

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------|----------------|----------------------|---------------------|------------------|
| 12/579,648 | 10/15/2009 | Todd Lael Siler | 73360-ICON2 | 8763 |
| Todd L. Siler | 7590 06/16/201 | 7 | EXAM | INER |
| Suite F2-200 4950 S. Yosemi | ite | | FERNSTRO | OM, KURT |
| Greenwood Vil | lage, CO 80111 | | ART UNIT | PAPER NUMBER |
| | | | 3711 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 06/16/2017 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Application of :

Todd Lael Siler :

Application No. 12/579,648 : DECISION ON PETITION

Filed: October 15, 2009 :

Attorney Docket No. 73360-ICON2 :

This is a decision on the petition filed January 10, 2017, which is being treated under 37 CFR 1.181 (feeless petition).

The application became abandoned for failure to file a timely and proper reply within the meaning of 37 CFR 1.113 to the final Office action of March 23, 2014, which set a three-month shortened statutory period for response. Petitioner did not obtain any extensions of time under the provisions of 37 CFR 1.136(a). Accordingly, the application became abandoned by law on June 24, 2014. The Office mailed a Notice of Abandonment on December 15, 2014.

As a condition for revival, applicant must submit a grantable petition under 37 CFR 1.137(a) accompanied by:

- (1) The reply required to the outstanding Office action or notice, unless previously filed;
- (2) The petition fee as set forth in § 1.17(m); and,
- (3) A statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

The Office finds that the present petition does not satisfy requirements (1) and (2) above.

As to item (1), upon further review of the USPTO finance records, the Office has discovered that applicant did <u>not</u> submit a petition fee as set forth in § 1.17(m) for consideration of the petition to revive this application and a decision on the merits to date. The Office sincerely apologizes for any confusion. Nevertheless, 35 U.S.C. 41(a)(7) provides that a petition for the revival of an unintentionally abandoned application <u>must be accompanied by the petition fee</u> set forth in 37 CFR 1.17(m). The payment of a petition fee, as well as the submission of the required reply, are prerequisites for revival of the abandoned application, and cannot be waived. The petition fee is required for the filing (and not merely the grant) of a petition under 37 CFR 1.137(a). Accordingly, applicant must pay the \$850.00 petition fee with any renewed petition.

Art Unit: OPET

As to item (2), applicant has not submitted a proper reply to the final Office action mailed March 23, 2014, with the present petition. As previously stated in the decision mailed November 22, 2016, the reply filed February 22, 2016, failed to place the application in condition for allowance. Therefore, applicant is required to file a proper reply to the final Office action as a condition for granting a petition for revival of the application.

As the application became abandoned for failure to reply to a final action, applicant may submit **one** of the following responses with a renewed petition under 37 CFR 1.137(a): (1) a Notice of Appeal (and appeal fee required by 37 CFR 41.20(b)(2)); (2) an amendment that *prima facie* places the application in condition for allowance; (3) a Request for Continued Examination and submission under 37 CFR 1.114 (and fee); **OR** (4) the filing of a continuing application under 37 CFR 1.53(b). See MPEP 711.03(c)(III)(A)(2). Petitioner may contact the Inventors' Assistance Center at 800-786-9199 or the Examiner with questions regarding the filing of an appropriate reply.

In view of the above, the petition is **DISMISSED**.

In summary, to revive the application, applicant must submit a "Renewed Petition under 37 CFR 1.137(a)" (see form PTO/SB/64), an \$850 petition fee, and a proper reply to the final Office action as listed above within **TWO (2) MONTHS** from the mail date of this decision. Extensions of time under 37 CFR 1.136(a) are permitted.

Further correspondence with respect to this matter should be addressed as follows:

By mail: Mail Stop Petition

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

By FAX: (571) 273-8300

Attn: Office of Petitions

By hand: Customer Service Window

Randolph Building 401 Dulany Street Alexandria, VA 22314

Correspondence may also be submitted via the electronic filing system of the USPTO.

¹ Applicant must choose <u>ONE</u> of the four types of replies to submit with a renewed petition and the \$850 petition fee. The Office has included a notice of appeal form and an RCE form should applicant desire to submit either of these as the reply.

Application/Control Number: 12/579,648 Page 3

Art Unit: OPET

Telephone inquiries related to this decision may be directed to the undersigned at (571) 272-3211. Questions regarding examination of the application should be directed to the Technology Center Art Unit.

/Christina Tartera Donnell/

Christina Tartera Donnell Attorney Advisor Office of Petitions

Enclosures: Fee Sheet and Forms – Petition for Revival under 37 CFR 1.137(a), Notice of Appeal, and Request for Continued Examination

Office of Petitions: Routing Sheet



Application No. 12579648

This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application, as indicated below. For details of this decision, please see the document PET.OP.DEC filed on the same date as this document.

GRANTED

X DISMISSED

DENIED

| Fee Code | 37 CFR | Description | Fee | Small Entity Fee | Micro Entity Fee |
|----------------|----------------|---|----------|------------------------|------------------------|
| 1817/2817/3817 | 1.17(c) | Request for prioritized examination | 4,000.00 | 2,000,00 | 1.000.00 |
| 1819/2819/3819 | 1.17(d) | Correction of inventorship after first action on merits | 500:00 | 300.00 | 150.00 |
| 1801/2801/3801 | 1.17(e) (1) | Request for continued examination (RCE) - 1st request (see 37 CFR 1.114) | 1,200.00 | 600,00 | 300,00 |
| 1820/2820/3820 | 1.17(e) (2) | Request for continued examination (RCE) - 2nd and subsequent request (see 37 CFR 1.114) | 1,700.00 | 850,00 | 425.00 |

| Fee Code | 37 CFR | Description | Fee | Small Entity Fee | Micro Entity Fee |
|----------------|-------------------------|--|----------|------------------------|------------------------|
| 1405/2405/3405 | 41.20 (a) | Petitions to the Chief Administrative Patent Judge under 37 CFR 41.3 | 460.09 | 400.00 | 400.00 |
| 1401/2401/3401 | 41.20 (b)(1) | Notice of appeal | 800.00 | 400.00 | 200,00° |
| n√a | 41.20 (b)(2) (i) | filling a brief in support of an appeal | 0.09 | 0.00 | 0.60 |
| 1404/2404/3404 | 41.20 (b)(Z) (ii) | Filing a brief in support of an appeal in an inter partes reexamination proceeding | 2,986,08 | 1,800.99 | 500,00* |
| 1403/2403/3403 | 41.20 (b)(3) | Request for oral hearing | 1,300.08 | 650.00 | 825.00* |

| Fee Code | 37 CFR | Description | Fee | Small Entity Fee | Micro Entity Fee |
|----------------|-------------|--|----------|------------------------|------------------------|
| 1462/2462/3462 | 1.17(f) | Petitions requiring the petition fee set forth in 37 CFR 1.17(f) (Group I) | 400.00 | 200 00 | 160.00 |
| 1463/2463/3463 | 1.17(g) | Petitions requiring the petition fee set forth in 37 CFR 1.17(g) (Group II) | 200.00 | 100.00 | 50.00 |
| 1464/2464/3464 | 1.17(h) | Petitions requiring the petition fee set forth in 37 CFR 1.17(h) (Group III) | 140.00 | 70.60 | 35.09 |
| 1452/2453/3453 | 1.17 (m) | Petition for revival of an abandoned application for a patent, for the delayed payment of the fee for issuing each patent, or for the delayed response by the patent owner in any reexamination proceeding | 1,700.00 | 859.60 | 850.00 |

Doc Code: PET.OP

Document Description: Petition for Review by the Office of Petitions

PTO/SB/64 (12-13)

Approved for use through 07/31/2016, OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

| First named inventor: Application No.: Art Unit: Filed: Examiner: Title: Attention: Office of Petitions Mail Stop Petition Commissioner for Patents P.O. Box 1459 Alternating, VA 22313-1450 FAX (571) 273-8300 NOTE: If information or assistance is needed in completing this form, please contact the Office of Petitions at (571) 272-3282. NoTE: If information became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark. Office. The date of abandonment is the day after the expiration date of the period set for reply in the Office notice or action by the United States Patent and Trademark. Office. The date of abandonment is the day after the expiration date of the period set for reply in the Office notice or action by the United States Patent and Trademark. Office. The date of abandonment is the day after the expiration date of the period set for reply in the Office notice or action by the United States Patent and Trademark. Office in the Office notice or action by the United States Patent and Trademark. Office in the Office notice or action by the United States Patent and Trademark. Office in the Office notice or action in the Office of Petitions at (571) 272-3282. APPLICATION TRADEMARK. PAPLICATION TRADEMARK. NOTE: A grantable petition requires the following items: (1) Petition fee; (2) Reply and/or issue fee; (3) Terminal disclaimer with disclaimer tee — required for all utility and plant applications filed before June 8, 1995, and for all design applications; and (4) Statement that the entire delay was unintentional. 1. Petition fee Small entity fee \$ | PETITION FOR REVIVAL OF AN A ABANDONED UNINTENTIONALL Page 1 of | Y UNDER 37 CFR 1.137(a) | Docket Number (Optional) |
|---|--|--|---|
| Application No.: | First named inventor: | 000000000000000000000000000000000000000 | |
| Title: Attention: Office of Petitions Mail Stop Petition Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 FAX(571) 273-3200 NOTE: If information or assistance is needed in completing this form, please contact the Office of Petitions at (571) 272-3282. The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the expiration date of the period set for reply in the Office notice or action plus any extensions of time actually obtained. APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION. NOTE: A grantable petition requires the following items: (1) Petition feee; (2) Reply and/or issue fee; (3) Tarminal disclaimer with disclaimer fee – required for all utility and plant applications filed before June 8, 1995, and for all design applications; and (4) Statement that the entire delay was unintentional. 1. Petition fee Small entity fee \$ | | | |
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| Small entity fee \$ (37 CFR 1.17(m)). Applicant asserts small entity status. See 37 CFR 1.27. Undiscounted fee \$ (37.CFR.1.17(m)). Reply and/or fee A The reply and/or fee to the above-noted Office notice or action in the form of (identify the type of reply): has been filed previously on is enclosed herewith. B The issue fee and publication fee (if applicable) of \$ | NOTE: A grantable petition requires the fol (1) Petition fee; (2) Reply and/or issue fee; (3) Terminal disclaimer with disclaimer fe | llowing items: ee — required for all utility and plant applicat | ions filed before June 8, 1995, and for all |
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This collection of information is required by 37 CFR 1.137(a). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 1 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Doc Code: PET.OP

Document Description: Petition for Review by the Office of Petitions

PTO/SB/64 (12-13)

Approved for use through 07/31/2016. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(a)

Page 2 of 2

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|--|---|--|--|--|--|--|--|
| 3. Te | rminal disclaimer with disclaimer fee | | | | | | |
| | Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required. | | | | | | |
| | A terminal disclaimer (and disclaimer fee (37 CFR 1.2 herewith (see PTO/SB/63). | O(d)) of \$) disclaiming the required period of time is enclosed | | | | | |
| under a que | 4. STATEMENT : The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(a) was unintentional. [NOTE: The United States Patent and Trademark Office may require additional information if there is a question as to whether either the abandonment or the delay in filing a petition under 37 CFR 1.137(a) was unintentional (MPEP 711.03(c), subsections (III)(C) and (D)).] | | | | | | |
| | | WARNING: | | | | | |
| identi credit applic redac of a p 1.213 the pr | ty theft. Personal information such as social security number card authorization form PTO-2038 submitted for payment cation. If this type of personal information is included in docting such personal information from the documents before atent application is available to the public after publication (a) is made in the application) or issuance of a patent. Furthublic if the application is referenced in a published application | formation in documents filed in a patent application that may contribute to ears, bank account numbers, or credit card numbers (other than a check or purposes) is never required by the USPTO to support a petition or an uments submitted to the USPTO, petitioners/applicants should consider submitting them to the USPTO. Petitioner/applicant is advised that the record of the application (unless a non-publication request in compliance with 37 CFR ermore, the record from an abandoned application may also be available to on or an issued patent (see 37 CFR 1.14). Checks and credit card authorization id in the application file and therefore are not publicly available. | | | | | |
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| I here | Address Sures: Fee Payment Reply Terminal Disclaimer Form Additional sheet(s) containing statements establishing unin Other: CERTIFICATE OF MAILIN by certify that this correspondence is being: Deposited with the United States Postal Service on the date addressed to: Mail Stop Petition, Commissioner for Patents | tentional delay IG OR TRANSMISSION [37 CFR 1.8(a)] Ishown below with sufficient postage as first class mail in an envelope in postage as first class mail in a | | | | | |
| I here | Address Sures: Fee Payment Reply Terminal Disclaimer Form Additional sheet(s) containing statements establishing unin Other: CERTIFICATE OF MAILIN by certify that this correspondence is being: Deposited with the United States Postal Service on the date addressed to: Mail Stop Petition, Commissioner for Patents Transmitted by EFS-Web or facsimile on the date shown bel | tentional delay IG OR TRANSMISSION [37 CFR 1.8(a)] Ishown below with sufficient postage as first class mail in an envelope is, P. O. Box 1450, Alexandria, VA 22313-1450. Ow to the United States Patent and Trademark Office at (571) 273-8300. | | | | | |

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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| NOTICE OF APPEAL FROM THE EXAMI THE PATENT TRIAL AND APPEAL BC | NEK 10 | Docket Number (Optional) | |
|--|---------------------------------|---|--|
| I hereby certify that this correspondence is being facsimile transmitted to the USPTO, EFS-Web transmitted to the USPTO, or | In re Application of | | |
| deposited with the United States Postal Service with sufficient postage in an envelope addressed to "Commissioner for Patents, P.O. | Application Number | Filed | |
| Box 1450, Alexandria, on Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on | For | | |
| Signature | | | |
| Typed or printed name | | | |
| Applicant hereby appeals to the Patent Trial and Appeal Board from the | last decision of the examiner. | | |
| The fee for this Notice of Appeal is (37 CFR 41.20(b)(1)) | | \$ | |
| Applicant asserts small entity status. See 37 CFR 1.27. Therefore, t by 50%, and the resulting fee is: | he fee shown above is reduce | d \$ | |
| Applicant certifies micro entity status. See 37 CFR 1.29. Therefore, by 75%, and the resulting fee is: Form PTO/SB/15A or B or equivalent must either be enclosed or have been | | sed \$ | |
| A check in the amount of the fee is enclosed. | | | |
| Payment by credit card. Form PTO-2038 is attached. | | | |
| The Director is hereby authorized to charge any fees which may be | e required, or credit any overp | ayment | |
| to Deposit Account No | | | |
| Payment made via EFS-Web. | | | |
| A petition for an extension of time under 37 CFR 1.136(a) (PTO/Al, For extensions of time in reexamination proceedings, see 37 CFR 1.550. | A/22 or equivalent) is enclosed | d. | |
| WARNING: Information on this form may become public. Credit on this form. Provide credit card information and authorization of | | be included | |
| I am the | | | |
| applicant attorney or agent of record | lJ | or agent acting under 37 CFR 1.34 | |
| Signature | | | |
| Typed or printed name | | | |
| Telephone Number | | | |
| Date | | | |
| NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 forms if more than one signature is required, see below*. | CFR 1.4 for signature requirer | ments and certifications. Submit multiple | |
| * Total offorms are submitted. | | | |

This collection of information is required by 37 CFR 41.20(b)(1) and 41.31. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
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- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

| Under the Paperwork Re | duction Act of 1995, no persons are requ | ired to respond to a collection of informa | ition unless it contains a valid OMB control number. |
|--|--|--|--|
| R | equest | Application Number | |
| Continued E | tor | Filing Date | |
| Continued Examination (RCE) Transmittal | | First Named Inventor | |
| Address to: | 13 F Nur C 3 3 E G G Nurs C | Art Unit | |
| Mail Stop RCE Commissioner for Patel P.O. Box 1450 | nts | Examiner Name | |
| Alexandria, VA 22313-1 | 1450 | Attorney Docket Number | |
| | | | |

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, to any international application that does not compy with the requirements of 35 U.S.C 371, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO on page 2.)

| submitted to the USPTO on page 2.) | | | | | | | | |
|---|--|--|--|--|--|--|--|--|
| Submission required under 37 CFR 1.114 Note: If the RCE is proper, any amendments enclosed with the RCE will be entered in the order in which they were applicant does not wish to have any previously filed unentered amendment(s) entered amendment(s). | filed unless applicant instructs otherwise. If | | | | | | | |
| a. Previously submitted. If a final Office action is outstanding, any amendme considered as a submission even if this box is not checked. | Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked. | | | | | | | |
| i. Consider the arguments in the Appeal Brief or Reply Brief previousl | Consider the arguments in the Appeal Brief or Reply Brief previously filed on | | | | | | | |
| ii. Other | | | | | | | | |
| b. Enclosed | | | | | | | | |
| i. Amendment/Reply iii. Info | rmation Disclosure Statement (IDS) | | | | | | | |
| ji, Affidavit(s)/ Declaration(s) iv. Oth | er | | | | | | | |
| 2. Miscellaneous | | | | | | | | |
| Suspension of action on the above-identified application is requested un | * * | | | | | | | |
| a period of months. (Period of suspension shall not exceed 3 months; | ; Fee under 37 CFR 1.17(i) required) | | | | | | | |
| b. Other | | | | | | | | |
| g O1 | The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to | | | | | | | |
| i. RCE fee required under 37 CFR 1.17(e) | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | | | | | |
| ii. Extension of time fee (37 CFR 1.136 and 1.17) | | | | | | | | |
| iii. Other | | | | | | | | |
| b. Check in the amount of \$enc | losed | | | | | | | |
| c. Payment by credit card (Form PTO-2038 enclosed) | | | | | | | | |
| LI WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. | | | | | | | | |
| SIGNATURE OF APPLICANT, ATTORNEY, OR AGE | ENT REQUIRED | | | | | | | |
| Signature | Date | | | | | | | |
| Name (Print/Type) | Registration No. | | | | | | | |
| CERTIFICATE OF MAILING OR TRANSMIS | SSION | | | | | | | |
| I hereby certify that this correspondence is being deposited with the United States Postal Service with s addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 o Office on the date shown below. | | | | | | | | |
| Signature | · | | | | | | | |
| Name (Print/Type) | Date | | | | | | | |

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Instruction Sheet for RCEs

(not to be submitted to the USPTO)

NOTES:

An RCE is not a new application, and filing an RCE will not result in an application being accorded a new filing date.

Filing Qualifications:

The application must be a utility or plant application filed on or after June 8, 1995. The application cannot be a provisional application, a utility or plant application filed before June 8, 1995, an international application that does not comply with the requirements of 35 U.S.C. 371, a design application, or a patent under reexamination. See 37 CFR 1.114(e). An international application does not comply with the requirements of 35 U.S.C. 371 until the requirements under 35 U.S.C. 371(c), including the requirement for the inventor's oath or declaration under 35 U.S.C. 371(c)(4), have been complied with.

Filing Requirements:

Prosecution in the application must be closed. Prosecution is closed if the application is under appeal, or the last Office action is a final action, a notice of allowance, or an action that otherwise closes prosecution in the application (e.g., an Office action under *Ex parte Quayle*). See 37 CFR 1.114(b).

A submission and a fee are required at the time the RCE is filed. If reply to an Office action under 35 U.S.C. 132 is outstanding (e.g., the application is under final rejection), the submission must meet the reply requirements of 37 CFR 1.111. If there is no outstanding Office action, the submission can be an information disclosure statement, an amendment, new arguments, or new evidence. See 37 CFR 1.114(c). The submission may be a previously filed amendment (e.g., an amendment after final rejection).

WARNINGS:

Request for Suspension of Action:

All RCE filing requirements must be met before suspension of action is granted. A request for a suspension of action under 37 C FR 1.103(c) does <u>not</u> satisfy the submission requirement and does not permit the filing of the required submission to be suspended.

Improper RCE will NOT toll Any Time Period:

Before Appeal - If the RCE is improper (e.g., prosecution in the application is not closed or the submission or fee has not been filed) and the application is not under appeal, the time period set forth in the last Office action will continue to run and the application will be abandoned after the statutory time period has expired if a reply to the Office action is not timely filed. No additional time will be given to correct the improper RCE.

Under Appeal - If the RCE is improper (e.g., the submission or the fee has not been filed) and the application is under appeal, the improper RCE is effective to withdraw the appeal. Withdrawal of the appeal results in the allowance or abandonment of the application depending on the status of the claims. If there are no allowed claims, the application is abandoned. If there is at least one allowed claim, the application will be passed to issue on the allowed claim(s). See MPEP 1215.01.

See MPEP 706.07(h) for further information on the RCE practice.

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The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

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RECEIVED CENTRAL FAX CENTER

JAN 2 4 2017

Mail Stop Petition Commissioner for Patents United States Department of Commerce United States Patent and Trade Mark Office P.O. Box 1450 Alexandria, Virginia 22313-1450

By FAX; (571) 273-8300 Attn; Office of Petitions (January 10, 2017)

Note: This is my Second Fax (1.20.17) FAX 571-273-8300

Dear Commissioner for Patents and Examiner Kurt Fernstrom:

I received a letter (dated November 21, 2016) from your office stating, 'This is a decision on the second renewed petition under 37 CFR 1.137(a) filed on February 22, 2016) for a revival of the application abandoned unintentionally; the petition is Dismissed.'

I am submitting here for reconsideration of this decision my request to revive my patent application (Application Number: # 12/579,648) on the grounds of UNINTENTIONAL DELAY. I have never abandoned my patent application, or ever intended to do so! And, to my knowledge, I have never received a "Final Rejection" on my patent application—otherwise I would have sent you a Notice of Appeal. Please understand: I have invested a great deal of time, money, creative energy, and patience since I embarked on this patent application over a decade ago!

Within the past month and week, I have spoken to Christina Tartera Donnell, Attorney Advisor, Office of Petitions (Tel. 571-272-3211) who was kind enough to try to explain why I had received this erroneous *Dismissed* Notice, and how to proceed to appeal this decision. Also, on Tuesday, January 10th at 3:06 p.m. MST, I spoke with Tyron at the Inventors Assistance Center (Tel. 800-786-9199); I was assigned this call number for my record; #1-453-576209. Today, I left a message for Ms. Donnell's supervisor Douglas (571-272-3231), whom I'm waiting to hear from.

I am now seeking a Grantable Petition under under 37 CFR 1.137(a) which is accompanied by 'the reply required to the outstanding Office action or notice. I understand there is no petition fee required. The November 21, 2016 letter your Office sent me states: 'the Examiner determined the reply filed February 22, 2016, failed to place the application in condition for allowance. I have read your Advisory Action Before the Filing of An Appeal Brief, and it states that 'No Notice of Appeal Filed.' To my knowledge, I never received a document from your Office that enabled me to appeal your decision. So I am requesting Petition #1 06 - "Withdrawal of Abandonment Based on Failure to Receive an Office Action." To reiterate: If I had I received your office action, I would've replied!

I would be very grateful for that opportunity to appeal so that I can further pursue the patenting of my invention. I thank you in advance, again, for your attention and assistance.

Sincerely,

Todd Lael Siler, Ph.D., Petitioner 4950 S. Yosemite Street, F2-200

Greenwood Village, Colorado 80111

Mobile 720-988-8853

Fax 303-745-8349

toddsiler@alum.MIT.edu

RECEIVED CENTRAL FAX CENTER

JAN 1 0 2017

January 10, 2017

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Greenwood Village, Colorado 80111

Mobile 720-988-8853 Fax 303-745-8349

toddsiler@alum_MIT.edu

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RECEIVED CENTRAL FAX CENTED

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Greenwood Village, Colorado 80111

Mobile 720-988-8853

Fax 303-745-8349

toddsiler@alum.MIT.edu

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------|----------------|----------------------|---------------------|------------------|
| 12/579,648 | 10/15/2009 | Todd Lael Siler | 73360-ICON2 | 8763 |
| Todd L. Siler | 7590 11/22/201 | 6 | EXAM | INER |
| Suite F2-200 4950 S. Yosemi | ite | | FERNSTRO | OM, KURT |
| Greenwood Vill | lage, CO 80111 | | ART UNIT | PAPER NUMBER |
| | | | 3711 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 11/22/2016 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

.....



Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Application of :

TODD LAEL SILER :

Application No. 12/579,648 : DECISION ON PETITION

Filed: 10/15/2009 :

Attorney Docket No. 73360-ICON2 :

This is a decision on the second renewed petition under 37 CFR 1.137(a) filed February 22, 2016, for revival of the application abandoned unintentionally.

The petition is **DISMISSED**.

Any request for reconsideration of this decision must be submitted within TWO (2) MONTHS from the mail date of this decision. Extensions of time under 37 CFR 1.136(a) are permitted. The reconsideration request should include a cover letter entitled "Renewed Petition under 37 CFR 1.137(a)." No additional petition fee is necessary.

The application became abandoned for failure to file a timely and proper reply within the meaning of 37 CFR 1.113 to the final Office action of March 23, 2014, which set a three-month shortened statutory period for response. Petitioner did not obtain any extensions of time under the provisions of 37 CFR 1.136(a). Accordingly, the application became abandoned by law on June 24, 2014. The Office mailed a Notice of Abandonment on December 15, 2014.

A grantable petition under 37 CFR 1.137(a) must be accompanied by:

- (1) The reply required to the outstanding Office action or notice, unless previously filed;
- (2) The petition fee as set forth in § 1.17(m); and,
- (3) A statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

The present renewed petition does not satisfy requirement (1) above.

With the present petition, petitioner submitted reply to the final Office action mailed March 23, 2014. However, after consulting with the Examiner, the Examiner determined that the reply filed February 22, 2016, failed to place the application in condition for allowance. An Advisory Action accompanies this decision

Application/Control Number: 12/579,648

Art Unit: OPET

In a nonprovisional application abandoned for failure to reply to a final action, the reply required for consideration of a petition to revive must be: (1) a Notice of Appeal (and appeal fee required by 37 CFR 41.20(b)(2)); (2) an amendment that *prima facie* places the application in condition for allowance; (3) a Request for Continued Examination and submission (37 CFR 1.114); or (4) the filing of a continuing application under 37 CFR 1.53(b). See MPEP 711.03(c)(III)(A)(2). With any renewed petition, petitioner must submit a proper reply to the outstanding final Office action. Petitioner may contact the Inventors Assistance Center at 800-786-9199 or the Examiner with questions regarding the filing of an appropriate reply.

Page 2

Further correspondence with respect to this matter should be addressed as follows:

By mail: Mail Stop Petition

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

By FAX: (571) 273-8300

Attn: Office of Petitions

By hand: Customer Service Window

Randolph Building 401 Dulany Street Alexandria, VA 22314

Correspondence may also be submitted via the electronic filing system of the USPTO.

Telephone inquiries related to this decision may be directed to the undersigned at (571) 272-3211. Questions regarding examination of the application should be directed to the Technology Center Art Unit.

/Christina Tartera Donnell/

Christina Tartera Donnell Attorney Advisor Office of Petitions

Enclosure: Advisory Action

Advisory Action Before the Filing of an Appeal Brief

| Application No. 12/579,648 | Applicant(s) SILER, TODI | | |
|----------------------------|-----------------------------|--|--|
| Examiner KURT FERNSTROM | Art Unit 3711 | AIA (First Inventor to File) Status No | |

| KUF | RIFERNSIROM | 3/11 | No | | |
|---|--|---|--|--|--|
| The MAILING DATE of this communication app | ears on the cover sheet with t | the correspond | dence address | | |
| THE REPLY FILED <u>22 February 2016</u> FAILS TO PLACE THIS APP NO NOTICE OF APPEAL FILED | LICATION IN CONDITION FOR | RALLOWANCE | | | |
| . ☑ The reply was filed after a final rejection. No Notice of Appeal has | been filed. To avoid abandonme | ent of this applica | ation, applicant must timely file one | | |
| of the following replies: (1) an amendment, affidavit, or other evide | | | | | |
| (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFI CFR 1.114 if this is a utility or plant application. Note that RCEs a following time periods: | re not permitted in design applica | | | | |
| a) \square The period for reply expires <u>3</u> months from the mailing da | | | | | |
| b) The period for reply expires on: (1) the mailing date of this Ac no event, however, will the statutory period for reply expire la | | | | | |
| c) A prior Advisory Action was mailed more than 3 months after within 2 months of the mailing date of the final rejection. The the prior Advisory Action or SIX MONTHS from the mailing date according to the prior Advisory Action or SIX MONTHS from the mailing date according to the prior Advisory Action or SIX MONTHS from the mailing date according to the prior Advisory Action or SIX MONTHS from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection. The prior Advisory Action was mailed more than 3 months after within 2 months after the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection. The prior Advisory Action or SIX MONTHS from the mailing date of the final rejection. The prior Advisory Action or SIX MONTHS from the mailing date of the final rejection. The the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection. The prior Advisory Action or SIX MONTHS from the mailing date of the final rejection. The prior Advisory Action or SIX MONTHS from the mailing date of the final rejection. The prior Advisory Action or SIX MONTHS from the mailing date of the final rejection. | current period for reply expires ate of the final rejection, whicheve a), (b) or (c). ONLY CHECK BOX FINAL REPLY WHICH WAS FILE | months from the from | om the mailing date of S ADVISORY ACTION IS THE D MONTHS OF THE FINAL | | |
| Extensions of time may be obtained under 37 CFR 1.136(a). The date have been filed is the date for purposes of determining the perioextension fee under 37 CFR 1.17(a) is calculated from: (1) the expirable action; or (2) as set forth in (b) or (c) above, if checked. Any rimal rejection, even if timely filed, may reduce any earned patent ter NOTICE OF APPEAL | d of extension and the correspo ation date of the shortened statu eply received by the Office later | nding amount out outory period for r than three mo | of the fee. The appropriate reply originally set in the final | | |
| 2. The Notice of Appeal was filed on A brief in compliant Notice of Appeal (37 CFR 41.37(a)), or any extension thereof has been filed, any reply must be filed within the time period s AMENDMENTS | (37 CFR 41.37(e)), to avoid disr | | | | |
| B. The proposed amendments filed after a final rejection, but pri | or to the date of filing a brief, wi | II <u>not</u> be entere | d because | | |
| a) They raise new issues that would require further consider | leration and/or search (see NO | ΓE below); | | | |
| b) They raise the issue of new matter (see NOTE below); | | | | | |
| c) They are not deemed to place the application in better appeal; and/or | form for appeal by materially red | ducing or simpli | fying the issues for | | |
| d) They present additional claims without canceling a corr NOTE: (See 37 CFR 1.116 and 41.33(a)). | esponding number of finally reje | ected claims. | | | |
| The amendments are not in compliance with 37 CFR 1.121. | | npliant Amendn | nent (PTOL-324). | | |
| 5. Applicant's reply has overcome the following rejection(s): | | | | | |
| Newly proposed or amended claim(s) would be allowa allowable claim(s). | · | • | - | | |
| 7. For purposes of appeal, the proposed amendment(s): (a) new or amended claims would be rejected is provided below of AFFIDAVIT OR OTHER EVIDENCE | | ill be entered, a | and an explanation of how the | | |
| B. A declaration(s)/affidavit(s) under 37 CFR 1.130(b) was/were | filed on | | | | |
| The affidavit or other evidence filed after final action, but before applicant failed to provide a showing of good and sufficient reasons. | e or on the date of filing a Notice | | | | |
| presented. See 37 CFR 1.116(e). | | | • | | |
| 0. The affidavit or other evidence filed after the date of filing the because the affidavit or other evidence failed to overcome <u>all</u> sufficient reasons why it is necessary and was not earlier pres | rejections under appeal and/or a | appellant fails to | a brief, will <u>not</u> be entered b provide a showing of good and | | |
| 1. The affidavit or other evidence is entered. An explanation of t | | | ttached. | | |
| 2. The request for reconsideration has been considered but doe | es NOT place the application in | condition for all | owance because: | | |
| See Continuation Sheet.3. ☐ Note the attached Information Disclosure Statement(s). (PTC |)/SB/08) Paper No(s). | | | | |
| 4. ☐ Other: TATUS OF CLAIMS | | | | | |
| 5. The status of the claim(s) is (or will be) as follows: | | | | | |
| Claim(s) allowed: Claim(s) objected to: Claim(s) rejected: 1-17. | | | | | |
| Claim(s) withdrawn from consideration: | | | | | |
| | /KURT FERNSTROM/ | nit 3711 | | | |

Continuation of 12. does NOT place the application in condition for allowance because: The arguments presented therein are not persuasive. The claims remain rejected for the reasons discussed in the Final Rejection of May 23, 2014.

Office of Petitions: Routing Sheet



Application No. 12/579,648

This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application, as indicated below. For details of this decision, please see the document PET.OP.DEC filed on the same date as this document.

GRANTED

X DISMISSED

DENIED

| Office of Petitions: Dec | cision Count Sheet | Mailing Month 11 |
|--|--|--|
| Application No. | 12579648 | * 1 2 5 7 9 6 4 8 * |
| For US serial numbers: enter number only, no slashes or commas. Ex: 10123456 For PCT: enter "51+single digit of year of filing+last 5 numbers", Ex. for PCT/US05/12345, enter 51512345 | | |
| Deciding Official: | DONNELL, CHRIS | STINA |
| Count (1) - Palm Credit | 12/579,648 | |
| Decision: DISMISSED - | FI NANCE WORK NEEDED T | * D I S M I S S E D * |
| Decision Type: 502 - 37 CFR 1.137(b) - REVIVAL BASED ON UNINTENTIC * * 5 0 2 * | | |
| Notes: | | |
| Count (2) | | |
| Decision: n/a | FI NANCE WORK NEEDED TO Select Check Box for YES | |
| Decision Type: NONE | | |
| Notes: | | |
| Count (3) | | |
| Decision: n/a | FI NANCE WORK NEEDED Select Check Box for YES | |
| Decision Type: NONE | | |
| Notes: | | |
| Initials of Approving C | Official (if required) | If more than 3 decisions, attach 2nd count sheet & mark this box |
| Printed on: 11/17/2016 | Of | fice of Petitions Internal Document - Ver. 5.0 |

DAR



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February 18, 2016

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Art Unit: OPET Filed: October 15, 2009 Attorney Docket No. 73360-ICON2

"Renewed Petition under 37 CFR 1.137(a)"

Dear Kurt Fernstrom, Examiner:

On February 1, 2016, I received your letter dismissing my request (dated filed February 9, 2015) to revive my Patent Application No. 12/579,648.

This letter serves as my statement attesting that *I never abandoned my application* or 'failed to timely file a reply to within the meaning of 37 CFR 1.113 to the final Office action of March 23, 2014.' In fact, the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition was *unintentional*.

I hereby request the withdrawal of the holding of Abandonment in the above-identified application on the grounds that the abandonment was unintentional. This one page petition requests reinstatement for unintentional abandonment.

This letter of petition is accompanied by a PDF, titled "Application/Control Number: 12/579,648, Art Unit 3711" (dated July 18, 2013), which was addressed to you and responded to your Office Action Summary. I have no record of your rebuttal. If this record exists, kindly send it to my office so I may have the opportunity to discuss it with you directly. That would be greatly appreciated.

Last month, I left a voicemail message for Christina Tartera Donnell, Attorney Advisor for the Office of Petitions (571-272-3211), requesting a date and time to discuss this patent application with you. I was hoping we could schedule a conversation between you, me and my patent attorney.

I thank you in advance for your attention and look forward to speaking with you.

Sincerely yours,

Todd Lael Siler Petitioner Application/Control Number: 12/579,648 Page 1

Art Unit: 3711



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July 18, 2013

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2 Mail Date 6/26/2013

"Application/Control Number: 12/579,648. Art Unit: 3711"

Dear Kurt Fernstrom, Examiner:

Thank you for giving me the opportunity to respond to the Office Action Summary (6/26/2013). This letter is intended to clarify the key points the examiner has flagged for further clarification of Claims 1-17, which are currently pending in the application.

I have addressed here the main factors the examiner listed in considering the enablement requirement, among them: (A) the breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quality of experimentation needed to make or use the invention. Taking into account each of these factors, I have determined that with *due experimentation* a person of ordinary skill in the art can practice the claimed method. I've concluded this because, in reality, they actually do. In testing the claimed invention, people are able to use the method and apparatuses exactly as I have described. That is to say, the invention actually works with individuals, groups and teams with "reasonably consistent results that can be predictably or reliably assured," to borrow the words of the examiner.

In sum: this invention has been reduced to practice. A person of ordinary skill in the art to which this invention pertains can use the invention to achieve a desired goal or objective (Siler, 2011a&b). In evaluating the method and apparatuses, the users have noted how they utilize both creativity and

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critical thinking, which underlie subjectivity and objectivity respectively; consequently, the claimed invention enhances cognitive, affective, expressive and communicative functions in a natural way.

This is important to note, given that the examiner has questioned this reality, stating: "The claimed method requires such a degree of subjective human judgment that a reasonably consistent result cannot be predictably or reliably assured." In testing the claimed invention, I have learned that there is "a level of predictability of thought processes in a group of people," to use the examiner's phrase, and there is ample evidence that the claimed method does indeed foster creativity and innovative thinking in measurable ways.

Moreover, I explain how the user's subjectivity is counterbalanced and complemented by the user's objectivity, which is directed and exercised through critical thinking. The examiner's position is that "the degree of subjectivity far outweighs all other factors in determining that the claimed invention requires undue experimentation to foster thinking in a group of participants" (pp.5&6). After extensively testing the invention, the applicant respectfully disagrees with this position and requests a conversation with the examiner, in order to present the evidence.

Concerning: (A) the breadth of the claims

The applicant believes that the specification in the pending application "contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention." (35 USC 101)

The applicant contends that the subject matter described in the specification does, indeed, enable one skilled in the art that "the claimed invention is directed to statutory matter (under 35 U.S.C. 101). This assessment is based on the fact that Claims 1-17 does comply with the written description requirement. They are composed of words with well-defined and commonly understood meanings. They're obviously accessible to any skilled in the art of using the claimed invention. Furthermore, the applicant does not introduce new subject matter, which is not already adequately described in the specification.

The claims are statutory subject matter, because the method and apparatuses described in the pending application adequately describe a non-obvious process that results in the production of myriad physical products (i.e., apparatuses). These products both embody and cultivate "enhanced cognitive, affective, expressive and communicative functions" in a person.

The examiner had rejected the claims as including information that was not described in the specification, when, in fact, it was described there. The applicant believes the problem lies in how the examiner has interpreted the language (or "verbiage"): in a way that limits the meanings and implications of the words that the applicant uses to describe the prescribed my method of enhancing cognitive functioning, and the way in which the method is used to make the symbolic models and apply one's understanding of them.

In reviewing the terminology in the specifications, the applicant believes he has answered the examiner's questions and addressed his objections without amending or adding any new terms.

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Concerning: (B) the nature of the invention

In the Office Action Summary (May 17, 2012), the examiner wrote: "the claimed invention is a method for enhancing cognitive functions." I would like to correct this statement by including these two words: **and apparatuses**. The apparatuses are not only core to the title of the pending application but, more importantly, they're essential ways and means of enhancing cognitive functions, as noted in the method claims. That structured process of the claimed method and its tangible products (i.e., symbolic models or apparatuses) constitute the invention, as noted in Claims 1-17, which are pending in the application.

This is an important point of clarification, because it marks the bane of the examiner's objection to this invention. The examiner wrote, wrongly in my view, that "...even if claim 1 were amended to clearly recite the formation of physical models, these models steps are tangential to the invention, as the objective of the invention is not the creation of the models themselves. Rather, the claim result of the invention is that cognitive, affective, expressive and communicative functions in a person are enhanced. Thus, the invention is not a statutory process is patentable under 35 USC 101." (p.3)

The "models steps" are not "tangential to the invention." Rather, they play a central role in enhancing cognitive, affective, expressive and communicative functions in a person as claimed. They are key tools for achieving the objective of the invention.

I respectfully ask the examiner to re-consider this essential connection between the method and the production of apparatuses, which use the method as described. When taken together, the method and apparatuses do enhance these neuropsychological functions in human systems as claimed. This conclusion is based on my research and practices over the past three decades, during which time I have used the method and apparatuses in a directed way on a wide range of projects (Siler, 1997, 2007, 2011a&b).

The claimed result *is* a cognitive enhancement, which is shown and demonstrated through the use of both the method and apparatuses. The applicant believes the examiner is in error presuming that the claimed result of the invention is not the model but a cognitive enhancement; consequently, the claims are not directed to statutory subject matter.

To be perfectly clear, the claimed results are actually two-fold parts: (1) the "Enhancement of Cognitive Functioning" and (2) "Its Manifestation Into Physical Form and Translation Into Useful Information." This second part of the results concerns the tangible manifestations of cognitive functioning, which are evidenced by the models. The "usefulness" of the information (data, knowledge, concepts, ideas, events, experiences, etc.) that is manifested in the models, refers to how well the information helps a person make informed decisions, or develop and apply an idea, or utilize the experience of creating and exploring, and translating the meanings of the symbolic models in personally useful and purposeful ways. These physical processes and products have tangible outcomes with measurable results (Siler, 2011a&b).

As the title of my patent application makes plainly evident, the claimed method entails making physical symbolic models that are explicitly referred to and described as "apparatuses." By entails, I mean this method has a "logically necessary consequence"—namely, the creation of apparatuses whose **translation into useful information** can be objectively assessed and evaluated.

In this way, the multi-dimensional models *manifest* cognitive, affective, expressive and communicative functions in a person. They make tangible and visible the otherwise intangible and invisible functions of the human brain, thus turning the hidden world of neuropsychological systems into useful and practical artifacts that inform our decisions and enhance the quality of our lives.

The claimed invention directs people how to use the symbolic models they create to show and constructively discuss a world of information that cannot easily be described or rendered with words and numbers alone. The models make tangible what is on people's minds, helping them more effectively express and communicate their issues, problems, concerns, challenges, and other personally meaningful things that pre-occupy and absorb their attention.

We have demonstrated in various media (videos, DVDs, software, etc.) how these constructed apparatuses (i.e., physical, symbolic models) help enhance and advance a user's work in concrete ways and with tangible results that are measurable (Siler, 1997). The models afford users the opportunity to see the creation of new knowledge or a new discovery or innovation, evaluating, analyzing and measuring its significance and relevance.

The models guide and inform the decision-making process—thus, improving it (Siler, 2011a). They help people better understand their goals and implementation plans for achieving them. Moreover they make it easier and more effective to communicate their ideas so that everyone can understand them better and act on them in a productive manner.

Regarding process claims, the law requires that the claims include something tangible. Clearly, the multi-dimensional, symbolic models are tangible. The models are clearly composed of physical objects and organized in such a way that anyone can touch them, point to and point out what they are seeing in the most tangible way. Even a physically blind person can *touch* another person's symbolic model that shows the contents of their mind. The law makes it clear that the result of the process needs to be tangible.

In determining the patentability of a method, the law (95 USPQ2d 1001) states that a "process" must be "tied to another statutory class" (such as a machine or article of manufacture). The physical, multi-dimensional ["5-D"] models, or apparatuses, that users are guided to create constitute physical machines of sorts that are, for all practical purposes, a self-manufactured article.

The examiner has written in his Office Action Summary (p.2): "A claim that recites purely mental steps is not a patentable process. The steps recited in claim 1 include constructing one or more physical **or virtual** models relating a subject, connecting and transforming some of the model elements, and performing various analytical steps in relation to the model. Because a virtual model can be created in the imagination of a user, all of these method steps amount to the manipulation of abstract ideas, and do not explicitly recite the literal creation or formation of a tangible object. These steps take place entirely within the minds of the users," to quote the examiner.

With all due respect, the applicant believes the examiner is misunderstanding the word "virtual," which neither refers to nor suggests "steps that take place entirely in the minds of the users." This is not the correct reading of "virtual" in the claimed method. In the pending application, I explicitly direct users to

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give form to their thoughts, feelings, knowledge, data, ideas, and experiences in the tangible ways in making these physical symbolic models.

The examiner is broadly interpreting this word virtual in a way that ignores the reality of how this term is used in the vernacular, referring to digital media and computer-generated materials.

In any event, the examiner noted that "virtual" could be redefined to clearly recite physical models. The applicant interprets this to mean creating electronically with computer-aided design tools symbolic models, comprising both abstract and representational information.

When I highlighted in Claim 1, "These physical, symbolic forms can also be represented in virtual reality or electronically, with the aid of computer-graphics, holography and other media technology," I am using this word "virtual" in a familiar, mainstream context to describe digital realities modeled *not in a human mind*, but rather in computers that create a spectrum of virtual objects: from vector graphics that visualize 3-D prototypes to experiential Virtual Reality systems that immerse users in a world of virtual visual objects.

Concerning: (C) the state of the prior art

"Any person skilled in the art to which the claimed invention pertains" (35 USC 101)—or any person *unskilled in the arts*—can create, show, describe, and express their ideas, knowledge, points of view in emotionally rich and evocative ways. The expressive objects they make—as well as the whole experience of using the method to make the apparatuses—dramatically contrast the prior art the examiner has cited in these three U.S. Patent Documents (US-5,406,477, John Harhen, Classification 703/6; US-6,626,677. Morse et al. Classification 434/237; US-2002/0103774. Victor et al. Classification 706/11) and these two Non-Patent Documents ("TECHNOTOWN – A LEGO Experience," The Technology Teacher, pp. 13-15, September 1994; and "The Laboratory Schools LEGO-LOGO Project," 1995 [retrieved online July 7, 2005]).

Users of the applicant's invention *experience* a substantially different sense of creative freedom and openness to wonder, using the claimed method and apparatuses to make their ideas and knowledge tangible. There are no set or standard objects to construct, such as the Lego blocks and other primitives, in the way that constrains the aesthetic experience. The Lego structures are all fixed, modular units of forms and shapes that are visually and tactilely regular in design. Like many building blocks that utilize standardized structures, such as those in computer-aided object-oriented models, they offer a very different emotional and aesthetic experience than the apparatuses created with the basic and common building materials used in the claimed invention.

The visual qualities and physical characteristics of these LEGO models stand in sharp contrast to those physical qualities of the materials used in the making of symbolic models, or apparatuses, using the applicant's claimed invention. What is more, the LEGO language of forms is much more constrictive than the forms and shapes of materials used in the applicant's invention, which directly impact and influence the enhancement of cognitive, affective, expressive, and communicative skills. It is the applicant's informed opinion that this LEGO language of forms hampers and limits many people's creativity rather than enhancing and expanding it. This

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observation is based on the applicant's lifetime experiences in the visual arts and professional expertise.

It can be argued that even when using the LEGO modular forms, whether physically or electronically composed with the aid of computers, users still have to deal with the same issues of subjective [value] judgments regarding their aesthetic appeal as the claimed invention. And, that these judgments are a natural part of the creative process underlying invention, innovation and discovery. Furthermore, the use of these LEGO objects as building materials frequently entail undue experimentation.

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For instance, in using LEGO's Technic II, fourth graders are tasked with building gears and pulleys, using a limited selection of materials with which to work in exploring a problem while becoming familiar with the function and names of various pieces." ("The Laboratory Schools LEGO-LOGO Project," 1995, p.6). This self-guided exploration often involves undue experimentation. Even when this exploration is learned algorithmically (i.e., in a step-by-step process using a general set of rules users followed in problem-solving operations).

My point is this: The quality, variety and consistent richness of the aesthetic experiences ultimately determines the degree to which one method succeeds at enhancing cognitive functioning whereas another method with more constraints may not by comparison.

A person using one million LEGO pieces to construct a representational object such as a town, as in the case of "Technotown, the School-Wide Design Technology Project" ("TECHNOTOWN – A LEGO Experience," The Technology Teacher, pp. 13-15, September 1994, p.39) versus a person using one million common wooden dowels to make an abstract, symbolic model of "Life" are going to have entirely different aesthetic experiences that offer varying degrees of enhancement to cognitive functioning. The applicant contrasts this Real Life Experience with a LEGO Experience. From my personal and professional experiences making symbolic models for more than forty years—and having formally studied the neuropsychology of these different creative activities and applied this explicit knowledge in business and learning organizations worldwide—I can say confidently that these are complementary methods, tools and experiences that are naturally related, but very different, in form, substance, experiences, and impact on cognitive functioning And these obvious and subtle experiential differences make up the different types of patentable inventions made available today.

This statement is generalizable to each of the examples of prior art the examiner presented the applicant for review. Clearly, there are "elements of subjectivity" that are obviously present in each of the prior art that the examiner has granted U.S. Patents.

Concerning (D) the level of one of ordinary skill

The examiner rejected "Claims 1-17 (under 35 U.S.C. 112, first paragraph), as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation." (p.4)

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The claimed invention does not require "undue experimentation" to use it effectively. I say this in light of the litany of factors the examiner listed which are used to determine whether or not the pending application "satisfies the enablement requirement" or whether or not the claimed invention involves "undue experimentation."

The creative act of understanding the meanings, implications and possible applications of the symbolic models, or apparatuses, has been shown to enhance cognitive functioning as claimed, which are freeform physical symbolic models to spark, inspire and accelerate invention, innovation and problem-solving is taught through the 4-Steps of Metaphorming (Siler, 1997). As we have argued, this proven methodology enables people to continually invent, innovate and create solutions to problems and challenges that we all encounter in real-life (Siler, 2011b). As we've explicitly highlighted and visually documented, these models serve as purposeful visual aids that enable users (from all socio-economic-cultural-educational backgrounds to show-and-tell and share their ideas and creative solutions with anyone in the world at any time for any purpose with measurable results

Here, the claimed method is tied to another class, i.e., the models that are explicitly recited in the patent claims. As duly noted, the invention is comprised of the Four-Step Process [of "Metaphorming," aka Think Like a Genius Process], which is applied to the creative act of making symbolic models and systematically exploring their possible meanings in ways that are personally meaningful and productive and that involve reasonable *due experimentation*. This directed and self-directed experimentation is a core part of the claimed invention, because it provides enriched learning experiences that "enhance cognitive functioning and its manifestation into physical form and translation into useful information." (Siler, 2011b)

I use this phrase, reasonable due experimentation, to contrast the examiner's phrase "undue experimentation," which presumes this is a purely subjective process that involves experimenting with the building materials. Nevertheless, both this self-guided and facilitated experimentation consistently yields measurable outcomes, which have been documented and noted in the peer-reviewed articles submitted here.

Concerning (E) the level of predictability in the art

The applicant contends that a reasonably consistent result can be predictably or reliably assured. He knows this for a fact, having applied the claimed invention in working with Fortunate 500 Companies, including the Technology Pioneers at the World Economic Forum in Davos, Switzerland on innovation-oriented workshops, and having worked with start-up technology companies that are funded by prominent venture-capital organizations that demand and expect reasonably consistent, reliable results with measurable outcomes. (Siler, 2011a; please read this peer-reviewed article, which is referenced with other supporting material for the claimed invention. It attests to this fact, and independent reviewers verified the testimonials.)

Furthermore, the applicant contends that the claimed invention would never have been accepted and applied for ideation and innovation-oriented work for the "Art of Science Learning" Program, which is funded by the National Science Foundation and other leading science organizations that aim to build a 21st Century Science, Technology, Engineering, Mathematics (STEM) Workforce. This program uses arts-based and science-based learning methods, tools, and best practices to build a Curriculum that

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delivers a set of specific, repeatable and reliable practices for incubating and developing innovation. These organizations also expect "reasonably consistent results" that are "predictably or reliably assured." Results that can be rigorously quantitatively and qualitatively evaluated. (Please read this peer-reviewed information on the "Metaphorming" process, which is posted on this official website, funded by the NSF (http://www.artofsciencelearning.org/metaphorming.html), which is referenced with other supporting material for my invention.)

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These references validate the reliability and consistency of using my invention to achieve the desired results of leading businesses and learning organizations and cultural organizations worldwide. In fact, I have been using this claimed invention since I first sought a patent for the method and apparatuses in the mid-1990s.

To further validate the reliability and consistency of the methods and apparatuses described in my patent application, you may be interested to know this fact, as well: My invention was used to help establish "The Five Elements of Discovery" that were noted in writing and visually documented by Procter & Gamble as one of Three Enabling Pillars of the Shopping Revolution" (2001). It was summarized in a P&G document, titled "Leveraging World Class Shopping Experiences," after I had formally presented the methods and apparatuses at a major industry conference by the executives of Procter & Gamble, titled "The Shopping Revolution" Symposium in Cincinnati on March 2, 2000. Procter & Gamble is a results-oriented organization that would never have utilized my invention, if it did not deliver "reasonably consistent results" that can be predictably or reliably assured."

The symbolic models that were created, which were contracted by P&G, synthesized and represented in model-form our exploratory studies of the general public's shopping patterns. Using my invention, we showed and described specifically "what makes a world-class shopping experience," based on objective information and evaluations. It is worth noting that Procter &Gamble used this information and our materials to build on what they learned from the symbolic models and the Think Like a Genius Process (aka, Metaphorming; that is the commercial name we have used over the past two decades to market the claimed invention). If the examiner would like to review any of this supporting material, such as the P&G produced videotape and written materials, the applicant will gladly send a copy.

Clearly, there are "degrees and elements of subjectivity" that are obviously present in each of the prior art examples that the examiner has cited; and yet, they were granted patents—and not because their inventions took precedence over mine.

Concerning (F) the amount of direction provided by the inventor

The claimed invention teaches learners of all ages, backgrounds and cultures how to use their innate critical thinking skills—and their natural sense of curiosity—to creatively construct meanings from their models (Siler, 2011b). It also guides them in discovering new meanings by asking a series of questions either to themselves or to others, which provides users with various self-learning experiences. These enriched learning experiences, in turn, enhance cognitive functioning as claimed by the invention.

In the case of the self-guided, 3-D Authoring Tool, titled "Think Like a Genius" software 1.0 and 2.0, which the applicant and his team collaboratively created to be utilized by the general public, users algorithmically learn (i.e., in a step-by-step process using a general set of rules), thus following

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Art Unit: 3711

problem-solving operations. The applicant has submitted a copy of the "Think Like a Genius" software 2.0, accompanying this letter. A brief overview and demonstration of the software can be found on the menu for the software marked "i" (information).

Concerning G) the existence of working examples

The applicant urges the examiner to please review the supporting materials that accompany the application. The purpose of this supporting material, which I've referenced serves to substantiate the efficacy of the method and apparatuses, and the "reasonably consistent results" that are "predictably or reliably assured." Clearly, Procter & Gamble recognized the invention for the valuable information they were able to ascertain it and build on for their consumer-packaged goods.

This material should assuage the examiner's doubt that the claimed invention actually works in a reasonably reliable manner. The applicant points to the fact the world's largest consumer-goods packager utilized the insights and discoveries gained from exploring this claimed invention. In a formal document they produced, they referenced the claimed method as "one of the Three Enabling Pillars of the Shopping Revolution."

The applicant offers to introduce this evidence, which can serve as affidavits from users. At the very least, the peer-reviewed documents referenced in this letter are submitted to the examiner for his review.

Concerning (H) the quality of experimentation needed to make or use the invention

The experiences of using the claimed invention are significantly different from Steve Knobloch's description of the Design Technology in his article on Techtown (p.43): "The process that students use in solving a design problem involves several steps. Each step can be evaluated as the students work. Define Need/Challenge. Research. Plan/Design. Gather Materials. Build Design. Test and Evaluate. The learning for understanding which took place can be best described by a fifth grade student, who, after three weeks of sorting and analyzing and exploring, asked, 'why are we doing this?' I answered, "To give every student in the school an opportunity to use the knowledge gained in all subjects and to apply that knowledge to a real world application. To take your math skills, language skills, research skills, science skills, social studies skills, and use them while building this town....Eventually, the project made sense to everyone."

The fact that "after three weeks of sorting and analyzing and exploring... "why are we doing this?"— one can reasonably infer that there was "undue experimentation" as well as a high degree of subjective interpretation(s) with regard to the process of making the Techtown. The words, eventually and making sense of this activity belie the real emotions and feelings of this student and, probably, may of her peers, who groped to figure out what exactly they were supposed to be learning from this adventure in innovative thinking.

The applicant points out that the experience of constructing this Techntown is also different from building physical symbolic models or virtual (i.e., digital or electronic) models using computer-generated visualization and animation tools that render 2-D and 3-D objects.

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Overall, the prior art cited by the examiner is related to, but significantly different from, the claimed invention, in the same way apples and oranges are related to one another as fruits but offer profoundly different taste and other sensory experiences. The prior art are related only in so far as they build on the "Constructivists" theories of learning and approaches to teaching that were popularized by these noted psychologists and learning theorists, Jean Piaget and Lev Vygotsky, but that originated over two thousand years ago with the Greek philosopher and scientist, Aristotle (384–322 bc) who was a student of Plato (c. 429–c. 347 bc), who was a disciple of Socrates (c. 469 BC – 399 BC). Collectively, their theories of learning-by-doing and questioning-everything-we-learn have influenced nearly every learning, teaching and building system used today by contemporary Constructivists. Technically speaking, every U.S. Patent awarded for methods that enable a person to learn and create things in new ways—including John Harhen, Morse et al., Victor et al. as well as other inventors—have this great precedence to point to: Socrates and other ancient Greek educators (Siler, 2011).

Finally, the examiner had rejected the claims as being obvious over the Technotown article, which describes a model city made by students. There is world of differences both experientially and productively – meaning, in terms of the physical products and objects created using my invention—in making 3-D representations of objects that are created using Solid-Modeling, computer-aided design (CAD) tools, compared to making 3-D (or 4-D or "5-D" Symbolic Models using the hands-on physical and electronic tools I have described in Claims for the pending application that enable people to physically express and give form to their ideas.

The differences are as obvious as comparing "Apples" (i.e., electronic models made with CAD software, which is distinctly more literal, illustrative and representational in nature) to "Oranges" (i.,e., the myriad types of free-form, expressive and interpretive models using my invention. The Claims 1-18 in the pending application also make reference to the Think Like a Genius software (versions 1.0 and 2.0); that is, the method and apparatuses outlined in my pending application, which, I believe, offer different experiences that enhance cognitive functioning. These differences are of patentable significance.

It is to be remembered that one of the biggest and most defining differences between the prior art cited by the examiner and the claimed invention is that the former is largely "illustrative" versus "interpretative" artifacts (i.e., visualizations, representations, demonstrations, etc.). The claimed invention represents information in the form of 2-D, 3-D, 4-D, and "5-D" Symbolic Models, which are comprised of a spectrum of feelings and emotions that cannot be adequately conveyed or communicated as *illustrations*. They use a fair and reasonable amount of ambiguity that is very useful for stimulating people creativity, curiosity and discovery, and intuition among other facets of the creative process that help enhance cognitive functioning, which is essential for idea-generation, knowledge-creation and sharing, critical thinking, problem posing and problem solving. The differences between illustrative and interpretative artifacts further differentiates the claimed invention from the illustrative models and modeling methods described in Knobloch's article on "Technotown," and John Harhen's invention, as well as the invention of Morse et al. and Victor et al.

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Conclusion

My comments are respectfully submitted. The examiner's evaluation of the claimed invention's efficacy should also include the references submitted here, which document the effectiveness and usefulness of the claimed invention as it has been extensively tested in various businesses and learning organizations.

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The applicant has considered the various factors the examiner listed in the latest Office Action Summary, considering the enablement requirement, among them: (A) the breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quality of experimentation needed to make or use the invention. I have taken these factors into account in determining that only due experimentation would be necessary for a person of ordinary skill in the art to be able to practice the claimed method.

Respectfully submitted,

Todd Lael Siler, Applicant

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. (1997) Think Like A Genius, New York: Bantam Books.

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Information Disclosure

In providing supportive material for the pending patent application, I listed several peer-reviewed articles that verify and substantiate the claims described in the pending application. Moreover, they address each of the seven factors the examiner highlighted that determine the enablement requirement. It's important to the applicant this information be considered by the Office of the Commissioner, as it complies with the requirements noted in M.P.E.P. 609.04 (a). The applicant will remove the list of references in the specification, which, as the examiner advised, is "not a proper information disclosure according to 37 CFR 1.98(b).

Page 12

References

The "Art of Science Learning" Conferences, Learning Worlds Institute, New York City http://www.artofsciencelearning.org/metaphorming.html

Todd Siler, (2011a) 'Pointing your way to success through metaphorming,' in Ted Buswick and Harvey

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------|----------------|----------------------|---------------------|------------------|
| 12/579,648 | 10/15/2009 | Todd Lael Siler | 73360-ICON2 | 8763 |
| Todd L. Siler | 7590 02/01/201 | 6 | EXAM | INER |
| Suite F2-200 4950 S. Yosem | ite | | FERNSTROM, KURT | |
| Greenwood Vil | lage, CO 80111 | | ART UNIT | PAPER NUMBER |
| | | | 3711 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 02/01/2016 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE



Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspto.gov

In re Application of :

TODD LAEL SILER :

Application No. 12/579,648 : DECISION ON PETITION

Filed: 10/15/2009 :

Attorney Docket No 73360-ICON2

This is a decision on the renewed petition under 37 CFR 1.137(a) filed November 18, 2015, for revival of the application abandoned unintentionally.

The renewed petition is **DISMISSED**.

Any request for reconsideration of this decision must be submitted within TWO (2) MONTHS from the mail date of this decision. Extensions of time under 37 CFR 1.136(a) are permitted. The reconsideration request should include a cover letter entitled "Renewed Petition under 37 CFR 1.137(a)." No additional petition fee is necessary.

The application became abandoned for failure to file a timely and proper reply within the meaning of 37 CFR 1.113 to the final Office action of March 23, 2014, which set a three-month shortened statutory period for response. Petitioner did not obtain any extensions of time under the provisions of 37 CFR 1.136(a). Accordingly, the application became abandoned by law on June 24, 2014. The Office mailed a Notice of Abandonment on December 15, 2014.

A grantable petition under 37 CFR 1.137(a) must be accompanied by:

- (1) The reply required to the outstanding Office action or notice, unless previously filed;
- (2) The petition fee as set forth in § 1.17(m); and,
- (3) A statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

The present renewed petition does not satisfy requirement (1) above.

After consulting with the Examiner, the Examiner determined that petitioner failed to submit a proper reply with the present petition in response to the final Office action.

Art Unit: OPET

In a nonprovisional application abandoned for failure to reply to a final action, the reply required for consideration of a petition to revive must be: (1) a Notice of Appeal (and appeal fee required by 37 CFR 41.20(b)(2)); (2) an amendment that *prima facie* places the application in condition for allowance; (3) a Request for Continued Examination and submission (37 CFR 1.114); or (4) the filing of a continuing application under 37 CFR 1.53(b). See MPEP 711.03(c)(III)(A)(2). With any renewed petition, petitioner must submit a proper reply to the outstanding final Office action. Petitioner may contact the Inventors Assistance Center at 800-786-9199 or the Examiner with questions regarding the filing of an appropriate reply.

Page 2

Further correspondence with respect to this matter should be addressed as follows:

By mail: Mail Stop Petition

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

By FAX: (571) 273-8300

Attn: Office of Petitions

By hand: Customer Service Window

Randolph Building 401 Dulany Street Alexandria, VA 22314

Correspondence may also be submitted via the electronic filing system of the USPTO.

Telephone inquiries related to this decision may be directed to the undersigned at (571) 272-3211. Question regarding examination of the application should be directed to the Technology Center Art Unit.

/Christina Tartera Donnell/

Christina Tartera Donnell Attorney Advisor Office of Petitions **Office of Petitions: Routing Sheet**



Application No. 12/579,648

This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application, as indicated below. For details of this decision, please see the document PET.OP.DEC filed on the same date as this document.

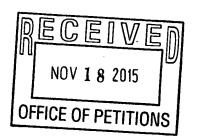
GRANTED

X DISMISSED

DENIED

| Office of Petitions: Dec | ision Count Sheet | Mailing Month | |
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| Application No. | 12579648 | * 1 2 5 7 9 6 4 8 * | |
| For US serial numbers: enter number only, no slashes or commas. Ex: 10123456 For PCT: enter "51+single digit of year of filing+last 5 numbers", Ex. for PCT/US05/12345, enter 51512345 | | | |
| Deciding Official: | DONNELL, CHRIS | STINA | |
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| Initials of Approving C | fficial (if required) | If more than 3 decisions, attach 2nd count sheet & mark this box | |
| Printed on: 1/29/2016 | | ffice of Petitions Internal Document - Ver. 5.0 | |

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November 1, 2015

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Art Unit: OPET Filed: October 15, 2009 Attorney Docket No. 73360-ICON2

"Renewed Petition under 37 CFR 1.137(a)"

Dear Thurman K. Page, Petitions Examiner:

On Saturday October 31, 2015, I received your letter dismissing my request (filed February 9, 2015) to revive my Patent Application No. 12/579,648.

This letter serves as my statement attesting that *I never abandoned my application* or 'failed to timely file a reply to within the meaning of 37 CFR 1.113 to the final Office action of March 23, 2014.' In fact, any delay between the original deadline and the filing of the corrected applications—as well as any other delay since then as a result—was absolutely unintentional.

I hereby request the withdrawal of the holding of Abandonment in the above-identified application on the grounds that the abandonment was unintentional. This one page petition requests reinstatement for unintentional abandonment.

This letter of petition is accompanied by a PDF, titled "Application/Control Number: 12/579,648, Art Unit 3711" (dated July 18, 2013), which was addressed to Examiner Kurt Fernstrom and responded to his Office Action Summary. I have no record of the Examiner's rebuttal. If this record exists, kindly send it to my office so I may have the opportunity to discuss it with you. That would be greatly appreciated.

I will call Christina Tartera Donnell, Attorney Advisor for the Office of Petitions (571-272-3211) to schedule a time to discuss this patent application with you.

I thank you in advance for your help and look forward to speaking with you.

Todd Lael Siler

Petitioner



United States Patent and Trademark Office

Received 1 10/31/15.

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450

Alexandria NOV 1 8 2015

DECISION ON PETITION:

In re Application of TODD LAEL SILER Application No. 12/579,648

Filed: 10/15/2009

Attorney Docket No. 73360-ICON2

This is a decision on the petition under 37 CFR 1.137(a), filed February 9, 2015, to revive the above-identified application.

The petition is **DISMISSED**.

Any request for reconsideration of this decision must be submitted within TWO (2) MONTHS from the mail date of this decision. Extensions of time under 37 CFR 1.136(a) are permitted. The reconsideration request should include a cover letter entitled "Renewed Petition under 37 CFR 1.137(a)." No additional petition fee is necessary.

The application became abandoned for failure to timely file a reply within the meaning of 37 CFR 1.113 to the final Office action of March 23, 2014, which set a three-month shortened statutory period for response. Petitioner did not obtain any extensions of time under the provisions of 37 CFR 1.136(a). Accordingly, the application became abandoned on June 24, 2014. The Office mailed a Notice of Abandonment on December 15, 2014.

A grantable petition under 37 CFR 1.137(a) must be accompanied by:

- (1) The reply required to the outstanding Office action or notice, unless previously filed;
- (2) The petition fee as set forth in § 1.17(m); and,
- (3) A statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

The present petition does not satisfy requirement (1) above.

After consulting with the Examiner, the Office finds that petitioner failed to submit a proper reply in response to the final Office action.

Art Unit: OPET

In a nonprovisional application abandoned for failure to reply to a final action, the reply required for consideration of a petition to revive must be a Notice of Appeal (and appeal fee required by 37 CFR 41.20(b)(2)), an amendment that *prima facie* places the application in condition for allowance, a Request for Continued Examination and submission (37 CFR 1.114), or the filing of a continuing application under 37 CFR 1.53(b). See MPEP 711.03(c)(III)(A)(2). With any renewed petition, petitioner must submit a proper reply to the outstanding final Office action.

Further correspondence with respect to this matter should be addressed as follows:

By mail:

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(571) 273-8300

Attn: Office of Petitions

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Correspondence may also be submitted via the electronic filing system of the USPTO.

Telephone inquiries related to this decision may be directed to the undersigned at (571) 272-3211.

/Christina Tartera Donnell/

Christina Tartera Donnell Attorney Advisor Office of Petitions Page 2



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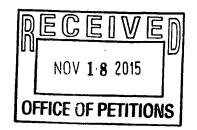
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------|-------------|----------------------|---------------------|------------------|
| 12/579,648 | 10/15/2009 | Todd Lael Siler | 73360-ICON2 | 8763 |
| 7590 10/28/2015 | | | EXAMINER | |
| Todd L. Siler Suite F2-200 | | | FERNSTROM, KURT | |
| 4950 S. Yosem | ite | | | |
| Greenwood Village, CO 80111 | | | ART UNIT | PAPER NUMBER |
| | | | 3711 | |
| | | 1 | MAIL DATE | DELIVERY MODE |
| | | | 10/28/2015 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Art Unit: 3711

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Page 1

July 18, 2013

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2 Mail Date 6/26/2013

"Application/Control Number: 12/579,648. Art Unit: 3711"

Dear Kurt Fernstrom, Examiner:

Thank you for giving me the opportunity to respond to the Office Action Summary (6/26/2013). This letter is intended to clarify the key points the examiner has flagged for further clarification of Claims 1-17, which are currently pending in the application.

I have addressed here the main factors the examiner listed in considering the enablement requirement, among them: (A) the breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quality of experimentation needed to make or use the invention. Taking into account each of these factors, I have determined that with *due experimentation* a person of ordinary skill in the art can practice the claimed method. I've concluded this because, in reality, they actually do. In testing the claimed invention, people are able to use the method and apparatuses exactly as I have described. That is to say, the invention actually works with individuals, groups and teams with "reasonably consistent results that can be predictably or reliably assured," to borrow the words of the examiner.

In sum: this invention has been reduced to practice. A person of ordinary skill in the art to which this invention pertains can use the invention to achieve a desired goal or objective (Siler, 2011a&b). In evaluating the method and apparatuses, the users have noted how they utilize both creativity and

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critical thinking, which underlie subjectivity and objectivity respectively; consequently, the claimed invention enhances cognitive, affective, expressive and communicative functions in a natural way.

This is important to note, given that the examiner has questioned this reality, stating: "The claimed method requires such a degree of subjective human judgment that a reasonably consistent result cannot be predictably or reliably assured." In testing the claimed invention, I have learned that there is "a level of predictability of thought processes in a group of people," to use the examiner's phrase, and there is ample evidence that the claimed method does indeed foster creativity and innovative thinking in measurable ways.

Moreover, I explain how the user's subjectivity is counterbalanced and complemented by the user's objectivity, which is directed and exercised through critical thinking. The examiner's position is that "the degree of subjectivity far outweighs all other factors in determining that the claimed invention requires undue experimentation to foster thinking in a group of participants" (pp.5&6). After extensively testing the invention, the applicant respectfully disagrees with this position and requests a conversation with the examiner, in order to present the evidence.

Concerning: (A) the breadth of the claims

The applicant believes that the specification in the pending application "contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention." (35 USC 101)

The applicant contends that the subject matter described in the specification does, indeed, enable one skilled in the art that "the claimed invention is directed to statutory matter (under 35 U.S.C. 101). This assessment is based on the fact that Claims 1-17 does comply with the written description requirement. They are composed of words with well-defined and commonly understood meanings. They're obviously accessible to any skilled in the art of using the claimed invention. Furthermore, the applicant does not introduce new subject matter, which is not already adequately described in the specification.

The claims are statutory subject matter, because the method and apparatuses described in the pending application adequately describe a non-obvious process that results in the production of myriad physical products (i.e., apparatuses). These products both embody and cultivate "enhanced cognitive, affective, expressive and communicative functions" in a person.

The examiner had rejected the claims as including information that was not described in the specification when, in fact, it was described there. The applicant believes the problem lies in how the examiner has interpreted the language (or "verbiage"): in a way that limits the meanings and implications of the words that the applicant uses to describe the prescribed my method of enhancing cognitive functioning, and the way in which the method is used to make the symbolic models and apply one's understanding of them.

In reviewing the terminology in the specifications, the applicant believes he has answered the examiner's questions and addressed his objections without amending or adding any new terms.

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Concerning: (B) the nature of the invention

In the Office Action Summary (May 17, 2012), the examiner wrote: "the claimed invention is a method for enhancing cognitive functions." I would like to correct this statement by including these two words: and apparatuses. The apparatuses are not only core to the title of the pending application but, more importantly, they're essential ways and means of enhancing cognitive functions, as noted in the method claims. That structured process of the claimed method and its tangible products (i.e., symbolic models or apparatuses) constitute the invention, as noted in Claims 1-17, which are pending in the application.

This is an important point of clarification, because it marks the bane of the examiner's objection to this invention. The examiner wrote, wrongly in my view, that "... even if claim 1 were amended to clearly recite the formation of physical models, these models steps are tangential to the invention, as the objective of the invention is not the creation of the models themselves. Rather, the claim result of the invention is that cognitive, affective, expressive and communicative functions in a person are enhanced. Thus, the invention is not a statutory process is patentable under 35 USC 101." (p.3)

The "models steps" are not "tangential to the invention." Rather, they play a central role in enhancing cognitive, affective, expressive and communicative functions in a person as claimed. They are key tools for achieving the objective of the invention.

I respectfully ask the examiner to re-consider this essential connection between the method and the production of apparatuses, which use the method as described. When taken together, the method and apparatuses do enhance these neuropsychological functions in human systems as claimed. This conclusion is based on my research and practices over the past three decades, during which time I have used the method and apparatuses in a directed way on a wide range of projects (Siler, 1997, 2007, 2011a&b).

The claimed result is a cognitive enhancement, which is shown and demonstrated through the use of both the method and apparatuses. The applicant believes the examiner is in error presuming that the claimed result of the invention is not the model but a cognitive enhancement; consequently, the claims are not directed to statutory subject matter.

To be perfectly clear, the claimed results are actually two-fold parts: (1) the "Enhancement of Cognitive Functioning" and (2) "Its Manifestation Into Physical Form and Translation Into Useful Information." This second part of the results concerns the tangible manifestations of cognitive functioning, which are evidenced by the models. The "usefulness" of the information (data, knowledge, concepts, ideas, events, experiences, etc.) that is manifested in the models, refers to how well the information helps a person make informed decisions, or develop and apply an idea, or utilize the experience of creating and exploring, and translating the meanings of the symbolic models in personally useful and purposeful ways. These physical processes and products have tangible outcomes with measurable results (Siler, 2011a&b).

As the title of my patent application makes plainly evident, the claimed method entails making physical symbolic models that are explicitly referred to and described as "apparatuses." By entails, I mean this method has a "logically necessary consequence"—namely, the creation of apparatuses whose translation into useful information can be objectively assessed and evaluated.

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In this way, the multi-dimensional models *manifest* cognitive, affective, expressive and communicative functions in a person. They make tangible and visible the otherwise intangible and invisible functions of the human brain, thus turning the hidden world of neuropsychological systems into useful and practical artifacts that inform our decisions and enhance the quality of our lives.

The claimed invention directs people how to use the symbolic models they create to show and constructively discuss a world of information that cannot easily be described or rendered with words and numbers alone. The models make tangible what is on people's minds, helping them more effectively express and communicate their issues, problems, concerns, challenges, and other personally meaningful things that pre-occupy and absorb their attention.

We have demonstrated in various media (videos, DVDs, software, etc.) how these constructed apparatuses (i.e., physical, symbolic models) help enhance and advance a user's work in concrete ways and with tangible results that are measurable (Siler, 1997). The models afford users the opportunity to see the creation of new knowledge or a new discovery or innovation, evaluating, analyzing and measuring its significance and relevance.

The models guide and inform the decision-making process—thus, improving it (Siler, 2011a). They help people better understand their goals and implementation plans for achieving them. Moreover they make it easier and more effective to communicate their ideas so that everyone can understand them better and act on them in a productive manner.

Regarding process claims, the law requires that the claims include something tangible. Clearly, the multi-dimensional, symbolic models are tangible. The models are clearly composed of physical objects and organized in such a way that anyone can touch them, point to and point out what they are seeing in the most tangible way. Even a physically blind person can *touch* another person's symbolic model that shows the contents of their mind. The law makes it clear that the result of the process needs to be tangible.

In determining the patentability of a method, the law (95 USPQ2d 1001) states that a "process" must be "tied to another statutory class" (such as a machine or article of manufacture). The physical, multi-dimensional ["5-D"] models, or apparatuses, that users are guided to create constitute physical machines of sorts that are, for all practical purposes, a self-manufactured article.

The examiner has written in his Office Action Summary (p.2): "A claim that recites purely mental steps is not a patentable process. The steps recited in claim 1 include constructing one or more physical or virtual models relating a subject, connecting and transforming some of the model elements, and performing various analytical steps in relation to the model. Because a virtual model can be created in the imagination of a user, all of these method steps amount to the manipulation of abstract ideas, and do not explicitly recite the literal creation or formation of a tangible object. These steps take place entirely within the minds of the users," to quote the examiner.

With all due respect, the applicant believes the examiner is misunderstanding the word "virtual," which neither refers to nor suggests "steps that take place entirely in the minds of the users." This is not the correct reading of "virtual" in the claimed method. In the pending application, I explicitly direct users to

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give form to their thoughts, feelings, knowledge, data, ideas, and experiences in the tangible ways in making these physical symbolic models.

The examiner is broadly interpreting this word virtual in a way that ignores the reality of how this term is used in the vernacular, referring to digital media and computer-generated materials.

In any event, the examiner noted that "virtual" could be redefined to clearly recite physical models. The applicant interprets this to mean creating electronically with computer-aided design tools symbolic models, comprising both abstract and representational information.

When I highlighted in Claim 1, "These physical, symbolic forms can also be represented in virtual reality or electronically, with the aid of computer-graphics, holography and other media technology," I am using this word "virtual" in a familiar, mainstream context to describe digital realities modeled *not in a human mind*, but rather in computers that create a spectrum of virtual objects: from vector graphics that visualize 3-D prototypes to experiential Virtual Reality systems that immerse users in a world of virtual visual objects.

Concerning: (C) the state of the prior art

"Any person skilled in the art to which the claimed invention pertains" (35 USC 101)—or any person *unskilled in the arts*—can create, show, describe, and express their ideas, knowledge, points of view in emotionally rich and evocative ways. The expressive objects they make—as well as the whole experience of using the method to make the apparatuses—dramatically contrast the prior art the examiner has cited in these three U.S. Patent Documents (US-5,406,477, John Harhen, Classification 703/6; US-6,626,677. Morse et al. Classification 434/237; US-2002/0103774. Victor et al. Classification 706/11) and these two Non-Patent Documents ("TECHNOTOWN – A LEGO Experience," The Technology Teacher, pp. 13-15, September 1994; and "The Laboratory Schools LEGO-LOGO Project," 1995 [retrieved online July 7, 2005]).

Users of the applicant's invention experience a substantially different sense of creative freedom and openness to wonder, using the claimed method and apparatuses to make their ideas and knowledge tangible. There are no set or standard objects to construct, such as the Lego blocks and other primitives, in the way that constrains the aesthetic experience. The Lego structures are all fixed, modular units of forms and shapes that are visually and tactilely regular in design. Like many building blocks that utilize standardized structures, such as those in computer-aided object-oriented models, they offer a very different emotional and aesthetic experience than the apparatuses created with the basic and common building materials used in the claimed invention.

The visual qualities and physical characteristics of these LEGO models stand in sharp contrast to those physical qualities of the materials used in the making of symbolic models, or apparatuses, using the applicant's claimed invention. What is more, the LEGO language of forms is much more constrictive than the forms and shapes of materials used in the applicant's invention, which directly impact and influence the enhancement of cognitive, affective, expressive, and communicative skills. It is the applicant's informed opinion that this LEGO language of forms hampers and limits many people's creativity rather than enhancing and expanding it. This

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observation is based on the applicant's lifetime experiences in the visual arts and professional expertise.

It can be argued that even when using the LEGO modular forms, whether physically or electronically composed with the aid of computers, users still have to deal with the same issues of subjective [value] judgments regarding their aesthetic appeal as the claimed invention. And, that these judgments are a natural part of the creative process underlying invention, innovation and discovery. Furthermore, the use of these LEGO objects as building materials frequently entail undue experimentation.

For instance, in using LEGO's Technic II, fourth graders are tasked with building gears and pulleys, using a limited selection of materials with which to work in exploring a problem while becoming familiar with the function and names of various pieces." ("The Laboratory Schools LEGO-LOGO Project," 1995, p.6). This self-guided exploration often involves undue experimentation. Even when this exploration is learned algorithmically (i.e., in a step-by-step process using a general set of rules users followed in problem-solving operations).

My point is this: The quality, variety and consistent richness of the aesthetic experiences ultimately determines the degree to which one method succeeds at enhancing cognitive functioning whereas another method with more constraints may not by comparison.

A person using one million LEGO pieces to construct a representational object such as a town, as in the case of "Technotown, the School-Wide Design Technology Project" ("TECHNOTOWN – A LEGO Experience," The Technology Teacher, pp. 13-15, September 1994, p.39) versus a person using one million common wooden dowels to make an abstract, symbolic model of "Life" are going to have entirely different aesthetic experiences that offer varying degrees of enhancement to cognitive functioning. The applicant contrasts this Real Life Experience with a LEGO Experience. From my personal and professional experiences making symbolic models for more than forty years—and having formally studied the neuropsychology of these different creative activities and applied this explicit knowledge in business and learning organizations worldwide—I can say confidently that these are complementary methods, tools and experiences that are naturally related, but very different, in form, substance, experiences, and impact on cognitive functioning And these obvious and subtle experiential differences make up the different types of patentable inventions made available today.

This statement is generalizable to each of the examples of prior art the examiner presented the applicant for review. Clearly, there are "elements of subjectivity" that are obviously present in each of the prior art that the examiner has granted U.S. Patents.

Concerning (D) the level of one of ordinary skill

The examiner rejected "Claims 1-17 (under 35 U.S.C. 112, first paragraph), as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation." (p.4)

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The claimed invention does not require "undue experimentation" to use it effectively. I say this in light of the litany of factors the examiner listed which are used to determine whether or not the pending application "satisfies the enablement requirement" or whether or not the claimed invention involves "undue experimentation."

The creative act of understanding the meanings, implications and possible applications of the symbolic models, or apparatuses, has been shown to enhance cognitive functioning as claimed, which are freeform physical symbolic models to spark, inspire and accelerate invention, innovation and problem-solving is taught through the 4-Steps of Metaphorming (Siler, 1997). As we have argued, this proven methodology enables people to continually invent, innovate and create solutions to problems and challenges that we all encounter in real-life (Siler, 2011b). As we've explicitly highlighted and visually documented, these models serve as purposeful visual aids that enable users (from all socio-economic-cultural-educational backgrounds to show-and-tell and share their ideas and creative solutions with anyone in the world at any time for any purpose with measurable results

Here, the claimed method is tied to another class, i.e., the models that are explicitly recited in the patent claims. As duly noted, the invention is comprised of the Four-Step Process [of "Metaphorming," aka Think Like a Genius Process], which is applied to the creative act of making symbolic models and systematically exploring their possible meanings in ways that are personally meaningful and productive and that involve reasonable *due experimentation*. This directed and self-directed experimentation is a core part of the claimed invention, because it provides enriched learning experiences that "enhance cognitive functioning and its manifestation into physical form and translation into useful information." (Siler, 2011b)

I use this phrase, reasonable due experimentation, to contrast the examiner's phrase "undue experimentation," which presumes this is a purely subjective process that involves experimenting with the building materials. Nevertheless, both this self-guided and facilitated experimentation consistently yields measurable outcomes, which have been documented and noted in the peer-reviewed articles submitted here.

Concerning (E) the level of predictability in the art

The applicant contends that a reasonably consistent result can be predictably or reliably assured. He knows this for a fact, having applied the claimed invention in working with Fortunate 500 Companies, including the Technology Pioneers at the World Economic Forum in Davos, Switzerland on innovation-oriented workshops, and having worked with start-up technology companies that are funded by prominent venture-capital organizations that demand and expect reasonably consistent, reliable results with measurable outcomes. (Siler, 2011a; please read this peer-reviewed article, which is referenced with other supporting material for the claimed invention. It attests to this fact, and independent reviewers verified the testimonials.)

Furthermore, the applicant contends that the claimed invention would never have been accepted and applied for ideation and innovation-oriented work for the "Art of Science Learning" Program, which is funded by the National Science Foundation and other leading science organizations that aim to build a 21st Century Science, Technology, Engineering, Mathematics (STEM) Workforce. This program uses arts-based and science-based learning methods, tools, and best practices to build a Curriculum that

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delivers a set of specific, repeatable and reliable practices for incubating and developing innovation. These organizations also expect "reasonably consistent results" that are "predictably or reliably assured." Results that can be rigorously quantitatively and qualitatively evaluated. (Please read this peer-reviewed information on the "Metaphorming" process, which is posted on this official website, funded by the NSF (http://www.artofsciencelearning.org/metaphorming.html), which is referenced with other supporting material for my invention.)

These references validate the reliability and consistency of using my invention to achieve the desired results of leading businesses and learning organizations and cultural organizations worldwide. In fact, I have been using this claimed invention since I first sought a patent for the method and apparatuses in the mid-1990s.

To further validate the reliability and consistency of the methods and apparatuses described in my patent application, you may be interested to know this fact, as well: My invention was used to help establish "The Five Elements of Discovery" that were noted in writing and visually documented by Procter & Gamble as one of Three Enabling Pillars of the Shopping Revolution" (2001). It was summarized in a P&G document, titled "Leveraging World Class Shopping Experiences," after I had formally presented the methods and apparatuses at a major industry conference by the executives of Procter & Gamble, titled "The Shopping Revolution" Symposium in Cincinnati on March 2, 2000. Procter & Gamble is a results-oriented organization that would never have utilized my invention, if it did not deliver "reasonably consistent results" that can be predictably or reliably assured."

The symbolic models that were created, which were contracted by P&G, synthesized and represented in model-form our exploratory studies of the general public's shopping patterns. Using my invention, we showed and described specifically "what makes a world-class shopping experience," based on objective information and evaluations. It is worth noting that Procter &Gamble used this information and our materials to build on what they learned from the symbolic models and the Think Like a Genius Process (aka, Metaphorming; that is the commercial name we have used over the past two decades to market the claimed invention). If the examiner would like to review any of this supporting material, such as the P&G produced videotape and written materials, the applicant will gladly send a copy.

Clearly, there are "degrees and elements of subjectivity" that are obviously present in each of the prior art examples that the examiner has cited; and yet, they were granted patents—and not because their inventions took precedence over mine.

Concerning (F) the amount of direction provided by the inventor

The claimed invention teaches learners of all ages, backgrounds and cultures how to use their innate critical thinking skills—and their natural sense of curiosity—to creatively construct meanings from their models (Siler, 2011b). It also guides them in discovering new meanings by asking a series of questions either to themselves or to others, which provides users with various self-learning experiences. These enriched learning experiences, in turn, enhance cognitive functioning as claimed by the invention.

In the case of the self-guided, 3-D Authoring Tool, titled "Think Like a Genius" software 1.0 and 2.0, which the applicant and his team collaboratively created to be utilized by the general public, users algorithmically learn (i.e., in a step-by-step process using a general set of rules), thus following

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problem-solving operations. The applicant has submitted a copy of the "Think Like a Genius" software 2.0, accompanying this letter. A brief overview and demonstration of the software can be found on the menu for the software marked "i" (information).

Concerning G) the existence of working examples

The applicant urges the examiner to please review the supporting materials that accompany the application. The purpose of this supporting material, which I've referenced serves to substantiate the efficacy of the method and apparatuses, and the "reasonably consistent results" that are "predictably or reliably assured." Clearly, Procter & Gamble recognized the invention for the valuable information they were able to ascertain it and build on for their consumer-packaged goods.

This material should assuage the examiner's doubt that the claimed invention actually works in a reasonably reliable manner. The applicant points to the fact the world's largest consumer-goods packager utilized the insights and discoveries gained from exploring this claimed invention. In a formal document they produced, they referenced the claimed method as "one of the Three Enabling Pillars of the Shopping Revolution."

The applicant offers to introduce this evidence, which can serve as affidavits from users. At the very least, the peer-reviewed documents referenced in this letter are submitted to the examiner for his review.

Concerning (H) the quality of experimentation needed to make or use the invention

The experiences of using the claimed invention are significantly different from Steve Knobloch's description of the Design Technology in his article on Techtown (p.43): "The process that students use in solving a design problem involves several steps. Each step can be evaluated as the students work. Define Need/Challenge. Research. Plan/Design. Gather Materials. Build Design. Test and Evaluate. The learning for understanding which took place can be best described by a fifth grade student, who, after three weeks of sorting and analyzing and exploring, asked, 'why are we doing this?' I answered, "To give every student in the school an opportunity to use the knowledge gained in all subjects and to apply that knowledge to a real world application. To take your math skills, language skills, research skills, science skills, social studies skills, and use them while building this town....Eventually, the project made sense to everyone."

The fact that "after three weeks of sorting and analyzing and exploring... why are we doing this?'— one can reasonably infer that there was "undue experimentation" as well as a high degree of subjective interpretation(s) with regard to the process of making the Techtown. The words, eventually and making sense of this activity belie the real emotions and feelings of this student and, probably, may of her peers, who groped to figure out what exactly they were supposed to be learning from this adventure in innovative thinking.

The applicant points out that the experience of constructing this Techntown is also different from building physical symbolic models or virtual (i.e., digital or electronic) models using computer-generated visualization and animation tools that render 2-D and 3-D objects.

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Overall, the prior art cited by the examiner is related to, but significantly different from, the claimed invention, in the same way apples and oranges are related to one another as fruits but offer profoundly different taste and other sensory experiences. The prior art are related only in so far as they build on the "Constructivists" theories of learning and approaches to teaching that were popularized by these noted psychologists and learning theorists, Jean Piaget and Lev Vygotsky, but that originated over two thousand years ago with the Greek philosopher and scientist, Aristotle (384–322 bc) who was a student of Plato (c. 429–c. 347 bc), who was a disciple of Socrates (c. 469 BC – 399 BC). Collectively, their theories of learning-by-doing and questioning-everything-we-learn have influenced nearly every learning, teaching and building system used today by contemporary Constructivists. Technically speaking, every U.S. Patent awarded for methods that enable a person to learn and create things in new ways—including John Harhen, Morse et al., Victor et al. as well as other inventors—have this great precedence to point to: Socrates and other ancient Greek educators (Siler, 2011).

Finally, the examiner had rejected the claims as being obvious over the Technotown article, which describes a model city made by students. There is world of differences both experientially and productively – meaning, in terms of the physical products and objects created using my invention—in making 3-D representations of objects that are created using Solid-Modeling, computer-aided design (CAD) tools, compared to making 3-D (or 4-D or "5-D" Symbolic Models using the hands-on physical and electronic tools I have described in Claims for the pending application that enable people to physically express and give form to their ideas.

The differences are as obvious as comparing "Apples" (i.e., electronic models made with CAD software, which is distinctly more literal, illustrative and representational in nature) to "Oranges" (i.,e., the myriad types of free-form, expressive and interpretive models using my invention. The Claims 1-18 in the pending application also make reference to the Think Like a Genius software (versions 1.0 and 2.0); that is, the method and apparatuses outlined in my pending application, which, I believe, offer different experiences that enhance cognitive functioning. These differences are of patentable significance.

It is to be remembered that one of the biggest and most defining differences between the prior art cited by the examiner and the claimed invention is that the former is largely "illustrative" versus "interpretative" artifacts (i.e., visualizations, representations, demonstrations, etc.). The claimed invention represents information in the form of 2-D, 3-D, 4-D, and "5-D" Symbolic Models, which are comprised of a spectrum of feelings and emotions that cannot be adequately conveyed or communicated as *illustrations*. They use a fair and reasonable amount of ambiguity that is very useful for stimulating people creativity, curiosity and discovery, and intuition among other facets of the creative process that help enhance cognitive functioning, which is essential for idea-generation, knowledge-creation and sharing, critical thinking, problem posing and problem solving. The differences between illustrative and interpretative artifacts further differentiates the claimed invention from the illustrative models and modeling methods described in Knobloch's article on "Technotown," and John Harhen's invention, as well as the invention of Morse et al. and Victor et al.

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Information Disclosure

In providing supportive material for the pending patent application, I listed several peer-reviewed articles that verify and substantiate the claims described in the pending application. Moreover, they address each of the seven factors the examiner highlighted that determine the enablement requirement. It's important to the applicant this information be considered by the Office of the Commissioner, as it complies with the requirements noted in M.P.E.P. 609.04 (a). The applicant will remove the list of references in the specification, which, as the examiner advised, is "not a proper information disclosure according to 37 CFR 1.98(b).

References

The "Art of Science Learning" Conferences, Learning Worlds Institute, New York City http://www.artofsciencelearning.org/metaphorming.html

Todd Siler, (2011a) 'Pointing your way to success through metaphorming,' in Ted Buswick and Harvey Seifter (Eds.), "Creatively Intelligent Companies and Leaders: Arts-based Learning for Business," *Journa of Business Strategy*' Vol. 31 No. 4, 2011, pp. 47-58, ISSN 0275-6668.

| (2011b) "The ArtScience Program for Realizing Human Potential," <i>Leonardo Journal for Art</i> , <i>Science, Technology</i> , Issue 44:5 (October, 2011); pp.417–424 + 389 color (Cambridge, MA: The MIT Press) http://www.leonardo.info/leoinfo.html |
|--|
| (2007) "Think Like A Genius Process: Realizing Human Potential Through the Purposeful Play of Metaphorming," [pp. 288-293 & 697A] in <i>The Change Handbook: Group Methods for Shaping the Future</i> , 2 nd Edition. (San Francisco: Berrett-Koehler, edited by Peggy Holman, Tom Devane, and Steven Cady, Ph.D. |
| (2002)"Metaphorming Your Company: Leading with the Next Generation of Brainstorming Tools," essay in <i>Leader To Leader</i> magazine of the Peter F. Drucker Foundation, Hesselbein & Company (San Francisco: Jossey-Bass / A Wiley Company) Spring 2002, pp. 15-19. |
| . (1997) Think Like A Genius, New York: Bantam Books. |

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Conclusion

My comments are respectfully submitted. The examiner's evaluation of the claimed invention's efficacy should also include the references submitted here, which document the effectiveness and usefulness of the claimed invention as it has been extensively tested in various businesses and learning organizations.

The applicant has considered the various factors the examiner listed in the latest Office Action Summary, considering the enablement requirement, among them: (A) the breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quality of experimentation needed to make or use the invention. I have taken these factors into account in determining that only due experimentation would be necessary for a person of ordinary skill in the art to be able to practice the claimed method.

Respectfully submitted,

Todd Lael Siler, Applicant

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UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|----------------|----------------------|---------------------|------------------|
| 12/579,648 | 10/15/2009 | Todd Lael Siler | 73360-ICON2 | 8763 |
| Todd L. Siler | 7590 10/28/201 | 5 | EXAM | INER |
| Suite F2-200 4950 S. Yosemite | | | FERNSTROM, KURT | |
| Greenwood Vil | lage, CO 80111 | | ART UNIT | PAPER NUMBER |
| | | | 3711 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 10/28/2015 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

.....



Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspto.gov

In re Application of :

TODD LAEL SILER :

Application No. 12/579,648 : DECISION ON PETITION

Filed: 10/15/2009 :

Attorney Docket No. 73360-ICON2

This is a decision on the petition under 37 CFR 1.137(a), filed February 9, 2015, to revive the above-identified application.

The petition is **DISMISSED**.

Any request for reconsideration of this decision must be submitted within TWO (2) MONTHS from the mail date of this decision. Extensions of time under 37 CFR 1.136(a) are permitted. The reconsideration request should include a cover letter entitled "Renewed Petition under 37 CFR 1.137(a)." No additional petition fee is necessary.

The application became abandoned for failure to timely file a reply within the meaning of 37 CFR 1.113 to the final Office action of March 23, 2014, which set a three-month shortened statutory period for response. Petitioner did not obtain any extensions of time under the provisions of 37 CFR 1.136(a). Accordingly, the application became abandoned on June 24, 2014. The Office mailed a Notice of Abandonment on December 15, 2014.

A grantable petition under 37 CFR 1.137(a) must be accompanied by:

- (1) The reply required to the outstanding Office action or notice, unless previously filed;
- (2) The petition fee as set forth in § 1.17(m); and,
- (3) A statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

The present petition does not satisfy requirement (1) above.

After consulting with the Examiner, the Office finds that petitioner failed to submit a proper reply in response to the final Office action.

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In a nonprovisional application abandoned for failure to reply to a final action, the reply required for consideration of a petition to revive must be a Notice of Appeal (and appeal fee required by 37 CFR 41.20(b)(2)), an amendment that *prima facie* places the application in condition for allowance, a Request for Continued Examination and submission (37 CFR 1.114), or the filing of a continuing application under 37 CFR 1.53(b). See MPEP 711.03(c)(III)(A)(2). With any renewed petition, petitioner must submit a proper reply to the outstanding final Office action.

Page 2

Further correspondence with respect to this matter should be addressed as follows:

By mail: Mail Stop Petition

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

By FAX: (571) 273-8300

Attn: Office of Petitions

By hand: Customer Service Window

Randolph Building 401 Dulany Street Alexandria, VA 22314

Correspondence may also be submitted via the electronic filing system of the USPTO.

Telephone inquiries related to this decision may be directed to the undersigned at (571) 272-3211.

/Christina Tartera Donnell/

Christina Tartera Donnell Attorney Advisor Office of Petitions

| Office of Petitions: Dec | ision Count Sheet | Mailing Month 10 | |
|--|------------------------------------|--|--|
| Application No. | 12579648 | * 1 2 5 7 9 6 4 8 * | |
| For US serial numbers: enter number only, no slashes or commas. Ex: 10123456 For PCT: enter "51+single digit of year of filing+last 5 numbers", Ex. for PCT/US05/12345, enter 51512345 | | | |
| Deciding Official: | DONNELL, CHRIS | STINA | |
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| Initials of Approving C | fficial (if required) | If more than 3 decisions, attach 2nd count sheet & mark this box | |
| Printed on: 10/27/2015 | Of | ffice of Petitions Internal Document - Ver. 5.0 | |

Office of Petitions: Routing Sheet



Application No. 12/579,648

This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application, as indicated below. For details of this decision, please see the document PET.OP.DEC filed on the same date as this document.

GRANTED

X DISMISSED

DENIED

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Application/Control Number: 12/579,648

Art Unit: 3711



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February 5, 2015

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2

Mail Date 6/26/2013

Re: Application/Control Number: 12/579,648. Art Unit: 3711

"Renewed Petition under 37 CFR 1.81 to Withdraw the Holding of Abandonment"

Dear Kurt Fernstrom, Examiner:

I have never intentionally abandoned my patent application, and was very dismayed by the letter I received on 12/21/2014 stating that my application was abandoned. Please accept this correspondence as a formal Letter of PETITION to revive my patent application.

Continuation Sheet (PTOL-1432)

Application No. 12/579,648

Item 7 - Other reasons for holding abandonment. Applicant is advised that the 5/21/14 letter requesting an interview was received by the Office and entered into the file on May 27, 2014, after the Final Rejection of 5/23/14 was mailed. The examiner did not see the letter until today, when preparing the Notice of Abandonment, as general letters do not move the application to the amended docket where it is brought to the examiner's attention. Notwithstanding applicant's stated intention not to abandon the application, the time period for replying to the 5/23/14 Final Rejection has lapsed, and thus the application by statute is abandoned. The examiner does not have any discretion to waive the time period or to withhold abandonment. Applicant is advised to file a peition if he wishes to revive the application.

The applicant is further advised that as a courtesy the examiner has carefully reviewed the application for patentable subject matter, and has determined that the invention as disclosed in the original disclosure is not patentable, and can not be made patentable by any amendment.

I have spent over a decade trying to help your office understand why this invention merits a US Patent, based on how its many novel aspects have been "reduced to practice" in providing experientially different arts-based and science-based learning methods and tools. According to patent law, that is a defining necessity. Everyday, people are using the Methods & Apparatuses to create 3-dimensional symbolic models that give form to the ideas of individuals, teams, groups, and companies. These physical, symbolic models (i.e., Apparatuses) have been shown to enhance cognitive functioning in tangible ways with measurable, concrete outcomes. In fact, they are being used in a three-year, National Science Foundation funded initiative, "The Art of Science Learning" Project (http://www.artofsciencelearning.org/metaphorming/)

As I have articulated in my patent claims, the multi-dimensional models manifest cognitive, affective, expressive and communicative functions in a person. Meaning, they make tangible and visible the otherwise intangible and invisible functions of the human brain, turning the hidden world of neural networks and neuropsychological systems into touchable artifacts of creative cognition. People can literally show one another their inner world, making tangible what's on their mind and what they're envisioning, and why. They're able to more completely and effectively express themselves thus enhancing human communication and understanding.

All that said, today I called your assistant today, Michelle Eason (571-272-4231) to inquire about the current status of my patent application. Also, I wanted to request a conference call with you and any patent officers you would like to examine my patent application. I very much look forward to hearing from you shortly.

Respectfully submitted,

TINS, ler

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May 21, 2014

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2 Mail Date 6/26/2013

"Application/Control Number: 12/579,648. Art Unit: 3711"

Dear Kurt Fernstrom, Examiner:

On July 18, 2013, I had sent my responses to your Office Action Summary (dated 6/26/2013) (see enclosure), but have not heard back from your office. At this point, I would very much appreciate the opportunity to speak with you by telephone at your earliest convenience, in order to discuss my pending application and to clarify any misunderstandings. As I have stated in writing in my past correspondences, I do not have any intention of abandoning my application for this patentable intellectual property. I am simply requesting further guidance from you on how I can continue to reach that long-standing goal.

Please suggest a date and time after June 10th, for me to reach you by telephone for a conference call with myself and my business partner and brother, Eric Siler. We look forward to speaking with you and thank you in advance for your attention and consideration.

Respectfully submitted,

Todd Lael Siler

2152

Art Unit: 3711



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July 12, 2013

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2 Mail Date 6/26/2013

"Application/Control Number: 12/579,648. Art Unit: 3711"

Dear Kurt Fernstrom, Examiner:

Thank you for giving me the opportunity to respond to your Office Action Summary (dated 6/26/2013). This letter is intended to clarify the key points the examiner has flagged for further clarification. I have taken care not introduce any new subject matter, written material or visual aids that could be construed as adding to my existing Claims 1-17 that are currently pending in the application.

I have considered the many factors the examiner listed in his Office Action in considering the enablement requirement, among them: (A) the breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quality of experimentation needed to make or use the invention. I have taken these factors into account and have determined that *only due experimentation* would be necessary for a person of ordinary skill in the art to be able to practice the claimed method.

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After the examiner has considered my responses to his points of contention, I would very much appreciate it if the examiner would kindly allow me to call him and discuss this matter.

Information Disclosure Statement

In support of my patent application, I listed in a separate paper the references, such as peer-reviewed articles that include case studies, which verify and substantiate the claims described in the pending application. It's important that the information I submitted be considered by the Office, as it complies with the requirements noted in M.P.E.P. 609.04 (a). I will remove the list of references in the specification, which, as the examiner advised, is "not a proper information disclosure according to 37 CFR 1.98(b). And I will list them in a separate article to comply with your protocol.

Claim Rejections – 35 USC 101

"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention."

Concerning: (A) the breadth of the claims

The examiner rejected Claims 2-18 under 35 U.S.C. 101 stating that "the claimed invention is directed to non-statutory matter."

The claims are statutory subject matter, because the method and apparatuses described in the pending application adequately describe a nonobvious process that results in the production of myriad physical products (i.e., apparatuses). These products both embody and cultivate "enhanced cognitive, affective, expressive and communicative functions" in a person.

Concerning: (B) The nature of the invention

In the Office Action Summary (May 17, 2012), the examiner wrote: "the claimed invention is a method for enhancing cognitive functions." I would like to correct this statement by including these two words: **and apparatuses**. The apparatuses are not only core to the title of the pending application but, more importantly, they're essential ways and means of enhancing cognitive functions, as noted in the method claims.

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This is a very important point of clarification, because it marks the bane of the examiner's objection to this invention. The examiner wrote, wrongly in my view, that "... even if claim 1 were amended to clearly recite the formation of physical models, these models steps are tangential to the invention, as the objective of the invention is not the creation of the models themselves. Rather, the claim result of the invention is that cognitive, affective, expressive and communicative functions in a person are enhanced. Thus, the invention is not a statutory process is patentable under 35 USC 101." (p.3)

The "models steps" are not "tangential to the invention." Rather, they play a central role in enhancing cognitive, affective, expressive and communicative functions in a person as claimed. Thus, they are key tools for achieving the objective of the invention.

I respectfully ask the examiner to re-consider this essential connection between the method and the production of apparatuses, which use the method as described. When taken together, they do enhance these neuropsychological functions in human systems as claimed. This conclusion is based on my research and practices over the past three decades, during which time I have used the method and apparatuses in a directed way on a wide range of projects (Siler, 1997, 2007, 2011a&b).

The claimed result *is* a cognitive enhancement, which is shown and demonstrated through the use of both the method and apparatuses.

My view sharply contrasts the examiner's view that the claimed result of the invention is not the model but a cognitive enhancement; consequently, the claims are not directed to statutory subject matter. I believe this is an error.

To be perfectly clear, the claimed results are actually two interconnected parts: (1) the "Enhancement of Cognitive Functioning" and (2) "Its Manifestation Into Physical Form and Translation Into Useful Information." This second part of the results concerns the tangible manifestations of cognitive functioning, which are evidenced by the models.

As the title of my application makes plainly evident, the method involves making physical symbolic models, which are explicitly referred to and described as "apparatuses."

In other words, the free-form, multi-dimensional models manifest cognitive, affective, expressive and communicative functions in a person. Meaning, they make tangible and visible the otherwise intangible and invisible functions of the human brain, turning the hidden world of neuropsychological systems into touchable artifacts. People literally show one another their inner world, making tangible what's on their mind and what they're envisioning, and why. They're able

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to more completely and effectively express what really interests them and why.

We have demonstrated in various media (videos, DVDs, software, etc.) how these constructed apparatuses (i.e., physical, symbolic models) directly help enhance and advance a user's work in concrete ways and with tangible results that are measurable. The models afford users the opportunity to see the creation of new knowledge or a new discovery or innovation, evaluating, analyzing and measuring its significance and relevance.

The models guide and inform the decision-making process—consequently, improving it, as well (Siler, 2011a). They help people better understand their goals and implementation plans for achieving them. And they make it easier and more effective to communicate their ideas so that everyone can grasp them better and act on them in a productive manner.

Concerning: (C) The state of the prior art

"Any person skilled in the art to which my invention pertains" (35 USC 101)—or any person *unskilled in the arts*—can create, show, describe, and express their ideas, knowledge, points of view in emotionally rich and evocative ways. The expressive objects they make—as well as the whole experience of using the method to make the apparatuses—dramatically contrast the prior art you have cited in these three U.S. Patent Documents (US-5,406,477, John Harhen, Classification 703/6; US-6,626,677. Morse et al. Classification 434/237; US-2002/0103774. Victor et al. Classification 706/11) and these two Non-Patent Documents ("TECHNOTOWN – A LEGO Experience," The Technology Teacher, pp. 13-15, September 1994; and "The Laboratory Schools LEGO-LOGO Project," 1995 [retrieved online July 7, 2005]).

Regarding process claims, the law requires that the claims include something tangible. Clearly, the multi-dimensional, symbolic models are tangible. The models are clearly composed of physical objects and organized in such a way that anyone can touch them, point to and point out what they are seeing in the most tangible way. Even a physically blind person can *touch* another person's symbolic model that shows the contents of their mind.

The law makes it clear that the result of the process needs to be tangible. For example: a method of treating depression by administering a psychoactive drug would be patentable subject matter, even though treating depression is no more tangible than the cognitive enhancement.

To build on this example: If people who suffer from various forms of depression were to use the method and apparatuses described in my invention to show how they can help themselves overcome or better manage their depression, that

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would illustrate a specific example of how the method and apparatuses can be applied in no uncertain way psychologically and medically. Producing measurable results.

I have facilitated workshops using my invention with patients suffering from Multiple Sclerosis, many of whom were chronically depressed. They used the method and apparatuses to create a sense of relief for themselves and a veritable "personal pain management system or plan."

In determining the patentability of a method, the law (95 USPQ2d 1001) states that a "process" must be "tied to another statutory class" (such as a machine or article of manufacture). The physical, multi-dimensional ["5-D"] models, or apparatuses, that users are guided to create constitute physical machines of sorts as well as a self-manufactured article.

You have written in your Office Action Summary (p.2), "A claim that recites purely mental steps is not a patentable process. The steps recited in claim 1 include constructing one or more physical **or virtual** models relating a subject, connecting and transforming some of the model elements, and performing various analytical steps in relation to the model. Because a virtual model can be created in the imagination of a user, all of these method steps amount to the manipulation of abstract ideas, and do not explicitly recite the literal creation or formation of a tangible object. These steps take place entirely within the minds of the users," to quote you.

With all due respect, I must correct your misunderstanding of the word "virtual," which is not just in the mind of the user.

This is not the correct reading of "virtual" in the patent application.

As you'll read in the patent application, I explicitly directed users to **give form to** their thoughts, feelings, knowledge, data, ideas, and experiences in the most concrete and tangible ways in making these models through these physical symbolic models;

That expression clearly means making touchable, tangible objects, such as Symbolic Models. These models may or may not originate from our intangible imagination.

In any event, you noted that "virtual" can be redefined to clearly recite physical models (which I would interpret as a model created on a computer and is a graphical, symbolic representation of information not unlike an architect's proposed buildings can be rendered electronically with computeraided design systems).

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Concerning your statement, "Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation." (p.4)

My invention does not require "undue experimentation" to use it effectively. I say this in light of the litany of factors you've listed which are used to determine whether or not the pending application "satisfies the enablement requirement" or whether or not the claimed invention involves "undue experimentation." Concerning (D) The level of one of ordinary skill

The creative act of understanding the meanings, implications and possible applications of these Apparatuses has been shown to enhance cognitive functioning as claimed, which are freeform physical symbolic models to spark, inspire and accelerate invention, innovation and problem-solving is taught through the 4-Steps of Metaphorming (Siler, 1997). As we've argued, this proven methodology enables people to continually invent, innovate and create solutions to problems and challenges that we all encounter in real-life (Siler, 2011b). As we've explicitly highlighted and visually documented, these models serve as purposeful visual aids that enable users (from all socio-economic-cultural-educational backgrounds to show-and-tell and share their ideas and creative solutions with anyone in the world at any time for any purpose with measurable results

Here, the claimed process is tied to another class, i.e., the models that are explicitly recited in the patent claims.

Furthermore, the claimed result *is* a cognitive enhancement, which has been shown and demonstrated through the use of the Method and Apparatuses.

The examiner holds that since the claimed result is not the model but a cognitive enhancement, the claims are not directed to statutory subject matter. I believe this is an error.

Actually, the Claimed results are <u>two-fold</u>: (1) the enhancement of "Cognitive Functioning" and (2) "Its Manifestation Into Physical Form and Translation Into Useful Information." This second part of the results concerns the tangible manifestations of cognitive functioning, which, indeed, are evidenced by the models.

More to the point: the physical models are explicitly described as "Apparatuses," which the title of the patent application makes self-evident.

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We have demonstrated in various media (videos, DVDs, software, etc.) how these Apparatuses (i.e., physical, symbolic models) directly help enhance and advance a user's work in concrete ways and with tangible results that are measurable. The models guide and inform the decision-making process—consequently, improving it, as well. (Siler, 2011a)

They help people better understand their goals and implementation plans for achieving them. And they make it easier and more effective to communicate their ideas so that everyone can grasp them better and act on them in a productive manner.

The law regarding process claims requires that the claims include something tangible. What can be more tangible than a multi-dimensional, symbolic models? The models are clearly composed of physical objects and organized in such a way that anyone can touch them, point to and point out what they are seeing in the most tangible way. Even a physically blind person can *touch* another person's symbolic model that shows the contents of their mind.

The law makes it clear that the result of the process needs to be tangible. One of our patent attorneys used this example: a method of treating depression by administering a psychoactive drug would be patentable subject matter, even though treating depression is no more tangible than the cognitive enhancement.

To build on this real-life example: If people who suffer from various forms of depression were to use the methods and apparatuses described to help illuminate and show how they can help themselves overcome or better manage their depression, that would illustrate a specific example of how the methods can be applied in no uncertain way psychologically and medically.

I have facilitated workshops using this method and apparatuses with patients suffering from Multiple Sclerosis, many of whom were chronically depressed. They used the method and apparatuses to create a sense of relief for themselves and a veritable "personal pain management system or plan."

Concerning (E) The level of predictability in the art

G) The existence of working examples

You contend that a "reasonably consistent result cannot be predictably or reliably assured." That is *not* true. If it were true, I would never have been able to work with Fortunate 500 Companies and Technology Pioneers at the World Economic Forum in Davos, Switzerland on innovation-oriented workshops, as they demand

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and expect reasonably consistent, reliable results with measurable outcomes. (Please read this peer-reviewed article, which is referenced with other supporting material for my invention. It attests to this fact, and the testimonials were verified by independent reviewers.)

More to the point: If your contention was true, I would never have been able to apply my Method and Apparatuses to the ideation and innovation-oriented work for the "Art of Science Learning" Program, which is funded by the National Science Foundation and other leading science organizations that aim to build a 21st Century Science, Technology, Engineering, Mathematics (STEM) Workforce. This program uses arts-based and science-based learning methods, tools, and best practices to build a Curriculum that delivers a set of specific, repeatable and reliable practices for incubating and developing innovation. These organizations also expect "reasonably consistent results" that are "predictably or reliably assured." Results that can be rigorously quantitatively and qualitatively evaluated. (Please read this peer-reviewed information on the "Metaphorming" process, which is posted on this official website, funded by the NSF (http://www.artofsciencelearning.org/metaphorming.html), which is referenced with other supporting material for my invention.)

These references validate the reliability and consistency of using my invention to achieve the desired results of leading businesses and learning organizations and cultural organizations worldwide. In fact, I have been using

with is to Since I first filed for this patent, nearly In fact, the Methods and Apparatuses

To further validate the reliability and consistency of the methods and apparatuses described in my patent application, you may be interested to know this fact, as well: My invention was used to help establish "The Five Elements of Discovery" that were noted in writing and visually documented by Procter & Gamble as one of Three Enabling Pillars of the Shopping Revolution" (2001) It was summarized in a P&G document, titled "Leveraging World Class Shopping Experiences," after I had formally presented the methods and apparatuses at a major industry conference by the executives of Procter & Gamble, titled "The Shopping Revolution" Symposium in Cincinnati on March 2, 2000. Other invited presenters included Carl Steidtmann (Director and Chief Economist of PriceWaterhouse Coopers), Marleen McDaniel (Chairman and CEO of Women.com Networks, Inc), Andrew Black (Director of Brand Development at Nike), and other innovators.

Procter & Gamble is a seriously conservative and results-oriented organization that would never have utilized my invention, if it did not deliver "reasonably consistent results" that can be predictably or reliably assured."

The symbolic models that were created, which were contracted by P&G,

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synthesized and represented in model-form our exploratory studies of the general public's shopping patterns. Using my invention, we showed and described specifically "what makes a world-class shopping experience."

P&G used this information and our materials to actually build on what they learned from the symbolic models and the Metaphorming process (aka, Think Like a Genius Process). That is the commercial name we have used over the past two decades to market my invention.

If you would like to review any of this supporting material, such as the P&G produced videotape and written materials, I will happily send you a copy.

Concerning G) The existence of working examples

Again, the purpose of this supporting material, which I've referenced serves to substantiate the efficacy of the method and apparatuses, and the "reasonably consistent results" that are "predictably or reliably assured." Clearly, Procter & Gamble recognized the invention for the valuable information they were able to ascertain it and build on for their consumer packaged goods. from

This material should assuage your doubt that the claimed invention actually works in a reasonably reliable manner.

My point is: Why would the world's largest consumer-goods packager reference and build on the insights and discoveries gained from exploring this invention? Why would they reference it in a document they produced as "one of the Three Enabling Pillars of the Shopping Revolution"? And they did, indeed.

I am hoping that you will allow me to introduce this evidence, such as affidavits from users—at the very least, these three peer-reviewed documents (the P&G documents, the article in the *Journal of Business Strategy*, and submitted to you for your review).

(H) The quality of experimentation needed to make or use the invention.

Re: Rejection based on enablement requirements

You had rejected the claims as including information that was not described in the specification.

In fact, it was described there. I believe the problem lies in how you have interpreted the language (or "verbiage"): in a way that limits the meanings and implications of the words that I used to describe the prescribed my method of

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enhancing cognitive functioning, and the way in which the method is used to make the symbolic models and apply one's understanding of them.

In evaluating the merits of this invention, one important thing to consider is that the models help people transcend the limits of words and numbers that often cannot adequately communicate an individual's ideas. That's an important and unique part of the method and apparatuses.

In reviewing the terminology in the specifications, I believe I have answered your questions and addressed your objections without amending or adding any new terminology.

Concerning (F) The amount of direction provided by the inventor

The main contentions in claimed invention does in fact work.

You also rejected the claims as failing to "particularly point out and distinctly claim the invention." I disagree. I think the Claims were adequately explained and that the four-step process that forms the foundation of the invention teaches anyone skilled in the art how to apply these steps in creating free-form, multi-dimensional, symbolic models that *physically embody* the user's tacit and explicit knowledge, ideas, feelings, emotions, opinions and experiences.

Furthermore, the invention teaches learners of all ages, backgrounds and cultures how to use their innate critical thinking skills—and their natural sense of curiosity—to creatively construct meanings from their models. It also guides them in discovering new meanings by asking a series of questions either to themselves or to others, which provides users with various self-learning experiences. These enriched learning experiences, in turn, enhance cognitive functioning as claimed by the invention.

That whole structured process and its tangible products (i.e., apparatuses) constitute the invention, as noted in Claims 1-18 which are pending in the current patent application.

As duly noted, the invention is comprised of the Four-Step Process [of "Metaphorming," aka Think Like a Genius Process], which is applied to the creative act of making symbolic models and systematically exploring their possible meanings in ways that are personally meaningful and productive and that involve reasonable *due experimentation*. This directed and self-directed experimentation is a core part of the invention, because it provides enriched learning experiences that "enhance cognitive functioning and its manifestation into physical form and translation into useful information."

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I use this phrase, reasonable due experimentation, to contrast your phrase "undue experimentation" that presumes this is a purely subjective process. Both this self-guided and facilitated experimentation consistently yields measurable outcomes, which have been documented and noted in the peer-reviewed articles submitted here.

The experiences are significantly different from X's Techtown and

The experience is also different from building virtual (i.e., digital or electronic) models using computer-generated visualization and animation tools that render 2-D and 3-D objects.

in a way that gets their desired results in a consistent and reliable manner.

The prior art you have cited are merely related to, but very different from, my invention, in the same way apples and oranges are related as fruits. Specifically, the prior art are all methods that build on the "Constructivists" theories of learning and approaches to teaching that were popularized by these noted psychologists and learning theorists, Jean Piaget and Lev Vygotsky, but that originated with Socrates and other ancient Greek educators over 2,000 years ago (Siler, 2011).

I would like to point out that the Claims 1-18 are composed of words with well-defined and commonly understood meanings. They're obviously accessible to any skilled in the art of using...

Finally, you had rejected the claims as being obvious over the Technotown article, which describes a model city made by students.

There is world of differences both experientially and productively – meaning, in terms of the physical products and objects created using my invention—in making 3-D representations of objects that are created using Solid-Modeling, computer-aided design (CAD) tools, compared to making 3-D (or 4-D or "5-D" Symbolic Models using the hands-on physical and electronic tools I've described in Claims for the pending application that enable people to physically express and give form to their ideas.

The differences are as obvious as comparing "Apples" (i.e., electronic models made with CAD software, which is distinctly more literal, illustrative and representational in nature) to "Oranges" (i.,e., the myriad types of free-form, expressive and interpretive models using my invention. The Claims 1-18 in the pending application also make reference to the Think Like a Genius software (versions 1.0 and 2.0)—that is, the method and apparatuses outlined in my pending application.

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It is to be remembered that the biggest differences between "illustrative" versus "interpretative" artifacts (i.e., visualizations, representations, demonstrations, etc.)—whether they're re-presented in 2-D, or 3-D, or 4-D or "5-D" Symbolic Models—is the spectrum of feelings and emotions that cannot be adequately conveyed or communicated as *illustrations*. They use a fair and reasonable amount of ambiguity that's very useful for stimulating people creativity, curiosity and discovery, and intuition among other facets of the creative process that helps enhance cognitive functioning, which is essential for idea-generation, knowledge-creation and sharing, critical thinking, problem posing and problem solving,

To point out the differences in the claimed invention compared to the modeling described in the Technotown article, I will explain why these differences are of patentable significance.

Here are some other differences that contrast

Algorithmically learned (i.e., in a step-by-step process using a general set of rules users followed in problem-solving operations. Moreover, we applied these rules to a computer-based 3D Authoring Tool, titled Think Like a Genius software 1.0 and 2.0, which are self-guided.

The examiner is broadly interpreting this word virtual in a way that ignores the reality of how this term is used in the vernacular, referring to digital media and computer-generated materials.

When I highlighted in Claim 1, "These physical, symbolic forms can also be represented in virtual reality or electronically, with the aid of computer-graphics, holography and other media technology," I am using this word "virtual" in a familiar, mainstream context to describe digital realities modeled *not in a human mind*, but rather in computers that create a spectrum of virtual objects: from vector graphics that visualize 3-D prototypes to experiential Virtual Reality systems that immerse users in a world of virtual visual objects.

The 5-D Symbolic Models serve physical algorithms.

Clearly, there are "elements of subjectivity" that are obviously present in each of the prior art that you have granted patents to.

I wanted to add the following [unedited] notes to my Claims for my patent application, "Metaphorming: Methods and Apparatuses To Enhance Cognitive

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Functioning and Its Manifestation Into Physical Form and Translation Into Useful Information." This application is currently pending and is scheduled to be published in the Patent Application Information Retrieval (PAIR) System on 5/23/02. I'm concerned that the Claims for the apparatuses part of my application were not probably describe or duly noted. I'd like to better describe the apparatuses, because they're an essential part of this invention. I'd like to discuss the following:

Conclusion

My comments are respectfully submitted for further examination on the merits of this invention, and the examiner's evaluation of the invention's efficacy based on its practice in various industries and businesses.

I have considered the many factors the examiner listed in his Office Action in considering the enablement requirement, among them: (A) the breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quality of experimentation needed to make or use the invention. I have taken these factors into account in determining that only due experimentation would be necessary for a person of ordinary skill in the art to be able to practice the claimed method.

Respectfully submitted,

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History of Application

This application claims priority to Application Serial No. 11/334,842, filed Jan. 19, 2006, now pending, which is a continuation of Application Serial No. 09/882,921, filed June 15, 2001, now abandoned, which is a continuation-in-part of Application Serial No. 09/164,285, filed October 1, 1998, now abandoned, which is a continuation of Application Serial No. 08/889,475, filed July 8, 1997, now abandoned, which is a continuation-in-part of Provisional Application Serial No. 60/021,498, filed July 10,1996, from which priority is claimed. These applications are incorporated by reference.

References

The "Art of Science Learning" Conferences, Learning Worlds Institute, New York City http://www.artofsciencelearning.org/metaphorming.html

Todd Siler, (2011a) 'Pointing your way to success through metaphorming,' in Ted Buswick and Harvey Seifter (Eds.), "Creatively Intelligent Companies and Leaders: Arts-based Learning for Business," *Journal of Business Strategy*, Vol. 31 No. 4, 2011, pp. 47-58, ISSN 0275-6668. http://www.emeraldinsight.com/journals.htm?issn=0275-6668

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| the Purposeful Play of Metaphorming," [pp. 288-293 & 697A] in The Change |
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| Cady, Ph.D. |

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Tools," essay in *Leader To Leader* magazine of the Peter F. Drucker Foundation, Hesselbein & Company (San Francisco: Jossey-Bass / A Wiley Company) Spring 2002, pp. 15-19.

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ARTIFACT SHEET

Enter artifact number below. Artifact number is application number + artifact type code (see list below) + sequential letter (A, B, C ...). The first artifact folder for an artifact type receives the letter A, the second B, etc... Examples: 59123456PA, 59123456PB, 59123456ZA, 59123456ZB 12579648ZB Indicate quantity of a single type of artifact received but not scanned. Create individual artifact folder/box and artifact number for each Artifact Type. CD(s) containing: computer program listing Doc Code: Computer Artifact Type Code: P pages of specification and/or sequence listing and/or table Artifact Type Code: S Doc Code: Artifact content unspecified or combined Doc Code: Artifact Artifact Type Code: U Stapled Set(s) Color Documents or B/W Photographs Artifact Type Code: C Doc Code: Artifact Microfilm(s) Doc Code: Artifact Artifact Type Code: F Video tape(s) Artifact Type Code: V Doc Code: Artifact Model(s) Doc Code: Artifact Artifact Type Code: M Bound Document(s) Doc Code: Artifact Artifact Type Code: B Confidential Information Disclosure Statement or Other Documents marked Proprietary, Trade Secrets, Subject to Protective Order, Material Submitted under MPEP 724.02, etc. Doc Code: Artifact Artifact Type Code X

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Other, description: **BROCHURE**

Doc Code: Artifact Artifact Type Code: Z

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------|----------------|----------------------|---------------------|------------------|
| 12/579,648 | 10/15/2009 | Todd Lael Siler | 73360-ICON2 | 8763 |
| Todd L. Siler | 7590 12/15/201 | 4 | EXAM | INER |
| Suite F2-200 4950 S. Yosemi | ite | | FERNSTRO | DM, KURT |
| Greenwood Vil | lage, CO 80111 | | ART UNIT | PAPER NUMBER |
| | | | 3711 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 12/15/2014 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
|--|---|--|
| | 12/579,648 | SILER, TODD LAEL |
| Notice of Abandonment | Examiner | Art Unit |
| | KURT FERNSTROM | 3711 |
| The MAILING DATE of this communication app | | |
| This application is abandoned in view of: | | |
| Applicant's failure to timely file a proper reply to the Office (a) ☐ A reply was received on (with a Certificate of New period for reply (including a total extension of time of (b) ☐ A proposed reply was received on, but it does (A proper reply under 37 CFR 1.113 to a final rejection application in condition for allowance; (2) a timely filed application, a timely filed Request for Continued Exampermitted in design applications.) (c) ☐ A reply was received on but it does not constitutinal rejection. See 37 CFR 1.85(a) and 1.111. (See (d) ☐ No reply has been received. | Mailing or Transmission dated month(s)) which expired on not constitute a proper reply under 3 in consists only of: (1) a timely filed ar I Notice of Appeal (with appeal fee); of hination (RCE) in compliance with 37 ute a proper reply, or a bona fide atte | 7 CFR 1.113 to the final rejection. mendment which places the or (3) if this is utility or plant CFR 1.114. Note that RCEs are not |
| 2. Applicant's failure to timely pay the required issue fee and from the mailing date of the Notice of Allowance (PTOL-8 (a) The issue fee and publication fee, if applicable, was), which is after the expiration of the statutory per Allowance (PTOL-85). (b) The submitted fee of \$ is insufficient. A balance The issue fee required by 37 CFR 1.18 is \$ (c) The issue fee and publication fee, if applicable, has not the statutory per Allowance (PTOL-85). | 5). received on (with a Certification of the issue fee (are of \$ is due. The publication fee, if required by 37 | ate of Mailing or Transmission dated and publication fee) set in the Notice of |
| 3. Applicant's failure to timely file corrected drawings as requallowability (PTO-37). (a) Proposed corrected drawings were received on after the expiration of the period for reply. (b) No corrected drawings have been received. | | |
| 4. The letter of express abandonment which is signed by the 1.33(b). See 37 CFR 1.138(b). | e attorney or agent of record or other | party authorized under 37 CFR |
| 5. The letter of express abandonment which is signed by an 1.34) upon the filing of a continuing application. | attorney or agent (acting in a repres | entative capacity under 37 CFR |
| 6. The decision by the Board of Patent Appeals and Interferon of the decision has expired and there are no allowed claim | | ee the period for seeking court review |
| 7. ★ The reason(s) below: | | |
| See Continuation Sheet | | |
| | | |
| | /KURT FERNSTROM/ Primary Examiner, Art Uni | t 3711 |
| Petitions to revive under 37 CFR 1.137, or requests to withdraw the ho | Iding of abandonment under 37 CFR 1.18 | B1, should be promptly filed to minimize |

Item 7 - Other reasons for holding abandonment: Applicant is advised that the 5/21/14 letter requesting an interview was received by the Office and entered into the file on May 27, 2014, after the Final Rejection of 5/23/14 was mailed. The examiner did not see the letter until today, when preparing the Notice of Abandonment, as general letters do not move the application to the amended docket where it is brought to the examiner's attention. Notwithstanding applicant's stated intention not to abandon the application, the time period for replying to the 5/23/14 Final Rejection has lapsed, and thus the application by statute is abandoned. The examiner does not have any discretion to waive the time period or to withhold abandonment. Applicant is advised to file a peition if he wishes to revive the application.

The applicant is further advised that as a courtesy the examiner has carefully reviewed the application for patentable subject matter, and has determined that the invention as disclosed in the original disclosure is not patentable, and can not be made patentable by any amendment.



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May 21, 2014

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2 Mail Date 6/26/2013

"Application/Control Number: 12/579,648. Art Unit: 3711"

Dear Kurt Fernstrom, Examiner:

On July 18, 2013, I had sent my responses to your Office Action Summary (dated 6/26/2013) (see enclosure), but have not heard back from your office. At this point, I would very much appreciate the opportunity to speak with you by telephone at your earliest convenience, in order to discuss my pending application and to clarify any misunderstandings. As I have stated in writing in my past correspondences, I do not have any intention of abandoning my application for this patentable intellectual property. I am simply requesting further guidance from you on how I can continue to reach that long-standing goal.

Please suggest a date and time after June 10th, for me to reach you by telephone for a conference call with myself and my business partner and brother, Eric Siler. We look forward to speaking with you and thank you in advance for your attention and consideration.

Respectfully submitted,

Todd Lael Siler

Art Unit: 3711



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July 18, 2013

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2 Mail Date 6/26/2013

"Application/Control Number: 12/579,648. Art Unit: 3711"

Dear Kurt Fernstrom, Examiner:

Thank you for giving me the opportunity to respond to the Office Action Summary (6/26/2013). This letter is intended to clarify the key points the examiner has flagged for further clarification of Claims 1-17, which are currently pending in the application.

I have addressed here the main factors the examiner listed in considering the enablement requirement, among them: (A) the breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quality of experimentation needed to make or use the invention. Taking into account each of these factors, I have determined that with *due experimentation* a person of ordinary skill in the art can practice the claimed method. I've concluded this because, in reality, they actually do. In testing the claimed invention, people are able to use the method and apparatuses exactly as I have described. That is to say, the invention actually works with individuals, groups and teams with "reasonably consistent results that can be predictably or reliably assured," to borrow the words of the examiner.

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In sum: this invention has been reduced to practice. A person of ordinary skill in the art to which this invention pertains can use the invention to achieve a desired goal or objective (Siler, 2011a&b). In evaluating the method and apparatuses, the users have noted how they utilize both creativity and critical thinking, which underlie subjectivity and objectivity respectively; consequently, the claimed invention enhances cognitive, affective, expressive and communicative functions in a natural way.

This is important to note, given that the examiner has questioned this reality, stating: "The claimed method requires such a degree of subjective human judgment that a reasonably consistent result cannot be predictably or reliably assured." In testing the claimed invention, I have learned that there is "a level of predictability of thought processes in a group of people," to use the examiner's phrase, and there is ample evidence that the claimed method does indeed foster creativity and innovative thinking in measurable ways.

Moreover, I explain how the user's subjectivity is counterbalanced and complemented by the user's objectivity, which is directed and exercised through critical thinking. The examiner's position is that "the degree of subjectivity far outweighs all other factors in determining that the claimed invention requires undue experimentation to foster thinking in a group of participants" (pp.5&6). After extensively testing the invention, the applicant respectfully disagrees with this position and requests a conversation with the examiner, in order to present the evidence.

Concerning: (A) the breadth of the claims

The applicant believes that the specification in the pending application "contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention." (35 USC 101)

The applicant contends that the subject matter described in the specification does, indeed, enable one skilled in the art that "the claimed invention is directed to statutory matter (under 35 U.S.C. 101). This assessment is based on the fact that Claims 1-17 does comply with the written description requirement. They are composed of words with well-defined and commonly understood meanings. They're obviously accessible to any skilled in the art of using the claimed invention. Furthermore, the applicant does not introduce new subject matter, which is not already adequately described in the specification.

The claims are statutory subject matter, because the method and apparatuses described in the pending application adequately describe a non-obvious process that results in the production of myriad physical products (i.e., apparatuses). These products both embody and cultivate

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"enhanced cognitive, affective, expressive and communicative functions" in a person.

The examiner had rejected the claims as including information that was not described in the specification, when, in fact, it was described there. The applicant believes the problem lies in how the examiner has interpreted the language (or "verbiage"): in a way that limits the meanings and implications of the words that the applicant uses to describe the prescribed my method of enhancing cognitive functioning, and the way in which the method is used to make the symbolic models and apply one's understanding of them.

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In reviewing the terminology in the specifications, the applicant believes he has answered the examiner's questions and addressed his objections without amending or adding any new terms.

Concerning: (B) the nature of the invention

In the Office Action Summary (May 17, 2012), the examiner wrote: "the claimed invention is a method for enhancing cognitive functions." I would like to correct this statement by including these two words: **and apparatuses**. The apparatuses are not only core to the title of the pending application but, more importantly, they're essential ways and means of enhancing cognitive functions, as noted in the method claims. That structured process of the claimed method and its tangible products (i.e., symbolic models or apparatuses) constitute the invention, as noted in Claims 1-17, which are pending in the application.

This is an important point of clarification, because it marks the bane of the examiner's objection to this invention. The examiner wrote, wrongly in my view, that "...even if claim 1 were amended to clearly recite the formation of physical models, these models steps are tangential to the invention, as the objective of the invention is not the creation of the models themselves. Rather, the claim result of the invention is that cognitive, affective, expressive and communicative functions in a person are enhanced. Thus, the invention is not a statutory process is patentable under 35 USC 101." (p.3)

The "models steps" are not "tangential to the invention." Rather, they play a central role in enhancing cognitive, affective, expressive and communicative functions in a person as claimed. They are key tools for achieving the objective of the invention.

I respectfully ask the examiner to re-consider this essential connection between the method and the production of apparatuses, which use the method as described. When taken together, the method and apparatuses do enhance these neuropsychological functions in human systems as claimed. This conclusion is based on my research and practices over the past three decades, during which time I have used the method and apparatuses in a directed way on a wide range of projects (Siler, 1997, 2007, 2011a&b).

The claimed result is a cognitive enhancement, which is shown and demonstrated through the

use of both the method and apparatuses. The applicant believes the examiner is in error presuming that the claimed result of the invention is not the model but a cognitive enhancement; consequently, the claims are not directed to statutory subject matter.

To be perfectly clear, the claimed results are actually two-fold parts: (1) the "Enhancement of Cognitive Functioning" and (2) "Its Manifestation Into Physical Form and Translation Into Useful Information." This second part of the results concerns the tangible manifestations of cognitive functioning, which are evidenced by the models. The "usefulness" of the information (data, knowledge, concepts, ideas, events, experiences, etc.) that is manifested in the models, refers to how well the information helps a person make informed decisions, or develop and apply an idea, or utilize the experience of creating and exploring, and translating the meanings of the symbolic models in personally useful and purposeful ways. These physical processes and products have tangible outcomes with measurable results (Siler, 2011a&b).

As the title of my patent application makes plainly evident, the claimed method entails making physical symbolic models that are explicitly referred to and described as "apparatuses." By entails, I mean this method has a "logically necessary consequence"—namely, the creation of apparatuses whose **translation into useful information** can be objectively assessed and evaluated.

In this way, the multi-dimensional models *manifest* cognitive, affective, expressive and communicative functions in a person. They make tangible and visible the otherwise intangible and invisible functions of the human brain, thus turning the hidden world of neuropsychological systems into useful and practical artifacts that inform our decisions and enhance the quality of our lives.

The claimed invention directs people how to use the symbolic models they create to show and constructively discuss a world of information that cannot easily be described or rendered with words and numbers alone. The models make tangible what is on people's minds, helping them more effectively express and communicate their issues, problems, concerns, challenges, and other personally meaningful things that pre-occupy and absorb their attention.

We have demonstrated in various media (videos, DVDs, software, etc.) how these constructed apparatuses (i.e., physical, symbolic models) help enhance and advance a user's work in concrete ways and with tangible results that are measurable (Siler, 1997). The models afford users the opportunity to see the creation of new knowledge or a new discovery or innovation, evaluating, analyzing and measuring its significance and relevance.

The models guide and inform the decision-making process—thus, improving it (Siler, 2011a). They help people better understand their goals and implementation plans for achieving them. Moreover they make it easier and more effective to communicate their ideas so that everyone can understand them better and act on them in a productive manner.

Regarding process claims, the law requires that the claims include something tangible. Clearly, the multi-dimensional, symbolic models are tangible. The models are clearly composed of physical objects and organized in such a way that anyone can touch them, point to and point out what they are seeing in the most tangible way. Even a physically blind person can *touch* another person's symbolic model that shows the contents of their mind. The law makes it clear that the result of the process needs to be tangible.

In determining the patentability of a method, the law (95 USPQ2d 1001) states that a "process" must be "tied to another statutory class" (such as a machine or article of manufacture). The physical, multi-dimensional ["5-D"] models, or apparatuses, that users are guided to create constitute physical machines of sorts that are, for all practical purposes, a self-manufactured article.

The examiner has written in his Office Action Summary (p.2): "A claim that recites purely mental steps is not a patentable process. The steps recited in claim 1 include constructing one or more physical **or virtual** models relating a subject, connecting and transforming some of the model elements, and performing various analytical steps in relation to the model. Because a virtual model can be created in the imagination of a user, all of these method steps amount to the manipulation of abstract ideas, and do not explicitly recite the literal creation or formation of a tangible object. These steps take place entirely within the minds of the users," to quote the examiner.

With all due respect, the applicant believes the examiner is misunderstanding the word "virtual," which neither refers to nor suggests "steps that take place entirely in the minds of the users." This is not the correct reading of "virtual" in the claimed method. In the pending application, I explicitly direct users to *give form to* their thoughts, feelings, knowledge, data, ideas, and experiences in the tangible ways in making these physical symbolic models.

The examiner is broadly interpreting this word virtual in a way that ignores the reality of how this term is used in the vernacular, referring to digital media and computer-generated materials.

In any event, the examiner noted that "virtual" could be redefined to clearly recite physical models. The applicant interprets this to mean creating electronically with computer-aided design tools symbolic models, comprising both abstract and representational information.

When I highlighted in Claim 1, "These physical, symbolic forms can also be represented in virtual reality or electronically, with the aid of computer-graphics, holography and other media technology," I am using this word "virtual" in a familiar, mainstream context to describe digital realities modeled *not in a human mind*, but rather in computers that create a spectrum of virtual objects: from vector graphics that visualize 3-D prototypes to experiential Virtual Reality systems that immerse users in a world of virtual visual objects.

Concerning: (C) the state of the prior art

"Any person skilled in the art to which the claimed invention pertains" (35 USC 101)—or any person *unskilled in the arts*—can create, show, describe, and express their ideas, knowledge, points of view in emotionally rich and evocative ways. The expressive objects they make—as well as the whole experience of using the method to make the apparatuses—dramatically contrast the prior art the examiner has cited in these three U.S. Patent Documents (US-5,406,477, John Harhen, Classification 703/6; US-6,626,677. Morse et al. Classification 434/237; US-2002/0103774. Victor et al. Classification 706/11) and these two Non-Patent Documents ("TECHNOTOWN – A LEGO Experience," The Technology Teacher, pp. 13-15, September 1994; and "The Laboratory Schools LEGO-LOGO Project," 1995 [retrieved online July 7, 2005]).

Users of the applicant's invention *experience* a substantially different sense of creative freedom and openness to wonder, using the claimed method and apparatuses to make their ideas and knowledge tangible. There are no set or standard objects to construct, such as the Lego blocks and other primitives, in the way that constrains the aesthetic experience. The Lego structures are all fixed, modular units of forms and shapes that are visually and tactilely regular in design. Like many building blocks that utilize standardized structures, such as those in computer-aided object-oriented models, they offer a very different emotional and aesthetic experience than the apparatuses created with the basic and common building materials used in the claimed invention.

The visual qualities and physical characteristics of these LEGO models stand in sharp contrast to those physical qualities of the materials used in the making of symbolic models, or apparatuses, using the applicant's claimed invention. What is more, the LEGO language of forms is much more constrictive than the forms and shapes of materials used in the applicant's invention, which directly impact and influence the enhancement of cognitive, affective, expressive, and communicative skills. It is the applicant's informed opinion that this LEGO language of forms hampers and limits many people's creativity rather than enhancing and expanding it. This observation is based on the applicant's lifetime experiences in the visual arts and professional expertise.

It can be argued that even when using the LEGO modular forms, whether physically or electronical-ly composed with the aid of computers, users still have to deal with the same issues of subjective [value] judgments regarding their aesthetic appeal as the claimed invention. And, that these judgments are a natural part of the creative process underlying invention, innovation and discovery. Furthermore, the use of these LEGO objects as building materials frequently entail undue experimentation.

For instance, in using LEGO's Technic II, fourth graders are tasked with building gears and pulleys, using a limited selection of materials with which to work in exploring a problem while

becoming familiar with the function and names of various pieces." ("The Laboratory Schools LEGO-LOGO Project," 1995, p.6). This self-guided exploration often involves undue experimentation. Even when this exploration is learned algorithmically (i.e., in a step-by-step process using a general set of rules users followed in problem-solving operations).

My point is this: The quality, variety and consistent richness of the aesthetic experiences ultimately determines the degree to which one method succeeds at enhancing cognitive functioning whereas another method with more constraints may not by comparison.

A person using one million LEGO pieces to construct a representational object such as a town, as in the case of "Technotown, the School-Wide Design Technology Project" ("TECHNOTOWN – A LEGO Experience," The Technology Teacher, pp. 13-15, September 1994, p.39) versus a person using one million common wooden dowels to make an abstract, symbolic model of "Life" are going to have entirely different aesthetic experiences that offer varying degrees of enhancement to cognitive functioning. The applicant contrasts this Real Life Experience with a LEGO Experience. From my personal and professional experiences making symbolic models for more than forty years—and having formally studied the neuropsychology of these different creative activities and applied this explicit knowledge in business and learning organizations worldwide—I can say confidently that these are complementary methods, tools and experiences that are naturally related, but very different, in form, substance, experiences, and impact on cognitive functioning And these obvious and subtle experiential differences make up the different types of patentable inventions made available today.

This statement is generalizable to each of the examples of prior art the examiner presented the applicant for review. Clearly, there are "elements of subjectivity" that are obviously present in each of the prior art that the examiner has granted U.S. Patents.

Concerning (D) the level of one of ordinary skill

The examiner rejected "Claims 1-17 (under 35 U.S.C. 112, first paragraph), as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation." (p.4)

The claimed invention does not require "undue experimentation" to use it effectively. I say this in light of the litany of factors the examiner listed which are used to determine whether or not the pending application "satisfies the enablement requirement" or whether or not the claimed invention involves "undue experimentation."

The creative act of understanding the meanings, implications and possible applications of the symbolic models, or apparatuses, has been shown to enhance cognitive functioning as claimed,

which are freeform physical symbolic models to spark, inspire and accelerate invention, innovation and problem-solving is taught through the 4-Steps of Metaphorming (Siler, 1997). As we have argued, this proven methodology enables people to continually invent, innovate and create solutions to problems and challenges that we all encounter in real-life (Siler, 2011b). As we've explicitly highlighted and visually documented, these models serve as purposeful visual aids that enable users (from all socio-economic-cultural-educational backgrounds to show-and-tell and share their ideas and creative solutions with anyone in the world at any time for any purpose with measurable results

Here, the claimed method is tied to another class, i.e., the models that are explicitly recited in the patent claims. As duly noted, the invention is comprised of the Four-Step Process [of "Metaphorming," aka Think Like a Genius Process], which is applied to the creative act of making symbolic models and systematically exploring their possible meanings in ways that are personally meaningful and productive and that involve reasonable *due experimentation*. This directed and self-directed experimentation is a core part of the claimed invention, because it provides enriched learning experiences that "enhance cognitive functioning and its manifestation into physical form and translation into useful information." (Siler, 2011b)

I use this phrase, reasonable due experimentation, to contrast the examiner's phrase "undue experimentation," which presumes this is a purely subjective process that involves experimenting with the building materials. Nevertheless, both this self-guided and facilitated experimentation consistently yields measurable outcomes, which have been documented and noted in the peer-reviewed articles submitted here.

Concerning (E) the level of predictability in the art

The applicant contends that a reasonably consistent result can be predictably or reliably assured. He knows this for a fact, having applied the claimed invention in working with Fortunate 500 Companies, including the Technology Pioneers at the World Economic Forum in Davos, Switzerland on innovation-oriented workshops, and having worked with start-up technology companies that are funded by prominent venture-capital organizations that demand and expect reasonably consistent, reliable results with measurable outcomes. (Siler, 2011a; please read this peer-reviewed article, which is referenced with other supporting material for the claimed invention. It attests to this fact, and independent reviewers verified the testimonials.)

Furthermore, the applicant contends that the claimed invention would never have been accepted and applied for ideation and innovation-oriented work for the "Art of Science Learning" Program, which is funded by the National Science Foundation and other leading science organizations that aim to build a 21st Century Science, Technology, Engineering, Mathematics (STEM) Workforce. This program uses arts-based and science-based learning methods, tools, and best practices to build a Curriculum that delivers a set of specific, repeatable and reliable practices for incubating and developing innovation. These organizations also expect "reasonably

consistent results" that are "predictably or reliably assured." Results that can be rigorously quantitatively and qualitatively evaluated. (Please read this peer-reviewed information on the "Metaphorming" process, which is posted on this official website, funded by the NSF (http://www.artofsciencelearning.org/metaphorming.html), which is referenced with other supporting material for my invention.)

These references validate the reliability and consistency of using my invention to achieve the desired results of leading businesses and learning organizations and cultural organizations worldwide. In fact, I have been using this claimed invention since I first sought a patent for the method and apparatuses in the mid-1990s.

To further validate the reliability and consistency of the methods and apparatuses described in my patent application, you may be interested to know this fact, as well: My invention was used to help establish "The Five Elements of Discovery" that were noted in writing and visually documented by Procter & Gamble as one of Three Enabling Pillars of the Shopping Revolution" (2001). It was summarized in a P&G document, titled "Leveraging World Class Shopping Experiences," after I had formally presented the methods and apparatuses at a major industry conference by the executives of Procter & Gamble, titled "The Shopping Revolution" Symposium in Cincinnati on March 2, 2000. Procter & Gamble is a results-oriented organization that would never have utilized my invention, if it did not deliver "reasonably consistent results" that can be predictably or reliably assured."

The symbolic models that were created, which were contracted by P&G, synthesized and represented in model-form our exploratory studies of the general public's shopping patterns. Using my invention, we showed and described specifically "what makes a world-class shopping experience," based on objective information and evaluations. It is worth noting that Procter &Gamble used this information and our materials to build on what they learned from the symbolic models and the Think Like a Genius Process (aka, Metaphorming; that is the commercial name we have used over the past two decades to market the claimed invention). If the examiner would like to review any of this supporting material, such as the P&G produced videotape and written materials, the applicant will gladly send a copy.

Clearly, there are "degrees and elements of subjectivity" that are obviously present in each of the prior art examples that the examiner has cited; and yet, they were granted patents—and not because their inventions took precedence over mine.

Concerning (F) the amount of direction provided by the inventor

The claimed invention teaches learners of all ages, backgrounds and cultures how to use their innate critical thinking skills—and their natural sense of curiosity—to creatively construct meanings from their models (Siler, 2011b). It also guides them in discovering new meanings by asking a series of questions either to themselves or to others, which provides users with various

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self-learning experiences. These enriched learning experiences, in turn, enhance cognitive functioning as claimed by the invention.

In the case of the self-guided, 3-D Authoring Tool, titled "Think Like a Genius" software 1.0 and 2.0, which the applicant and his team collaboratively created to be utilized by the general public, users algorithmically learn (i.e., in a step-by-step process using a general set of rules), thus following problem-solving operations. The applicant has submitted a copy of the "Think Like a Genius" software 2.0, accompanying this letter. A brief overview and demonstration of the software can be found on the menu for the software marked "i" (information).

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Concerning G) the existence of working examples

The applicant urges the examiner to please review the supporting materials that accompany the application. The purpose of this supporting material, which I've referenced serves to substantiate the efficacy of the method and apparatuses, and the "reasonably consistent results" that are "predictably or reliably assured." Clearly, Procter & Gamble recognized the invention for the valuable information they were able to ascertain it and build on for their consumer-packaged goods.

This material should assuage the examiner's doubt that the claimed invention actually works in a reasonably reliable manner. The applicant points to the fact the world's largest consumer-goods packager utilized the insights and discoveries gained from exploring this claimed invention. In a formal document they produced, they referenced the claimed method as "one of the Three Enabling Pillars of the Shopping Revolution."

The applicant offers to introduce this evidence, which can serve as affidavits from users. At the very least, the peer-reviewed documents referenced in this letter are submitted to the examiner for his review.

Concerning (H) the quality of experimentation needed to make or use the invention

The experiences of using the claimed invention are significantly different from Steve Knobloch's description of the Design Technology in his article on Techtown (p.43): "The process that students use in solving a design problem involves several steps. Each step can be evaluated as the students work. Define Need/Challenge. Research. Plan/Design. Gather Materials. Build Design. Test and Evaluate. The learning for understanding which took place can be best described by a fifth grade student, who, after three weeks of sorting and analyzing and exploring, asked, 'why are we doing this?' I answered, "To give every student in the school an opportunity to use the knowledge gained in all subjects and to apply that knowledge to a real world application. To take your math skills, language skills, research skills, science skills, social studies skills, and use them while building this town....Eventually, the project made sense to everyone."

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The fact that "after three weeks of sorting and analyzing and exploring... why are we doing this?"— one can reasonably infer that there was "undue experimentation" as well as a high degree of subjective interpretation(s) with regard to the process of making the Techtown. The words, eventually and making sense of this activity belie the real emotions and feelings of this student and, probably, may of her peers, who groped to figure out what exactly they were supposed to be learning from this adventure in innovative thinking.

The applicant points out that the experience of constructing this Techntown is also different from building physical symbolic models or virtual (i.e., digital or electronic) models using computergenerated visualization and animation tools that render 2-D and 3-D objects.

Overall, the prior art cited by the examiner is related to, but significantly different from, the claimed invention, in the same way apples and oranges are related to one another as fruits but offer profoundly different taste and other sensory experiences. The prior art are related only in so far as they build on the "Constructivists" theories of learning and approaches to teaching that were popularized by these noted psychologists and learning theorists, Jean Piaget and Lev Vygotsky, but that originated over two thousand years ago with the Greek philosopher and scientist, Aristotle (384–322 bc) who was a student of Plato (c. 429–c. 347 bc), who was a disciple of Socrates (c. 469 BC – 399 BC). Collectively, their theories of learning-by-doing and questioning-everything-we-learn have influenced nearly every learning, teaching and building system used today by contemporary Constructivists. Technically speaking, every U.S. Patent awarded for methods that enable a person to learn and create things in new ways—including John Harhen, Morse et al., Victor et al. as well as other inventors—have this great precedence to point to: Socrates and other ancient Greek educators (Siler, 2011).

Finally, the examiner had rejected the claims as being obvious over the Technotown article, which describes a model city made by students.

There is world of differences both experientially and productively – meaning, in terms of the physical products and objects created using my invention—in making 3-D representations of objects that are created using Solid-Modeling, computer-aided design (CAD) tools, compared to making 3-D (or 4-D or "5-D" Symbolic Models using the hands-on physical and electronic tools I have described in Claims for the pending application that enable people to physically express and give form to their ideas.

The differences are as obvious as comparing "Apples" (i.e., electronic models made with CAD software, which is distinctly more literal, illustrative and representational in nature) to "Oranges" (i.e., the myriad types of free-form, expressive and interpretive models using my invention. The Claims 1-18 in the pending application also make reference to the Think Like a Genius software (versions 1.0 and 2.0); that is, the method and apparatuses outlined in my pending application, which, I believe, offer different experiences that enhance cognitive functioning. These differences are of patentable significance.

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It is to be remembered that one of the biggest and most defining differences between the prior art cited by the examiner and the claimed invention is that the former is largely "illustrative" versus "interpretative" artifacts (i.e., visualizations, representations, demonstrations, etc.). The claimed invention represents information in the form of 2-D, 3-D, 4-D, and "5-D" Symbolic Models, which are comprised of a spectrum of feelings and emotions that cannot be adequately conveyed or communicated as *illustrations*. They use a fair and reasonable amount of ambiguity that is very useful for stimulating people creativity, curiosity and discovery, and intuition among other facets of the creative process that help enhance cognitive functioning, which is essential for ideageneration, knowledge-creation and sharing, critical thinking, problem posing and problem solving. The differences between illustrative and interpretative artifacts further differentiates the claimed invention from the illustrative models and modeling methods described in Knobloch's article on "Technotown," and John Harhen's invention, as well as the invention of Morse et al. and Victor et al.

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Conclusion

My comments are respectfully submitted. The examiner's evaluation of the claimed invention's efficacy should also include the references submitted here, which document the effectiveness and usefulness of the claimed invention as it has been extensively tested in various businesses and learning organizations.

The applicant has considered the various factors the examiner listed in the latest Office Action Summary, considering the enablement requirement, among them: (A) the breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quality of experimentation needed to make or use the invention. I have taken these factors into account in determining that only due experimentation would be necessary for a person of ordinary skill in the art to be able to practice the claimed method.

Respectfully submitted,

Todd Lael Siler, Applicant
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Art Unit: 3711

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Art Unit: 3711

Information Disclosure

In providing supportive material for the pending patent application, I listed several peer-reviewed articles that verify and substantiate the claims described in the pending application. Moreover, they address each of the seven factors the examiner highlighted that determine the enablement requirement. It's important to the applicant this information be considered by the Office of the Commissioner, as it complies with the requirements noted in M.P.E.P. 609.04 (a). The applicant will remove the list of references in the specification, which, as the examiner advised, is "not a proper information disclosure according to 37 CFR 1.98(b).

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References

The "Art of Science Learning" Conferences, Learning Worlds Institute, New York City http://www.artofsciencelearning.org/metaphorming.html

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______. (2007) "Think Like A Genius Process: Realizing Human Potential Through the Purposeful Play of Metaphorming," [pp. 288-293 & 697A] in The Change Handbook: Group Methods for Shaping the Future, 2nd Edition. (San Francisco: Berrett-Koehler, edited by Peggy Holman, Tom Devane, and Steven Cady, Ph.D.
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Todd Siler, (2011a) 'Pointing your way to success through metaphorming,' in Ted Buswick and

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|----------------|----------------------|---------------------|------------------|
| 12/579,648 | 10/15/2009 | Todd Lael Siler | 73360-ICON2 | 8763 |
| Todd L. Siler | 7590 05/23/201 | EXAM | IINER | |
| Suite F2-200 | · | | FERNSTROM, KURT | |
| 4950 S. Yosemite Greenwood Village, CO 80111 | | | ART UNIT | PAPER NUMBER |
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| | | | MAIL DATE | DELIVERY MODE |
| | | | 05/23/2014 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | Application No. 12/579,648 | Applicant(s) SILER, TODD LAEL | | | | |
|---|---|--|--|--|--|--|
| Office Action Summary | Examiner KURT FERNSTROM | Art Unit 3711 | AIA (First Inventor to File) Status No | | | |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address | | | | | | |
| Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). | 36(a). In no event, however, may a reply be tir rill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE | nely filed the mailing date of ED (35 U.S.C. § 133 | this communication. | | | |
| Status | | | | | | |
| 1) Responsive to communication(s) filed on 7/29/ A declaration(s)/affidavit(s) under 37 CFR 1.1 | | | | | | |
| , | action is non-final. | | | | | |
| An election was made by the applicant in response to a restriction requirement set forth during the interview on; the restriction requirement and election have been incorporated into this action. Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i>, 1935 C.D. 11, 453 O.G. 213. | | | | | | |
| Disposition of Claims* | | | | | | |
| 5) Claim(s) 1-17 is/are pending in the application. 5a) Of the above claim(s) is/are withdraw 6) Claim(s) is/are allowed. 7) Claim(s) 1-17 is/are rejected. 8) Claim(s) is/are objected to. 9) Claim(s) are subject to restriction and/or if any claims have been determined allowable, you may be eliparticipating intellectual property office for the corresponding aparticipating intellectual property office for the corresponding aparticipating intellectual property office for the corresponding aparticipation Papers 10) The specification is objected to by the Examined | vn from consideration. relection requirement. gible to benefit from the Patent Propolication. For more information, please an inquiry to PPHfeedback@uspto.s | ase see gov. | way program at a | | | |
| 11) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). | | | | | | |
| Priority under 35 U.S.C. § 119 12) Acknowledgment is made of a claim for foreign Certified copies: a) All b) Some** c) None of the: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the prio application from the International Bureau ** See the attached detailed Office action for a list of the certified | s have been received. s have been received in Applicat rity documents have been receiv I (PCT Rule 17.2(a)). | tion No | | | | |
| | (a 35p. 55 16t. 1655) | | | | | |
| Attachment(s) | | | | | | |
| Notice of References Cited (PTO-892) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/S Paper No/s)/Mail Date | 3) Interview Summary Paper No(s)/Mail D. 4) Other: | | | | | |

provisions.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed July 25, 2013 fails to comply with 37 CFR 1.97(c) because it is not a complete information disclosure statement. It lacks a statement as specified in 37 CFR 1.97(e). It has been placed in the application file, but the information referred to therein has not been considered.

Applicant is advised to use Form PTO/SB/08a to submit a proper Information Disclosure statement. This form is available for download at http://www.uspto.gov/web/forms/sb0008a.pdf.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention is a method for enhancing cognitive functions. While the steps recited can be considered a "process", not all processes are statutory. Various factors must be considered in determining the patentability of a method, including whether the method requires the use of a particular machine, whether the method

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results in the physical transformation of a physical article, and whether a method is a

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practical application of an abstract idea. See Bilski v. Kappos, 95 USPQ2d 1001 (U.S. 2010). A claim that recites purely mental steps is not a patentable process. The steps recited in claim 1 include constructing one or more physical or virtual models relating to a subject, connecting and transforming some of the model elements, and performing various analytical steps in relation to the model. Because a virtual model can be created in the imagination of a user, all of these method steps amount to the manipulation of abstract ideas, and do not explicitly recite the literal creation or formation of a tangible object. These steps take place entirely within the minds of the users. Applicant is further advised that even if claim 1 were amended to clearly recite the formation of physical models, these models steps are tangential to the invention, as the objective of the invention is not the creation of the models themselves. Rather, the claimed result of the invention is that cognitive, affective, expressive and communicative functions in a person are enhanced. Thus, the invention is not a statutory process which is patentable under 35 USC § 101.

Additionally, the recitation of "future technological innovations" in claim 5 is not patentable subject matter because the applicant by definition has not invented "future technological innovations".

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue." These factors include, but are not limited to:

- (A) The breadth of the claims;
- (B) The nature of the invention;
- (C) The state of the prior art;
- (D) The level of one of ordinary skill;
- (E) The level of predictability in the art;
- (F) The amount of direction provided by the inventor;
- (G) The existence of working examples; and

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(H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The examiner has taken each of the above factors into account in making the determination that undue experimentation would be necessary in order for one of ordinary skill in the art to be able to practice the claimed method of fostering thinking in a reliably consistent manner. First, the breadth of the claims and nature of the invention recognize that appellant is seeking patent protection for essentially a method of making a human beings think in a certain manner (i.e. enhancing cognitive, affective, expressive and communicative functions). Evaluation of the amount of experimentation necessary to practice appellant's claimed invention, however, is not based solely on these basic factors. The examiner must also take into consideration the level of predictability in the art, the amount of direction provided by the inventor, the existence of working examples and the quantity of experimentation needed to make or use the invention.

In this case, the claimed method requires such a degree of subjective human judgment that a reasonably consistent result cannot be predictably or reliably assured. The fact that a human being is involved leaves open the myriad of ways in which humans can and do think. There is no guarantee, or any degree of reasonable assuredness, that one could enhance cognitive, affective, expressive and communicative functions in a person in the manner recited in the claim. The level of predictability of thought processes in a group of people is suspect. The working examples set forth in applicant's specification do not provide concrete evidence that

fostering thinking resulted from the claimed steps. Further, it is this examiner's position that the degree of subjectivity far outweighs all other factors in determining that the claimed invention requires undue experimentation to foster thinking in a group of participants.

In conclusion, the claimed invention contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation.

Claims 1-17 are also rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims contain numerous examples of language which is not described in the specification, including but not limited to the recited steps of connecting and transforming the models, discovering aspects of the models in a "self-guided, inquiry based way", certain of the materials recited in claim 5 including dowels, clay, "common building materials", handmade materials, "future technological innovations", the provision of at least partially ready made models, the use of multimedia tools, the provision of randomly generated forms, the various "prompting" steps, and so forth.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims include numerous examples of language whose meaning is vague and uncertain, and which does not adequately define the scope of the invention. In addition to the language identified above as not being described in the specification, terms such as "self guided, inquiry-based way", "involves", "can", "personally meaningful", "in the nature of", "other common building materials", "future technological innovations", "randomly generated forms", "relate(s) to", and "physically and/or virtually experimenting" are vague and indefinite under 35 USC 112. Again, this is not an exhaustive list of indefinite terminology, but is a list of examples to guide applicant in preparing a response.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephan F. Knobloch, "Technotown: A School-Wide Design Technology Project". As best understood, the invention is directed to creating models, and analyzing the models in various ways. Knobloch discloses a method of enhancing cognitive abilities of a

person including the steps of constructing models as a group and connecting and transforming the models to enhance creative thinking. While Technotown does not explicitly disclose the precise nature of the mental processes recited in the claims, these steps are considered to be obvious variations on the teachings of Knobloch.

Response to Arguments

Applicant's arguments filed July 25, 2013 have been fully considered but they are not persuasive.

MPEP 2106 lists several factors which are to be considered in light of *Bilski v. Kappos*, 95 USPQ2d 1001 (U.S. 2010). Such factors include:

- (a) Whether the method involves or is executed by a particular machine or apparatus
- (b) Whether performance of the claimed method results in or otherwise involves a transformation of a particular article
- (c) Whether performance of the claimed method involves an application of a law of nature, even in the absence of a particular machine, apparatus, or transformation
- (d) Whether a general concept (which could also be recognized in such terms as a principle, theory, plan or scheme) is involved in executing the steps of the method

Examples of general concepts as provided in MPEP 2106 include, but are not limited to:

• Basic economic practices or theories (e.g., hedging, insurance, financial transactions, marketing);

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- Basic legal theories (e.g., contracts, dispute resolution, rules of law);
- Mathematical concepts (e.g., algorithms, spatial relationships, geometry);
- Mental activity (e.g., forming a judgment, observation, evaluation, or opinion);
- Interpersonal interactions or relationships (e.g. conversing, dating);
- Teaching concepts (e.g., memorization, repetition);
- Human behavior (e.g., exercising, wearing clothing, following rules or instructions);
 - Instructing "how business should be conducted."

Viewing the claims in light of these factors, the claimed method remains rejected under 35 USC 101. Notwithstanding applicant's arguments concerning the meaning of the word "virtual", claim language is to be given its plain meaning, and given its broadest reasonable interpretation. See MPEP 2111, 2111.01. The specification does not include any special definition of the term "virtual". Construction and alteration of a virtual model does not amount to a physical transformation of a tangible article.

Additionally, if the models were clearly recited as physical the claims would remain rejected under 35 USC 101. The claimed result of the invention is not the construction of one or more models. Rather, the claimed result is the enhancement of cognitive abilities. Such results are directed to mental activity and teaching concepts, and are thus directed to abstract ideas. Also, the asserted physical steps of assembling and reconfiguring models are very well known. The asserted inventive concept resides in the mental steps of discovering various aspects of the model, creating goals and so forth. It is thus the examiner's position that applicant is attempting to gain patent

protection for an abstract idea. In short, it may well be that the claimed method does enhance certain neuropsychological functions in human systems as argued by applicant. Such enhancements may not, however, serve as the basis for patentability. The rejections of the claims under 35 USC 101 are maintained.

The rejections under 35 USC 112 are also maintained. Performance of the method is mental, and thus relies on subjective determinations. After careful consideration of applicant's arguments, the examiner respectfully disagrees with those arguments, and maintains the rejections. Also, as noted above the claims contain various limitations not discussed in the specification.

With respect to the rejections under 35 USC 103, the purported physical steps of assembling and reconfiguring models are taught by the Technotown reference. The recited abstract mental steps are considered to be obvious variations on the teachings of the Technotown reference.

Applicant is advised that the examiner has carefully reviewed the entire disclosure, and has determined that no patentable subject matter exists in the application. The rejections of the claims are made not merely because the claims are not worded properly. Rather, the invention itself is not patentable..

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KURT FERNSTROM whose telephone number is (571)272-4422. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Kim can be reached on 571 272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KURT FERNSTROM/ Primary Examiner, Art Unit 3711

May 21, 2014

| | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|-----------------|-------------------------|---|
| Index of Claims | 12579648 | SILER, TODD LAEL |
| | Examiner | Art Unit |
| | KURT FERNSTROM | 3711 |

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Page 1

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Art Unit: 3711



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July 18, 2013

United States Department of Commerce United States Patent and Trademark Office Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2 Mail Date 6/26/2013

"Application/Control Number: 12/579,648. Art Unit: 3711"

Dear Kurt Fernstrom, Examiner:

Thank you for giving me the opportunity to respond to the Office Action Summary (6/26/2013). This letter is intended to clarify the key points the examiner has flagged for further clarification of Claims 1-17, which are currently pending in the application.

I have addressed the main factors the examiner listed in considering the enablement requirement, among them: (A) the breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quality of experimentation needed to make or use the invention. Taking into account each of these factors, I have determined that with *due experimentation* a person of ordinary skill in the art can practice the claimed method. I've concluded this because, in reality, *they actually do*. In testing the claimed invention, people are able to use the method and apparatuses exactly as I have described. That is to say, the invention actually works with individuals, groups and teams with "reasonably consistent results that can be predictably or reliably assured," to borrow the words of the examiner.

In sum: this invention has been reduced to practice. A person of ordinary skill in the art to which this invention pertains can use the invention to achieve a desired goal or objective (Siler, 2011a&b). In evaluating the method and apparatuses, the users have noted how they utilize both creativity and

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critical thinking, which underlie subjectivity and objectivity respectively; consequently, the claimed invention enhances cognitive, affective, expressive and communicative functions in a natural way.

This is important to note, given that the examiner has questioned this reality, stating: "The claimed method requires such a degree of subjective human judgment that a reasonably consistent result cannot be predictably or reliably assured." In testing the claimed invention, I have learned that there is "a level of predictability of thought processes in a group of people," to use the examiner's phrase, and there is ample evidence that the claimed method does indeed foster creativity and innovative thinking in measurable ways.

Moreover, I explain how the user's subjectivity is counterbalanced and complemented by the user's objectivity, which is directed and exercised through critical thinking. The examiner's position is that "the degree of subjectivity far outweighs all other factors in determining that the claimed invention requires undue experimentation to foster thinking in a group of participants" (pp.5&6). After extensively testing the invention, the applicant respectfully disagrees with this position and requests a conversation with the examiner, in order to present the evidence.

Concerning: (A) the breadth of the claims

The applicant believes that the specification in the pending application "contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention." (35 USC 101)

The applicant contends that the subject matter described in the specification does, indeed, enable one skilled in the art that "the claimed invention is directed to statutory matter (under 35 U.S.C. 101). This assessment is based on the fact that Claims 1-17 does comply with the written description requirement. They are composed of words with well-defined and commonly understood meanings. They're obviously accessible to any skilled in the art of using the claimed invention. Furthermore, the applicant does not introduce new subject matter, which is not already adequately described in the specification.

The claims are statutory subject matter, because the method and apparatuses described in the pending application adequately describe a non-obvious process that results in the production of myriad physical products (i.e., apparatuses). These products both embody and cultivate "enhanced cognitive, affective, expressive and communicative functions" in a person.

The examiner had rejected the claims as including information that was not described in the specification, when, in fact, it was described there. The applicant believes the problem lies in how the examiner has interpreted the language (or "verbiage"): in a way that limits the meanings and implications of the words that the applicant uses to describe the prescribed my method of enhancing cognitive functioning, and the way in which the method is used to make the symbolic models and apply one's understanding of them.

In reviewing the terminology in the specifications, the applicant believes he has answered the examiner's questions and addressed his objections without amending or adding any new terms.

Concerning: (B) the nature of the invention

In the Office Action Summary (May 17, 2012), the examiner wrote: "the claimed invention is a method for enhancing cognitive functions." I would like to correct this statement by including these two words: and apparatuses. The apparatuses are not only core to the title of the pending application but, more importantly, they're essential ways and means of enhancing cognitive functions, as noted in the method claims. That structured process of the claimed method and its tangible products (i.e., symbolic models or apparatuses) constitute the invention, as noted in Claims 1-17, which are pending in the application.

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This is an important point of clarification, because it marks the bane of the examiner's objection to this invention. The examiner wrote, wrongly in my view, that "...even if claim 1 were amended to clearly recite the formation of physical models, these models steps are tangential to the invention, as the objective of the invention is not the creation of the models themselves. Rather, the claim result of the invention is that cognitive, affective, expressive and communicative functions in a person are enhanced. Thus, the invention is not a statutory process is patentable under 35 USC 101." (p.3)

The "models steps" are not "tangential to the invention." Rather, they play a central role in enhancing cognitive, affective, expressive and communicative functions in a person as claimed. They are key tools for achieving the objective of the invention.

I respectfully ask the examiner to re-consider this essential connection between the method and the production of apparatuses, which use the method as described. When taken together, the method and apparatuses do enhance these neuropsychological functions in human systems as claimed. This conclusion is based on my research and practices over the past three decades, during which time I have used the method and apparatuses in a directed way on a wide range of projects (Siler, 1997, 2007, 2011a&b).

The claimed result is a cognitive enhancement, which is shown and demonstrated through the use of both the method and apparatuses. The applicant believes the examiner is in error presuming that the claimed result of the invention is not the model but a cognitive enhancement; consequently, the claims are not directed to statutory subject matter.

To be perfectly clear, the claimed results are actually two-fold parts: (1) the "Enhancement of Cognitive Functioning" and (2) "Its Manifestation Into Physical Form and Translation Into Useful Information." This second part of the results concerns the tangible manifestations of cognitive functioning, which are evidenced by the models. The "usefulness" of the information (data, knowledge, concepts, ideas, events, experiences, etc.) that is manifested in the models, refers to how well the information helps a person make informed decisions, or develop and apply an idea, or utilize the experience of creating and exploring, and translating the meanings of the symbolic models in personally useful and purposeful ways. These physical processes and products have tangible outcomes with measurable results (Siler, 2011a&b).

As the title of my patent application makes plainly evident, the claimed method entails making physical symbolic models that are explicitly referred to and described as "apparatuses." By entails, I mean this method has a "logically necessary consequence"—namely, the creation of apparatuses whose **translation into useful information** can be objectively assessed and evaluated.

In this way, the multi-dimensional models *manifest* cognitive, affective, expressive and communicative functions in a person. They make tangible and visible the otherwise intangible and invisible functions of the human brain, thus turning the hidden world of neuropsychological systems into useful and practical artifacts that inform our decisions and enhance the quality of our lives.

The claimed invention directs people how to use the symbolic models they create to show and constructively discuss a world of information that cannot easily be described or rendered with words and numbers alone. The models make tangible what is on people's minds, helping them more effectively express and communicate their issues, problems, concerns, challenges, and other personally meaningful things that pre-occupy and absorb their attention.

We have demonstrated in various media (videos, DVDs, software, etc.) how these constructed apparatuses (i.e., physical, symbolic models) help enhance and advance a user's work in concrete ways and with tangible results that are measurable (Siler, 1997). The models afford users the opportunity to see the creation of new knowledge or a new discovery or innovation, evaluating, analyzing and measuring its significance and relevance.

The models guide and inform the decision-making process—thus, improving it (Siler, 2011a). They help people better understand their goals and implementation plans for achieving them. Moreover they make it easier and more effective to communicate their ideas so that everyone can understand them better and act on them in a productive manner.

Regarding process claims, the law requires that the claims include something tangible. Clearly, the multi-dimensional, symbolic models are tangible. The models are clearly composed of physical objects and organized in such a way that anyone can touch them, point to and point out what they are seeing in the most tangible way. Even a physically blind person can *touch* another person's symbolic model that shows the contents of their mind. The law makes it clear that the result of the process needs to be tangible.

In determining the patentability of a method, the law (95 USPQ2d 1001) states that a "process" must be "tied to another statutory class" (such as a machine or article of manufacture). The physical, multi-dimensional ["5-D"] models, or apparatuses, that users are guided to create constitute physical machines of sorts that are, for all practical purposes, a self-manufactured article.

The examiner has written in his Office Action Summary (p.2): "A claim that recites purely mental steps is not a patentable process. The steps recited in claim 1 include constructing one or more physical or virtual models relating a subject, connecting and transforming some of the model elements, and performing various analytical steps in relation to the model. Because a virtual model can be created in the imagination of a user, all of these method steps amount to the manipulation of abstract ideas, and do not explicitly recite the literal creation or formation of a tangible object. These steps take place entirely within the minds of the users," to quote the examiner.

With all due respect, the applicant believes the examiner is misunderstanding the word "virtual," which neither refers to nor suggests "steps that take place entirely in the minds of the users." This is not the correct reading of "virtual" in the claimed method. In the pending application, I explicitly direct users to

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give form to their thoughts, feelings, knowledge, data, ideas, and experiences in the tangible ways in making these physical symbolic models.

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The examiner is broadly interpreting this word virtual in a way that ignores the reality of how this term is used in the vernacular, referring to digital media and computer-generated materials.

In any event, the examiner noted that "virtual" could be redefined to clearly recite physical models. The applicant interprets this to mean creating electronically with computer-aided design tools symbolic models, comprising both abstract and representational information.

When I highlighted in Claim 1, "These physical, symbolic forms can also be represented in virtual reality or electronically, with the aid of computer-graphics, holography and other media technology," I am using this word "virtual" in a familiar, mainstream context to describe digital realities modeled *not in a human mind*, but rather in computers that create a spectrum of virtual objects: from vector graphics that visualize 3-D prototypes to experiential Virtual Reality systems that immerse users in a world of virtual visual objects.

Concerning: (C) the state of the prior art

"Any person skilled in the art to which the claimed invention pertains" (35 USC 101)—or any person *unskilled in the arts*—can create, show, describe, and express their ideas, knowledge, points of view in emotionally rich and evocative ways. The expressive objects they make—as well as the whole experience of using the method to make the apparatuses—dramatically contrast the prior art the examiner has cited in these three U.S. Patent Documents (US-5,406,477, John Harhen, Classification 703/6; US-6,626,677. Morse et al. Classification 434/237; US-2002/0103774. Victor et al. Classification 706/11) and these two Non-Patent Documents ("TECHNOTOWN – A LEGO Experience," The Technology Teacher, pp. 13-15, September 1994; and "The Laboratory Schools LEGO-LOGO Project," 1995 [retrieved online July 7, 2005]).

Users of the applicant's invention *experience* a substantially different sense of creative freedom and openness to wonder, using the claimed method and apparatuses to make their ideas and knowledge tangible. There are no set or standard objects to construct, such as the Lego blocks and other primitives, in the way that constrains the aesthetic experience. The Lego structures are all fixed, modular units of forms and shapes that are visually and tactilely regular in design. Like many building blocks that utilize standardized structures, such as those in computer-aided object-oriented models, they offer a very different emotional and aesthetic experience than the apparatuses created with the basic and common building materials used in the claimed invention.

The visual qualities and physical characteristics of these LEGO models stand in sharp contrast to those physical qualities of the materials used in the making of symbolic models, or apparatuses, using the applicant's claimed invention. What is more, the LEGO language of forms is much more constrictive than the forms and shapes of materials used in the applicant's invention, which directly impact and influence the enhancement of cognitive, affective, expressive, and communicative skills. It is the applicant's informed opinion that this LEGO language of forms hampers and limits many people's creativity rather than enhancing and expanding it. This

observation is based on the applicant's lifetime experiences in the visual arts and professional expertise.

It can be argued that even when using the LEGO modular forms, whether physically or electronically composed with the aid of computers, users still have to deal with the same issues of subjective [value] judgments regarding their aesthetic appeal as the claimed invention. And, that these judgments are a natural part of the creative process underlying invention, innovation and discovery. Furthermore, the use of these LEGO objects as building materials frequently entail undue experimentation.

For instance, in using LEGO's Technic II, fourth graders are tasked with building gears and pulleys, using a limited selection of materials with which to work in exploring a problem while becoming familiar with the function and names of various pieces." ("The Laboratory Schools LEGO-LOGO Project," 1995, p.6). This self-guided exploration often involves undue experimentation. Even when this exploration is learned algorithmically (i.e., in a step-by-step process using a general set of rules users followed in problem-solving operations).

My point is this: The quality, variety and consistent richness of the aesthetic experiences ultimately determines the degree to which one method succeeds at enhancing cognitive functioning whereas another method with more constraints may not by comparison.

A person using one million LEGO pieces to construct a representational object such as a town, as in the case of "Technotown, the School-Wide Design Technology Project" ("TECHNOTOWN – A LEGO Experience," The Technology Teacher, pp. 13-15, September 1994, p.39) versus a person using one million common wooden dowels to make an abstract, symbolic model of "Life" are going to have entirely different aesthetic experiences that offer varying degrees of enhancement to cognitive functioning. The applicant contrasts this Real Life Experience with a LEGO Experience. From my personal and professional experiences making symbolic models for more than forty years—and having formally studied the neuropsychology of these different creative activities and applied this explicit knowledge in business and learning organizations worldwide—I can say confidently that these are complementary methods, tools and experiences that are naturally related, but very different, in form, substance, experiences, and impact on cognitive functioning And these obvious and subtle experiential differences make up the different types of patentable inventions made available today.

This statement is generalizable to each of the examples of prior art the examiner presented the applicant for review. Clearly, there are "elements of subjectivity" that are obviously present in each of the prior art that the examiner has granted U.S. Patents.

Concerning (D) the level of one of ordinary skill

The examiner rejected "Claims 1-17 (under 35 U.S.C. 112, first paragraph), as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation." (p.4)

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The claimed invention does not require "undue experimentation" to use it effectively. I say this in light of the litany of factors the examiner listed which are used to determine whether or not the pending application "satisfies the enablement requirement" or whether or not the claimed invention involves "undue experimentation."

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The creative act of understanding the meanings, implications and possible applications of the symbolic models, or apparatuses, has been shown to enhance cognitive functioning as claimed, which are freeform physical symbolic models to spark, inspire and accelerate invention, innovation and problem-solving is taught through the 4-Steps of Metaphorming (Siler, 1997). As we have argued, this proven methodology enables people to continually invent, innovate and create solutions to problems and challenges that we all encounter in real-life (Siler, 2011b). As we've explicitly highlighted and visually documented, these models serve as purposeful visual aids that enable users (from all socio-economic-cultural-educational backgrounds to show-and-tell and share their ideas and creative solutions with anyone in the world at any time for any purpose with measurable results

Here, the claimed method is tied to another class, i.e., the models that are explicitly recited in the patent claims. As duly noted, the invention is comprised of the Four-Step Process [of "Metaphorming," aka Think Like a Genius Process], which is applied to the creative act of making symbolic models and systematically exploring their possible meanings in ways that are personally meaningful and productive and that involve reasonable *due experimentation*. This directed and self-directed experimentation is a core part of the claimed invention, because it provides enriched learning experiences that "enhance cognitive functioning and its manifestation into physical form and translation into useful information." (Siler, 2011b)

I use this phrase, *reasonable due experimentation*, to contrast the examiner's phrase "undue experimentation," which presumes this is a purely subjective process that involves experimenting with the building materials. Nevertheless, both this self-guided and facilitated experimentation consistently yields measurable outcomes, which have been documented and noted in the peer-reviewed articles submitted here.

Concerning (E) the level of predictability in the art

The applicant contends that a reasonably consistent result can be predictably or reliably assured. He knows this for a fact, having applied the claimed invention in working with Fortunate 500 Companies, including the Technology Pioneers at the World Economic Forum in Davos, Switzerland on innovation-oriented workshops, and having worked with start-up technology companies that are funded by prominent venture-capital organizations that demand and expect reasonably consistent, reliable results with measurable outcomes. (Siler, 2011a; please read this peer-reviewed article, which is referenced with other supporting material for the claimed invention. It attests to this fact, and independent reviewers verified the testimonials.)

Furthermore, the applicant contends that the claimed invention would never have been accepted and applied for ideation and innovation-oriented work for the "Art of Science Learning" Program, which is funded by the National Science Foundation and other leading science organizations that aim to build a 21st Century Science, Technology, Engineering, Mathematics (STEM) Workforce. This program uses arts-based and science-based learning methods, tools, and best practices to build a Curriculum that

delivers a set of specific, repeatable and reliable practices for incubating and developing innovation. These organizations also expect "reasonably consistent results" that are "predictably or reliably assured." Results that can be rigorously quantitatively and qualitatively evaluated. (Please read this peer-reviewed information on the "Metaphorming" process, which is posted on this official website, funded by the NSF (http://www.artofsciencelearning.org/metaphorming.html), which is referenced with other supporting material for my invention.)

These references validate the reliability and consistency of using my invention to achieve the desired results of leading businesses and learning organizations and cultural organizations worldwide. In fact, I have been using this claimed invention since I first sought a patent for the method and apparatuses in the mid-1990s.

To further validate the reliability and consistency of the methods and apparatuses described in my patent application, you may be interested to know this fact, as well: My invention was used to help establish "The Five Elements of Discovery" that were noted in writing and visually documented by Procter & Gamble as one of Three Enabling Pillars of the Shopping Revolution" (2001). It was summarized in a P&G document, titled "Leveraging World Class Shopping Experiences," after I had formally presented the methods and apparatuses at a major industry conference by the executives of Procter & Gamble, titled "The Shopping Revolution" Symposium in Cincinnati on March 2, 2000. Procter & Gamble is a results-oriented organization that would never have utilized my invention, if it did not deliver "reasonably consistent results" that can be predictably or reliably assured."

The symbolic models that were created, which were contracted by P&G, synthesized and represented in model-form our exploratory studies of the general public's shopping patterns. Using my invention, we showed and described specifically "what makes a world-class shopping experience," based on objective information and evaluations. It is worth noting that Procter &Gamble used this information and our materials to build on what they learned from the symbolic models and the Think Like a Genius Process (aka, Metaphorming; that is the commercial name we have used over the past two decades to market the claimed invention). If the examiner would like to review any of this supporting material, such as the P&G produced videotape and written materials, the applicant will gladly send a copy.

Clearly, there are "degrees and elements of subjectivity" that are obviously present in each of the prior art examples that the examiner has cited; and yet, they were granted patents—and not because their inventions took precedence over mine.

Concerning (F) the amount of direction provided by the inventor

The claimed invention teaches learners of all ages, backgrounds and cultures how to use their innate critical thinking skills—and their natural sense of curiosity—to creatively construct meanings from their models (Siler, 2011b). It also guides them in discovering new meanings by asking a series of questions either to themselves or to others, which provides users with various self-learning experiences. These enriched learning experiences, in turn, enhance cognitive functioning as claimed by the invention.

In the case of the self-guided, 3-D Authoring Tool, titled "Think Like a Genius" software 1.0 and 2.0, which the applicant and his team collaboratively created to be utilized by the general public, users algorithmically learn (i.e., in a step-by-step process using a general set of rules), thus following

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problem-solving operations. The applicant has submitted a copy of the "Think Like a Genius" software 2.0, accompanying this letter. A brief overview and demonstration of the software can be found on the menu for the software marked "i" (information).

Concerning G) the existence of working examples

The applicant urges the examiner to please review the supporting materials that accompany the application. The purpose of this supporting material, which I've referenced serves to substantiate the efficacy of the method and apparatuses, and the "reasonably consistent results" that are "predictably or reliably assured." Clearly, Procter & Gamble recognized the invention for the valuable information they were able to ascertain it and build on for their consumer-packaged goods.

This material should assuage the examiner's doubt that the claimed invention actually works in a reasonably reliable manner. The applicant points to the fact the world's largest consumer-goods packager utilized the insights and discoveries gained from exploring this claimed invention. In a formal document they produced, they referenced the claimed method as "one of the Three Enabling Pillars of the Shopping Revolution."

The applicant offers to introduce this evidence, which can serve as affidavits from users. At the very least, the peer-reviewed documents referenced in this letter are submitted to the examiner for his review.

Concerning (H) the quality of experimentation needed to make or use the invention

The experiences of using the claimed invention are significantly different from Steve Knobloch's description of the Design Technology in his article on Techtown (p.43): "The process that students use in solving a design problem involves several steps. Each step can be evaluated as the students work. Define Need/Challenge. Research. Plan/Design. Gather Materials. Build Design. Test and Evaluate. The learning for understanding which took place can be best described by a fifth grade student, who, after three weeks of sorting and analyzing and exploring, asked, 'why are we doing this?' I answered, "To give every student in the school an opportunity to use the knowledge gained in all subjects and to apply that knowledge to a real world application. To take your math skills, language skills, research skills, science skills, social studies skills, and use them while building this town....Eventually, the project made sense to everyone."

The fact that "after three weeks of sorting and analyzing and exploring... "why are we doing this?"— one can reasonably infer that there was "undue experimentation" as well as a high degree of subjective interpretation(s) with regard to the process of making the Techtown. The words, eventually and making sense of this activity belie the real emotions and feelings of this student and, probably, may of her peers, who groped to figure out what exactly they were supposed to be learning from this adventure in innovative thinking.

The applicant points out that the experience of constructing this Techntown is also different from building physical symbolic models or virtual (i.e., digital or electronic) models using computer-generated visualization and animation tools that render 2-D and 3-D objects.

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Overall, the prior art cited by the examiner is related to, but significantly different from, the claimed invention, in the same way apples and oranges are related to one another as fruits but offer profoundly different tastes, smells, touch, sound and other sensory experiences. More specifically, the prior art are related in so far as they build on or are inspired by the "Constructivists" theories of learning and approaches to teaching that were popularized by these noted psychologists and learning theorists, Jean Piaget and Lev Vygotsky. Some scholars would argue they originated over two thousand years ago with the Greek philosopher and scientist, Aristotle (384–322 BC) whose theory of learning-by-doing and questioning-everything-we-learn-and-do have influenced nearly every strategy for learning and teaching used today by contemporary Constructivists. Technically speaking, every U.S. Patent awarded for methods that enable a person to learn by creating things in new ways—including John Harhen, Morse et al., Victor et al. as well as other inventors—have this unspoken precedence to point to: Socrates and other ancient Greek educators (Siler, 2011).

Finally, the examiner had rejected the claims as being obvious over the Technotown article, which describes a model city made by students. There is world of differences both experientially and productively – meaning, in terms of the physical products and objects created using my invention—in making 3-D representations of objects that are created using Solid-Modeling, computer-aided design (CAD) tools, compared to making 3-D (or 4-D or "5-D" Symbolic Models using the hands-on physical and electronic tools I have described in Claims for the pending application that enable people to physically express and give form to their ideas.

The differences are as obvious as comparing "Apples" (i.e., electronic models made with CAD software, which is distinctly more literal, illustrative and representational in nature) to "Oranges" (i.,e., the myriad types of free-form, expressive and interpretive models using my invention. The Claims 1-18 in the pending application also make reference to the Think Like a Genius software (versions 1.0 and 2.0); that is, the method and apparatuses outlined in my pending application, which, I believe, offer different experiences that enhance cognitive functioning. These differences are of patentable significance.

It is to be remembered that one of the biggest and most defining differences between the prior art cited by the examiner and the claimed invention is that the former is largely "illustrative" versus "interpretative" artifacts (i.e., visualizations, representations, demonstrations, etc.). The claimed invention represents information in the form of 2-D, 3-D, 4-D, and "5-D" Symbolic Models, which are comprised of a spectrum of feelings and emotions that cannot be adequately conveyed or communicated as *illustrations*. They use a fair and reasonable amount of ambiguity that is very useful for stimulating people creativity, curiosity and discovery, and intuition among other facets of the creative process that help enhance cognitive functioning, which is essential for idea-generation, knowledge-creation and sharing, critical thinking, problem posing and problem solving. The differences between illustrative and interpretative artifacts further differentiates the claimed invention from the illustrative models and modeling methods described in Knobloch's article on "Technotown," and John Harhen's invention, as well as the invention of Morse et al. and Victor et al.

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Conclusion

My comments are respectfully submitted. The examiner's evaluation of the claimed invention's efficacy should also include the references submitted here, which document the effectiveness and usefulness of the claimed invention as it has been extensively tested in various businesses and learning organizations.

The applicant has considered the various factors the examiner listed in the latest Office Action Summary, considering the enablement requirement, among them: (A) the breadth of the claims; (B) The nature of the invention; (C) The state of the prior art; (D) The level of one of ordinary skill; (E) The level of predictability in the art; (F) The amount of direction provided by the inventor; (G) The existence of working examples; and (H) The quality of experimentation needed to make or use the invention. I have taken these factors into account in determining that only due experimentation would be necessary for a person of ordinary skill in the art to be able to practice the claimed method.

Respectfully submitted,

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Information Disclosure

In providing supportive material for the pending patent application, I listed several peer-reviewed articles that verify and substantiate the claims described in the pending application. Moreover, they address each of the seven factors the examiner highlighted that determine the enablement requirement. It's important to the applicant this information be considered by the Office of the Commissioner, as it complies with the requirements noted in M.P.E.P. 609.04 (a). The applicant will remove the list of references in the specification, which, as the examiner advised, is "not a proper information disclosure according to 37 CFR 1.98(b).

References

The "Art of Science Learning" Conferences, Learning Worlds Institute, New York City http://www.artofsciencelearning.org/metaphorming.html

Todd Siler, (2011a) 'Pointing your way to success through metaphorming,' in Ted Buswick and Harvey Seifter (Eds.), "Creatively Intelligent Companies and Leaders: Arts-based Learning for Business," *Journal of Business Strategy*' Vol. 31 No. 4, 2011, pp. 47-58, ISSN 0275-6668.

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| Science | 011b) "The ArtScience Pro e, Technology, Issue 44:5 (Cress) http://www.leonardo.i | October, 2011); pp.4 | | | |
| of Meta | 007) "Think Like A Genius aphorming," [pp. 288-293 & ure, 2 nd Edition. (San Franc Cady, Ph.D. | & 697A] in <i>The Cha</i> | ange Handbook: Gro | oup Methods for Sh | aping |
| (2 | 2002) "Metaphorming You Tools," essay in <i>Lead</i> Hesselbein & Compa 2002, pp. 15-19. | der To Leader maga | zine of the Peter F. 1 | Drucker Foundatio | n, |
| (1 | 1997)Think Like A Genius, | , New York: Bantan | n Books. | | |

ARTIFACT SHEET

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Other, description: **BOOK**

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------|-----------------|----------------------|---------------------|------------------|
| 12/579,648 | 10/15/2009 | Todd Lael Siler | 73360-ICON2 | 8763 |
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| Suite F2-200 | · | | FERNSTRO | OM, KURT |
| 4950 S. Yosem Greenwood Vil | | | ART UNIT | PAPER NUMBER |
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| | • | | 06/26/2013 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | Application No. | Applicant(s) | |
|--|---|--|--|--|
| | | 12/579,648 | SILER, TODD LAEL | |
| Office Act | ion Summary | Examiner | Art Unit | |
| | | KURT FERNSTROM | 3711 | |
| The MAILING D Period for Reply | ATE of this communication app | ears on the cover sheet with t | he correspondence address | |
| A SHORTENED STAT WHICHEVER IS LONG - Extensions of time may be as after SIX (6) MONTHS from 1 If NO period for reply is speci- Failure to reply within the set | TUTORY PERIOD FOR REPLY GER, FROM THE MAILING DAY railable under the provisions of 37 CFR 1.1: he mailing date of this communication. filed above, the maximum statutory period vor extended period for reply will, by statute ice later than three months after the mailing nt. See 37 CFR 1.704(b). | ATE OF THIS COMMUNICAT 36(a). In no event, however, may a reply vill apply and will expire SIX (6) MONTHS , cause the application to become ABAND | TION. be timely filed from the mailing date of this communicationED (35 U.S.C. § 133). | |
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| 2a) ☐ This action is FI 3) ☐ An election was ; the restri 4) ☐ Since this applic | ommunication(s) filed on | action is non-final. onse to a restriction requirem have been incorporated into nce except for formal matters | this action. prosecution as to the merits | |
| Disposition of Claims | | , | | |
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| 1) Notice of References Cite 2) Notice of Draftsperson's F 3) Information Disclosure Sta Paper No(s)/Mail Date | ratent Drawing Review (PTO-948) attement(s) (PTO/SB/08) | Paper No(s)/M | nary (PTO-413) ail Date nal Patent Application | |

DETAILED ACTION

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 2-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention is a method for enhancing cognitive functions. While the steps recited can be considered a "process", not all processes are statutory. Various factors must be considered in determining the patentability of a method, including whether the method requires the use of a particular machine, whether the method results in the physical transformation of a physical article, and whether a method is a practical application of an abstract idea. See Bilski v. Kappos, 95 USPQ2d 1001 (U.S. 2010). A claim that recites purely mental steps is not a patentable process. The steps recited in claim 1 include constructing one or more physical **or virtual** models relating to

a subject, connecting and transforming some of the model elements, and performing various analytical steps in relation to the model. Because a virtual model can be created in the imagination of a user, all of these method steps amount to the manipulation of abstract ideas, and do not explicitly recite the literal creation or formation of a tangible object. These steps take place entirely within the minds of the users. Applicant is further advised that even if claim 1 were amended to clearly recite the formation of physical models, these models steps are tangential to the invention, as the objective of the invention is not the creation of the models themselves. Rather, the claimed result of the invention is that cognitive, affective, expressive and communicative functions in a person are enhanced. Thus, the invention is not a statutory process which is patentable under 35 USC § 101.

Additionally, the recitation of "future technological innovations" in claim 6 is not patentable subject matter because the applicant by definition has not invented "future technological innovations".

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Page 4

Art Unit: 3711

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue." These factors include, but are not limited to:

- (A) The breadth of the claims;
- (B) The nature of the invention;
- (C) The state of the prior art;
- (D) The level of one of ordinary skill;
- (E) The level of predictability in the art;
- (F) The amount of direction provided by the inventor;
- (G) The existence of working examples; and
- (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The examiner has taken each of the above factors into account in making the determination that undue experimentation would be necessary in order for one of ordinary skill in the art to be able to practice the claimed method of fostering thinking in a reliably consistent manner. First, the breadth of the claims and nature of the invention recognize that appellant is seeking patent protection for essentially a method of making a human beings think in a certain manner (i.e. enhancing cognitive, affective, expressive and communicative functions). Evaluation of the amount of experimentation necessary to practice appellant's claimed invention, however, is not based solely on these basic factors. The examiner must also take into consideration the level of predictability in the art, the amount of direction provided by the inventor, the existence of working examples and the quantity of experimentation needed to make or use the invention.

In this case, the claimed method requires such a degree of subjective human judgment that a reasonably consistent result cannot be predictably or reliably assured. The fact that a human being is involved leaves open the myriad of ways in which humans can and do think. There is no guarantee, or any degree of reasonable assuredness, that one could enhance cognitive, affective, expressive and communicative functions in a person in the manner recited in the claim. The level of predictability of thought processes in a group of people is suspect. The working examples set forth in applicant's specification do not provide concrete evidence that fostering thinking resulted from the claimed steps. Further, it is this examiner's position that the degree of subjectivity far outweighs all other factors in determining that the

claimed invention requires undue experimentation to foster thinking in a group of participants.

In conclusion, the claimed invention contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation.

Claims 1-17 are also rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims contain numerous examples of language which is not described in the specification, including but not limited to the recited steps of connecting and transforming the models, discovering aspects of the models in a "self-guided, inquiry based way", certain of the materials recited in claim 5 including dowels, clay, "common building materials", handmade materials, "future technological innovations", the provision of at least partially ready made models, the use of multimedia tools, the provision of randomly generated forms, the various "prompting" steps, and so forth.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims include numerous examples of language whose meaning is vague and uncertain, and which does not adequately define the scope of the invention. In addition to the language identified above as not being described in the specification, terms such as "self guided, inquiry-based way", "involves", "can", "personally meaningful", "in the nature of", "other common building materials", "future technological innovations", "randomly generated forms", "relate(s) to", and "physically and/or virtually experimenting" are vague and indefinite under 35 USC 112. Again, this is not an exhaustive list of indefinite terminology, but is a list of examples to guide applicant in preparing a response.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephan F. Knobloch, "Technotown: A School-Wide Design Technology Project". As best understood, the invention is directed to creating models, and analyzing the models in various ways. Knobloch discloses a method of enhancing cognitive abilities of a person including the steps of constructing models as a group and connecting and

transforming the models to enhance creative thinking. While Technotown does not explicitly disclose the precise nature of the mental processes recited in the claims, these steps are considered to be obvious variations on the teachings of Knobloch.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harhen, Morse, Victor and "The Laboratory Schools LEGO-LOGO Project" disclose various methods of enhancing cognitive abilities.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kurt Fernstrom whose telephone number is (571) 272-4422. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Kim can be reached on 571 272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 12/579,648 Page 9

Art Unit: 3711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kurt Fernstrom/ Primary Examiner, Art Unit 3711

May 17, 2012

Notice of References Cited Application/Control No. 12/579,648 Examiner KURT FERNSTROM Applicant(s)/Patent Under Reexamination SILER, TODD LAEL Page 1 of 1 U.S. PATENT DOCUMENTS

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification |
|---|---|---|-----------------|---------------|----------------|
| * | Α | US-5,406,477 | 04-1995 | Harhen, John | 703/6 |
| * | В | US-6,626,677 | 09-2003 | Morse et al. | 434/237 |
| * | U | US-2002/0103774 | 08-2002 | Victor et al. | 706/11 |
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NON-PATENT DOCUMENTS

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| * | | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
| | U | "TECHNOTOWN -A LEGO Experience", The Technology Teacher, pp. 13-15 (September 1994). |
| | \ \ | "The Laboratory Schools LEGO-LOGO Project", 1995 [retrieved online July 7, 2005]. |
| | w | |
| | x | |

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes



| Application/Control No. | Applicant(s)/Patent Under Reexamination |
|-------------------------|---|
| 12579648 | SILER, TODD LAEL |
| Examiner | Art Unit |
| KURT FERNSTROM | 3711 |

| SEARCHED | | | | | | | |
|----------|------------------------|---------|----------|--|--|--|--|
| Class | Subclass | Date | Examiner | | | | |
| 434 | 107, 29, 168, 236, 237 | 5/17/12 | KF | | | | |
| 705 | 10, 11 | 5/17/12 | KF | | | | |

| SEARCH NOTES | | | | | |
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| Search Notes | Date | Examiner | | | |
| EAST text search. | 5/17/12 | KF | | | |
| Inventor name search. | 5/17/12 | KF | | | |

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U.S. Patent and Trademark Office Part of Paper No. :



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TODD L. SILER SUITE F2-200 4950 S. YOSEMITE GREENWOOD VILLAGE CO 80111



In re Application of

Todd Lael SILER

Application No. 12/579,648 : DECISION ON PETITION

Filed: October 15, 2009

Attorney Docket No. 73360-ICON2

This is a decision on the renewed petition, filed February 20, 2013, which is being treated as a petition under 37 CFR 1.181 (no fee) requesting withdrawal of the holding of abandonment in the above-identified application.

The petition is **GRANTED**.

This application was held abandoned for failure to reply to the non-final Office action mailed May 21, 2012, which set a three month shortened statutory period to reply. Accordingly the application became abandoned on August 22, 2012.

Petitioner asserts that the final Office action dated December 30, 2008 was not received.

A review of the written record indicates no irregularity in the mailing of the Office action, and, in the absence of any irregularity, there is a strong presumption that the Office action was properly mailed to the practitioner at the address of record. This presumption may be overcome by a showing that the Office action was not in fact received. In this regard, the showing required to establish the failure to receive the Office action must consist of the following:

- 1. a statement from practitioner stating that the Office action was not received by the practitioner;
- 2. a statement from the practitioner attesting to the fact that a search of the file jacket and docket records indicates that the Office action was not received; and

3. a copy of the docket record where the nonreceived Office action would have been entered had it been received and docketed must be attached to and referenced in the practitioner's statement.

See MPEP § 711.03(c) under subhéading "Petition to Withdraw Holding of Abandonment Based on Failure to Receive Office Action," and "Withdrawing the Holding of Abandonment When Office Actions Are Not Received," 1156 Official Gazette 53 (November 16, 1993).

The petition satisfies the above-stated requirements. Accordingly, the application was not abandoned in fact.

In view of the above, the Notice of Abandonment is hereby vacated and the holding of abandonment withdrawn.

Telephone inquiries related to this decision may be directed to Michelle R. Eason at (571) 272-4231.

This application is being referred to the Technology Center technical support staff of Art Unit 3711 for re-mailing the Office action of May 21, 2012. The period for reply will run from the mailing date of the Office action.

Thurman K. Page Petitions Examiner Office of Petitions Todd Lael Siler
Think Like a Genius₂ Foundation
Suite F2-200
4950 S. Yosemite St.
Greenwood Village, CO 80111
Mobile 720-988-8853
Email: toddsiler@alum.MIT.edu



February 12, 2013

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2

"Renewed Petition under 37 CFR 1.81 to Withdraw the Holding of Abandonment"

Dear Thurman K. Page, Petitions Examiner:

On January 28, 2013 I received your letter *dismissing* my request (dated December 12, 2012) to withdraw the holding of Abandonment in the above-identified application on the grounds that the abandonment was unintentional.

This letter serves as my statement attesting to the fact that (1) I never received the Office action dated May 21, 2012; (2) I searched the file jacket and docket records and could not find the Office action; and (3) a copy of your DECISION ON PETITION (DISMISSED) January 28, 2013, which clearly shows

Note that your most recent letter was incorrectly addressed to my old Suite F2-325 instead of Suite F2-200, which I had corrected (as shown in the copy I've enclosed). Nevertheless, I still received your D. As I pointed out in my letter to Mr. Kurt Fernstrom, Primary Examiner (dated 12, 2012), that minor change in the Suite number would not have prevented your letter from reaching me. More to the point: I did not intentionally delay the filing of a petition for revival.

I hereby request the withdrawal of the holding of Abandonment in the above-identified application on the grounds that the abandonment was unintentional. This one page petition requests reinstatement for unavoidable abandonment.

As that petition was recently rejected, I am now asking that the original application be revived as a result of filing this petition to revive for unintentional abandonment.

For the reasons set forth above, I declare that I had <u>no intention of abandoning this patent application</u> that I've worked so hard to maintain and any delay between the original deadline and the filing of the corrected applications—as well as any other delay since then as a result—was absolutely unintentional.

Given these circumstances, it is my hope that you withdraw the abandonment so that my application can be reinstated. I will then promptly file a 6-month extension fee.

I will call Michelle R. Eason at the number you provided (571-272-4231) to schedule a time to discuss this patent application with you. I thank you in advance for your help and look forward to speaking with you.

Todd Lael Siler Petitioner 72 Stand Siler

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GREENWOOD VILLAGE CO 80111 4950 S. YOSEMITTE **TODD L. SILER** SUITE F2-325



Attorney Docket No. 73360-100NZ Application No. 12/579,648 Filed: October 15, 2009 In re Application of Todd Lael SILER

DECISION ON PETITION

This is a decision on the petition, filed December 20, 2012, which is being-treated as a potition under 37 CFR 1.181 (no fee) requesting withdrawal of the holding of abandonment in the above-identified application.

The petition is DISMISSED

of this decision. Note 37 CFR 1.181(f). The request for reconsideration should include a cover letter and Any request for reconsideration of this decision should be filed within two (2) months from the mail date be entitled as a "Renewed Petition under 37 CFR 1.181 to Withdraw the Holding of Abandonment."

2012, which set a three (3) month shortened statutory period for reply. A Notice of Abandonment was This application was held abandoned for failure to reply to the nonfinal Office action mailed May 21, mailed on November 30, 2012.

Petitioner asserts that the Office section dated May 21, 2012 was not received.

absence of any irregularity, there is a strong presumption that the Office action was properly mailed to the practitioner at the address of record. This presumption may be overcome by a showing that the A review of the written record indicates no irregularity in the mailing of the Office action and, in the Office action was not in fact received. In this regard, the showing required to establish the failure to receive the Office action must consist of the following:

- 1. a statement from practitioner stating that the Office action was not received by the prectitioner,
- a statement from the practitioner attesting to the fact that a search of the file jacket and docket records indicates that the Office action was not received; and d
- entered had it been received must be attached to and referenced in the practitioner's a copy of the docket record where the nonreceived Office action would have been ۳.

Application No. 12/579,648

Failure to Receive Office Action," and "Withdrawing the Holding of Abandonment When Office Actions See MPEP § 711.03(c) under subheading "Petition to Withdraw Holding of Abandonment Based on Are Not Received," 1156 Official Gazette 53 (November 16, 1993).

The petition fails to satisfy all of the above-stated requirements.

Accordingly, absent the required evidence to establish nonreceipt of the Office action of May 21, 2012, the petition requesting withdrawal of the holding of abandonment cannot be granted at this time.

does not wish to, petitioner should consider filing a petition under 37 CFR 1.137(b) stating that the delay "unavoidable." This amendment to 35 U.S.C. § 41(a)(7) has been implemented in 37 CFR 1.137(b). An If pecitioner cannot supply the evidence necessary to withdraw the holding of abandonment, or simply was unintentional. Public Law 97-247, § 3, 96 Stat. 317 (1982), which revised patent and trademark fees, amended 35 U.S.C. § 41(a)(7) to provide for the revival of an "unintentionally" abandoned application without a showing that the delay in prosecution or in late payment of the issue fee was "unintentional" petition under 37 CFR 1.137(b) must be accompanied by the \$945.00 petition for.

delay was unintentional unless the entire delay, including the date it was discovered that the application statement that the delay was unintentional is not appropriate if petitioner intentionally delayed the filing filed promptly. A person seeking revival due to unintentional delay cannot make a statement that the was abandoned until the filling of the petition to revive under 37 CFR 1.137(b), was unintentional. A The filing of a petition under 37 CFR 1.137(b) cannot be intentionally delayed and therefore must be of a petition for revival under 37 CFR 1.137(b).

Further correspondence with respect to this matter should be addressed as follows:

Mail Stop PETTTION By Mail: Commissioner for Patents

P. O. Box 1450

Alexandria, VA 22313-1450

U. S. Patent and Trademark Office

By hand:

Oustomer Service Window, Mail Stop Petitions Randolph Building

401 Dulany Street

Alexandria, VA 22314

Attn: Office of Petitions (571) 273-8300

By facsimile:

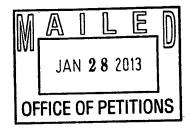
Telephone inquiries concerning this decision should be directed to Michelle R. Eason at (571) 272-4231.

Petitions Examiner Office of Petitions hurman K. Page



Commissioner for Patents
United States Patent and Trademark Office
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TODD L. SILER SUITE F2-325 4950 S. YOSEMITE GREENWOOD VILLAGE CO 80111



In re Application of

Todd Lael SILER

Application No. 12/579,648

Filed: October 15, 2009

Attorney Docket No. 73360-ICON2

DECISION ON PETITION

This is a decision on the petition, filed December 20, 2012, which is being treated as a petition under 37 CFR 1.181 (no fee) requesting withdrawal of the holding of abandonment in the above-identified application.

The petition is **DISMISSED**.

Any request for reconsideration of this decision should be filed within two (2) months from the mail date of this decision. *Note* 37 CFR 1.181(f). The request for reconsideration should include a cover letter and be entitled as a "Renewed Petition under 37 CFR 1.181 to Withdraw the Holding of Abandonment."

This application was held abandoned for failure to reply to the nonfinal Office action mailed May 21, 2012, which set a three (3) month shortened statutory period for reply. A Notice of Abandonment was mailed on November 30, 2012.

Petitioner asserts that the Office action dated May 21, 2012 was not received.

A review of the written record indicates no irregularity in the mailing of the Office action and, in the absence of any irregularity, there is a strong presumption that the Office action was properly mailed to the practitioner at the address of record. This presumption may be overcome by a showing that the Office action was not in fact received. In this regard, the showing required to establish the failure to receive the Office action must consist of the following:

- 1. a statement from practitioner stating that the Office action was not received by the practitioner;
- 2. a statement from the practitioner attesting to the fact that a search of the file jacket and docket records indicates that the Office action was not received; and
- a copy of the docket record where the nonreceived Office action would have been entered had it been received must be attached to and referenced in the practitioner's statement.

See MPEP § 711.03(c) under subheading "Petition to Withdraw Holding of Abandonment Based on Failure to Receive Office Action," and "Withdrawing the Holding of Abandonment When Office Actions Are Not Received," 1156 Official Gazette 53 (November 16, 1993).

The petition fails to satisfy all of the above-stated requirements.

Accordingly, absent the required evidence to establish nonreceipt of the Office action of May 21, 2012, the petition requesting withdrawal of the holding of abandonment cannot be granted at this time.

If petitioner cannot supply the evidence necessary to withdraw the holding of abandonment, or simply does not wish to, petitioner should consider filing a petition under 37 CFR 1.137(b) stating that the delay was unintentional. Public Law 97-247, § 3, 96 Stat. 317 (1982), which revised patent and trademark fees, amended 35 U.S.C. § 41(a)(7) to provide for the revival of an "unintentionally" abandoned application without a showing that the delay in prosecution or in late payment of the issue fee was "unavoidable." This amendment to 35 U.S.C. § 41(a)(7) has been implemented in 37 CFR 1.137(b). An "unintentional" petition under 37 CFR 1.137(b) must be accompanied by the \$945.00 petition fee.

The filing of a petition under 37 CFR 1.137(b) cannot be intentionally delayed and therefore must be filed promptly. A person seeking revival due to unintentional delay cannot make a statement that the delay was unintentional unless the entire delay, including the date it was discovered that the application was abandoned until the filing of the petition to revive under 37 CFR 1.137(b), was unintentional. A statement that the delay was unintentional is not appropriate if petitioner intentionally delayed the filing of a petition for revival under 37 CFR 1.137(b).

Further correspondence with respect to this matter should be addressed as follows:

By Mail:

Mail Stop PETITION

Commissioner for Patents

P. O. Box 1450

Alexandria, VA 22313-1450

By hand:

U. S. Patent and Trademark Office

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Randolph Building 401 Dulany Street Alexandria, VA 22314

By facsimile:

(571) 273-8300

Attn: Office of Petitions

Telephone inquiries concerning this decision should be directed to Michelle R. Eason at (571) 272-4231.

Thurman K. Page Petitions Examiner

Office of Petitions





Todd Lael Siler Suite F2-200 4950 S. Yosemite St. Greenwood Village, CO 80111 Mobile 720-988-8853 Email: toddsiler@alum.MIT.edu

December 12, 2012

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2

Dear Mr. Kurt Fernstrom, Primary Examiner:

On December 4th, I received your "Notice of Abandonment" (postmarked November 30th), regarding the Application No. 12/579.648 Art Unity 3711. I am puzzled why you did not receive my application that I had sent to the Patent Office, following the instructions and protocol for a proper and timely reply. I encountered a similar problem in August 29, 2011 when I received a similar letter from your Office, to which I promptly replied, as well. My mail is collected in the same address and mail stop for many years, with one minor recent change to the number on our mailbox to F2-200 (from F2-325). That change would not have prevented your letter from reaching me, as we have a very reliable mail service provider.

I hereby request the withdrawal of the holding of Abandonment in the above-identified application on the grounds that the abandonment was unintentional. This one page petition requests reinstatement for unavoidable abandonment. I took what I believed to be all necessary steps to address the Notice to File Missing Parts (mailed 5/11/2010). I have enclosed a copy of the "GRANTED" Decision on Petition, Sept. 12, 2011).

Based on the reasonable belief that I had met the good faith standard with the original reply, I also petitioned for a withdrawal of the abandonment based on what I believed was an error by the examiner. As that petition was recently rejected, I am now asking that the original application be revived as a result of filing this petition to revive for unintentional abandonment.

For the reasons set forth above, I declare that I had no intention of abandoning this patent application that I've worked so hard to maintain and any delay between the original deadline and the filing of the corrected applications—as well as any other delay since then as a result—was absolutely unintentional. I was only confused as to filing dates and drawing specifications and have attached with this petition my good faith reply to the matter of submitting corrected drawings. Given these circumstances, it is my hope that you withdraw the abandonment so that my application can be reinstated. I will then promptly file a 6-month extension fee, accompanied by a petition fee.

I would like to discuss this patent application with you at your earliest convenience, but only have the Main line number to the U.S. Department of Commerce (202-482-2000). Could you please send me your direct telephone number. I thank you in advance for your help and I very much look forward to speaking with you.

Sincerely,

Todd Lael Siler
Petitioner



Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspto.gov

TODD L. SILER SUITE F2-325 4950 S. YOSEMITE GREENWOOD VILLAGE CO 80111

MAILED

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OFFICE OF PETITIONS

In re Application of Todd Lael SILER

Application No. 12/579,648

Effective Date: October 15, 2009 Attorney Docket No. 73360-ICON2 **DECISION ON PETITION**

This is a decision on the petition under the unintentional provisions of 37 CFR 1.137(b), filed August 30, 2011, to revive the above-identified application.

The petition is GRANTED.

The application became abandoned for failure to reply in a timely manner to the Notice to File Missing Parts of Nonprovisional Application (Notice), mailed May 11, 2010. The Notice set a period for reply of two (2) months from the mail date of the Notice. A four (4) month extension of times under the provisions of 37 CFR 1.136(a) was obtained. Accordingly, the application became abandoned on November 12, 2010.

The petition satisfies the requirements of 37 CFR 1.137(b) in that petitioner has supplied (1) the reply in the form of an oath/declaration and replacement drawings, (2) the petition fee of \$810.00, and (3) a proper statement of unintentional delay. Accordingly, the reply to the Notice to File Missing Parts of Nonprovisional Application of May 11, 2010 is accepted as having been unintentionally delayed.

Telephone inquiries concerning this decision should be directed to the undersigned at 571-272-4231.

This application is being referred to the Office Patent Application Processing.

Mulled. Edger Michelle R. Eason Petitions Examiner

Office of Petitions

| Best Available Copy | / | |
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| Q 33 \$. | Application No. | Applicant(s) |
| Notice of Abandonment | 12/579,648 | SILER, TODD LAEL |
| \a \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | Examiner | Art Unit |
| FIFTY & TRADENIAS | KURT FERNSTROM | ₇ 3711 |
| - The MAILING DATE of this communication ap | pears on the cover sheet with | the correspondence address- |
| This application is abandoned in view of | | e e |
| Applicant's failure to timely file a proper reply to the Office) A reply was received on (with a Certificate of period for reply (including a total extension of time of time). | Mailing or Transmission dated fmonth(s)) which expire | d on |
| (b) ☐ A proposed reply was received on but it does (A proper reply under 37 CFR 1.113 to a final rejection application in condition for allowance; (2) a timely file Continued Examination (RCE) in compliance with 37 | on consists only of: (1) a timely ed Notice of Appeal (with appea 7 CFR 1.114) | filed amendment which places the I fee); or (3) a timely filed Request for |
| (c) ☐ A-reply was received onbut it does not const final rejection See 37/CFR*185(a) and 141/11. (Sec (d) ☑ No reply has been received. | itute a proper reply, or a bonatil e explanation in box 72 below) | de attemprate propertient from e non- |
| 2. ☐ Applicant's failure to timely pay the required issue fee a from the mailing date of the Notice of Allowance (PTOL | nd publication fee, if applicable; | within the statutory period of three months |
| (a) ☐ The issue fee and publication fee, if applicable, we is after the expiration of the statutory Allowance (PTOL-85). | as received on (with a contract period for payment of the issue | Certificate of Mailing or Transmission dated fee (and publication fee) set in the Notice of |
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| after the expiration of the period for reply. (b) \(\sum \) No corrected drawings have been received. | | |
| 4. ☐ The letter of express abandonment which is signed by t | the attorney or agent of record | the assignee of the entire interest, or all of |
| the applicants. | n de genin de hekking het | - 1 |
| 5. The letter of express abandonment which is signed by a 134(a)) upon the filing of a continuing application. | an attorney or agent (acting in a | |
| 6. ☐ The decision by the Board of Patent Appeals and Interf of the decision has expired and there are no allowed cla | erence rendered onand | because the period for seeking court review |
| 7. The reason(s) below: | | |
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| | | |
| | | |
| | /Kurt Fernstrom/ | |
| | Primary Examiner, | Art Unit 3711 |
| | | |
| Petitions to revive under 37 CFR 1:137(a) or (b), or requests to with | draw the holding of abandonment u | nder 37 CFR 1.181, should be promptly filed to |

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------|----------------|----------------------|---------------------|------------------|
| 12/579,648 | 10/15/2009 | Todd Lael Siler | 73360-ICON2 | 8763 |
| Todd L. Siler | 7590 11/30/201 | 2 | EXAM | INER |
| Suite F2-325 4950 S. Yosemi | ita | | FERNSTRO | OM, KURT |
| Greenwood Vil | | | ART UNIT | PAPER NUMBER |
| | | | 3711 | |
| | | | | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 11/30/2012 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | Application No. | Applicant(s) | | |
|---|---|---|---|--|--|
| Examiner | | 12/579.648 | SILER, TODD LAEL | | |
| - The MAILING DATE of this communication appears on the cover sheet with the correspondence address— This application is abandoned in view of: | Notice of Abandonment | | | | |
| This application is abandoned in view of: | | KURT FERNSTROM | 3711 | | |
| 1. Signaplicant's failure to timely file a proper reply to the Office letter mailed on 21 May 2012. (a) A reply was received on (with a Certificate of Mailing or Transmission dated), which is after the expiration of the period for reply (including a total extension of time of month(s)) which expired on (b) A proposed reply was received on but it close not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 (a) to the final rejection. Continued Examination (RCE) in compliance with 37 CFR 1.114). (c) A reply was received on but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below). (d) No reply has been received. 2. □ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, was received on (with a Certificate of Mailing or Transmission dated), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85). (a) □ The issue fee and publication fee, if applicable, was received on (with a Certificate of Mailing or Transmission dated), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85). (b) □ The issue fee required by 37 CFR 1.18 is \$ The publication fee, if applicable, has not been received. 3. □ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowance failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowance (PTOL-37). (a) □ Pro | The MAILING DATE of this communication app | | | | |
| (a) A reply was received on (with a Certificate of Mailing or Transmission dated), which is after the expiration of the period for reply (including a total exession of time of month(s)) which expired on (b) A proposed reply was received on but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal feet); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114⟩. (c) ☐ A reply was received on but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below). (d) ☐ No reply has been received. 2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PToL-85). (a) ☐ The issue fee and publication fee, if applicable, was received on (with a Certificate of Mailing or Transmission dated), which is safer the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85). (b) ☐ The issue fee required by 37 CFR 1.18 is \$ The publication fee, if required by 37 CFR 1.18(d), is \$ The publication fee, if applicable, has not been received. 3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowablity (PTO-37). (a) ☐ Proposed corrected drawings were received on (with a Certificate of Mailing or Transmission dated), which is after the expiration of the period for reply. 4. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR | This application is abandoned in view of: | | | | |
| (d) ☑ No reply has been received. 2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-95). (a) ☐ The issue fee and publication fee, if applicable, was received on (with a Certificate of Mailing or Transmission dated), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-95). (b) ☐ The submitted fee of \$ is insufficient. A balance of \$ is due. The issue fee required by 37 CFR 1.18 is \$ The publication fee, if required by 37 CFR 1.18(d), is \$ (c) ☐ The issue fee and publication fee, if applicable, has not been received. 3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37). (a) ☐ Proposed corrected drawings were received on (with a Certificate of Mailing or Transmission dated), which is after the expiration of the period for reply. (b) ☐ No corrected drawings have been received. 4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants. 5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filling of a continuing application. 6. ☐ The decision by the Board of Patent Appeals and Interference rendered on and because the period for seeking court review of the decision has expired and there are no allowed claims. 7. ☐ The reason(s) below: Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the helding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term. | (a) A reply was received on (with a Certificate of Mailing or Transmission dated), which is after the expiration of the period for reply (including a total extension of time of month(s)) which expired on (b) A proposed reply was received on, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114). (c) A reply was received on but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non- | | | | |
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| 4. The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants. 5. The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application. 6. The decision by the Board of Patent Appeals and Interference rendered on and because the period for seeking court review of the decision has expired and there are no allowed claims. 7. The reason(s) below: Kurt Fernstrom/ Primary Examiner, Art Unit 3711 Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term. U.S. Patent and Trademark Office | from the mailing date of the Notice of Allowance (PTOL-8 (a) The issue fee and publication fee, if applicable, was), which is after the expiration of the statutory produced Allowance (PTOL-85). (b) The submitted fee of \$ is insufficient. A balance The issue fee required by 37 CFR 1.18 is \$ (c) The issue fee and publication fee, if applicable, has not allowability (PTO-37). (a) Proposed corrected drawings were received on after the expiration of the period for reply. | s received on (with a Certificateriod for payment of the issue fee (and e of \$ is due. The publication fee, if required by 37 of been received. Lired by, and within the three-month | ate of Mailing or Transmission dated and publication fee) set in the Notice of CFR 1.18(d), is \$ period set in, the Notice of | | |
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| /Kurt Fernstrom/ Primary Examiner, Art Unit 3711 Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term. U.S. Patent and Trademark Office | | | se the period for seeking court review | | |
| Primary Examiner, Art Unit 3711 Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term. U.S. Patent and Trademark Office | 7. ☐ The reason(s) below: | | | | |
| Primary Examiner, Art Unit 3711 Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term. U.S. Patent and Trademark Office | | | | | |
| minimize any negative effects on patent term. U.S. Patent and Trademark Office | | I | t 3711 | | |
| U.S. Patent and Trademark Office | | aw the holding of abandonment under 37 | CFR 1.181, should be promptly filed to | | |
| | U.S. Patent and Trademark Office | of Abandonment | Part of Paper No. 20121129 | | |



United States Patent and Trademark Office

INITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Sox 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NUMBER

FILING OR 371(C) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO./TITLE 73360-ICON2

12/579,648

10/15/2009

Todd Lael Siler

CONFIRMATION NO. 8763

PUBLICATION NOTICE

Todd L. Siler Suite F2-325 4950 S. Yosemite Greenwood Village, CO 80111

Title: Methods and Apparatuses To Enhance Cognitive Functioning And Its Manifestation Into Physical Form and Translation Into Useful Information

Publication No.US-2012-0189994-A1 Publication Date: 07/26/2012

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seg. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------|----------------|----------------------|---------------------|------------------|
| 12/579,648 | 10/15/2009 | Todd Lael Siler | 73360-ICON2 | 8763 |
| Todd L. Siler | 7590 05/21/201 | 2 | EXAM | IINER |
| Suite F2-325 | · | | FERNSTRO | OM, KURT |
| 4950 S. Yosemi Greenwood Vil | | | ART UNIT | PAPER NUMBER |
| | | | 3711 | |
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| | | | MAIL DATE | DELIVERY MODE |
| | | | 05/21/2012 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) | |
|--|---|--|-----------|
| Office Action Comment | 12/579,648 | SILER, TODD LAEL | |
| Office Action Summary | Examiner | Art Unit | |
| | KURT FERNSTROM | 3711 | |
| The MAILING DATE of this communication app Period for Reply | ears on the cover sheet with the c | orrespondence addres | s |
| A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). | ATE OF THIS COMMUNICATION 6(a). In no event, however, may a reply be tim ill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE | N. nely filed the mailing date of this commul (35 U.S.C. § 133). | |
| Status | | | |
| 1) Responsive to communication(s) filed on | | | |
| , | -· action is non-final. | | |
| 3) An election was made by the applicant in response | | set forth during the inte | erview on |
| ; the restriction requirement and election | · | _ | |
| 4) Since this application is in condition for allowan | · | | rits is |
| closed in accordance with the practice under E | • | | |
| Disposition of Claims | | | |
| 5)⊠ Claim(s) <u>1-17</u> is/are pending in the application. | | | |
| 5a) Of the above claim(s) is/are withdraw | n from consideration. | | |
| 6) Claim(s) is/are allowed. | | | |
| 7) Claim(s) <u>1-17</u> is/are rejected. | | | |
| 8) Claim(s) is/are objected to. | | | |
| 9) Claim(s) are subject to restriction and/or | election requirement. | | |
| | | | |
| Application Papers | | | |
| 10) ☐ The specification is objected to by the Examiner | | | |
| 11) The drawing(s) filed on is/are: a) acce | epted or b) \square objected to by the E | Examiner. | |
| Applicant may not request that any objection to the o | drawing(s) be held in abeyance. See | : 37 CFR 1.85(a). | |
| Replacement drawing sheet(s) including the correcti | on is required if the drawing(s) is obj | ected to. See 37 CFR 1. | .121(d). |
| 12) ☐ The oath or declaration is objected to by the Example 12. | aminer. Note the attached Office | Action or form PTO-1 | 52. |
| Priority under 35 U.S.C. § 119 | | | |
| 13) ☐ Acknowledgment is made of a claim for foreign a) ☐ All b) ☐ Some * c) ☐ None of: | priority under 35 U.S.C. § 119(a) | -(d) or (f). | |
| Certified copies of the priority documents | have been received. | | |
| Certified copies of the priority documents | have been received in Application | on No | |
| 3. Copies of the certified copies of the prior | ity documents have been receive | d in this National Stag | ge |
| application from the International Bureau | (PCT Rule 17.2(a)). | | |
| * See the attached detailed Office action for a list of | of the certified copies not receive | d. | |
| AM - characteristics | | | |
| Attachment(s) 1) Notice of References Cited (PTO-892) | 4) Interview Summary | /PTO-413\ | |
| Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4) 🔲 Interview Summary Paper No(s)/Mail Da | | |
| 3) Information Disclosure Statement(s) (PTO/SB/08) | 5) Notice of Informal P | atent Application | |
| Paper No(s)/Mail Date | 6) | | |

DETAILED ACTION

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 2-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention is a method for enhancing cognitive functions. While the steps recited can be considered a "process", not all processes are statutory. Various factors must be considered in determining the patentability of a method, including whether the method requires the use of a particular machine, whether the method results in the physical transformation of a physical article, and whether a method is a practical application of an abstract idea. See Bilski v. Kappos, 95 USPQ2d 1001 (U.S. 2010). A claim that recites purely mental steps is not a patentable process. The steps recited in claim 1 include constructing one or more physical **or virtual** models relating to

Application/Control Number: 12/579,648 Page 3

Art Unit: 3711

a subject, connecting and transforming some of the model elements, and performing various analytical steps in relation to the model. Because a virtual model can be created in the imagination of a user, all of these method steps amount to the manipulation of abstract ideas, and do not explicitly recite the literal creation or formation of a tangible object. These steps take place entirely within the minds of the users. Applicant is further advised that even if claim 1 were amended to clearly recite the formation of physical models, these models steps are tangential to the invention, as the objective of the invention is not the creation of the models themselves. Rather, the claimed result of the invention is that cognitive, affective, expressive and communicative functions in a person are enhanced. Thus, the invention is not a statutory process which is patentable under 35 USC § 101.

Additionally, the recitation of "future technological innovations" in claim 6 is not patentable subject matter because the applicant by definition has not invented "future technological innovations".

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue." These factors include, but are not limited to:

- (A) The breadth of the claims;
- (B) The nature of the invention;
- (C) The state of the prior art;
- (D) The level of one of ordinary skill;
- (E) The level of predictability in the art;
- (F) The amount of direction provided by the inventor;
- (G) The existence of working examples; and
- (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

Art Unit: 3711

The examiner has taken each of the above factors into account in making the determination that undue experimentation would be necessary in order for one of ordinary skill in the art to be able to practice the claimed method of fostering thinking in a reliably consistent manner. First, the breadth of the claims and nature of the invention recognize that appellant is seeking patent protection for essentially a method of making a human beings think in a certain manner (i.e. enhancing cognitive, affective, expressive and communicative functions). Evaluation of the amount of experimentation necessary to practice appellant's claimed invention, however, is not based solely on these basic factors. The examiner must also take into consideration the level of predictability in the art, the amount of direction provided by the inventor, the existence of working examples and the quantity of experimentation needed to make or use the invention.

In this case, the claimed method requires such a degree of subjective human judgment that a reasonably consistent result cannot be predictably or reliably assured. The fact that a human being is involved leaves open the myriad of ways in which humans can and do think. There is no guarantee, or any degree of reasonable assuredness, that one could enhance cognitive, affective, expressive and communicative functions in a person in the manner recited in the claim. The level of predictability of thought processes in a group of people is suspect. The working examples set forth in applicant's specification do not provide concrete evidence that fostering thinking resulted from the claimed steps. Further, it is this examiner's position that the degree of subjectivity far outweighs all other factors in determining that the

claimed invention requires undue experimentation to foster thinking in a group of participants.

In conclusion, the claimed invention contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without undue experimentation.

Claims 1-17 are also rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims contain numerous examples of language which is not described in the specification, including but not limited to the recited steps of connecting and transforming the models, discovering aspects of the models in a "self-guided, inquiry based way", certain of the materials recited in claim 5 including dowels, clay, "common building materials", handmade materials, "future technological innovations", the provision of at least partially ready made models, the use of multimedia tools, the provision of randomly generated forms, the various "prompting" steps, and so forth.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims include numerous examples of language whose meaning is vague and uncertain, and which does not adequately define the scope of the invention. In addition to the language identified above as not being described in the specification, terms such as "self guided, inquiry-based way", "involves", "can", "personally meaningful", "in the nature of", "other common building materials", "future technological innovations", "randomly generated forms", "relate(s) to", and "physically and/or virtually experimenting" are vague and indefinite under 35 USC 112. Again, this is not an exhaustive list of indefinite terminology, but is a list of examples to guide applicant in preparing a response.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephan F. Knobloch, "Technotown: A School-Wide Design Technology Project". As best understood, the invention is directed to creating models, and analyzing the models in various ways. Knobloch discloses a method of enhancing cognitive abilities of a person including the steps of constructing models as a group and connecting and

Application/Control Number: 12/579,648 Page 8

Art Unit: 3711

transforming the models to enhance creative thinking. While Technotown does not explicitly disclose the precise nature of the mental processes recited in the claims, these steps are considered to be obvious variations on the teachings of Knobloch.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harhen, Morse, Victor and "The Laboratory Schools LEGO-LOGO Project" disclose various methods of enhancing cognitive abilities.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kurt Fernstrom whose telephone number is (571) 272-4422. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Kim can be reached on 571 272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 12/579,648 Page 9

Art Unit: 3711

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/Kurt Fernstrom/ Primary Examiner, Art Unit 3711

May 17, 2012

Notice of References Cited Application/Control No. 12/579,648 Examiner KURT FERNSTROM Applicant(s)/Patent Under Reexamination SILER, TODD LAEL Art Unit Page 1 of 1

U.S. PATENT DOCUMENTS

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification |
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| * | В | US-6,626,677 | 09-2003 | Morse et al. | 434/237 |
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FOREIGN PATENT DOCUMENTS

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NON-PATENT DOCUMENTS

| * | | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|---|
| | U | "TECHNOTOWN -A LEGO Experience", The Technology Teacher, pp. 13-15 (September 1994). |
| | V | "The Laboratory Schools LEGO-LOGO Project", 1995 [retrieved online July 7, 2005]. |
| | w | |
| | х | |

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes



| Application/Control No |) |
|------------------------|---|
|------------------------|---|

12579648

Applicant(s)/Patent Under Reexamination

SILER, TODD LAEL

Examiner

Art Unit

KURT FERNSTROM

3711

SEARCHED

| Class | Subclass | Date | Examiner |
|-------|------------------------|---------|----------|
| 434 | 107, 29, 168, 236, 237 | 5/17/12 | KF |
| 705 | 10, 11 | 5/17/12 | KF |

| SEARCH | NOTES |
|--------|--------------|
|--------|--------------|

| Search Notes | Date | Examiner |
|-----------------------|---------|----------|
| EAST text search. | 5/17/12 | KF |
| Inventor name search. | 5/17/12 | KF |

INTERFERENCE SEARCH

| Class | Subclass | Date | Examiner |
|-------|----------|------|----------|
| | | | |

/K.F./ Primary Examiner.Art Unit 3711

U.S. Patent and Trademark Office Part of Paper No.:

| | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|-----------------|-------------------------|---|
| Index of Claims | 12579648 | SILER, TODD LAEL |
| | Examiner | Art Unit |
| | KURT FERNSTROM | 3711 |

| ✓ | Rej | ected | | - | Car | celled | | N | Non-Elected | | Α | Appeal | | |
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| II | Alle | owed | | ÷ | Res | tricted | | I | Interference | | 0 | Objected | | |
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| | ☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47 | | | | | | | | | | | | | |
| | CLAIN | / | | | | | | | DATE | | | | | |
| Fi | inal | Original | 05/17/20 | 012 | | | | | | | | | | |
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U.S. Patent and Trademark Office Part of Paper No. :

Application or Docket Number PATENT APPLICATION FEE DETERMINATION RECORD 12/579,648 Substitute for Form PTO-875 APPLICATION AS FILED - PART I OTHER THAN SMALL ENTITY OR SMALL ENTITY (Column 1) (Column 2) RATE(\$) RATE(\$) FOR NUMBER FILED NUMBER EXTRA FEE(\$) FEE(\$) BASIC FEE N/A N/A N/A N/A 95 (37 CFR 1.16(a), (b), or (c)) SEARCH FEE N/A N/A N/A 310 N/A (37 CFR 1.16(k), (i), or (m)) **EXAMINATION FEE** N/A N/A N/A 125 N/A (37 CFR 1.16(o), (p), or (q)) TOTAL CLAIMS 17 30 0.00 OR minus 20 = (37 CFR 1.16(i)) INDEPENDENT CLAIMS 1 125 0.00 minus 3 = (37 CFR 1.16(h)) If the specification and drawings exceed 100 APPLICATION SIZE sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. FEE 0.00 (37 CFR 1.16(s)) 41(a)(1)(G) and 37 CFR 1.16(s). MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) 0.00 * If the difference in column 1 is less than zero, enter "0" in column 2. TOTAL 530 TOTAL APPLICATION AS AMENDED - PART II OTHER THAN SMALL ENTITY OR SMALL ENTITY (Column 1) (Column 2) (Column 3) CLAIMS HIGHEST REMAINING PRESENT ADDITIONAL ADDITIONAL NUMBER RATE(\$) RATE(\$) ⋖ AFTER AMENDMENT PREVIOUSLY EXTRA FEE(\$) FEE(\$) **AMENDMENT** PAID FOR Total Minus OR (37 CFR 1.16(i)) Independent (37 CFR 1.16(h)) Minus OR Application Size Fee (37 CFR 1.16(s)) FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) OR TOTAL TOTAL OR ADD'L FEE ADD'L FEE (Column 1) (Column 2) (Column 3) CLAIMS HIGHEST REMAINING NUMBER PRESENT ADDITIONAL ADDITIONAL RATE(\$) RATE(\$) Ш PREVIOUSLY **AFTER** EXTRA FEE(\$) FEE(\$) **AMENDMENT** PAID FOR **AMENDMENT** Minus Total OR (37 CFR 1.16(i)) Independent Minus OR (37 CFR 1.16(h)) Application Size Fee (37 CFR 1.16(s)) OR FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) TOTAL TOTAL OR ADD'L FEE ADD'L FEE * If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20" *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3"

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| APPLICATION | FILING or | GRP ART | | | | |
|-------------|-------------|---------|---------------|----------------|------------|------------|
| NUMBER | 371(c) DATE | UNIT | FIL FEE REC'D | ATTY.DOCKET.NO | TOT CLAIMS | IND CLAIMS |
| 12/579 648 | 10/15/2009 | 2123 | 527 | 73360-ICON2 | 17 | 1 |

CONFIRMATION NO. 8763

FILING RECEIPT

CC000000053747829

Date Mailed: 04/17/2012

Todd L. Siler Suite F2-325 4950 S. Yosemite Greenwood Village, CO 80111

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Todd Lael Siler, Aurora, CO:

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CIP of 09/164,285 10/01/1998 ABN which is a CON of 08/889,475 07/08/1997 ABN which claims benefit of 60/021,498 07/10/1996

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)

If Required, Foreign Filing License Granted: 10/26/2009

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/579,648**

Projected Publication Date: 07/26/2012

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

Methods and Apparatuses To Enhance Cognitive Functioning And Its Manifestation Into Physical Form and Translation Into Useful Information

Preliminary Class

703

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INITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Sox 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NUMBER

Greenwood Village, CO 80111

FILING OR 371(C) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO./TITLE 73360-ICON2

12/579,648

10/15/2009

Todd Lael Siler

CONFIRMATION NO. 8763

WITHDRAWAL NOTICE



Date Mailed: 04/17/2012

Letter Regarding a New Notice and/or the Status of the Application

If a new notice or Filing Receipt is enclosed, applicant may disregard the previous notice mailed on 09/20/2011. The time period for reply runs from the mail date of the new notice. Within the time period for reply, applicant is required to file a reply in compliance with the requirements set forth in the new notice to avoid abandonment of the application.

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APPLICATION NUMBER

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FIRST NAMED APPLICANT Todd Lael Siler

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Greenwood Village, CO 80111

10/15/2009

CONFIRMATION NO. 8763

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10/15/2009

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Date Mailed: 09/20/2011

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| APPLICATION | FILING or | GRP ART | | | | |
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| NUMBER | 371(c) DATE | UNIT | FIL FEE REC'D | ATTY.DOCKET.NO | TOT CLAIMS | IND CLAIMS |
| 12/579.648 | 10/15/2009 | 2123 | 527 | 73360-ICON2 | 17 | 1 |

CONFIRMATION NO. 8763

FILING RECEIPT

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Date Mailed: 09/20/2011

Todd L. Siler Suite F2-325 4950 S. Yosemite Greenwood Village, CO 80111

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Applicant(s)

Todd Lael Siler, Aurora, CO;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CIP of 09/164,285 10/01/1998 ABN which is a CON of 08/889,475 07/08/1997 ABN which claims benefit of 60/021,498 07/10/1996

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Projected Publication Date: To Be Determined - pending completion of Corrected Papers

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

Methods and Apparatuses To Enhance Cognitive Functioning And Its Manifestation Into Physical Form and Translation Into Useful Information

Preliminary Class

703

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

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Suite F2-325

4950 S. Yosemite

12/579,648

Greenwood Village, CO 80111

United States Patent and Trademark Office

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APPLICATION NUMBER FILING OR 371(C) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO./TITLE 73360-ICON2

Todd Lael Siler

73360-ICON2 **CONFIRMATION NO. 8763**

WITHDRAWAL NOTICE

OC00000049916921

Date Mailed: 09/20/2011

Letter Regarding a New Notice and/or the Status of the Application

If a new notice or Filing Receipt is enclosed, applicant may disregard the previous notice mailed on 01/14/2011. The time period for reply runs from the mail date of the new notice. Within the time period for reply, applicant is required to file a reply in compliance with the requirements set forth in the new notice to avoid abandonment of the application.

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web. https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If the reply is not filed electronically via EFS-Web, the reply must be accompanied by a copy of the new notice.

If the Office previously granted a petition to withdraw the holding of abandonment or a petition to revive under 37 CFR 1.137, the status of the application has been returned to pending status.

| /gasgedom/ | | | |
|------------|--|--|--|
| | | | |
| | | | |

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Application or Docket Number PATENT APPLICATION FEE DETERMINATION RECORD 12/579,648 Substitute for Form PTO-875 APPLICATION AS FILED - PART I OTHER THAN SMALL ENTITY OR SMALL ENTITY (Column 1) (Column 2) RATE(\$) RATE(\$) FOR NUMBER FILED NUMBER EXTRA FEE(\$) FEE(\$) BASIC FEE N/A N/A N/A N/A 82 (37 CFR 1.16(a), (b), or (c)) SEARCH FEE N/A N/A N/A 270 N/A (37 CFR 1.16(k), (i), or (m)) **EXAMINATION FEE** N/A N/A N/A 110 N/A (37 CFR 1.16(o), (p), or (q)) TOTAL CLAIMS 17 26 0.00 OR minus 20 = (37 CFR 1.16(i)) INDEPENDENT CLAIMS 1 110 0.00 minus 3 = (37 CFR 1.16(h)) If the specification and drawings exceed 100 APPLICATION SIZE sheets of paper, the application size fee due is \$270 (\$135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. FEE 0.00 (37 CFR 1.16(s)) 41(a)(1)(G) and 37 CFR 1.16(s). MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) 0.00 * If the difference in column 1 is less than zero, enter "0" in column 2. TOTAL 462 TOTAL APPLICATION AS AMENDED - PART II OTHER THAN SMALL ENTITY OR SMALL ENTITY (Column 1) (Column 2) (Column 3) CLAIMS HIGHEST REMAINING PRESENT ADDITIONAL ADDITIONAL NUMBER RATE(\$) RATE(\$) ⋖ AFTER AMENDMENT PREVIOUSLY EXTRA FEE(\$) FEE(\$) **AMENDMENT** PAID FOR Total Minus OR (37 CFR 1.16(i)) Independent (37 CFR 1.16(h)) Minus OR Application Size Fee (37 CFR 1.16(s)) FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) OR TOTAL TOTAL OR ADD'L FEE ADD'L FEE (Column 1) (Column 2) (Column 3) CLAIMS HIGHEST REMAINING NUMBER PRESENT ADDITIONAL ADDITIONAL RATE(\$) RATE(\$) Ш PREVIOUSLY **AFTER** EXTRA FEE(\$) FEE(\$) **AMENDMENT** PAID FOR **AMENDMENT** Minus Total OR (37 CFR 1.16(i)) Independent Minus OR (37 CFR 1.16(h)) Application Size Fee (37 CFR 1.16(s)) OR FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) TOTAL TOTAL OR ADD'L FEE ADD'L FEE * If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20" *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3"

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.



Todd L. Siler Suite F2-325

4950 S. Yosemite

Greenwood Village, CO 80111

United States Patent and Trademark Office

INITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Sox 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NUMBER 12/579,648

FILING OR 371(C) DATE 10/15/2009

FIRST NAMED APPLICANT Todd Lael Siler

ATTY. DOCKET NO./TITLE 73360-ICON2

CONFIRMATION NO. 8763

FORMALITIES LETTER

Date Mailed: 09/20/2011

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
 - The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) 2, 13.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Replies should be mailed to:

Mail Stop Missing Parts Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web. https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

| | /gasgedom/ | | | |
|--|---|--------------|----------------|-------------------|
| Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-010 | Office of Data Management Application Assistance Unit (E71) | 070 4000 0** | /EZ1) 070 4000 | or 1 000 700 0101 |



Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspto.gov

TODD L. SILER **SUITE F2-325** 4950 S. YOSEMITE **GREENWOOD VILLAGE CO 80111**

MAILED

SEP 12 2011

OFFICE OF PETITIONS

In re Application of

Todd Lael SILER

Application No. 12/579,648

Effective Date: October 15, 2009

Attorney Docket No. 73360-ICON2

DECISION ON PETITION

This is a decision on the petition under the unintentional provisions of 37 CFR 1.137(b), filed August 30, 2011, to revive the above-identified application.

The petition is **GRANTED**.

The application became abandoned for failure to reply in a timely manner to the Notice to File Missing Parts of Nonprovisional Application (Notice), mailed May 11, 2010. The Notice set a period for reply of two (2) months from the mail date of the Notice. A four (4) month extension of times under the provisions of 37 CFR 1.136(a) was obtained. Accordingly, the application became abandoned on November 12, 2010.

The petition satisfies the requirements of 37 CFR 1.137(b) in that petitioner has supplied (1) the reply in the form of an oath/declaration and replacement drawings, (2) the petition fee of \$810.00, and (3) a proper statement of unintentional delay. Accordingly, the reply to the Notice to File Missing Parts of Nonprovisional Application of May 11, 2010 is accepted as having been unintentionally delayed.

Telephone inquiries concerning this decision should be directed to the undersigned at 571-272-4231.

This application is being referred to the Office Patent Application Processing.

Petitions Examiner Office of Petitions

Doc Code: PET.OP

Document Description: Petition for Review by the Office of Petitions

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DAC

PTO/SB/64 (07-09)

Approved for use through 07/31/2012. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT Docket Number (Optional) ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b) First named inventor: Todd L. Siler Application No.: 12/579,648 Art Unit: 2123 Examiner: Golla Filed: October 12, 2009 Title: Methods and Apparatus To Enhance Cognitive Functioning And Its Manifestation Into Physical Form and Its Manifestation Into Physical Form and Translation Into useful Information Attention: Office of Petitions **Mail Stop Petition** Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 FAX (571) 273-8300 NOTE: If information or assistance is needed in completing this form, please contact Petitions Information at (571) 272-3282. The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the expiration date of the period set for reply in the office notice or action plus any extensions of time actually obtained. APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION NOTE: A grantable petition requires the following items: (1) Petition fee: (2) Reply and/or issue fee; (3) Terminal disclaimer with disclaimer fee - required for all utility and plant applications filed before June 8, 1995; and for all design applications; and (4) Statement that the entire delay was unintentional 1. Petition Fee Small entity-fee \$ 810 (37 CFR 1.17(m)). Application claims small entity status. See 37 CFR 1.27. Other than small entity-fee \$ _____ (37 CFR 1.17(m)) Reply and/or fee The reply and/or fee to the above-noted Office action in the form of Response to Office Action _____ (identify type of reply): 09/01/2011 SDENBOB3 00000010 12579648 is enclosed herewith. 819.99 OP 01 FC:2453 B. The issue fee and publication fee (if applicable) of \$____ has been paid previously on ____ is enclosed herewith. [Page 1 of 2] This collection of information is required by 37 CFR 1.137(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to

process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office,

PTO/SB/64 (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

| 3. | Terminal disclaimer with disclaimer fee | | | | |
|---|--|--|--|--|--|
| | Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required. | | | | |
| | A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of \$ for a small entity or \$ for other than a small entity) disclaiming the required period of time is enclosed herewith (see PTO/SB/63). | | | | |
| 4. STATEMENT: The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional. [NOTE: The United States Patent and Trademark Office may require additional information if there is a question as to whether either the abandonment or the delay in filing a petition under 37 CFR 1.137(b) was unintentional (MPEP 711.03(c), subsections (III)(C) and (D)).] | | | | | |
| | WARNING: | | | | |
| to in the pet shot adverse adverse adverse adverse adverse adverse absolute (see | itioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute dentity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a ack or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a stion or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants and consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is rised that the record of a patent application is available to the public after publication of the application (unless a non-publication usest in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an undoned application may also be available to the public if the application is referenced in a published application or an issued patent as 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the dication file and therefore are not publicly available. | | | | |
| | August, 2011 | | | | |
| | Signature Date | | | | |
| | | | | | |
| | Type or Printed name Registration Number, If applicable | | | | |
| | Todd L. Siler 4950 5. 765en7e 51. #F2-325 720-988-8853 Address Telephone Number | | | | |
| | Todd L. Siler 4950 5. 765er; Te 51. #F2-325 720-988-8853 Address Telephone Number Greenwood Village, CO 80111 | | | | |
| | Address | | | | |
| En | closures: | | | | |
| | Terminal Disclaimer Form | | | | |
| | Additional sheets containing statements establishing unintentional delay | | | | |
| | Other: | | | | |
| | Other. | | | | |
| | CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR 1.8(a)] I hereby certify that this correspondence is being: Deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450. | | | | |
| | Transmitted by facsimile on the date shown below to the United States Patent and Trademark Office at (571) 273-8300. | | | | |
| | August , 2011 Date Signature | | | | |
| | | | | | |
| | Todd L. Siler | | | | |
| | Typed or printed name of person signing certificate | | | | |



Todd L. Siler Suite F2-325 4950 S. Yosemite St. Greenwood Village, CO 80111

August 29, 2011

Mail Stop PETITION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Re: Todd Lael SILER

Application No. 12/579,648 Filed: October 15, 2009

Attorney Docket No. 73360-ICON2

To whom it may concern:

I hereby request the withdrawal of the holding of abandonment in the above-identified application on the grounds that the abandonment was unintentional. I took what I believed to be all necessary steps to address the Notice to File Missing Parts (mailed 5/11/2010) – as evidenced by both the filings on 11/9/10 and 12/27/10 (enclosed herein along with the Decision on Petition) – however I did not do so in a timely manner. At the time, I believed I had filed on time given my response on 11/9/10 which included replacement drawings, but learned on 11/24/10 that the drawings were insufficient. Then believing I had two months from the date of the 11/24/10 Notice, filed the corrected drawings on 12/27/10, not realizing that the actual due date was 12/11/10.

Finally, based on the reasonable belief that I had met the good faith standard with the original reply, I also petitioned for a withdrawal of the abandonment based on what I believed was an error by the examiner. As that petition was recently rejected, I am now asking that the original application be revived as a result of filing this petition to revive for unintentional abandonment.

For the reasons set forth above, I declare that I had no intention of abandoning this patent application that I've worked so hard to maintain and any delay between the original deadline and the filing of the corrected apps—as well as any other delay since then as a result—was unintentional. I was only confused as to filing dates and drawing specifications and have attached with this petition my good faith reply to the matter of submitting corrected drawings. Given these circumstances, it is my hope that you withdraw the abandonment.

If you have any questions on this matter, please feel free to contact me.

Todd L. Siler Petitioner AUG 3 0 2011



Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

TODD L. SILER
SUITE F2-325
4950 S. YOSEMITE
GREENWOOD VILLAGE CO 80111

MAILED

JUL 01 2011

OFFICE OF PETITIONS

In re Application of Todd Lael SILER Application No. 12/579,648 Filed: October 15, 2009 Attorney Docket No. 73360-ICON2

DECISION ON PETITION

This is a decision on the petition, filed March 15, 2011, which is being treated as a petition under 37 CFR 1.8(b), requesting withdrawal of the holding of abandonment in the above-identified application.

The petition is **DISMISSED**.

Any request for reconsideration of this decision should be filed within two (2) months from the mail date of this decision. *Note* 37 CFR 1.181(f). The request for reconsideration should include a cover letter and be entitled as a "Renewed Petition under 37 CFR 1.181 to Withdraw the Holding of Abandonment."

The application became abandoned for failure to reply in a timely manner to the Notice to File Missing Parts, mailed May 11, 2010. The Notice set a period for reply of two (2) months from the mail date of the Notice. A four (4) month extension of time under the provisions of 37 CFR 1.136(a) was obtained. Accordingly, the application became abandoned on November 12, 2010.

Petitioner asserts that a reply along which included a three (3) month extension of time was filed on August 23, 2010.

The Office acknowledges the receipt of the documents on December 27, 2010. However, the reply along with an additional one (1) month extension of times was due in the Office by December 11, 2010. Therefore the petition can not be granted.

ALTERNATIVE VENUE

Petitioner is strongly encouraged to consider filing a petition under 37 CFR 1.137(b) to revive an unintentionally abandoned application instead of filing a renewed petition under 37 CFR 1.181 or a petition under 37 CFR 1.137(a).

A grantable petition pursuant to 37 CFR 1.137(b) must be accompanied by:

Street with the law age a company of a

- (1) The reply required to the outstanding Office action or notice, unless previously filed. In nonprovisional utility application abandoned for failure to respond to a non-final Office action, the required reply may be met by filing either (A) an argument or amendment under 37 CFR 1.111 or (B) a continuing application under 37 CFR 1.53(b).
- (2) The petition fee as set forth in 37 CFR 1.17(m), \$810.00 for a small entity or \$1,620.00 for a large entity,
- (3) A statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

A form for filing a petition to revive an unintentionally abandoned application accompanies this decision for petitioner's convenience. If petitioner desires to file a petition under 37 CFR 1.137(b) instead of filing a request for reconsideration, petitioner must complete the enclosed petition form (PTO/SB/64) and pay the \$810.00 petition fee.

Further correspondence with respect to this matter should be addressed as follows:

By Mail:

Mail Stop PETITION

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

By hand:

U. S. Patent and Trademark Office

Customer Service Window, Mail Stop Petitions

Randolph Building 401 Dulany Street Alexandria, VA 22314 By facsimile:

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(571) 273-8300

Attn: Office of Petitions

Telephone inquiries concerning this decision should be directed to Michelle R. Eason at (571) 272-4231.

Thurman K. Page 0

Petitions Examiner Office of Petitions

AUG 3 0 2011

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| In re the App | olication of: |) | Group Art Unit: | 2123 |
|---------------|---|---|------------------|------------------------|
| | Todd L. Siler |) | Confirmation No. | 8763 |
| Serial No.: | 12/579,648 |) | | |
| Filed: | 10/15/2009 |) | | |
| | ods and Apparatus To ical Form and Translati | | | Its Manifestation Into |

Response to Notice to File Missing Parts

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir or Madam:

Applicant hereby responds to the Notice to File Missing Parts of Nonprovisional Application dated 5/11/2010.

Replacement drawings (13 pages) are submitted herewith.

Remarks begin on page 2 of this paper..

The filing receipt filed 5/11/2010 should be corrected as follows. The receipt does not correctly identify the priority claims, which should be as follows.

"This application claims priority to Application Serial No. 11/561,005 filed November

17, 2006, now abandoned, which is a continuation of 11/334,842, filed Jan. 19, 2006, now

abandoned, which is a continuation of Application Serial No. 09/882,921, filed June 15, 2001,

now abandoned, which is a continuation-in-part of Application Serial No. 09/164,285, filed

October 1, 1998, now abandoned, which is a continuation of Application Serial No. 08/889,475,

filed July 8, 1997, now abandoned, which is a continuation-in-part of Provisional Application

Serial No. 60/021,498, filed July 10,1996, from which priority is claimed. These applications are

incorporated by reference."

This application is a continuation (and <u>not</u> a continuation-in-part) of App. Serial

No. 11/561,005, and so no new declaration should be required.

A petition for an extension of time is being filed herewith.

Respectfully submitted,

Todd L. Siler, Applicant

4950 S. Yosemite Street, Suite F2-325

Greenwood Village, CO 80111

Phone: (720) 988-8853

100960171 1.DOC

2

Doc Code: TRAN.LET

Date

Typed or printed name

Document Description: Transmittal Letter

PTO/SB/21 (07-09)

| Approved for use through 07/31/2012. | OMB 0 | 651-0031 |
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| Under the Paperwork Reduction Act of 1995 | no persons are required to respond to a col | lection of information unless it displays a valid OMB control number. 12/579,648 |
|--|---|---|
| TRANSMITTAL | Filing Date | 10/15/2009 |
| | First Named Inventor | Todd L. Siler |
| 3 0 2011 (a) FORM | Art Unit | 3711 |
| (4) Be used for all correspondence after initial | Examiner Name | Kurt Fernstrom |
| DEMPH used for all correspondence after initial Total Number of Pages in This Submission | Attorney Docket Number | 73360-ICON2 |
| | ENCLOSURES (Check all | that apply) |
| Fee Transmittal Form | Drawing(s) | After Allowance Communication to TC |
| Fee Attached | Licensing-related Papers | Appeal Communication to Board of Appeals and Interferences |
| Amendment/Reply After Final Affidavits/declaration(s) Extension of Time Request Express Abandonment Request Information Disclosure Statement Certified Copy of Priority Decument(s) | Petition Petition to Convert to a Provisional Application Power of Attorney, Revocation Change of Correspondence A Terminal Disclaimer Request for Refund CD, Number of CD(s) Landscape Table on CI Remarks | Address Status Letter Other Enclosure(s) (please Identify below): |
| Document(s) Reply to Missing Parts/ Incomplete Application Reply to Missing Parts under 37 CFR 1.52 or 1.53 | Response to TURE OF APPLICANT, ATTO | Notice to File Missing Parts RNEY, OR AGENT |
| Firm Name | TORE OF AFFEIGARI, ATTO | MILI, ON AGENT |
| Signature | VI. Siter | |
| Printed name Todd L. Siler | _ | |

CERTIFICATE OF TRANSMISSION/MAILING

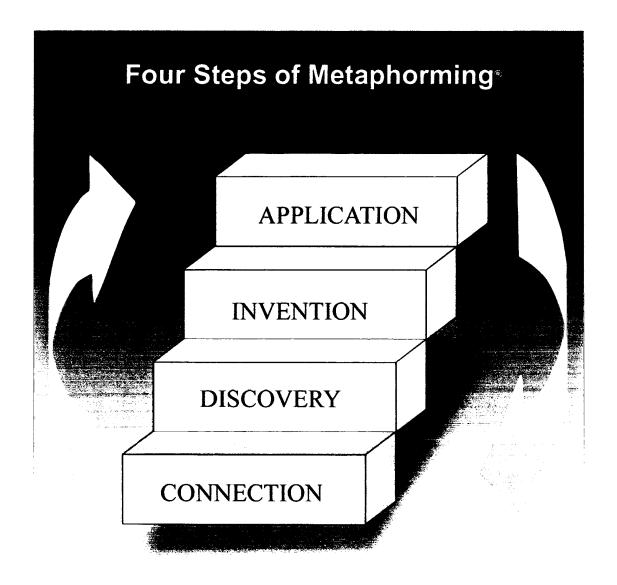
Reg. No.

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

11/5/10

Date ///6

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



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Figure 1

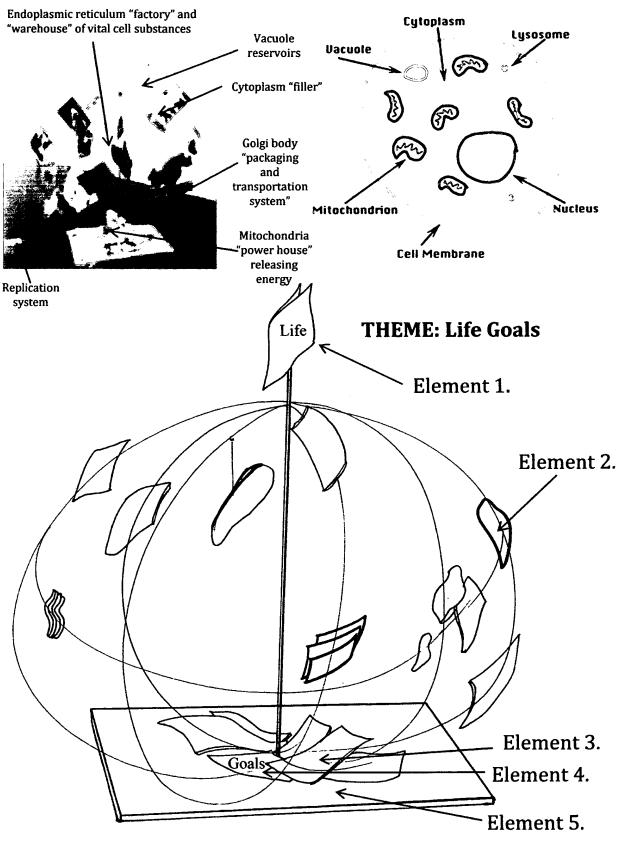
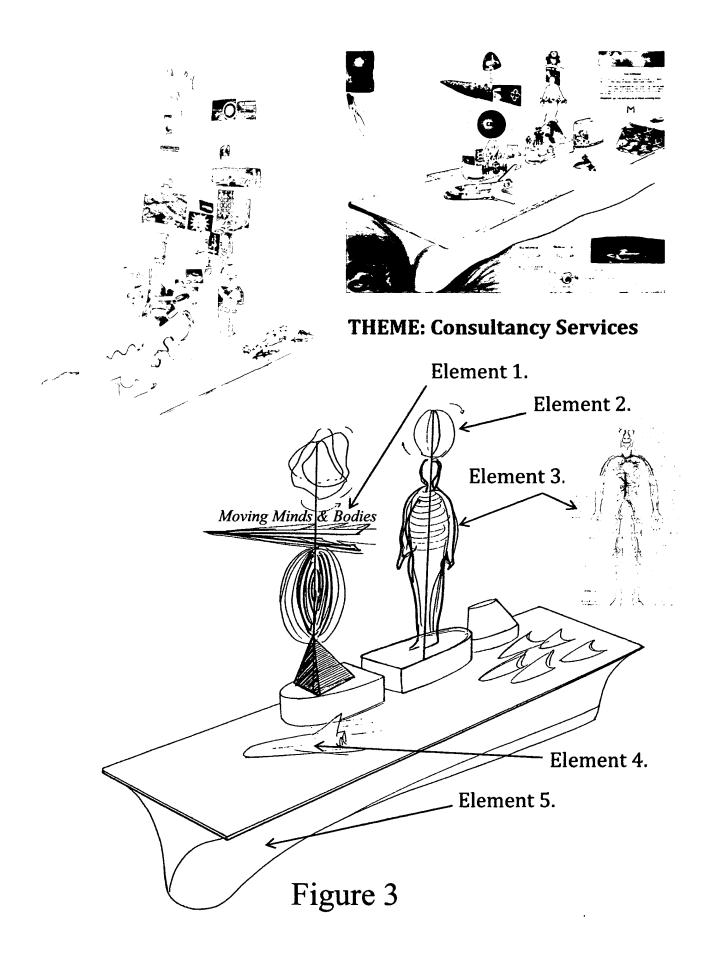


Figure 2





THEME: "Ideal" Customer

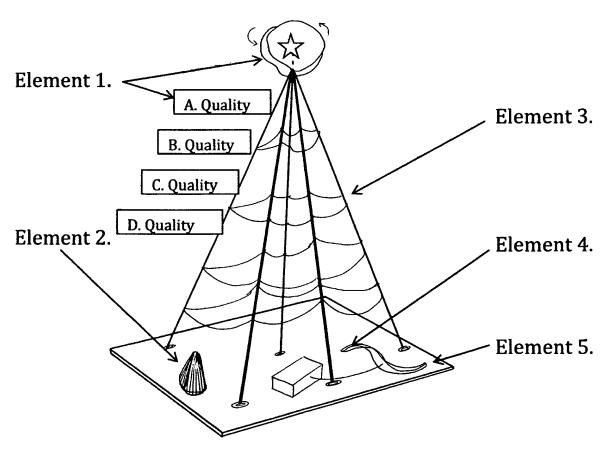


Figure 4



THEME: Evolutionary Process

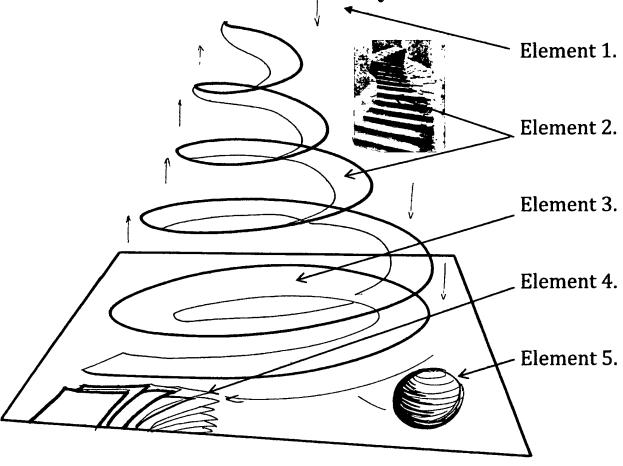
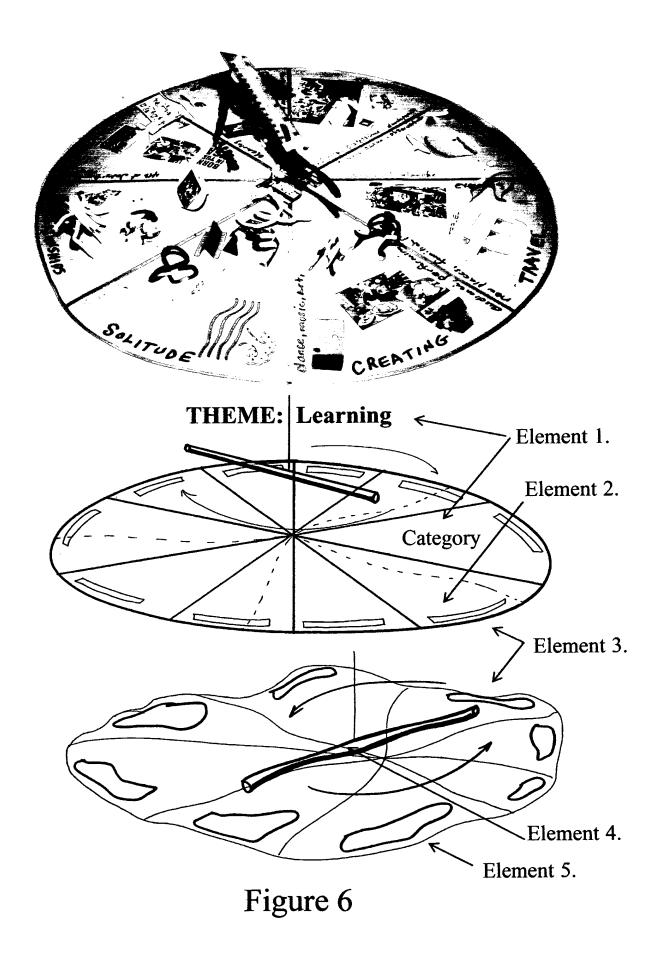
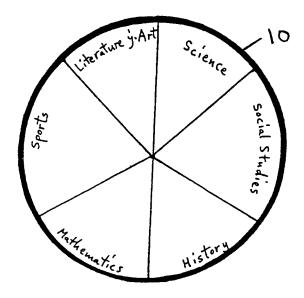


Figure 5

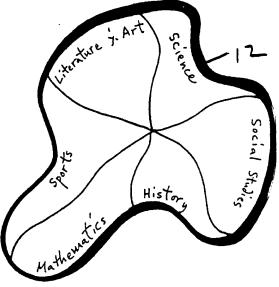


VERSION 1.



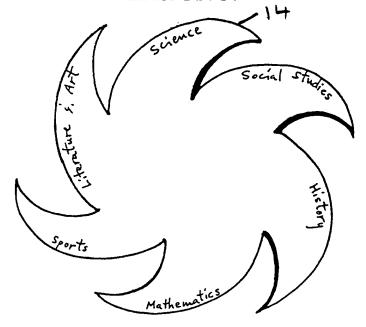
EDUCATION (Traditional)

VERSION 2.



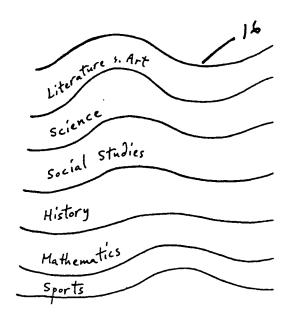
EDUCATION (Reform)

VERSION 3.



EDUCATION (Progressive)

VERSION 4.



EDUCATION (New Wave)

Figure 7

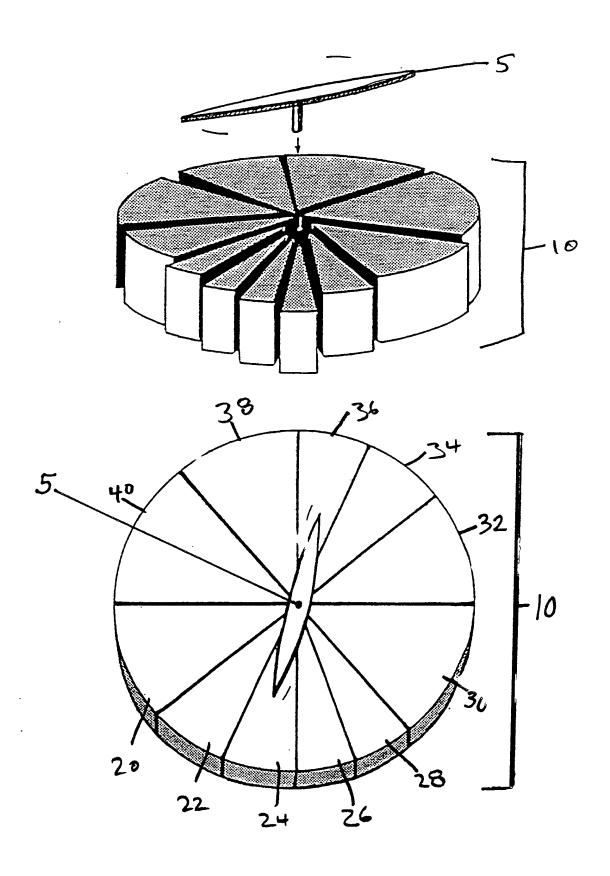


Figure 8

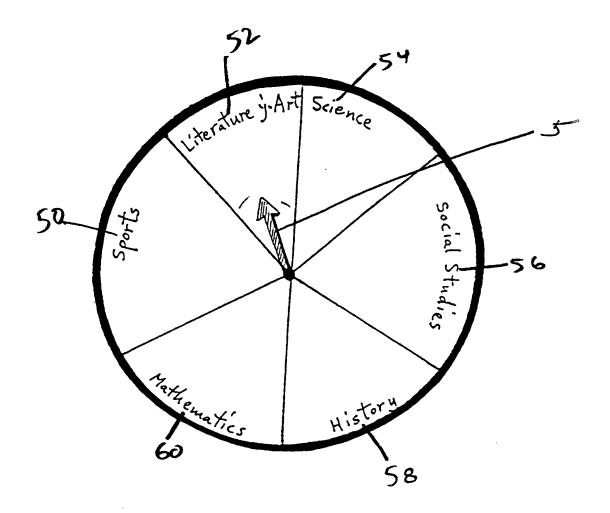


Figure 9

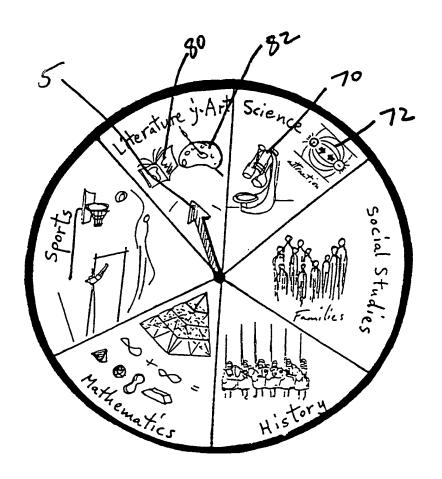


Figure 10

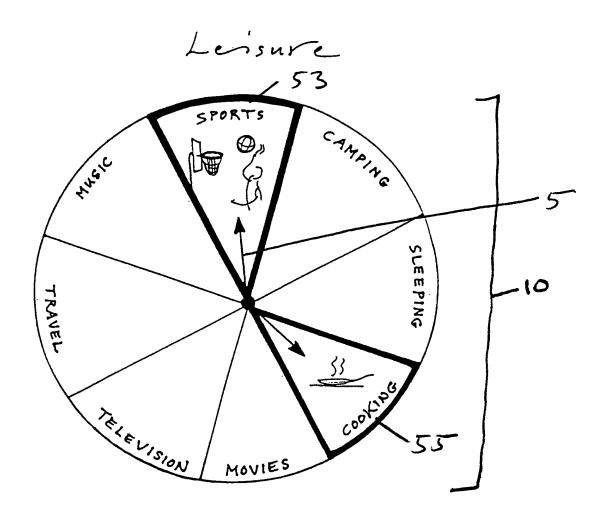


Figure 11

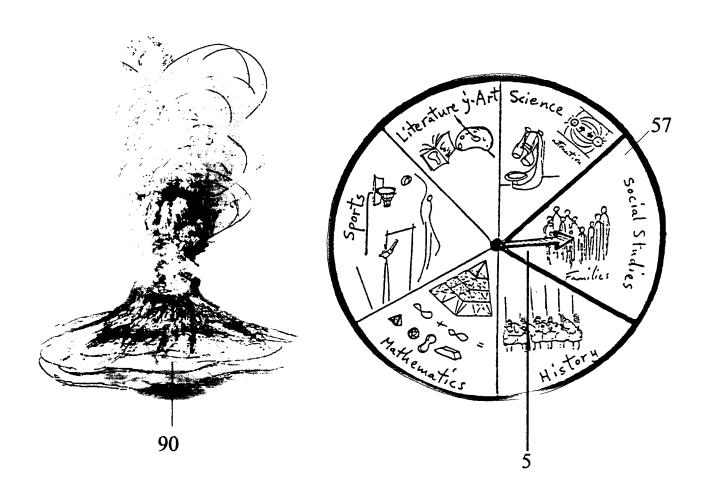
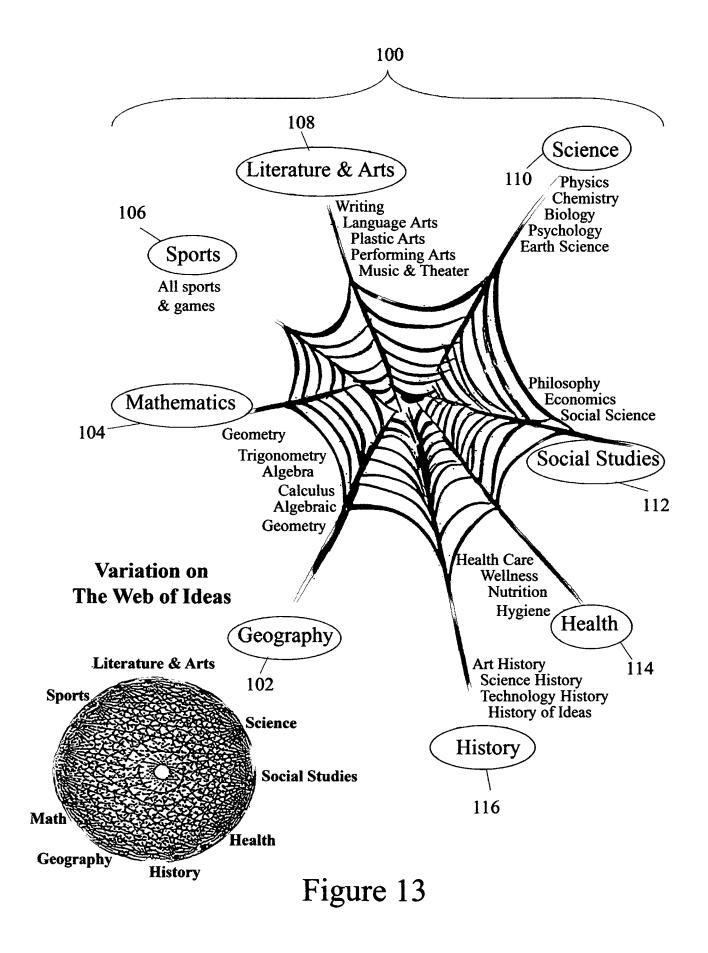


Figure 12



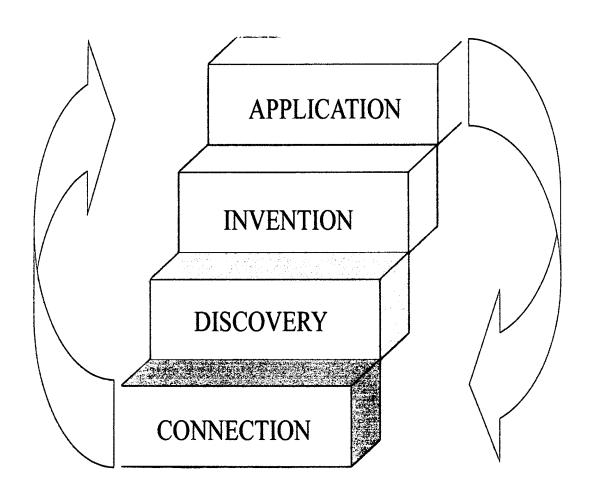


Figure 1

THEME: Life Goals

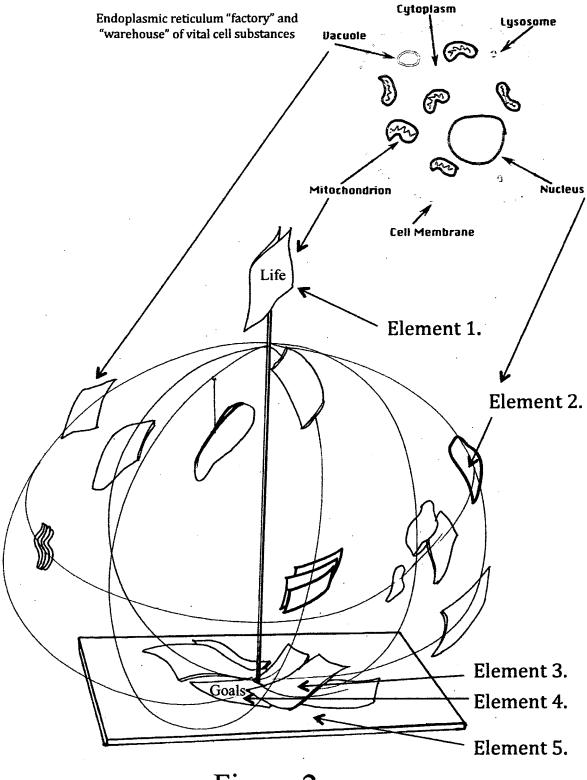


Figure 2

THEME: Consultancy Services

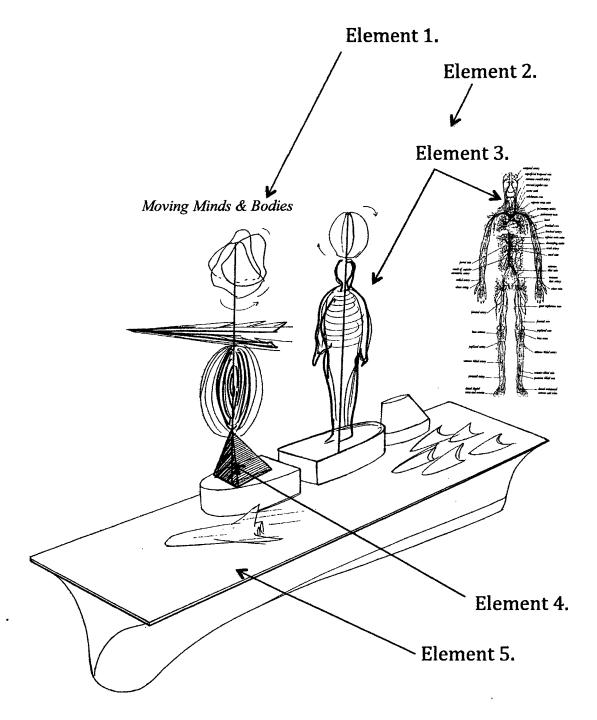


Figure 3

THEME: "Ideal" Customer

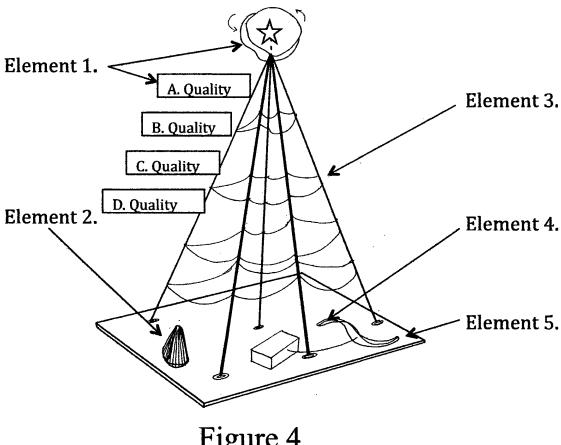
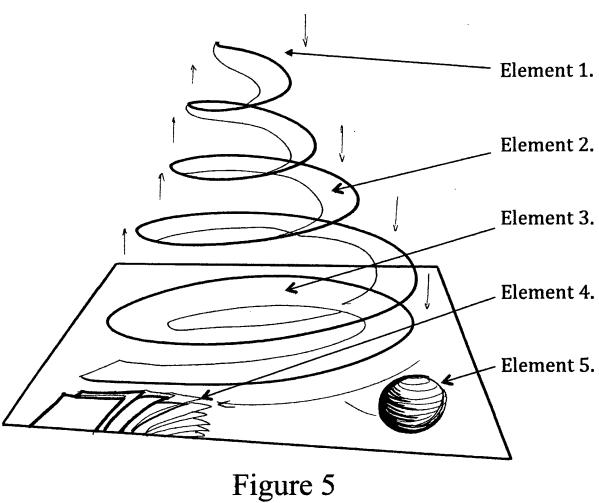


Figure 4

THEME: Evolutionary Process



THEME: Learning

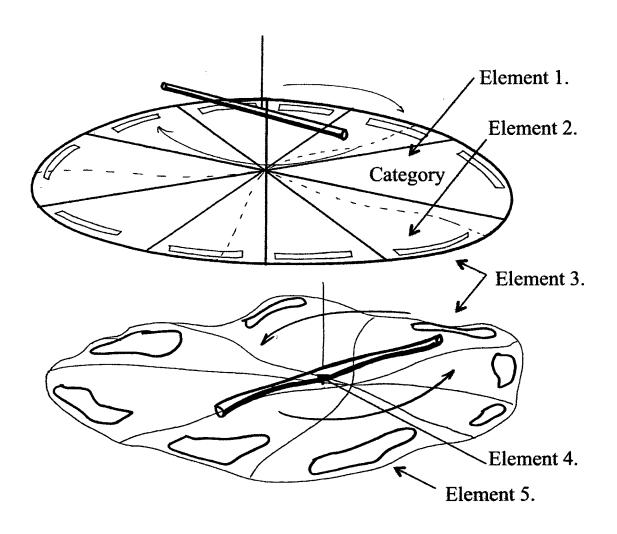


Figure 6

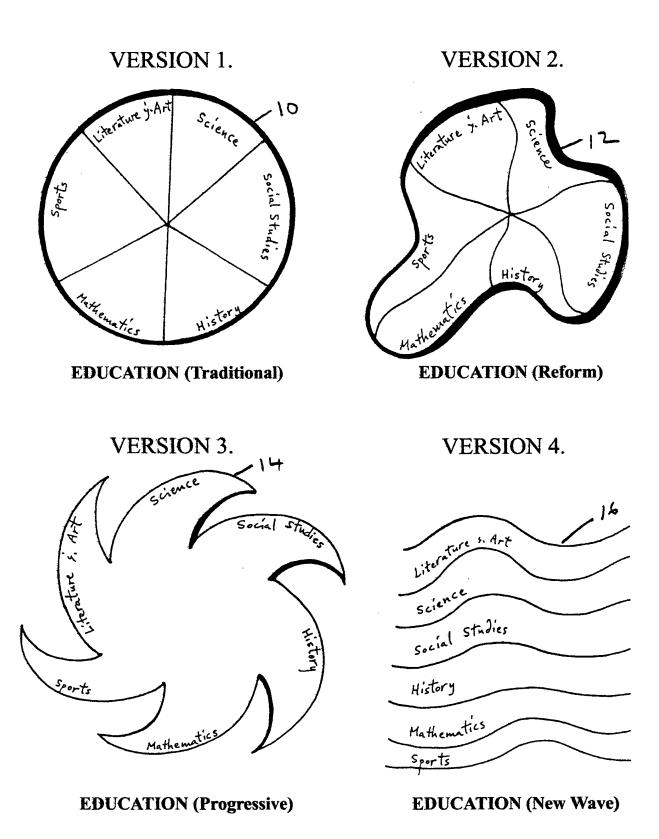


Figure 7

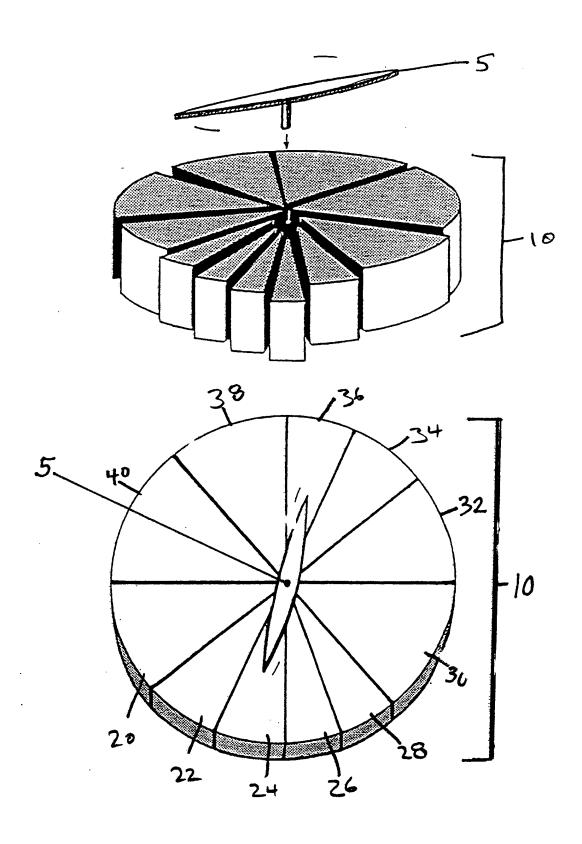


Figure 8

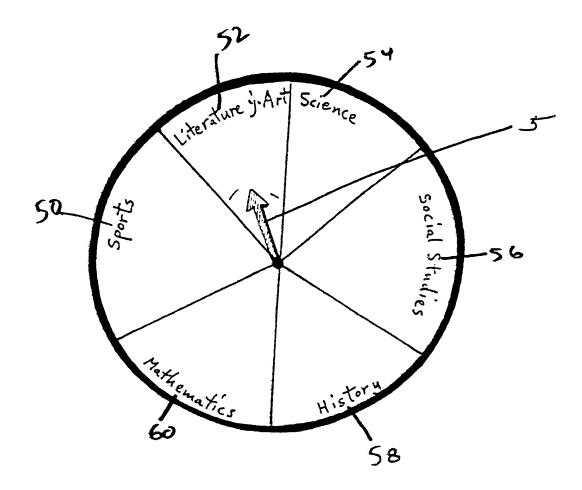


Figure 9

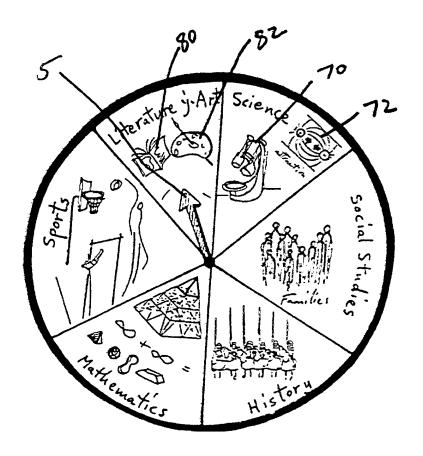


Figure 10

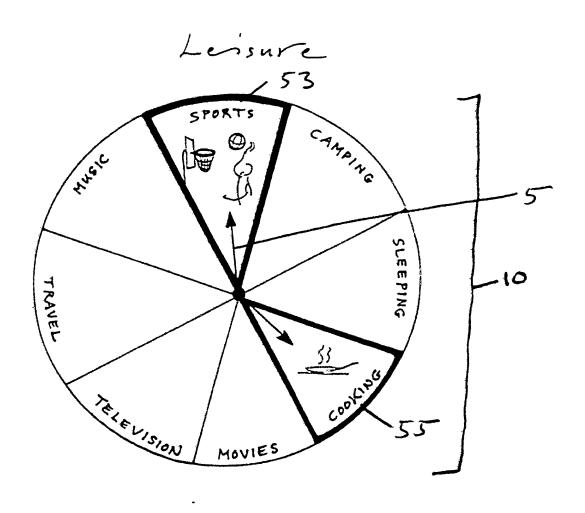


Figure 11

Use a picture, or photo, or drawing of a VOLCANO, here or anywhere on this "Wheel of Meaning."

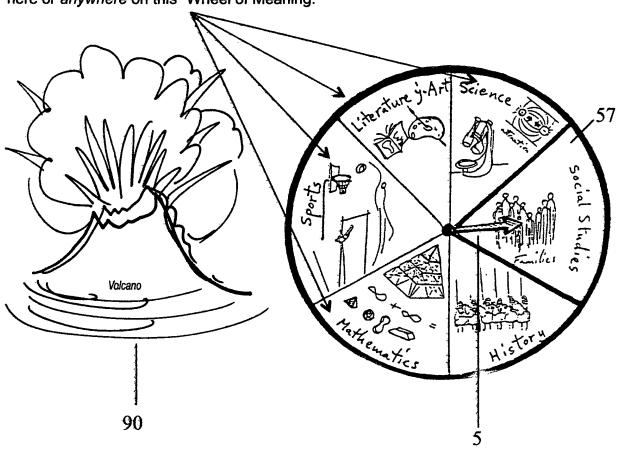
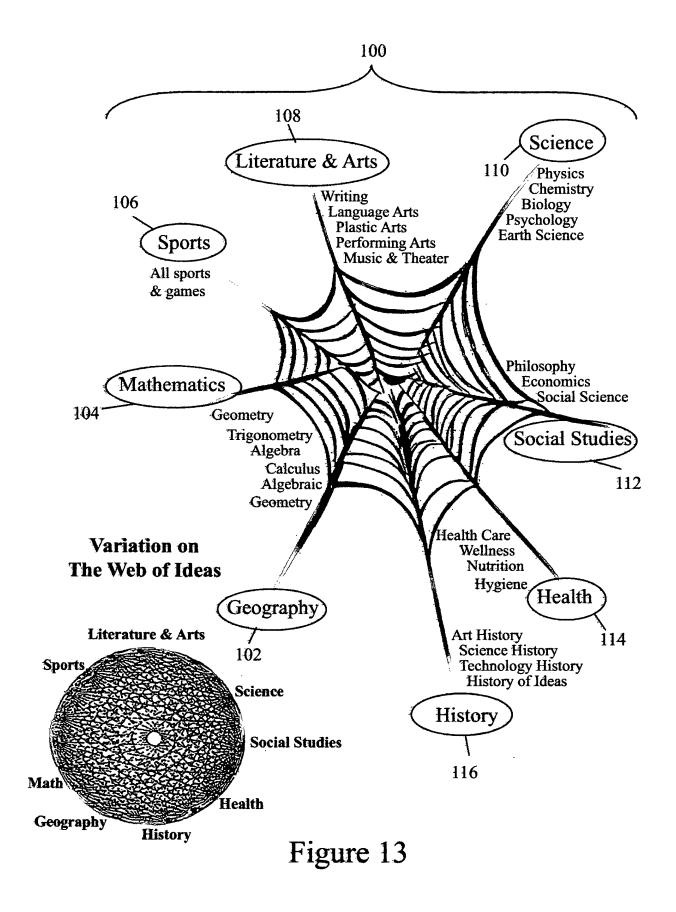


Figure 12



SCORE Placeholder Sheet for IFW Content

Application Number: 12579648 Document Date: 08/30/2011

The presence of this form in the IFW record indicates that the following document type was received in paper and is scanned and stored in the SCORE database.

Drawings

Images of the original documents are scanned in gray scale or color and stored in SCORE. Bi-tonal images are also stored in IFW. Defects visible in both IFW and SCORE are indicative of defects in the original paper documents.

To access the documents in the SCORE database, refer to instructions developed by SIRA.

At the time of document entry (noted above):

- Examiners may access SCORE content via the eDAN interface.
- Other USPTO employees can bookmark the current SCORE URL (http://es/ScoreAccessWeb/).
- External customers may access SCORE content via the Public and Private PAIR interfaces.

Form Revision Date: December 8, 2006

UNITED STATES PATENT AND TRADEMARK OFFICE



Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

TODD L. SILER SUITE F2-325 4950 S. YOSEMITE GREENWOOD VILLAGE CO 80111

MAILED

JUL 01 2011

OFFICE OF PETITIONS

In re Application of

Todd Lael SILER

Application No. 12/579,648

Filed: October 15, 2009

Attorney Docket No. 73360-ICON2

DECISION ON PETITION

This is a decision on the petition, filed March 15, 2011, which is being treated as a petition under 37 CFR 1.8(b), requesting withdrawal of the holding of abandonment in the above-identified application.

The petition is **DISMISSED**.

Any request for reconsideration of this decision should be filed within two (2) months from the mail date of this decision. *Note* 37 CFR 1.181(f). The request for reconsideration should include a cover letter and be entitled as a "Renewed Petition under 37 CFR 1.181 to Withdraw the Holding of Abandonment."

The application became abandoned for failure to reply in a timely manner to the Notice to File Missing Parts, mailed May 11, 2010. The Notice set a period for reply of two (2) months from the mail date of the Notice. A four (4) month extension of time under the provisions of 37 CFR 1.136(a) was obtained. Accordingly, the application became abandoned on November 12, 2010.

Petitioner asserts that a reply along which included a three (3) month extension of time was filed on August 23, 2010.

The Office acknowledges the receipt of the documents on December 27, 2010. However, the reply along with an additional one (1) month extension of times was due in the Office by December 11, 2010. Therefore the petition can not be granted.

ALTERNATIVE VENUE

Petitioner is strongly encouraged to consider filing a petition under 37 CFR 1.137(b) to revive an unintentionally abandoned application instead of filing a renewed petition under 37 CFR 1.181 or a petition under 37 CFR 1.137(a).

A grantable petition pursuant to 37 CFR 1.137(b) must be accompanied by:

- (1) The reply required to the outstanding Office action or notice, unless previously filed. In nonprovisional utility application abandoned for failure to respond to a non-final Office action, the required reply may be met by filing either (A) an argument or amendment under 37 CFR 1.111 or (B) a continuing application under 37 CFR 1.53(b).
- (2) The petition fee as set forth in 37 CFR 1.17(m), \$810.00 for a small entity or \$1,620.00 for a large entity,
- (3) A statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

A form for filing a petition to revive an unintentionally abandoned application accompanies this decision for petitioner's convenience. If petitioner desires to file a petition under 37 CFR 1.137(b) instead of filing a request for reconsideration, petitioner must complete the enclosed petition form (PTO/SB/64) and pay the \$810.00 petition fee.

Further correspondence with respect to this matter should be addressed as follows:

By Mail: Mail Stop PETITION

Commissioner for Patents

P. O. Box 1450

Alexandria, VA 22313-1450

By hand: U. S. Patent and Trademark Office

Customer Service Window, Mail Stop Petitions

Randolph Building 401 Dulany Street

Alexandria, VA 22314

By facsimile:

(571) 273-8300

Attn: Office of Petitions

Telephone inquiries concerning this decision should be directed to Michelle R. Eason at (571) 272-4231.

Thurman K. Page d Petitions Examiner

Office of Petitions

3-17-11

MAR 1 5 2011 Ly

Dereby certify that this correspondence is being filed via express Mail with the United States Post Office on March 15, 2011. Express mail #

•

REPLY TO NOTICE OF ABANDONMENT DATED JANUARY 14, 2011

PATENT

EG720551267US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Todd Siler

Application No.: 12/579,648

Filed: October 12, 2009

For: Methods and Apparatus To Enhance

Cognitive Functioning And Its

Manifestation Into Physical Form and Translation Into Useful Information

Customer No.:

Confirmation No.:

Examiner:

Golla

Art Unit:

2123

REPLY TO NOTICE OF ABANDONMENT DATED

JANUARY 14, 2011

Via Express Mail
Mail Stop Petition (not otherwise provided for under 37 CRF 1.182)
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This statement is submitted in response to the Notice of Abandonment by the U.S. Patent Office for the above-identified application on January 14, 2011 (the "Office Action").

MAR 1 5 2011 W

Mail Stop for Petition not otherwise provided for under 37 CFR 1.182 Commissioner for Patents
U.S. Patent and Trademark Office
P.O. box 1450
Alexandria, Virginia 22313

RE: Petition for Revival/Withdrawal of Abandonment

Dear Commissioner:

I have recently received a notice of abandonment of application #12/579,648. This holding was based on an apparent failure to properly reply to a Notice of Missing Parts mailed on May 11, 2010. As the fact below illustrate, however, I made not just one but two good faith attempts to correct any alleged deficiencies in a timely manner to the best of my ability. As a result, I believe this holding is in error.

As you will note from the file history, in response to the notice of missing parts, I (Todd Siler) filed a bona fide good faith reply on November 8, 2010 (See Exhibit A) which included a reply to each item including a revised oath or declaration along with revised drawings and fees for an extension of time. A filing data for my application had already been granted pending closure of two open items: a declaration and correction of one or more drawings.

My earnest reply mailed on November 8, 2010, included a bona fide, good faith attempt to meet the drawing requirements and otherwise address the outstanding concerns cited in the notice in every way. A side by side comparison of the drawings before (Exhibit A) and after clearly demonstrate these changes (see Exhibit B) with respect to the objections made in the notice. Specifically, I removed all alterations, overwriting, folds, copy marks and/or blurry images as requested.

In response to this reply, and without noting the adjustments and changes that I had made in good faith to the drawings, a second reply was sent by the examiner asserting that the last reply failed to address the drawing deficiencies and that corrected drawings had to be submitted by November 11, 2010 or the application would go abandoned. This was received approximately 5 days after the initial deadline with extension had already passed. In other words, by the time I had received the notice asserting that my changes to the prior drawings were insufficient, the application had effectively been abandoned.

Nonetheless, assuming this revised reply date was in error, I once again tried to make the additional corrections requested in the Formalities Letter and submitted a final set of revised drawings on December 18, 2010. In response, I received a notice indicating that my failure to properly reply to the Notice of Missing Parts had caused me to abandon my application.

AS you can see, I have done everything in my power to meet any objections and file in a timely fashion and have made every attempt to provide a bona fide response to each action. After years of prosecuting this and related applications through the patent and trademark office, it would be devastating to lose this application strictly because of a misunderstanding regarding changes required to the drawings I had submitted.

For these and other reasons, I respectfully request that you withdraw the holding of abandonment and place the revised figures that were submitted within 30 days of the second notice of deficiency (see Exhibit C) into the application and permit timely consideration of this application.

Thank you in advance for your time and consideration.

Respectfully submitted,

Todd Siler

Exhibit A: drawings as originally submitted

Exhibit B: revised drawings submitted on November 8, 2010 Exhibit C: revised drawings submitted on December 18, 2010

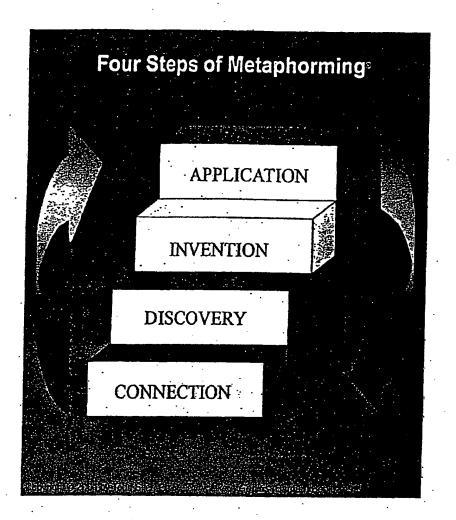
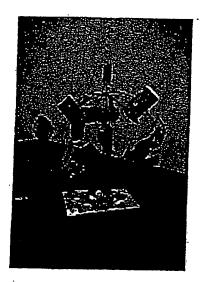


Figure 1



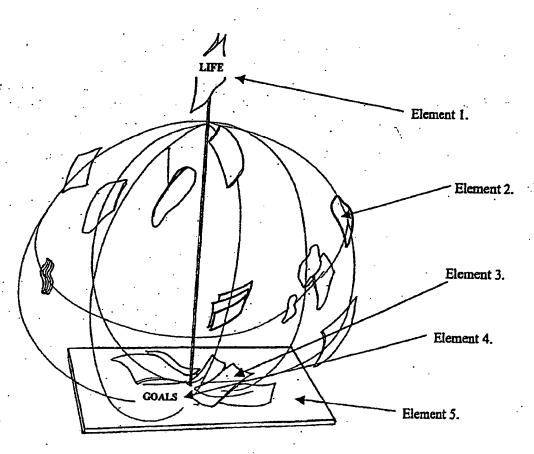
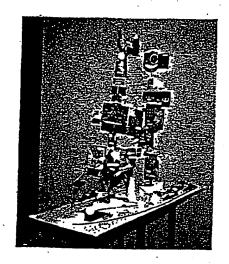
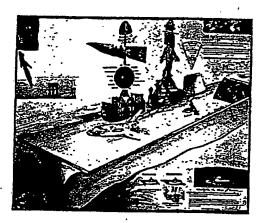


Figure 2





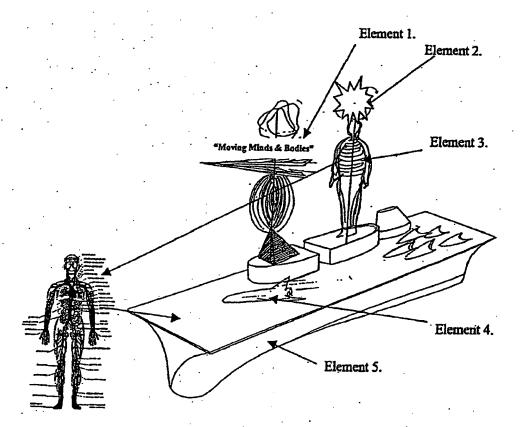


Figure 3



Figure 11a.

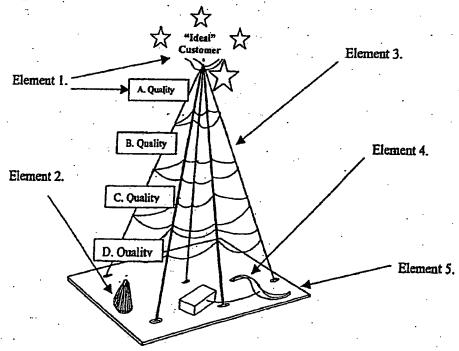


Figure 4

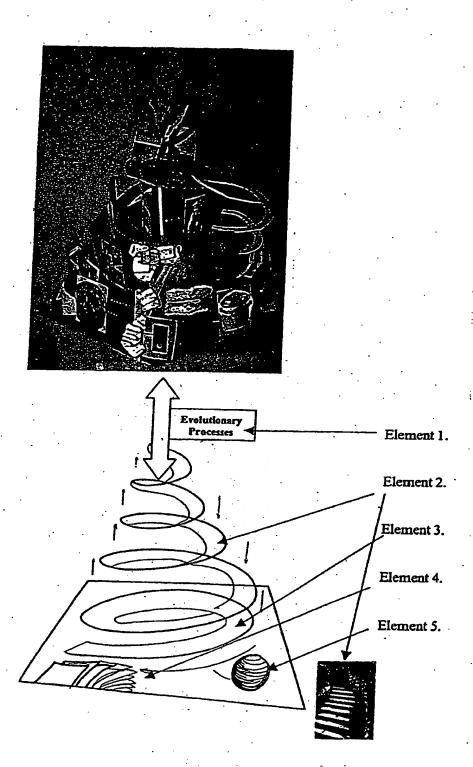
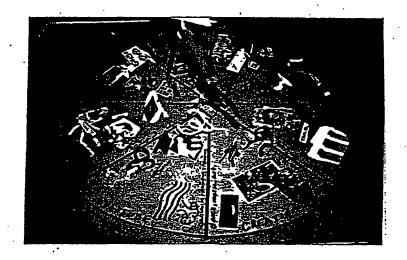


Figure 5



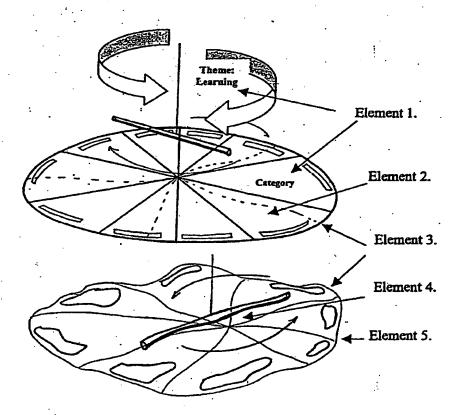


Figure 6

Figure 7

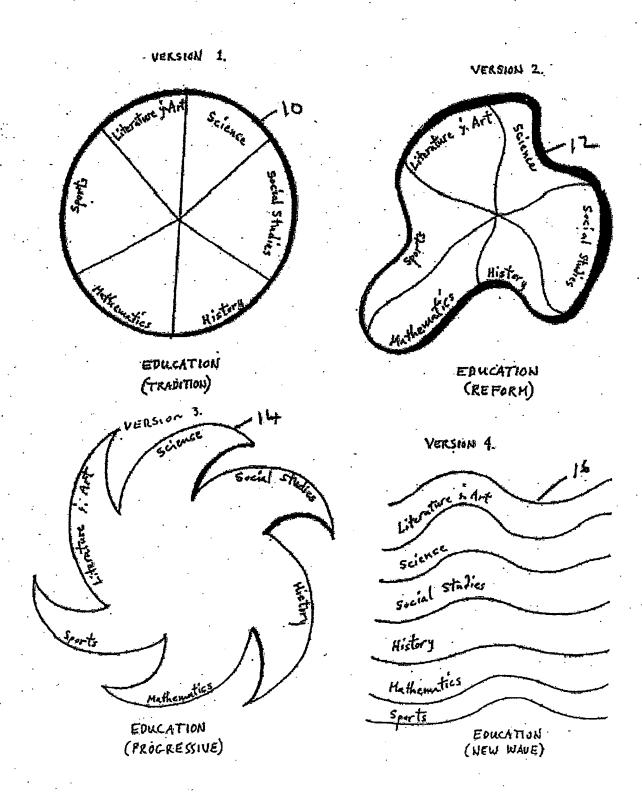
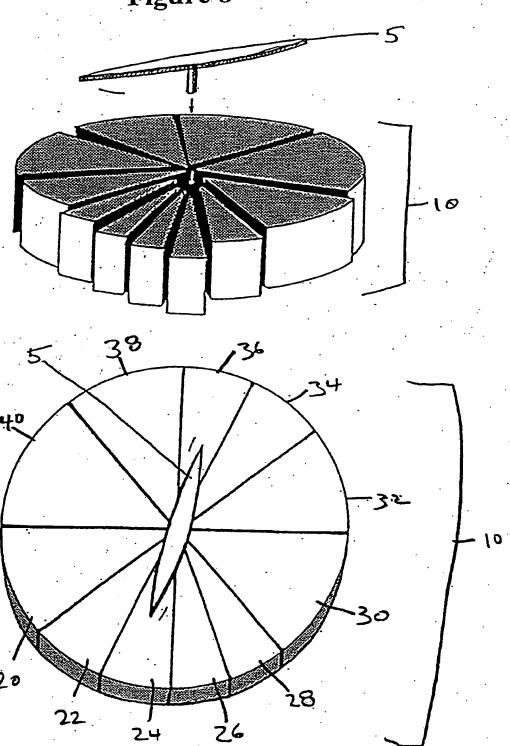


Figure 8



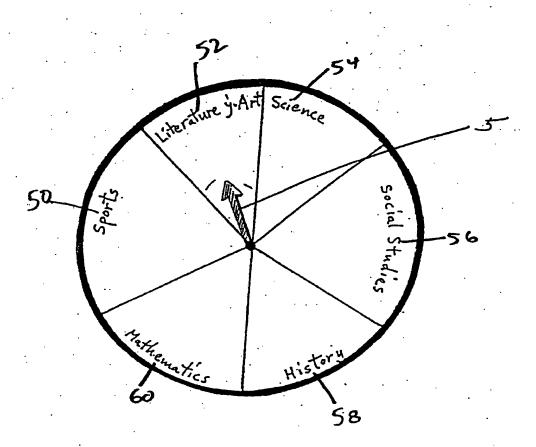


Figure 9

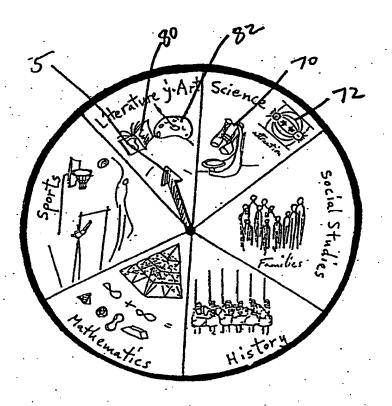


Figure 10

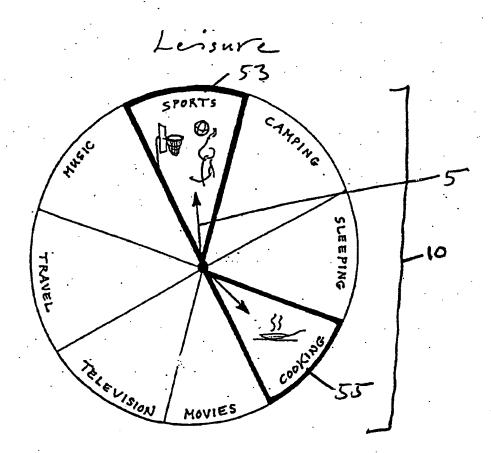


Figure 11

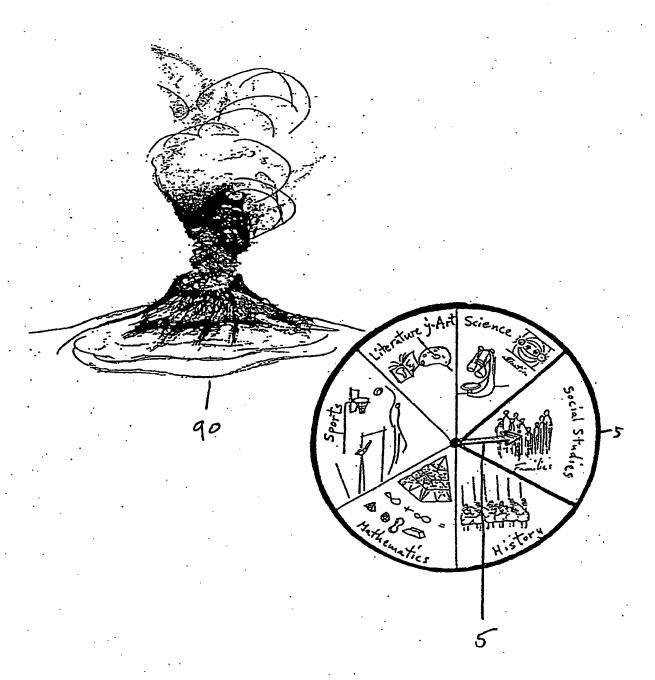
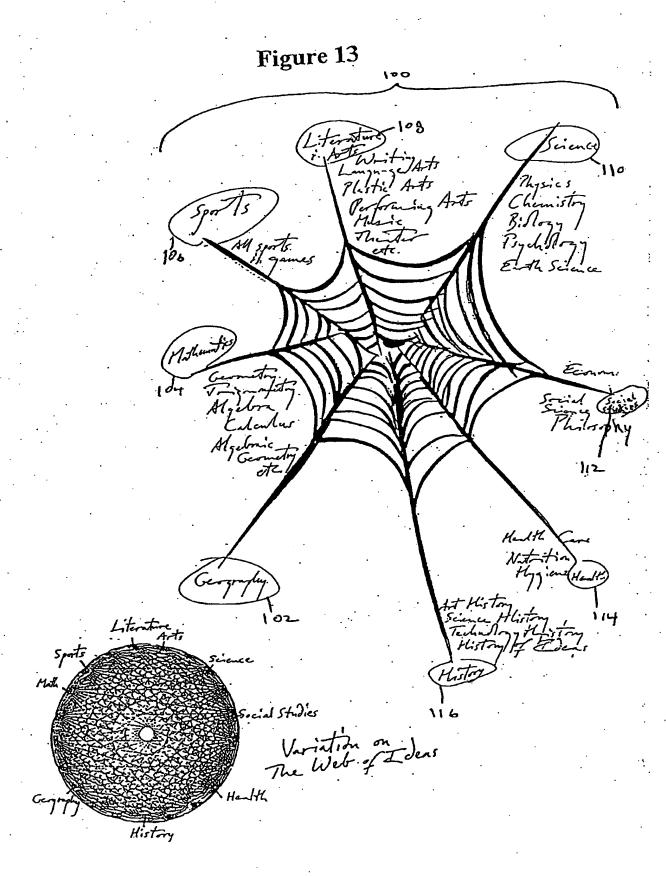


Figure 12



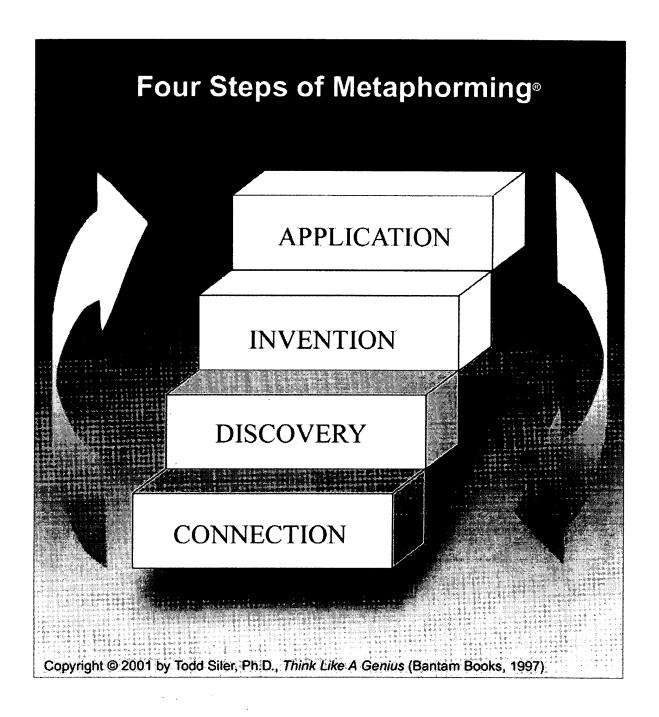


Figure 1

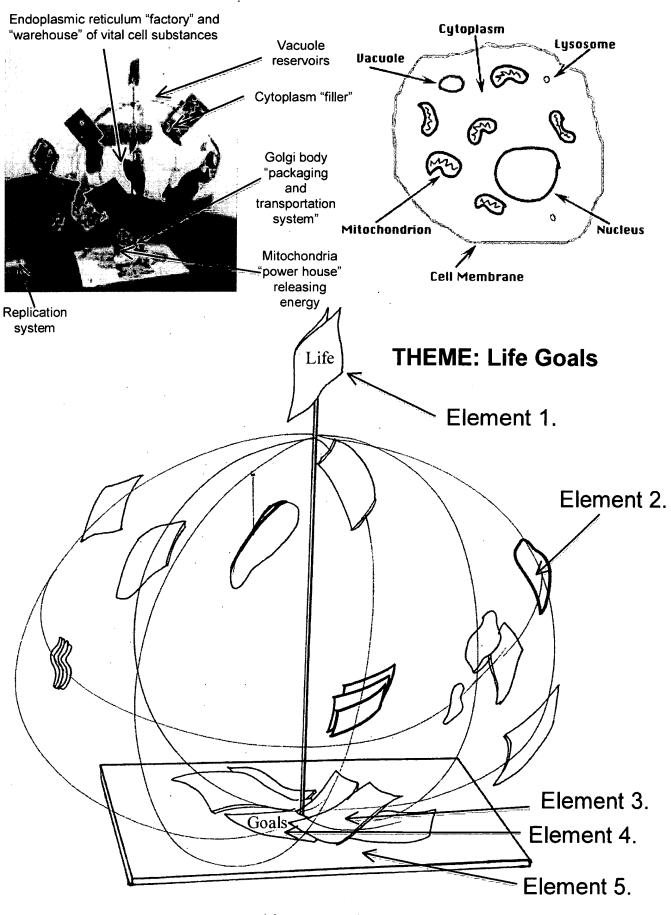
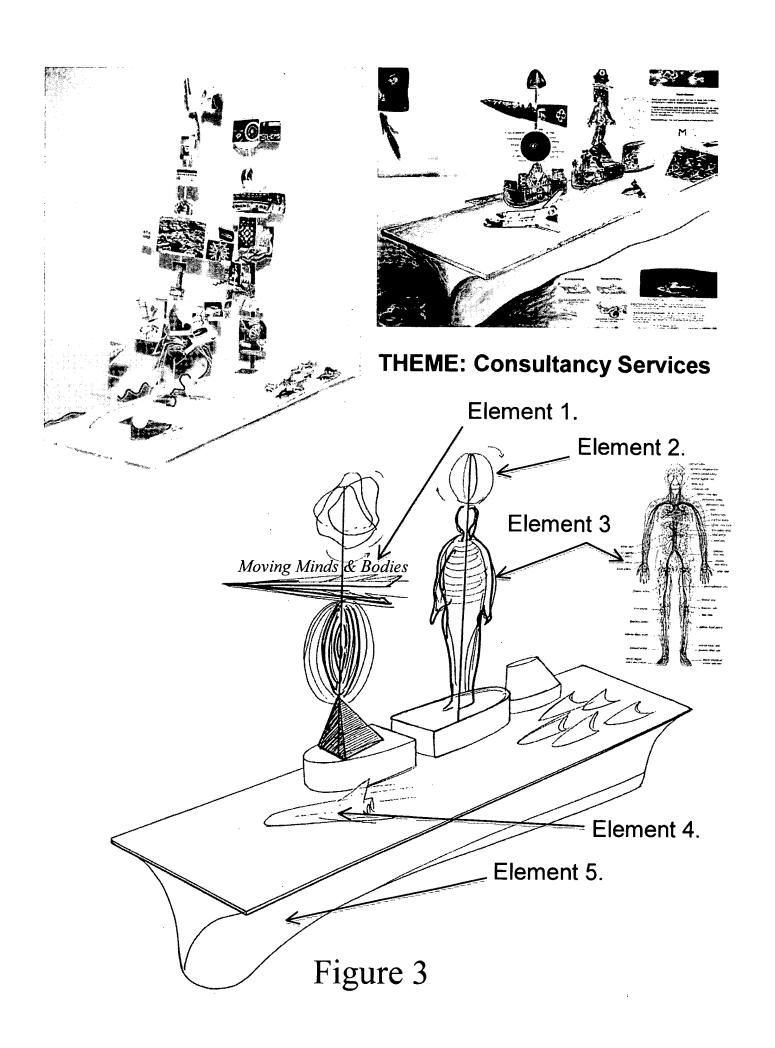
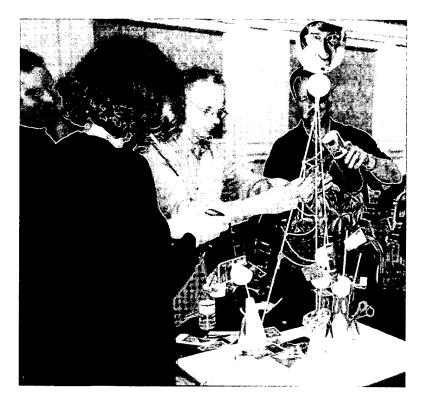


Figure 2





THEME: "Ideal" Customer

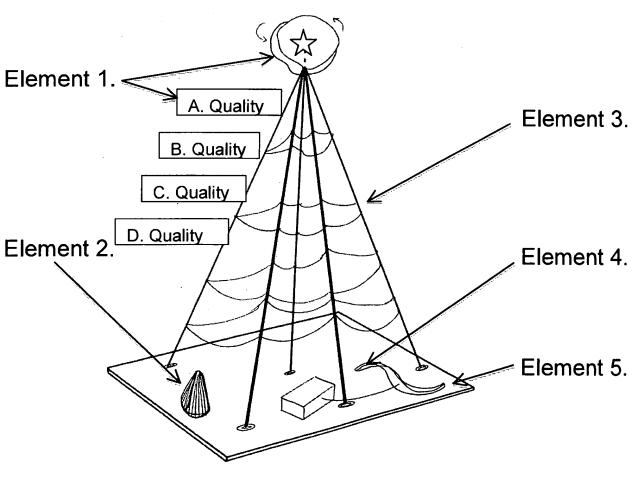


Figure 4



THEME: Evolutionary Process

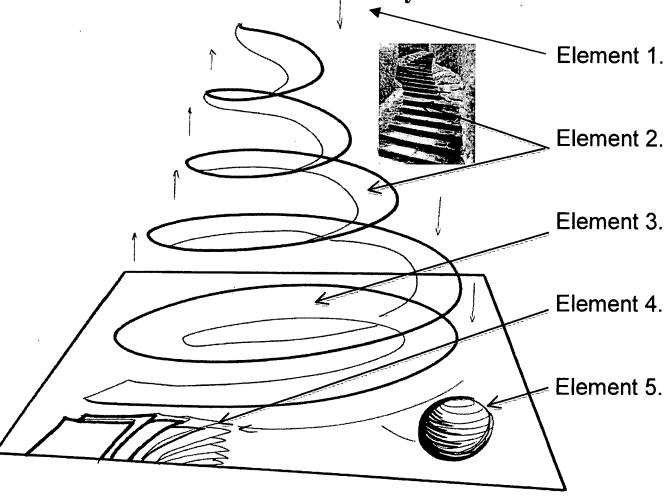
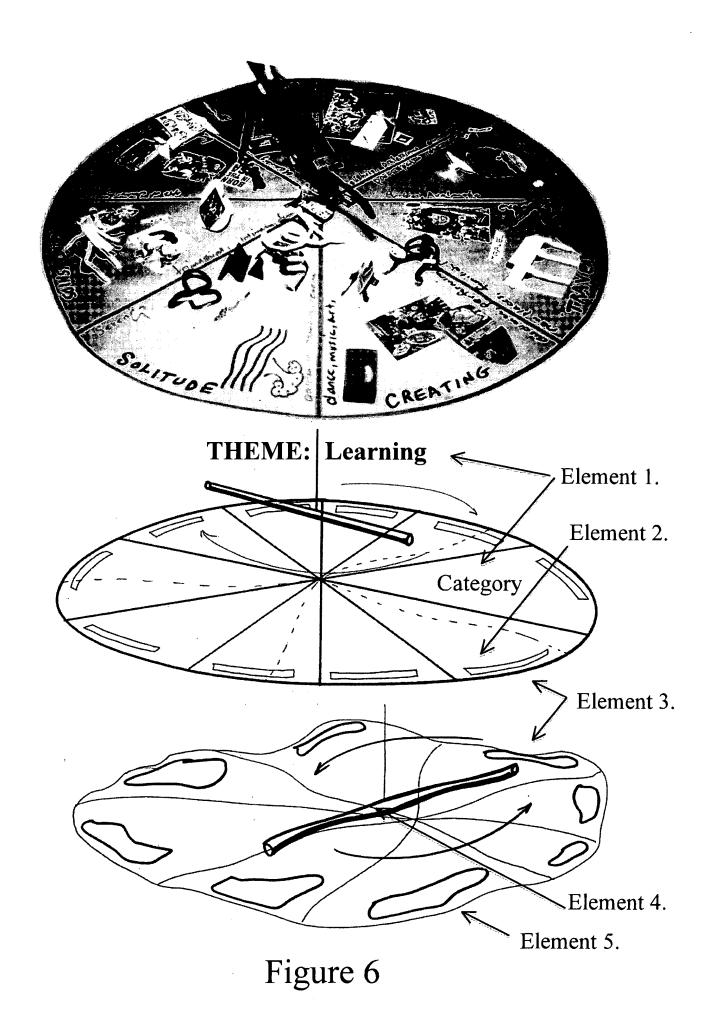
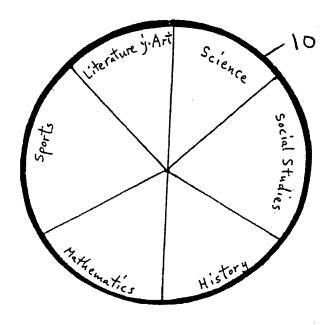


Figure 5

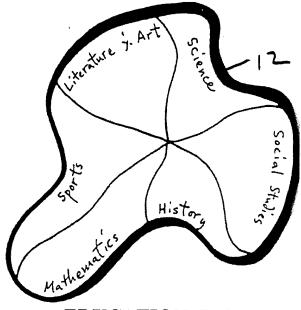


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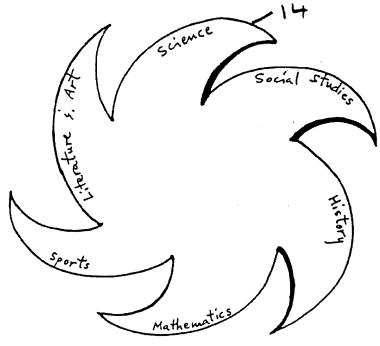
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VERSION 2.



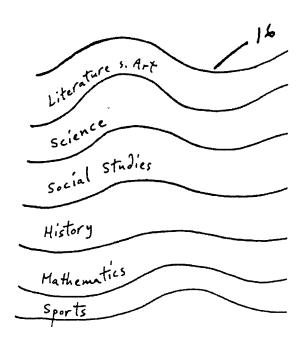
EDUCATION (Reform)





EDUCATION (Progressive)

VERSION 4.



EDUCATION (New Wave)

Figure 7

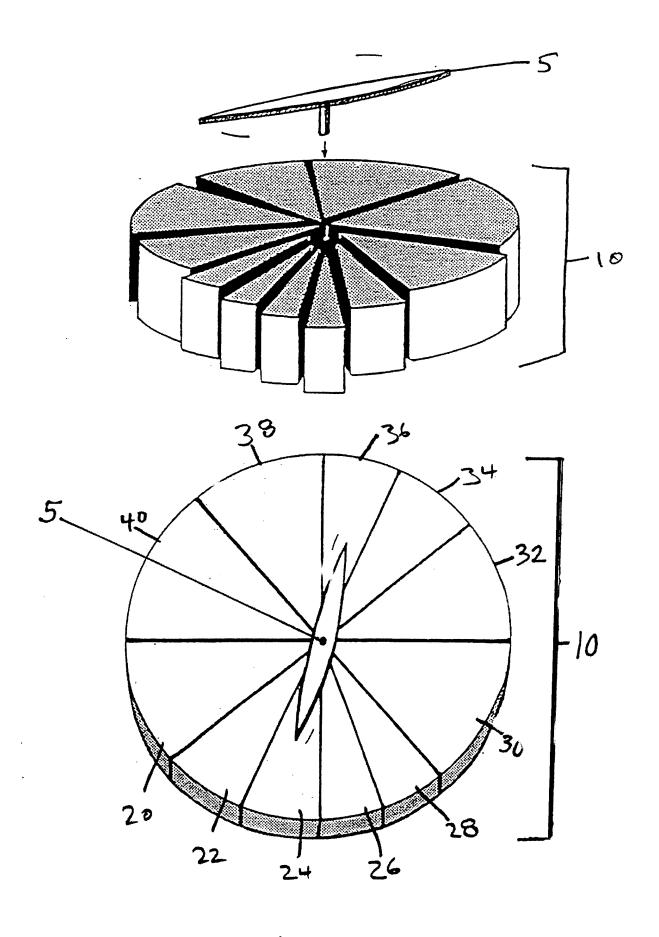


Figure 8

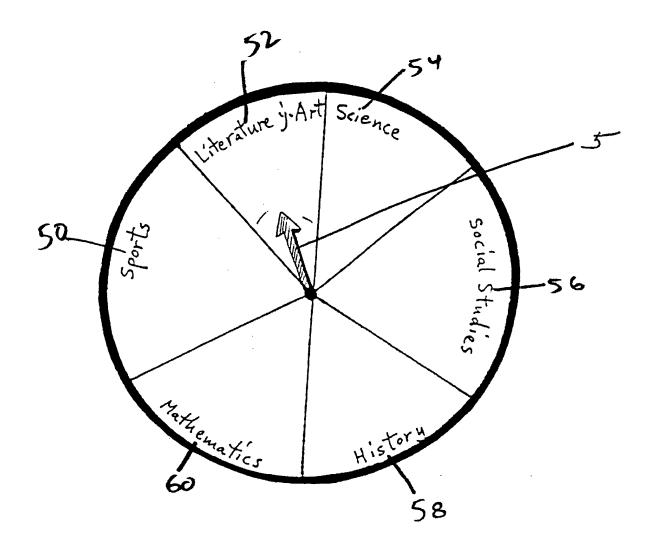


Figure 9

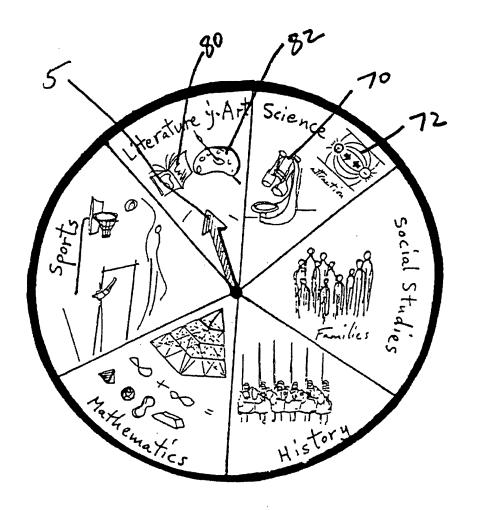


Figure 10

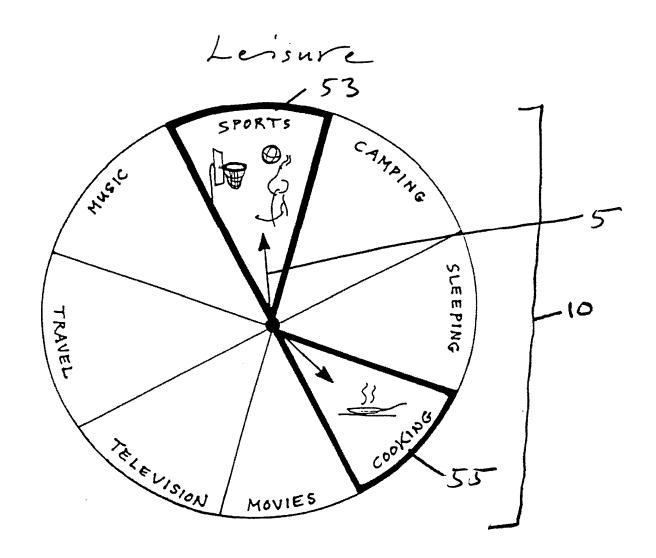


Figure 11

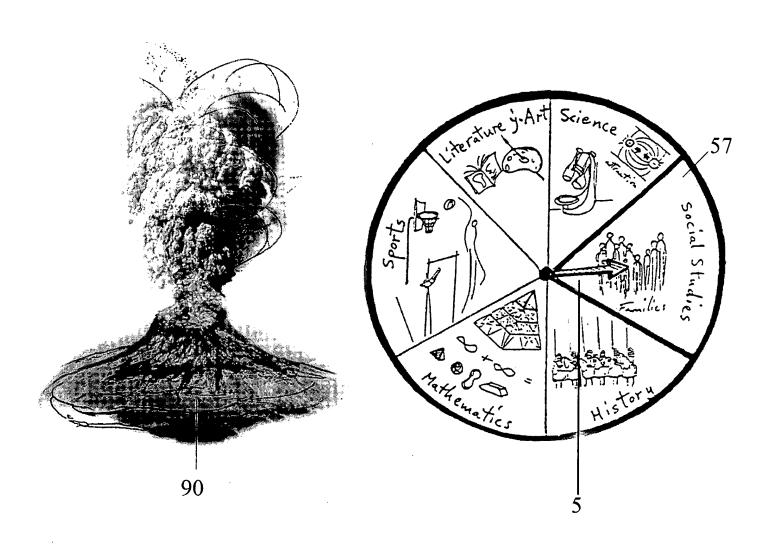
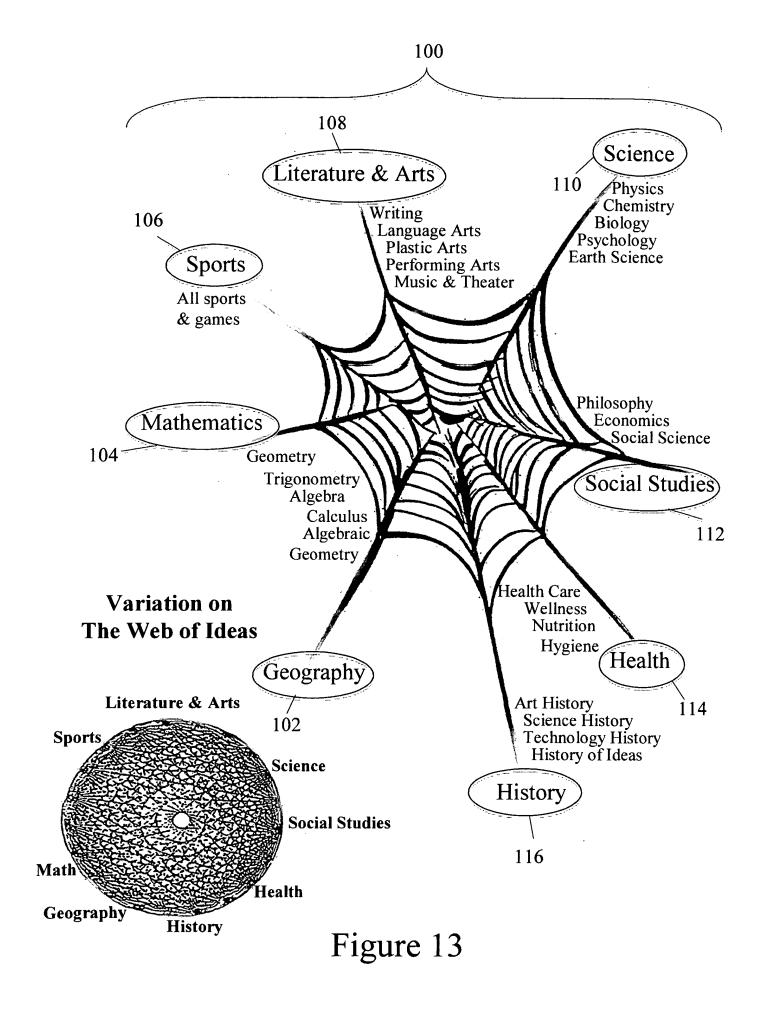


Figure 12



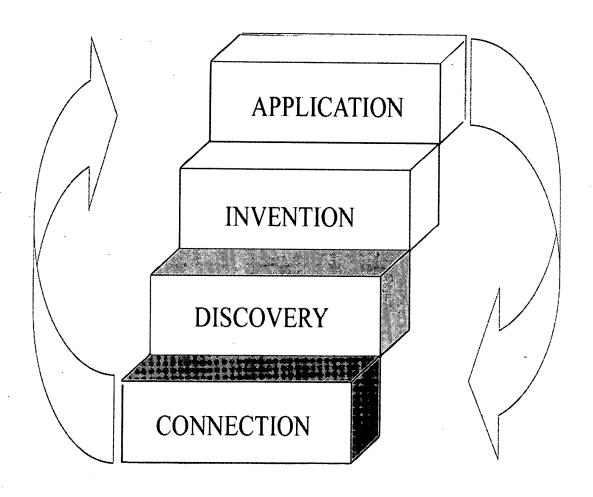


Figure 1

THEME: Life Goals

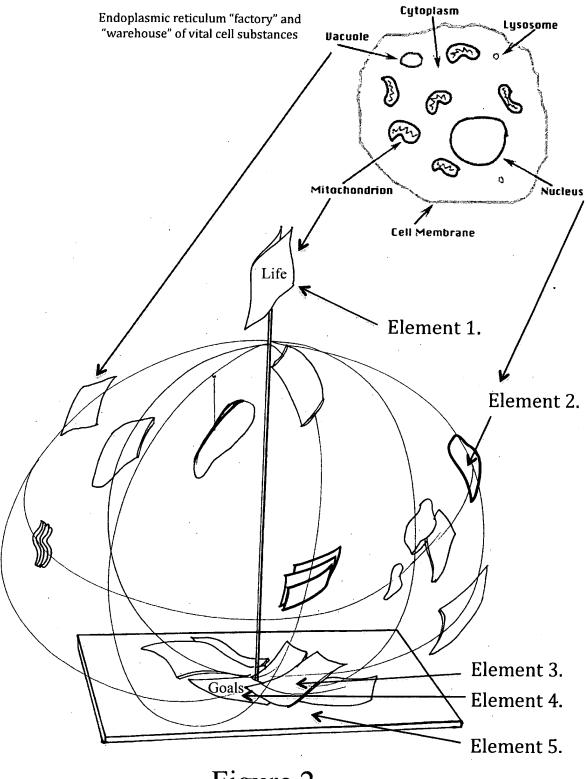


Figure 2

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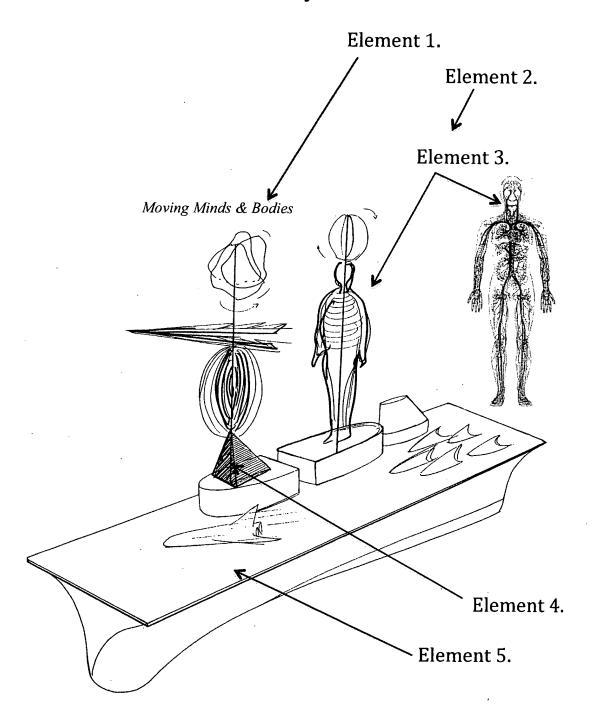


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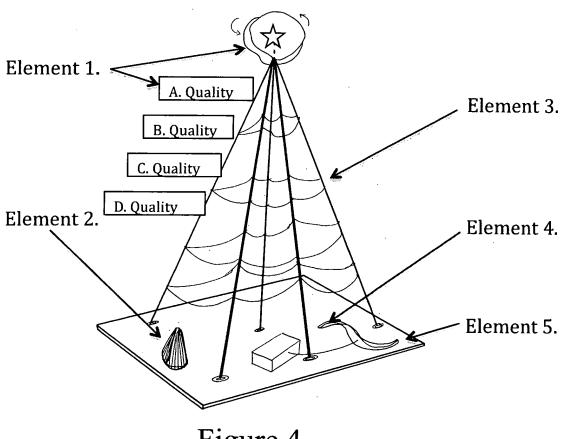
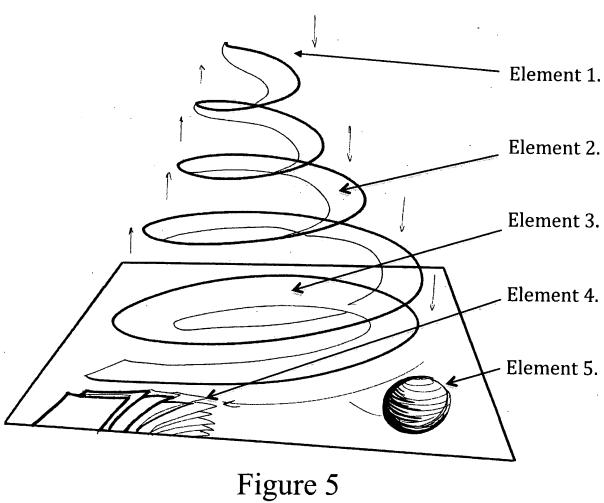


Figure 4

THEME: Evolutionary Process



THEME: Learning

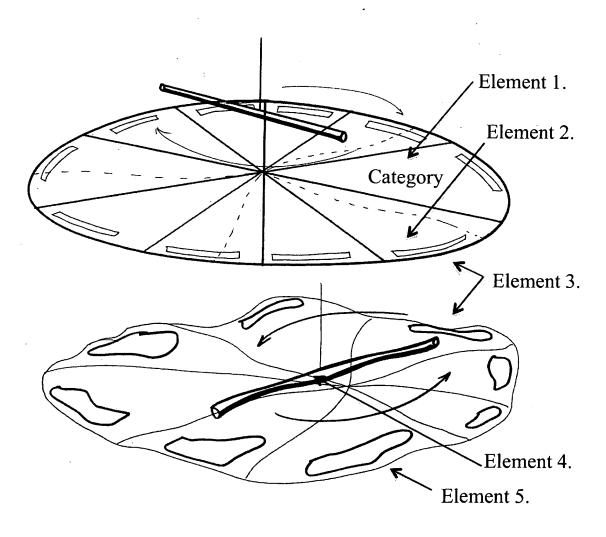


Figure 6

VERSION 1. VERSION 2. 10 Histor **EDUCATION (Traditional) EDUCATION (Reform)** VERSION 3. VERSION 4. social studies History Mathematics

Figure 7

EDUCATION (Progressive)

Sports

EDUCATION (New Wave)



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS PC. Box 1450 Alexandria, Vignia 22313-1450 www.uspto.gov

APPLICATION NUMBER FILING OR 371(C) DATE FIRST NAMED APPLICANT ATTY. DOCKET NO./TITLE

12/579,648 10/15/2009 Todd Lael Siler

73360-ICON2

Todd L. Siler Suite F2-325 4950 S. Yosemite Greenwood Village, CO 80111 CONFIRMATION NO. 8763
ABANDONMENT/TERMINATION
LETTER



Date Mailed: 01/14/2011

NOTICE OF ABANDONMENT UNDER 37 CFR 1.53 (f) OR (g)

The above-identified application is abandoned for failure to timely or properly reply to the Notice to File Missing Parts (Notice) mailed on 05/11/2010.

· No reply was received.

If a complete reply to the notice was previously filed by applicant within the time period set forth in the notice, applicant may request for reconsideration of the holding of abandonment within 2 months from the mailing of this notice of abandonment by filing a petition to withdraw the holding of abandonment under 37 CFR 1.181(a). No petition fee is required. The petition must be accompanied by a true copy of the originally filed reply and the item(s) identified in one of the following:

- 1. A properly itemized date-stamped postcard receipt (see MPEP § 503);
- 2. If the originally filed reply included a certificate of mailing or transmission in compliance with 37 CFR 1.8(a), a copy of the certificate of mailing or transmission and a statement in compliance with 37 CFR 1.8(b) (see MPEP § 512); or
- 3. If the reply was filed via "Express Mail," a submission satisfying the requirements of 37 CFR 1.10(e) including, for example, a copy of the "Express Mail" mailing label showing the "date-in" (see MPEP § 513).

Any petition to withdraw the holding of abandonment should be directed to OPAP.

If applicant did not previously file a complete reply within the time period set forth in the notice, applicant may file a petition to revive the application under 37 CFR 1.137.

Under 37 CFR 1.137(a), a petition requesting the application be revived on the grounds of **UNAVOIDABLE DELAY** must be filed promptly after the applicant becomes aware of the abandonment and such petition must be accompanied by: (1) an adequate showing of the cause of unavoidable delay; (2) the required reply to the above-identified Notice; (3) the petition fee set forth in 37 CFR 1.17(I); and (4) a terminal disclaimer if required by 37 CFR 1.137(d). See MPEP § 711.03(c) and Form PTO/SB/61.

Under 37 CFR 1.137(b), a petition requesting the application be revived on the grounds of **UNINTENTIONAL DELAY** must be filed promptly after applicant becomes aware of the abandonment and such petition must be accompanied by: (1) a statement that the entire delay was unintentional; (2) the required reply to the above-identified Notice; (3) the petition fee set forth in 37 CFR 1.17(m); and (4) a terminal disclaimer if required by 37 CFR 1.137(d). See MPEP § 711.03(c) and Form PTO/SB/64.

| Any questions concerning petitions to revive should be directed to the "Office of Petitions" at (571) 272-3282. |
|---|
| A copy of this notice MUST be returned with the reply. |
| |
| /twoldeyes/ |

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PTO/SB/22 (07-09)

Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARMENT OF COMMERCE
a collection of information unless it displays a valid OMB control number.

| Uniter the paperwork Reduction Act of 1995, no persons are required to r | coporio to a conección | To mornation discoons | | | | | |
|---|--------------------------|---------------------------|-------------------------------|--|--|--|--|
| DETITION FOR EXTENSION OF TIME UNDER 37 CF | Docket Number (Optional) | | | | | | |
| FY 2009 (Fees pursuant to the Consolidated Appropriations Act, 2005 (H. | 73360-ICON2 | | | | | | |
| Application Number 12/579,648 | | Filed 10/15/20 | 009 | | | | |
| For Methods and Apparatus To Enhance Cognitive F | unctioning And | Its Manifestation | Into Physical Form and T | | | | |
| Art Unit 3711 | | Examiner Kurt F | ernstrom | | | | |
| This is a request under the provisions of 37 CFR 1.136(a) to application. | extend the perio | d for filing a reply in | the above identified | | | | |
| The requested extension and fee are as follows (check time | period desired ar | nd enter the approp | riate fee below): | | | | |
| | <u>Fee</u> | Small Entity Fee | 2 | | | | |
| One month (37 CFR 1.17(a)(1)) | \$130 | \$65 | \$ | | | | |
| Two months (37 CFR 1.17(a)(2)) | \$490 | \$245 | \$ | | | | |
| Three months (37 CFR 1.17(a)(3)) \$ | 1110 | \$555 | \$ | | | | |
| Four months (37 CFR 1.17(a)(4)) \$ | 1730 | \$865 | \$ <i>865</i> | | | | |
| Five months (37 CFR 1.17(a)(5)) \$ | 2350 | \$1175 | \$ | | | | |
| Applicant claims small entity status. See 37 CFR 1.27. | Econor | nden namene eren | and and the | | | | |
| A check in the amount of the fee is enclosed. | 01/ECA | 2010_0CHADA 0900 | 1028/128/1848/ 7 Acr on on | | | | |
| Payment by credit card. Form PTO-2038 is attached | 0 0 | אמא | | | | | |
| ☐ The Director has already been authorized to charg | e fees in this a | pplication to a De | posit Account. | | | | |
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| assignee of record of the entire inter Statement under 37 CFR 3.73(b) | | | | | | | |
| attorney or agent of record. Registra | tion Number | · | | | | | |
| attorney or agent under 37 CFR 1.34 Registration number if acting under 37 CF | 4. FR 1.34 | | ; | | | | |
| Signature 72/12. Siler Date 11/5/10 | | | | | | | |
| Todd L. Siler | | • | , , 20-988-8853 | | | | |
| Typed or printed name | • | · - | ephone Number | | | | |
| NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below. | | | | | | | |
| ☐ Total of forms are sub | mitted. | | | | | | |

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. 8ox 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

DEC 2 7 2010 DEC 2

| in re the App | offication of: |) | Group Art Onit. | 2123 |
|---------------|----------------|---|------------------|------|
| | Todd L. Siler |) | Confirmation No. | 8763 |
| Serial No.: | 12/579,648 |) | | |
| Filed: | 10/15/2009 |) | | |

For:

Methods and Apparatus To Enhance Cognitive Functioning And Its Manifestation Into

Physical Form and Translation Into Useful Information

Response to Notice to File Missing Parts

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir or Madam:

Applicant hereby responds to the Notice to File Missing Parts of Nonprovisional Application dated 5/11/2010.

Replacement drawings (13 pages) are submitted herewith.

Remarks begin on page 2 of this paper..

The filing receipt filed 5/11/2010 should be corrected as follows. The receipt does not correctly identify the priority claims, which should be as follows.

"This application claims priority to Application Serial No. 11/561,005 filed November 17, 2006, now abandoned, which is a continuation of 11/334,842, filed Jan. 19, 2006, now abandoned, which is a continuation of Application Serial No. 09/882,921, filed June 15, 2001, now abandoned, which is a continuation-in-part of Application Serial No. 09/164,285, filed October 1, 1998, now abandoned, which is a continuation of Application Serial No. 08/889,475, filed July 8, 1997, now abandoned, which is a continuation-in-part of Provisional Application Serial No. 60/021,498, filed July 10,1996, from which priority is claimed. These applications are incorporated by reference."

This application is a continuation (and <u>not</u> a continuation-in-part) of App. Serial No. 11/561,005, and so no new declaration should be required.

A petition for an extension of time is being filed herewith.

Respectfully submitted,

Todd L. Siler, Applicant

4950 S. Yosemite Street, Suite F2-325

Greenwood Village, CO 80111

Phone: (720) 988-8853

100960171_1.DOC

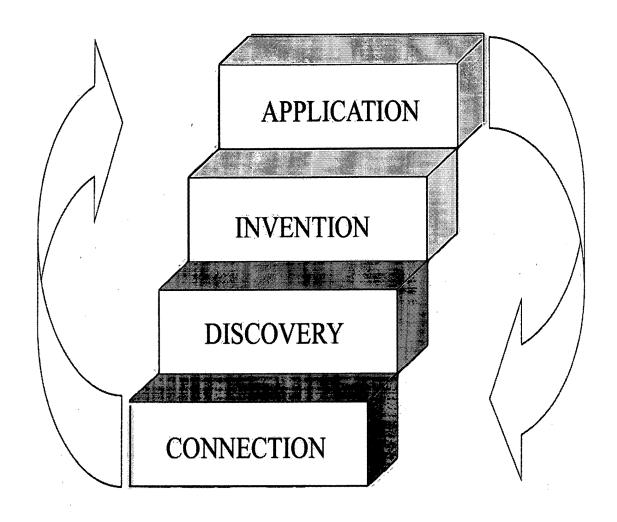


Figure 1

THEME: Life Goals

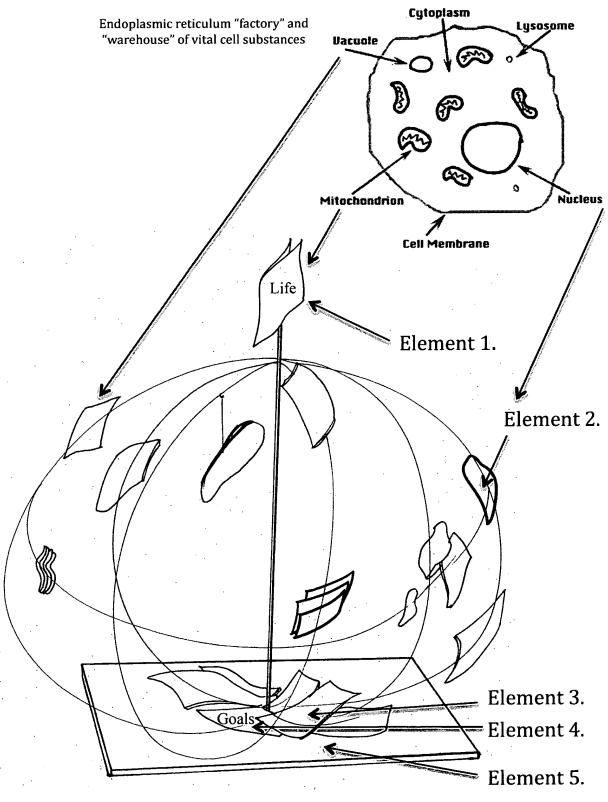


Figure 2

THEME: Consultancy Services

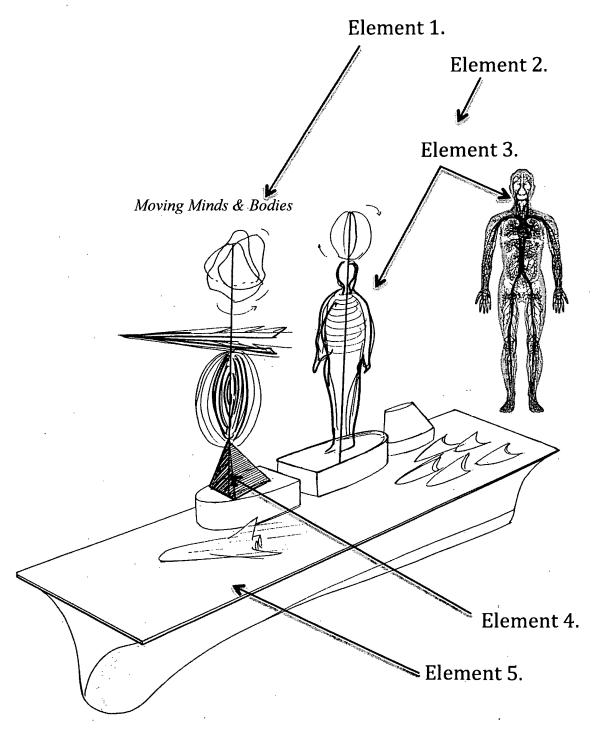


Figure 3

THEME: "Ideal" Customer

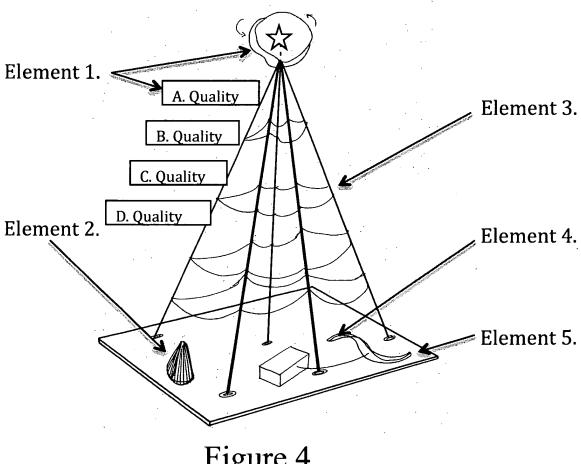
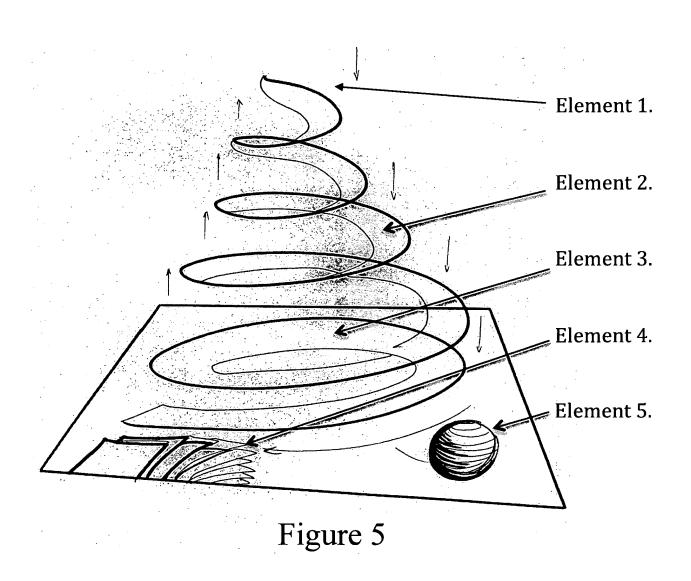


Figure 4

THEME: Evolutionary Process



THEME: Learning

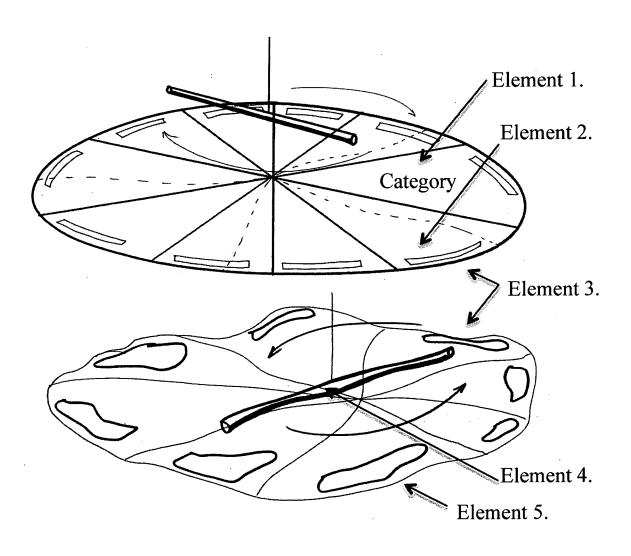
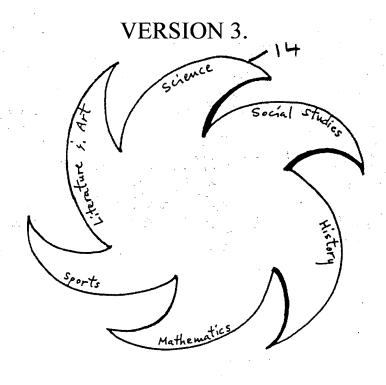


Figure 6

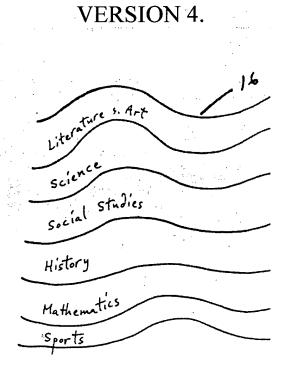
VERSION 1. Science Social Studies Track-emaxics History EDUCATION (Traditional)

VERSION 2.

Secial State State



EDUCATION (Progressive)



EDUCATION (New Wave)

Figure 7

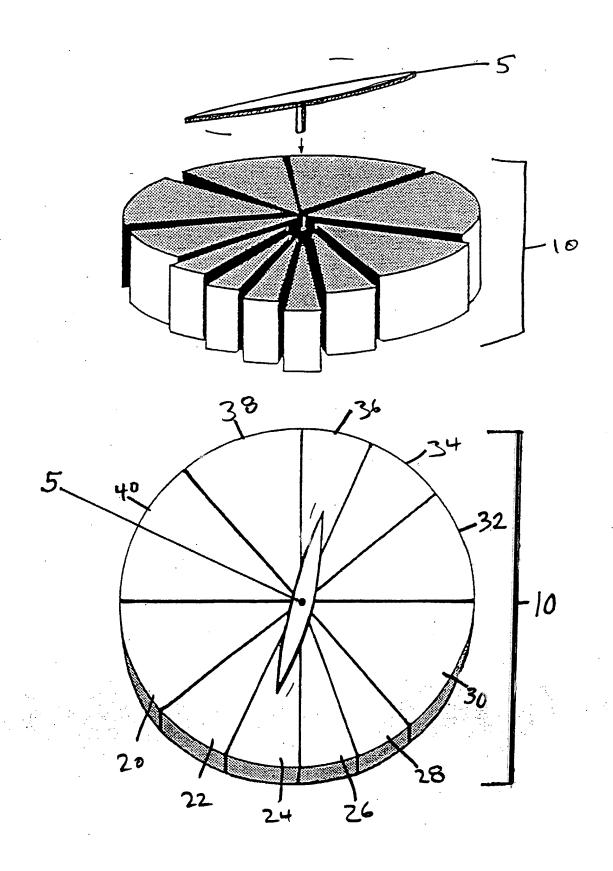


Figure 8

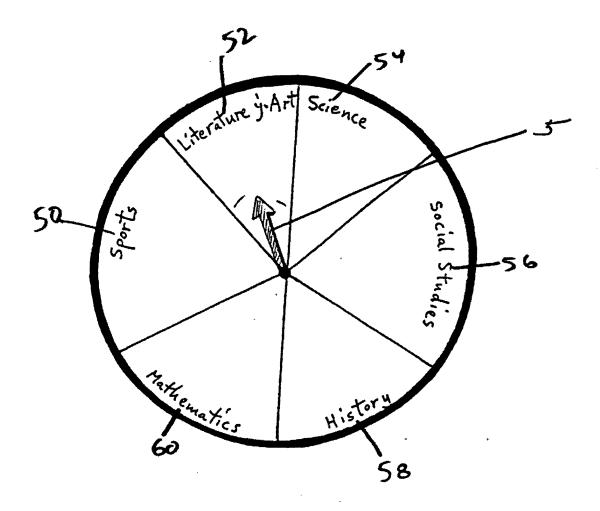


Figure 9

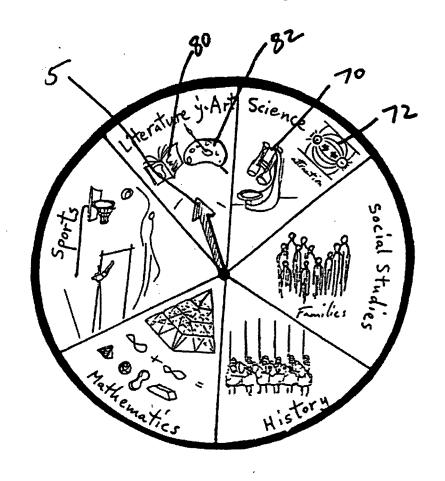


Figure 10

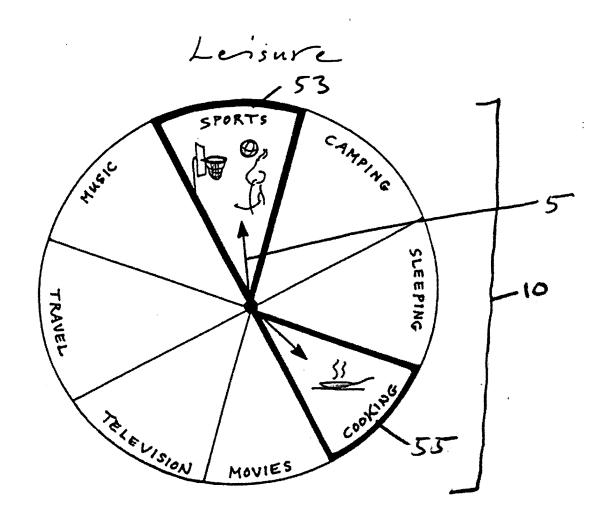


Figure 11

Use a picture, or photo, or drawing of a VOLCANO, here or *anywhere* on this "Wheel of Meaning."

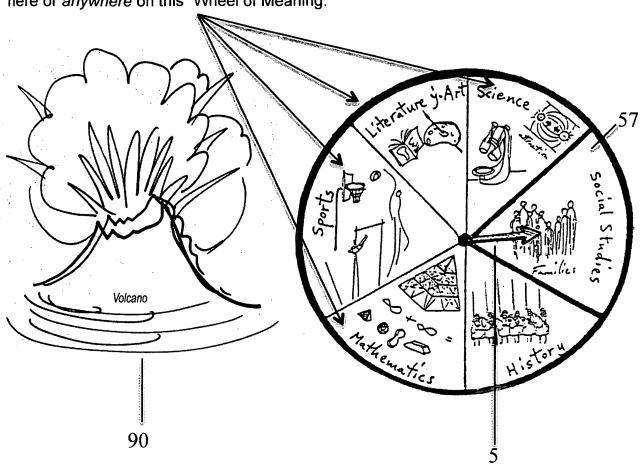
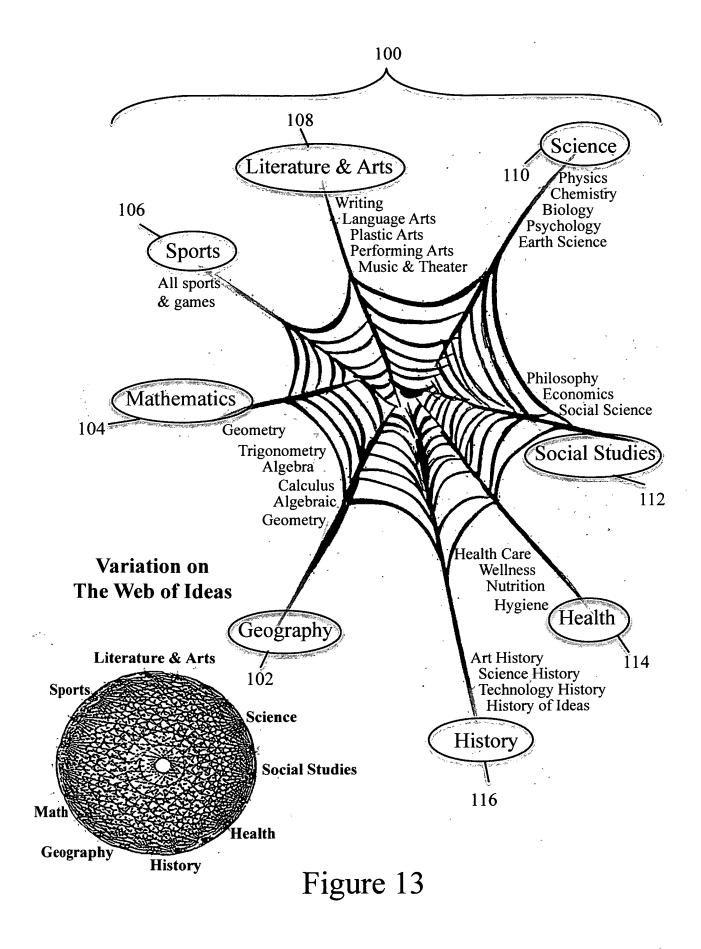


Figure 12



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| / | O PAD DECLA | | N FOR | UTILITY OR | Attorney Docket Number First Named Inventor | 73360-ICON2 | |
|-----|--|-------------------------------|---|------------------------|---|---------------|--|
| | EC 2 7 2010 😩 | | APPLI CFR 1. | CATION 63) | | Todd L. Siler | |
| (¢ | ADEMATH OF Declaration Submitted With Initial Filing | | Declaration Submitted After Initial Filing (surcharge | Filing Date | 12/579,648 10/15/2009 | | |
| | | (37 CFR 1.16(f)) required) | Art Unit Examiner Name | 3711 Kurt Fernstrom | | | |

I hereby declare that: (1) Each inventor's residence, mailing address, and citizenship are as stated below next to their name; and (2) I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention titled: Methods and Apparatus To Enhance Cognitive Functioning And Its Manifestation Into Physical Form and Translation Into Useful Information (Title of the Invention) the application of which is attached hereto OR was filed on (MM/DD/YYYY)10/15/2009 ~ as United States Application Number or PCT International Application Number 12/579,648 and was amended on (MM/DD/YYYY) (if applicable). I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment specifically referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application. Authorization To Permit Access To Application by Participating Offices If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified patent application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified patent application is filed to have access to the above-identified patent application. In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the above-identified patent application with respect to: 1) the above-identified patent application-as-filed; 2) any foreign application to which the above-identified patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application. In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

[Page 1 of 3]

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DECLARATION — Utility or Design Patent Application

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| I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed. | | | | | | | | | |
| Prior Foreign Application | Country | Foreign Filing Date | Priority | Certified Copy Attached? | | | | | |
| Number(s) | , | (MM/DD/YYYY) | Not Claimed | YES NO | | | | | |
| *************************************** | | | | | | | | | |
| | | _ | | | | | | | |
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| | | | | | | | | | |
| Additional foreign application number(s) are listed on a supplemental priority data sheet PTO/SB/02B attached hereto. | | | | | | | | | |

[Page 2 of 3]

PTO/SB/01 (04-09)

Approved for use through 09/30/2010. OMB 0651-0032

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| Todd L. Siler | | | | | | |
| Address | | | | | | |
| 4950 S. Yosemite Street | t, F2-325 | | | | | |
| City | 1111 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - | State | | Zip | | |
| Greenwood Village | | Colorado | | 80111 | | |
| Country | Telephone | | Email | 1 | | |
| USA | 720-988- | 8853 | toddsiler@alum.MIT.edu | | | |
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| NAME OF SOLE OR FIRS | ST INVENTOR: | A petition | has been filed | for this ur | nsigned inventor | |
| Given Name (first and middle [in | f any]) | Family Name or Su | rname | | | |
| Todd Lael | | Siler | | | | |
| Inventor's Signature | T C-1 | Da | te | | | |
| 16/1/2 | -,), les | - 11-! | 5-10 | | | |
| Residence: City | State | Country | | С | itizenship | |
| Aurora | Colorado | USA | | U | S | |
| Mailing Address | Ooloraao | Joon | | | | |
| 4950 S. Yosemite Street | E0 225 | | | | | |
| City City | , F2-323 State | Zip | | C | ountry | |
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| | on Numbe | | | Filed 10/15/2 | 009 | | |
| For M | ethods a | nd Apparatus To Enhance Cog | nitive Functioning And | Its Manifestation | Into Physical Form and T | | |
| Art Unit | 3711 | | | Examiner Kurt | Fernstrom | | |
| This is a applicati | | nder the provisions of 37 CFR 1.1 | 36(a) to extend the period | d for filing a reply i | n the above identified | | |
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| | Three | e months (37 CFR 1.17(a)(3)) | \$1110 | \$555 | \$ | | |
| | ✓ Four | months (37 CFR 1.17(a)(4)) | \$1730 | \$865 | \$865 | | |
| | Five | months (37 CFR 1.17(a)(5)) | \$2350 | \$1175 | \$ | | |
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| | | attorney or agent of record. F | • • | · | | | |
| | | attorney or agent under 37 C Registration number if acting un | CFR 1.34. der 37 CFR 1.34 | | | | |
| | | Signature | Siler | | 11/5/10 Date | | |
| | | Todd L. Siler | | 7 | 20-988-8853 | | |
| | | Typed or printed name | | Tel | ephone Number | | |
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Application or Docket Number PATENT APPLICATION FEE DETERMINATION RECORD 12/579,648 Substitute for Form PTO-875 APPLICATION AS FILED - PART I OTHER THAN SMALL ENTITY OR SMALL ENTITY (Column 1) (Column 2) RATE(\$) RATE(\$) FOR NUMBER FILED NUMBER EXTRA FEE(\$) FEE(\$) BASIC FEE N/A N/A N/A N/A 82 (37 CFR 1.16(a), (b), or (c)) SEARCH FEE N/A N/A N/A 270 N/A (37 CFR 1.16(k), (i), or (m)) **EXAMINATION FEE** N/A N/A N/A 110 N/A (37 CFR 1.16(o), (p), or (q)) TOTAL CLAIMS 17 26 0.00 OR minus 20 = (37 CFR 1.16(i)) INDEPENDENT CLAIMS 1 110 0.00 minus 3 = (37 CFR 1.16(h)) If the specification and drawings exceed 100 APPLICATION SIZE sheets of paper, the application size fee due is \$270 (\$135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. FEE 0.00 (37 CFR 1.16(s)) 41(a)(1)(G) and 37 CFR 1.16(s). MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) 0.00 * If the difference in column 1 is less than zero, enter "0" in column 2. TOTAL 462 TOTAL APPLICATION AS AMENDED - PART II OTHER THAN SMALL ENTITY OR SMALL ENTITY (Column 1) (Column 2) (Column 3) CLAIMS HIGHEST REMAINING PRESENT ADDITIONAL ADDITIONAL NUMBER RATE(\$) RATE(\$) ⋖ AFTER AMENDMENT PREVIOUSLY EXTRA FEE(\$) FEE(\$) **AMENDMENT** PAID FOR Total Minus OR (37 CFR 1.16(i)) Independent (37 CFR 1.16(h)) Minus OR Application Size Fee (37 CFR 1.16(s)) FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) OR TOTAL TOTAL OR ADD'L FEE ADD'L FEE (Column 1) (Column 2) (Column 3) CLAIMS HIGHEST REMAINING NUMBER PRESENT ADDITIONAL ADDITIONAL RATE(\$) RATE(\$) Ш PREVIOUSLY **AFTER** EXTRA FEE(\$) FEE(\$) **AMENDMENT** PAID FOR **AMENDMENT** Minus Total OR (37 CFR 1.16(i)) Independent Minus OR (37 CFR 1.16(h)) Application Size Fee (37 CFR 1.16(s)) OR FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) TOTAL TOTAL OR ADD'L FEE ADD'L FEE * If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20" *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3"

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APPLICATION NUMBER FILING OR 371(C) DATE FIRST NAMED APPLICANT ATTY. DOCKET NO./TITLE

12/579,648 10/15/2009 Todd Lael Siler

73360-ICON2 CONFIRMATION NO. 8763

FORMALITIES LETTER

Date Mailed: 11/24/2010

Todd L. Siler Suite F2-325 4950 S. Yosemite Greenwood Village, CO 80111

NOTICE OF INCOMPLETE REPLY (NONPROVISIONAL)

Filing Date Granted

The U.S. Patent and Trademark Office has received your reply on 11/09/2010 to the Notice to File Missing Parts (Notice) mailed 05/11/2010 and it has been entered into the nonprovisional application. The reply, however, does not include the following items required in the Notice. A complete reply must be timely filed to prevent ABANDONMENT of the above-identified application. Replies should be mailed to: Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

Applicant is given **TWO MONTHS** from the date of the Notice to File Missing Parts (Notice) mailed 05/11/2010 within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

Items Required to Avoid Abandonment:

The required items noted below SHOULD be filed along with any items required above. The filing date of this nonprovisional application will be the date of receipt of the items required above.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
 - The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) 2, 5, 7, 8, 13.
 - The drawings submitted to the Office are not electronically reproducible because portions of figures 1-6 are missing and/or blurry.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

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APPLICATION NUMBER 12/579,648

FILING OR 371(C) DATE 10/15/2009

FIRST NAMED APPLICANT Todd Lael Siler

ATTY. DOCKET NO./TITLE

Gibson, Dunn & Crutcher LLP Suite 4100 1801 California St. Denver, CO 80202

CONFIRMATION NO. 8763 POWER OF ATTORNEY NOTICE



Date Mailed: 11/24/2010

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/25/2010.

• The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/skiflemariam/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



Todd L. Siler

Suite F2-325

4950 S. Yosemite

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE UNITED STATES DEPARTMENT OF COMMI United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS PO. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NUMBER

FILING OR 371(C) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO./TITLE

12/579,648

Greenwood Village, CO 80111

10/15/2009

Todd Lael Siler

CONFIRMATION NO. 8763 POA ACCEPTANCE LETTER



Date Mailed: 11/24/2010

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/25/2010.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/skiflemariam/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Todd L. Siler NOV 0 9 2010

Group Art Unit: 2123

Confirmation No.

8763

Serial No.:

12/579,648

Filed:

For:

10/15/2009

Methods and Apparatus To Enhance Cognitive Functioning And Its Manifestation Into

Physical Form and Translation Into Useful Information

Response to Notice to File Missing Parts

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir or Madam:

Applicant hereby responds to the Notice to File Missing Parts of Nonprovisional Application dated 5/11/2010.

Replacement drawings (13 pages) are submitted herewith.

Remarks begin on page 2 of this paper..

The filing receipt filed 5/11/2010 should be corrected as follows. The receipt does not correctly identify the priority claims, which should be as follows.

"This application claims priority to Application Serial No. 11/561,005 filed November 17, 2006, now abandoned, which is a continuation of 11/334,842, filed Jan. 19, 2006, now abandoned, which is a continuation of Application Serial No. 09/882,921, filed June 15, 2001, now abandoned, which is a continuation-in-part of Application Serial No. 09/164,285, filed October 1, 1998, now abandoned, which is a continuation of Application Serial No. 08/889,475, filed July 8, 1997, now abandoned, which is a continuation-in-part of Provisional Application Serial No. 60/021,498, filed July 10,1996, from which priority is claimed. These applications are incorporated by reference."

This application is a continuation (and <u>not</u> a continuation-in-part) of App. Serial No. 11/561,005, and so no new declaration should be required.

A petition for an extension of time is being filed herewith.

Respectfully submitted,

Todd L. Siler, Applicant

4950 S. Yosemite Street, Suite F2-325

Greenwood Village, CO 80111

Phone: (720) 988-8853

100960171_1.DOC

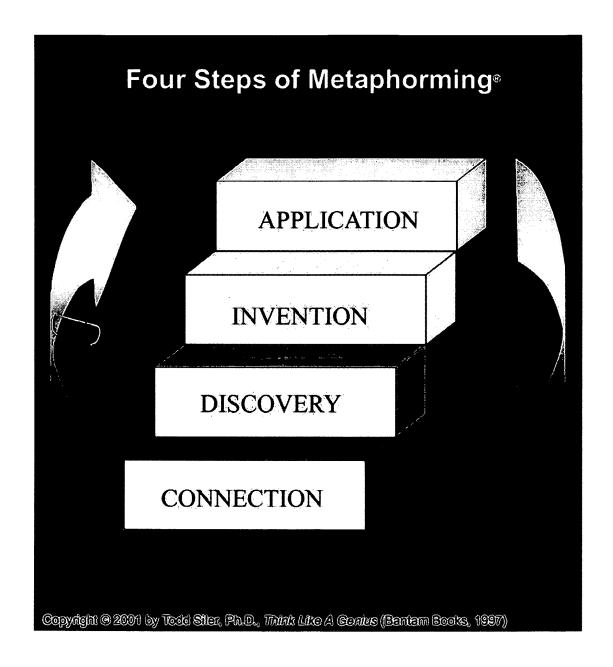


Figure 1

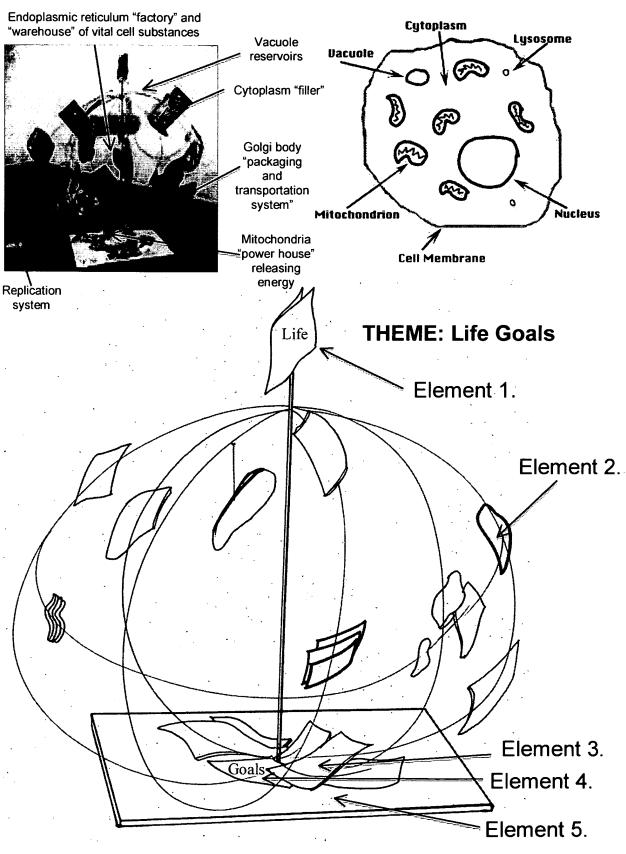
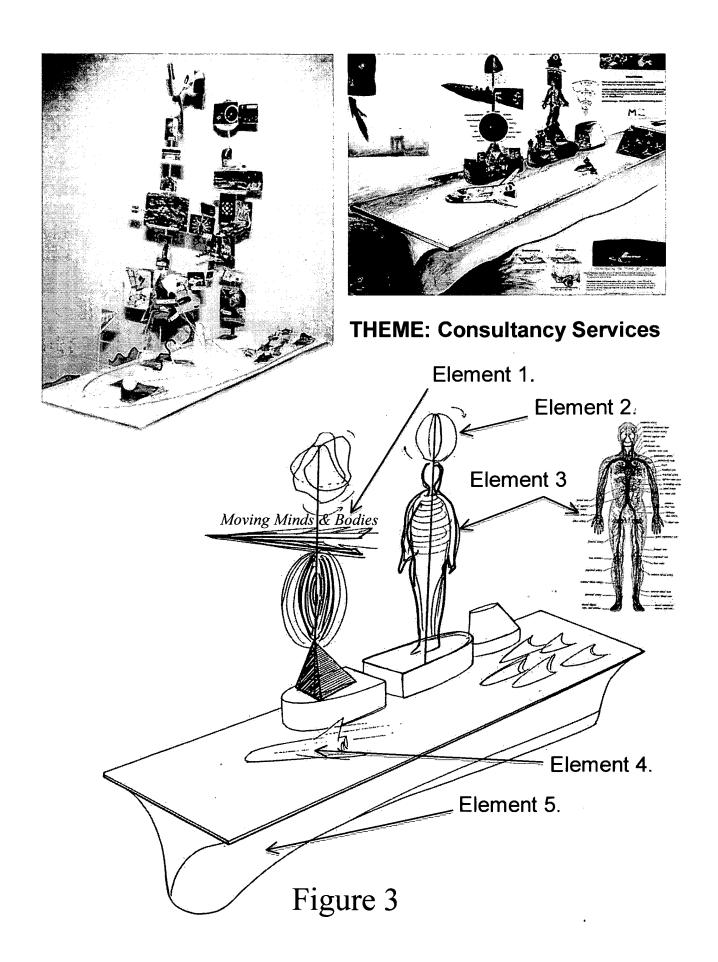
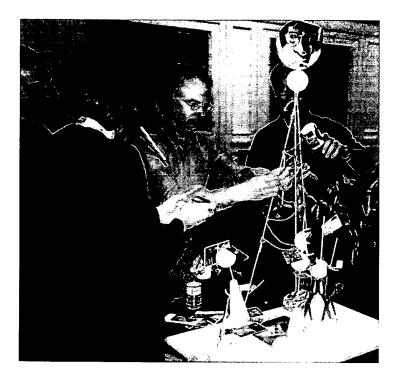


Figure 2





THEME: "Ideal" Customer

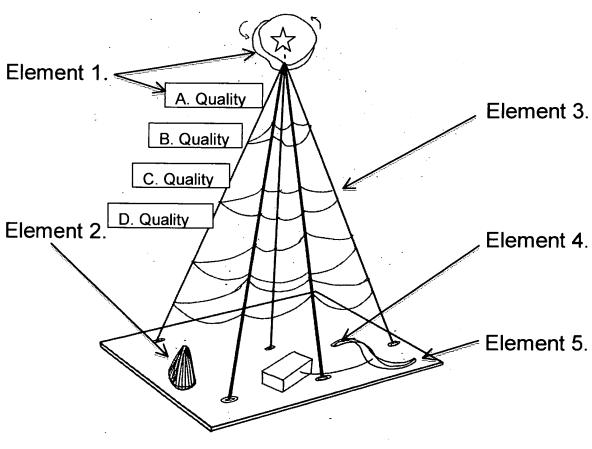


Figure 4



THEME: Evolutionary Process

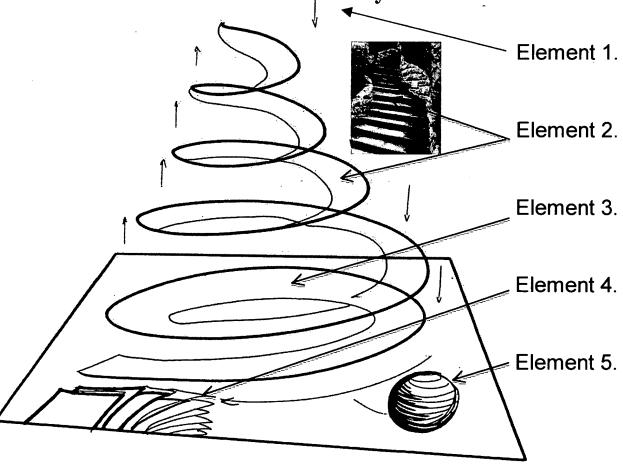
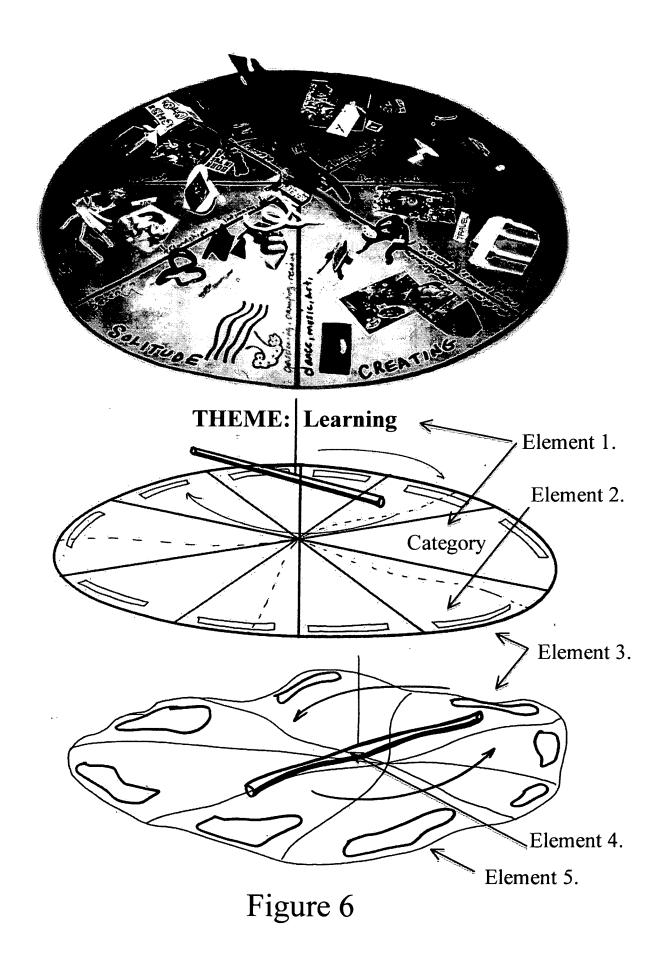
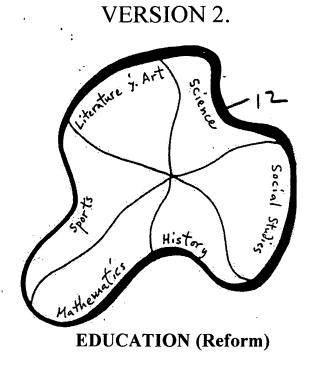
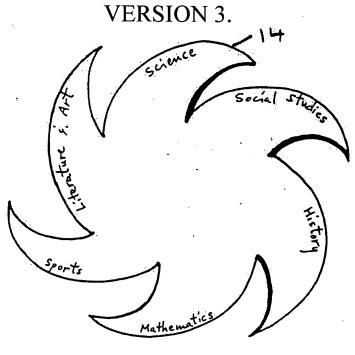


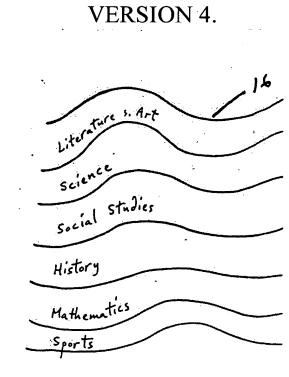
Figure 5



VERSION 1. VERSION 1. Science Social Strudies FDUCATION (Traditional) VERSION 3.







EDUCATION (Progressive)

EDUCATION (New Wave)

Figure 7

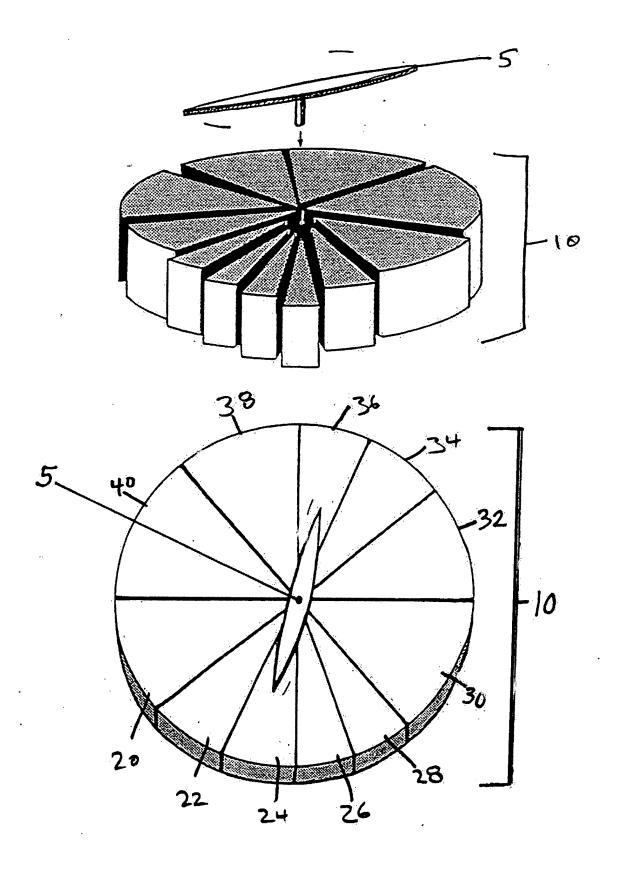


Figure 8

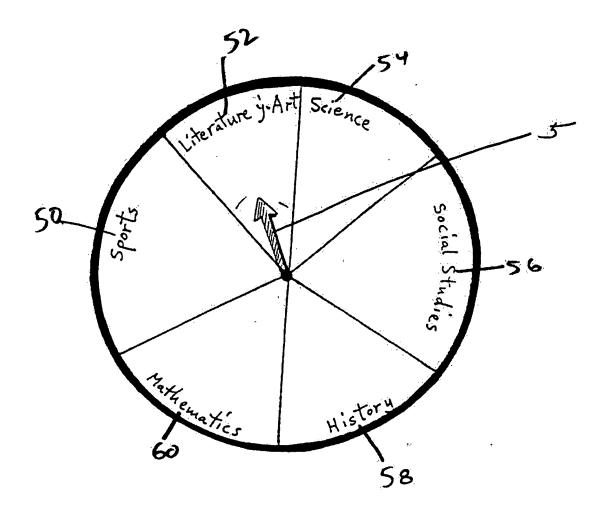


Figure 9

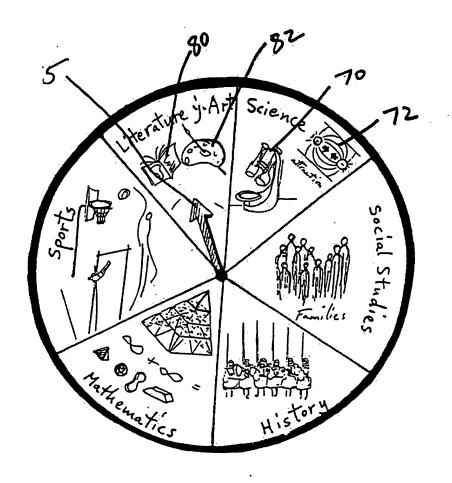


Figure 10

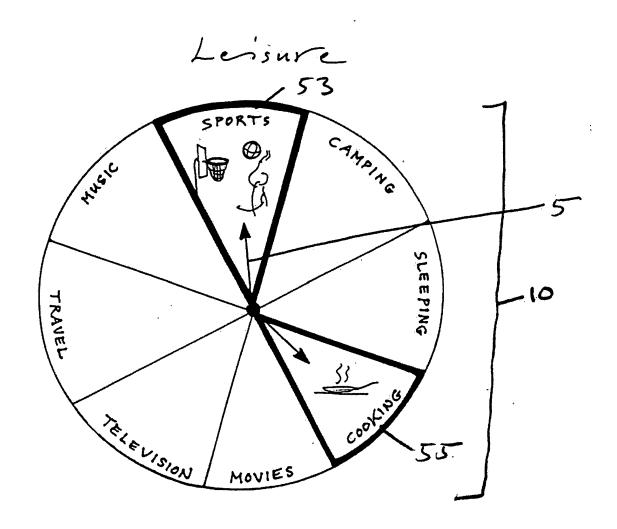


Figure 11

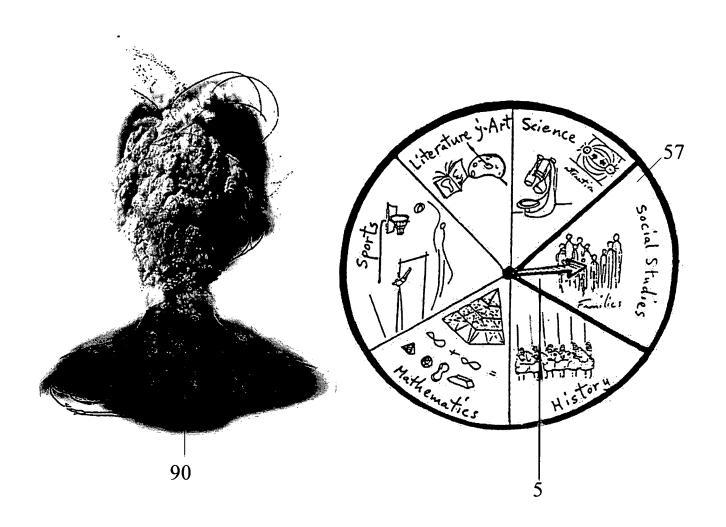
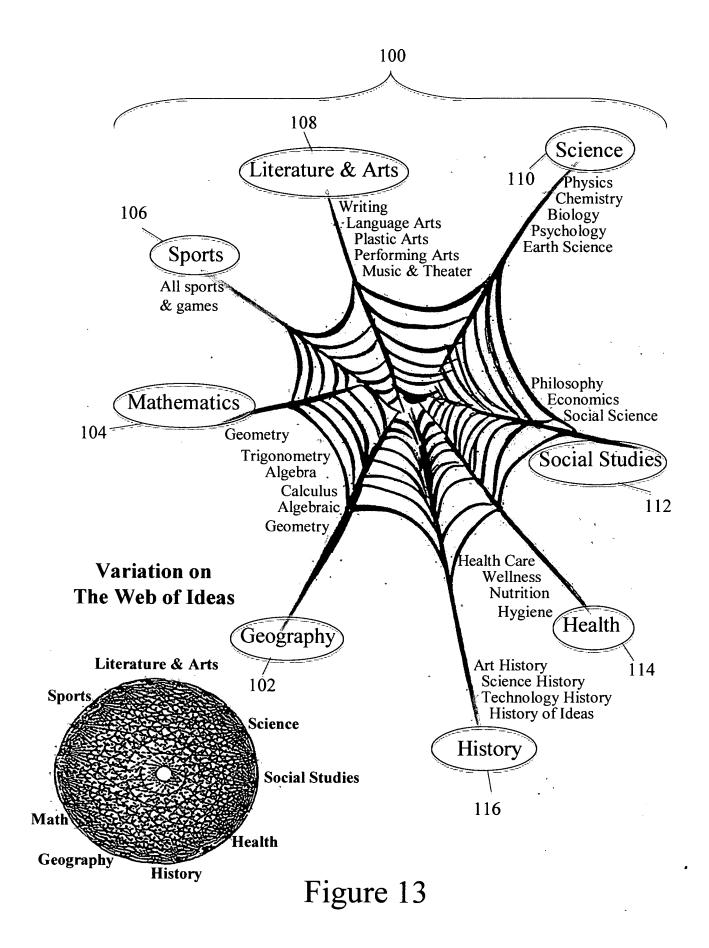


Figure 12



SCORE Placeholder Sheet for IFW Content

Application Number: 12579648 Document Date: 11/09/2010

The presence of this form in the IFW record indicates that the following document type was received in paper and is scanned and stored in the SCORE database.

Drawings

Images of the original documents are scanned in gray scale or color and stored in SCORE. Bi-tonal images are also stored in IFW. Defects visible in both IFW and SCORE are indicative of defects in the original paper documents.

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- Examiners may access SCORE content via the eDAN interface.
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Form Revision Date: December 8, 2006

PTO/SB/22 (07-09)

Approved for use through 07/31/2012. OMB 0561-0031
U.S. Patent and Trademark Office; U.S. DEPARMENT OF COMMERCE
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| PETITION | | TENSION OF TIME UNDE | | Docket Number (Op | otional) | |
|--------------------------------------|------------------------------------|---|--|--|--------------------------------------|--|
| | | FY 2009 | 73360-ICON2 | 73360-ICON2 | | |
| Application I | | the Consolidated Appropriations A 12/579,648 | Act, 2005 (H.R. 4818).) | Filed 10/15/2 | | |
| For | - | | | | | |
| ivietri | | Apparatus To Enhance Co | gnitive Functioning A | | Into Physical Form and T | |
| | 711 | | | Examiner Kurt I | | |
| This is a req application. | uest unde | r the provisions of 37 CFR 1. | 136(a) to extend the pe | riod for filing a reply in | n the above identified | |
| The request | ed extensi | on and fee are as follows (ch | eck time period desired | and enter the approp | oriate fee below): | |
| | | | <u>Fee</u> | Small Entity Fe | <u>e</u> | |
| | One mor | th (37 CFR 1.17(a)(1)) | \$130 | \$65 | \$ | |
| | Two mor | ths (37 CFR 1.17(a)(2)) | \$490 | \$245 | \$ | |
| | Three mo | onths (37 CFR 1.17(a)(3)) | \$1 110 | \$555 | \$ | |
| V | Four mor | nths (37 CFR 1.17(a)(4)) | \$1730 | \$865 | \$ <i>865</i> | |
| | Five mor | ths (37 CFR 1.17(a)(5)) | \$2350 | \$1175 | \$ | |
| Applicar | nt claims s | mall entity status. See 37 CF | | | | |
| ✓ A checl | k in the a | mount of the fee is enclose | ed . | 10/2010 CCHAU1 0000 ⁻ C:2254 | 0023 12579648 | |
| Payme | nt by cred | dit card. Form PTO-2038 is | | G:CEJ4 | 865.00 DP | |
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| I am the | ✓ ap | plicant/inventor. | | | | |
| | as | signee of record of the en Statement under 37 CFR | | | | |
| | at | corney or agent of record. | Registration Number | | | |
| | att | orney or agent under 37 (Registration number if acting un | OFR 1.34. nder 37 CFR 1.34 | | | |
| | | Signature | 72112. | Siler | Date 11/5/10 | |
| | | Todd L. Siler | | | 20-988-8853 | |
| | | Typed or printed name | | Tele | ephone Number | |
| NOTE: Signature signature is requ | es of all the in ired, see belo | ventors or assignees of record of the ow. | entire interest or their represe | entative(s) are required. Sub | omit multiple forms if more than one | |
| Total of | of | forms | are submitted. | | | |

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Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)

| | F10/30/21 (07-09) |
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| Approved for use through 07/31/20 | 12. OMB 0651-0031 |
| U.S. Patent and Trademark Office; U.S. DEPARTMEN | NT OF COMMERCE |

| PF | A | | | Application Multiper | | 12/579,6 | 548 | • | |
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| | / & nnc , | FORM | | First Named Inventor | | odd L. S | | | |
| HOV O | A Tala M | | | Art Unit | | 3711 | | | |
| . (10 | he used for all | correspondence after initial | filina | Examiner Name | K ₁ | urt Ferns | tron | 0 | |
| MALE | DEMIN | | <i>imng)</i> | Attorney Docket Number | | 3360-IC | | | |
| lot | al Number of Pa | ges in This Submission | | | | 3300 10 | O1. 12 | | |
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| | Fee Transmi | | | Drawing(s) | | | | Illowance Communication to TC I Communication to Board | |
| | Fee / | Attached | | Licensing-related Papers | | | f App | eals and Interferences | |
| | Amendment | /Reply | | Petition Petition to Convert to a | | | | Communication to TC Notice, Brief, Reply Brief) | |
| | After A | Final | | Provisional Application Power of Attorney, Revocati | : | | roprie | etary Information | |
| | L Affida | avits/declaration(s) | | Change of Correspondence | | 📙 s | Status | Letter | |
| | Extension of | Time Request | | Terminal Disclaimer | | | Other I elow) | Enclosure(s) (please Identify : | |
| | Express Aba | ndonment Request | | Request for Refund | | | | | |
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| X | Incomplete A | pplication | | | | | | | |
| | under | to Missing Parts r 37 CFR 1.52 or 1.53 | | | | | | | |
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| Firm N | ame | OIGINA | · OILL | AFFLICANI, ATT | JANET, C | JR AUEN | 4 1 | | |
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| Signati | ure | 17.10 | /_ | 1, 5, 10- | | | | | |
| Printed | l name | Todd L. Siler | | | | | | 1 | |
| Date | | 11/5/10 | | | Reg. No. | | | | |
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| Signatu | | | 7_ | 1/2.5:1 | ler | | | | |
| Typed | or printed nam | ne ToJ | dL. | , Siler | | D | ate | 11/6/10 | |
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PTO/SB/01 (04-09)

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| OP A ADECLA | | | | Attorney Docket Number | 73360-ICON2 | |
|----------------------------------|--------|----------------|--|---------------------------|-----------------|---|
| 20 PA | | ESIGN Appli | CATION | First Named Inventor | Todd L. Siler | _ |
| MON O A TAID MI | | CFR 1. | | CON | IPLETE IF KNOWN | |
| AD Committed With Initial Filing | ted OR | | Declaration Submitted After Initial Filing (surcharge (37 CFR 1.16(f)) | Application Number | 12/579,648 | |
| | | | | Filing Date | 10/15/2009 | |
| | | | | Art Unit | 3711 | |
| | | required) | Examiner Name | Kurt Fernstrom | | |

I hereby declare that: (1) Each inventor's residence, mailing address, and citizenship are as stated below next to their name; and (2) I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention titled: Methods and Apparatus To Enhance Cognitive Functioning And Its Manifestation Into Physical Form and Translation Into Useful Information (Title of the Invention) the application of which is attached hereto OR was filed on (MM/DD/YYYY) 10/15/2009 ~ as United States Application Number or PCT International Application Number 12/579,648 and was amended on (MM/DD/YYYY) (if applicable). I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment specifically referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application. Authorization To Permit Access To Application by Participating Offices If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified patent application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified patent application is filed to have access to the above-identified patent application. In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the above-identified patent application with respect to: 1) the above-identified patent application-as-filed; 2) any foreign application to which the above-identified patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application. In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

[Page 1 of 3]

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PTO/SB/01 (04-09)

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DECLARATION — Utility or Design Patent Application

| Claim of Foreign Priority | Benefits | | | | | | |
|--|----------|------------------------|-------------|--------------------------|--|--|--|
| I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed. | | | | | | | |
| Prior Foreign Application | Country | Foreign Filing Date | Priority | Certified Copy Attached? | | | |
| Number(s) | | (MM/DD/YYYY) | Not Claimed | YES NO | | | |
| | | 17 1000 (1000 1000 100 | | | | | |
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| | | | | | | | |
| Additional foreign application number(s) are listed on a supplemental priority data sheet PTO/SB/02B attached hereto. | | | | | | | |

[Page 2 of 3]

DECLARATION — Utility or Design Patent Application

| Mailing Address 4950 S. Yosemite Street, F2-325 City State Zip Country | | | | | | | |
|--|---|----------------------------|----------------|-----------------|------------------|--------------|---------------------------------------|
| Todd L. Siler Address 4950 S. Yosemite Street, F2-325 City State Colorado B0111 Country Telephone T20-988-8853 T20-988-8853 Toddsiler@alum.MIT.edu WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information in documents filed in a patent application that may contribute to identity theft. Personal information in documents filed in a patent application that may contribute to identity theft. Personal information in documents filed in a patent application that may contribute to identity theft. Personal information in documents filed in a patent application that may contribute to identity theft. Personal information in counters submitted to the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO. Petitioners/applicant is advised that the record of a patent application from the documents before submitting them to the USPTO. Petitioners/applicant is advised that the record of a patent application from the documents before submitting them to the USPTO. Petitioners/applicant is advised that the record of a patent application from the documents before submitting them to the USPTO. Petitioners/applicant is advised that the credit of an application may also be available to the public if the publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application or is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not public available. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SB/01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE-PAT-T. System new Patent Application Files. Documents not retain | correspondence to: | ssociated with | | | OR | V | |
| Address 4950 S. Yosemite Street, F2-325 City Greenwood Village Colorado State Colorado Email USA Telephone WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioner/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application of the application of an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.213(a) is made in the application or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application forms PTO-2038 submitted for payment purposes are not retained in the application (such as and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application (such as TPO/SB/I01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE.PAT-7. System name: Patent Application fless. Documents which form the record of a patent application (such as TPO/SB/I01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE.PAT-7. System name: Patent Application fless. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE.PAT-110, System name: Deposit Accounts and E | Name | | | | | | |
| Agent Street, F2-325 City Greenwood Village Country Telephone Telephone Telephone Telephone Telephone Telephone Telephone WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO. Petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioners/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application of a patent. Furthermore, the record from an abandoned application may also be available to the public the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization formation formation formation formation formation from the record of a patent application file and therefore are not bublicly available. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SBO(1) are placed into the Privacy Act system of records DEPARTIMENT OF COMMERCE.COMMERCE.PAT-T. System name: Patent Application files. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE/PAT-TM-10, System name: Patent Application files for the publication files for the application or any patent issued thereon. Name for Sole OR FIRST INVENTOR: A patent Application has been filed for this unsigned inventor or any appendix thereon. Name of Sole OR FIRST INVENTOR: A patent | | | | | | | |
| Greenwood Village Country Telephone Talephone Talep | Address | | | | | | |
| Greenwood Village Country Telephone Telep | 4950 S. Yosemite Street | t, F2-325 | | | | | |
| USA 720-988-8853 toddsiler@alum.MIT.edu WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioner/applicants should consider redacting such personal information is included in documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application of referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. Petitioner/applicant is advised that documents which form the record of a patent application such as the PTO/SBO(1) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PAT-7, System name. Patent Application Files. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE/PAT-TM-10, System name. Peposit Accounts and Electronic Funds Transfer Profiles. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements may jeopardize the validity of the application or any patent issued thereon. NAME OF SOLE OR FIRST INVENTOR: Date | City | | State | | | Zip | |
| Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioner/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is advised that adocuments which form the record of a patent application applicat | Greenwood Village | | Colora | ado | | 80111 | |
| Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.13). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SB/01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PATT., System name: Patent Application Files. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PATT., System name: Patent Application Files. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE.PATT. M-10, System name: Deposit Accounts and Electronic Funds Transfer Profiles. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements may jeopardize the validity of the application or any patent issued thereon. NAME OF SOLE OR FIRST INVENTOR: Date | Country | Teleph | none | | Email | I | |
| Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO. Petitioners/applicants should consider readacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application forms a patent. Furthermore, the record from an abandoned application may also be available to the public if the application forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. PTO-2038 submitted for payment purposes are not retained in the application forms PTO-2038 submitted for payment purposes are not retained in the application formation forms PTO-2038 submitted for payment purposes are not retained in the application formation formation formation and retained in an application formation formation file (such as the PTO-2038) are placed into the Privacy Act system of records DEPARTIMENT OF COMMERCE, COMMERCE, PAT-T, System name: Patent Application Files. I hereby declare that all statements made herein of my own knowledge | USA | 720-9 | 88-8853 | | toddsile | r@alum | .MIT.edu |
| Todd Lael Inventor's Signature Date 11-5-10 Residence: City State Country Citizenship US Mailing Address 4950 S. Yosemite Street, F2-325 City State Zip Country | contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SB/01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PAT-7, System name: Patent Application Files. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE/PAT-TM-10, System name: Deposit Accounts and Electronic Funds Transfer Profiles. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements may jeopardize the validity of the application or any patent issued thereon. | | | | | | |
| Inventor's Signature Country Citizenship | • | i arryj) | | Ivanie or Surna | ille | | |
| Residence: City State Country Citizenship Aurora Colorado USA US Mailing Address 4950 S. Yosemite Street, F2-325 City State Zip Country Greenwood Village Colorado 80111 | | | | Date | | | |
| Residence: City State Country Citizenship Aurora Colorado USA US Mailing Address 4950 S. Yosemite Street, F2-325 City State Zip Country Greenwood Village Colorado 80111 | | ., J, /e | ~ | | 10 | | |
| Mailing Address 4950 S. Yosemite Street, F2-325 City State Zip Country Greenwood Village Colorado 80111 | Residence: City | | - ' | | | Cit | tizenship |
| Mailing Address 4950 S. Yosemite Street, F2-325 City State Zip Country Greenwood Village Colorado 80111 | Aurora | Colorado | | USA | | US | · · · · · · · · · · · · · · · · · · · |
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| City State Zip Country Greenwood Village Colorado 80111 | 4950 S. Yosemite Street | , F2-325 | | | | | |
| | | | | Zip | | Co | ountry |
| Additional inventors or a legal representative are being named on the supplemental sheet(s) PTO/SB/02A or 02LR attached hereto | Greenwood Village Colorado | | | 80111 | | | |
| | Additional inventors or a lega | al representative are bein | g named on the | suppleme | ental sheet(s) P | TO/SB/02A or | 02LR attached hereto |

PTO/SB/81 (01-09)

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POWER OF ATTORNEY A NEW POWER OF ATTORNEY CHANGE OF CORRESPONDENCE ADDRESS

| Application Number | 12/579,648 |
|------------------------|--|
| Filing Date | 10/15/2009 |
| First Named Inventor | Siler |
| Title | Methods and App. to Enhance Cognitive etc. |
| Art Unit | 2123 |
| Examiner Name | N/A |
| Attorney Docket Number | |

| I hereby revoke all | I hereby revoke all previous powers of attorney given in the above-identified application. | | | | | | | |
|-------------------------------------|---|----------------------------------|--------------------------------|-----------------------|----------------------------------|-----|--|--|
| A Power of Atto | orney is submitted herewith. | | | | | | | |
| Number as my/cidentified above | I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith: | | | | | | | |
| I hereby appoint to transact all be | t Practitioner(s) named below as my/our attorner usiness in the United States Patent and Tradem | y(s) or agent(ark Office cor | s) to prosecut nected there | e the applic with: | ation identified above, and | | | |
| | Practitioner(s) Name | | Reg | istration Nu | ımber | | | |
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| Please recognize o | or change the correspondence address | for the ab | ove-identifi | ed applica | ation to: | | | |
| | sociated with the above-mentioned Customer No | umber. | | | | | | |
| OR The address ass OR | sociated with Customer Number: | | | | | | | |
| Firm or Individual Name | Todd Siler | · | | | · · · · · · | | | |
| Address | 4950 S. Yosemite Street, Suite F2-325 | | | | | | | |
| City | Greenwood Village | State | СО | | Zip 80111 | | | |
| Country | USA | | <u> </u> | | | | | |
| Telephone | | Emai | | | | | | |
| OR | Applicant/Inventor. | | | | | | | |
| | ord of the entire interest. See 37 CFR 3.71. r 37 CFR 3.73(b) (Form PTO/SB/96) submitted I | nerewith or file | ed on | | | | | |
| | SIGNATURE of Applican | t or Assigne | e of Record | | | | | |
| Signature | x 10-11 Siler | | Date | | ct. <u>Z1,</u> 2010 | | | |
| Name | Todd Siler | | Tele | ohone 🗶 | 720-988-81 | 853 | | |
| Title and Company | | | | | | | | |
| signature is required, see b | e inventors or assignees of record of the entire interes below*. | t or their repres | entative(s) are | required. Sub | omit multiple forms if more than | one | | |
| Total of1 | forms are submitted. | | | | | | | |

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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| O TRÂNSMITTAL | Filing Date | 10/15/200 | 9 | | | |
| FORM | First Named Inventor | Siler | | | | |
| OCT 2 5 2010 \$\subseteq | Art Unit | 2123 | | | | |
| the be used for all calabspondence after initial filmo) | Examiner Name | N/A | | | | |
| Total Mathematical Segmentary Submission | Attorney Docket Number | | · | | | |
| Total Titles of Fages HTTES Submission | | <u>- </u> | | | | |
| E | NCLOSURES (Check al | i that apply | 7) | | | |
| Fee Transmittal Form Fee Attached Amendment/Reply After Final Affidavits/declaration(s) Extension of Time Request Express Abandonment Request Information Disclosure Statement Certified Copy of Priority Document(s) Reply to Missing Parts/ Incomplete Application Reply to Missing Parts under 37 CFR 1.52 or 1.53 | Drawing(s) Licensing-related Papers Petition Petition to Convert to a Provisional Application Power of Attorney, Revocatic Change of Correspondence Terminal Disclaimer Request for Refund CD, Number of CD(s) Landscape Table on Cemarks | Address | Appe of Ap Appe (Appe | Allowance Communication to TC al Communication to Board peals and Interferences al Communication to TC al Notice, Brief, Reply Brief) rietary Information s Letter r Enclosure(s) (please Identify y): | | |
| SIGNATUR | E OF APPLICANT, ATTO | ORNEY, C | OR AGENT | | | |
| Firm Name | | | · | | | |
| Signature | | | | | | |
| * ~ // | Siler | | | | | |
| Printed name Todd Siler | | | | | | |
| Date × 10/21/10 | | Reg. No. | | | | |
| CERTIFICATE OF TRANSMISSION/MAILING | | | | | | |
| I hereby certify that this correspondence is being | acsimile transmitted to the USP | TO or depos | sited with the U | nited States Postal Service with | | |
| sufficient postage as first class mail in an envelop the date shown below: | e addressed to: Commissioner fo | or Patents, I | P.O. Box 1450, | Alexandria, VA 22313-1450 on | | |
| Signature Signature | 155-les | | - | | | |
| Typed or printed name | Siler | | Date | × 10/21/10 | | |

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



Suite 4100

1801 California St. Denver, CO 80202

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UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS PC. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NUMBER

FILING OR 371(C) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO./TITLE

12/579,648

Gibson, Dunn & Crutcher LLP

10/15/2009

Todd L. Siler

CONFIRMATION NO. 8763 FORMALITIES LETTER



Date Mailed: 05/11/2010

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration does not cover the newly submitted items.

 A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
 - The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) ALL .
 - The drawings submitted to the Office are not electronically reproducible because portions of figures 1-6, 12 are missing and/or blurry.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Replies should be mailed to:

Mail Stop Missing Parts Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web. https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

| /eulanday/ | | | |
|--|--------------|-----------------|-------------------|
| | | | |
| Office of Data Management, Application Assistance Unit (571) | 272-4000, or | (571) 272-4200, | or 1-888-786-0101 |



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APPLICATION NUMBER FILING OR 371(C) DATE FIRST NAMED APPLICANT ATTY. DOCKET NO./TITLE

12/579,648 10/15/2009

Todd L. Siler

Gibson, Dunn & Crutcher LLP Suite 4100 1801 California St. Denver, CO 80202 CONFIRMATION NO. 8763 WITHDRAWAL NOTICE



Date Mailed: 05/11/2010

Letter Regarding a New Notice and/or the Status of the Application

If a new notice or Filing Receipt is enclosed, applicant may disregard the previous notice mailed on 10/30/2009. The time period for reply runs from the mail date of the new notice. Within the time period for reply, applicant is required to file a reply in compliance with the requirements set forth in the new notice to avoid abandonment of the application.

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web. https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If the reply is not filed electronically via EFS-Web, the reply must be accompanied by a copy of the new notice.

If the Office previously granted a petition to withdraw the holding of abandonment or a petition to revive under 37 CFR 1.137, the status of the application has been returned to pending status.

| /eulanday/ | |
|------------|--|
| | |

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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| APPLICATION | FILING or | GRP ART | | | | |
|-------------|-------------|---------|---------------|----------------|------------|------------|
| NUMBER | 371(c) DATE | UNIT | FIL FEE REC'D | ATTY.DOCKET.NO | TOT CLAIMS | IND CLAIMS |
| 12/579 648 | 10/15/2009 | 2123 | 527 | | 17 | 1 |

CONFIRMATION NO. 8763

Gibson, Dunn & Crutcher LLP Suite 4100 1801 California St. Denver, CO 80202

OC00000041534966

FILING RECEIPT

Date Mailed: 05/11/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Todd L. Siler, Aurora, CO;

Power of Attorney:

Glenn Beaton--30995 Kendall Thiessen--45158

Domestic Priority data as claimed by applicant

This application is a CIP of 09/164,285 10/01/1998 ABN which is a CON of 08/889,475 07/08/1997 ABN which claims benefit of 60/021,498 07/10/1996

Foreign Applications

If Required, Foreign Filing License Granted: 10/26/2009

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/579,648**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

Methods and Apparatuses To Enhance Cognitive Functioning And Its Manifestation Into Physical Form and Translation Into Useful Information

Preliminary Class

703

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER Title 35, United States Code, Section 184 Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

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Alexandria, Virginia 22313-1450
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APPLICATION NUMBER

Suite 4100 1801 California St. Denver, CO 80202 FILING OR 371(C) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO/TITLE

12/579,648

Gibson, Dunn & Crutcher LLP

10/15/2009

Todd L. Siler

CONFIRMATION NO. 8763

FORMALITIES LETTER

Date Mailed: 10/30/2009

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required Items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filling a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The statutory basic filing fee is missing.
 Applicant must submit \$82 to complete the basic filing fee for a small entity.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The substitute specification must be submitted with markings and be accompanied by a clean version (without markings) as set forth in 37 CFR 1.125(c) and a statement that the substitute specification contains no new matter (see 37 CFR 1.125(b)). The specification, claims, and/or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
 - The line spacing on the specification, claims, and/or abstract is not 1½ or double spaced (see 37 CFR 1.52(b)).
- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
 - The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) 7-13.
 - The drawings submitted to the Office are not electronically reproducible because portions of figures 1-6, 12 are missing and/or blurry.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

page 1 of 2

04/23/2010 CCHAU1 00000069 12579648

 01 FC:4011
 82.00 OP

 02 FC:2111
 270.00 OP

 03 FC:2311
 110.00 OP

 04 FC:2051
 65.00 OP

• To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this notice.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is \$527 for a small entity

- \$82 Statutory basic filing fee.
- \$65 Surcharge.
- The application search fee has not been paid. Applicant must submit \$270 to complete the search fee.
- The application examination fee has not been paid. Applicant must submit \$110 to complete the examination fee for a small entity in compliance with 37 CFR 1.27.

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|--|--|-----------|---------|-----------|---------|
| • | | | | | |
| Office of Data Management, Application | on Assistance Unit (571) 272-4000 or (| (571) 272 | -4200 o | r 1-888-7 | 86_0101 |

. PTO/SB/22 (10-08) Approved for use through 10/31/2008. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARMENT OF COMMERCE

the paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless if displays a valid OMB control number. PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) Docket Number (Optional)

| PETITION FOR EXTENSION OF THIS UNDER 37 OF IX 1.130(a) | | | 72200 400N2 | | | |
|---|----------|--|-----------------------------|-------------------------------------|------------------------------|--|
| FY 2009 (Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).) | | 73360-1CON3 | | | | |
| Application Number 12/579,648 | | Filed October 15, 2009 | | | | |
| For Methods and Apparatus To Enhance Cognitive Functioning And Its Manifestation Into Physical Form | | | | | | |
| Art Uni | it 212 | 23 | | Examiner | | |
| This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application. | | | | | | |
| The requested extension and fee are as follows (check time period desired and enter the appropriate fee below): | | | | | | |
| | | | <u>Fee</u> | Small Entity Fee | | |
| | | One month (37 CFR 1.17(a)(1)) | \$130 | \$65 | \$ | |
| | | Two months (37 CFR 1.17(a)(2)) | \$490 | \$245 | \$ | |
| <u> </u> | | Three months (37 CFR 1.17(a)(3)) | \$1110 | \$555 | \$ | |
| | ✓ | Four months (37 CFR 1.17(a)(4)) | \$1730 | \$865 | \$ <u>865.00</u> | |
| | | Five months (37 CFR 1.17(a)(5)) | \$2350 | \$1175 | \$ | |
| Applicant claims small entity status. See 37 CFR 1.27. | | | | | | |
| A check in the amount of the fee is enclosed. | | | | | | |
| ☐ Pa | ayme | ent by credit card. Form PTO-2038 is at | tached. | | · | |
| П П | he Di | rector has already been authorized to o | charge fees in this | application to a Deposi | t Account. | |
| The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 500792 | | | | | | |
| WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. | | | | | | |
| I am the applicant/inventor. | | | | | | |
| assignee of record of the entire interest. See 37 CFR 3.71. | | | | | | |
| Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96). attorney or agent of record. Registration Number 40866 | | | | | | |
| | | | | | | |
| attorney or agent under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 | | | | | | |
| | | Fiest F Wan | | April 20, 2010 | | |
| P | eter F | Signature F. Weinberg | X | (303)298-5901 | pate | |
| Typed or printed name | | Telephone Number | | | | |
| NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below. | | | | | | |
| Total of forms are submitted. | | | | | | |
| This colled | ction of | information is required by 37 CFR 1 136(a). The inform | ation is required to obtain | or retain a benefit by the nublic w | which is to file (and by the | |

USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.134 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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| , i e | | | | Approved | for use t | PTO/SB/21 (11-07) hrough 11/30/2007. OMB 0651-0031 |
| E/ | | U.S | S. Patent and Tr | rademark (| Office: U | .S. DEPARTMENT OF COMMERCE |
| Under the Paperwork Reduction Act of 199 | o, no persons | Application Number | l. | | mess it t | displays a valid OMB CONTO Humber. |
| ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ | | Eller Date | 12/579,648 | | | · · · · · · · · · · · · · · · · · · · |
| TRANSMITTAL | | Filing Date | October 15 | 5, 2009 | | |
| FORM | 1 | First Named Inventor | Todd L. Sil | ler | | |
| | | Art Unit | 2123 | | | |
| | | Examiner Name | Golla | | | |
| (to be used for all correspondence after initia | l filing) | Attorney Docket Number | 7 70000 400 | | | |
| Total Number of Pages in This Submission | | , | 73360-1C0 | JN3 | | |
| ENCLOSURES (Check all that apply) | | | | | | |
| Fee Transmittal Form | ✓ D | rawing(s) | | | After A | llowance Communication to TC |
| Fee Attached | Li | icensing-related Papers | | | | Communication to Board eals and Interferences |
| Amendment/Reply | | etition | | Appeal Communication to T (Appeal Notice, Brief, Reply B | | |
| After Final | | Petition to Convert to a Provisional Application Proprietary I | | | etary Information | |
| | P | ower of Attorney, Revoca | | | Status | Letter |
| Affidavits/declaration(s) | ᄖ | Change of Correspondence | e Address | H | | Enclosure(s) (please Identify |
| Extension of Time Request | ╵Ш | erminal Disclaimer | | | below) | : |
| Express Abandonment Request | R | Request for Refund | | | | ce to File Missing Parts 32788 Amt. \$527.00 |
| | | CD, Number of CD(s) | | Checl | k No. 9 | 32790 Amt. \$865.00 |
| Information Disclosure Statement | 15 | ¬ | | Retur | n Posto | ard Receipt |
| | | Landscape Table on | CD. | | | |
| Certified Copy of Priority Document(s) | Remark | ks | | | | |
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| Reply to Missing Parts/ Incomplete Application | | , | | | | • |
| Reply to Missing Parts | | | | | | |
| ▼ under 37 CFR 1.52 or 1.53 | | | | | | |
| | | | | | | |
| | ATURE O | F APPLICANT, ATT | ORNEY, C | R AGE | ENT | |
| Firm Name Gibson, Dunn & Crutche | r LLP | | | | | |
| Signature | - W. | emly | | | | |
| Printed name Peter F. Weinberg | | 0 | . | | | |
| Date April 20, 2010 | | | Reg. No. | 40866 | | |
| | | | | | | |
| CERTIFICATE OF TRANSMISSION/MAILING | | | | | | |
| I hereby certify that this correspondence is sufficient postage as first class mail in an e the date shown below: | being facsim nvelope add | nile transmitted to the US dressed to: Commissioner | PTO or depos for Patents, I | sited with P.O. Box | the Un 1450, / | ited States Postal Service with Alexandria, VA 22313-1450 on |
| Signature Signature | 1 V | 7 | | | | |
| Typed or printed name Clifford D. Cory | 2 | | | | Date | April 20, 2010 |

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

APR 2 3 2010

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| In re the Application of: | |) | Group Art Unit: | | 2123 | |
|---------------------------|---------------|-------------|--------------------|-------|-------------|--|
| | Todd L. Siler |)) | Examiner: | Golla | | |
| Serial No.: | 12/579,648 |))) | Attorney File No.: | | 73360-1CON3 | |
| Filed: | 10/15/2009 |) | | | | |

For:

Methods and Apparatus To Enhance Cognitive Functioning And Its Manifestation Into

Physical Form and Translation Into Useful Information

Response to Notice to File Missing Parts

Commissioner for Patents P.O. Box 1450 *Alexandria, VA 22313-1450

Dear Sir or Madam:

In response to the Notice to File Missing Parts of Nonprovisional Application dated 10/30/2009, applicant submits missing items identified in notice:

Substitute Specification (claims (3 pages);

Replacement drawings (13 pages); and

Filing Fees and surcharge.

No new matter has been added. No markings are shown in the substitute specification because the only changes are to the line spacing, and only the parts of the specification that were not $1\frac{1}{2}$ or double spaced are enclosed herewith.

Respectfully submitted,

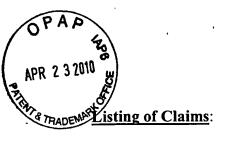
Peter F. Weinberg Reg. #40866

1801 California Street, Suite 4200

Denver, CO 80202

Telephone: 303-298-5901

April 20, 2010



1. A method for enhancing the cognitive, affective, expressive, and communicative functions of a human, regarding a subject, comprising the following steps:

constructing one or more physical or virtual symbolic models relating to the subject, wherein each model has a number of elements;

connecting at least some of the model elements to each other to form or make connections;

transforming at least some of the model elements as the human sees fit, in order to form new connections, and to discover new meanings and purposes for the model elements;

discovering aspects of the model elements and connections in a self-guided, inquiry-based way, wherein the discovering step involves examining and researching the model elements and connections, and analyzing and interpreting the connections and model elements, wherein the analyzing and interpreting is prompted at least in part by questions relating to the model elements and connections, and wherein the human can pose other questions that are personally meaningful and useful for the human to explore in relation to the model, and to explore in relation to a group or team of humans who are using the method collaboratively and posing their collective questions toward some expressed purpose or objective;

developing a plan or goal relating to the subject;

and applying the plan regarding the subject to achieve a goal.

- 2. The method of claim 1, wherein the developing a plan step entails making a second model, wherein the second model incorporates the results of the discovering step and a goal-related plan of implementation.
- 3. The method of claim 1, further comprising applying the method iteratively.
- 4. The method of claim 1, wherein the model uses physical materials in the nature of marking pens, paints, magazines, photographs, collage elements, wooden dowels, clay, drawings, tape, other common building materials, or personal, one-of-a-kind, hand-made materials.

- 5. The method of claim 1, wherein the model is delivered by electronic means via media technology, which encompasses present and future technological innovations used for human communications.
- 6. The method of claim 1, wherein at least one of the one or more physical or virtual symbolic models are delivered to the human as, at least, partially ready-made models.
- 7. The method of claim 6, wherein the at least partially ready-made models are delivered by physical or electronic means using multi-media tools.
- 8. The method of claim 6, wherein the ready-made models are delivered to the human to be further transformed and "re-purposed" by the human or group of humans working collaboratively.
- 9. The method of claim 6, wherein the ready-made models are delivered to the human in randomly generated forms—re-constructed or re-arranged electronically from their existing elements—in order to spark creativity and inspire innovation.
- 10. The method of claim 1, wherein the connecting step involves prompting the human with questions relating to the elements and to the subject, as well as prompting the group or team of humans who are collaboratively using the invention to achieve some goal or objective.
- 11. The method of claim 10, wherein the prompting relates to (1) an appearance of the model regarding the model's form, color, textures, and content, and (2) concepts of the model regarding whether its elements are representational, figurative, abstract, or combinations of both representational and abstract elements.
- 12. The method of claim 1, wherein the discovering step researching includes using the library, Internet, observations, interviews and or direct contact with an expert relating to the subject.
- 13. The method of claim 1, wherein the discovering step questions relate to comparing, contrasting or connecting an element in the model to another element in the model, or comparing elements of the model to other symbolic models.

- 14. The method of claim 1, wherein the discovering step questions relate to determining whether the model has a top, bottom, center, border, or boundary, and if so, if determining the effect of moving another element to the top, bottom, center, border, or boundary of the model, whereby the meanings, significance and/or implications of the model are changed.
- 15. The method of claim 1, wherein the step of developing a plan or goal relating to the subject includes constructing and deconstructing the plan, modifying it in whole or in part, and comparing it to a wide range of plans and goals visualized in and embodied by the ready-made models.
- 16. The method of claim 1, wherein the step of applying a plan or goal relating to the subject includes physically and/or virtually experimenting with the models that are created by each human, or group of humans, and that are delivered to the human(s) as ready-made models to be further manipulated, transformed, and experimented with to achieve a goal.
- 17. The method of claim 16 wherein the goal has a tangible outcome and a measurable result.

1CON3 claims.doc

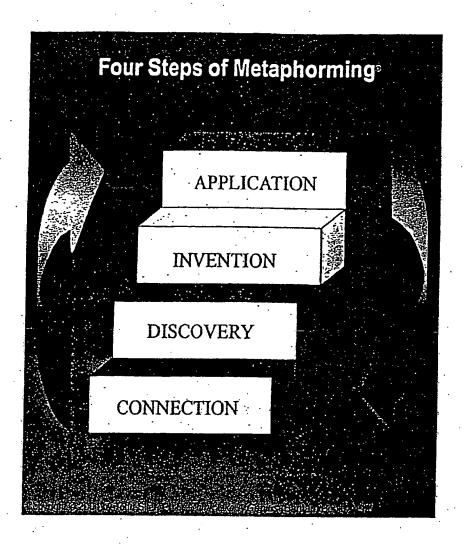
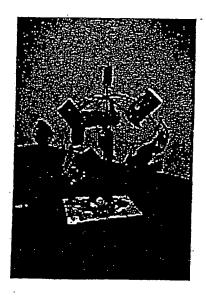


Figure 1



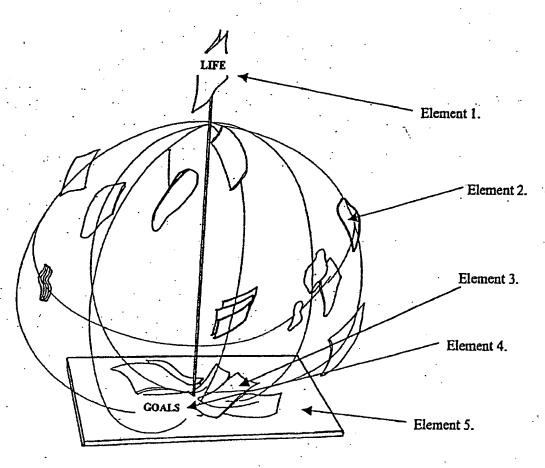
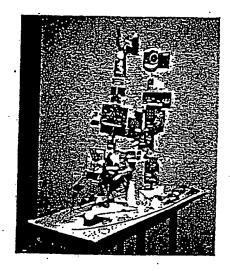
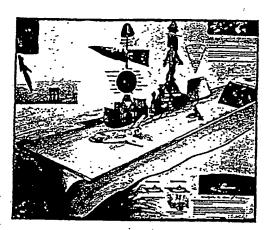


Figure 2





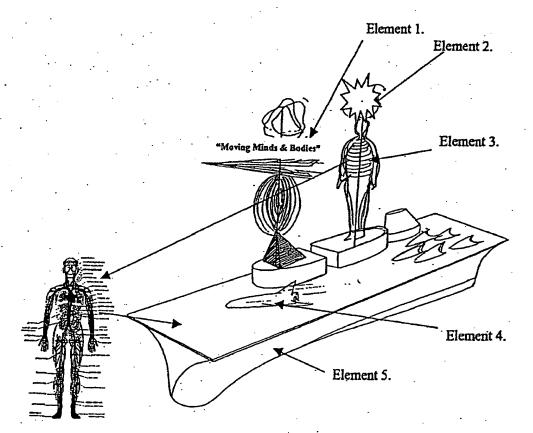


Figure 3



Figure 11a.

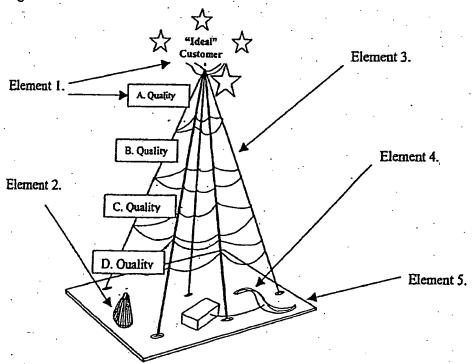


Figure 4

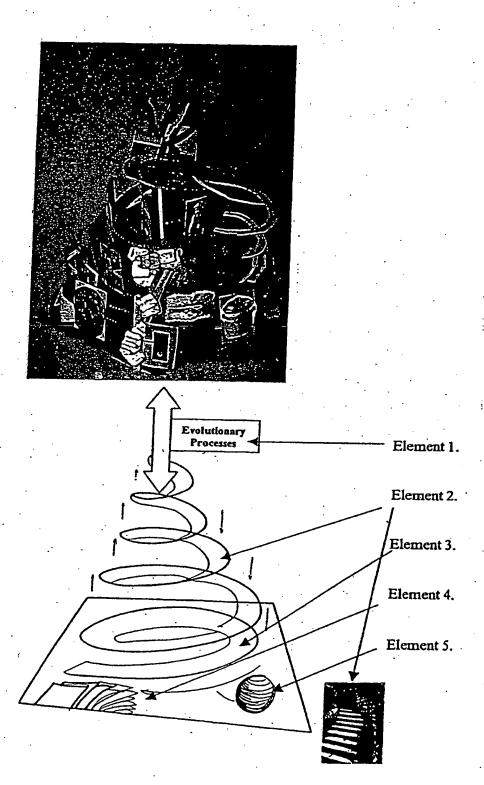
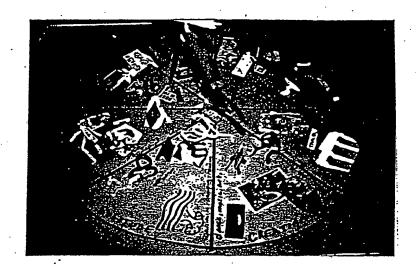


Figure 5



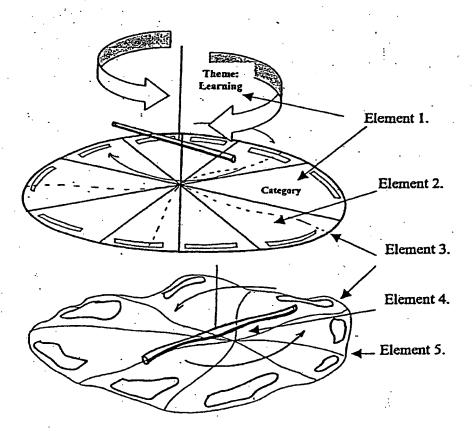
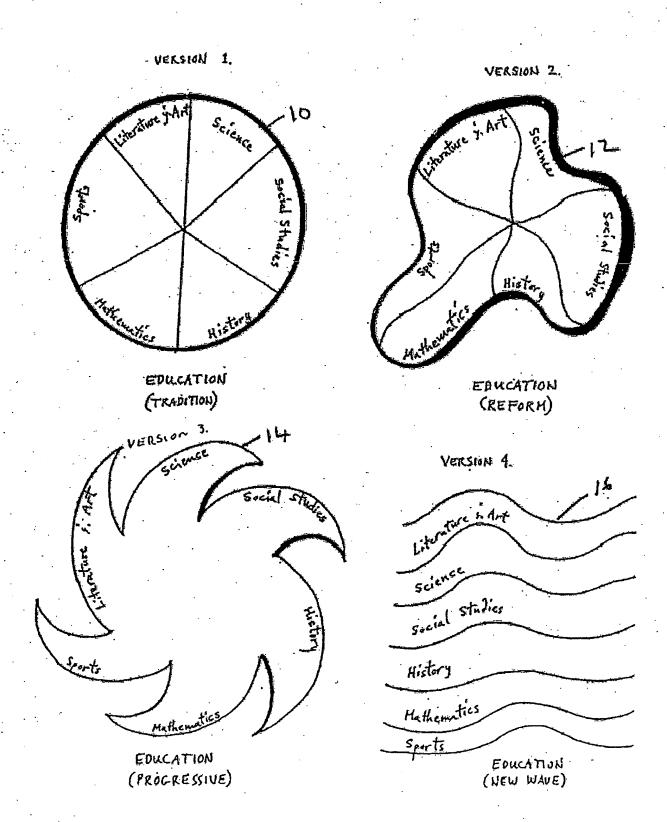
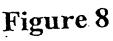
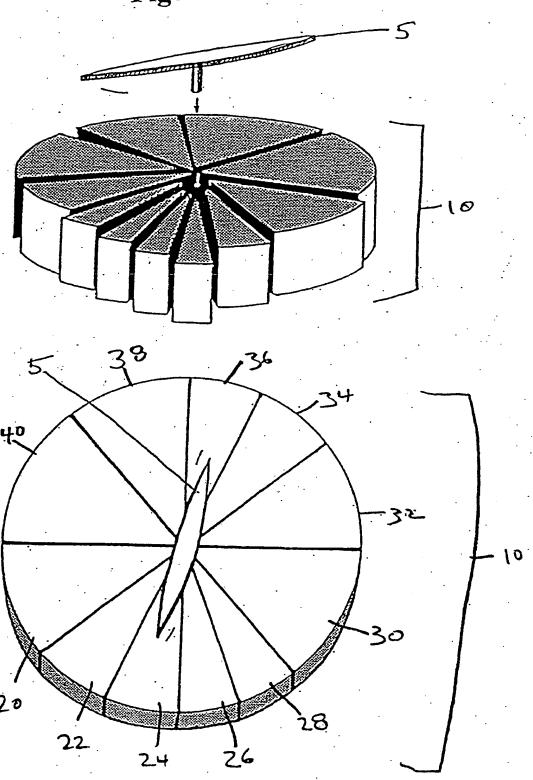


Figure 6

Figure 7







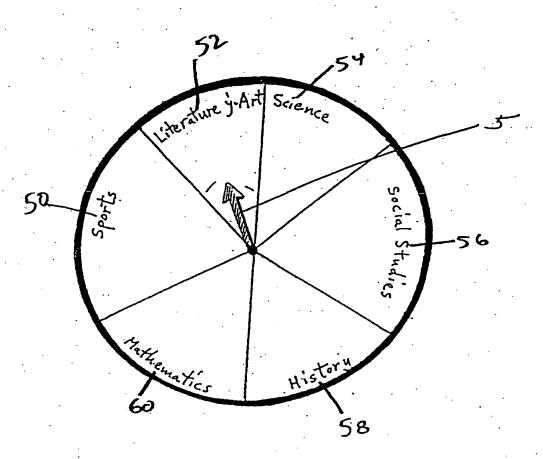


Figure 9

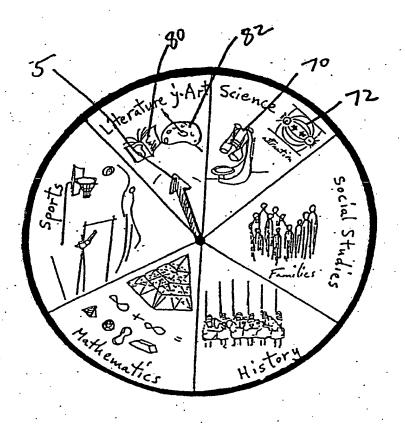


Figure 10

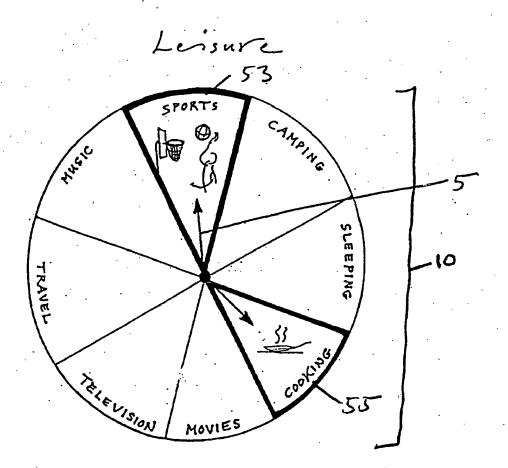


Figure 11

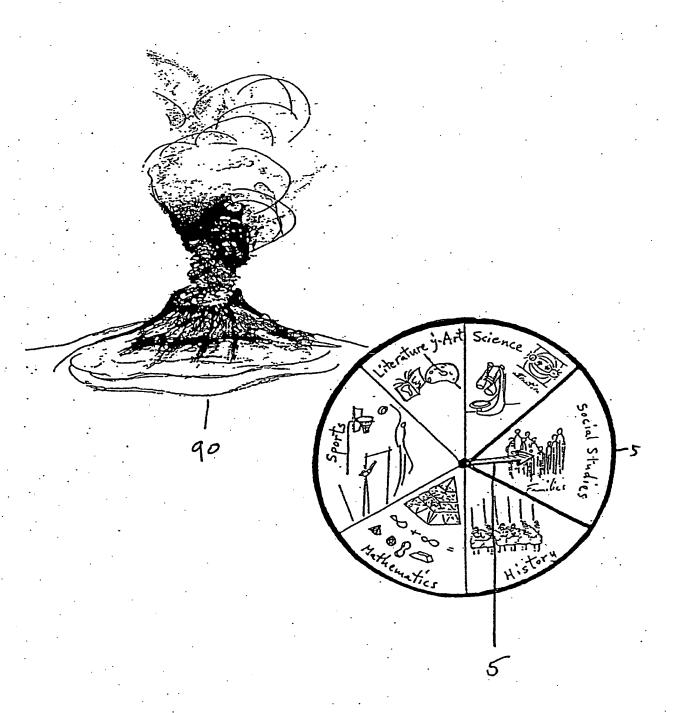
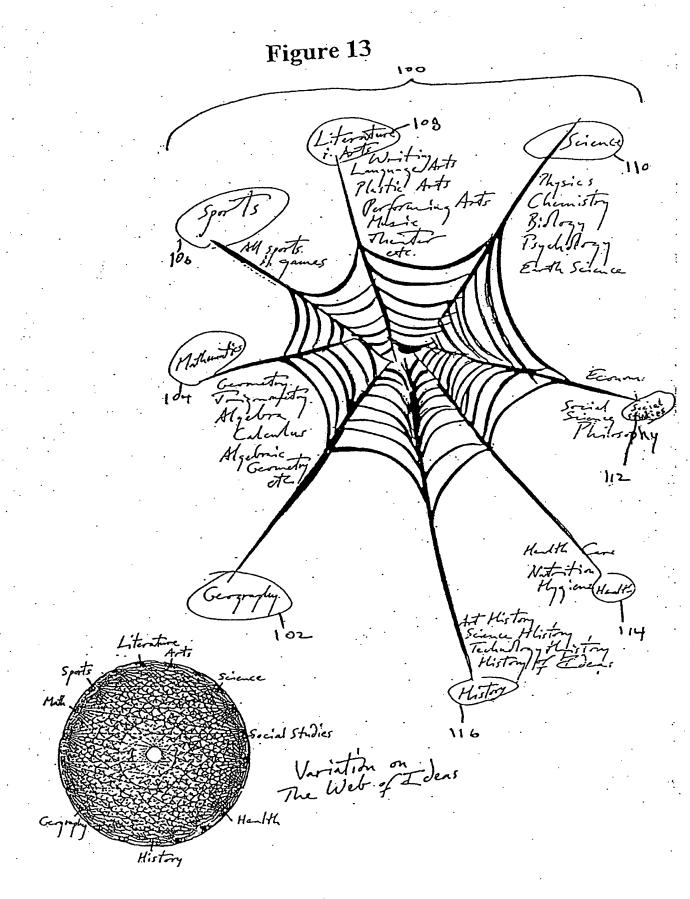


Figure 12



SCORE Placeholder Sheet for IFW Content

Application Number: 12579648 Document Date: 04/23/2010

The presence of this form in the IFW record indicates that the following document type was received in paper and is scanned and stored in the SCORE database.

Drawings

Images of the original documents are scanned in gray scale or color and stored in SCORE. Bi-tonal images are also stored in IFW. Defects visible in both IFW and SCORE are indicative of defects in the original paper documents.

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- Other USPTO employees can bookmark the current SCORE URL (http://es/ScoreAccessWeb/).
- External customers may access SCORE content via the Public and Private PAIR interfaces.

Form Revision Date: December 8, 2006



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APPLICATION NUMBER FILING OR 371(C) DATE FIRST NAMED APPLICANT ATTY. DOCKET NO./TITLE

12/579,648 10/15/2009 Todd L. Siler

Gibson, Dunn & Crutcher LLP Suite 4100 1801 California St. Denver, CO 80202 CONFIRMATION NO. 8763 FORMALITIES LETTER



Date Mailed: 10/30/2009

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

• The statutory basic filing fee is missing.

Applicant must submit \$82 to complete the basic filing fee for a small entity.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The substitute specification must be submitted with markings and be accompanied by a clean version (without markings) as set forth in 37 CFR 1.125(c) and a statement that the substitute specification contains no new matter (see 37 CFR 1.125(b)). The specification, claims, and/or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
 - The line spacing on the specification, claims, and/or abstract is not 1½ or double spaced (see 37 CFR 1.52(b)).
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• To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this notice.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is \$527 for a small entity

- \$82 Statutory basic filing fee.
- \$65 Surcharge.
- The application search fee has not been paid. Applicant must submit \$270 to complete the search fee.
- The application examination fee has not been paid. Applicant must submit \$110 to complete the examination fee for a small entity in compliance with 37 CFR 1.27.

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If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

| | /eggolla/ | | | | | | |
|------------------|------------|-----------------------|--------------------------|--------------------------|-------------|----------------|-------------|
| Office of Data N | Management | Application Assistanc | •e I Init (571) 272- | 4000 or (57 [.] | 1) 272-4200 | or 1-888-786-1 | 0101 |



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| APPLICATION | FILING or | GRP ART | | | | |
|-------------|-------------|---------|---------------|----------------|------------|------------|
| NUMBER | 371(c) DATE | UNIT | FIL FEE REC'D | ATTY.DOCKET.NO | TOT CLAIMS | IND CLAIMS |
| 12/579 648 | 10/15/2009 | 2123 | 0.00 | | 17 | 1 |

CONFIRMATION NO. 8763

Gibson, Dunn & Crutcher LLP Suite 4100 1801 California St. Denver, CO 80202

FILING RECEIPT

Date Mailed: 10/30/2009

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Todd L. Siler, Aurora, CO;

Power of Attorney:

Glenn Beaton--30995 Kendall Thiessen--45158

Domestic Priority data as claimed by applicant

This application is a CIP of 09/164,285 10/01/1998 ABN which is a CON of 08/889,475 07/08/1997 ABN which claims benefit of 60/021,498 07/10/1996

Foreign Applications

If Required, Foreign Filing License Granted: 10/26/2009

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/579,648**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

Methods and Apparatuses To Enhance Cognitive Functioning And Its Manifestation Into Physical Form and Translation Into Useful Information

Preliminary Class

703

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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UNITED STATES DEPARTMENT OF COMMI United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS PO. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov UNITED STATES DEPARTMENT OF COMMERCE

APPLICATION NUMBER 12/579,648

FILING OR 371(C) DATE 10/15/2009

FIRST NAMED APPLICANT Todd L. Siler

ATTY. DOCKET NO./TITLE 73360-1CON3

CONFIRMATION NO. 8763

Gibson, Dunn & Crutcher LLP

1801 California St., Suite 4100 Denver, CO 80202

POA ACCEPTANCE LETTER

OC00000038470774

Date Mailed: 10/30/2009

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/15/2009.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

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Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| In re the Application of: | |) Group Art Unit: | | N/A | |
|---------------------------|--|-------------------|--------------------|-------------|--|
| | Todd L. Siler |) | Examiner: | N/A | |
| Serial No.: | N/A |) | Attorney File No.: | 73360-1CON3 | |
| Filed: | N/A |) | | | |
| | METHODS AND APPARA ITS MANIFESTATION INTO UL INFORMATION | | | | |

PRELIMINARY AMENDMENT UNDER 37 CFR § 1.115

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

INTRODUCTORY COMMENTS:

Please amend the above identified application as follows:

Amendments to the Specification are reflected on page 2 of this paper.

IN THE SPECIFICATION:

On page 1 of the specification, please replace the first paragraph with the following paragraph:

This application claims priority to Application Serial No. 11/561,005, filed on November 17, 2006, now pending, which is a continuation of Application Serial No. 11/334,842, filed Jan. 19, 2006, now abandoned, which is a continuation of Application Serial No. 09/882,921, filed June 15, 2001, now abandoned, which is a continuation-in-part of Application Serial No. 09/164,285, filed October 1, 1998, now abandoned, which is a continuation of Application Serial No. 08/889,475, filed July 8, 1997, now abandoned, which is a continuation-in-part of Provisional Application Serial No. 60/021,498, filed July 10,1996, from which priority is claimed. These applications are incorporated by reference.

CONCLUSION:

It is respectfully submitted that the application as amended is now in a condition for examination on the merits, and such action on the merits is earnestly solicited.

Respectfully submitted,

Gibson, Dunn & Crutcher LLP

By:/pfw/
Peter F. Weinberg
Registration No. 40,866
Gibson, Dunn & Crutcher LLP
1801 California St., Suite 4100
Denver, CO 80202-2641
Phone: (303) 298-5901

Fax: (303) 313-2827

Date: October 15, 2009

PSI Prelim 09.DOC

Listing of Claims:

1. A method for enhancing the cognitive, affective, expressive, and communicative functions of a human, regarding a subject, comprising the following steps:

constructing one or more physical or virtual symbolic models relating to the subject, wherein each model has a number of elements;

connecting at least some of the model elements to each other to form or make connections;

transforming at least some of the model elements as the human sees fit, in order to form new connections, and to discover new meanings and purposes for the model elements;

discovering aspects of the model elements and connections in a self-guided, inquiry-based way, wherein the discovering step involves examining and researching the model elements and connections, and analyzing and interpreting the connections and model elements, wherein the analyzing and interpreting is prompted at least in part by questions relating to the model elements and connections, and wherein the human can pose other questions that are personally meaningful and useful for the human to explore in relation to the model, and to explore in relation to a group or team of humans who are using the method collaboratively and posing their collective questions toward some expressed purpose or objective;

developing a plan or goal relating to the subject;

and applying the plan regarding the subject to achieve a goal.

- 2. The method of claim 1, wherein the developing a plan step entails making a second model, wherein the second model incorporates the results of the discovering step and a goal-related plan of implementation.
- 3. The method of claim 1, further comprising applying the method iteratively.
- 4. The method of claim 1, wherein the model uses physical materials in the nature of marking pens, paints, magazines, photographs, collage elements, wooden dowels, clay, drawings, tape, other common building materials, or personal, one-of-a-kind, hand-made materials.
- 5. The method of claim 1, wherein the model is delivered by electronic means via media technology, which encompasses present and future technological innovations used for human communications.
- 6. The method of claim 1, wherein at least one of the one or more physical or virtual symbolic models are delivered to the human as, at least, partially ready-made models.
- 7. The method of claim 6, wherein the at least partially ready-made models are delivered by physical or electronic means using multi-media tools.

- 8. The method of claim 6, wherein the ready-made models are delivered to the human to be further transformed and "re-purposed" by the human or group of humans working collaboratively.
- 9. The method of claim 6, wherein the ready-made models are delivered to the human in randomly generated forms—re-constructed or re-arranged electronically from their existing elements—in order to spark creativity and inspire innovation.
- 10. The method of claim 1, wherein the connecting step involves prompting the human with questions relating to the elements and to the subject, as well as prompting the group or team of humans who are collaboratively using the invention to achieve some goal or objective.
- 11. The method of claim 10, wherein the prompting relates to (1) an appearance of the model regarding the model's form, color, textures, and content, and (2) concepts of the model regarding whether its elements are representational, figurative, abstract, or combinations of both representational and abstract elements.
- 12. The method of claim 1, wherein the discovering step researching includes using the library, Internet, observations, interviews and or direct contact with an expert relating to the subject.
- 13. The method of claim 1, wherein the discovering step questions relate to comparing, contrasting or connecting an element in the model to another element in the model, or comparing elements of the model to other symbolic models.
- 14. The method of claim 1, wherein the discovering step questions relate to determining whether the model has a top, bottom, center, border, or boundary, and if so, if determining the effect of moving another element to the top, bottom, center, border, or boundary of the model, whereby the meanings, significance and/or implications of the model are changed.
- 15. The method of claim 1, wherein the step of developing a plan or goal relating to the subject includes constructing and deconstructing the plan, modifying it in whole or in part, and comparing it to a wide range of plans and goals visualized in and embodied by the ready-made models.
- 16. The method of claim 1, wherein the step of applying a plan or goal relating to the subject includes physically and/or virtually experimenting with the models that are created by each human, or group of humans, and that are delivered to the human(s) as ready-made models to be further manipulated, transformed, and experimented with to achieve a goal.
- 17. The method of claim 16 wherein the goal has a tangible outcome and a measurable result.

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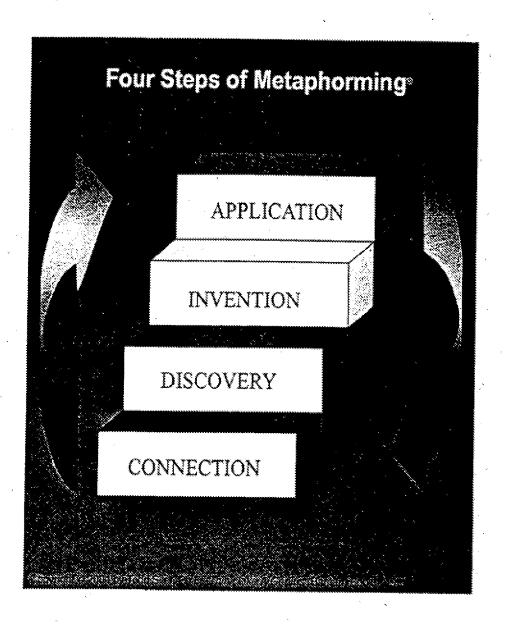
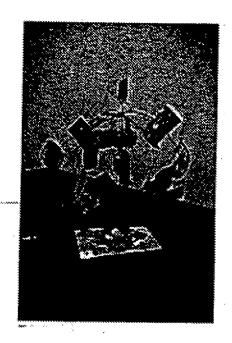


Figure 1



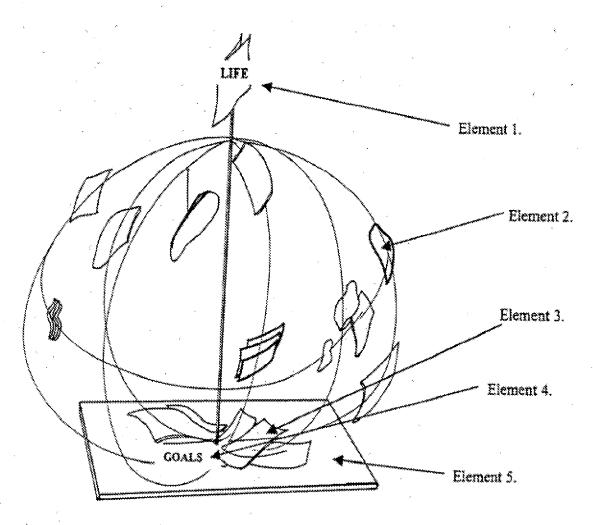
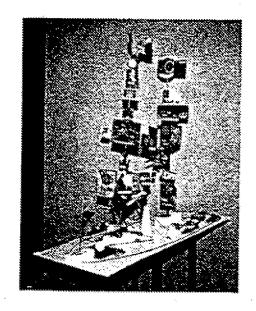
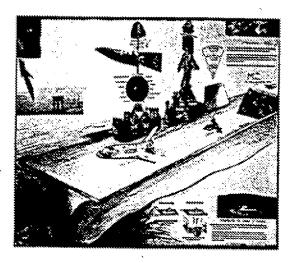


Figure 2





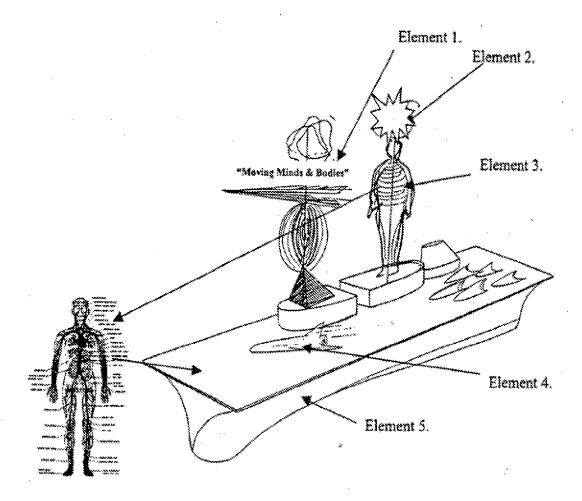


Figure 3



Figure 11a.

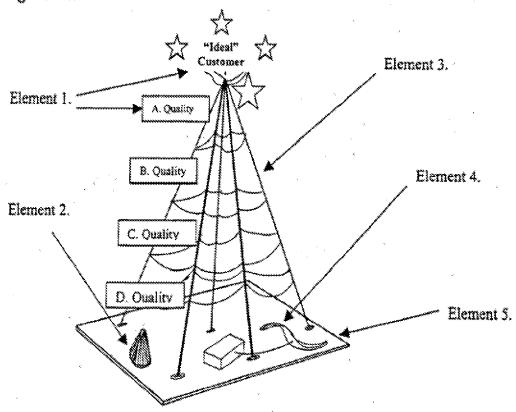
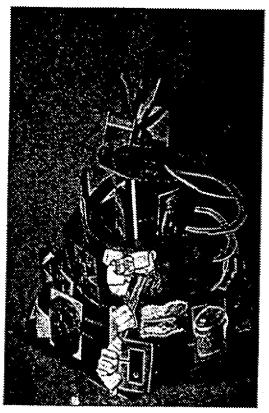


Figure 4



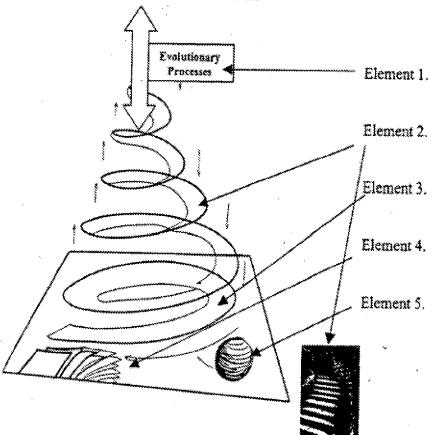
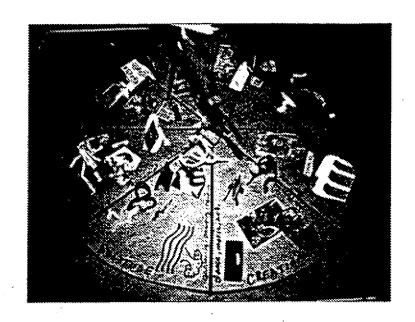


Figure 5



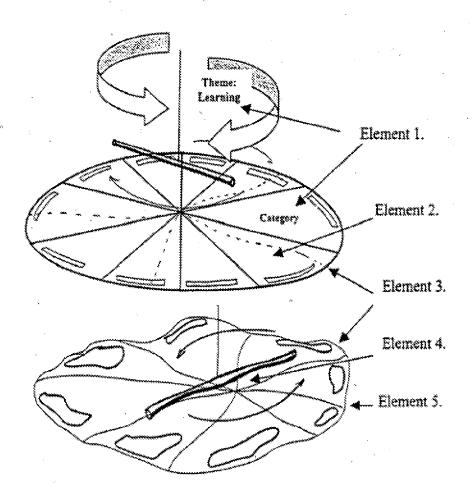


Figure 6

Figure 7

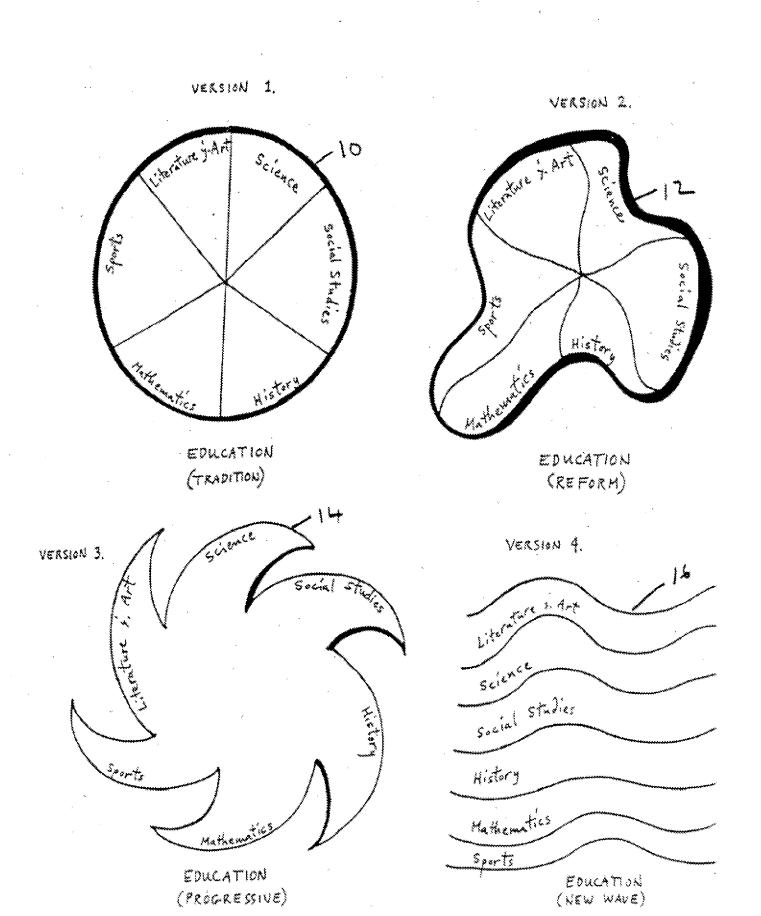
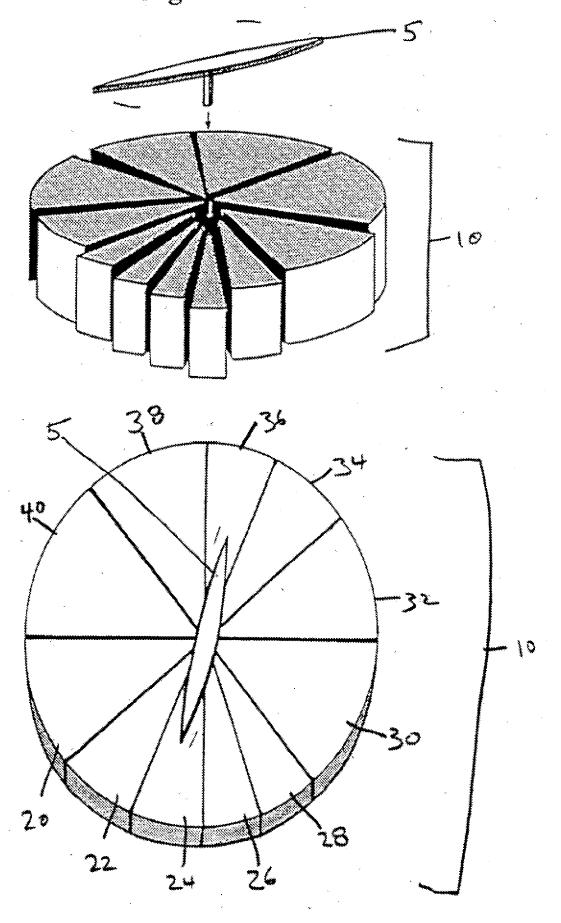


Figure 8



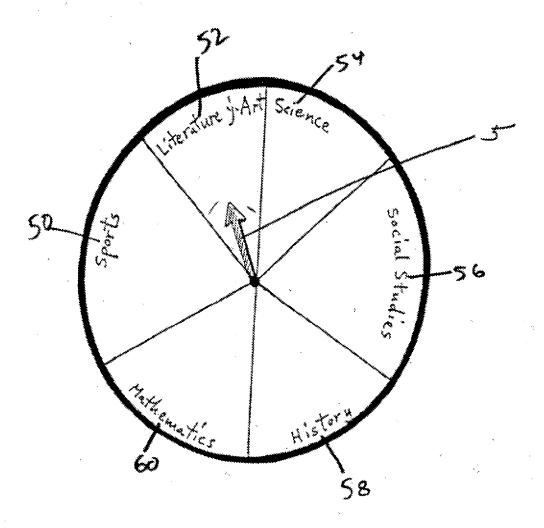


Figure 9

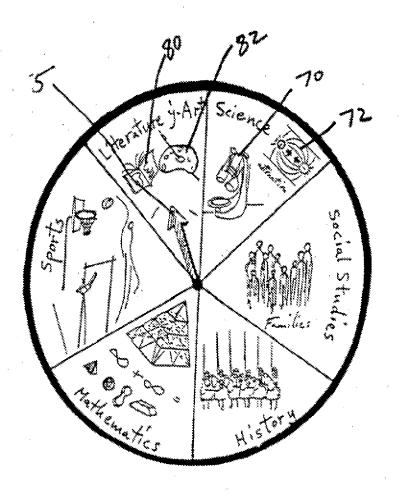


Figure 10

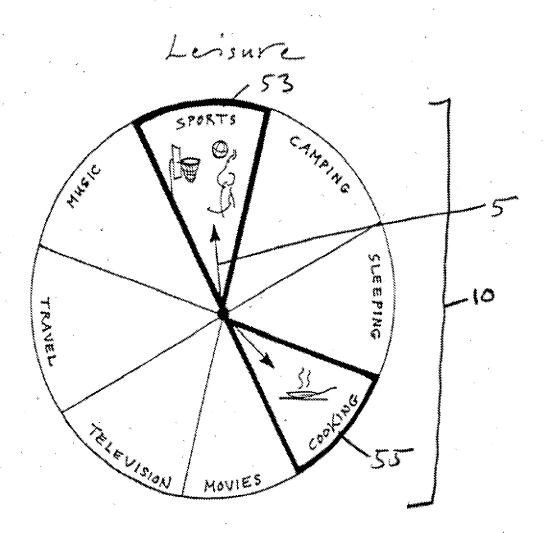


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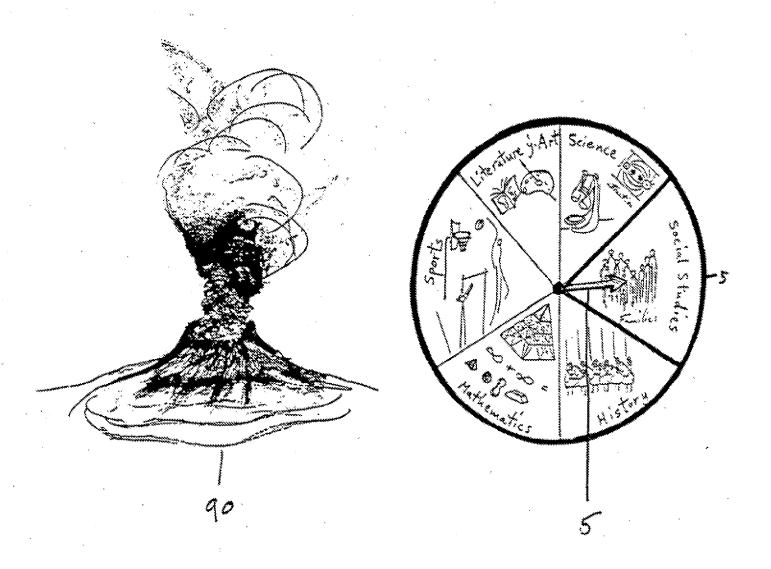
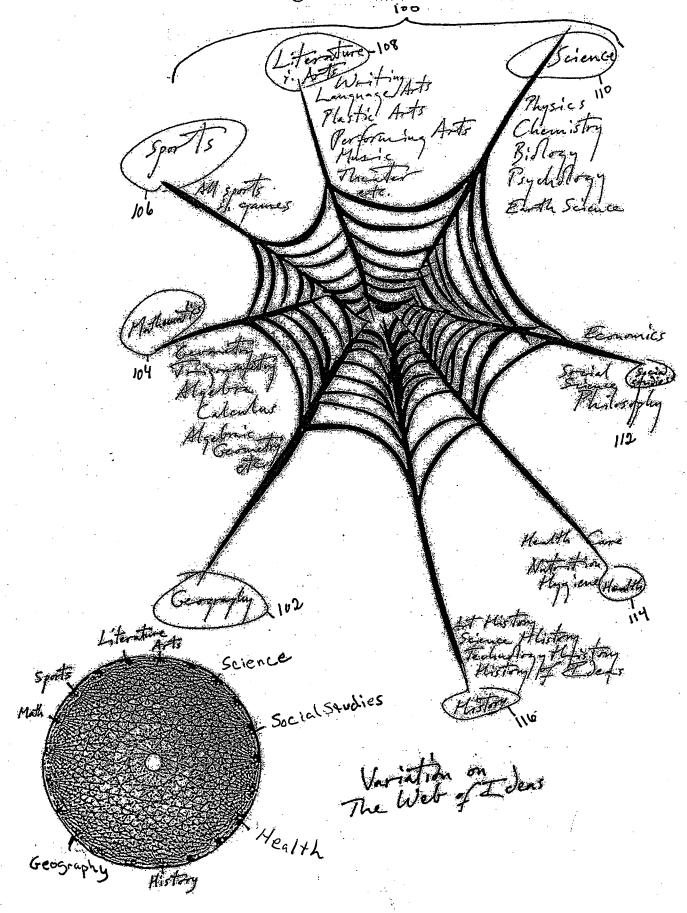


Figure 12

Figure 13



| VERIFIEI STATU | VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) AND 1.27 (b)) - INDEPENDENT INVENTOR | | | | | | | | | | |
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I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

It hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may Jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

| NAME OF INVENTOR Todd L. Siler | | . 1 1 |
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Docket No.

Declaration and Power of Attorney For Patent Application English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

METAPHORMING: METHODS AND APPARATUSES TO ENHANCE COGNITIVE FUNCTIONING AND ITS MANIETS TATION INTO PHYSICAL FORM AND TRANSLATION INTO USEFUL INFORMATION

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| | I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. | | | | | | | | | | |
| | I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56. | | | | | | | | | | |
| | Seany Sta pat | ction 385(b) of any forei PCT International app tes. listed below and ha | rity benefits under Title 35, gn application(s) for patent lication which designated a ve also identified below, by the or PCT international applics claimed. | or inventor's certificate at least one country o checking the box, any | , or Sect other that foreign a | ion 365(a) of n the United opplication for | | | | | |
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I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional 60/021,498 July 10, 1996 (Filing Date) (Application Serial No.) (Filing Date) (Application Serial No.) (Filing Date) (Application Serial No.) I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national $\stackrel{\sim}{\text{if}}$ or PCT International filing date of this application: M abandoned 08/889.475 July 8, 1997 5 (Status) (Application Serial No.) (Filing Date) (patented, pending, abandoned) đ pending October 1, 1998 **Ы**. 09/164,285 IJ (Status) (Filing Date) (Application Serial No.) 0 (patented, pending, abandoned) Ы (Filing Date) (Status) (Application Serial No.) (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

ž;.

| | POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number) Ruth Eure, Reg. No. 35,131 |
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Application Number: 12579648 Document Date: 10/15/2009

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METAPHORMING:

METHODS AND APPARATUSES TO ENHANCE COGNITIVE FUNCTIONING AND ITS MANIFESTATION INTO PHYSICAL FORM AND TRANSLATION INTO USEFUL

INFORMATION

By

Todd L. Siler

Claim of Priority for the Application

This application is a continuation-in-part of Application SN 09/164,285 filed October 1, 1998, which is a continuation of Application SN 08/889,475, filed July 8, 1997, which is a continuation-in-part of provisional application SN 60/021,498, filed July 10, 1996, from which priority is claimed.

Field of the Invention

The present invention relates to the field of cognitive functioning and results of thereof, particularly problem solving, inventing, innovating and realizing human potential.

Background of the Invention

The present invention relates to methods and apparatuses for facilitating cognitive functioning and the results of such functioning as evidenced by physical form. Such facilitation includes interpreting, analyzing and applying the insights and discoveries that emerge from the guided exploration and analysis of the physical symbolic forms. These physical forms can be created individually or collaboratively and can also be represented and enhanced by virtual reality or electronically with the aid of computer technology to stimulate the human sensorium. Such physical forms are tangible, visual, symbolic and metaphorical information for problem solving, inventing and other functions requiring creative and critical mental functioning.

In the mid-1900's in the United States, business, educational and political leaders recognized the need for gathering intellectuals from various fields in order to creatively generate new ideas for rational consensus so as to accelerate and

enhance the decision making process. These sometimes well-funded collaborative efforts came to be known by the coined words "think tank" or "task force."

Recognizing that "a picture is worth a thousand words" at times, graphic presentations, slide shows and pictures were often used. These tools accelerated decision making as well as provided motivation and emotional stimulation to discussions. The advertising industry has repeatedly demonstrated that pictures evoke emotional responses. These emotional responses can motivate people to buy products, or adopt a particular opinion. Pictures can immediately provide a context for thoughts and thereby clarify the thoughts being presented.

The preferred models of the present invention incorporate not only the visual impact of 2-D pictures but are five-dimensional ("5-D"). 5-D models embody commonly accepted 3-dimensional physical space, as well as 4-D perspective. 4-D perspective involves time and motion. The "fifth dimension" relates to all forms of symbolism, or symbolic languages (e.g., words, images, objects, signs, stories, symbols, archetypes, for example). The 5-D models can be kinetic, multi-layered and often highly animated objects.

The methods and apparatuses of the present invention facilitate business, educational, community and family functions by giving visual, tangible and concrete form to people's creative and critical ideas. The present invention provides tools for visualization to foster the exploration of ideas and the

communication of these ideas to others through natural, hands-on methods. The methods of the present invention illuminate thought processes through unique modeling methods.

The present invention may be used to stimulate creativity, to discover and make inventions, to connect things that seem unrelated, to solve problems and find solutions, to examine and question original ideas, and to enrich the experience of learning and enhance communication.

Although the inventor is not aware of any other similar inventions, there are other representative patents in the field. For example, U.S. patent No. 4,717,343 relates to a method of conditioning a person's unconscious mind to affect a change in the person's behavior by using a program of video pictures to condition the person's thought pattern to alter behavior.

U.S. patent No. 4,734,038 relates to a system and method of psycho-actualized learning comprising (1) selecting a behavior to be modified, (2) defining the steps to be taken to effectuate the modification, (3) assigning a mnemonic for each step and (4) providing a visual image of a role model for behavioral emulation.

U.S. patent No. 5,151,080 relates to a method and apparatus for inducing and establishing a changed state of consciousness by using electro-acoustic means for creating and generating electromagnetic sound signals, producing synthetic

human speech signals, superimposing the sound and speech signals to make a superimposed signal, and conveying the signal to the ears.

U.S. patent No. 5,312,114 relates to a method and apparatus for enhancing decision making comprising (1) thinking about a subject until an issue related to the subject comes to mind and making a choice from alternatives of the issue, (2) looking inside the head to ask if you are right, (3) picturing the subject in the head and while daydreaming the picture, listening for thoughts on both sides of the issue and change over time and (4) verbalizing conclusions.

U.S. patent No. 5,387,104 relates to an instructional system for improving communication skills using computer technology to integrate multi-sensory stimuli for synthesis of individualized instruction, evaluation, and prescription for advancing such skills.

These patents disclose methods and systems which, when used in combination, lead users to improve their visualization skills, creativity, communication and decision making abilities. In contrast, the present invention focuses on using a detailed model, preferably a symbolic 5-D model, to improve functions, including solving problems and conceptualizing ideas in a visual and tangible way. Also, 5-D models make the subconscious mind conscious and comprehensible. Furthermore, they reveal a person's understanding of a subject, viewpoint or field of knowledge. Through use of this model in the instant process,

the user can quickly grasp and convey a concept or experience, regardless of how complex the concept is or how personal and subtle the experience.

The process of the present invention differs from these prior disclosures in that, in addition to providing prepared materials for the user to work with, it carefully instructs the users in creating their own materials and in constructing a symbolic multi-dimensional physical model. Moreover, it guides users in discovering and adapting materials from their immediate environment, demonstrating how to make comparisons between different subjects, including: analogy, figure of speech, metaphor, symbol, story, allegory, pun, story-writing, story-telling, scenario-making, visualizing, hypothesizing, brainstorming, role-playing, and many more. The instant process not only makes metaphors to connect one thing to other things, it also uses all the ways of analyzing, evaluating, modeling, and tangibly realizing the meanings of the connections made.

Summary of the Invention

One of the methods of the present invention is called "metaphorming." As used herein "metaphorming" refers to the act of making connections, discoveries, inventions and applications. It involves combining, integrating, bridging, and relating many different sources of information and material forms. To metaphorm is to connect, shape, and transform some thing in our mind's eyes and hands. The term is derived from the ancient Greek words meta which means "between,"

"after," "beyond," "transcending," and phora which means "transference."

Metaphorming is a four step process described in more detail below.

It is an object of the present invention to provide a method for improving communication. The act of getting people to truly communicate is fundamental to their sense of success, happiness, mental health, and well-being. The experiential nature of the methods and apparatuses of the present invention connects people with themselves and with others in profound way, thus enriching communication.

It is a further object of the present invention to provide a method for leveraging tacit and explicit knowledge. People know more than they think they know. The methods and apparatuses of the present invention help extract this knowledge in a natural, intuitive, easy and pleasurable way, leaving people the option of working individually or collaboratively to this end.

It is a further object of the present invention to provide a method for tapping human potential. The methods and apparatuses of the present invention enable people to see the limits or boundaries of their knowledge, and suggest ways of transcending them. This is particularly useful when organizations (such as companies and schools) need to rapidly and thoroughly assess an individual's knowledge, core competencies, skills, and resources.

It is a still further object of the present invention to provide a method for fostering creativity, breakthroughs and innovations. The methods and apparatuses of the present

invention catalyze and initiate connection-making and idea-generation. They produce fresh insights, cultivate discoveries, inventions and innovations with multiple applications.

The present invention can be applied to a number of functions in the following representative areas and to the overall integration of these areas of peoples' lives:

In the corporate setting, it can be used, for example, to (1) enrich and accelerate research, development and design processes; (2) create multi-purpose visual knowledge maps; (3) give form to global strategic plans and corporate mission statements; (4) enhance re-engineering processes and effectively implement tactical and practical action plans; (5) improve communication, team building skills, collaborative work, innovation and productivity; (6) make connections between different work processes, ensuring best practices; (7) to conceptualize a problem or scientific paradigm in order to test a hypothesis or challenge an assumption, or examine and rethink the implications of a theory; and (8) for crisis management and conflict resolution. The process of the present invention is effective in enhancing functions in the corporate realm, for example, as an "emergency procedure," or crisis management, in opening up the imagination of people whose creativity is severely blocked by anxiety, fear, close-mindedness or compartmentalization.

In the educational setting, it can be used, for example, to (1) make improvements in learning and applying curricular (content) materials; (2) better understand and use

curricular materials applied to everyday life; (3) design educational games that enhance the learning process; and (4) facilitate advanced planning and development of scholastic activities.

The present invention also is useful in the family and home, for example, to (1) foster communication between family members; (2) develop abilities of families to act as lifelong collaborative learners; (3) improve family functionality, cohesion and well-being; (4) nurture family values, awareness and interest in learning, and (5) discover points of human commonalities.

Concretely, the work done through the process of the invention can include areas as disparate as the design of an innovative museum and garden; the re-engineering of aspects of a telephone company's installation and service system; the development of new technology and services for leading Application Service Providers (ASPs) in the Internet industry; the invention and development of an alternative plasma fusion energy system; the enhancement of learning systems for schools; and the improvement of systems and techniques for dealing with children-at-risk and broken families, among other familial and social dysfunctions.

The process of the present invention also may be used to enhance other functions, including to design games, children's pop-up books, CD-ROM's, Internet electronic games and services, audiocassettes, videotapes and practical workshop exercises in which the process serves as the basis of their operations. A version of the process comprising

the 5-D model in a wheel form may be used in educational and corporate settings, for example, to solve a particular problem of a company. The process of the present invention can be adapted to a variety of media, both traditional and electronic.

The process can be used by an individual or by large groups of many hundreds of people, or more simultaneously. The users can be from all levels of education, social, economic and ethnic backgrounds and ages.

Description of the Figures

Figure 1 sets forth the four steps of the process of the present invention.

Figures 2 through 7 show various forms of 5-D models useful in the present invention applications.

Figures 8 through 13 show the evolution of a 5-D model described in the Example

Detailed Description of the Preferred Embodiments

The preferred physical, symbolic models (i.e., apparatuses) are five-dimensional ("5-D"). 5- D models embody commonly accepted 3-dimensional physical space, as well as 4-D perspective. 4-D perspective involves time and motion. The "fifth dimension" relates to all forms of symbolism, or symbolic languages (e.g., words, images, objects, signs, symbols, numbers, figures of speech, euphemisms, puns, riddles, stories, visual metaphors, physical analogies, allegories, archetypes, etc.).

Referring to Figures 2 through 6, 1-Dimension refers to all forms and usages of words (Element 1). Dimensions refer to all forms and usages of images and pictures (Element 2). 3-Dimensions refer to objects and structures (Element 3). 4-Dimensions refer to all forms and usages of moving, dynamic parts or structures (Element 4). And, 5-Dimensions refer to the whole spectrum of symbolic creations: from abstract to concrete things; from figurative to literal things; from non-objective, or imaginary, to representational or realistic things (Element 5). In short, 5-D symbolic models can be described as the arts. "The arts embody the languages of our senses of touch, taste, smell, hearing, seeing and knowing. Without these languages we couldn't begin to describe or relate our experiences of life in any meaningful way." (Voice, March 2001, p. 13; published by the Washington Alliance for Arts Education, Seattle, Washington.)

When all five dimensions of communication are used to generate, articulate and convey viewpoints, ideas, insights, and inventions or innovations, the sense of understanding increases, as does the meaning and usefulness of the information being communicated. As well, the information is retained longer and applied in more personally meaningful and productive ways. Furthermore, when the methods and apparatuses of the present invention are experienced, connections between different sources and forms of information become apparent. Knowledge and ideas that previously remained separate and unrelated to one another become

connected. In effect, the tools of the present invention enable the user to see the deeper connections and relationships between all forms of information. This act of seeing and creation improves human communication, strengthens and inspires collaborative learning, helps people leverage their tacit and explicit knowledge, and accelerates breakthroughs and innovations.

The 5-D models can be kinetic, multi-layered, highly animated and dynamic objects, which makes them literally and figuratively *moving*, so to speak, in more ways than one; meaning, their demonstrative and communicative powers can be especially visceral and *emotionally moving*. This is shown in Figures 5 and 6.

The methods and apparatuses of the present invention facilitate business, educational, and family functions by giving visual, tangible and concrete form to creative and critical thinking and ideas – thus making it easier and more effective to communicate thoughts, feelings, viewpoints, beliefs, realizations, intuitions and ideas.

The physical symbolic models of the present invention can be created spontaneously and intuitively, or logically and methodically. They can be "unpacked" (analyzed and interpreted) and discussed in an orderly, rational, and systematic way or randomly.

Furthermore, unlike the conventional use of multi-media, in which words, images, objects, and other forms of language are used to enrich the experience of

information or ideas presented, the symbolic nature of these 5-D models allows the users to continually transform the model's content, physical attributes, meanings, implications, associations, usages and purposes.

The 5-D models and model-building activity deepen people's understanding and knowledge of subject matter, topics, issues, ideas, feelings, viewpoints, beliefs, values, and their implications. Every mark or symbol or movement in these physical models is symbolic and can be understood as representing visible, tangible thoughts and concepts. See Figures 2 through 6. Each symbolic element reveals a world of hidden information and sensibilities in the form of Elements 1 through 5, discussed above. This versatile symbolic language can be effectively used to tell stories, relate data, information and knowledge in such a way that it transcends our compartmentalized, disciplines and knowledge. The 5-D symbolic models of the present invention provide innumerable clues for solving problems, reframing and answering questions, or developing an opportunity.

As users interpret the meaning of the models, a web of connections is created in the human brain that involve visual, auditory, tactile and other sensory modalities which serve to reinforce this content and store it long-term memory. Contemporary brain research on memory and learning suggest that this phenomenon of encoding information and sensory stimuli according to its emotional significance and existing knowledge structures underlies the operations

of memory. (Newsweek, June 15, 1998, p. 48-53; "How Memory Works"). This neurophysiological phenomenon is referred to as elaborative encoding. The processes of the present invention can be the biological basis or manifestations of elaborative encoding.

The 5-D models can be connected with one another through multiple interpretations. When users and others add their impressions, insights grow and mutual understanding increases. This shared understanding is essential for ensuring that individuals are aligned in the implementation and execution of their common goals and specific tasks.

The present invention provides tools for conceptualization, visualization and expressive manipulation. These tools may be used to foster the generation, exploration, implementation, advertising, marketing, and selling of ideas and knowledge, and the communication of these ideas to others through hands-on, interactive methods that can involve or be augmented by media technology. The methods of the present invention illuminate thought processes and all forms of "physical thinking" through unique modeling methods — thus providing a means of expressing this knowledge in myriad ways. The methods of the present invention draw upon the user's innate ability to build and construct things, without requiring any learned skill or artistic ability to engage this activity.

Metaphorming taps people's tacit and explicit knowledge, while revealing their many faceted intelligence (visual, spatial, mathematical/logical, musical, kinesthetic, emotional, intrapersonal, and interpersonal) – allowing for a greater freedom of conceptualizing, representing, and expressing ideas, viewpoints, beliefs, vision, values, issues, problems or opportunities The metaphorming methods and apparatuses enable people to apply their innate ability to think differently and innovatively – inspiring a sense of creative freedom, freeing the mind, encouraging openness, and exercising people's curiosity, skepticism and wonderment.

The present invention has been proven to stimulate creativity, breakthroughs and innovations in corporations, businesses, schools, communities, families and individuals. It has been used to make tangible discoveries and inventions by physically and conceptually connecting various types and forms of information, knowledge, ideas and things in highly original ways.

The process of the present invention, metaphorming, is set forth below:

The invention comprises a system comprising an iterative process comprised of four tangible steps (1) connection, (2) discovery, (3) invention, and (4) application.

Before these steps can take place, however, the user must select a function to be enhanced or propose a focal question to explore a specific subject, topic, issue, problem or opportunity. Once the question or function to be enhanced has been selected, a model is constructed. Users create images and forms or structures from an array of materials and

techniques (i.e., marking pens, paints, magazines, photographs, collage elements, drawings, tape, etc.) delivered and used either physically or by electronic means via media technology.

Allow the model to develop and evolve at the users preferred, natural pace, or set a time limit, and recommend that the 5-D model be constructed within this time frame.

Instructor or facilitator can emphasize the importance of modifying and changing the model.

The models may be in the form of drawings, three dimensional constructions or other forms of expression, including four dimensional animation, which involves time and motion in kinetic models. The depictions may use all systems of comparison and connection-making (including, for example, metaphor, analogy, figure of speech, story, symbol, hypothesis, and pun) in order to make connections between seemingly unrelated things, ideas, events and experiences.

Simple models created during the process normally take between 30 minutes and 3 hours to complete. More complex models, or models which depict complex connections, may take substantially more time.

Users of the process of the present invention create visual models by depicting metaphorms (which are a combination of metaphors, analogies, symbols, and stories) and connections between the function they wish to enhance and other things, either natural or human-made.

Once the model is constructed, the metaphorming process can begin. The steps are as follows:

1. CONNECTING

Initially, users should address the physical characteristics and qualities of their models before addressing the conceptual elements and intentions. Questions can assist users in this process. The questions help orient and prepare the user's mind for the deeper journey into their creative processes and creations. Such questions may include, but are not limited to, the following: (1) What do you see? (2) What does your model look like? (3) Why did you give it this shape or form? (4) What are other visual elements that made up the model? (5) Are there a lot of colors used in the models, and what do they mean with respect to their forms and shapes? (6) Describe some of the model textures: Are they flat or very dimensional with much texture? (7) Are the shapes, forms and media used in the models similar? (8) Are the icons and symbols used representational, figurative or abstract? The questions to be asked will vary accordingly to meet the necessary requirements of the particular situation.

After noting the physical characteristics and qualities, users should address the conceptual elements and intentions. They should describe the music or sounds the symbols and icons evoke, asking, for example, these kinds of questions: (1) What does a particular symbol mean? (2) What symbols do you see in real life that represents other things? Are they concrete or abstract? (3) What would these works sound like, if they

had a sound (e.g., classical, rock, jazz, rap, new age, and tribal)? (4) How would these works be different if they were the size of a room and participants could walk into or through them? (5) How would these works be different if they were four-dimensional, i.e., had a time element to them, like moving kinetic sculptures? (6) How would your model be different if it were the size of a room or building? (7) How would your experience of the model be different? During the connection step, users should list as many insights as possible.

2. DISCOVERING

Users further explore the connections and insights made in Step One. This discovery or "exploring" step may involve a number of activities including research, remodeling and additional unpacking.

Users should research elements of the connections and insights made in Step
One. This research can involve use of a variety of tools, including, for example, the
library, Internet, observations, interviews and direct contact with experts in a
particular field, personal knowledge and interests, and other artistic and scientific
resources. Users should get to know as much about their previous connections as
feasible. Research should be guided towards identifying relationships between forms
and processes, and between like and unlike processes, and exploring interconnections
between the whole of systems and their parts. Exploration also involves comparing
categories of relationships in and among things that seem unconnected or unrelated.

For example, with regard to management information systems, users could explore power plants, overnight package companies, or learn more about how trees, nerve cells and other natural systems grow. They also should define the products of their growth. This research would help the users, in turn, to learn more about management information system designs.

Search for relationships between and within the models. Go beyond the surface of the things you see, hear, taste, smell and touch, to discover and understand the layers of details and levels of information. Relate why you selected the particular images and objects. Listen carefully and take notes on what the participants say. This will help users construct and respond to their next set of questions. Examples of such questions may include: (1) How many of you have had a similar experience to this?

(2) How is this image similar to other images within the model? (3) How is one image related to the whole of the model? (4) How is each part embedded, or "nested" in the whole? (5) Does your model have a center? If so, where is it? (6) How would the meaning of the model change if another category is moved to the center? How would this modification change the message?

After thorough research, the users should amend and modify their previous models based on the findings of their research. Research will often lead to additional insights and possibly "discoveries." These insights and discoveries should be incorporated into the previously generated models or used as a guideline to amend

these models. This may also include constructing models jointly among the users.

Another possibility is for users to model particular aspects of the earlier models, using the research to explore areas of interest in detail.

As used herein, "unpacking," or analyzing and interpreting, comprises the following: The first stage of unpacking involves stepping back and observing the types of icons and symbols that were employed in the model as well as the similarities between icons. A list of the users' responses is generated. The list acts as a log of responses, so that users can revisit and analyze, for example, a particular statement or figure of speech used to describe a symbol or convey an idea.

Upon completion, users analyze and interpret the models. This process is referred to as "unpacking." Unpacking enables the users to become familiar with the full realm of symbols used to create their models. It also helps users understand the symbols in a deeper, more meaningful and productive way. This, in turn, enables users to explore and interpret both their conscious and unconscious thoughts. It creates a window into the mind of the individual engaged in the process. It sheds light on the systems, processes and problems that may have been previously obscured by any number of mental barriers or blocked by the subconscious mind. Insights into the models and functions are formed during this unpacking activity.

In the second stage of unpacking, users take turns interpreting their model creations for the other users, if present. Users should explain why they selected the

symbols, colors, shapes, etc. that they did. They should also note what other creations are similar to their creations and why. Each aspect of the user's model should be explored in as great depth as possible, with all users listening closely to the expressions of language and personal stories used in the descriptions. All users are encouraged to verbally interpret and discuss the models being presented. By doing this, users gain valuable insights concerning their models (and ultimately their thought processes) that otherwise would have remained hidden.

3. INVENTING

In this step, users will develop a plan and method for realizing an idea or inventing something that improves the function they wish to enhance. The inventions will be based on their exploration and discovery of the original connections. The inventions will be represented in the form of symbolic models. Again, models provide the method of visualization and conceptualization necessary to explore the inventions in a tangible manner.

Using the example of management information systems, users may invent a method for improving the system through discoveries made in researching how apple trees are like computer systems, or how apple orchards are similar in process to computer networks. The management information system may be redesigned to function more like an apple tree, or orchard, based on an understanding of the ecology of this natural system and how to sustain and maintain a healthy, ecologically sound system. The users would

then express this invention in a model. The model would serve to put into visual form many of the aspects of the invention. The model would be "unpacked," with further discoveries perhaps being made, and the invention model amended accordingly. This step encompasses recognizing and understanding the process of the symbolic model as an invention or innovation and posing other possibilities based on the connections and discoveries made. Examples of questions to ask may include: (1) What are some ideas that were generated based on previous discussion and discoveries? (2) Where is the invention or innovation in the symbolic model? (3) Describe the steps taken to make the invention, such as, gathering, assembling, modifying and combining materials and information.

4. APPLYING

In this step, users will develop a plan and method for applying their inventions to improving the function they wish to enhance. They will also create a list of action items necessary for the implementation of their inventions. The tactical plan and list are preferably incorporated directly into the invention model.

A single invention can stimulate and support successive generations of discoveries and inventions. The improvement to the functions generated in Step Three can also be applied to other areas. For example, inventions that benefit the management information systems function of a company may also be used to improve other areas of the company, including, for example, product design, sales, marketing or product distribution. Models

also can be developed that are specific to these areas. The process of the present invention serves to extend ideas, relationships, meanings, implications and information contained in the 5-D symbolic models into real-life areas, situations, circumstances and events.

The application step also involves a second generation (and subsequent generations) of invention based on the first invention, which is rooted in the initial comparison. The instant process is, therefore, iterative in nature — like the creative process itself. Exemplary questions may include: (1) How can the model be applied to understand different things experienced during the course of a day? (2) How can the model be applied to understand things taught in school? (3) How does the geometry of the model reflect the geometry of the environment?

For example, a company engaged in re-engineering its management information systems (MIS), could try connecting the MIS functions to a number of functions outside this area of specialized information. Although this information may be unlike in form, appearance or representation, it is potentially similar in process, i.e., the way it works. Since a well-functioning management information system will deliver information on demand, users could explore other delivery systems, such as electric power plants and grids (which deliver electricity), overnight package companies (which deliver parcels), or apple trees (which deliver fruit), or brain cells (which deliver neurotransmitters). The

visual models would, in this instance, depict the connections between the process of management information systems and the processes of these other systems.

Example 1

Education

The instant process may be used in every day life to explore a certain concern, issue, problem, obstacle or opportunity. In this example, the process uses as the model, a wheel and spinner concept that is familiar to most people and is used to enhance educational functions. It can also use a variety of other shapes and forms, as seen in Fig. 7.

Referring to Fig. 7, in this example both the wheel 10 (or other forms 12, 14, 16) and the selection of its content are created by the participants using their own knowledge base and life experiences. Since the process uses the participants' life experiences, it is particularly meaningful to them and can be used for a variety of purposes. Its uses include connecting diverse sources and forms of information, combining ideas, and relating experiences and other activities. It can be used on a one-time basis to introduce and teach benchmark curricular content or it can be repeatedly used in a classroom environment over the course of a semester or longer. During the life cycle of the process, using the wheel, the participants can continually modify its design and content, making a highly personalized yet universal teaching tool.

Procedure

- Referring now to Fig. 8, make a large wheel 10 (or functionally similar form),
 complete with spinner 5. The wheel should be at least three to four feet in diameter to
 allow room to add objects, images, and words.
- 2. Referring further to Figure 8, divide the wheel 10 (or other appropriate shape) into approximately six to twelve segments 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40. After making the segments, leave the wheel blank, with no words or images on it. Attach the wheel to a wall, or lay it on the floor or table, where everyone can see it.
- 3. Choose a broad subject, for example, education, environment, family, leisure, work, health, or sports. The subject must be of interest, or meaningful and familiar to the participants. For example, corporate life would not be a good subject for third grade children but would be for adults. However, a subject such as leisure activities would likely be interesting to any participant.
- 4. Referring now to Figure 9, subdivide the subject into "categories" and place them as headings 50, 52, 54, 56, 58, 60 on each of the segments of the wheel. For education, the categories may be the different disciplines taught in secondary school, such as art, physics, chemistry, math, history, literature, etc. If the subject is leisure activities, participants could choose categories such as camping, music, sports, travel, etc.

 Again, make sure that the categories are meaningful to the participants.
- 5. Referring now to Figure 10, list characteristics 70, 72, 80, 82 of each category.

 Participants should come up with words, phrases, images and icons that describe that

category. For example, in the category of biology, participants could use words and images such as fish, mammals, microscopes and petri dishes. Participants should actually create these through writing, collage, drawing and other forms of symbol making, model building and construction. It is up to the participants to decide how many images, icons and other visual artifacts should be employed and which ones will best represent the categories. When finished, participants should attach their creations to the appropriate category on the wheel. For example, the category of biology would now have on it the symbols of fish, mammals, microscopes and petri dishes selected above. Larger images and three-dimensional forms and symbols may have to be attached outside the wheel with strings linking them to the appropriate category. Alternatively, if the creations are elaborate enough, they could be set around an entire room expanding the scope of the wheel. The wheel can become part of the surrounding environment physically encircling the participants.

6. Once the wheel is complete, the symbols, images and text on the wheel should be "unpacked," or discussed and interpreted, in detail. This step will enable all participants to become familiar with the full realm of symbols used to create the wheel. It also will help participants understand the symbols in a deeper and more meaningful way.

The first stage of unpacking involves stepping back and observing the types of icons that were created as well as the similarities between icons. It may be helpful to

make a list of all of the participants' responses. The list acts as a "memory log" of responses, so that participants can revisit and analyze a particular statement or figure of speech used to describe a symbol or convey an idea.

Initially, participants should address the physical characteristics and qualities of the wheel before addressing the conceptual elements and intentions. Are there a lot of colors used in the wheel? Is the wheel flat or very dimensional with much texture?

Are the shapes, forms and media similar? Are the icons and symbols used representational, figurative or abstract?

After noting the physical similarities, participants should address the conceptual elements and intentions. They should describe the music or sounds the symbols and icons evoke. What would these works sound like, if they had a sound (e.g., classical, rock, jazz, rap, new age, tribal)? How would these works be different if they were the size of a room and participants could walk into or through them? How would these works be different if they were four-dimensional; i.e., had a time element to them, like moving kinetic sculptures?

In the second stage of unpacking, participants should take turns interpreting their creations for the other participants. Participants should explain why they selected the symbols, colors, shapes, etc. that they did. They should also note what other creations are similar to their creations and why. Each aspect of the wheel should be explored in

as great depth as possible, with all participants listening closely to the expressions of language and personal stories used in the descriptions.

- 7. Referring now to Figure 11, to further explore and understand the wheel 10, spin the spinner 5 twice and note the two categories that the spinner lands on. The participants should then explore the connections between the two categories. It may be helpful to make a list of these connections. For example, if the subject is "leisure time" and the spinner lands on "cooking" and "sports", the participants should list all the ways in which cooking and sports are similar. Are there ingredients in sports? Is there a chef? Do sports have anything comparable to a cookbook? Are there penalties in cooking? Is a kitchen like a playing field? All of these possibilities should be explored. The more connections, the better; nothing should be seen as too extreme or abstract.
- 8. Referring now to Figure 12, choose an area of study for enhancement or an object that is of interest to the participants, something from which they wish to extract more meaning. For example, if it's a fifth grade teacher who wishes to enhance the students' knowledge about volcanoes and other eruptive structures in nature, then they should choose that. Once the area of study or object has been chosen, an icon is selected or created which represents it and placed next to the wheel. Here the teacher could place a picture or model of a volcano 90 next to the wheel.

9. Begin by spinning the spinner. Whatever category the spinner lands on should be related to the icon representing the area of study or object. In the volcano example, if the subject is "education" and the spinner lands on "social studies, 57" relate the volcano to social studies. That is, list all of the ways in which volcanoes are like social events. For example, a particular historical event may be taken, such as the 1991 Los Angeles Riot, or the break-up of the Eastern Bloc nations, and related to the turbulent birth and growth of a volcano.

Again, participants should begin with the obvious likenesses between these subjects — working from the general information and observation to the specific details. This will produce both general responses such as "war is like an erupting volcano," to specific ones such as the "the Croats & Serbs are like the lava flow which hasn't yet cooled to form stable land masses (i.e., governments)." This is Step One (connection) of the process.

The teacher should encourage further discussion by introducing subject matter related to the volcano, such as how a volcano works, how seismic activity can be used to predict a volcanic eruption or how lava changes the landscape around it. All of these can be related back to social upheaval and war. How does the process of war resemble the process of a volcano? How do wars and volcanoes change the landscape around them? What are the conditions in which a volcano – or a war – occur? Can war be predicted or anticipated by studying the technological processes by which volcanic

actions are forecasted? What can we learn from one about the other? More importantly, is it possible to stop a volcano and what are the implications of this for stopping war? Through this enhanced discussion, the students will soon be making discoveries concerning the nature of volcanoes, the nature of war and how war and volcanoes are similar in many ways. This is Step Two (discovery) of the process.

Step Three (invention) of the process involves building upon discoveries and inventing something based on them. For example, the students may discover that the same conditions which prevent a volcano from erupting, may be similar in process to those that prevent a war from occurring (e.g. a certain rock formation which blocks magma flow may resemble a blockade of arms). If the students use the knowledge that they gained to invent a way to cut down on playground fighting, they would be reaching Step Three (invention). If they actually applied this knowledge or used this knowledge to make further inventions, they would be at Step Four (application) of the process.

10. Repeat 9. Using the same icon as in number 9, spin the spinner again and relate the new selection to the icon. For example, if the spinner now lands on art, relate art - including, art forms, and techniques of art-making -- to volcanoes.

Note: if the participants ever get stuck on any given connection, spin again. The more they engage in this exercise, the less likely they will be to draw a blank.

The wheel can be used to move through all levels of the process quickly or slowly. During this process, the wheel enhances and enriches meaning in any subject or area of personal interest. A key to this process is starting with the participant's personal knowledge and life experiences and applying the new area of learning directly back to that base knowledge. The volcano example assumes that the students know something about social studies. If they didn't, the exercise wouldn't be nearly as fruitful.

Another key involves letting the participants create the wheel themselves, using their base of personal knowledge in the process. Through this method, the participants have ownership of the wheel. This ownership makes it very personal to them and gives them a real stake in shaping the process and product of education. Even the act of deciding what categories to pick-and-choose and what images to place on the wheel teaches invaluable lessons about how to select and make meaning from information. It also shows that information and categorization are not fixed, and that information can be presented and divided in almost infinite ways.

Another feature of the wheel is that it can be used over time. Participants can continually use it to enhance their knowledge about any subject that they would like to learn about. In the teacher/volcano example, the teacher could reuse the wheel to teach other course content. The wheel should be updated periodically -- or completely reformulated -- in order to reflect the growth of the participants who created it.

Referring now to Figure 13, the steps of the process can be further modified for classroom use by having the participating students physically create their own wheel.

One way to do this is to draw an idea web 100 on the blackboard. The students can brainstorm categories 102, 104, 106, 108, 110, 112, 114, 116 for the given subject and the teacher places these categories of ideas onto the web. The students could then distill the web into the best eight to twelve main categories, which should also be listed on the board.

Students would then have the opportunity to divide themselves into groups and create images, text and models for a category of their choice. A group of students could also be assigned to building the wheel itself. This latter assignment would involve the students having to design the wheel, select the materials and build it.

Prior to doing the wheel, the teacher should explain to the students that they will be designing and using their own learning system. The wheel will be used for seeing the relationships between things, connecting things and discovering the meaning of these connections. How they go about creating this learning system is up to them, from how it looks to what is on it.

It might also be helpful to show pictures of how humans have used wheels throughout history, such as early wheels with carts, Indian prayer wheels and even modern, metaphorical wheels as in the popular television game "The Wheel of Fortune."

Teachers may even create their own wheels and show these to the class. The discussion

of all of these wheels will put what the students are doing in perspective while also demonstrating the versatility of wheels.

Participants may also invent games based on the wheel. This includes the creation of scoring systems and rules of play. Encourage the participants to be as creative as they can with the creation of the wheel. The wheel can take many forms and be simple and complicated in form or playing rules. Experiment with the wheel, noting how each different construction, tells a different story. Another feature of the wheel is that it can be used over a long period. Participants can continually use it to engage and enhance any new information, subject or problem that they would like to. The wheel should be updated periodically — or completely reformulated — in order to reflect the growth of the participants who created it.

While the exemplary preferred embodiment of the present invention is described herein with particularity, those having ordinary skill in the art will recognize various changes, modifications, additions, and applications other than those specifically described herein, and may adapt the preferred embodiment and methods without departing from the spirit of the invention.

Abstract of the Disclosure

The present invention provides a method and apparatus for enhancing cognitive functioning and its manifestation into physical form and translation into useful information for improving functioning in human experience, for example, business, academic or personal endeavors.

Filing Date: 10/15/09 Approved for use through 7/31/2006. OMB 0651-0032

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This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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| PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875 | | | | | | Application or Docket Number 12/579,648 | | | ing Date 15/2009 | To be Mailed | | |
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