UNITED STATES PATENT AND TRADEMARK OFFICE

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.
11/267,223	11/04/2005	Keyur D. Dalal	RSW920050159US1	1713

36736 7590 01/26/2009

DUKE W. YEE
YEE & ASSOCIATES, P.C.
P.O. BOX 802333
DALLAS, TX 75380

EXAMINER	
YADAV, HIMANSHU	
ART UNIT	**PAPER NUMBER**
4115	

NOTIFICATION DATE	DELIVERY MODE
01/26/2009	ELECTRONIC

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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptonotifs@yeeiplaw.com

Office Action Summary	Application No.	Applicant(s)	
	11/267,223	DALAL ET AL.	
	Examiner	Art Unit	
	HIMANSHU YADAV	4115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ 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 *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 November 2005* 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).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/4/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because many of the figure numbers for the different objects in Figure 2 are labeled differently in the specification and there are two numbers in the specification referred to that do not exist in the drawing. In Figure 2, the following object numbers: "202", "218", "208", "204", "210" should be replaced with --206--, --210--, --202--, --208--, --204-- respectively, so as to have a drawing that matches up with the specification. Further, the reference numbers of bus "238" and bus "240" should be recited in Figure 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: The reference numbers "534" (¶ [0049], line 18) and "820" (¶ [0053], line 4) should be replaced with --634-- and --840-- respectively, so as to match the specification with the drawings. Appropriate correction is required.

Claim Objections

3. Claim 13 is objected to because of the following informalities: The phrase "artifacts for generated by the" should be recited as --artifacts generated by the --. Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 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.

5. Claims 11-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 11-13, they are directed to entirely software which amounts to functional descriptive material per se. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. Therefore, claims 11-13 are directed to non-statutory subject matter.

Regarding claims 14-20, the claims are directed to "the computer program product comprising: a computer usable medium having computer usable program code …". However, according to the specification ¶ [0057], lines 16-22 the computer readable medium includes signals. Signals do not fall within a statutory category since they clearly are not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter. Thus, claims 14-20 are directed to a non-statutory subject matter and are not patent-eligible under 35 USC § 101.

Claim Rejections - 35 USC § 103

6. 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.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-6, 8, 9 and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontana et al. (US Pat. No. 6,167,564) in view of "Plausible and Adaptive Requirement Traceability Structures" by George Spanoudakis (hereinafter as Spanoudakis).

Regarding claim 1, Fig. 5 of Fontana et al. broadly discloses a computer implemented method for model based traceability, the computer implemented method (Abstract, lines 1-12) comprising: providing a traceability model. It is noted that Fontana et al. does not disclose creating a plurality of traceability links based on the traceability model; and providing a tool for

managing the plurality of traceability links. However, Spanoudakis discloses creating a plurality of traceability links based on the traceability model (Abstract, lines 1-4); and providing a tool for managing the plurality of traceability links (Abstract, lines 8-15). Hence, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fontana et al. and Spanoudakis, because the motivation to do so would be to be able to better define the relationships between the models and the artifacts that are based on those models.

Regarding claim 2, Fig. 5 of Fontana et al. discloses the traceability model comprises a plurality of tables that form a schema (i.e. a database is a set of tables and the repository holds data).

Regarding claim 3, Fig. 5 of Fontana et al. discloses the plurality of tables comprising an artifact table (Fontana et al.: Fig. 5). It is noted that Fontana et al. does not disclose the traceability link type table and the traceability links table. However, Spanoudakis discloses a traceability link type table, and a traceability links table (Abstract). Hence, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fontana et al. and Spanoudakis, because the motivation to do so would be to be able to better define the relationships between the models and the artifacts that are based on those models.

Regarding claim 4, Fig. 5 of Fontana et al. broadly discloses the traceability link type table that defines a plurality of traceability types comprising artifact-to-artifact links, model-to-model links, model-to-code links, and artifact- to-model/code links (column 9, lines 31-42).

Regarding claim 5, it is noted that Fontana et al. does not disclose the step of receiving traceability information. However, Spanoudakis discloses the method where creating a plurality of traceability links comprises: receiving traceability information; (page 1, right hand column, lines 17-22). Hence, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fontana et al. and Spanoudakis, because the motivation to do so would be to be able to better define the relationships between the models and the artifacts that are based on those models.

Regarding claim 6, the teachings of Fontana et al. and Spanoudakis disclose a method wherein each entry of the traceability links table identifies for a given traceability link an identifier (Spanoudakis: Abstract, lines 8-12: the different traceability relations generated would have some form of identifier), a source artifact, a target artifact (Fontana et al.: Fig. 5), and a traceability type (Spanoudakis: Abstract, lines 8-12: the different rules used to create the traceability relations would infer different traceability types).

Regarding claim 8, Fig. 5 of Fontana et al. discloses a method responsive to selection of a given traceability link, presenting artifact information for the given traceability link.

Regarding claim 9, it is noted that Fontana et al. does not disclose the steps of receiving a traceability links query; identifying a set of traceability links that satisfy the traceability links query; and presenting the set of traceability links. However, Spanoudakis discloses receiving a traceability links query; identifying a set of traceability links that satisfy the traceability links query; and presenting the set of traceability links (page 1, right hand side column, lines 31-34; and page 3, left hand side column, lines 20-27). Hence, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of

Fontana et al. and Spanoudakis, because the motivation to do so would be to be able to better define the relationships between the models and the artifacts that are based on those models.

Regarding claim 11, Fig. 5 of Fontana et al. broadly discloses a traceability system comprising an application module (Abstract, lines 1-5); a model framework, wherein the model framework provides a traceability model (see Fig. 5); an application programming interface, wherein the application programming interface exposes the traceability model to the application module (see Figs. 5 and 6); and a database (see Fig. 2). It is noted that Fontana et al. does not disclose the application module creating a plurality of traceability links based on the traceability model and provides a tool for managing the plurality of traceability links, and wherein the database stores the plurality of traceability links. However, Spanoudakis discloses creating a plurality of traceability links based on the traceability model (Abstract, lines 1-4); and providing a tool for managing the plurality of traceability links (Abstract, lines 8-15). With regard to the limitation of having a database, wherein the application module creates a plurality of traceability links based on the traceability model and provides a tool for managing the plurality of traceability links, and wherein the database stores the plurality of traceability links, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Fontana et al. with the feature of creating a plurality of traceability links based on the traceability model and providing a tool for managing the plurality of traceability links, as taught by Spanoudakis, which would result in the teachings of Fontana et al. being able to have a database, wherein the application module creates a plurality of traceability links based on the traceability model and provides a tool for managing the plurality of traceability links, and wherein the database stores the plurality of traceability links. The motivation for this

modification would be to be able to better define the relationships between the models and the artifacts that are based on those models. Hence, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fontana et al. with the teachings of Spanoudakis because the motivation for this modification would be to be able to better define the relationships between the models and the artifacts that are based on those models.

Regarding claim 12, Fontana et al. broadly discloses the application module is a client application, an application plugin to an integrated development environment, or a server application (Abstract, lines 1-5).

Regarding claim 13, Figs. 1, 5 and 6 of Fontana et al. broadly discloses that the database stores artifacts generated by the application module.

Regarding claims 14-20, it is a computer usable medium having computer usable program code, which corresponds to the method claims 1-6, 8 and 9 respectively. Therefore, it is rejected for the same reasons as the method claims 1-6, 8 and 9 above.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fontana et al. (US Pat. No. 6,167,564) in view of "Plausible and Adaptive Requirement Traceability Structures" by George Spanoudakis (hereinafter as Spanoudakis) and further in view of Miller (US Pub. No. 2005/0091642 A1) and Blasciak et al. (US Pat. No. 5,265,254).

Regarding claim 7, Fig. 5 of Fontana et al. discloses a method wherein each entry of the traceability links table further identifies for the given traceability link an originator. It is noted that Fontana et al. does not disclose the traceability links table further identifying a time stamp,

and whether the given traceability link is suspect, or whether the given traceability link is valid. However, Blasciak et al. discloses using a time stamp (column 4, lines 8-12). Also, Miller discloses detecting failures and then tracing the failures back to the integrated development environment and then identifying the model errors in the integrated development environment based on the tracing of the failures (Abstract, lines 13-17). Regarding the limitation of having each entry of the traceability links table further identify for the given traceability link an originator, a time stamp, whether the given traceability link is suspect, or whether the given traceability link is valid, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fontana et al., with the feature of using a time stamp and the feature of detecting failures and then tracing the failures back to the integrated development environment and then identifying the model errors in the integrated development environment based on the tracing of the failures, as taught by Blasciak et al. and Miller respectively, which would result in the teachings of Fontana et al. having the method wherein each entry of the traceability links table further identify for the given traceability link an originator, a time stamp, whether the given traceability link is suspect, or whether the given traceability link is valid. The motivation for this modification would be to be able to better define the relationships between the models and the artifacts that are based on those models. Hence, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fontana et al. with the teachings of Blasciak et al. and Miller because the motivation for this modification would be to be able to better define the relationships between the models and the artifacts that are based on those models.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fontana et al. (US Pat. No. 6,167,564) in view of "Plausible and Adaptive Requirement Traceability Structures" by George Spanoudakis (hereinafter as Spanoudakis) and further in view of Miller (US Pub. No. 2005/0091642 A1).

Regarding claim 10, the teachings of Fontana et al. and Spanoudakis disclose presenting a link identifier in association with a traceability link (i.e. the different traceability relations generated would have some form of identifier, see Spanoudakis: Abstract, lines 8-12). It is noted that the teachings of Fontana et al. and Spanoudakis do not disclose identifying a suspect traceability link within the set of traceability links; and presenting a suspect link identifier in association with the suspect traceability link. However, Miller discloses detecting failures and then tracing the failures back to the integrated development environment and then identifying the model errors in the integrated development environment based on the tracing of the failures (Abstract, lines 13-17). With respect to the limitation of identifying a suspect traceability link within the set of traceability links; and presenting a suspect link identifier in association with the suspect traceability link, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Fontana et al. and Spanoudakis with the feature of detecting failures and then tracing the failures back to the integrated development environment and then identifying the model errors in the integrated development environment based on the tracing of the failures, as taught by Miller, which would result in the teachings of Fontana et al. and Spanoudakis being able to have a method that identifies a suspect traceability link within the set of traceability links; and presenting a suspect link identifier in association with the suspect traceability link. The motivation for this modification would be to be able to better

define the relationships between the models and the artifacts that are based on those models. Hence, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Fontana et al. and Spanoudakis with the teachings of Miller because the motivation for this modification would be to be able to better define the relationships between the models and the artifacts that are based on those models.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HIMANSHU YADAV whose telephone number is (571)270-7829. The examiner can normally be reached on Monday - Thursday, 7:30 a.m. - 5:00 p.m., alternate Fridays, est..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe H. Cheng can be reached on 571-272-4433. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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.

/H.Y./
Examiner, Art Unit 4115
1/14/2009

/Joe H Cheng/
Supervisory Patent Examiner
Art Unit 4115