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2	Information Disclosure Statement (IDS) Filed	2222775000E_IDS.pdf	592187 5eb5dc7e1b57a97b2d7661911dd8187e9bcf10f2	no	12
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This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	EP0733983A2.pdf	527609 c941ab56cade0ae79bcd9847edf1e1be81f90b60	no	10
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4	Foreign Reference	EP0749081A1.pdf	1509738 b4b7425e71f808f757a8579f29e44ef16ecdfe7b	no	28
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5	Foreign Reference	EP0889421A1.pdf	1069856 f2abfea72a281f498f0d7e065adc87a686f1afa4	no	25
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6	Foreign Reference	WO9716796.pdf	7229934 e42add843aef8e5277aba53b0294e825d050ac3f	no	133
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7	Foreign Reference	WO0163837.pdf	1881090 8e748cdf54285b96040815fccb0368a34850f1a8	no	56
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8	Foreign Reference	WO2005046184A1.pdf	590371 1de30e9a46c0a6f8dde2173fc44da4aa69e70101	no	15
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9	NPL Documents	Franklin.PDF	527314 93dcc87d9e4053b29a4e0b5e12bdc7a8248a8888	no	9
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10	NPL Documents	Nagami.PDF	526716 e08b70b1b2bdae2d23a39b9ed72add812a799c98	no	16
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11	NPL Documents	Strom.PDF	142063 5f13e9472d9f4287b21bed4e485ca3aa25276fe4	no	2
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12	NPL Documents	Sturman.PDF	287156 65a3221c0c373b4518323714 1f33d42778875009	no	5
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13	NPL Documents	InternationalDOI.PDF	183511 9995e6e72dbb901dbc972d1ea31865a9ebb80a8a	no	4
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14	NPL Documents	Aksoy.PDF	549473 dafd5f82534bc7b0886ece7d355adc9d6a675f4c	no	15
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17	NPL Documents	AguileraMatching.PDF	550578 d6f2acbf7400c9d762bfb98abc1e5c6d1ed33378	no	9
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18	NPL Documents	BanavarCase.PDF	712830 69b00e5a86471cec08a0f977cc57deb8b98f8276	no	18
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22	NPL Documents	Reuters.PDF	2283319 755539ab31ba8cefa9d4e2086ab65aaea0d6c17c	no	51
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26	NPL Documents	ComputerLetterVol17Nov52001.PDF	404211 0139f438908cdb7e1bfdc97466e2b428d49d1e3f	no	6
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31	NPL Documents	Zhao.PDF	885727 d3ea2622c8daad3b6ab096f933af9bb47ff9e2d5	no	10
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32	NPL Documents	Gribble.PDF	1816120 74c76e5cc69879b55c17895c3da090674be01274	no	25
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Information:					
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35	NPL Documents	029162_search.pdf	265468 eeb73403580ed84ff11aeee2bbf17566d4cb35d1	no	7
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36	NPL Documents	029021_search.pdf	439565 a4b65e8aa2659accaa92cee0c0becd1f895dbe16	no	10
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37	NPL Documents	029158_search.pdf	265149 29819c516f680e7381ba5d77d666d84ecec5fab7	no	7

Warnings:	
Information:	
Total Files Size (in bytes):	39712808

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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+Admitted only in Virginia
•Practice Limited to Federal Agencies

June 24, 2008

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Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Art Unit 2194

Attn: Mail Stop Amendment

Re: U.S. Utility Patent Application
Application No. 11/396,251; Filed: March 30, 2006
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**
Inventors: Tuttle *et al.*
Our Ref: 2222.775000E

Sir:

Transmitted herewith for appropriate action are the following documents:

1. First Supplemental Information Disclosure Statement; and

2. Form PTO/SB/08A (1 sheet listing 2 documents (US1-US2)).

The above-listed documents are filed electronically through EFS-Web.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
Attorney for Applicants
Registration No. 28,458

GJP/n-h
Enclosure(s)

838437_1.DOC

IPR2025-00200 / 722 Patent Page 403 of 1171 EX1002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
Tuttle *et al.*	Art Unit: 2194
Appl. No.: 11/396,251	Examiner: FATEHI, PARHAM R.
Filed: March 30, 2006	Atty. Docket: 2222.775000E
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**	

First Supplemental Information Disclosure Statement

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms are documents that may be considered material to the patentability of this application as defined in 37 C.F.R. §1.56, and in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.97 and 1.98. The numbering on this First Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Information Disclosure Statement filed on October 23, 2007 in connection with the above-captioned application.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.

☒ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.

IPR2025-00200 / 722 Patent Page 405 of 1171 EX1002

☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☐ c. The required fee is provided through online credit card payment authorization in the amount of $180.00 in payment of the fee under 37 C.F.R. § 1.17(p).

☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. The required fee is provided through online credit card payment authorization in the amount of $180.00 in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office

is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.

☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below in accordance with 37 C.F.R. § 1.98(a)(3).

☒ 7. In accordance with 37 C.F.R. § 1.98(a)(2), no copies of U.S. patents and patent application publications cited on the attached IDS Forms are submitted.

☐ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No._____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

☒ 9. It is expected that the examiner will review the prosecution and cited art in the parent application nos. 10/105,018 filed March 21, 2002 (now U.S. Pat. No. 7,051,070) and 10/017,182 filed December 14, 2001 (now U.S. Pat. No. 7,043,525) in accordance with MPEP 2001.06(b) and requested that the examiner will review the prosecution and cited art in the sibling application nos. 09/901,582 filed July 9, 2001, 10/213,269 filed August 5, 2002 (now U.S. Pat. No. 7,127,720), 11/205,263 filed August 15, 2005, 11/205,233 filed August 15, 2005, 11/205,237 filed August 15, 2005, 11/347,802 filed February 3, 2006 (now U.S. Pat. No. 7,277,917), 11/469,325 filed August 31, 2006, 11/515,233 filed August 31, 2006, and 11/515,366 filed August 31, 2006, and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application

IPR2025-00200 / 722 Patent Page 408 of 1171 EX1002

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
Attorney for Applicants
Registration No. 28,458

Date: 24 June 2008

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

838433_1.DOC

IPR2025-00200 / 722 Patent Page 409 of 1171 EX1002

Equivalent of Form PTO/SB/08a (01-08)
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Substitute for form 1449/PTO

FIRST SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	2194
Examiner Name	FATEHI, PARHAM R.
Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US1	6,728,747 B1	04-27-2004	6,728,747 B1	
	US2	7,159,034 B1	01-02-2007	7,159,034 B1	
	US3				
	US4				
	US5				
	US6				
	US7				
	US8				
	US9				
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	US11				
	US12				
	US13				
	US14				
	US15				
	US16				
	US17				
	US18				
	US19				
	US20				

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	FP1					
	FP2					
	FP3					
	FP4					
	FP5					
	FP6					
	FP7					
	FP8					
	FP9					

838431_1.DOC

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. 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 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, 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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Electronic Acknowledgement Receipt

EFS ID:	3509899
Application Number:	11396251
International Application Number:	
Confirmation Number:	1129
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Customer Number:	26111
Filer:	Glenn J. Perry
Filer Authorized By:	
Attorney Docket Number:	2222.775000E
Receipt Date:	24-JUN-2008
Filing Date:	30-MAR-2006
Time Stamp:	15:52:07
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		2222775000E1stsupplementalidsfilingdocs.pdf	299635 b983f8d275edd7f9a2fff72981761ec0b7f0e257	yes	9

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Information Disclosure Statement Letter	1	8
	Information Disclosure Statement (IDS) Filed	9	9
Warnings:			
Information:			
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New Applications Under 35 U.S.C. 111
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E	1129

26111 7590 07/23/2009

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EXAMINER	
DAO, TUAN C.	

ART UNIT	PAPER NUMBER
4142	

MAIL DATE	DELIVERY MODE
07/23/2009	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.

Office Action Summary	Application No.	Applicant(s)	
	11/396,251	TUTTLE ET AL.	
	Examiner	Art Unit	
	Tuan C. Dao	4142	

-- 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 *30 March 2006*.

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) *26-62* 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) *26-62* 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 *30 March 2006 and 30 August 2006* 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 *06/24/2008 and 10/23/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The instant application having Application No. 11/396251 filed on 03/30/2006 is presented for examination by the examiner.

Examiner Notes

2. Examiner cites particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Oath/Declaration

3. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63.**

Drawings

4. The applicant's drawings submitted are acceptable for examination purposes.

Information Disclosure Statement

5. As required by M.P.E.P. 609, the applicant's submissions of the Information Disclosure Statements dated 06/24/2008 and 10/23/2007 are acknowledged by the

examiner and the cited references have been considered in the examination of the claims now pending.

Specification Objections

6. The disclosure is objected to because there is not particular definition provided in the specification for the "computer readable medium".

Appropriate correction is requested.

Claim Rejections - 35 USC § 101

7. 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.

8. Claims 33-38 and 51-56 are rejected because the claimed invention is directed to non-statutory subject matter.

Claim 33 is rejected under 35 U.S.C. 101 as directed to non-statutory subject matter of software, per se. The claim lacks the necessary physical articles or objects to constitute a machine or manufacture within the meaning of 35 U.S.C. 101. It is clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. It is at best, function descriptive material per se.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material"

are non-statutory when claimed as descriptive material per se, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994).

Merely claiming non-functional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See Diehr, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in Benson were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.").

Applicant has claimed a "a routing network" for enabling dynamic updating of a property of a live object at client coupled to the network in the preamble comprising: "A gateway that receive .." and "routing means for determining .."; this implies that applicant is claiming a system of software, per se, lacking the hardware necessary to realize any of the underlying functionality. Therefore, claim 33 is directed to non-statutory subject matter as computer programs, per se, i.e. the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

Claims 34-38 are rejected under 35 U.S.C. 101 as directed to non-statutory subject matter for at least the reason stated above. Claims 34-38 are depended on claim 33, however, they do not add any feature or subject matter that would solve any of the non-statutory deficiencies of claim 33.

Claims 51-56 are considered statutory under 35 U.S.C. 101 because the claimed invention are directed to a statutory subject matter. In this case, although the specification fails to specifically define the term "computer readable medium", however, the examiner interprets that the term "computer readable medium" as a type of physical hardware storage that can be read by a computer. When functional descriptive material is recorded on some computer readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994).

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 39-42, 45-50, 51-56, and 57-62 are rejected under 35 U.S.C. 102(e) as being anticipated by Wu et al. (US Patent Publication No. 2002/0087630 hereafter "Wu").

As per claim 39, Wu discloses a computer method for providing dynamic content over a network, the method comprising:

providing a data representation to a client device coupled to the network (e.g., [0022] rendering near real time information/data to a device display; [0037], displaying event/response on a client device), wherein the data representation includes at least one live object that is recognized by the client device (e.g., [0003] and [0073], near real time message/object; [0045], said message/object is recognized and processed by UAR 201 embedded in client device 206), and wherein the client responds to the live object of the data representation by determining an object ID of the live object to register for updates of the live object with a routing network (e.g., [0061], [0066] and [0069]), such that registering the client with the routing network provides client connection information to the routing network (e.g., [0003], [0014], and [0036]);

sending an update message to the routing network (e.g., [0012] and [0042]), wherein the update message identifies the live object and contains update data that updates a property of the live object (e.g., [0044], [0055], [0064], and [0101]) such that the routing network has sufficient information to identify the client device as a registered device and send a routed message containing the update data to the client device (e.g., [0061], [0066], and [0097]), such that the client device processes the routed message

upon receipt to update the property of the live object at the client device (e.g., [0006] and [0061]).

As per claim 40, Wu discloses the method of claim 39, wherein the live object of the data representation causes the client device to register with a client proxy of the network (e.g., [0045] and [0060]).

As per claim 41, Wu discloses the method of claim 39, wherein the live object of the data representation causes the client device to register with a node of the network (e.g., [0036] and [0047]).

As per claim 42, Wu discloses the method of claim 39, wherein the received data representation includes an activation module that is executed by the client device and is adapted to register the live object with the routing network (e.g., [0012] and [0042]).

As per claim 45, it is an apparatus version, which recite(s) the same limitations as claim 39, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 45.

As per claim 46, it is an apparatus version, which recite(s) the same limitations as claim 40, wherein all claimed limitations have been addressed and/or set forth above.

Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 46.

As per claim 47, it is an apparatus version, which recite(s) the same limitations as claim 41, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 47.

As per claim 48, it is an apparatus version, which recite(s) the same limitations as claim 42, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 48.

As per claim 49, it is an apparatus version, which recite(s) the same limitations as claim 43, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 49.

As per claim 50, it is an apparatus version, which recite(s) the same limitations as claim 44, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 50.

As per claim 51, it is a computer-readable memory medium version, which recite(s) the same limitations as claim 39, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 51.

As per claim 52, it is a computer-readable memory medium version, which recite(s) the same limitations as claim 40, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 52.

As per claim 53, it is a computer-readable memory medium version, which recite(s) the same limitations as claim 41, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 53.

As per claim 54, it is a computer-readable memory medium version, which recite(s) the same limitations as claim 42, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 54.

As per claim 55, it is a computer-readable memory medium version, which recite(s) the same limitations as claim 43, wherein all claimed limitations have been

addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 55.

As per claim 56, it is a computer-readable memory medium version, which recite(s) the same limitations as claim 44, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 56.

As per claim 57, it is a device version, which recite(s) the same limitations as claim 39, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 57.

As per claim 58, it is a device version, which recite(s) the same limitations as claim 40, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 58.

As per claim 59, it is a device version, which recite(s) the same limitations as claim 41, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 59.

As per claim 60, it is a device version, which recite(s) the same limitations as claim 42, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 60.

As per claim 61, it is a device versions, which recite(s) the same limitations as claim 43, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 61.

As per claim 62, it is a device version, which recite(s) the same limitations as claim 44, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 62.

Claim Rejections - 35 USC § 103

11. 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.

12. Claims 26-38 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Wu et al. (US Patent Publication No. 2002/0087630 hereafter "Wu") in view of Giotta et al. (US Patent Publication No. 2002/0120717 hereafter "Giotta").

As per claim 26, Wu discloses a method for providing dynamic content over a network, the method comprising:

receiving an update message from an input source (e.g., [0060], publishing/subscribing (receiving) a topic and posting a message associated with the topic;),

the update message identifying a live object and containing data for updating a property of the live object (e.g., [0069], published event (update message) including properties such as text string, id, expired time);

identifying a category of the update message (e.g., [0060], the service request are identified by three categories: subscribe, unsubscribe, and publish);

determining a client that has registered for updates of the live object and routing the data to the client (e.g., [0042] and [0066]: determining a subscriber (a client registering a topic) and routing a message to the subscriber),

wherein the client is adapted to process the update data and update the property of the live object (e.g., [0003] and [0045]).

Wu does not explicitly discloses identifying a mapping of the category to a node type; routing the update message to a node having the mapped node type.

However, Giotta further discloses:

identifying a mapping of the category to a node type (e.g., [0039]: a multiple of nodes identified as Client Manager CM nodes and Message Manager MM nodes; by mapping, the MM nodes providing all the services of the destinations);

routing the update message to a node having the mapped node type (e.g., [0039] and [0041], routing outgoing messages to only CM nodes, storing messages to MM nodes).

Wu and Giotta are analogous art because they are from the same filed of endeavor of delivering messages between computer programs via communication network.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine routing outgoing messages to only CM nodes of Giotta into the teaching of Wu because it would provide for the purpose of providing scalability with respect to performance and connections (e.g., [0027]-[0028]).

As per claim 27, Wu discloses wherein determining a client and routing the data to the client are performed at the node (e.g., [0066]).

As per claim 28, Wu discloses wherein determining a client comprises extracting an object ID from the update message and determining a connection to the client (e.g., [0042] and [0066]).

As per claim 29, Wu discloses wherein determining a connection comprises determining at least one client proxy with which the client communicates and routing the

data to the client proxy, and then routing the data from the client proxy to the client (e.g., [0006], [0012], and [0042]).

As per claim 30, Wu discloses wherein client registration information concerning the client connection is maintained at the node (e.g., [0014] and [0036]).

As per claim 31, Wu discloses wherein client registration information concerning the client connection is maintained at the client proxy (e.g., [0033] and [0041]).

As per claim 32, Wu fails to disclose wherein: routing the update message comprises routing the update message to a proxy node comprising a node that is adapted to receive messages of more than one message category; and determining a connection comprises determining at least one corresponding node having a node type that is mapped to the message category, with which the registered client communicates, and routing the data to the corresponding node.

However, Giotta further discloses routing the update message comprises routing the update message to a proxy node comprising a node that is adapted to receive messages of more than one message category (e.g., [0039], Client Manager CM nodes and Message Manager MM nodes);

and determining a connection comprises determining at least one corresponding node having a node type that is mapped to the message category, with which the registered client communicates, and routing the data to the corresponding node (e.g.,

[0039] and [0041], routing outgoing messages to only CM nodes, storing messages to MM nodes).

Wu and Giotta are analogous art because they are from the same filed of endeavor of delivering messages between computer programs via communication network.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine routing outgoing messages to only CM nodes of Giotta into the teaching of Wu because it would provide for the purpose of providing scalability with respect to performance and connections (e.g., [0027]-[0028]).

As per claim 33, it recite(s) the same limitations as claim 26, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claim 33.

As per claim 34, Wu discloses wherein the routing means extracts an object ID from the update message and determines a connection to the registered client for routing the data to the registered client (e.g., [0042] and [0061]).

As per claim 35, Wu discloses wherein the routing means determines a connection by determining at least one client proxy with which the registered client communicates, and then routing the data to the client proxy (e.g., [0061] and [0066]).

As per claim 36, it is a routing network version, which recite(s) the same limitations as claim 30, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 36.

As per claim 37, it is a routing network version, which recite(s) the same limitations as claim 31, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 37.

As per claim 38, it is a routing network version, which recite(s) the same limitations as claim 32, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 38.

As per claim 43, Wu fails to disclose wherein the activation module determines a node type that handles registration and causes the client device to register with a node of the determined registration node type.

However, Giotta further discloses the activation module determines a node type that handles registration and causes the client device to register with a node of the determined registration node type (e.g., [0039], Client Manager CM nodes and Message Manager MM nodes).

Wu and Giotta are analogous art because they are from the same filed of endeavor of delivering messages between computer programs via communication network.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Client Manager CM nodes and Message Manager MM nodes of Giotta into the teaching of Wu because it would provide for the purpose of providing scalability with respect to performance and connections (e.g., [0027]-[0028]).

As per claim 44, Wu fails to disclose wherein the activation module determines a message category of the data representation and causes the client device to register with a node having a node type corresponding to the message category.

However, Giotta further discloses the activation module determines a message category of the data representation and causes the client device to register with a node having a node type corresponding to the message category (e.g., [0020] and [0041]).

Wu and Giotta are analogous art because they are from the same filed of endeavor of delivering messages between computer programs via communication network.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Client Manager CM nodes and Message Manager MM nodes of Giotta into the teaching of Wu because it would provide for the purpose of providing scalability with respect to performance and connections (e.g., [0027]-[0028]).

Conclusion

13. Any inquiry concerning this communication should be directed to examiner Tuan Dao, whose telephone/fax numbers are (571) 270 3387, respectively. The examiner can normally be reached on every Monday-Thursday, and the second Friday of the bi-week from 7:30AM to 5:00PM.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Pham, can be reached at (571) 272 3689.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

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).

/T. C. D./

Examiner, Art Unit 4142

/THOMAS K PHAM/
Supervisory Patent Examiner, Art Unit 4142

Notice of References Cited	Application/Control No. 11/396,251	Applicant(s)/Patent Under Reexamination TUTTLE ET AL.	
	Examiner Tuan C. Dao	Art Unit 4142	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,230,048 A	07-1993	Moy, Diana Y.	707/1
*	B	US-6,366,926 B1	04-2002	Pohlmann et al.	707/104.1
*	C	US-2002/0087630 A1	07-2002	Wu, Jonathan	709/203
*	D	US-2002/0120717 A1	08-2002	Giotta, Paul	709/219
*	E	US-7,293,074 B1	11-2007	Jellinek et al.	709/218
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	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
	11396251	TUTTLE ET AL.
	Examiner	Art Unit
	Tuan C Dao	4142

SEARCHED			
Class	Subclass	Date	Examiner
709	203, 219	07/14/2009	TD
719	309	07/14/2009	TD

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor search	07/14/2009	TD
East search	07/14/2009	TD

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11396251	TUTTLE ET AL.
	Examiner	Art Unit
	Tuan C Dao	4142

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/18/2009								
	26	✓								
	27	✓								
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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11396251	TUTTLE ET AL.
	Examiner	Art Unit
	Tuan C Dao	4142

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/18/2009								
	62	✓								

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BIB DATA SHEET

CONFIRMATION NO. 1129

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/396,251	03/30/2006	~~709~~ 719	4142	2222.775000E

APPLICANTS

Timothy Tuttle, San Francisco, CA;
Karl E. Rumelhart, Palo Alto, CA;

**** CONTINUING DATA ***************************

This application is a CON of 10/105,018 03/21/2002 PAT 7,051,070
which is a CIP of 10/017,182 12/14/2001 PAT 7,043,525
which claims benefit of 60/278,303 03/21/2001
and claims benefit of 60/280,627 03/29/2001
and claims benefit of 60/279,608 03/28/2001
and claims benefit of 60/276,847 03/16/2001
and claims benefit of 60/256,613 12/18/2000

/Tuan Dao/ verified

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

04/25/2006

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /TUAN C. DAO/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		CA	12	37	6

ADDRESS

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005
UNITED STATES

TITLE

Asynchronous messaging using a node specialization architecture in the dynamic routing network

FILING FEE RECEIVED	FEES: Authority has been given in Paper	☐ All Fees
2580	No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.D./

Equivalent of Form PTO/SB/08a (01-08)
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FIRST SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 1

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	2194
Examiner Name	~~PATEL, PARIAM R.~~ Tuan Dao
Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number / Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US1	6,728,747 B1	04-27-2004	6,728,747 B1	
	US2	7,159,034 B1	01-02-2007	7,159,034 B1	
	US3				
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FOREIGN PATENT DOCUMENTS

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	FP1					
	FP2					
	FP3					
	FP4					
	FP5					
	FP6					
	FP7					
	FP8					
	FP9					

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Examiner Signature	/Tuan Dao/	Date Considered	07/15/2009

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	US1	5,535,335	07-09-1996	Cox et al.	
	US2	5,706,516	01-06-1998	Chang et al.	
	US3	5,822,543	10-13-1998	Dunn et al.	
	US4	5,878,420	03-02-1999	de la Salle	
	US5	5,886,643	03-23-1999	Diebboll et al.	
	US6	5,964,839	10-12-1999	Johnson et al.	
	US7	5,974,457	10-26-1999	Waclawsky et al.	
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	US9	6,029,175	02-22-2000	Chow et al.	
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	FP1	EP 0 733 983 A2	09-25-1996	AT&T Corp.		
	FP2	EP 0 749 081 A1	12-18-1996	Pointcast Inc.		
	FP3	EP 0 889 421 A1	01-07-1999	Yahoo Inc.		
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	FP5	WO 01/63837 A2	08-30-2001	Navic Systems Inc.		
	FP6	WO 2005/046184 A1	05-19-2005	Dotworlds Ltd.		
	FP7					
	FP8					
	FP9					

Examiner Signature	/Tuan Dao/	Date Considered	07/15/2009

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 3

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	2194
Examiner Name	~~FATEHI PARHAM R.~~ Tuan Dao
Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

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	US21	6,418,448 B1	07-09-2002	Sarkar	
	US22	6,418,467 B1	07-09-2002	Schweitzer et al.	
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	FP18					

Examiner Signature	/Tuan Dao/	Date Considered	07/15/2009

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 3 of 3

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	2194
Examiner Name	~~PATEL, PARHAM R.~~ Tuan Dao
Attorney Docket Number	2222.775000E

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	US41	6,871,346 B1	03-22-2005	Kumbalimutt et al.	
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	US57				
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	US59				
	US60				

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	FP19					
	FP20					
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	FP25					
	FP26					
	FP27					

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				*Application Number*	11/396,251
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				Art Unit	2194
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Sheet	1	of	3	*Attorney Docket Number*	2222.775000E

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	NPL1	Franklin et al., "Dissemination-Based Information Systems," IEEE Data Engineering Bulletin, vol. 19, No. 3, Sep. 1996, 9 pages.	
	NPL2	Nagami et al., "Toshiba's Flow Attribute Notification Protocol (FANP) Specification," Apr. 1997, RFC 2129, Internet RFC/STD/FYI/BCP Archives [online], [retrieved on May 16, 2002]. Retrived from the Internet: <landfield.com/rfcs/rfc2129.html>, 16 pages.	
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Examiner Signature	/Tuan Dao/	Date Considered	07/15/2009

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	NPL11	Aguilera et al., "Efficient Atomic Broadcast Using Deterministic Merge," Symposium on Principles of Distributed Computing, 2000, 10 pages.	
	NPL12	Opyrchal et al., "Exploiting IP Multicast in Content-Based Publish-Subscribe Systems," Proceedings of the IFIP/ACM International Conference on Distributed Systems Platforms (Middleware 2000), Apr. 2000, 23 pages.	
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	NPL14	Reuters, "Reuters Market Data Systems and the Trading Solutions Architecture," Version 1.0, Jan. 12, 2001, 51 pages.	
	NPL15	Ramamrithan et al., "Dissemination of Dynamic Data on the Internet," [online]. Powerpoint Presentation, Spring 2001, [retrieved on Feb. 6, 2002], 5 pages. Retrieved from the Internet <.cs.umbc.edu/courses/graduate/CMSC691T/spring.sub.--2001/rlist/amit.ppt>.	
	NPL16	ComputerLetter, vol. 17, No. 23, Jul. 16, 2001, pp. 1-8.	
	NPL17	ComputerLetter, vol. 17, No. 31, Sep. 24, 2001, pp. 1-6.	
	NPL18	ComputerLetter, vol. 17, No. 35, Nov. 5, 2001, pp. 1-6.	
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Examiner Signature	/Tuan Dao/	Date Considered	07/15/2009

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NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T[2]
	NPL21	"Reckoning with IP", ComputerLetter, vol. 17, No. 37, Nov. 19, 2001, pp. 1-6.	
	NPL22	"Persistence Counts", ComputerLetter, vol. 17, No. 23, Jul. 16, 2001, pp. 1, 5-7.	
	NPL23	Zhao et al.; "A Workflow-centric Study of Organizational Knowledge Distribution;" Proceedings of the 33rd Hawaii International Conference on System Sciences;" 2000; pp.1-10; IEEE.	
	NPL24	Gribble, et al.; "The Ninja Architecture for Robust Internet-scale Systems and Services;" Computer Networks; 2001; pp.473-497; Volume 35; Elsevier Science B.V.	
	NPL25	Carmona, David; "Programming the Thread Pool in the .NET Framework"; 'Online' June 2002, pp.1-17, XP002357234; retrieved on 12/01/2005 from the Internet: URL:http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dndotnet/hmtl/progthrepool.asp>, pages 1-17.	
	NPL26	Welsh, Matthew D.; "An Architecture for Highly Concurrent, Well-Conditioned Internet Services"; URL: http://www.eecs.harvard.edu/{mdw/papers/mdw-phdthesis/pdf>, 2005, pages 48-54, 101, and 113-114.	
	NPL27	Written Opinion of the International Searching Authority for International Application No. PCT/US2005/029162, recorded January 17, 2006, 7 pages.	
	NPL28	Written Opinion of the International Searching Authority for International Application No. PCT/US2005/029021, recorded December 14, 2005, 10 pages.	
	NPL29	Written Opinion of the International Searching Authority for International Application No. PCT/US2005/029158, recorded January 25, 2006, 7 pages.	
	NPL30		

Examiner Signature	/Tuan Dao/	Date Considered	07/15/2009

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.98. 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 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, 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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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
Tuttle *et al.*	Art Unit: 4142
Appl. No.: 11/396,251	Examiner: DAO, TUAN C.
Filed: March 30, 2006	Atty. Docket: 2222.775000E
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**	

Amendment and Reply Under 37 C.F.R. § 1.111

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the Non-Final Office Action dated July 23, 2009, Applicants submit the following Amendment and Remarks.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments to the Specification

Please amend paragraph [0131] of the Specification as follows:

[0131] The above description is included to illustrate the operation of the preferred embodiments and is not meant to limit the scope of the invention. The scope of the invention is to be limited only by the following claims. From the above discussion, many variations will be apparent to one skilled in the relevant art that would yet be encompassed by the spirit and scope of the invention. For example, the invention may be implemented using a tangible computer-readable medium having stored thereon computer-executable instructions.

IPR2025-00200 / 722 Patent Page 445 of 1171 EX1002

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-25. (canceled)

26. (Currently Amended) A method for providing dynamic content over a network, the method comprising:

receiving, using a processing device, an update message from an input source, the update message identifying a live object and containing data for updating a property of the live object;

identifying, using the processing device, a category of the update message;

identifying, using the processing device, a mapping of the category to a node type;

routing, using the processing device, the update message to a node having the mapped node type; and

determining, using the processing device, a client that has registered for updates of the live object and routing the data to the client, wherein the client is adapted to process the update data and update the property of the live object.

27. (Previously Presented) The method of claim 26, wherein determining a client and routing the data to the client are performed at the node.

28. (Previously Presented) The method of claim 26, wherein determining a client comprises extracting an object ID from the update message and determining a connection to the client.

29. (Previously Presented) The method of claim 28, wherein determining a connection comprises determining at least one client proxy with which the client communicates and routing the data to the client proxy, and then routing the data from the client proxy to the client.

30. (Previously Presented) The method of claim 29, wherein client registration information concerning the client connection is maintained at the node.

31. (Previously Presented) The method of claim 29, wherein client registration information concerning the client connection is maintained at the client proxy.

32. (Previously Presented) The method of claim 28, wherein:

routing the update message comprises routing the update message to a proxy node comprising a node that is adapted to receive messages of more than one message category; and

determining a connection comprises determining at least one corresponding node having a node type that is mapped to the message category, with which the registered client communicates, and routing the data to the corresponding node.

33. (Currently Amended) A routing network for enabling dynamic updating of a property of a live object at a client coupled to the network, the routing network comprising:

a gateway that receives, using a processing device, an update message from an input source, the update message identifying a live object and containing data for updating a property of the live object, wherein the gateway identifies a category of the update message, identifies a mapping of the category to a node type, and routes the update message in accordance with the identified mapping; and

routing means for determining, using the processing device, a client that has registered for updates of the live object and routing the data from a node that has received the routed update message to the registered client, wherein the registered client is adapted to process the data and update the property of the live object.

34. (Previously Presented) The routing network of claim 33, wherein the routing means extracts an object ID from the update message and determines a connection to the registered client for routing the data to the registered client.

35. (Previously Presented) The routing network of claim 34, wherein the routing means determines a connection by determining at least one client proxy with which the registered client communicates, and then routing the data to the client proxy.

36. (Previously Presented) The routing network of claim 35, wherein client registration information concerning the client connection is maintained at the node.

37. (Previously Presented) The routing network of claim 35, wherein client registration information concerning the client connection is maintained at the client proxy.

38. (Previously Presented) The routing network of claim 33, wherein:

the gateway routs the update message by routing the update message to a proxy node comprising a node that is adapted to receive messages of more than one message category; and

the routing means determines at least one corresponding node that has a node type mapped to the message category and with which the registered client communicates, and then routing the data to the corresponding node.

39. (Currently Amended) A computer method for providing dynamic content over a network, the method comprising:

providing, using a processing device, a data representation to a client device coupled to the network, wherein the data representation includes at least one live object that is recognized by the client device, and wherein the client responds to the live object of the data representation by determining an object ID of the live object to register for updates of the live object with a routing network, such that registering the client with the routing network provides client connection information to the routing network; and

sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object such that the routing network has sufficient information to identify the client device as a registered device and send a routed message containing the update data to the client device, such that the client device processes the routed message upon receipt to update the property of the live object at the client device.

40. (Previously Presented) The method of claim 39, wherein the live object of the data representation causes the client device to register with a client proxy of the network.

41. (Previously Presented) The method of claim 39, wherein the live object of the data representation causes the client device to register with a node of the network.

42. (Previously Presented) The method of claim 39, wherein the received data representation includes an activation module that is executed by the client device and is adapted to register the live object with the routing network.

43. (Previously Presented) The method of claim 42, wherein the activation module determines a node type that handles registration and causes the client device to register with a node of the determined registration node type.

44. (Previously Presented) The method of claim 42, wherein the activation module determines a message category of the data representation and causes the client device to register with a node having a node type corresponding to the message category.

45. (Currently Amended) An apparatus for providing dynamic content over a network, the apparatus comprising:

a content provider that provides, using a processing device, a data representation to a client device coupled to the network, wherein the data representation includes at least one live object that is recognized by the client device, and wherein the client responds to the live object of the data representation by determining an object ID of the live object to register for updates of the live object with a routing network, such that registering the client with the routing network provides client connection information to the routing network;

an information provider that sends, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object such that the routing network has sufficient information

to identify the client device as a registered device and send a routed message containing the update data to the client device, such that the client device processes the routed message upon receipt to update the property of the live object at the client device.

46. (Previously Presented) The apparatus of claim 45, wherein the live object of the data representation causes the client device to register with a client proxy of the network.

47. (Previously Presented) The apparatus of claim 45, wherein the live object of the data representation causes the client device to register with a node of the network.

48. (Previously Presented) The apparatus of claim 45, wherein the received data representation includes an activation module that is executed by the client device and is adapted to register the live object with the routing network.

49. (Previously Presented) The apparatus of claim 48, wherein the activation module determines a node type that handles registration and causes the client device to register with a node of the determined registration node type.

50. (Previously Presented) The apparatus of claim 48, wherein the activation module determines a message category of the data representation and causes the client device to register with a node having a node type corresponding to the message category.

51. (Currently Amended) A tangible computer-readable medium having stored thereon computer-executable instructions ~~code embodied therein~~ for providing dynamic content over a

network that, if executed by a computing device, cause the computing device to ~~the computer program code configured to cause a computing device to~~ perform ~~operations~~ a method comprising:

providing, using a processing device, a data representation to a client device coupled to the network, wherein the data representation includes at least one live object that is recognized by the client device, and wherein the client responds to the live object of the data representation by determining an object ID of the live object to register for updates of the live object with a routing network, such that registering the client with the routing network provides client connection information to the routing network; and

sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object such that the routing network has sufficient information to identify the client device as a registered device and send a routed message containing the update data to the client device, such that the client device processes the routed message upon receipt to update the property of the live object at the client device.

52. (Previously Presented) The computer-readable medium of claim 51, wherein the live object of the data representation causes the client device to register with a client proxy of the network.

53. (Previously Presented) The computer-readable medium of claim 51, wherein the live object of the data representation causes the client device to register with a node of the network.

54. (Previously Presented) The computer-readable medium of claim 51, wherein the received data representation includes an activation module that is executed by the client device and is adapted to register the live object with the routing network.

55. (Previously Presented) The computer-readable medium of claim 54, wherein the activation module determines a node type that handles registration and causes the client device to register with a node of the determined registration node type.

56. (Previously Presented) The computer-readable medium of claim 54, wherein the activation module determines a message category of the data representation and causes the client device to register with a node having a node type corresponding to the message category.

57. (Currently Amended) A device for providing dynamic content over a network, the device comprising:

logic configured to provide, using a processing device, a data representation to a client device coupled to the network, wherein the data representation includes at least one live object that is recognized by the client device, and wherein the client responds to the live object of the data representation by determining an object ID of the live object to register for updates of the live object with a routing network, such that registering the client with the routing network provides client connection information to the routing network; and

logic configured to provide, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object such that the routing network has sufficient information to identify the client device as a registered device and send a routed message containing the

update data to the client device, such that the client device processes the routed message upon receipt to update the property of the live object at the client device.

58. (Previously Presented) The device of claim 57, wherein the live object of the data representation causes the client device to register with a client proxy of the network.

59. (Previously Presented) The device of claim 57, wherein the live object of the data representation causes the client device to register with a node of the network.

60. (Previously Presented) The device of claim 57, wherein the received data representation includes an activation module that is executed by the client device and is adapted to register the live object with the routing network.

61. (Previously Presented) The device of claim 60, wherein the activation module determines a node type that handles registration and causes the client device to register with a node of the determined registration node type.

62. (Previously Presented) The device of claim 60, wherein the activation module determines a message category of the data representation and causes the client device to register with a node having a node type corresponding to the message category.

63. (New) A method comprising:

providing, using a processing device, a live object to a client device;

sending, using the processing device, an update message to a routing network, the update message identifying the live object and containing update data to update the live object; and

if the client device is registered to receive update data for the identified live object, sending, using the processing device, from the routing network a routed message containing the update data to the client device.

64. (New) An apparatus that provides dynamic content, the apparatus comprising:

a content provider arranged to provide a live object to a client device; and

an information provider arranged to provide an update message to a routing network, the update message identifying the live object and containing update data to update the live object,

wherein the routing network is arranged to send a routed message containing the update data to the client device if the client device is registered to receive update data for the identified live object.

65. (New) A tangible computer-readable storage medium having stored thereon computer-executable instructions for providing dynamic content over a network, that if executed by a computing device, cause the computing device to perform a method comprising:

providing, using a processing device, a live object to a client;

sending, using the processing device, an update message to a routing network, the update message identifying the live object and containing update data to update the live object; and

if the client device is registered to receive update data for the identified live object, sending, using the processing device, from the routing network a routed message containing the update data to the client device.

66. (New) A device for providing dynamic content, the device comprising:

logic configured to provide a live object to a client;

logic configured to provide an update message to a routing network, the update message identifying the live object and containing update data to update the live object; and

logic configured to send a routed message containing the update data to the client device if the client device is registered to receive update data for the identified live object.

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 26-66 are pending in the application, with claims 26, 33, 39, 45, 51, 57, and 63-66 being the independent claims. New claims 63-66 are sought to be added. Claims 1-25 were previously cancelled without prejudice to or disclaimer of the subject matter therein. The Specification is sought to be amended at paragraph [0131]. Applicants reserve the right to prosecute similar or broader claims, with respect to the cancelled and amended claims, in the future. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Objection to the Specification

At page 3 of the Office Action, the Examiner objected to the Specification as allegedly not providing "particular definition" for "computer readable medium." Applicants respectfully traverse this objection.

Without acquiescing to the propriety of the objection, Applicants have amended the Specification as indicated above to recite "tangible computer-readable medium." This amendment to the Specification does not constitute new matter. The M.P.E.P. recites at section 2163.07(a):

> By disclosing in a patent application a device that inherently performs a function or has a property, operates according to a theory or has an advantage, a patent application ***necessarily discloses that function, theory or advantage, even though it says nothing explicit concerning it. The application may later be amended to recite the function, theory or advantage without introducing prohibited new matter.*** *In re Reynolds*, 443 F.2d 384, 170 USPQ 94 (CCPA 1971); *In re Smythe*, 480 F. 2d 1376, 178 USPQ 279 (CCPA 1973). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the Objection to the Specification.

Rejection under 35 U.S.C. § 101

At page 3 of the Office Action, the Examiner rejected claims 33-38 and 51-56 under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Applicants respectfully traverse this rejection.

Without acquiescing to the propriety of the rejection, Applicants have amended claims 33 and 51 for other reasons and to expedite prosecution. Claims 33 and 51 recite, *inter alia*, "using a processing device."

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. § 101 rejection of claims 33 and 51 and pass these claims to allowance. Additionally, at least based on their respective dependencies to claims 33 and 51, claims 34-38 and 52-56 should be found allowable, as well as for their additional distinguishing features.

IPR2025-00200 / 722 Patent Page 458 of 1171 EX1002

Rejection under 35 U.S.C. § 102

At page 6 of the Office Action, the Examiner rejected claims 39-42, 45-50, 51-56, and 57-62 under 35 U.S.C. § 102(e) as being allegedly anticipated by U.S. Patent Application Publication Number 2002/0087630 to Wu *et al.* ("Wu"). Applicants respectfully traverse this rejection.

Wu is an improper reference. Wu has a filing date of **October 19, 2001** and claims priority to a provisional application (U.S. Provisional Application Number 60/242,045) with a filing date of **October 20, 2000**.

At pages 6-11 of the Office Action, the Examiner states that Wu discloses all the elements of claims 39-42, 45-50, 51-56, and 57-62. Applicants respectfully disagree. Further, ***the portions of Wu cited by the Examiner are not supported by U.S. Provisional Application Number 60/242,045***. Thus, the Examiner cannot rely on U.S. Provisional Application Number 60/242,045 for a 35 U.S.C. § 102(e) priority date for Wu.

The instant application claims priority to Provisional Application Number 60/278, 303 with filing date **March 21, 2001**, Provisional Application Number 60/280,627 with filing date **March 29, 2001**, Provisional Application Number 60/279,608 with filing date **March 28, 2001**, Provisional Application Number 60/276,847 with filing date **March 16, 2001**, and Provisional Application Number 60/256,613 with filing date **December 18, 2000**, ***all five of which have priority dates older than the filing date of Wu***.

Thus, the rejection of claims 39-42, 45-50, 51-56, and 57-62 has been rendered moot.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. § 102(e) rejection of claims 39-42, 45-50, 51-56, and 57-62 and pass these claims to allowance.

Rejection under 35 U.S.C. § 103

At page 12 of the Office Action, the Examiner rejected claims 26-38 and 43-44 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Wu in view of U.S. Patent Application Publication Number 2002/0120717 to Giotta *et al.* ("Giotta"). Applicants respectfully traverse this rejection.

As stated above with respect to claims 39-42, 45-50, 51-56, and 57-62, Wu is an improper reference.

At page 13 of the Office Action the Examiner states that Giotta teaches "identifying a mapping of the category to a node type" and "routing the update message to a node having the mapped node type." However, the Examiner does not use Giotta to teach, nor does Giotta teach, any of the other features of claims 26 or 33. Thus, Giotta cannot be used to cure the deficiencies of Wu. Therefore, the applied references cannot be used to establish a prima facie case of obviousness for claims 26 and 33.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. § 103(a) rejection of claims 26 and 33 and pass these claims to allowance. Additionally, at least based on their respective dependencies to claims 26 and 39, claims 27-32,

34-38, 43, and 44 should be found allowable over the applied references, as well as for their additional distinguishing features

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
Attorney for Applicants
Registration No. 28,458

Date: 23 Oct 2009

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
Tuttle *et al.*	Art Unit: 4142
Appl. No.: 11/396,251	Examiner: DAO, TUAN C.
Filed: March 30, 2006	Atty. Docket: 2222.775000E
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**	

Second Supplemental Information Disclosure Statement

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms are documents that may be considered material to the patentability of this application as defined in 37 C.F.R. §1.56, and in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.97 and 1.98.

Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.

☐ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.

☒ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☒ c. The required fee is provided through online credit card payment authorization in the amount of $180.00 in payment of the fee under 37 C.F.R. § 1.17(p).

☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but on or before payment of the Issue Fee. The required fee is provided through online credit card payment authorization in the amount of $180.00 in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38 and MPEP 609.04(a)(III).

☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below in accordance with 37 C.F.R. § 1.98(a)(3).

☒ 7. Copies of documents NPL1-NPL15 are submitted. However, in accordance with 37 C.F.R. § 1.98(a)(2), no copies of U.S. patents and patent application publications cited on the attached IDS Forms are submitted.

☐ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No._____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

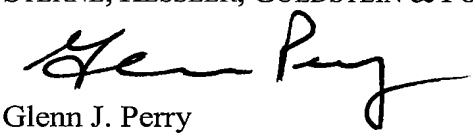
☒ 9. It is expected that the examiner will review the prosecution and cited art in the parent application nos. 10/105,018 filed March 21, 2002 (now U.S. Pat. No. 7,051,070) and 10/017,182 filed December 14, 2001 (now U.S. Pat. No. 7,043,525) in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Glenn J. Perry
Attorney for Applicants
Registration No. 28,458

Date: 23 Oct. 2009

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Substitute for form 1449/PTO

SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	4142
Examiner Name	DAO, TUAN C.
Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US1	6,094,681	07-25-2000	Shaffer et al.	
	US2	6,408,282 B1	06-18-2002	Buist	
	US3	6,553,413 B1	04-22-2003	Leighton et al.	
	US4	6,725,446 B1	04-20-2004	Hahn et al.	
	US5	6,769,009 B1	07-27-2004	Reisman	
	US6	7,107,326 B1	09-12-2006	Fijolek et al.	
	US7	7,249,197 B1	07-24-2007	Roestenburg et al.	
	US8	7,412,518 B1	08-12-2008	Duigou et al.	
	US9	7,430,610 B2	09-20-2008	Pace et al.	
	US10	2001/0012299 A1	08-09-2001	Dahlen	
	US11	2002/0095399 A1	07-18-2002	Devine et al.	
	US12	2003/0026254 A1	02-06-2003	Sim	
	US13	2003/0041110 A1	02-27-2003	Wenocur et al.	
	US14	2003/0140111 A1	07-24-2003	Pace et al	
	US15	2004/0139433 A1	07-15-2004	Blythe et al.	
	US16	2004/0215493 A1	10-28-2004	Koppes et al.	
	US17	2005/0125557 A1	06-09-2005	Vasudevan et al.	
	US18	2005/0278726 A1	12-15-2005	Cano et al.	
	US19	2006/0031282 A1	02-09-2006	Tuttle et al.	
	US20	2006/0031283 A1	02-09-2006	Tuttle et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

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This collection of information is required by 37 CFR 1.97 and 1.98. 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 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, 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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SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 2

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	4142
Examiner Name	DAO, TUAN C.
Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US21	2006/0265488 A1	11-23-2006	Tuttle et al.	
	US22	2009/0077173 A1	03-19-2009	Lowery et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

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1034433_1.DOC

Substitute for form 1449/PTO				*Complete if Known*	
SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				*Application Number*	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy Tuttle
				Art Unit	4142
				Examiner Name	DAO, TUAN C.
Sheet	1	of	2	*Attorney Docket Number*	2222.775000E

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
	NPL1	Non-Final Office Action dated May 3, 2005, 8 pages in U.S. Application No. 10/017,182, Tuttle et al., filed December 14, 2001	
	NPL2	Notice of Allowance dated January 3, 2006, U.S. Application No. 10/105,018, Tuttle et al., filed March 21, 2002	
	NPL3	Notice of Allowance dated July 5, 2006, U.S. Application No. 10/105,018, Tuttle et al., filed March 21, 2002	
	NPL4	Non-Final Office Action dated August 9, 2005, U.S. Application No. 10/213,269, Cano et al., filed August 5, 2002	
	NPL5	Final Office Action dated January 26, 2006, U.S. Application No. 10/213,269, Cano et al., filed August 5, 2002	
	NPL6	Notice of Allowance dated June 6, 2006, U.S. Application No. 10/213,269, Cano et al., filed August 5, 2002	
	NPL7	Non-Final Office Action dated February 3, 2009, U.S. Application No. 11/205,233, Rumelhart et al., filed August 15, 2005	
	NPL8	Non-Final Office Action dated August 6, 2009, U.S. Application No. 11/205,233, Rumelhart et al., filed August 15, 2005	
	NPL9	Non-Final Office Action dated April 22, 2008, U.S. Application No. 11/205,237, Cameros et al., filed August 15, 2005	
	NPL10	Non-Final Office Action dated April 29, 2009, U.S. Application No. 11/205,237, Cameros et al., filed August 15, 2005	

Examiner Signature		Date Considered	

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[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449/PTO				*Complete if Known*	
SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				*Application Number*	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy Tuttle
				Art Unit	4142
				Examiner Name	DAO, TUAN C.
Sheet	2	of	2	*Attorney Docket Number*	2222.775000E

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T[2]
	NPL11	Final Office Action dated November 25, 2008, U.S. Application No. 11/205,237, Cameros et al., filed August 15, 2005	
	NPL12	Notice of Allowance dated May 22, 2007, U.S. Application No. 11/347,802, Tuttle et al., filed February 3, 2006	
	NPL13	Non-Final Office Action dated January 26, 2007, U.S. Application No. 11/347,802, Tuttle et al., filed February 3, 2006	
	NPL14	Non-Final Office Action dated March 6, 2009, U.S. Application No. 11/515,233, Rumelhart et al., filed August 31, 2006	
	NPL15	Final Office Action dated October 7, 2009, U.S. Application No. 11/515,233, Rumelhart et al., filed August 31, 2006.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. 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 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, 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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1034440_2.DOC

Electronic Patent Application Fee Transmittal

Application Number:	11396251
Filing Date:	30-Mar-2006
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Filer:	Glenn J. Perry/Leonard Adgerson
Attorney Docket Number:	2222.775000E

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	6322545
Application Number:	11396251
International Application Number:	
Confirmation Number:	1129
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Customer Number:	26111
Filer:	Glenn J. Perry/Leonard Adgerson
Filer Authorized By:	Glenn J. Perry
Attorney Docket Number:	2222.775000E
Receipt Date:	23-OCT-2009
Filing Date:	30-MAR-2006
Time Stamp:	16:29:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$180
RAM confirmation Number	2962
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1		2222775000Eamendmentandids.pdf	1185395 6b642b09874d2361e0e691b290592545e2d762a9	yes	30

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Miscellaneous Incoming Letter	1	2
Amendment/Req. Reconsideration-After Non-Final Reject	3	3
Specification	4	4
Claims	5	15
Applicant Arguments/Remarks Made in an Amendment	16	20
Transmittal Letter	21	26
Information Disclosure Statement (IDS) Filed (SB/08)	27	30

Warnings:					
Information:					
2	NPL Documents	NPL1_NonFinal_10017182.pdf	260948 37b47194a67ec155a865b3cc63da0f39352a74d2	no	8
Warnings:					
Information:					
3	NPL Documents	NPL2_NoticeOfAllowance_10105018.pdf	251130 dbf3bdc65dbb2378390f18bb9ef05216805b8d06	no	4
Warnings:					
Information:					
4	NPL Documents	NPL3_NoticeOfAllowance_10105018.pdf	300322 19797701829be36c653c13663a48dd406307049e	no	6
Warnings:					
Information:					
5	NPL Documents	NPL4_NonFinal_10213269.PDF	2866521 a76f6ce992d5580a66b842bfc832d807c86c57c5	no	10
Warnings:					
Information:					
6	NPL Documents	NPL5_Final_10213269.PDF	2767577 0b0c1585655cd774c90056bd89e1e688fea6ab41	no	8

Warnings:					
Information:					
7	NPL Documents	NPL6_NoticeOfAllowance_10213269.pdf	257896 765214218a6036f211e7fe7416adf984baca0af6	no	4
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Information:					
8	NPL Documents	NPL7_NonFinal_11205233.PDF	16840421 94484d00a805ddb08494fb96b2241d7287010881	no	32
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Information:					
9	NPL Documents	NPL8_NonFinal_11205233.PDF	17299280 5810ebdc13b5aef978f75db5aee9512dee368958	no	32
Warnings:					
Information:					
10	NPL Documents	NPL9_NonFinal_11205237.PDF	8463780 8d9162b55d2c3634e2d602c05a8047e1cd5fd74b	no	18
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Information:					
12	NPL Documents	NPL11_Final_11205237.PDF	9869362 d4e5bfd1917cada98631e21ae44528d43c301a9e	no	21
Warnings:					
Information:					
13	NPL Documents	NPL12_NoticeOfAllowance_11347802.PDF	4193042 83717ab9f913b324a8c2d8522457871a677ff105	no	6
Warnings:					
Information:					
14	NPL Documents	NPL13_NonFinal_11347802.PDF	2437635 92921cfc6622803abfb04fb45ff41b23d6ddb92a	no	6
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Information:					
15	NPL Documents	NPL14_NonFinal_11515233.pdf	272089 51a10b6c9cc143f58bba7a1eab0e00904671c159	no	9

Warnings:					
Information:					
16	NPL Documents	NPL15_Final_11515233.PDF	558417 8a08457c3c6320f19d4a088289bb13bc06972f97	no	17
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Information:					
17	Fee Worksheet (PTO-875)	fee-info.pdf	30189 1bc40e8bda4ba2020b65a12932c354131371f82b	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	77633682	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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Christopher P. Wrist
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Jason D. Eisenberg

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+Admitted only in Virginia
•Practice Limited to Federal Agencies

October 23, 2009

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INTERNET ADDRESS:
GJPERRY@SKGF.COM

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Art Unit 4142

Attn: Mail Stop Amendment

Re: U.S. Utility Patent Application
Application No. 11/396,251; Filing or 371(c) Date: March 30, 2006
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**
Inventors: Tuttle *et al.*
Our Ref: 2222.775000E

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Amendment and Reply Under 37 C.F.R. §1.11;
2. Online Credit Card Payment Authorization in the amount of $180.00 to cover:

   $180.00 in payment of the fee under 37 C.F.R. § 1.17(p);

3. Second Supplemental Information Disclosure Statement;
4. Form PTO/SB/08A two (2) sheets listing twenty-two (22) documents (US1-US22);
5. Form PTO/SB/08B two (2) sheets listing fifteen (15) documents (NPL1-NPL15); and
6. Copies of cited documents NPL1-NPL15.

The above-listed documents are filed electronically through EFS-Web.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Fee payment is provided through online credit card payment. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
Attorney for Applicants
Registration No. 28,458

GJP/WPL/la
Enclosures

1038582_1.DOC

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/396,251	03/30/2006	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☐ RATE ($)	SMALL ENTITY ☐ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	10/23/2009	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 41	Minus	** 37	= 4	X $ =		OR	X $52=	208
	Independent (37 CFR 1.16(h))	* 9	Minus	***6	= 3	X $ =		OR	X $220=	660
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	868

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL 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 number found in the appropriate box in column 1.

Legal Instrument Examiner:
/VENICE M. WILLIAMS/

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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Document code: WFEE

United States Patent and Trademark Office
Sales Receipt for Accounting Date: 11/06/2009

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01	FC : 1202	208.00	DA
02	FC : 1201	660.00	DA

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
Tuttle *et al.*	Art Unit: 2194
Appl. No.: 11/396,251	Examiner: DAO, TUAN C.
Filed: March 30, 2006	Atty. Docket: 2222.775000E
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**	

Third Supplemental Information Disclosure Statement

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms are documents that may be considered material to the patentability of this application as defined in 37 C.F.R. §1.56, and in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.97 and 1.98.

Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.

☐ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.

☒ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☒ c. The required fee is provided through online credit card payment authorization in the amount of $180.00 in payment of the fee under 37 C.F.R. § 1.17(p).

☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but on or before payment of the Issue Fee. The required fee is provided through online credit card payment authorization in the amount of $___ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38 and MPEP 609.04(a)(III).

☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below in accordance with 37 C.F.R. § 1.98(a)(3).

☒ 7. Copies of documents NPL1-NPL2 are submitted. However, in accordance with 37 C.F.R. § 1.98(a)(2), no copies of U.S. patents and patent application publications cited on the attached IDS Forms are submitted.

☐ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No._____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

☒ 9. It is expected that the examiner will review the prosecution and cited art in the parent application nos. 10/105,018 filed March 21, 2002 (now U.S. Pat. No. 7,051,070) and 10/017,182 filed December 14, 2001 (now U.S. Pat. No. 7,043,525) in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
Attorney for Applicants
Registration No. 28,458

Date: 5 Jan. 2010

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

1066164_1.DOC

Substitute for form 1449/PTO

THIRD SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	2194
Examiner Name	DAO, TUAN C.
Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US1	5,692,193	11-25-1997	Jagannathan et al.	
	US2	5,938,733	08-17-1999	Heimsoth et al.	
	US3	7,350,213 B2	03-25-2008	Deutesfeld et al.	
	US4	2004/0199926 A1	10-07-2004	Gilgen et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. 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 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, 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.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

1066158_1.DOC

Substitute for form 1449/PTO				*Complete if Known*	
THIRD SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy Tuttle
				Art Unit	2194
				Examiner Name	DAO, TUAN C.
Sheet	1	of	1	Attorney Docket Number	2222.775000E

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
	NPL1	Non-Final Office Action dated October 26, 2009, U.S. Application No. 11/205,263, Rumelhart et al., filed August 15, 2005	
	NPL2	Final Office Action dated November 24, 2009, U.S. Application No. 11/205,237, Rumelhart et al., filed August 15, 2005.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. 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 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, 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.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

1066162_1.DOC

Electronic Patent Application Fee Transmittal

Application Number:	11396251
Filing Date:	30-Mar-2006
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Filer:	Glenn J. Perry/Mariannd Adams
Attorney Docket Number:	2222.775000E

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	6750571
Application Number:	11396251
International Application Number:	
Confirmation Number:	1129
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Customer Number:	26111
Filer:	Glenn J. Perry/Mariannd Adams
Filer Authorized By:	Glenn J. Perry
Attorney Docket Number:	2222.775000E
Receipt Date:	05-JAN-2010
Filing Date:	30-MAR-2006
Time Stamp:	15:11:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$180
RAM confirmation Number	1264
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1		2222775000E_IDS.pdf	362109 05065d04beeca69ff21f4edb5adefdddec31dc12	yes	10

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Transmittal Letter	1	2
Information Disclosure Statement (IDS) Filed (SB/08)	3	10

Warnings:					
Information:					
2	NPL Documents	NPL1_NonFinalOA_App11205263.pdf	506392 a5dc3813ea93c42d63e981ddf703a1aa255e24cb	no	16
Warnings:					
Information:					
3	NPL Documents	NPL2_FinalOA_App11205237.pdf	917960 2b3b12715755e86a8c0ee46f0f185ab68db576f1	no	26
Warnings:					
Information:					
4	Fee Worksheet (PTO-875)	fee-info.pdf	30187 3618a59deabb4dce7ef6448a722aea86c1c45a39	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1816648		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Sterne Kessler Goldstein Fox
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Of Counsel
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Jason D. Eisenberg

*Admitted only in Maryland
+Admitted only in Virginia
•Practice Limited to Federal Agencies

January 5, 2010

WRITER'S DIRECT NUMBER:
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Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Art Unit 2194

Attn: Mail Stop Amendment

Re: U.S. Utility Patent Application
Application No. 11/396,251; Filing or 371(c) Date: March 30, 2006
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**
Inventors: Tuttle *et al.*
Our Ref: 2222.775000E

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Online Credit Card Payment Authorization in the amount of $180.00 to cover:

   $180.00 in payment of the fee under 37 C.F.R. § 1.17(p);

2. Sixth Supplemental Information Disclosure Statement;

3. Form PTO/SB/08A one (1) sheet listing four (4) documents (US1-US4);

4. Form PTO/SB/08B one (1) sheet listing two (2) documents (NPL1-NPL2); and

5. Copies of cited documents NPL1-NPL2.

The above-listed documents are filed electronically through EFS-Web.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Fee payment is provided through online credit card payment. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
Attorney for Applicants
Registration No. 28,458

GJP/kma

1066166_1.DOC

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.
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E	1129

26111 7590 01/19/2010

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
DAO, TUAN C.	

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
01/19/2010	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.

Office Action Summary	Application No.	Applicant(s)	
	11/396,251	TUTTLE ET AL.	
	Examiner	Art Unit	
	TUAN DAO	2194	

-- 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 *26-66*.

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) *26-66* 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) *26-66* 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 _____ 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 *01/08/2010 and 10/24/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to Amendment filed 10/03/2009.

2. Claims 26-66 have been examined.

Response to Amendment

3. In the instant amendment, claims 26-62 have been amended. Claims 63-66 have been added.

- The objection to the specification is withdrawn in view of Applicant's amendments.
- The 35 USC §101 rejection over claims 33-38 and 51-56 is withdrawn in view of Applicant's amendments.

Claim Rejections - 35 USC § 101

7. 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.

8. Claims 57-62, 64 and 66 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

9. Claim 57 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Although the preamble of the claim recites *"A device,"* the body of the claim does not positively recite any elements of hardware. The body of the claim recites *'logic configured to provide.'* In light of the specification, the aforementioned logic is implemented in software (see e.g., paragraphs 0047, 0050 and 0062), which is non-statutory

subject matter. Therefore, the nature of the subject matter claimed may reasonably be construed as non-tangible embodiments.

Claims 58-62 have the same rejection.

10. Claim 64 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Although the preamble of the claim recites "An apparatus" the body of the claim does not positively recite any elements of hardware. The rejected claims are directed to an apparatus which appears to be software per se. More specifically, in light of the specification (see e.g., paragraphs 0050 and 0062), the claimed apparatus is merely software which is non-statutory subject matter.

11. Claim 66 is not directed to eligible subject matter in view of **In re Comiskey**, 499 F.3d 1365 (Fed. Cir. 2007). Although the preamble of the claim recites "a device" the body of the claim does not positively recite any elements of hardware. The claim merely recites "logic configured to provide …" and "logic configured to send …" and does not positively recite any element of hardware or machine (e.g., a computer). Therefore, the nature of the subject matter claimed may reasonably be construed as non-tangible embodiments. See **In Re Bilski**, 88 USPQ2d 1385; see also **Diamond v. Diehr**, 450 U.S. 175, 184 (1981); **Parker v. Flook**, 473 U.S. 584, 588 n.9 (1978); **Gottschalk v. Benson**, 409 U.S. 63, 70 (1972); **Cochrane v. Deener**, 94 U.S. 780, 787-88 (1976)); The mere recitation of the machine in the preamble with an absence of a machine in the body of the claim fails to make the claim statutory under 35 USC 101.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 26-28, 33-34, 39, 42-45, 48-51, 54-57 and 60-66 are rejected under 35 U.S.C. 102(e) as being anticipated by Trenbeath et al. (US 6,324,587, hereinafter "Trenbeath").

As per claim 26, Trenbeath discloses a method for providing dynamic content over a network, the method comprising:

receiving, using a processing device, an update message from an input source (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients), the update message identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing data for updating a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object);

identifying, using the processing device, a category of the update message (FIG. 7 and 14; column 25: types of an update message: block 404 message for updating subscription

list/client, block 408 message for updating content/data, block 412, message for updating/synchronizing state/data, …);

identifying, using the processing device, a mapping of the category to a node type (FIG. 7 and 14; column 13: 5-40 and column 25: blocks 402, 406 and 410 associated with blocks 404, 408 and 412 respectively);

routing, using the processing device, the update message to a node having the mapped node type (FIG. 14; column 25: depending on the condition, the message will be routed to block 404, 408 or 412);

and determining, using the processing device, a client that has registered for updates of the live object and routing the data to the client (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217,), wherein the client is adapted to process the update data and update the property of the live object (FIG. 5; column 9-10: subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A).

As per claim 27, Trenbeath discloses the method of claim 26, wherein determining a client and routing the data to the client are performed at the node (FIG. 6-7: columns 12-13).

As per claim 28, Trenbeath discloses the method of claim 26, wherein determining a client comprises extracting an object ID from the update message (FIG. 8; column 13: 40-65 – column 14:1-20) and determining a connection to the client (FIG. 8; column 13: 40-65 – column 14: 1-20: Store and Transport protocol).

As per claim 33, Trenbeath discloses a routing network for enabling dynamic updating of a property of a live object at a client coupled to the network, the routing network comprising:

a gateway that receives, using a processing device, an update message from an input source (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients), the update message identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing data for updating a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object), wherein the gateway identifies a category of the update message (FIG. 7 and 14; column 25: types of an update message: block 404 message for updating subscription list/client, block 408 message for updating content/data, block 412, message for updating/synchronizing state/data, …), identifies a mapping of the category to a node type (FIG. 7 and 14; column 13: 5-40 and column 25: blocks 402, 406 and 410 associated with blocks 404, 408 and 412 respectively), and routes the update message in accordance with the identified mapping (FIG. 14; column 25: depending on the condition, the message will be routed to block 404, 408 or 412); and

routing means for determining, using the processing device, a client that has registered for updates of the live object and routing the data from a node that has received the routed update message to the registered client (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217,), wherein the registered client is adapted to process the data and update the property of the live object (FIG. 5; column 9-10: subscribed

clients C, D, E receives update data, attached data object in update messages from a publishing client A).

As per claim 34, it is a routing network claim, which recite(s) the same limitations as those of claims 28, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 34.

As per claim 39, Trenbeath discloses a computer method for providing dynamic content over a network, the method comprising:

providing, using a processing device, a data representation to a client device coupled to the network (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients), wherein the data representation includes at least one live object that is recognized by the client device (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID 208), and wherein the client responds to the live object of the data representation by determining an object ID of the live object (FIG. 8B, Publication ID 208 registered with Subscription Client ID 213) to register for updates of the live object with a routing network (FIG. 5E, column 3: 30-50 subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A,), such that registering the client with the routing network provides client connection information to the routing network (FIG. 8B, Permissions 215 of subscribed clients; Subscriber Status 216 including active, pending); and

sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and contains update data that updates a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object) such that the routing network has sufficient information (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217) to identify the client device as a registered device and send a routed message containing the update data to the client device, such that the client device processes the routed message upon receipt to update the property of the live object at the client device (FIG. 5; column 9-10: subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A).

As per claim 42, Trenbeath discloses the method of claim 39, wherein the received data representation includes an activation module that is executed by the client device (FIG. 4, 14; column 9-10; column 25: 15-25: software located in both publication client and subscription client) and is adapted to register the live object with the routing network (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217,).

As per claim 43, Trenbeath discloses the method of claim 42, wherein the activation module determines a node type that handles registration and causes the client device to register

with a node of the determined registration node type (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217,).

As per claim 44, Trenbeath discloses the method of claim 42, wherein the activation module determines a message category of the data representation and causes the client device to register with a node having a node type corresponding to the message category (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217, message categories updating/deleting/modifying).

As per claim 45, Trenbeath discloses an apparatus for providing dynamic content over a network, the apparatus comprising:

a content provider that provides, using a processing device, a data representation to a client device coupled to the network (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients), wherein the data representation includes at least one live object that is recognized by the client device (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID 208), and wherein the client responds to the live object of the data representation by determining an object ID of the live object (FIG. 8B, Publication ID 208 registered with Subscription Client ID 213) to register for updates of the live object with a routing network (FIG. 5E, column 3: 30-50 subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A,), such that registering the

client with the routing network provides client connection information to the routing network (FIG. 8B, Permissions 215 of subscribed clients; Subscriber Status 216 including active, pending);

an information provider that sends, using the processing device, an update message to the routing network, wherein the update message identifies the live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and contains update data that updates a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object) such that the routing network has sufficient information (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217) to identify the client device as a registered device and send a routed message containing the update data to the client device, such that the client device processes the routed message upon receipt to update the property of the live object at the client device (FIG. 5; column 9-10: subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A).

As per claim 48, it is an apparatus claim, which recite(s) the same limitations as those of claims 42, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 48.

As per claim 49, it is an apparatus claim, which recite(s) the same limitations as those of claims 43, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 49.

As per claim 50, it is an apparatus claim, which recite(s) the same limitations as those of claims 44, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 50.

As per claim 51, it is a computer readable medium claim, which recite(s) the same limitations as those of claims 39, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 51.

As per claim 54, it is a computer readable medium claim, which recite(s) the same limitations as those of claims 42, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 54.

As per claim 55, it is a computer readable medium claim, which recite(s) the same limitations as those of claims 43, wherein all claimed limitations have been addressed and/or set

forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 55.

As per claim 56, it is a computer readable medium claim, which recite(s) the same limitations as those of claims 44, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 56.

As per claim 57, it is a device claim, which recite(s) the same limitations as those of claims 39, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 57.

As per claim 60, it is a device claim, which recite(s) the same limitations as those of claims 42, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 60.

As per claim 61, it is a device claim, which recite(s) the same limitations as those of claims 43, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 61.

As per claim 62, it is a device claim, which recite(s) the same limitations as those of claims 44, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 62.

As per claim 63, Trenbeath discloses a method comprising:

providing, using a processing device, a live object to a client device (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients);

sending, using the processing device, an update message to a routing network (FIG. 4-6; column 3: 40-50 and column 9: 20-35), the update message identifying the live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing update data to update the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object); and

if the client device is registered to receive update data for the identified live object (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217), sending, using the processing device, from the routing network a routed message containing the update data to the client device (FIG. 5; column 9-10: subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A.).

As per claim 64, it is an apparatus claim, which recite(s) the same limitations as those of claims 63, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 64.

As per claim 65, it is a computer readable medium claim, which recite(s) the same limitations as those of claims 63, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 65.

As per claim 66, it is a device claim, which recite(s) the same limitations as those of claims 63, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 66.

Claim Rejections - 35 USC § 103

14. 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.

15. Claims 29-32 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trenbeath in view of Campbell et al. (US 7,209,959, hereinafter "Campbell").

As per claim 29, Trenbeath does not explicitly disclose determining a connection comprises determining at least one client proxy with which the client communicates and routing the data to the client proxy, and then routing the data from the client proxy to the client.

However, in analogous art, Campbell further discloses determining a connection comprises determining at least one client proxy with which the client communicates and routing the data to the client proxy, and then routing the data from the client proxy to the client (column 2: 8-20).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (column 2: 8-20: a proxy server is considered as a client server).

As per claim 30, Trenbeath discloses the method of claim 29, wherein client registration information concerning the client connection is maintained at the node (FIG. 8B; column 14:1-20).

As per claim 31, Trenbeath does not explicitly disclose wherein client registration information concerning the client connection is maintained at the client proxy.

However, in analogous art, Campbell further discloses wherein client registration information concerning the client connection is maintained at the client proxy (column 2: 8-20:

client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (column 2: 8-20).

As per claim 32, Trenbeath discloses wherein:

comprising a node that is adapted to receive messages of more than one message category (FIG. 7; column 12: 50-65 – column 13: 1-3: different Data Objects);

and determining a connection comprises determining at least one corresponding node having a node type that is mapped to the message category, with which the registered client communicates, and routing the data to the corresponding node (FIG. 6-8; column 3: 30-50 and column 12-14).

Trenbeath does not explicitly disclose routing the update message comprises routing the update message to a proxy node.

However, in analogous art, Campbell further discloses routing the update message comprises routing the update message to a proxy node (column 2: 8-20: proxy server is considered as a proxy node).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (column 2: 8-20).

As per claim 35, it is a routing network claim, which recite(s) the same limitations as those of claims 29, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 35.

As per claim 36, it is a routing network claim, which recite(s) the same limitations as those of claims 30, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 36.

As per claim 37, it is a routing network claim, which recite(s) the same limitations as those of claims 31, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 37.

As per claim 38, it is a routing network claim, which recite(s) the same limitations as those of claims 32, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 38.

16. Claims 40-41, 46-47, 52-53 and 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trenbeath in view of Freeman et al. (US 6,314,459 hereinafter "Freeman").

As per claim 40, Trenbeath does not explicitly disclose wherein the live object of the data representation causes the client device to register with a client proxy of the network.

However, in analogous art, Freeman further discloses wherein the live object of the data representation causes the client device to register with a client proxy of the network (FIG. 7; column 4: 5-35).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (column 2: 5-15).

As per claim 41, Trenbeath does not explicitly disclose wherein the live object of the data representation causes the client device to register with a node of the network.

However, in analogous art, Freeman further discloses wherein the live object of the data representation causes the client device to register with a node of the network (FIG. 7; column 4: 5-35: node 102 and 104 containing registry 124 and 126 respectively).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (column 2: 5-15).

As per claim 46, it is an apparatus claim, which recite(s) the same limitations as those of claims 40, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 46.

As per claim 47, it is an apparatus claim, which recite(s) the same limitations as those of claims 41, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 47.

As per claim 52, it is a computer readable medium claim, which recite(s) the same limitations as those of claims 40, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 52.

As per claim 53, it is a computer readable medium claim, which recite(s) the same limitations as those of claims 41, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 53.

As per claim 58, it is a device claim, which recite(s) the same limitations as those of claims 40, wherein all claimed limitations have been addressed and/or set forth above. Therefore,

as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 58.

As per claim 59, it is a device claim, which recite(s) the same limitations as those of claims 41, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 59.

Response to Arguments

17. Applicant's arguments, see Remarks (page 16-17), filed 10/23/2009, with respect to the rejection(s) of claim(s) 39-42, 45-50, 51-56 and 57-62 under 35 U.S.C 102 (e) and claim(s) 26-38 and 43-44 under 35 U.S.C 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the new references (please refer to section 3 and 4 above for further details).

Conclusion

18. Any inquiry concerning this communication should be directed to examiner Tuan Dao, whose telephone/fax numbers are (571) 270 3387 and (571) 270 4387, respectively. The examiner can normally be reached on every Monday-Thursday and the second Friday of the bi-week from 7:30AM to 5:00PM.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough, can be reached at (571) 272 6799.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

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).

/T. D./

Examiner, Art Unit 2194

/Hyung S. Sough/
Supervisory Patent Examiner, Art Unit 2194
01/15/10

Notice of References Cited	Application/Control No. 11/396,251	Applicant(s)/Patent Under Reexamination TUTTLE ET AL.	
	Examiner TUAN DAO	Art Unit 2194	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,324,587 B1	11-2001	Trenbeath et al.	719/310
*	B	US-6,314,459 B1	11-2001	Freeman, Lawrence Alexander	709/220
*	C	US-7,209,959 B1	04-2007	Campbell et al.	709/219
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	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.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	31	"6314459"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/11 11:46
L2	4	"6314459" freeman.inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/11 11:46
S1	1569	tuttle.inv.	US-PGPUB; USPAT	AND	ON	2009/07/14 09:08
S2	9	tuttle-timothy.inv.	US-PGPUB; USPAT	AND	ON	2009/07/14 09:08
S3	0	(publish$5 subcri$5)((message or topic or event) (live near2 object) identif$5 category node) 7??/$.ccls.	US-PGPUB; USPAT	AND	ON	2009/07/14 09:13
S4	0	(publish$5 subcri$5)((message or topic or event) (live near2 object) identif$5 category node) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT	AND	ON	2009/07/14 09:13
S5	18	(publish$5 subcri$5)((message or topic or event)) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT	AND	ON	2009/07/14 09:15
S6	18	(publish$5 subcri$9)((message or topic or event or notification)) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT	AND	ON	2009/07/14 13:21
S7	24	(publish$5 subcri$9)((message or topic or event or notification)) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/14 13:21
S8	0	(publish$5 subcri$9)((message or topic or event or notification)) 7??/$.ccls. @ay<"2001" not S7	US-PGPUB; USPAT	AND	ON	2009/07/14 13:22
S9	6	(publish$5 subcri$9)((message or topic or event or notification)) 7??/$.ccls. @ay<"2001" not S6	US-PGPUB; USPAT	AND	ON	2009/07/14 13:22

IPR2015-00220-720 Patent 7,720,971 Page 519 of 1171 EX1002

S10	19	((publish$5 or provider) subcri $9)((message or topic or event or notification)) 7??/$.ccls. @ay<"2001" not S6	US-PGPUB; USPAT	AND	ON	2009/07/14 13:26
S11	19	((publish$5 or provider) subcri $9)(message or topic or event or notification) 7??/$.ccls. @ay<"2001" not S6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:36
S12	37	((publish$5 or provider) subcri $9)(message or topic or event or notification) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:37
S13	29823	((publish$5 or provider) or subcri$9)(message or topic or event or notification) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:45
S14	37	((publish$5 or provider) subcri $9)(message or topic or event or notification) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:46
S15	0	((publish$5 or provider) subcri $9)(message or topic or event or notification) 7??/$.ccls. @ay<"200"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:46
S16	27	((publish$5 or provider) subcri $9)(message or topic or event or notification) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:46
S17	9	((publish$5 or provider) subcri $9)(asynchronou$5) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:48
S18	7	((publish$5 or provider) subcri $9)(asynchronou$5 (event or message or notification)) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:59

IPR2015-00220-720 Patent Page 520 of 1171 EX1002

S19	1	((publish$5 or provider) subcri $9)(asynchronou$5 same (event or message or notification)) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:59
S20	2	((publish$5 or provider) subcri $9)(asynchronou$5 same (event or message or notification)) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 14:01
S21	1	"20020087630"	US-PGPUB; USPAT	AND	ON	2009/07/18 09:28
S22	5	"20020120717"	US-PGPUB; USPAT	AND	ON	2009/07/18 09:44
S23	21	((independ$5 near5 message) same delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:22
S24	53	((independ$5 with message) same delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:25
S25	35	((independ$5 near5 message) same delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:26
S26	43513	(rout$5 (data or message) same application) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:27
S27	5484	((rout$5 near5(data or message)) same application) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:27
S28	2379	((rout$5 near5(data or message)) with application) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:28
S29	469	((rout$5 near5(data or message)) with application) (device client node) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:29
S30	207	((rout$5 near5(data or message)) with application) (device client node host manager) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:29
S31	0	((rout$5 near5(data or message)) with application) (device client node host manager) (create with delet$5 with rout$5)7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:31

IPR2015-00220-720 Patent 7,720,721 Page 521 of 1171 EX1002

S32	0	((rout$5 near5(data or message)) with application) (device client node host manager) (creat$5 with delet$5 with rout$5)7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:31
S33	3	((rout$5 near5(data or message)) with application) (device client node host manager) (creat$5 with delet$5 with rout$5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:31
S34	3	((rout$5 near5(data or message)) with application) (device client node manager) (creat$5 with delet$5 with rout $5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:32
S35	39	((rout$5 near5(data or message)) with application) (creat$5 with delet$5 with rout $5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:32
S36	107	((rout$5 with (data or message or application)) with application) (creat$5 with delet $5 with rout$5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:34
S37	107	((rout$5 with (message or application)) with application) (creat$5 with delet$5 with rout $5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:34
S38	107	((rout$5 with (software or application)) with application) (creat$5 with delet$5 with rout $5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:35
S39	115	((rout$5 with (software or application)) with application) (creat$5 with delet$5 with rout $5) 7??/$.ccls. @ay<"2002"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:36
S40	66	((rout$5 near5 (software or application)) near5 application) (creat$5 with delet$5 with rout $5) 7??/$.ccls. @ay<"2002"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:36
S41	11095	((updat$4 near2 message) near4 (send$3 or sent or receiv $4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/09 10:43
S42	27	((updat$4 near2 message) near4 (send$3 or sent or receiv $4)) (publication near2 (id or identif$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/09 10:43

IPR2015-00220-720 Patent 7,702,751 Page 522 of 1171 EX1002

S43	16	((updat$4 near2 message) near4 (send$3 or sent or receiv $4)) (publication near2 (id or identif$6)) @ay<"2002"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/09 10:45
S44	16	((updat$4 near2 message) near4 (send$3 or sent or receiv $4)) (publication near2 (id or identif$6)) @ay<"2002" 7??/$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/09 10:45
S45	53	((Timothy Tuttle) OR (Karl Rumelhart)).inv.	US-PGPUB; USPAT	AND	ON	2010/01/09 11:14
S46	18	((Timothy Tuttle) OR (Karl Rumelhart)).inv. (message update)	US-PGPUB; USPAT	AND	ON	2010/01/09 11:14
S47	10	((Timothy Tuttle) OR (Karl Rumelhart)).inv. (message update).clm.	US-PGPUB; USPAT	AND	ON	2010/01/09 11:14
S48	10	((Timothy Tuttle) OR (Karl Rumelhart)).inv. (message update object).clm.	US-PGPUB; USPAT	AND	ON	2010/01/09 11:15
S49	3	((Timothy Tuttle) OR (Karl Rumelhart)).inv. (message update object category).clm.	US-PGPUB; USPAT	AND	ON	2010/01/09 11:15
S50	3	((Timothy Tuttle) OR (Karl Rumelhart)).inv. (message update category).clm.	US-PGPUB; USPAT	AND	ON	2010/01/09 11:15
S51	9	"6324587" ((updat$4 near2 message) near4 (send$3 or sent or receiv$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 10:36
S52	2	"6324587" (publication near2 (id or identif$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 10:43
S53	8	"6324587" ((message near2 updat$4) near3 (content or field or data or parameter))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 10:51
S54	37	"6324587" (regis$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 11:13

IPR2015-00220-722 Patent Page 523 of 1171 EX1002

S55	38	"6324587" (regis8)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 11:14
S56	0	"6324587" (subcr$8)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 11:16
S57	32	"6324587" (subscr$8)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 11:16
S58	8	"6324587" proxy	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 11:56
S59	1520	@ay <"2001" (proxy near3 client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 12:02
S60	72	7??/$.ccls. @ay <"2001" ((proxy near3 client) near8 rout$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 12:07
S61	5	7??/$.ccls. @ay <"2001" (((proxy near3 client) near8 rout$6) same regist$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:21
S62	0	"6324587" (subsc near3 client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:46
S63	0	"6324587" (subsc with client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:47

IPR2015-00220-720 Patent Page 524 of 1171 EX1002

S64	36	"6324587" (client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:47
S65	7	"6324587" (subsc$8 with client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:48
S66	6	"6324587" (subsc$8 near2 client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:48
S67	1	"6324587" ((subsc$8 near2 client) with software)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:49

EAST Search History (Interference)

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1/11/2010 11:48:52 AM
C:\Documents and Settings\tdao2\My Documents\EAST\Workspaces\11396251.wsp

IPR2015-00220-722 Patent Page 525 of 1171 EX1002

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.D./

Equivalent of Form PTO/SB/08a (7-09)

Substitute for form 1449/PTO				*Complete if Known*	
THIRD SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy Tuttle
				Art Unit	2194
				Examiner Name	DAO, TUAN C.
Sheet	1	of	1	Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US1	5,692,193	11-25-1997	Jagannathan et al.	
	US2	5,938,733	08-17-1999	Heimsoth et al.	
	US3	7,350,213 B2	03-25-2008	Deutesfeld et al.	
	US4	2004/0199926 A1	10-07-2004	Gilgen et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature	/Tuan Dao/	Date Considered	01/09/2010

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This collection of information is required by 37 CFR 1.97 and 1.98. 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 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, 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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THIRD SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy Tuttle
				Art Unit	2194
				Examiner Name	DAO, TUAN C.
Sheet	1	of	1	Attorney Docket Number	2222.775000E

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
	NPL1	Non-Final Office Action dated October 26, 2009, U.S. Application No. 11/205,263, Rumelhart et al., filed August 15, 2005	
	NPL2	Final Office Action dated November 24, 2009, U.S. Application No. 11/205,237, Rumelhart et al., filed August 15, 2005.	

Examiner Signature	/Tuan Dao/	Date Considered	01/09/2010

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11396251	TUTTLE ET AL.
	Examiner	**Art Unit**
	Tuan C Dao	4142

SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
709	203, 219	07/14/2009	TD
719	309	07/14/2009	TD

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
Inventor search	07/14/2009	TD
East search	07/14/2009	TD
East text search	1/9/2010	TD

INTERFERENCE SEARCH			
Class	**Subclass**	**Date**	**Examiner**

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
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	Examiner	Art Unit
	Tuan C Dao	4142

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/18/2009	01/11/2010							
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	36	✓	✓							

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	11396251	TUTTLE ET AL.
	Examiner	Art Unit
	Tuan C Dao	4142

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/18/2009	01/11/2010							
	37	✓	✓							
	38	✓	✓							
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Equivalent of Form PTO/SB/08a (7-09)

Substitute for form 1449/PTO				*Complete if Known*	
SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy Tuttle
(Use as many sheets as necessary)				Art Unit	~~2192~~ 2194
				Examiner Name	DAO, TUAN C.
Sheet	1	of	2	Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US1	6,094,681	07-25-2000	Shaffer et al.	
	US2	6,408,282 B1	06-18-2002	Buist	
	US3	6,553,413 B1	04-22-2003	Leighton et al.	
	US4	6,725,446 B1	04-20-2004	Hahn et al.	
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	US18	2005/0278726 A1	12-15-2005	Cano et al.	
	US19	2006/0031282 A1	02-09-2006	Tuttle et al.	
	US20	2006/0031283 A1	02-09-2006	Tuttle et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature	/Tuan Dao/	Date Considered	01/09/2010

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. 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 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, 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.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.D./

Equivalent of Form PTO/SB/08a (7-09)

Substitute for form 1449/PTO	*Complete if Known*	
SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*	Application Number	11/396,251
	Filing Date	March 30, 2006
	First Named Inventor	Timothy Tuttle
	Art Unit	~~4142~~ 2194
	Examiner Name	DAO, TUAN C.
Sheet 2 of 2	Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US21	2006/0265488 A1	11-23-2006	Tuttle et al.	
	US22	2009/0077173 A1	03-19-2009	Lowery et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature	/Tuan Dao/	Date Considered	01/09/2010

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.D./

Equivalent of Form PTO/SB/08b (7-09)

Substitute for form 1449/PTO				*Complete if Known*	
SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				*Application Number*	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy Tuttle
				Art Unit	~~4142~~ 2194
				Examiner Name	DAO, TUAN C.
Sheet	1	of	2	*Attorney Docket Number*	2222.775000E

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
	NPL1	Non-Final Office Action dated May 3, 2005, 8 pages in U.S. Application No. 10/017,182, Tuttle et al., filed December 14, 2001	
	NPL2	Notice of Allowance dated January 3, 2006, U.S. Application No. 10/105,018, Tuttle et al., filed March 21, 2002	
	NPL3	Notice of Allowance dated July 5, 2006, U.S. Application No. 10/105,018, Tuttle et al., filed March 21, 2002	
	NPL4	Non-Final Office Action dated August 9, 2005, U.S. Application No. 10/213,269, Cano et al., filed August 5, 2002	
	NPL5	Final Office Action dated January 26, 2006, U.S. Application No. 10/213,269, Cano et al., filed August 5, 2002	
	NPL6	Notice of Allowance dated June 6, 2006, U.S. Application No. 10/213,269, Cano et al., filed August 5, 2002	
	NPL7	Non-Final Office Action dated February 3, 2009, U.S. Application No. 11/205,233, Rumelhart et al., filed August 15, 2005	
	NPL8	Non-Final Office Action dated August 6, 2009, U.S. Application No. 11/205,233, Rumelhart et al., filed August 15, 2005	
	NPL9	Non-Final Office Action dated April 22, 2008, U.S. Application No. 11/205,237, Cameros et al., filed August 15, 2005	
	NPL10	Non-Final Office Action dated April 29, 2009, U.S. Application No. 11/205,237, Cameros et al., filed August 15, 2005	

Examiner Signature	/Tuan Dao/	Date Considered	01/09/2010

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[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

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Equivalent of Form PTO/SB/08b (7-09)

Substitute for form 1449/PTO				*Complete if Known*	
SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				*Application Number*	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy Tuttle
				Art Unit	~~4142~~ 2194
				Examiner Name	DAO, TUAN C.
Sheet	2	of	2	*Attorney Docket Number*	2222.775000E

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T[2]
	NPL11	Final Office Action dated November 25, 2008, U.S. Application No. 11/205,237, Cameros et al., filed August 15, 2005	
	NPL12	Notice of Allowance dated May 22, 2007, U.S. Application No. 11/347,802, Tuttle et al., filed February 3, 2006	
	NPL13	Non-Final Office Action dated January 26, 2007, U.S. Application No. 11/347,802, Tuttle et al., filed February 3, 2006	
	NPL14	Non-Final Office Action dated March 6, 2009, U.S. Application No. 11/515,233, Rumelhart et al., filed August 31, 2006	
	NPL15	Final Office Action dated October 7, 2009, U.S. Application No. 11/515,233, Rumelhart et al., filed August 31, 2006.	

Examiner Signature	/Tuan Dao/	Date Considered	01/09/2010

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E	1129

26111 7590 03/12/2010

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
DAO, TUAN C.	

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
03/12/2010	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.

Interview Summary	Application No.	Applicant(s)	
	11/396,251	TUTTLE ET AL.	
	Examiner	Art Unit	
	TUAN DAO	2194	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Tuan Dao*.

(2) *Hyung Sough*.

(3)*Jason Eisenberg*.

(4)*William Ladd*.

Date of Interview: *05 March 2010*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☒ No.
If Yes, brief description: _____.

Claim(s) discussed: *26 and 67-69*.

Identification of prior art discussed: *Trenbeath et al. (US 6,324,587)*.

Agreement with respect to the claims f)☐ was reached. g)☒ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *See Continuation Sheet*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/TUAN DAO/ Examiner, Art Unit 2194	/Hyung S. Sough/ Supervisory Patent Examiner, Art Unit 2194

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

———

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Applicant discusses the differences between the cited reference (Trenbeath et al. (US 6,324,587)) and independent claim 26 and new claims 67-69.

Applicant raised concerns regarding the disclosures of prior art for claim 26 and new claims 67-69 in the area of:

1) determining, using the processing device, a client that has registered for updates of the live object and routing the data to the client, wherein the client is adapted to process the update data and update the property of the live object.

2) new claims 67-69

Regarding to the first concern, Trenbeath et al. discloses determining, using the processing device, a client that has registered for updates of the live object and routing the data to the client (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217,), wherein the client is adapted to process the update data and update the property of the live object (FIG. 5; column 9-10: subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A).

Regarding to claim 67, Trenbeath, FIG. 7 and 14; column 13: 1-40 and column 25.

Regarding to claim 68: Trenbeath, FIG. 11, column 17: 15-55

Regarding to claim 69: Trenbeath, column 8: 20-40

Upon receiving formal response, the examiner will reconsider above issue.

.

Unofficial Communication, Not To Be Entered, Privileged and Confidential

Proposed Agenda for Examiner Interview (time TBD)
Ser. No. 11/396,251

Participants:
For PTO: Examiner Tuan Dao
For representatives: Jason Eisenberg (Reg.# 43,447) and William Ladd (Reg.# 64,646)

Dear Examiner Dao:

We would appreciate the opportunity to discuss the outstanding 35 U.S.C. § 102(e) and 103(a) rejections and any suggestions you might be able to provide that might advance the prosecution of this application.

We would like to discuss the following representative pending claim (emphasis added).

26. (Previously Presented) A method for providing dynamic content over a network, the method comprising:

receiving, using a processing device, an update message from an input source, the update message identifying a live object and containing data for updating a property of the live object;

identifying, using the processing device, a category of the update message;

identifying, using the processing device, a mapping of the category to a node type;

routing, using the processing device, the update message to a node having the mapped node type; and

determining, using the processing device, a client that has registered for updates of the live object and routing the data to the client, wherein the client is adapted to process the update data and update the property of the live object.

We would also like to discuss the following proposed new dependent claims:

67. (New) The method of claim 26, wherein the data is routed from the node to the client.

68. (New) The method of claim 26, wherein the client has sent a request for updates of the live object.

69. (New) The method of claim 26, wherein the client is remote with respect to the node.

Please contact us if you have any questions or comments:

Jason Eisenberg (JasonE@SKGF.com)/ William Ladd (wladd@SKGF.com)
202-772-8645 / 202-772-8691

Regards,
Will Ladd

1086971_1.DOC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
Tuttle *et al.*	Art Unit: 2194
Appl. No.: 11/396,251	Examiner: DAO, TUAN C.
Filed: March 30, 2006	Atty. Docket: 2222.775000E
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**	

Amendment and Reply Under 37 C.F.R. § 1.111

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the Non-Final Office Action dated January 19, 2010, Applicants submit the following Amendment and Remarks.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-25. (canceled)

26. (Currently Amended) A method ~~for providing dynamic content over a network, the method~~ comprising:

receiving, using a processing device, an update message ~~from an input source, the update message~~ identifying a live object and containing data for updating a property of the live object;

~~identifying, using the processing device, a category of the update message;~~

identifying, using the processing device, a mapping of [[the]] a category of the update message to a node type; and

routing, using the processing device, the update message to a node having the ~~mapped~~ node type, [[; and]]

causing the node, through the update message, to determine ~~determining, using the processing device,~~ a client that has registered for updates of the live object and ~~routing~~ causing the node to route the data from the node to the client, and

~~wherein~~ causing the client ~~is adapted~~ to process ~~the update~~ the data and to update the property of the live object.

27. (Cancelled)

28. (Currently Amended) The method of claim 26, ~~wherein~~ further comprising causing the node ~~determining a client comprises extracting~~ to extract an object ID from the update message and ~~determining~~ to establish a connection to the client to determine the client that has registered for updates of the live object.

29. (Currently Amended) The method of claim 28, ~~wherein determining a connection comprises determining~~ further comprising causing the node to determine at

IPR2025-00200 / 722 Patent Page 541 of 1171 EX1002

least one client proxy with which the client communicates, [[and]] ~~routing~~ to route the data to the client proxy, and ~~then routing~~ to route the data from the client proxy to the client to determine the connection.

30. (Currently Amended) The method of claim 29, ~~wherein~~ further comprising causing the node to maintain client registration information concerning the client connection. ~~is maintained at the node.~~

31. (Currently Amended) The method of claim 29, further comprising causing the node to maintain ~~wherein~~ client registration information concerning the client connection ~~is maintained~~ at the client proxy.

32. (Currently Amended) The method of claim 28, wherein:

the routing the update message comprises routing the update message to a proxy node comprising a second node ~~that is adapted to receive~~ receiving messages of more than one message category, [[;]] and

further comprising causing the node ~~determining a connection comprises determining~~ to determine at least one corresponding node having a corresponding node type ~~that is~~ mapped to the message category, with which the registered client communicates, and ~~routing~~ to route the data to the corresponding node to determine the connection.

33. (Currently Amended) A routing network ~~for enabling dynamic updating of a property of a live object at a client coupled to the network, the routing network~~ comprising:

a gateway device ~~that receives~~ configured to:

receive, ~~using a processing device,~~ an update message ~~from an input source, the update message~~ identifying a live object and containing data for updating a property of the live object, ~~wherein the gateway identifies a category of the update message, identifies~~

IPR2025-00200 / 722 Patent Page 542 of 1171 EX1002

identify a mapping of [[the]] a category of the update message to a node type, and ~~routes~~

route the update message; and ~~in accordance with the identified mapping; and~~

~~routing means for determining~~ a node device configured to:

receive the update message from the gateway device, wherein the node device is configured to be mapped to the node type,

determine~~, using the processing device,~~ a client that has registered for updates of the live object, and ~~routing~~

route the data from [[a]] the node device ~~that has received the routed update message~~ to the ~~registered~~ client, wherein the ~~registered~~ client is adapted to process the data and to update the property of the live object.

34. (Currently Amended) The routing network of claim 33, wherein the ~~routing means~~ node device is configured to extract ~~extracts~~ an object ID from the update message and to determine ~~determines~~ a connection to the ~~registered~~ client ~~for routing~~ to route the data to the ~~registered~~ client.

35. (Currently Amended) The routing network of claim 34, wherein the ~~routing means~~ node device is configured to determine ~~determines~~ a connection by determining at least one client proxy with which the registered client communicates[[,]] and ~~then routing~~ to route the data to the client proxy.

36. (Currently Amended) The routing network of claim 35, wherein client registration information concerning the client connection is configured to be maintained at the node device.

37. (Currently Amended) The routing network of claim 35, wherein client registration information concerning the client connection is configured to be maintained at the client proxy.

38. (Currently Amended) The routing network of claim 33, wherein:

the gateway device is configured to ~~routs~~ route the update message by routing the update message to a proxy node comprising a second node ~~that is~~ adapted to receive messages of more than one message category, [[;]] and

~~the routing means~~ the node device is configured to determine ~~determines~~ at least one corresponding node that has a corresponding node type mapped to the message category and with which the registered client communicates[[,]] and ~~then routing~~ to route the data to the corresponding node.

39. (Currently Amended) A ~~computer~~ method ~~for providing dynamic content over a network, the method~~ comprising:

providing, using a processing device, a data representation to a client device coupled to [[the]] a network, wherein the data representation includes at least one live object ~~that is~~ recognized by the client device, and ~~wherein~~ causing the client device ~~responds~~ to respond to the live object of the data representation by determining an object ID of the live object and to register for updates of the live object with a routing network, such that registering the client device with the ~~routing~~ network provides client connection information to the routing network; [[and]]

sending, using the processing device, an update message to the ~~routing~~ network, wherein the update message identifies the live object and contains update data that updates a property of the live object, such that a gateway device at the ~~routing~~ network ~~has sufficient information~~ is configured to identify the client device as a registered device and to send a routed message containing the update data from the gateway device to a node;

causing the node to send the routed message to the client device; ~~, such that~~ and

causing the client device ~~processes~~ to process the routed message upon receipt to update the property of the live object at the client device.

40. (Currently Amended) The method of claim 39, wherein providing the data representation to the client device includes providing a [[the]] live object ~~of the data representation~~ that causes the client device to register with a client proxy of the network.

41. (Currently Amended) The method of claim 39, wherein providing the data representation to the client device includes providing a [[the]] live object ~~of the data representation~~ that causes the client device to register with a node of the network.

42. (Currently Amended) The method of claim 39, wherein providing the data representation to the client device including providing ~~the received data representation includes~~ an activation module that is executed by the client device and ~~is adapted to register~~ that registers the live object with the ~~routing~~ network.

43. (Currently Amended) The method of claim 42, wherein providing the activation module includes providing an activation module that is configured to determine ~~determines~~ a node type that handles registration and that causes the client device to register with a node ~~of the determined registration~~ corresponding to the node type.

44. (Currently Amended) The method of claim 42, wherein providing the activation module ~~determines~~ includes providing an activation module that is configured to determine a message category of the data representation and that causes the client device to register with a node having a node type corresponding to the message category.

45. (Currently Amended) An apparatus ~~for providing dynamic content over a network, the apparatus~~ comprising:

a content provider device configured to provide ~~that provides, using a processing device,~~ a data representation to a client device coupled to the network, wherein the data representation includes at least one live object that is recognized by the client device, and that causes ~~wherein~~ the client device to determine ~~responds to the live object of the data representation by determining~~ an object ID of the live object to register for updates of the live object with ~~a routing~~ the network, such that registering the client device with the ~~routing~~ network provides client connection information to the ~~routing~~ network; and

an information provider device ~~that sends, using the processing device,~~ configured to send an update message to the ~~routing~~ network, wherein the update

message identifies the live object and contains update data ~~that updates~~ for updating a property of the live object, such that a gateway device at the routing network ~~has sufficient information~~ is configured to identify the client device as a registered device and to send a routed message from the gateway device to a node,

wherein the node is configured to send the routed message containing the update data to the client device, ~~such that~~ and

wherein the client device is configured to process ~~processes~~ the routed message upon receipt to update the property of the live object at the client device.

46. (Currently Amended) The apparatus of claim 45, wherein the live object of the data representation is configured to cause ~~causes~~ the client device to register with a client proxy of the network.

47. (Currently Amended) The apparatus of claim 45, wherein the live object of the data representation is configured to cause ~~causes~~ the client device to register with a node of the network.

48. (Currently Amended) The apparatus of claim 45, wherein the received data representation includes an activation module that is configured to be executed by the client device and [[is]] adapted to register the live object with the routing network.

49. (Currently Amended) The apparatus of claim 48, wherein the activation module is configured to determine ~~determines~~ a node type ~~that handles~~ for handling registration and to cause ~~causes~~ the client device to register with a node of the ~~determined registration~~ node type.

50. (Previously Presented) The apparatus of claim 48, wherein the activation module determines a message category of the data representation and causes the client device to register with a node having a node type corresponding to the message category.

51. (Currently Amended) [[A]] An article of manufacture including a ~~tangible~~ computer-readable medium having ~~stored thereon computer-executable~~ instructions ~~for providing dynamic content over a network~~ stored thereon, an execution of which by a computing device causes the computing device to perform operations ~~that, if executed by a computing device, cause the computing device to perform a method~~ comprising:

providing, using a processing device, a data representation to a client device coupled to [[the]] a network, wherein the data representation includes at least one live object that is recognized by the client device, and ~~wherein~~ that causes the client device ~~responds~~ to respond to the live object ~~of the data representation~~ by determining an object ID of the live object to register for updates of the live object with ~~a routing~~ the network, such that registering the client device with the ~~routing~~ network provides client connection information to the ~~routing~~ network; and

sending, using the processing device, an update message to the ~~routing~~ network, wherein the update message identifies the live object and contains update data ~~that updates~~ for updating a property of the live object, such that a gateway device at the ~~routing~~ network ~~has sufficient information~~ is configured to identify the client device as a registered device and to send a routed message containing the update data from the gateway device to a node, wherein the node sends the routed message to the client device, and ~~such that~~ wherein the client device ~~processes~~ is configured to process the routed message upon receipt to update the property of the live object at the client device.

52. (Currently Amended) The ~~computer-readable medium~~ article of manufacture of claim 51, wherein the live object of the data representation causes the client device to register with a client proxy of the network.

53. (Currently Amended) The ~~computer-readable medium~~ article of manufacture of claim 51, wherein the live object of the data representation causes the client device to register with a node of the network.

54. (Currently Amended) The ~~computer-readable medium~~ article of manufacture of claim 51, wherein the received data representation includes an activation module ~~that is~~

executed by the client device and [[is]] adapted to register the live object with the ~~routing~~ network.

55. (Currently Amended) The ~~computer-readable medium~~ article of manufacture of claim 54, wherein the activation module determines a node type that handles registration and causes the client device to register with a node of the ~~determined registration~~ node type.

56. (Currently Amended) The ~~computer-readable medium~~ article of manufacture of claim 54, wherein the activation module determines a message category of the data representation and causes the client device to register with a node having a node type corresponding to the message category.

57. (Currently Amended) A device ~~for providing dynamic content over a network, the device~~ comprising:

logic configured to provide~~, using a processing device,~~ a data representation to a client device coupled to the network, wherein the data representation includes at least one live object ~~that is~~ recognized by the client device, and wherein the client device ~~responds~~ is configured to respond to the live object of the data representation by determining an object ID of the live object to register for updates of the live object with a ~~routing~~ network, such that registering the client device with the ~~routing~~ network provides client connection information to the ~~routing~~ network; and

logic configured to provide, using [[the]] a processing device, an update message to the ~~routing~~ network, wherein the update message identifies the live object and contains update data ~~that updates~~ for updating a property of the live object, such that a gateway device at the ~~routing~~ network ~~has sufficient information~~ is configured to identify the client device as a registered device and to send a routed message from the gateway device to a node, wherein the node is configured to send the routed message containing the update data to the client device, ~~such that~~ and wherein the client device ~~processes~~ is configured to process the routed message upon receipt to update the property of the live object at the client device.

58. (Previously Presented) The device of claim 57, wherein the live object of the data representation causes the client device to register with a client proxy of the network.

59. (Previously Presented) The device of claim 57, wherein the live object of the data representation causes the client device to register with a node of the network.

60. (Currently Amended) The device of claim 57, wherein the ~~received~~ data representation includes an activation module that is executed by the client device and that is adapted to register the live object with the ~~routing~~ network.

61. (Currently Amended) The device of claim 60, wherein the activation module determines a node type ~~that handles~~ for handling registration and causes the client device to register with a node of the ~~determined registration~~ node type.

62. (Previously Presented) The device of claim 60, wherein the activation module determines a message category of the data representation and causes the client device to register with a node having a node type corresponding to the message category.

63. (Currently Amended) A method comprising:

providing~~, using a processing device,~~ a live object to a client device;

sending~~, using the processing device,~~ an update message to a ~~routing~~ network~~, the update message~~ identifying the live object and containing update data to update the live object at the client device; and

in response to determining that [[if]] the client device is registered to receive update data for the ~~identified~~ live object, sending a routed message containing the update data ~~, using the processing device,~~ from a gateway device at the ~~routing~~ network to a node, wherein the node sends the routed message to the client device. ~~a routed message containing the update data to the client device.~~

64. (Currently Amended) An apparatus ~~that provides dynamic content, the apparatus~~ comprising:

a content provider arranged to provide a live object to a client device; and

an information provider arranged to provide an update message to a ~~routing~~ network~~, the update message~~ identifying the live object and containing update data ~~to update~~ for updating the live object,

wherein the ~~routing~~ network ~~is arranged to send~~ is configured to send a routed message containing the update data from a gateway device at the network to a node, and wherein the node is configured to send the routed message to the client device if the client device is registered to receive the update data for the ~~identified~~ live object.

65. (Currently Amended) A tangible computer-readable ~~storage~~ medium having ~~stored thereon computer-executable~~ instructions ~~for providing dynamic content over a network~~ stored thereon, ~~that if executed by a computing device, cause the computing device to perform a method~~ the instructions comprising:

instructions to provide ~~providing~~, using a processing device, a live object to a client device;

instructions to send ~~sending~~, using the processing device, an update message to a ~~routing~~ network~~, the update message~~ identifying the live object and containing update data ~~to update~~ for updating the live object; and

~~if the client device is registered to receive update data for the identified live object, sending~~ instructions to cause, using the processing device and in response to determining that the client device is registered to receive update data for the live object, ~~from the routing network~~ a routed message to be sent from a gateway device at the network to a node, wherein the node is configured to send the routed message containing the update data to the client device.

66. (Currently Amended) A device ~~for providing dynamic content, the device~~ comprising:

logic configured to provide a live object to a client device;

logic configured to provide an update message to a ~~routing~~ network~~, the update message~~ identifying the live object and containing update data ~~to update~~ for updating the live object at the client device; and

logic configured to send a routed message containing the update data from a gateway device at the network to a node, wherein the node is configured to send the routed message to the client device in response to determining that [[if]] the client device is registered to receive the update data for the ~~identified~~ live object.

67. (New) The routing network of claim 33, wherein the node type is configured to identify the node that receives the update message from the gateway device.

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 26 and 28-67 are pending in the application, with claims 26, 33, 39, 45, 51, 57, and 63-66 being the independent claims. Claim 27 is sought to be cancelled, and claims 1-25 were previously cancelled, without prejudice to or disclaimer of the subject matter therein. Claims 26, 28, 29-49, 51-57, 60, 61, and 63-66 are sought to be amended. New claim 67 is sought to be added. Applicants reserve the right to prosecute similar or broader claims, with respect to any cancelled and amended claims, in the future. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Statement of Substance of Examiner Interview

Applicants respectfully thank the Examiner for extending the courtesy of a telephone interview on March 5, 2010, with Applicants' representatives Jason Eisenberg and William Ladd. In the interview, Applicants' representatives discussed why the claims distinguished over the applied references. No final agreement was reached.

Rejection under 35 U.S.C. § 101

At page 2 of the Office Action, the Examiner rejected claims 57-62, 64, and 66 under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Applicants respectfully traverse this rejection.

Without acquiescing to the propriety of the rejection, claims 57, 64, and 66 have been clarified and recite statutory subject matter. For example, claims 57, 64, and 66 recite, *inter alia*, a "client device," and claim 57 recites, *inter alia*, a "processing device."

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. § 101 rejection of claims 57, 64, and 66 and pass these claims to allowance. Additionally, claims 58-62 depend from claim 57, so the revisions and comments directed to claim 57 apply equally to claims 58-62.

Rejection under 35 U.S.C. § 102

At page 4 of the Office Action, the Examiner rejected claims 26-28, 33-34, 39, 42-45, 48-51, 54-57, and 60-66 under 35 U.S.C. § 102(e) as being allegedly anticipated by U.S. Patent Number 6,324,587 to Trenbeath *et al.* ("Trenbeath"). Applicants respectfully traverse this rejection.

Claim 26

The applied references do not support a 35 U.S.C. § 102(e) rejection of claim 26. For example, claim 26 recites, *inter alia*, "identifying, using the processing device, a ***mapping of a category of the update message to a node type***; and ***routing, using the processing device, the update message to a node having the node type***" (emphasis added).

At page 5 of the Office Action the Examiner states, to which Applicants do not acquiesce, that Trenbeath teaches "identifying, using the processing device, a mapping of the category to a node type" because "blocks 402, 406, and 410 [of FIG. 14 are] associated with blocks 404, 408, and 412 respectively." Applicants respectfully disagree.

In Trenbeath, "FIG. 14 . . . illustrate[s] the high-level steps taken by a subscription client in processing messages received from a publication client and high level events . . . [i]f an update message is detected at step 406, the subscription client will process the update message at step 408." (Trenbeath, col. 25, lines 16-36 and FIG. 14.)

However, Trenbeath does not disclose at least that the "subscription message" in Trenbeath is ***routed to*** the "high-level steps" in Trenbeath, as recited in claim 26. Rather, in Trenbeath, "an update message is sent to each subscription client." (Trenbeath, col. 25, lines 6 and 7.)

Also, the "client" in Trenbeath ("publication client" or "subscription client") does not disclose the "node type," as recited by claim 26, because, for example, Trenbeath does not teach at least a ***mapping of a category of the update message to*** a type of "client."

Thus, Trenbeath does not disclose at least "identifying, using the processing device, a mapping of a category of the update message to a node type; and routing, using

the processing device, the update message to a node having the node type," as recited by claim 26 (emphasis added). Rather, Trenbeath merely describes "message[s] detected" and "high-level steps" taken. (Trenbeath, col. 25, lines 16-36 and FIG. 14.)

Thus, for at least this reason, Trenbeath does not support a 35 U.S.C. § 102(e) rejection of claim 26.

Claims 33, 39, 45, 51, 57, and 63-66

Without acquiescing to the propriety of the rejection, claims 33, 39, 45, 51, 57, and 63-66 have been clarified to state features not disclosed by the applied references. For example, claim 33 recites, *inter alia*, "a ***gateway device*** configured to . . . route the update message . . . a ***node device*** configured to . . . ***receive*** the update message ***from the gateway device*** . . . and route the data ***from the node device to the client***," claims 39, 45, 51, and 57 recite, *inter alia*, "send a routed message containing the update data ***from the gateway device to a node . . . the node . . . send[s] the routed message . . . to the client device***," claim 65 recites, *inter alia*, "instructions to cause . . . ***a routed message to be sent from a gateway device at the network to a node, wherein the node is configured to send the routed message containing the update data to the client device***," and claims 63, 64, and 66 recite, *inter alia*, "send[ing] a routed message . . . ***from a gateway device at the network to a node, wherein the node . . . send[s] the routed message to the client device***" (emphasis added).

In Trenbeath, "the publication client would be software running on a personal computer operated by the grandparents and each family would operate subscription client software on computers in their home . . . [a] subscription client would submit, through email, the modified family information file to the publication client which would replace the previous copy of the file . . . [n]ext, the publication client would distribute the modified family information file to each of the subscription clients, again over email." (Trenbeath, col. 3, lines 13-25.)

Trenbeath states that ". . . the subscription client creates a subscription folder and sends a request message to the publication client in order to receive all the data objects for the subscription folder . . . [t]hese data objects are sent using update messages that contain the data objects as attachments . . . [a]t this point, the subscription folder is

current with the publication folder and will receive update messages as the state of the folder changes." (Trenbeath, col. 3, lines 39-46.)

Thus, Trenbeath does not disclose at least "a ***gateway device*** configured to . . . route the update message . . . a ***node device*** configured to . . . ***receive*** the update message ***from the gateway device*** . . . and route the data ***from the node device to the client***," as recited by claim 33, at least "send a routed message containing the update data ***from the gateway device to a node . . . the node . . . send[s] the routed message . . . to the client device***," as recited by claims 39, 45, 51, and 57, "instructions to cause . . . ***a routed message to be sent from a gateway device at the network to a node, wherein the node is configured to send the routed message containing the update data to the client device***," as recited by claim 65, or at least "send[ing] a routed message . . . ***from a gateway device at the network to a node, wherein the node . . . send[s] the routed message to the client device***," as recited by claims 63, 64, and 66. Rather, in Trenbeath, "the subscription client . . . receive[s] all the data objects" from "the publication client." (Trenbeath, col. 3, lines 39-46.)

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. § 102(e) rejection of claims 26, 33, 39, 45, 51, 57, and 63-66 and pass these claims to allowance. Additionally, at least based on their respective dependencies to claims 26, 33, 39, 45, 51, and 57, Applicants respectfully request allowance of claims 28, 34, 42-44, 48-50, 54-56, 60-62, as well as for their additional distinguishing features.

Without acquiescing to the propriety of the rejection, Applicants have cancelled claim 27, rendering the 35 U.S.C. § 102(e) rejection of claim 27 moot.

Rejections under 35 U.S.C. § 103

Claims 29-32 and 35-38

At page 14 of the Office Action, the Examiner rejected claims 29-32 and 35-38 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Trenbeath in view of U.S. Patent Number 7,209,959 to Campbell *et al.* ("Campbell"). Applicants respectfully traverse this rejection.

Claims 29-32 and 35-38 depend from claims 26 and 33, respectively. At page 15 of the Office Action the Examiner states that Campbell teaches "determining a connection comprises determining at least one client proxy with which the client communicates and routing the data to the client proxy, and then routing the data from the client proxy to the client." However, the Examiner does not use Campbell to teach at least the above noted distinguishing features of claims 26 and 33. Therefore, the applied references cannot be used to establish a prima facie case of obviousness for claims 26 and 33.

Accordingly, at least based on their respective dependencies to claims 26 and 33, Applicants respectfully request allowance of claims 29-32 and 35-38, as well as for their additional distinguishing features.

Claims 40, 41, 46, 47, 52, 53, 58, and 59

At page 17 of the Office Action, the Examiner rejected claims 40-41, 46-47, 52-53, and 58-59 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Trenbeath in view of U.S. Patent Number 6,314,459 to Freeman ("Freeman"). Applicants respectfully traverse this rejection.

Claims 40, 41, 46, 47, 52, 53, 58, and 59 depend from claims 39, 45, 51, and 57, respectively. At page 18 of the Office Action the Examiner states, to which Applicants do not acquiesce, that Freeman teaches "wherein the live object of the data representation causes the client device to register with a client proxy of the network." However, the Examiner does not use Freeman to teach, nor does Freeman teach, at least the above noted distinguishing features of claims 39, 45, 51, and 57. Thus, Freeman cannot be used to cure the deficiencies of Trenbeath. Therefore, the applied references cannot be used to establish a prima facie case of obviousness for claims 39, 45, 51, and 57.

Accordingly, at least based on their respective dependencies to claims 39, 45, 51, and 57, Applicants respectfully request allowance of claims 40, 41, 46, 47, 52, 53, 58, and 59, as well as for their additional distinguishing features.

New Claim 67

New claim 67 depends from claim 33 and includes all features therein. Thus, at least based on its dependency to claim 33, Applicants respectfully request allowance of new claim 67, as well as for its additional distinguishing features.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
Attorney for Applicants
Registration No. 28,458

Date: 19 April 2010

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IPR2025-00200 / 722 Patent Page 557 of 1171 EX1002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
Tuttle *et al.*	Art Unit: 2194
Appl. No.: 11/396,251	Examiner: DAO, TUAN C.
Filed: March 30, 2006	Atty. Docket: 2222.775000E
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**	

Fourth Supplemental Information Disclosure Statement

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms are documents that may be considered material to the patentability of this application as defined in 37 C.F.R. §1.56, and in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.97 and 1.98.

Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.

☐ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.

☒ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☒ c. The required fee is provided through online credit card payment authorization in the amount of $180.00 in payment of the fee under 37 C.F.R. § 1.17(p).

☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but on or before payment of the Issue Fee. The required fee is provided through online credit card payment authorization in the amount of $180.00 in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38 and MPEP 609.04(a)(III).

☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below in accordance with 37 C.F.R. § 1.98(a)(3).

☒ 7. Copies of documents NPL1-NPL3 are submitted. However, in accordance with 37 C.F.R. § 1.98(a)(2), no copies of U.S. patents and patent application publications cited on the attached IDS Forms are submitted.

☐ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No._____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

☒ 9. It is expected that the examiner will review the prosecution and cited art in the parent application nos. 10/105,018 filed March 21, 2002 (now U.S. Pat. No. 7,051,070) and 10/017,182 filed December 14, 2001 (now U.S. Pat. No. 7,043,525) in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

☒ 10. In accordance with the Federal Circuit decision in *Dayco Prods., Inc. v. Total Containment, Inc.* 329 F.3d 1358 (Fed. Cir. 2003), Applicants submit herewith Office Actions from the co-pending U.S. Patent Application No. 11/205,233, filed August 15, 2005 as document NPL1; U.S. Patent Application No. 11/515,233, filed August 31, 2006 as document NPL2; and U.S. Patent Application No. 11/205,263, filed August 15, 2005 as document NPL3. The identification of these Office Actions is not to be construed as a waiver of secrecy as to those applications now or upon issuance of the present application

as a patent. The Examiner is respectfully requested to consider the cited applications and the art cited therein during examination.

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
Attorney for Applicants
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Date: 19 April 2010

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Substitute for form 1449/PTO

FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	2194
Examiner Name	DAO, TUAN C.
Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US1	5,699,523	12-16-1997	Li et al.	
	US2	5,754,939	05-19-1998	Herz et al.	
	US3	5,933,429	08-03-2009	Bubenik et al.	
	US4	6,138,158	10-24-2000	Boyle et al.	
	US5	6,449,638 B1	09-10-2002	Wecker et al.	
	US6	6,460,036 B1	10-01-2002	Herz	
	US7	6,606,596 B1	08-12-2003	Zirngibl et al.	
	US8	6,918,084 B1	07-12-2005	Slaughter et al.	
	US9	7,139,844 B2	11-21-2006	Smith et al.	
	US10	7,263,547 B2	08-28-2007	Kloba et al.	
	US11	7,426,721 B1	09-16-2008	Saulpaugh et al.	
	US12	7,516,177 B2	04-07-2009	Knapp et al.	
	US13	7,565,359 B2	07-21-2009	Nazem et al.	
	US14	2001/0047426 A1	11-29-2001	Hunter	
	US15	2002/0010757 A1	01-24-2002	Granik et al.	
	US16	2002/0013852 A1	01-31-2002	Janik	
	US17	2002/0024536 A1	02-28-2002	Kahan et al.	
	US18	2002/0056004 A1	05-09-2002	Smith et al.	
	US19	2002/0073165 A1	06-13-2002	McNulty et al.	
	US20	2002/0078251 A1	06-20-2002	Lewis	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. 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 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, 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.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for form 1449/PTO

FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 2

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	2194
Examiner Name	DAO, TUAN C.
Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number / Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US21	2004/0148606 A1	07-29-2004	Hosoe	
	US22	2005/0027815 A1	02-03-2005	Christodoulou et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document / Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

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If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for form 1449/PTO				*Complete if Known*	
FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy Tuttle
				Art Unit	2194
				Examiner Name	DAO, TUAN C.
Sheet	1	of	1	Attorney Docket Number	2222.775000E

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
	NPL1	Non-Final Office Action dated January 7, 2010, U.S. Appl. No. 11/205,233, Rumelhart et al., filed August 15, 2005	
	NPL2	Non-Final Office Action dated February 22, 2010, U.S. Appl. No. 11/515,233, Rumelhart et al., filed August 31, 2006.	
	NPL3	Final Office Action dated March 23, 2010, U.S. Appl. No. 11/205,263, Rumelhart et al., filed August 15, 2005	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. 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 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, 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.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Electronic Patent Application Fee Transmittal

Application Number:	11396251
Filing Date:	30-Mar-2006
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Filer:	William Pierce Ladd/Leonard Adgerson
Attorney Docket Number:	2222.775000E

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	7439594
Application Number:	11396251
International Application Number:	
Confirmation Number:	1129
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Customer Number:	26111
Filer:	William Pierce Ladd/Leonard Adgerson
Filer Authorized By:	William Pierce Ladd
Attorney Docket Number:	2222.775000E
Receipt Date:	19-APR-2010
Filing Date:	30-MAR-2006
Time Stamp:	14:54:26
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$180
RAM confirmation Number	1332
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1		2222775000Eamendmentandids.pdf	2030619 85e3f68cfb08cebf089b794f5d94048e7c1a0ea3	yes	29

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Miscellaneous Incoming Letter	1	2
Amendment/Req. Reconsideration-After Non-Final Reject	3	3
Claims	4	14
Applicant Arguments/Remarks Made in an Amendment	15	20
Transmittal Letter	21	26
Information Disclosure Statement (IDS) Filed (SB/08)	27	29

Warnings:					
Information:					
2	NPL Documents	2222775000E_NPL1.pdf	224695 f1c589ba0f7e936c53f9efb3ef6312553d5e4378	no	16
Warnings:					
Information:					
3	NPL Documents	2222775000E_NPL2.pdf	250640 6cc8ab023f8a6bdee4f362cc13e995ac28fa7f5a	no	17
Warnings:					
Information:					
4	NPL Documents	2222775000E_NPL3.pdf	269035 713f462f0e1fda1542abdbc825775a83a1a51663	no	24
Warnings:					
Information:					
5	Fee Worksheet (PTO-875)	fee-info.pdf	30148 4febcb80fe950a6bdb2440cfdbf217eb5c9f85d8	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	2805137	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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*Admitted only in Maryland
†Admitted only in Virginia
*Practice Limited to Federal Agencies

April 19, 2010

WRITER'S DIRECT NUMBER:
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GJPERRY@SKGF.COM

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Art Unit 2194

Attn: Mail Stop Amendment

Re: U.S. Utility Patent Application
Application No. 11/396,251; Filing or 371(c) Date: March 30, 2006
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**
Inventors: TUTTLE *et al.*
Our Ref: 2222.775000E

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Amendment and Reply Under 37 C.F.R. §1.111;
2. Online Credit Card Payment Authorization in the amount of $180.00 to cover:

   $180.00 in payment of the fee under 37 C.F.R. § 1.17(p);

3. Fourth Supplemental Information Disclosure Statement;
4. Form PTO/SB/08A two (2) sheets listing twenty-two (22) documents (US1-US22);
5. Form PTO/SB/08B one (1) sheet listing three (3) documents (NPL1-NPL3); and
6. Copy of cited documents (NPL1-NPL3).

The above-listed documents are filed electronically through EFS-Web.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

IPR2025-00200 / 722 Patent Page 572 of 1171 EX1002

Fee payment is provided through online credit card payment. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
Attorney for Applicants
Registration No. 28,458

GJP/WPL/kma

1103913_1.DOC

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
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.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/396,251	03/30/2006	

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☐		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	04/19/2010	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 41	Minus	** 41	= 0	X $ =		OR	X $52=	0
	Independent (37 CFR 1.16(h))	* 9	Minus	***9	= 0	X $ =		OR	X $220=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL 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 number found in the appropriate box in column 1.

Legal Instrument Examiner:
/DORIS M. KING/

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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UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E	1129

26111 7590 06/17/2010

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
DAO, TUAN C.	

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
06/17/2010	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.

Office Action Summary	Application No.	Applicant(s)	
	11/396,251	TUTTLE ET AL.	
	Examiner	Art Unit	
	TUAN DAO	2194	

-- 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 *19 April 2010*.

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) *26 and 28-67* 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) *26 and 28-67* 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 _____ 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 *04/19/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to Amendment filed 04/19/2010.

2. Claims 26 and 28-67 have been examined.

Response to Amendment

3. In the instant amendment, claims 26 and 28-66 have been amended. Claim 67 has been newly added.

- The 35 USC §101 rejection over claims 57-62, 64, and 66 is withdrawn in view of Applicant's amendments.

Information Disclosure Statement

4. As required by M.P.E.P. 609, the applicant's submissions of the Information Disclosure Statement dated 04/19/2010 is acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending.

Claim Objections

5. Claims 45-50 are objected to because of the following informalities:

As per claims 45 and 48, "the routing network" (lines 9 and 3, respectively) is not previous addressed.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 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.

7. Claim 65 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

8. As per claim 65, it fails to place the invention squarely within one statutory class of invention by declaring "a tangible computer-readable medium" including data storage and transmission media. As such, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore this claim(s) is/are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefore not a composition of matter.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 26, 28, 33-34, 39, 42-45, 48-51, 54-57 and 60-67 are rejected under 35 U.S.C. 102(e) as being anticipated by Trenbeath et al. (US 6,324,587, hereinafter "Trenbeath").

As per claim 26, Trenbeath discloses a method comprising:

receiving, using a processing device (FIG. 3B: a server device/publishing client in FIG. 4/publishing/subsribting client in FIG. 5E), an update message identifying a live object and containing data for updating a property of the live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing data for updating a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object);

identifying, using the processing device, a mapping of a category of the update message to a node type (FIG.14, decision node 402 New Subscription Message? Yes ➔ mapping to node for processing new subscription message; decision node 406 "Update Message? Yes ➔ mapping to node for processing update message; decision node 410 Syncstate Message? Yes ➔ mapping to node for processing syncstate message);

and routing, using the processing device, the update message to a node having the node type (FIG.14, decision node 408 ➔ FIG.16, decision nodes 442-444-462, wherein each type of the update messages has associated node types create, modify, delete for creating, modifying, and deleting),

causing the node, through the update message, to determine a client that has registered for updates of the live object (FIG. 5D-E; column 10: 30-55: determining a list of subscription clients)

and causing the node to route the data from the node to the client (FIG. 5E; column 10: 40-55: the revised object data sent from the publication folder to the subscription folder located in subscription client),

and causing the client to process the data and to update the property of the live object (FIG. 5E; column 10: 40-55: the object in the subscription folder located on the subscription client is updated).

As per claim 28, Trenbeath discloses the method of claim 26, further comprising causing the node to extract an object ID from the update message (FIG. 8; column 13: 40-65 – column 14:1-20) and to establish a connection to the client to determine the client that has registered for updates of the live object (FIG. 8; column 13: 40-65 – column 14: 1-20: Store and Transport protocol).

As per claim 33, Trenbeath discloses a routing network comprising:

a gateway device (FIG. 3B: a server device/publishing client in FIG. 4/publishing/subsribting client in FIG. 5E) configured to:

receive an update message (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients)

identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID)

and containing data for updating a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object),

identify a mapping of a category of the update message to a node type (FIG.14, decision node 402 New Subscription Message? Yes ➔ mapping to node for processing new subscription message; decision node 406 "Update Message? Yes ➔ mapping to node for processing update message; decision node 410 Syncstate Message? Yes ➔ mapping to node for processing syncstate message),

and route the update message (FIG. 5C: message is routed from client E to client A; FIG. 14; column 25: depending on the condition, the message will be routed to block 404, 408 or 412);

and a node device (FIG. 2 and 3; column 7 and 8: client and/or server) configured to:

receive the update message from the gateway device, wherein the node device is configured to be mapped to the node type (FIG.14, decision node 408 ➔ FIG.16, decision nodes 442-444-462, wherein each type of the update messages has associated node types create, modify, delete for creating, modifying, and deleting),

determine a client that has registered for updates of the live object (FIG. 5D-E; column 10: 30-55: determining a list of subscription clients),

and route the data from the node device to the client (FIG. 5E; column 10: 40-55: the revised object data sent from the publication folder to the subscription folder located in subscription client),

wherein the client is adapted to process the data and to update the property of the live object (FIG. 5E; column 10: 40-55: the object in the subscription folder located on the subscription client is updated).

As per claim 34, it is a routing network claim, which recite(s) the same limitations as those of claims 28, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 34.

As per claim 67, Trenbeath discloses the routing network of claim 33, wherein the node type is configured to identify the node that receives the update message from the gateway device (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217; FIG.14, decision node 402 New Subscription Message? Yes ➔ mapping to node for processing new subscription message; decision node 406 "Update Message? Yes ➔ mapping to node for processing update message; decision node 410 Syncstate Message? Yes ➔ mapping to node for processing syncstate message).

As per claim 39, Trenbeath discloses a method comprising:

providing, using a processing device (FIG. 3B: a server device/publishing client in FIG. 4/publishing/subsribting client in FIG. 5E), a data representation to a client device coupled to a network (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients), wherein the data representation includes at least one live object recognized by the client device (FIG. 8B, Publication ID 208 registered with Subscription Client ID 213), and causing the client device to respond to the live object of the data representation by determining an object ID of the live object (FIG. 8B, Publication ID 208

registered with Subscription Client ID 213) and to register for updates of the live object with a routing network (FIG. 5E, column 3: 30-50 subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A,), such that registering the client device with the network provides client connection information to the routing network (FIG. 8B, Permissions 215 of subscribed clients; Subscriber Status 216 including active, pending);

sending, using the processing device, an update message to the network, wherein the update message identifies the live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID)

and contains update data that updates a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object),

such that a gateway device at the network (FIG. 3B: a server device/publishing client in FIG. 4/publishing/subsribting client in FIG. 5E)

is configured to identify the client device as a registered device (FIG. 5D-E; column 10: 15-55: determining a publication client)

and to send a routed message containing the update data from the gateway device to a node (FIG.14, decision node 408 ➔ FIG.16, decision nodes 442-444-462, wherein each type of the update messages has associated node types create, modify, delete for creating, modifying, and deleting);

causing the node to send the routed message to the client device (FIG. 5E; column 10: 40-55: the revised object data sent from the publication folder to the subscription folder located in subscription client);

and causing the client device to process the routed message upon receipt to update the property of the live object at the client device (FIG. 5E; column 10: 40-55: the object in the subscription folder located on the subscription client is updated).

As per claim 42, Trenbeath discloses the method of claim 39, wherein providing the data representation to the client device including providing an activation module that is executed by the client device (FIG. 4, 14; column 9-10; column 25: 15-25: software located in both publication client and subscription client) and that registers the live object with the network (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

As per claim 43, Trenbeath discloses the method of claim 42, wherein providing the activation module includes providing an activation module that is configured to determine determines a node type that handles registration and that causes the client device to register with a node corresponding to the node type (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

As per claim 44, Trenbeath discloses the method of claim 42, wherein providing the activation module includes providing an activation module that is configured to determine a message category of the data representation and that causes the client device to register with a node having a node type corresponding to the message category (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217, message categories updating/deleting/modifying).

As per claim 45, Trenbeath discloses an apparatus comprising:

a content provider device configured to provide a data representation to a client device coupled to the network (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients), wherein the data representation includes at least one live object that is recognized by the client device (FIG. 8B, Publication ID 208 registered with Subscription Client ID 213), and that causes the client device to determine an object ID of the live object (FIG. 8B, Publication ID 208 registered with Subscription Client ID 213) to register for updates of the live object with the network (FIG. 5E, column 3: 30-50 subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A,), such that registering the client device with the network provides client connection information to the network (FIG. 8B, Permissions 215 of subscribed clients; Subscriber Status 216 including active, pending);

and an information provider device configured to send an update message to the network, wherein the update message identifies the live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID)

and contains update data-for updating a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object),

such that a gateway device at the routing network (FIG. 3B: a server device/publishing client in FIG. 4/publishing/subsribting client in FIG. 5E) is configured to identify the client device as a registered device (FIG. 5D-E; column 10: 15-55: determining a publication client)

and to send a routed message from the gateway device to a node (FIG.14, decision node 408 ➔ FIG.16, decision nodes 442-444-462, wherein each type of the update messages has associated node types create, modify, delete for creating, modifying, and deleting),

wherein the node is configured to send the routed message containing the update data to the client device (FIG. 5E; column 10: 40-55: the revised object data sent from the publication folder to the subscription folder located in subscription client),

and wherein the client device is configured to process processes the routed message upon receipt to update the property of the live object at the client device (FIG. 5E; column 10: 40-55: the object in the subscription folder located on the subscription client is updated).

As per claim 48, Trenbeath discloses the apparatus of claim 45, wherein the received data representation includes an activation module that is configured to be executed by the client device (FIG. 4, 14; column 9-10; column 25: 15-25: software located in both publication client

and subscription client) and adapted to register the live object with the routing network (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

As per claim 49, Trenbeath discloses the apparatus of claim 48, wherein the activation module is configured to determine a node type for handling registration and to cause the client device to register with a node of the node type (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

As per claim 50, it is an apparatus claim, which recite(s) the same limitations as those of claims 44, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 50.

As per claim 51, Trenbeath discloses an article of manufacture including a computer-readable medium having instructions stored thereon, an execution of which by a computing device causes the computing device to perform operations (FIG. 2) comprising:

providing, using a processing device (FIG. 3B: a server device/publishing client in FIG. 4/publishing/subsribting client in FIG. 5E), a data representation to a client device coupled to a network (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients), wherein the data representation includes at least one

live object that is recognized by the client device (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID 208), and that causes the client device to respond to the live object by determining an object ID of the live object (FIG. 8B, Publication ID 208 registered with Subscription Client ID 213) to register for updates of the live object with the network (FIG. 5E, column 3: 30-50 subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A,), such that registering the client device with the network provides client connection information to the network (FIG. 8B, Permissions 215 of subscribed clients; Subscriber Status 216 including active, pending);

and sending, using the processing device, an update message to the network, wherein the update message identifies the live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID)

and contains update data for updating a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object),

such that a gateway device at the network (FIG. 3B: a server device/publishing client in FIG. 4/publishing/subsribting client in FIG. 5E)

is configured to identify the client device as a registered device (FIG. 5D-E; column 10: 15-55: determining a publication client)

and to send a routed message containing the update data from the gateway device to a node (FIG.14, decision node 408 ➔ FIG.16, decision nodes 442-444-462, wherein each type of the update messages has associated node types create, modify, delete for creating, modifying, and deleting),

wherein the node sends the routed message to the client device (FIG. 5E; column 10: 40-55: the revised object data sent from the publication folder to the subscription folder located in subscription client),

and wherein the client device is configured to process the routed message upon receipt to update the property of the live object at the client device (FIG. 5E; column 10: 40-55: the object in the subscription folder located on the subscription client is updated).

As per claim 54, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 48, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 54.

As per claim 55, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 49, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 55.

As per claim 56, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 50, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 56.

As per claim 57, it is a device claim, which recite(s) the same limitations as those of claims 39, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 57.

As per claim 60, it is a device claim, which recite(s) the same limitations as those of claims 48, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 60.

As per claim 61, it is a device claim, which recite(s) the same limitations as those of claims 49, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 61.

As per claim 62, it is a device claim, which recite(s) the same limitations as those of claims 50, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 62.

As per claim 63, Trenbeath discloses a method comprising:

Providing a live object to a client device (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients);

Sending an update message to a network (FIG. 4-6; column 3: 40-50 and column 9: 20-35) identifying the live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing update data to update the live object at the client device (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object);

And in response to determining that the client device is registered to receive update data for the live object (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217),

sending a routed message containing the update data from a gateway device at the network to a node (FIG.14, decision node 408 ➔ FIG.16, decision nodes 442-444-462, wherein each type of the update messages has associated node types create, modify, delete for creating, modifying, and deleting),

wherein the node sends the routed message to the client device (FIG. 5E; column 10: 40-55: the revised object data sent from the publication folder to the subscription folder located in subscription client).

As per claim 64, Trenbeath discloses an apparatus comprising:

a content provider arranged to provide a live object to a client device (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients);

and an information provider arranged to provide an update message to a network (FIG. 4-6; column 3: 40-50 and column 9: 20-35)

identifying the live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing update data for updating the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object),

wherein the network is configured to send a routed message containing the update data from a gateway device at the network to a node (FIG.14, decision node 408 ➔ FIG.16, decision nodes 442-444-462, wherein each type of the update messages has associated node types create, modify, delete for creating, modifying, and deleting),

and wherein the node is configured to send the routed message to the client device (FIG. 5E; column 10: 40-55: the revised object data sent from the publication folder to the subscription folder located in subscription client)

if the client device is registered to receive the update data for the live object (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

As per claim 65, Trenbeath discloses a tangible computer-readable medium having instructions stored thereon (FIG. 2), the instructions comprising:

instructions to provide, using a processing device, a live object to a client device (FIG. 4; column 3: 40-50 and column 9: 20-35: an update message sent from subscription clients to publishing clients);

instructions to send, using the processing device, an update message to a network-(FIG. 4-6; column 3: 40-50 and column 9: 20-35)

identifying the live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID)

and containing update data for updating the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object);

and instructions to cause, using the processing device and in response to determining that the client device is registered to receive update data for the live object (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217),

a routed message to be sent from a gateway device at the network to a node (FIG.14, decision node 408 ➔ FIG.16, decision nodes 442-444-462, wherein each type of the update messages has associated node types create, modify, delete for creating, modifying, and deleting),

wherein the node is configured to send the routed message containing the update data to the client device (FIG. 5E; column 10: 40-55: the revised object data sent from the publication folder to the subscription folder located in subscription client).

As per claim 66, it is a device claim, which recite(s) the same limitations as those of claims 63, wherein all claimed limitations have been addressed and/or set forth above. Therefore,

as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 66.

Claim Rejections - 35 USC § 103

11. 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.

12. Claims 29-32 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trenbeath in view of Campbell et al. (US 7,209,959, hereinafter "Campbell").

As per claim 29, Trenbeath does not explicitly disclose further comprising causing the node to determine at least one client proxy with which the client communicates, and to route the data to the client proxy, and to route the data from the client proxy to the client to determine the connection.

However, Campbell further discloses further comprising causing the node to determine at least one client proxy with which the client communicates, and to route the data to the client proxy, and to route the data from the client proxy to the client to determine the connection (column 2: 8-20).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Trenbeath's teaching because

it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20: a proxy server is considered as a client server).

As per claim 30, Trenbeath discloses further comprising causing the node to maintain client registration information concerning the client connection (FIG. 8B; column 14:1-20).

As per claim 31, Trenbeath does not explicitly disclose comprising causing the node to maintain client registration information concerning the client connection at the client proxy.

However, Campbell further discloses comprising causing the node to maintain client registration information concerning the client connection at the client proxy (column 2: 8-20: client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20).

As per claim 32, Trenbeath discloses wherein:

the routing the update message comprises routing the update message to a proxy node comprising a second node receiving messages of more than one message category (FIG. 7; column 12: 50-65 – column 13: 1-3: different Data Objects),

and further comprising causing the node to determine at least one corresponding node having a corresponding node type mapped to the message category, with which the registered client communicates (FIG. 6-8; column 3: 30-50 and column 12-14).

Trenbeath does not explicitly disclose to route the data to the corresponding node to determine the connection.

However, Campbell further discloses to route the data to the corresponding node to determine the connection (column 2: 8-20: proxy server is considered as a proxy node).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20).

As per claim 35, it is a routing network claim, which recite(s) the same limitations as those of claims 29, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 35.

As per claim 36, Trenbeath discloses wherein the node device is configured to determine a connection by determining at least one client proxy with which the registered client communicates and to route the data to the client proxy (FIG. 8B; column 14:1-20).

As per claim 37, Trenbeath does not disclose wherein client registration information concerning the client connection is configured to be maintained at the client proxy.

However, Campbell further discloses wherein client registration information concerning the client connection is configured to be maintained at the client proxy (column 2: 8-20: client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20).

As per claim 38, Trenbeath discloses wherein:

the gateway device is configured to route the update message by routing the update message to a proxy node comprising a second node adapted to receive messages of more than one message category (FIG. 7; column 12: 50-65 – column 13: 1-3: different Data Objects),

and the node device is configured to determine at least one corresponding node that has a corresponding node type mapped to the message category and with which the registered client communicates (FIG. 6-8; column 3: 30-50 and column 12-14).

Trenbeath does not explicitly disclose to route the data to the corresponding node.

However, Campbell further discloses to route the data to the corresponding node (column 2: 8-20: proxy server is considered as a proxy node).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20).

13. Claims 40-41, 46-47, 52-53 and 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trenbeath in view of Freeman et al. (US 6,314,459 hereinafter "Freeman").

As per claim 40, Trenbeath does not explicitly disclose wherein providing the data representation to the client device includes providing a live object that causes the client device to register with a client proxy of the network.

However, Freeman further discloses wherein providing the data representation to the client device includes providing a live object that causes the client device to register with a client proxy of the network (FIG. 7; column 4: 5-35).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 41, Trenbeath does not explicitly disclose wherein providing the data representation to the client device includes providing a live object that causes the client device to register with a node of the network.

However, Freeman further discloses wherein providing the data representation to the client device includes providing a live object that causes the client device to register with a node of the network (FIG. 7; column 4: 5-35: node 102 and 104 containing registry 124 and 126 respectively).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 46, Trenbeath does not explicitly disclose wherein the live object of the data representation is configured to cause the client device to register with a client proxy of the network.

However, Campbell further discloses wherein the live object of the data representation is configured to cause the client device to register with a client proxy of the network (FIG. 7; column 4: 5-35).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 47, Trenbeath does not explicitly disclose wherein the live object of the data representation is configured to cause the client device to register with a node of the network.

However, Campbell further discloses wherein the live object of the data representation is configured to cause the client device to register with a node of the network (FIG. 7; column 4: 5-35: node 102 and 104 containing registry 124 and 126 respectively).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 52, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 46, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 52.

As per claim 53, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 47, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 53.

As per claim 58, it is a device claim, which recite(s) the same limitations as those of claims 46, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 58.

As per claim 59, it is a device claim, which recite(s) the same limitations as those of claims 47, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 59.

Response to Arguments

14. Applicants' arguments have been considered but are moot in view of the new ground(s) of rejection. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action.

15. Applicant's arguments filed on 04/19/2010 have been fully considered but they are not persuasive for the following reasons:

1) Limitation at issue " identifying, using the processing device, a mapping of a category of the update message to a node type; and routing, using the processing device, the update message to a node having the node type" (Remarks, page 14).

a) Applicants argue "Trenbeath does not teach at least a mapping of a category of the update message to a type of 'client'."

As an initial matter, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "…at least a mapping of a category of the update message to a type of "client."" – see

Remarks, page 14) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In further, examiner notes that in the specification, Applicants defined a node can be a Document Object Model (DOM) tree node (paragraph 0058) or a cluster node (paragraph 0109).

Accordingly, the plain language of the claims "identifying, using the processing device, a mapping of a category of the update message to a node type; and routing, using the processing device, the update message to a node having the node type" does not exclude a branching/decision tree node, which is used by a processing device to map and forward/branch/route a message for further processing.

Therefore, Trenbeath fully teaches identifying, using the processing device, a mapping of a category of the update message to a node type;" (FIG.14, decision node 402 New Subscription Message? Yes à mapping to node for processing new subscription message; decision node 406 "Update Message? Yes à mapping to node for processing update message; decision node 410 Syncstate Message? Yes à mapping to node for processing syncstate message).

b)Applicants argue "Trenbeath does not disclose at least that the "subscription message" in Trenbeath is routed to the "high-level steps" in Trenbeath, as recited in claim 26." (Remarks, page 14)

Examiner respectfully disagrees. Trenbeath explicitly teaches routing, using the processing device, the update message to a node having the node type (FIG.14, decision node

408 à FIG.16, decision nodes 442-444-462, wherein each type of the update messages has associated node types create, modify, delete for creating, modifying, and deleting).

Therefore, Trenbeath fully teaches identifying, using the processing device, a mapping of a category of the update message to a node type; (FIG.14, decision node 402 New Subscription Message? Yes ➔ mapping to node for processing new subscription message; decision node 406 "Update Message? Yes ➔ mapping to node for processing update message; decision node 410 Syncstate Message? Yes ➔ mapping to node for processing syncstate message) and

routing, using the processing device, the update message to a node having the node type (FIG.14, decision node 408 à FIG.16, decision nodes 442-444-462, wherein each type of the update messages has associated node types create, modify, delete for creating, modifying, and deleting).

2) Limitation at issue "a gateway configured to... route the update message.., a node device configured to... receive the update message from the gateway device.., and route the data from the node device to the client," claims 39, 45, 51, and 57 recite, inter alia, "send a routed message containing the update data from the gateway device to a node.., the node.., send[s] the routed message.., to the client device," claim 65 recites, inter alia, "instructions to cause.., a routed message to be sent from a gateway device at the network to a node, wherein the node is configured to send the routed message containing the update data to the client device," and claims 63, 64, and 66 recite, inter alia, "send[ing] a routed message.., from a gateway: device at

the network to a node, wherein the node.., send[s] the routed message to the client device" (Remarks, page 15).

Examiner notes that Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action set forth in details above.

c) Claims 29-32 and 35-38 (Remarks, page 16) are also rejected based on virtue of their dependencies on the rejected base claim 26 and 33.

d) Claims 40-41, 46-47, 52-53, and 58-59 (Remarks, page 17) are also rejected based on virtue of their dependencies on the rejected base claim 39, 45, 51, and 57.

In conclusion, examiner respectfully maintains ground of rejection over claims 26 and 28-65.

Conclusion

16. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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 date of this final action.

17. Any inquiry concerning this communication should be directed to examiner Tuan Dao, whose telephone/fax numbers are (571) 270 3387 and (571) 270 4387, respectively. The examiner can normally be reached on every Monday-Thursday and the second Friday of the bi-week from 7:30AM to 5:00PM.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough, can be reached at (571) 272 6799.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100. I

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).

/Tuan C. Dao/

Examiner, Art Unit 2194

/Hyung S. Sough/
Supervisory Patent Examiner, Art Unit 2194
June 16, 2010

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11396251	TUTTLE ET AL.
	Examiner	Art Unit
	Tuan C Dao	4142

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/18/2009	01/11/2010	06/14/2010						
	1	-	-	-						
	2	-	-	-						
	3	-	-	-						
	4	-	-	-						
	5	-	-	-						
	6	-	-	-						
	7	-	-	-						
	8	-	-	-						
	9	-	-	-						
	10	-	-	-						
	11	-	-	-						
	12	-	-	-						
	13	-	-	-						
	14	-	-	-						
	15	-	-	-						
	16	-	-	-						
	17	-	-	-						
	18	-	-	-						
	19	-	-	-						
	20	-	-	-						
	21	-	-	-						
	22	-	-	-						
	23	-	-	-						
	24	-	-	-						
	25	-	-	-						
	26	✓	✓	✓						
	27	✓	✓	-						
	28	✓	✓	✓						
	29	✓	✓	✓						
	30	✓	✓	✓						
	31	✓	✓	✓						
	32	✓	✓	✓						
	33	✓	✓	✓						
	34	✓	✓	✓						
	35	✓	✓	✓						
	36	✓	✓	✓						

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11396251	TUTTLE ET AL.
	Examiner	Art Unit
	Tuan C Dao	4142

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CLAIM		DATE								
Final	Original	07/18/2009	01/11/2010	06/14/2010						
	37	✓	✓	✓						
	38	✓	✓	✓						
	39	✓	✓	✓						
	40	✓	✓	✓						
	41	✓	✓	✓						
	42	✓	✓	✓						
	43	✓	✓	✓						
	44	✓	✓	✓						
	45	✓	✓	✓						
	46	✓	✓	✓						
	47	✓	✓	✓						
	48	✓	✓	✓						
	49	✓	✓	✓						
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	58	✓	✓	✓						
	59	✓	✓	✓						
	60	✓	✓	✓						
	61	✓	✓	✓						
	62	✓	✓	✓						
	63		✓	✓						
	64		✓	✓						
	65		✓	✓						
	66		✓	✓						

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /T.D./

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Substitute for form 1449/PTO

FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	2194
Examiner Name	DAO, TUAN C.
Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US1	5,699,523	12-16-1997	Li et al.	
	US2	5,754,939	05-19-1998	Herz et al.	
	US3	5,933,429	08-03-2009	Bubenik et al.	
	US4	6,138,158	10-24-2000	Boyle et al.	
	US5	6,449,638 B1	09-10-2002	Wecker et al.	
	US6	6,460,036 B1	10-01-2002	Herz	
	US7	6,606,596 B1	08-12-2003	Zirngibl et al.	
	US8	6,918,084 B1	07-12-2005	Slaughter et al.	
	US9	7,139,844 B2	11-21-2006	Smith et al.	
	US10	7,263,547 B2	08-28-2007	Kloba et al.	
	US11	7,426,721 B1	09-16-2008	Saulpaugh et al.	
	US12	7,516,177 B2	04-07-2009	Knapp et al.	
	US13	7,565,359 B2	07-21-2009	Nazem et al.	
	US14	2001/0047426 A1	11-29-2001	Hunter	
	US15	2002/0010757 A1	01-24-2002	Granik et al.	
	US16	2002/0013852 A1	01-31-2002	Janik	
	US17	2002/0024536 A1	02-28-2002	Kahan et al.	
	US18	2002/0056004 A1	05-09-2002	Smith et al.	
	US19	2002/0073165 A1	06-13-2002	McNulty et al.	
	US20	2002/0078251 A1	06-20-2002	Lewis	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature	/Tuan Dao/	Date Considered	06/13/2010

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This collection of information is required by 37 CFR 1.97 and 1.98. 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 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, 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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Equivalent of Form PTO/SB/08a (7-09)

Substitute for form 1449/PTO

FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 2

Complete if Known	
Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy Tuttle
Art Unit	2194
Examiner Name	DAO, TUAN C.
Attorney Docket Number	2222.775000E

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number / Number-Kind Code[2] (If Known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US21	2004/0148606 A1	07-29-2004	Hosoe	
	US22	2005/0027815 A1	02-03-2005	Christodoulou et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document / Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature	/Tuan Dao/	Date Considered	06/13/2010

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Substitute for form 1449/PTO				*Complete if Known*	
FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy Tuttle
				Art Unit	2194
				Examiner Name	DAO, TUAN C.
Sheet	1	of	1	Attorney Docket Number	2222.775000E

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
	NPL1	Non-Final Office Action dated January 7, 2010, U.S. Appl. No. 11/205,233, Rumelhart et al., filed August 15, 2005	
	NPL2	Non-Final Office Action dated February 22, 2010, U.S. Appl. No. 11/515,233, Rumelhart et al., filed August 31, 2006.	
	NPL3	Final Office Action dated March 23, 2010, U.S. Appl. No. 11/205,263, Rumelhart et al., filed August 15, 2005	

Examiner Signature	/Tuan Dao/	Date Considered	06/13/2010

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
TUTTLE *et al.*	Art Unit: 2194
Appl. No.: 11/396,251	Examiner: DAO, TUAN C.
Filed: March 30, 2006	Atty. Docket: 2222.775000E
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**	

Amendment and Reply Under 37 C.F.R. § 1.116

Mail Stop AF

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the Office Action dated June 17, 2010, Applicants submit the following Amendment and Remarks.

Amendments to the Claims are reflected in the listing of claims which begins on page **3** of this paper.

Remarks and Arguments begin on page **12** of this paper.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefore (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-25. (Cancelled)

26. (Currently Amended) A method comprising:

receiving, using a processing device, an update message identifying a live object and containing data for updating a property of the live object;

determining a node having a node type to which the update message is to be routed based on ~~identifying, using the processing device,~~ a mapping of ~~a category~~ categories of ~~the~~ update messages to [[a]] node types, the mapping controlling an amount of update message traffic through nodes of a routing network; and

routing, using the processing device, the update message to [[a]] the node having the determined node type,

causing the node, through the update message, to determine a client that has registered for updates of the live object;

causing the node to route the data from the node to the client, and

causing the client to process the data and to update the property of the live object.

27. (Cancelled)

28. (Currently Amended) The method of claim 26, further comprising:

causing the node to extract an object ID from the update message, [[and]] to establish a connection [[to]] with the client, and to determine if the client [[that]] has registered for updates of the live object based on the object ID.

29. (Currently Amended) The method of claim 28, further comprising:

causing the node to determine at least one client proxy with which the client communicates;[[, to]]

routing[[e]] the data to the client proxy[[,]]; and

IPR2025-00200 / 722 Patent Page 613 of 1171 EX1002

routing ~~to route~~ the data from the client proxy to the client to determine the connection.

30. (Previously Presented) The method of claim 29, further comprising causing the node to maintain client registration information concerning the client connection.

31. (Previously Presented) The method of claim 29, further comprising causing the node to maintain client registration information concerning the client connection at the client proxy.

32. (Currently Amended) The method of claim 28, wherein:

the routing the update message comprises routing the update message to a gateway device ~~proxy node comprising a second node~~ receiving message of more than one message category, and

further comprising causing the gateway device ~~node~~ to determine the node having the node type to which the update message is to be routed based on ~~at least one corresponding node having a corresponding~~ the mapping of categories to node types ~~mapped to the message category~~, with which the registered client communicates, and to route the data to the ~~corresponding~~ node to determine the client connection.

33. (Currently Amended) A routing network comprising:

a gateway device configured to:

receive an update message identifying a live object and containing data for updating a property of the live object,

determine a node having a node type to which the update message is to be routed based on ~~identify~~ a mapping of a ~~category~~ categories of the update messages to [[a]] node types, the mapping controlling an amount of update message traffic through nodes of a routing network; and

route the update message; and

[[a]] the node ~~device~~ configured to:

receive the update message from the gateway device, wherein the node ~~device~~ is configured to be mapped to the node type,

determine a client that has registered for updates of the live object, and

route the data from the node ~~device~~ to the client, wherein the client is adapted to process the data and to update the property of the live object.

34. (Currently Amended) The routing network of claim 33, wherein the node ~~device~~ is configured to extract an object ID from the update message and to determine a connection to the client to route the data to the client.

35. (Currently Amended) The routing network of claim 34, wherein the node ~~device~~ is configured to determine a connection by determining at least one client proxy with which the registered client communicates and to route the data to the client proxy.

36. (Currently Amended) The routing network of claim 35, wherein client registration information concerning the client connection is configured to be maintained at the node ~~device~~.

37. (Previously Presented) The routing network of claim 35, wherein client registration information concerning the client connection is configured to be maintained at the client proxy.

38. (Currently Amended) The routing network of claim 33, wherein:

the gateway device is configured to route the update message <u>to the node</u> ~~by routing the update message to a proxy node comprising a second node~~ adapted to receive messages of more than one message category, and

the node ~~device~~ is configured to determine ~~at least one corresponding node that has a corresponding node type mapped to the message category and with which the registered client communicates and to route the data to the corresponding node~~ a connection <u>with</u> ~~by determining~~ at least one client proxy with which the registered client communicates and to route the data to the client proxy.

39. (Currently Amended) A method comprising:

providing, using a processing device, a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object ~~recognized~~ recognizable by the client device, and causing the client device to respond to the live object of the data representation by determining an object ID of the live object and to register for updates of the live object with [[a]] the routing network, such that registering the client device with the routing network provides client connection information to a node in the routing network; and

sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object, such that a gateway device at the routing network is configured ~~to identify the client device as a registered device and~~ to route the update ~~send a routed~~ message ~~containing the update data~~ from the gateway device to [[a]] the node at the routing network and the node is configured to identify the client device as a registered device,[[;]]

wherein ~~causing~~ the node ~~to sends~~ routes the ~~routed~~ update message to the client device, and [[; and]]

wherein ~~causing~~ the client device [[to]] processes the update ~~routed~~ message upon receipt to update the property of the live object at the client device.

40. (Currently Amended) The method of claim 39, wherein providing the data representation to the client device includes providing [[a]] the live object that causes the client device to register with a client proxy of the routing network.

41. (Currently Amended) The method of claim 39, wherein providing the data representation to the client device includes providing [[a]] the live object that causes the client device to register with [[a]] the node of the routing network.

42. (Currently Amended) The method of claim 39, wherein providing the data representation to the client device including providing an activation module that is executed by the client device and that registers the live object with the routing network.

43. (Currently Amended) The method of claim 42, wherein providing the activation module includes providing [[an]] the activation module that is configured to determine a node type that handles registration and that causes the client device to register with [[a]] the node corresponding to the node type.

44. (Currently Amended) The method of claim 42, wherein providing the activation module includes providing [[an]] the activation module that is configured to determine a message category of the data representation and that causes the client device to register with a node having a node type corresponding to the message category.

45. (Currently Amended) An apparatus comprising:

an input source ~~content provider~~ device configured to provide a data representation to a client device coupled to [[the]] a routing network, wherein the data representation includes at least one live object that is ~~recognized~~ recognizable by the client device, and that causes the client device to determine an object ID of the live object to register for updates of the live object with the routing network, such that registering the client device with the routing network provides client connection information to the routing network; and

an input source ~~information provider~~ device configured to route ~~send~~ an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object, such that a gateway device at the network is configured ~~to identify the client device as a registered device and~~ to route ~~send a routed~~ the update message from the gateway device to a node at the routing network,

wherein the node is configured to identify the client device as a registered device and route ~~send~~ the ~~routed~~ update message containing the update data to the client device, and

IPR2025-00200 / 722 Patent Page 617 of 1171 EX1002

wherein the client device is configured to process the ~~routed~~ update message upon receipt to update the property of the live object at the client device.

46. (Currently Amended) The apparatus of claim 45, wherein the live object of the data representation is configured to cause the client device to register with a client proxy of the routing network.

47. (Currently Amended) The apparatus of claim 45, wherein the live object of the data representation is configured to cause the client device to register with [[a]] the node of the routing network.

48. (Previously Presented) The apparatus of claim 45, wherein the received data representation includes an activation module that is configured to be executed by the client device and adapted to register the live object with the routing network.

49. (Currently Amended) The apparatus of claim 48, wherein the activation module is configured to determine a node type for handling registration and to cause the client device to register with [[a]] the node of the node type.

50. (Previously Presented) The apparatus of claim 48, wherein the activation module determines a message category of the data representation and causes the client device to register with [[a]] the node having a node type corresponding to the message category.

51. (Currently Amended) An article of manufacture including a computer-readable medium having instructions stored thereon, [[an]] execution of which by a computing device causes the computing device to perform operations comprising:

providing, using a processing device, a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object that is ~~recognized~~ recognizable by the client device, and that causes the client device to respond to the live object by determining an object ID of the live object to

register for updates of the live object with the routing network, such that registering the client device with the routing network provides client connection information to the routing network; and

sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object, such that a gateway device at the routing network is configured ~~to identify the client device as a registered device and~~ to route ~~send~~ an update ~~routed~~ message ~~containing the update data~~ from the gateway device at the routing network to a node at the routing network, wherein the node is configured to identify the client device as a registered device and to route ~~sends~~ the update ~~routed~~ message to the client device, and wherein the client device is configured to process the update ~~routed~~ message upon receipt to update the property of the live object at the client device.

52. (Currently Amended) The article of manufacture of claim 51, wherein the live object of the data representation causes the client device to register with a client proxy of the routing network.

53. (Currently Amended) The article of manufacture of claim 51, wherein the live object of the data representation causes the client device to register with [[a]] the node of the routing network.

54. (Currently Amended) The article of manufacture of claim 51, wherein the received data representation includes an activation module executed by the client device and adapted to register the live object with the routing network.

55. (Currently Amended) The article of manufacture of claim 54, wherein the activation module determines a node type that handles registration and causes the client device to register with [[a]] the node of the node type.

56. (Currently Amended) The article of manufacture of claim 54, wherein the activation module determines a message category of the data representation and causes

the client device to register with [[a]] the node having a node type corresponding to the message category.

57. (Currently Amended) A device comprising:

logic configured to provide a data representation to a client device coupled to [[the]] a routing network, wherein the data representation includes at least one live object ~~recognized~~ recognizable by the client device, and wherein the client device is configured to respond to the live object of the data representation by determining an object ID of the live object to register for updates of the live object with [[a]] the routing network, such that registering the client device with the routing network provides client connection information to the routing network; and

logic configured to provide, using a processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object, such that a gateway device at the routing network is configured ~~to identify the client device as a registered device and~~ to route ~~send~~ the update ~~a routed~~ message from the gateway device to a node at the routing network, wherein the node is configured to identify the client device as a registered device and to route ~~send~~ the update ~~routed~~ message containing the update data to the client device, and wherein the client device is configured to process the update ~~routed~~ message upon receipt to update the property of the live object at the client device.

58. (Currently Amended) The device of claim 57, wherein the live object of the data representation causes the client device to register with a client proxy of the routing network.

59. (Currently Amended) The device of claim 57, wherein the live object of the data representation causes the client device to register with [[a]] the node of the routing network.

60. (Currently Amended) The device of claim 57, wherein the data representation includes an activation module that is executed by the client device and that is adapted to register the live object with the routing network.

61. (Currently Amended) The device of claim 60, wherein the activation module determines a node type for handling registration and causes the client device to register with [[a]] the node of the node type.

62. (Currently Amended) The device of claim 60, wherein the activation module determines a message category of the data representation and causes the client device to register with [[a]] the node having [[a]] the node type corresponding to the message category.

63. (Currently Amended) A method comprising:

providing a live object to a client device;

sending an update message to a routing network identifying the live object and containing update data to update the live object at the client device~~; and~~

wherein in response to determining that the client device is registered to receive update data for the live object, the update message is routed from ~~sending a routed message containing the update data from~~ a gateway device at the routing network to a node at the routing network, wherein the node routes ~~sends~~ the update ~~routed~~ message to the client device.

64. (Currently Amended) An apparatus comprising:

an input source ~~a content provider~~ arranged to provide a live object to a client device; and

the input source ~~an information provider~~ arranged to provide an update message to a routing network identifying the live object and containing update data for updating the live object,

wherein the routing network is configured to ~~send~~ route the update message from ~~a routed message containing the update data from~~ a gateway device at the routing

IPR2025-00200 / 722 Patent Page 621 of 1171 EX1002

network to a node at the routing network, and wherein the node is configured to route the update ~~send the routed~~ message to the client device if the client device is registered to receive the update data for the live object.

65. (Cancelled)

66. (Currently Amended) A device comprising:

logic configured to provide a live object to a client device;

logic configured to provide an update message to a routing network identifying the live object and containing update data for updating the live object at the client device~~;~~ ~~and~~

wherein ~~logic configured to send~~ the update ~~a routed~~ message ~~containing the update data~~ is routed from a gateway device at the routing network to a node at the routing network, wherein the node is configured to route ~~send~~ the update ~~routed~~ message to the client device in response to determining that the client device is registered to receive the update data for the live object.

67. (Previously Presented) The routing network of claim 33, wherein the node type is configured to identify the node that receives the update message from the gateway device.

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 26, 28-64 and 66-67 are pending in the application, with claims 26, 33, 39, 45, 51, 57, 63-64, 66 being the independent claims. Claim 65 is sought to be cancelled without prejudice to or disclaimer of the subject matter therein. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 101

Claim 65 was rejected under 35 U.S.C. § 101 as the claimed invention is allegedly directed to non statutory subject matter. Applicants respectfully traverse this rejection.

Without acquiescing the propriety of the rejection, Applicants have cancelled claim 65. Applicants, therefore, respectfully request that the Examiner withdraws the rejection under 35 U.S.C. 101.

Rejections under 35 U.S.C. § 102

Claims 26, 28, 33-34, 39, 42-45, 48-51, 54-57, 60-64, 66-67 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Pat. No. 6,324,587 to Trenbeath et al. ("Trenbeath"). Applicants respectfully traverse this rejection.

IPR2025-00200 / 722 Patent Page 623 of 1171 EX1002

Claims 26, 28 and 33-34

Without acquiescing to the propriety of the rejection, Applicants have amended claims 26 and 33.

Claim 26 recites, *inter alia,*

> determining a node having a node type to which the update message is to be routed based on a mapping of categories of update messages to node types, **the mapping controlling an amount of update message traffic through nodes of a routing network;**
>
> [emphasis added]

Claim 33 recites a similar feature.

Trenbeath at least does not disclose or suggest mapping a category of the update message to a node type to control the amount of message traffic to a node in a routing network, as set forth in independent claims 26 and 33. In Trenbeath, Figure 14 describes the high level internal steps that the subscription client takes in processing messages from the publication client. (Trenbeath, Col. 25, ln 16-21). After the subscription client receives the message, those high level steps include the subscription client determining whether the message is a new subscription message (Trenbeath, Figure 14, step 402), an update message (Trenbeath, Figure 14, step 406), a syncstate message (Trenbeath, Figure 14, step 410), a data object submission event (Trenbeath, Figure 14, step 414) or a subscription client status event (Trenbeath, Figure 14, step 418). After the subscription client determines the type of a message, the subscription client process the message in accordance with the message type in steps 404, 408, 412, 416, and 420. The processing is internal to the subscription client. (Trenbeath, Col. 25, ln 16-19).

Claims 26 and 33 describe that the update messages is routed to "a node having a certain node type to which the update message is to be routed based on a mapping of

IPR2025-00200 / 722 Patent Page 624 of 1171 EX1002

categories of update messages to node types." The mapping of categories controls "an amount of update message traffic through nodes of a routing network." Therefore, Trenbeath does not anticipate these claims under 35 U.S.C. 102(e) as it fails to teach all elements of claims 26 and 33.

Claims 28 and 34 respectively depend from the independent claims 26 and 33. As Trenbeath fails to anticipate of claims 26 and 33, Trenbeath fails to anticipate the corresponding dependent claims. Therefore, Applicants request reconsideration and withdrawal of the rejection of claims 26, 28 and 33-34 under 35 U.S.C. 102(e).

Claims 39,43-45, 48-51, 54-57, 60-64, and 66-67

Without acquiescing to the propriety of the rejection, applicant has amended claims 39, 45, 51, 57, and 63.

Claim 39, recties, *inter alia,*

> sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object, such that a **gateway device at the routing network is configured to route the update message from the gateway device to the node at the routing network and the node is configured to identify the client device as a registered device**,
>
> [emphasis added]

Claims 45, 51, 57, 63-64, and 66 were modified to recite a similar feature.

Trenbeath at least does not disclose or suggest sending a message to a routing network which includes a configurable gateway device that routes messages to a node or a node that is configured to identify a client device, as set forth in independent claims 39, 45, 51, 57, 63-64, and 66. Trenbeath discloses a publication client and a subscription client that use a routing network to send communicate messages that include a data

IPR2025-00200 / 722 Patent Page 625 of 1171 EX1002

object (Trenbeath, Abstract; Fig. 2, Fig 3A). In Trenbeath the routing network's only functionality is to route a message from the publication client to the subscription client and *vise versa*. In fact, Trenbeath discloses that "[T]he invention is entirely client-based in that a particular server is not required for performing the replication. The server is only used for communication between the clients . . . typically . . . using a standard protocol such as the Internet message protocol . . . that is widely implemented today." (Trenbeath, Col. 2 ln 65-68; Col 3. 1-4).

A routing network is a feature of independent claims 39, 45, 51, 57, 63-64 and 66. The routing network that receives an update message contains elements such as a gateway and a node. The function of the gateway is to route update messages to a node. (Specification, paragraph 14). The function of the node is to identify a client device that has registered to receive a message update and route the update message to the client device. (Specification, paragraph 14). Therefore, Trenbeath does not establish anticipation under 35 U.S.C. 102(e) as it fails to establish all elements of claims 39, 45, 51, 57, 63, 64 and 66.

Claims 43, 44, 48-50, 54-56, 60-62 and 67 depend from the independent claims 39, 45, 51, 57, 63-64 and 66. As Trenbeath fails to establish anticipation of claims 39, 45, 51, 57, 63-64 and 66, Trenbeath also fails to establish anticipation of the corresponding dependent claims. Therefore, Applicants request reconsideration and withdrawal of the rejection of claims 43, 44, 48-50, 54-56, 60-62 and 67 under 35 U.S.C. 102(e).

Accordingly, the Office Action fails to establish anticipation of claims 26, 28, 33, 34, 39, 42-45, 48-51, 54-57, 60-64 and 66-67 over Trenbeath. Applicants therefore

respectfully request the reconsideration and withdrawal of the rejection of claims 26, 28, 33, 34, 39, 42-45, 48-51, 54-57, 60-64 and 66-67 under 35 U.S.C. § 102(e).

Rejections under 35 U.S.C. § 103

Claims 29-32 and 35-38

Claims 29-32 and 35-38 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Pat. No. 6,324,587 to Trenbeath et al. ("Trenbeath") in view of U.S. Pat. No. 7,209,959 to Campbell et al. ("Campbell"). Applicants respectfully traverse this rejection.

Claims 29-32 and 35-38 depend from claims 26 and 33, respectively. At page 15 of the Office Action the Examiner states that Campbell teaches "determining a connection comprises determining at least one client proxy with which the client communicates and routing the data to the client proxy, and then routing the data from the client proxy to the client." However, the Examiner does not use Campbell to teach at least the above noted distinguishing features of claims 26 and 33. Therefore, the applied references cannot be used to establish a prima facie case of obviousness for claims 26 and 33.

Accordingly, at least based on their respective dependencies to claims 26 and 33 as well as for their additional distinguishing features Applicants respectfully request allowance of claims 29-32 and 35-38.

Claims 40, 41, 46, 47, 52, 53, 58, and 59

Claims 40-41, 46-47, 52-53 and 58-59 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Pat. No. 6,324,587 to Trenbeath et al.

("Trenbeath") in view of U.S. Pat. No. 6,314,459 to Freeman ("Freeman"). Applicants respectfully traverse this rejection.

Claims 40, 41, 46, 47, 52, 53, 58, and 59 depend from claims 39, 45, 51, and 57, respectively. At page 18 of the Office Action the Examiner states, to which Applicants do not acquiesce, that Freeman teaches "wherein the live object of the data representation causes the client device to register with a client proxy of the network." However, the Examiner does not use Freeman to teach, nor does Freeman teach, at least the above noted distinguishing features of claims 39, 45, 51, and 57. Thus, Freeman does not cure the deficiencies of Trenbeath. Therefore, the applied references do not establish a prima facie case of obviousness for claims 39, 45, 51, and 57.

Accordingly, at least based on their respective dependencies to claims 39, 45, 51, and 57 as well as for their additional distinguishing features, Applicants respectfully request allowance of claims 40, 41, 46, 47, 52, 53, 58, and 59.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

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IPR2025-00200 / 722 Patent Page 629 of 1171 EX1002

Electronic Acknowledgement Receipt

EFS ID:	8224083
Application Number:	11396251
International Application Number:	
Confirmation Number:	1129
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Customer Number:	26111
Filer:	Glenn J. Perry
Filer Authorized By:	
Attorney Docket Number:	2222.775000E
Receipt Date:	16-AUG-2010
Filing Date:	30-MAR-2006
Time Stamp:	13:47:16
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2222775000E_Amendment_After_Final.pdf	1075196 040d2cadfdc935ba00c58f661fc8c09346545785	yes	19

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Miscellaneous Incoming Letter	1	1
	Amendment After Final	2	2
	Claims	3	12
	Applicant Arguments/Remarks Made in an Amendment	13	19
Warnings:			
Information:			
	Total Files Size (in bytes):	1075196	

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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August 16, 2010

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PO Box 1450
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Confirmation No. 1129
Art Unit 2194
Attn: Mail Stop AF

Re: U.S. Utility Patent Application
Application No. 11/396,251; Filing or 371(c) Date: March 30, 2006
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**
Inventors: TUTTLE *et al.*
Our Ref: 2222.775000E

Sir:

Transmitted herewith for appropriate action is the following document:

1. Amendment and Reply under 37 C.F.R. § 1.116.

The above-listed document is filed electronically through EFS-Web.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

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Attorney for Applicants
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GJP/D-B/ms
Enclosure
1152168_1.doc

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/396,251	03/30/2006	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 08/16/2010	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 39	Minus	** 41	= 0	X $ =		OR	X $52=	0
Independent (37 CFR 1.16(h))	* 9	Minus	***9	= 0	X $ =		OR	X $220=	0
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

AMENDMENT	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL 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 number found in the appropriate box in column 1.

Legal Instrument Examiner:
/DALE HALL/

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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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
TUTTLE *et al.*	Art Unit: 2194
Appl. No.: 11/396,251	Examiner: DAO, TUAN C.
Filed: March 30, 2006	Atty. Docket: 2222.775000E
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**	

Amendment and Reply Under 37 C.F.R. § 1.116

Mail Stop AF

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the Office Action dated June 17, 2010, Applicants submit the following Amendment and Remarks.

Amendments to the Claims are reflected in the listing of claims which begins on page **3** of this paper.

Remarks and Arguments begin on page **12** of this paper.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefore (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

DO NOT ENTER. TDAO 08/26/2010

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
TUTTLE *et al.*	Art Unit: 2194
Appl. No.: 11/396,251	Examiner: DAO, TUAN C.
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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.
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E	1129

26111 7590 08/30/2010

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
DAO, TUAN C.	

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
08/30/2010	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.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 11/396,251	**Applicant(s)** TUTTLE ET AL.	
	Examiner TUAN DAO	**Art Unit** 2194	

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

THE REPLY FILED 16 August 2010 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *See continuation sheet.*. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *26,28-64,66 and 67*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/Hyung S. SOUGH/
Supervisory Patent Examiner, Art Unit 2194
August 27, 2010

The proposed claim amendments, at least in independent claims 26, 33, 39, 45, 51, 57, 63, and 66, raise new issues that would require further consideration and/or search.

PTO/SB/30 (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 contains a valid OMB control number.

Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy TUTTLE
Art Unit	2194
Examiner Name	DAO, TUAN C.
Attorney Docket Number	2222.775000E

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, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

   a. [X] 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 previously filed on _____

      ii. [X] Other Amendment after Final filed August 16, 2010

   b. [ ] Enclosed

      i. [ ] Amendment/Reply

      ii. [ ] Affidavit(s)/ Declaration(s)

      iii. [ ] Information Disclosure Statement (IDS)

      iv. [ ] Other _____

2. Miscellaneous

   a. [ ] Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

   b. [ ] Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

   a. [X] The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to Deposit Account No. 19-0036

      i. [X] RCE fee required under 37 CFR 1.17(e)

      ii. [ ] Extension of time fee (37 CFR 1.136 and 1.17)

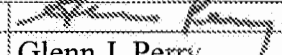
      iii. [ ] Other _____

   b. [ ] Check in the amount of $ _____ enclosed

   c. [X] Payment by credit card (Form PTO-2038 enclosed)

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 AGENT REQUIRED

Signature		Date	13 Sept 2010
Name (Print/Type)	Glenn J. Perry	Registration No.	28,458

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark 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.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal

Application Number:	11396251
Filing Date:	30-Mar-2006
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Filer:	Dina Blikshteyn/Leonard Adgerson
Attorney Docket Number:	2222.775000E

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for continued examination	1801	1	810	810
		Total in USD ($)		**810**

Electronic Acknowledgement Receipt

EFS ID:	8406325
Application Number:	11396251
International Application Number:	
Confirmation Number:	1129
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Customer Number:	26111
Filer:	Dina Blikshteyn/Leonard Adgerson
Filer Authorized By:	Dina Blikshteyn
Attorney Docket Number:	2222.775000E
Receipt Date:	13-SEP-2010
Filing Date:	30-MAR-2006
Time Stamp:	16:43:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$810
RAM confirmation Number	3777
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1		2222775000eRCE.pdf	287318 3cc70987e2568b27d1e74f6beaebb12e921bdd1b	yes	2

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Miscellaneous Incoming Letter	1	1
	Request for Continued Examination (RCE)	2	2

Warnings:

Information:

2	Fee Worksheet (PTO-875)	fee-info.pdf	30123 9531bdd59696d87e35b6100dd0096531eb211ed2	no	2

Warnings:

Information:

Total Files Size (in bytes):	317441

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

GLENN J. PERRY
(202) 772-8703
GJPERRY@SKGF.COM

Sterne Kessler Goldstein Fox
ATTORNEYS AT LAW

September 13, 2010

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Confirmation No. 1129
Art Unit 2194
Attn: Mail Stop RCE

Re: U.S. Utility Patent Application
Application No. 11/396,251; Filing or 371(c) Date: March 30, 2006
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**
Inventors: TUTTLE *et al.*
Our Ref: 2222.775000E

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Online Credit Card Payment Authorization in the amount of $810.00 to cover:

   $810 for Request for Continued Examination fee; and

2. Request for Continued Examination.

The above-listed documents are filed electronically through EFS-Web.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Fee payment is provided through online credit card payment. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
Attorney for Applicants
Registration No. 28,458

GJP/D-B/la
Enclosure(s)

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
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.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/396,251	03/30/2006	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 09/13/2010	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 39	Minus	** 41	= 0	X $ =		OR	X $52=	0
Independent (37 CFR 1.16(h))	* 9	Minus	***9	= 0	X $ =		OR	X $220=	0
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

AMENDMENT	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL 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 number found in the appropriate box in column 1.

Legal Instrument Examiner:
/DALE HALL/

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.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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.
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E	1129

26111 7590 10/26/2010

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
DAO, TUAN C.	

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
10/26/2010	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.

Office Action Summary	Application No.	Applicant(s)	
	11/396,251	TUTTLE ET AL.	
	Examiner	Art Unit	
	TUAN DAO	2194	

-- 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 *13 September 2010*.

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) *26,28-64,66 and 67* 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) *26, 28-64, 66-67* 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 _____ 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 _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 09/13/2010 has been entered.

2. Claims 26, 28-65, and 66 have been examined.

Response to Amendment

3. In the instant amendment, claims 26, 28-29, 32-36, 38-39, 41-47, 49, 51-64, and 65 have been amended.

- The objection to claims 45-50 is withdrawn in view of Applicant's amendments.
- The 35 USC §101 rejection over claim 65 is withdrawn in view of Applicant's amendments.

Claim Rejections - 35 USC § 101

7. 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.

8. Claims 51-62 and 66 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

9. As per claim 51, the claim fails to place the invention squarely within one statutory class of invention by declaring "A computer-readable medium" including storage and transmission. The amendment to paragraph 0131 of the specification to obviate 101 rejection is recognized by the examiner. However, the claim recites "A computer-readable medium" not a computer readable storage medium. Thus, the claimed "computer readable medium" still includes signals as implied the last line of the paragraph [0131] in the amended specification filed on 10/23/2009. Thus, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore this claim(s) is/are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefore not a composition of matter.

Claims 52-56 have the same rejection.

10. Claim 57 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Although the preamble of the claim recites *"A device,"* the body of the claim does not positively recite any elements of hardware. The body of the claim recites *'logic configured to provide.'* In light of the specification, the aforementioned logic is implemented in software (see e.g., paragraphs 0047, 0050 and 0062), which is non-statutory subject matter. Therefore, the nature of the subject matter claimed may reasonably be construed as non-tangible embodiments.

Claims 58-62 have the same rejection.

Claim Rejections - 35 USC § 103

4. 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.

5. Claims 26, 28, 32-34, 39, 42-45, 48-51, 54-57, 60-64, and 66-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novaes in view of Trenbeath et al. (US 6,324,587, hereinafter "Trenbeath").

As per claim 26, Novaes discloses a method comprising:

receiving, using a processing device, an update message (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …));

determining a node having a node type to which the update message is to be routed based on a mapping categories of update messages to node types (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node which may be a regular node, leader node, multicast routing node, or failed node), the mapping controlling an amount of update message traffic through nodes of a routing network (FIG. 5-6; paragraphs 0076-0078:

only multicasting messages to multicast routing nodes 2, 4, 6; paragraph 0028: stopping routing messages to a failed multicast routing node, reassigning a new multicast routing node);

and routing, using the processing device, the update message to the node having the determined node type (FIG. 5-6; paragraphs 0076-0079: only multicasting messages to multicast routing nodes 2, 4, 6 --> within Network A, multicast routing node 2 forwarding received messages to regular nodes in said Network A),

causing the node, through the update message, to determine a client that has registered for updates of the live object (paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered);

causing the node to route the data from the node to the client, and causing the client to process the data and to update the property of the live object (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message identifying a live object and containing data for updating a property of the live object.

However, Trenbeath further discloses the update message identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing data for updating a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would

provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 28, Novaes does not explicitly disclose causing the node to extract an object ID from the update messages, to establish a connection with the client, and to determine if the client has registered for updates of the live object based on the object ID.

However, Trenbeath further discloses the node to extract an object ID from the update messages, to establish a connection with the client (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages), and to determine if the client has registered for updates of the live object based on the object ID (FIG. 8; column 13: 40-65 – column 14: 1-20: Store and Transport protocol).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 32, Novaes discloses the method of claim 28, wherein:

the routing the update message comprises routing the update message to a gateway device receiving message of more than one message category (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device) receiving/sending more than one different publishing/subscripting message categories from/to different nodes),

and further comprising causing the gateway device to determine the node having the node type to which the update message is to be routed based on the mapping of categories to node types (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node which may be a regular node, leader node, multicast routing node, or failed node) with which the registered client communicates (FIG. 5-6; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes), and to route the data to the node to determine the client connection (FIG. 5-6; paragraphs 0062-0063).

As per claim 33, Novaes discloses a routing network comprising:

a gateway device configured to (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)):

receive an update message (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)),

determine a node having a node type to which the update message is to be routed based on a mapping of a categories of the update messages to node types (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node which may be a regular node, leader node, multicast routing node, or failed node), the mapping controlling an amount of update message traffic through nodes of a routing network (FIG. 5-6; paragraphs 0076-0078:

only multicasting messages to multicast routing nodes 2, 4, 6; paragraph 0028: stopping routing messages to a failed multicast routing node, reassigning a new multicast routing node);

and route the update message (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed);

and the node configured to:

receive the update message from the gateway device, wherein the node is configured to be mapped to the node type (FIG. 5-6; paragraphs 0076-0079: only multicasting messages to multicast routing nodes 2, 4, 6 --> within Network A, multicast routing node 2 forwarding received messages to regular nodes in said Network A),

determine a client that has registered for updates of the live object (paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered),

and route the data from the node gea4ee to the client, wherein the client is adapted to process the data and to update the property of the live object (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message identifying a live object and containing data for updating a property of the live object.

However, Trenbeath further discloses the update message identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing data for updating a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 34, Novaes does not disclose wherein the node is configured to extract an object ID from the update message and to determine a connection to the client to route the data to the client.

However, Trenbeath further discloses wherein the node is configured to extract an object ID from the update message (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages) and to determine a connection to the client to route the data to the client (FIG. 5E; column 10: 40-55: the revised object data sent from the publication folder to the subscription folder located in subscription client).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 39, Novaes discloses a method comprising:

providing, using a processing device, a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object

recognizable by the client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), and causing the client device to respond to the live object of the data representation to register for updates message with the routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)); publishing/subscribing messages is considered registering for updates of the news/topics/events), such that registering the client device with the routing network provides client connection information to a node in the routing network (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes; paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered);

and sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), such that a gateway device at the routing network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) is configured to route the update message from the gateway device to the node at the routing network (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node which may be a regular node, leader node, multicast routing node, or failed node) and the node is configured

to identify the client device as a registered device (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes)),

wherein the node routes the update message to the client device (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed),

and wherein causing the client device processes the update message upon receipt to update the property of the live object at the client device (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message of the live object, and determining an object ID of the live object;

However, Trenbeath further discloses the update message of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object), determining an object ID of the live object (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 42, Novaes does not explicitly disclose wherein providing the data representation to the client device including providing an activation module that is executed by the client device and that registers the live object with the routing network.

However, Trenbeath further discloses wherein providing the data representation to the client device (FIG. 4, 14; column 9-10; column 25: 15-25: software located in both publication client and subscription client) including providing an activation module that is executed by the client device and that registers the live object with the routing network (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 43, Novaes does not explicitly disclose wherein providing the activation module includes providing the activation module that is configured to determine a node type that handles registration and that causes the client device to register with the node corresponding to the node type.

However, Trenbeath further discloses wherein providing the activation module includes providing the activation module that is configured to determine a node type that handles registration and that causes the client device to register with the node corresponding to the node type (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and

they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 44, Novaes does not explicitly disclose wherein providing the activation module includes providing the activation module that is configured to determine a message category of the data representation and that causes the client device to register with a node having a node type corresponding to the message category.

However, Trenbeath further discloses wherein providing the activation module includes providing the activation module that is configured to determine a message category of the data representation and that causes the client device to register with a node having a node type corresponding to the message category (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217, message categories updating/deleting/modifying).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 45, Novaes discloses an apparatus comprising:

an input source device configured to provide a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object that is recognizable by the client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), and that causes the client device to determine the live object to register for updates message with the routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes; paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered);

and an input source device configured to route an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), such that a gateway device at the network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) is configured to route the

update message from the gateway device to a node at the routing network (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node which may be a regular node, leader node, multicast routing node, or failed node),

wherein the node is configured to identify the client device as a registered device (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes))

and route the routed update message containing the update data to the client device (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed),

and wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message of the live object and determining an object ID of the live object;

However, Trenbeath further discloses the update message of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object) and determining an object ID of the live object (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 48, Novaes does not explicitly disclose wherein the received data representation includes an activation module that is configured to be executed by the client device and adapted to register the live object with the routing network.

However, Trenbeath further discloses wherein the received data representation (FIG. 4, 14; column 9-10; column 25: 15-25: software located in both publication client and subscription client) includes an activation module that is configured to be executed by the client device and adapted to register the live object with the routing network (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 49, Novaes does not explicitly disclose wherein the activation module is configured to determine a node type for handling registration and to cause the client device to register with the node of the node type.

However, Trenbeath further discloses wherein the activation module is configured to determine a node type for handling registration and to cause the client device to register with the node of the node type (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client

subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 50, Novaes does not explicitly disclose wherein the activation module determines a message category of the data representation and causes the client device to register with the node having a node type corresponding to the message category.

However, Trenbeath further discloses wherein the activation module determines a message category of the data representation and causes the client device to register with the node having a node type corresponding to the message category (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217, message categories updating/deleting/modifying).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 51, Novaes discloses an article of manufacture including a computer-readable medium having instructions stored thereon (FIG. 1-2; paragraphs 0046-0048), execution of which by a computing device causes the computing device to perform operations comprising:

providing, using a processing device, a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object that is recognizable by the client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), and that causes the client device to respond to the live object by determining the live object to register for updates message with the routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes; paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered);

and sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), such that a gateway device at the routing network (FIG. 5-6; paragraphs 0022, 0024, 0026, and

0030: routing node and also leader node (considered as gateway device)) is configured to route an update message from the gateway device at the routing network to a node at the routing network (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node which may be a regular node, leader node, multicast routing node, or failed node), wherein the node is configured to identify the client device as a registered device (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes)) and to route the update message to the client device (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed), and wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes does not explicitly disclose determining an object ID of the live object;

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message of the live object, and determining an object ID of the live object;

However, Trenbeath further discloses the update message of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object), determining an object ID of the live object (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would

provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 54, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 48, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 54.

As per claim 55, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 49, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 55.

As per claim 56, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 50, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 56.

As per claim 57, Novaes discloses a device comprising:

logic configured to provide a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object recognizable by the client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages

containing information/data identifying news/events/topic (live object as claimed)), and wherein the client device is configured to respond to the live object of the data representation to register for updates message with the routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes; paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered);

and logic configured to provide, using a processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), such that a gateway device at the routing network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) is configured to route the update message from the gateway device to a node at the routing network (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node which may be a regular node, leader node, multicast routing node, or failed node), wherein the node is configured to identify the client device as a registered device (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes)) and to route the update message

containing the update data to the client device (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed), and wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message of the live object, and determining an object ID of the live object;

However, Trenbeath further discloses the update message of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object), determining an object ID of the live object (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 60, it is a device claim, which recite(s) the same limitations as those of claims 48, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 60.

As per claim 61, it is a device claim, which recite(s) the same limitations as those of claims 49, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 61.

As per claim 62, it is a device claim, which recite(s) the same limitations as those of claims 50, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 62.

As per claim 63, Novaes discloses a method comprising:

providing a live object to a client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed));

sending an update message to a routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …));

wherein in response to determining that the client device is registered to receive update data for the live object (paragraphs 0018-0019 and 0041: publishing/subscribing messages is considered registering for updates of the news/topics/events), the update message is routed from

a gateway device at the routing network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) to a node at the routing network (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node which may be a regular node, leader node, multicast routing node, or failed node), wherein the node routes sends the update routed message to the client device (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes; paragraphs 0076-0079: publishing/subscripting messages are routed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message identifying the live object and containing update data to update the live object at the client device.

However, Trenbeath further discloses the update message identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing update data to update the live object at the client device (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 64, Novaes discloses an apparatus comprising:

an input source a content provider arranged to provide a live object to a client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed));

and the input source an information provider arranged to provide an update message to a routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)),

wherein the routing network is configured to route the update message from a gateway device at the routing network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) to a node at the routing network (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node which may be a regular node, leader node, multicast routing node, or failed node), and wherein the node is configured to route the update message to the client device (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed) if the client device is registered to receive the update data for the live object (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes)).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message identifying a live object and containing update data for updating the live object.

However, Trenbeath further discloses the update message identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing update data for updating the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 66, it is a device claim, which recite(s) the same limitations as those of claims 63, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 66.

As per claim 67, Novaes discloses the routing network of claim 33, wherein the node type is configured to identify the node that receives the update message from the gateway device (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node which may be a regular node, leader node, multicast routing node, or failed node; FIG. 5-6; paragraphs 0076-0079: only multicasting messages to multicast routing nodes 2, 4, 6 --> within Network A, multicast routing node 2 forwarding received messages to regular nodes in said Network A).

6. Claims 29-31 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novaes in view of Trenbeath, as applied to claims 28 and 34 respectively, and further in view of Campbell et al. (US 7,209,959, hereinafter "Campbell").

As per claim 29, Novaes in view of Trenbeath does not explicitly disclose causing the node to determine at least one client proxy with which the client communicates; routing the data to the client proxy; and routing the data from the client proxy to the client to determine the connection.

However, Campbell further discloses causing the node to determine at least one client proxy with which the client communicates; routing the data to the client proxy; and routing the data from the client proxy to the client to determine the connection (column 2: 8-20).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20: a proxy server is considered as a client server).

As per claim 30, Novaes discloses causing the node to maintain client registration information concerning the client connection (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes).

As per claim 31, Novaes in view of Trenbeath does not explicitly disclose causing the node to maintain client registration information concerning the client connection at the client proxy.

However, Campbell further discloses causing the node to maintain client registration information concerning the client connection at the client proxy (column 2: 8-20: client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20).

As per claim 35, Novaes in view of Trenbeath does not explicitly disclose wherein the node is configured to determine a connection by determining at least one client proxy with which the registered client communicates and to route the data to the client proxy.

However, Campbell further discloses wherein the node is configured to determine a connection by determining at least one client proxy with which the registered client communicates and to route the data to the client proxy (column 2: 8-20).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20: a proxy server is considered as a client server).

As per claim 36, Novaes discloses wherein client registration information concerning the client connection is configured to be maintained at the node (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes).

As per claim 37, Novaes in view of Trenbeath does not explicitly disclose wherein client registration information concerning the client connection is configured to be maintained at the client proxy.

However, Campbell further discloses wherein client registration information concerning the client connection is configured to be maintained at the client proxy (column 2: 8-20: client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20).

As per claim 38, Novaes discloses wherein:

the gateway device is configured to route the update message to the node adapted to receive messages of more than one message category (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device) receiving/sending more than one different publishing/subscripting message categories from/to different nodes).

Novaes in view of Trenbeath does not explicitly disclose the node is configured to determine a connection with at least one client proxy with which the registered client communicates and to route the data to the client proxy.

However, Campbell further discloses the node is configured to determine a connection with at least one client proxy with which the registered client communicates and to route the data to the client proxy (column 2: 8-20: client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20).

7. Claims 40-41, 46-47, 52-53, and 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novaes in view of Trenbeath as applied to claims 39, 45, 51 and 57 above, and further in view of Freeman et al. (US 6,314,459 hereinafter "Freeman").

As per claim 40, Novaes in view of Trenbeath does not disclose wherein providing the data representation to the client device includes providing the live object that causes the client device to register with a client proxy of the routing network.

However, Freeman further discloses wherein providing the data representation to the client device includes providing the live object that causes the client device to register with a client proxy of the routing network (FIG. 7; column 4: 5-35).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 41, Novaes in view of Trenbeath does not explicitly disclose wherein providing the data representation to the client device includes providing the live object that causes the client device to register with the node of the routing network.

However, Freeman further discloses wherein providing the data representation to the client device includes providing the live object that causes the client device to register with the node of the routing network (FIG. 7; column 4: 5-35: node 102 and 104 containing registry 124 and 126 respectively).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 46, Novaes in view of Trenbeath does not explicitly disclose wherein the live object of the data representation is configured to cause the client device to register with a client proxy of the routing network.

However, Freeman further discloses wherein the live object of the data representation is configured to cause the client device to register with a client proxy of the routing network (FIG. 7; column 4: 5-35).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 47, Novaes in view of Trenbeath does not explicitly disclose wherein the live object of the data representation is configured to cause the client device to register with the node of the routing network.

However, Freeman further discloses wherein the live object of the data representation is configured to cause the client device to register with the node of the routing network (FIG. 7; column 4: 5-35: node 102 and 104 containing registry 124 and 126 respectively).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 52, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 46, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 52.

As per claim 53, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 47, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 53.

As per claim 58, it is a device claim, which recite(s) the same limitations as those of claims 46, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 58.

As per claim 59, it is a device claim, which recite(s) the same limitations as those of claims 47, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 59.

Response to Arguments

8. Applicants' arguments have been considered but are moot in view of the new ground(s) of rejection. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. The limitations that the Applicants arguing are newly added. The aforementioned newly added limitations taught by the new references.

Conclusion

9. Any inquiry concerning this communication should be directed to examiner Tuan Dao, whose telephone/fax numbers are (571) 270 3387 and (571) 270 4378, respectively. The examiner can normally be reached on every Monday-Thursday and the second Friday of the bi-week from 7:30AM to 5:00PM.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough, can be reached at (571) 272 6799.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100. I

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).

/Tuan C. Dao/

Examiner, Art Unit 2194

/H. S. SOUGH/
Supervisory Patent Examiner, Art Unit 2194
10/24/10

Notice of References Cited	Application/Control No. 11/396,251	Applicant(s)/Patent Under Reexamination TUTTLE ET AL.	
	Examiner TUAN DAO	Art Unit 2194	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2002/0165977 A1	11-2002	NOVAES, MARCOS N	709/238
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	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.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11396251	TUTTLE ET AL.
	Examiner	Art Unit
	Tuan C Dao	4142

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/18/2009	01/11/2010	06/14/2010	10/13/2010					
	1	-	-	-	-					
	2	-	-	-	-					
	3	-	-	-	-					
	4	-	-	-	-					
	5	-	-	-	-					
	6	-	-	-	-					
	7	-	-	-	-					
	8	-	-	-	-					
	9	-	-	-	-					
	10	-	-	-	-					
	11	-	-	-	-					
	12	-	-	-	-					
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	14	-	-	-	-					
	15	-	-	-	-					
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	25	-	-	-	-					
	26	✓	✓	✓	✓					
	27	✓	✓	-	-					
	28	✓	✓	✓	✓					
	29	✓	✓	✓	✓					
	30	✓	✓	✓	✓					
	31	✓	✓	✓	✓					
	32	✓	✓	✓	✓					
	33	✓	✓	✓	✓					
	34	✓	✓	✓	✓					
	35	✓	✓	✓	✓					
	36	✓	✓	✓	✓					

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11396251	TUTTLE ET AL.
	Examiner	Art Unit
	Tuan C Dao	4142

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/18/2009	01/11/2010	06/14/2010	10/13/2010					
	37	✓	✓	✓	✓					
	38	✓	✓	✓	✓					
	39	✓	✓	✓	✓					
	40	✓	✓	✓	✓					
	41	✓	✓	✓	✓					
	42	✓	✓	✓	✓					
	43	✓	✓	✓	✓					
	44	✓	✓	✓	✓					
	45	✓	✓	✓	✓					
	46	✓	✓	✓	✓					
	47	✓	✓	✓	✓					
	48	✓	✓	✓	✓					
	49	✓	✓	✓	✓					
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	62	✓	✓	✓	✓					
	63		✓	✓	✓					
	64		✓	✓	✓					
	65		✓	✓	-					
	66		✓	✓	✓					
	67			✓	✓					

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11396251	TUTTLE ET AL.
	Examiner	Art Unit
	Tuan C Dao	4142

SEARCHED			
Class	Subclass	Date	Examiner
709	203, 219	07/14/2009	TD
719	309	07/14/2009	TD

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor search	07/14/2009	TD
East search	07/14/2009	TD
East text search	1/9/2010	TD
East text search	10/12/2010	TD

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1569	tuttle.inv.	US-PGPUB; USPAT	AND	ON	2009/07/14 09:08
S2	9	tuttle-timothy.inv.	US-PGPUB; USPAT	AND	ON	2009/07/14 09:08
S3	0	(publish$5 subcri$5)((message or topic or event) (live near2 object) identif$5 category node) 7??/$.ccls.	US-PGPUB; USPAT	AND	ON	2009/07/14 09:13
S4	0	(publish$5 subcri$5)((message or topic or event) (live near2 object) identif$5 category node) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT	AND	ON	2009/07/14 09:13
S5	18	(publish$5 subcri$5)((message or topic or event)) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT	AND	ON	2009/07/14 09:15
S6	18	(publish$5 subcri$9)((message or topic or event or notification)) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT	AND	ON	2009/07/14 13:21
S7	24	(publish$5 subcri$9)((message or topic or event or notification)) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/14 13:21
S8	0	(publish$5 subcri$9)((message or topic or event or notification)) 7??/$.ccls. @ay<"2001" not S7	US-PGPUB; USPAT	AND	ON	2009/07/14 13:22
S9	6	(publish$5 subcri$9)((message or topic or event or notification)) 7??/$.ccls. @ay<"2001" not S6	US-PGPUB; USPAT	AND	ON	2009/07/14 13:22
S10	19	((publish$5 or provider) subcri$9) ((message or topic or event or notification)) 7??/$.ccls. @ay<"2001" not S6	US-PGPUB; USPAT	AND	ON	2009/07/14 13:26
S11	19	((publish$5 or provider) subcri$9) (message or topic or event or notification) 7??/$.ccls. @ay<"2001" not S6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:36
S12	37	((publish$5 or provider) subcri$9) (message or topic or event or notification) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:37
S13	29823	((publish$5 or provider) or subcri$9) (message or topic or event or notification) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:45

IPR2015-00200 U.S. Patent Page 686 of 1171 EX1002

S14	37	((publish$5 or provider) subcri$9) (message or topic or event or notification) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:46
S15	0	((publish$5 or provider) subcri$9) (message or topic or event or notification) 7??/$.ccls. @ay<"200"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:46
S16	27	((publish$5 or provider) subcri$9) (message or topic or event or notification) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:46
S17	9	((publish$5 or provider) subcri$9) (asynchronou$5) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:48
S18	7	((publish$5 or provider) subcri$9) (asynchronou$5 (event or message or notification)) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:59
S19	1	((publish$5 or provider) subcri$9) (asynchronou$5 same (event or message or notification)) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 13:59
S20	2	((publish$5 or provider) subcri$9) (asynchronou$5 same (event or message or notification)) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2009/07/14 14:01
S21	1	"20020087630"	US-PGPUB; USPAT	AND	ON	2009/07/18 09:28
S22	5	"20020120717"	US-PGPUB; USPAT	AND	ON	2009/07/18 09:44
S23	21	((independ$5 near5 message) same delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:22
S24	53	((independ$5 with message) same delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:25
S25	35	((independ$5 near5 message) same delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:26
S26	43513	(rout$5 (data or message) same application) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:27

IPR2015-00200 '722 Patent Page 687 of 1171 EX1002

S27	5484	((rout$5 near5(data or message)) same application) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:27
S28	2379	((rout$5 near5(data or message)) with application) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:28
S29	469	((rout$5 near5(data or message)) with application) (device client node) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:29
S30	207	((rout$5 near5(data or message)) with application) (device client node host manager) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:29
S31	0	((rout$5 near5(data or message)) with application) (device client node host manager) (create with delet$5 with rout$5)7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:31
S32	0	((rout$5 near5(data or message)) with application) (device client node host manager) (creat$5 with delet$5 with rout$5)7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:31
S33	3	((rout$5 near5(data or message)) with application) (device client node host manager) (creat$5 with delet$5 with rout$5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:31
S34	3	((rout$5 near5(data or message)) with application) (device client node manager) (creat$5 with delet$5 with rout$5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:32
S35	39	((rout$5 near5(data or message)) with application) (creat$5 with delet$5 with rout$5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:32
S36	107	((rout$5 with (data or message or application)) with application) (creat$5 with delet$5 with rout$5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:34
S37	107	((rout$5 with (message or application)) with application) (creat$5 with delet$5 with rout$5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:34
S38	107	((rout$5 with (software or application)) with application) (creat$5 with delet$5 with rout$5) 7??/$.ccls. @ay<"2001"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:35
S39	115	((rout$5 with (software or application)) with application) (creat$5 with delet$5 with rout$5) 7??/$.ccls. @ay<"2002"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:36
S40	66	((rout$5 near5 (software or application)) near5 application) (creat $5 with delet$5 with rout$5) 7??/$.ccls. @ay<"2002"	US-PGPUB; USPAT	AND	ON	2009/07/18 12:36
S41	11095	((updat$4 near2 message) near4 (send $3 or sent or receiv$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/09 10:43

IPR2015-00200-722 Patent Page 688 of 1171 EX1002

S42	27	((updat$4 near2 message) near4 (send $3 or sent or receiv$4)) (publication near2 (id or identif$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/09 10:43
S43	16	((updat$4 near2 message) near4 (send $3 or sent or receiv$4)) (publication near2 (id or identif$6)) @ay<"2002"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/09 10:45
S44	16	((updat$4 near2 message) near4 (send $3 or sent or receiv$4)) (publication near2 (id or identif$6)) @ay<"2002" 7??/$.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/09 10:45
S45	53	((Timothy Tuttle) OR (Karl Rumelhart)).inv.	US-PGPUB; USPAT	AND	ON	2010/01/09 11:14
S46	18	((Timothy Tuttle) OR (Karl Rumelhart)).inv. (message update)	US-PGPUB; USPAT	AND	ON	2010/01/09 11:14
S47	10	((Timothy Tuttle) OR (Karl Rumelhart)).inv. (message update).clm.	US-PGPUB; USPAT	AND	ON	2010/01/09 11:14
S48	10	((Timothy Tuttle) OR (Karl Rumelhart)).inv. (message update object).clm.	US-PGPUB; USPAT	AND	ON	2010/01/09 11:15
S49	3	((Timothy Tuttle) OR (Karl Rumelhart)).inv. (message update object category).clm.	US-PGPUB; USPAT	AND	ON	2010/01/09 11:15
S50	3	((Timothy Tuttle) OR (Karl Rumelhart)).inv. (message update category).clm.	US-PGPUB; USPAT	AND	ON	2010/01/09 11:15
S51	9	"6324587" ((updat$4 near2 message) near4 (send$3 or sent or receiv$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 10:36
S52	2	"6324587" (publication near2 (id or identif$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 10:43
S53	8	"6324587" ((message near2 updat$4) near3 (content or field or data or parameter))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 10:51
S54	37	"6324587" (regis$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 11:13

IPR2015-00200-722 Patent Page 689 of 1171 EX1002

S55	38	"6324587" (regis8)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 11:14
S56	0	"6324587" (subcr$8)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 11:16
S57	32	"6324587" (subscr$8)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 11:16
S58	8	"6324587" proxy	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 11:56
S59	1520	@ay <"2001" (proxy near3 client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 12:02
S60	72	7??/$.ccls. @ay <"2001" ((proxy near3 client) near8 rout$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 12:07
S61	5	7??/$.ccls. @ay <"2001" (((proxy near3 client) near8 rout$6) same regist $7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:21
S62	0	"6324587" (subsc near3 client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:46
S63	0	"6324587" (subsc with client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:47

IPR2015-00200-722 Patent Page 690 of 1171 EX1002

S64	36	"6324587" (client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:47
S65	7	"6324587" (subsc$8 with client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:48
S66	6	"6324587" (subsc$8 near2 client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:48
S67	1	"6324587" ((subsc$8 near2 client) with software)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/10 14:49
S68	31	"6314459"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/11 11:46
S69	4	"6314459" freeman.inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/11 11:46
S71	8	"6324587" (client with regist$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/03/05 09:30
S72	0	08/996785 (client with regist$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/03/05 09:31
S73	1	08/996785 (client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/03/05 09:31

IPR2015-00200-722 Patent Page 691 of 1171 EX1002

S74	0	08/996785 (remoteclient)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/03/05 10:26
S75	1	08/996785 (remote client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/03/05 10:26
S76	1	08/996785 (client same request$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/03/05 11:12
S77	1	11/396251 (amount)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 14:33
S78	153	(dynamic$4 same rout$6 same distribu $5 same mult$7) 7??/$.ccls. @ay<"2000"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 15:38
S79	81	(dynamic$4 same rout$6 same distribu $5 same mult$7) 7??/$.ccls. @ay<"2000" (node same message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 15:39
S80	5	(dynamic$4 same rout$6 same distribu $5 same mult$7) 7??/$.ccls. @ay<"2000" (node same message) (rout$6 node dyna$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 15:40
S81	2	"20020165977" (message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 16:59
S82	1	"20020165977" (message near9 (data or information))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 17:02

IPR2015-00200 '722 Patent Page 692 of 1171 EX1002

S83	1	"20020165977" (node near4 (leader multi$6 fail$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 17:09
S84	0	"20020165977" (node near4 (leader multi$6 fail$4)) same category	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 17:17
S85	1	"20020165977" (node near4 (leader multi$6 fail$4)) same message	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 17:17
S86	1	"20020165977" (node near4 (leader multi$6 fail$4)) same message same group	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 17:18
S87	1	"20020165977" (node near4 (leader fail $4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 17:22
S88	1	"20020165977" (message near4 (publish$4 subscri$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/11 17:33
S89	0	"20020165977" (message near8 id$9)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 13:32
S90	1	"20020165977" (message same id$9)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 13:32
S91	1	"20020165977" (name or iden$8)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 13:32

IPR2015-00200 '722 Patent Page 693 of 1171 EX1002

S92	1	"20020165977" (topic or news)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 13:34
S93	0	"20020165977" (proxy)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 13:52
S94	0	"20020165977" (regist$7 near9 client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 13:59
S95	1	"20020165977" (regist$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 13:59
S96	1	"20020165977" (regist$10)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 14:00
S97	1	"20020165977" (regist$10 or dmr)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 14:00
S98	0	"20020165977" (gateway)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 14:15
S99	0	"20020165977" (gate$1way)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 14:15
S100	2	"20020165977" (node near6 rout$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 14:21

IPR2015-00200-722 Patent Page 694 of 1171 EX1002

S101	1	"20020165977" (subscr$8 publish$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 16:20

EAST Search History (Interference)

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10/13/2010 2:14:24 PM
C:\Documents and Settings\tdao2\My Documents\EAST\Workspaces\11396251.wsp

IPR2025-00200 '722 Patent Page 695 of 1171 EX1002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
TUTTLE *et al.*	Art Unit: 2194
Appl. No.: 11/396,251	Examiner: DAO, TUAN C.
Filed: March 30, 2006	Atty. Docket: 2222.775000E
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**	

Amendment and Reply Under 37 C.F.R. § 1.111

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the Office Action dated **October 26, 2010**, Applicants submit the following Amendment and Remarks.

Amendments to the Claims are reflected in the listing of claims which begins on page **2** of this paper.

Remarks and Arguments begin on page **12** of this paper.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-25. (Cancelled)

26. (Currently Amended) A method comprising:

receiving, using a processing device, an update message identifying a live object and containing data for updating a property of the live object;

determining a node having a node type to which the update message is to be routed based on a mapping of categories of update messages to node types, the mapping controlling an amount of update message traffic through nodes of a routing network; [[and]]

routing, using the processing device, the update message to the node having the determined node type [[,]] ;

causing the node, through the update message, to determine a client that has registered for updates of the live object;

causing the node to route the data from the node to the client [[,]] ; and

causing the client to process the data and to update the property of the live object.

27. (Cancelled)

28. (Previously Presented) The method of claim 26, further comprising:

causing the node to extract an object ID from the update message, to establish a connection with the client, and to determine if the client has registered for updates of the live object based on the object ID.

29. (Previously Presented) The method of claim 28, further comprising:

causing the node to determine at least one client proxy with which the client communicates;

routing the data to the client proxy; and

routing the data from the client proxy to the client to determine the connection.

30. (Previously Presented) The method of claim 29, further comprising causing the node to maintain client registration information concerning the client connection.

31. (Previously Presented) The method of claim 29, further comprising causing the node to maintain client registration information concerning the client connection at the client proxy.

32. (Cancelled)

33. (Currently Amended) A routing network comprising:

a gateway device configured to:

receive an update message identifying a live object and containing data for updating a property of the live object,

determine a node having a node type to which the update message is to be routed based on a mapping of a categories of [[the]] update messages to node types, the mapping controlling an amount of update message traffic through nodes of a routing network; and

route the update message; and

the node configured to:

receive the update message from the gateway device, wherein the node is configured to be mapped to the node type,

determine a client that has registered for updates of the live object, and

route the data from the node to the client, wherein the client is adapted to process the data and to update the property of the live object.

34. (Previously Presented) The routing network of claim 33, wherein the node is configured to extract an object ID from the update message and to determine a connection to the client to route the data to the client.

35. (Currently Amended) The routing network of claim 34, wherein the node is configured to determine [[a]] the connection by determining at least one client proxy with which the ~~registered~~ client communicates and to route the data to the client proxy.

36. (Previously Presented) The routing network of claim 35, wherein client registration information concerning the client connection is configured to be maintained at the node.

37. (Previously Presented) The routing network of claim 35, wherein client registration information concerning the client connection is configured to be maintained at the client proxy.

38. (Currently Amended) The routing network of claim 33, wherein:

the gateway device is configured to route the update message to the node adapted to receive messages of more than one message category, and

the node is configured to determine a connection with at least one client proxy with which the ~~registered~~ client communicates and to route the data to the client proxy.

39. (Previously Presented) A method comprising:

providing, using a processing device, a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object recognizable by the client device, and causing the client device to respond to the live object of the data representation by determining an object ID of the live object and to register for updates of the live object with the routing network, such that registering the client device with the routing network provides client connection information to a node in the routing network; and

sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object, such that a gateway device at the routing network is configured to route the update message from the gateway device to the node at the

routing network and the node is configured to identify the client device as a registered device,

wherein the node routes the update message to the client device, and

wherein the client device processes the update message upon receipt to update the property of the live object at the client device.

40. (Previously Presented) The method of claim 39, wherein providing the data representation to the client device includes providing the live object that causes the client device to register with a client proxy of the routing network.

41. (Previously Presented) The method of claim 39, wherein providing the data representation to the client device includes providing the live object that causes the client device to register with the node of the routing network.

42. (Currently Amended) The method of claim 39, wherein providing the data representation to the client device ~~including~~ includes providing an activation module that is executed by the client device and that registers the live object with the routing network.

43. (Previously Presented) The method of claim 42, wherein providing the activation module includes providing the activation module that is configured to determine a node type that handles registration and that causes the client device to register with the node corresponding to the node type.

44. (Previously Presented) The method of claim 42, wherein providing the activation module includes providing the activation module that is configured to determine a message category of the data representation and that causes the client device to register with a node having a node type corresponding to the message category.

45. (Currently Amended) An apparatus comprising:

an input source device configured to provide a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object that is recognizable by the client device, and that causes the client device to determine an object ID of the live object to register for updates of the live object with the routing network, such that registering the client device with the routing network provides client connection information to the routing network [[; and]] ,

[[an]] wherein the input source device is configured to route an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object, such that a gateway device at the network is configured to route the update message from the gateway device to a node at the routing network,

wherein the node is configured to identify the client device as a registered device and route the update message containing the update data to the client device, and

wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device.

46. (Previously Presented) The apparatus of claim 45, wherein the live object of the data representation is configured to cause the client device to register with a client proxy of the routing network.

47. (Previously Presented) The apparatus of claim 45, wherein the live object of the data representation is configured to cause the client device to register with the node of the routing network.

48. (Previously Presented) The apparatus of claim 45, wherein the received data representation includes an activation module that is configured to be executed by the client device and adapted to register the live object with the routing network.

49. (Previously Presented) The apparatus of claim 48, wherein the activation module is configured to determine a node type for handling registration and to cause the client device to register with the node of the node type.

50. (Previously Presented) The apparatus of claim 48, wherein the activation module determines a message category of the data representation and causes the client device to register with the node having a node type corresponding to the message category.

51. (Currently Amended) An article of manufacture including a computer-readable storage medium having instructions stored thereon, execution of which by a computing device causes the computing device to perform operations comprising:

providing, using a processing device, a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object that is recognizable by the client device, and that causes the client device to respond to the live object by determining an object ID of the live object to register for updates of the live object with the routing network, such that registering the client device with the routing network provides client connection information to the routing network; and

sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object, such that a gateway device at the routing network is configured to route [[an]] the update message from the gateway device at the routing network to a node at the routing network, wherein the node is configured to identify the client device as a registered device and to route the update message to the client device, and wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device.

52. (Previously Presented) The article of manufacture of claim 51, wherein the live object of the data representation causes the client device to register with a client proxy of the routing network.

53. (Previously Presented) The article of manufacture of claim 51, wherein the live object of the data representation causes the client device to register with the node of the routing network.

54. (Previously Presented) The article of manufacture of claim 51, wherein the received data representation includes an activation module executed by the client device and adapted to register the live object with the routing network.

55. (Previously Presented) The article of manufacture of claim 54, wherein the activation module determines a node type that handles registration and causes the client device to register with the node of the node type.

56. (Previously Presented) The article of manufacture of claim 54, wherein the activation module determines a message category of the data representation and causes the client device to register with the node having a node type corresponding to the message category.

57. (Currently Amended) A ~~device~~ non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:

~~logic configured to provide~~ instructions for providing a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object recognizable by the client device, and wherein the client device is configured to respond to the live object of the data representation by determining an object ID of the live object to register for updates of the live object with the routing network, such that registering the client device with the routing network provides client connection information to the routing network; and

~~logic configured to provide~~ instructions for providing, using a processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object, such that a gateway device at the routing network is configured to route the update message from the gateway device to a node at the routing network, wherein the node is configured to

identify the client device as a registered device and to route the update message containing the update data to the client device, and wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device.

58. (Currently Amended) The ~~device~~ non-transitory computer readable storage medium of claim 57, wherein the live object of the data representation causes the client device to register with a client proxy of the routing network.

59. (Currently Amended) The ~~device~~ non-transitory computer readable storage medium of claim 57, wherein the live object of the data representation causes the client device to register with the node of the routing network.

60. (Currently Amended) The ~~device~~ non-transitory computer readable storage medium of claim 57, wherein the data representation includes an activation module that is executed by the client device and that is adapted to register the live object with the routing network.

61. (Currently Amended) The ~~device~~ non-transitory computer readable storage medium of claim 60, wherein the activation module determines a node type for handling registration and causes the client device to register with the node of the node type.

62. (Currently Amended) The ~~device~~ non-transitory computer readable storage medium of claim 60, wherein the activation module determines a message category of the data representation and causes the client device to register with the node having the node type corresponding to the message category.

63. (Currently Amended) A method comprising:

providing a live object to a client device;

sending an update message to a routing network identifying the live object and containing update data to update the live object at the client device,

wherein in response to determining that the client device is registered to receive update data for the live object, causing the update message [[is]] to be routed from a gateway device at the routing network to a node at the routing network ~~, wherein~~ causing the node ~~routes~~ to route the update message to the client device.

64. (Previously Presented) An apparatus comprising:

an input source arranged to provide a live object to a client device; and

the input source arranged to provide an update message to a routing network identifying the live object and containing update data for updating the live object,

wherein the routing network is configured to route the update message from a gateway device at the routing network to a node at the routing network, and wherein the node is configured to route the update message to the client device if the client device is registered to receive the update data for the live object.

65. (Cancelled)

66. (Currently Amended) A ~~device~~ non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:

~~logic configured to provide~~ instructions for providing a live object to a client device; and

~~logic configured to provide~~ instructions for providing an update message to a routing network identifying the live object and containing update data for updating the live object at the client device,

wherein the update message is routed from a gateway device at the routing network to a node at the routing network, wherein the update message is routed from the node ~~is configured to route the update message~~ to the client device in response to ~~determining~~ a determination that the client device is registered to receive the update data for the live object.

IPR2025-00200 / 722 Patent Page 705 of 1171 EX1002

67. (Previously Presented) The routing network of claim 33, wherein the node type is configured to identify the node that receives the update message from the gateway device.

IPR2025-00200 / 722 Patent Page 706 of 1171 EX1002

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 26, 28-31, 33-64, 66, and 67 are pending in the application, with claims 26, 33, 39, 45, 51, 57, 63, 64, and 66 being the independent claims. Claims 26, 33, 35, 38, 42, 45, 51, 57-63, and 66 are sought to be amended. Claims 1-25, 27, and 65 were previously cancelled without prejudice to or disclaimer of the subject matter therein. Claim 32 is sought to be cancelled without prejudice to or disclaimer of the subject matter therein. Applicants reserve the right to prosecute similar or broader claims, with respect to the amended and/or cancelled claims, in the future. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 101

Claims 51-56

Claims 51-56 were rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Applicants respectfully traverse this rejection.

While not conceding the basis for the rejection and solely to expedite prosecution, claim 51 is sought to be amended. Amended claim 51 recites, *inter alia*, "[a]n article of manufacture including a computer-readable storage medium having instructions stored thereon."

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. § 101 rejection of independent claim 51 and dependent claims 52-56, which depend on claim 51.

Claims 57-62 and 66

Claims 57-62 and 66 were rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Applicants respectfully traverse this rejection.

While not conceding the basis for the rejection and solely to expedite prosecution, claims 57 and 66 are sought to be amended. Amended claims 57 and 66 recite, *inter alia*, "[a] non-transitory computer readable storage medium having instructions stored thereon."

Applicants note that a "non-transitory computer readable storage medium," as recited by amended claims 57 and 66, comprises all computer-readable media, with the sole exception being a transitory, propagating signal.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. § 101 rejection of independent claims 57 and 66, and dependent claims 58-62, which depend on claim 57.

Rejections under 35 U.S.C. § 103

Claims 26, 28, 32-34, 39, 42-45, 48-51, 54-57, 60-64, 66, and 67

Claims 26, 28, 32-34, 39, 42-45, 48-51, 54-57, 60-64, 66, and 67 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2002/0165977 to Novaes ("Novaes") in view of U.S. Patent No.

IPR2025-00200 / 722 Patent Page 708 of 1171 EX1002

6,324,587 to Trenbeath et al. ("Trenbeath"). Applicants respectfully traverse this rejection.

Independent Claims 26 and 33

While not conceding the basis for the rejection and solely to expedite prosecution, claim 32 is sought to be cancelled without prejudice to or disclaimer of the subject matter therein, rendering its rejection moot

Independent claims 26 and 33 recite features that distinguish over the applied references. For example, claims 26 and 33 recite, *inter alia*:

> determining a node having a node type to which the update message is to be routed based on a mapping of categories of update messages to node types, the mapping controlling an amount of update message traffic through nodes of a routing network.

These feature are neither disclosed nor suggested by the applied references.

Novaes discloses a Dynamic Multicast Routing (DMR) facility for a distributed computing environment having a plurality of networks of computing nodes (Novaes, Abstract). "The DMR facility automatically creates virtual interfaces between selected computing nodes of the networks to ensure multicast message reachability to all functional computing nodes" (Novaes, Abstract). As illustrated in FIGs. 5 and 6 of Novaes and disclosed in paragraphs [0061]-[0076] of Novaes, a distributed computing environment of Novaes has a plurality of nodes distributed among multiple networks (Novaes, FIG. 5, para. [0061]). In the DMR facility of Novaes to implement a routing topology, one point in each network acts as a routing or tunneling agent (Novaes, para. [0061]). FIG. 6 of Novaes illustrates this routing topology, where one node of each network is chosen as the leader for that network (node 2 for network A; node 4 for network B; and node 6 for network C) (Novaes FIG. 6, para. [0076]). Further, one node

out of the leader nodes is chosen as the leader of the group of leaders (node 2) (Novaes, para. [0076]). Novaes discloses that "[n]ode 2 operates to forward multicast messages to any node within Network A, node 4 forwards multicast messages to any node within Network B and node 6 forwards multicast messages to any node within Network C" (Novaes, para. [0076]). Therefore, Novaes discloses that each of the leader nodes (nodes 2, 4, and 6) merely forward the multicasts messages to **any** node in their networks. This is in contrast to "*determine a node having a node type to which the update message is to be routed based on a mapping of a categories of update messages to node types*," as recited in claims 26 and 33, using their respective language.

Moreover, as the leader nodes in the method disclosed by Novaes merely forward the multicasts messages to **any** node in their networks and no "*mapping of a categories of update messages to node types*," as recited in claims 26 and 33, is disclosed or suggested by Novaes, thus Novaes does not disclose or suggest "*the mapping controlling an amount of update message traffic through nodes of a routing network*," as recited in claims 26 and 33, using their respective language.

The Examiner, on page 4 of the Office Action, also relies on paragraphs [0023]-[0026] and [0055] of Novaes to allegedly disclose the above-noted distinguishing features of claims 26 and 33. Applicants respectfully disagree. These sections relied on by the Examiner, merely discloses that one node in each of plurality of networks can be chosen as a leader for that network, which the group leader is responsible for controlling activities associated with its group(s), and one leader can be chosen for the group of the leaders (Novaes, paras. [0023], [0025], and [0055]). Further, paragraphs [0024] and [0026] of Novaes disclose that "[a]t least one computing node of the multiple networks of computing nodes functions as a multicast routing node" and in case of a failure in a

multicast routing node, the distributed computing environment can be reconfigured to replace the failed multicast routing node. However, none of these sections disclose or suggest "*determine a node having a node type to which the update message is to be routed based on a mapping of a categories of update messages to node types, the mapping controlling an amount of update message traffic through nodes of a routing network*," as recited in claims 26 and 33, using their respective language.

Further, the Office Action, on pages 5 and 8, states, which Applicants do not acquiesce to, that Trenbeath teaches "PublicationID" and "update message updating/modifying/deleting data object." However, the Office Action does not use Trenbeath to disclose, nor does it teach or suggest, at least the above-noted distinguishing features of claims 26 and 33. Therefore, Trenbeath does not cure the deficiencies of Novaes. Thus the combination of Novaes and Trenbeath does not render the claims obvious.

Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 26 and 33 under 35 U.S.C. § 103(a). Accordingly, at least based on their respective dependency to claims 26 and 33, claims 28, 34, and 67 should be found allowable over the applied references, as well as for their additional distinguishing features.

Independent Claims 39, 45, 51, 57, 63, 64, and 66

Independent claims 39, 45, 51, 57, 63, 64, and 66 recite features that distinguish over the applied references. For example, claim 39 recites, *inter alia*:

> sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data

that updates a property of the live object, such that **a gateway device at the routing network is configured to route the update message from the gateway device to the node at the routing network and the node is configured to identify the client device as a registered device**.

For example, claim 45 recites, *inter alia*:

> wherein the input source device is configured to route an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object, such that **a gateway device at the network is configured to route the update message from the gateway device to a node at the routing network,**
>
> **wherein the node is configured to identify the client device as a registered device** and route the update message containing the update data to the client device.

For example, claim 51 recites, *inter alia*:

> sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object, such that **a gateway device at the routing network is configured to route the update message from the gateway device at the routing network to a node at the routing network, wherein the node is configured to identify the client device as a registered device** and to route the update message to the client device, and wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device.

For example, claim 57 recites, *inter alia*:

> instructions for providing, using a processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object, such that **a gateway device at the routing network is configured to route the update message from the gateway device to a node at the routing network, wherein the node is configured to identify the client device as a registered device** and to route the update message containing the update data to the client device, and

> wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device.

For example, claim 63 recites, *inter alia*:

> sending an update message to a routing network identifying the live object and containing update data to update the live object at the client device,
>
> **wherein in response to determining that the client device is registered to receive update data for the live object, causing the update message to be routed from a gateway device at the routing network to a node at the routing network causing the node to route the update message to the client device.**

For example, claim 64 recites, *inter alia*:

> the input source arranged to provide an update message to a routing network identifying the live object and containing update data for updating the live object,
>
> wherein the routing network is configured to route the update message from **a gateway device at the routing network to a node at the routing network, and wherein the node is configured to route the update message to the client device if the client device is registered to receive the update data for the live object.**

For example, claim 66 recites, *inter alia*:

> instructions for providing an update message to a routing network identifying the live object and containing update data for updating the live object at the client device,
>
> **wherein the update message is routed from a gateway device at the routing network to a node at the routing network, wherein the update message is routed from the node to the client device in response to a determination that the client device is registered to receive the update data for the live object.**

These features are neither disclosed nor suggested by the applied references.

The Examiner, for example on pages 11 and 12 of the Office Action, and to allegedly disclose the above-noted distinguishing features of independent claims 39, 45, 51, 57, 63, 64, and 66, analogizes (1) the "routing node or also leader node" of Novaes to

the gateway device of claims 39, 45, 51, 57, 63, 64, and 66; (2) the "regular node, leader node, multicast routing node, or failed node" of Novaes to the node of these claims; and (3) the "location of registry servers/nodes" of Novaes to the client device of these claims. Applicants respectfully disagree with the Examiner's analogy, at least, for the following reasons.

First, Applicants note that the Examiner's analogies seem to be inconsistent as the Examiner relies, partly, on leader nodes of Novaes to alleged disclose both the gateway and the node of independent claims 39, 45, 51, 57, 63, 64, and 66.

Second, assuming, *arguendo,* the Examiner's analogy for the gateway and the node of independent claims 39, 45, 51, 57, 63, 64, and 66, with which Applicants do not agree, Novaes does not disclose or suggest *identifying and/or determining the client device as a registered device*, as recited in independent claims 39, 45, 51, 57, 63, 64, and 66, using their respective language. As discussed above, Novaes discloses that "[n]ode 2 operates to forward multicast messages to any node within Network A, node 4 forwards multicast messages to any node within Network B and node 6 forwards multicast messages to any node within Network C" (Novaes, para. [0076]). Therefore, Novaes discloses that each of the leader nodes (nodes 2, 4, and 6) merely forward the multicasts messages to **any** node in their networks. Novaes's method does not *identify and/or determine the client device as a registered device*, as recited in independent claims 39, 45, 51, 57, 63, 64, and 66, using their respective language.

Novaes discloses that "[t]he DMR facility described herein has multiple applications in a distributed computing environment such as a cluster or parallel system. ... . An example of the need for a dynamic service facility is the location of the registry servers at boot time" (Novaes, para. [0030]). However, mere disclosure of "registry

servers" does not disclose or suggest *identifying and/or determining the client device as a registered device*, as recited in independent claims 39, 45, 51, 57, 63, 64, and 66, using their respective language.

Moreover, the Office Action, for example on page 11, states, which Applicants do not acquiesce to, that Trenbeath teaches "update message updating/modifying/deleting data object" and "Publication ID (live object as claimed) is extracted from the publishing/subscribing messages" However, the Office Action does not use Trenbeath to disclose, nor does it teach or suggest, at least the above-noted distinguishing features of independent claims 39, 45, 51, 57, 63, 64, and 66. Therefore, Trenbeath does not cure the deficiencies of Novaes. Thus the combination of Novaes and Trenbeath does not render the claims obvious.

Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 39, 45, 51, 57, 63, 64, and 66 under 35 U.S.C. § 103(a). Accordingly, at least based on their respective dependency to claims 39, 45, 51, and 57, claims 42-44, 48-50, 54-56, and 60-62 should be found allowable over the applied references, as well as for their additional distinguishing features.

Claims 29-31 and 35-38

Claims 29-31 and 35-38 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Novaes in view of Trenbeath, further in view of U.S. Patent No. 7,209,959 to Campbell et al. ("Campbell"). Applicants respectfully traverse this rejection.

Dependent claims 29-31 and 35-38 are allowable at least because they recite all of the features of independent claims 26 and 33, from which they depend. As discussed

above, Novaes and Trenbeath, taken alone or in combination, fail to disclose all of the features of claims 26 and 33.

Further, the Office Action, on pages 27-30, states, which Applicants do not acquiesce to, that Campbell teaches "causing the node to determine at leas one client proxy with which the client communicates; routing the data to the client proxy; and routing the data from the client proxy to the client to determine the connection," "client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy," and "wherein the node is configured to determine a connection by determining at least one client proxy with which the registered client communicates and to route the data to the client proxy." However, the Office Action does not use Campbell to disclose, nor does it teach or suggest, at least the above-noted distinguishing features of claims 26 and 33. Therefore, Campbell does not cure the deficiencies of Novaes and Trenbeath.

Accordingly, at least based on their respective dependency to claims 26 and 33, claims 29-31 and 35-38 should be found allowable over the applied references, as well as for their additional distinguishing features.

Claims 40, 41, 46, 47, 52, 53, 58, and 59

Claims 40, 41, 46, 47, 52, 53, 58, and 59 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Novaes in view of Trenbeath, further in view of U.S. Patent No. 6,314,459 to Freeman ("Freeman"). Applicants respectfully traverse this rejection.

Dependent claims 40, 41, 46, 47, 52, 53, 58, and 59 are allowable at least because they recite all of the features of independent claims 39, 45, 51, and 57, from which they

depend. As discussed above, Novaes and Trenbeath, taken alone or in combination, fail to disclose all of the features of claims 39, 45, 51, and 57.

Further, the Office Action, on pages 30-33, states, which Applicants do not acquiesce to, that Freeman teaches "wherein providing the data representation to the client device includes providing the live object that causes the client device to register with a client proxy of the routing network," "wherein providing the data representation to the client device includes providing the live object that causes the client device to register with the node of the routing network," "wherein the live object of the data representation is configured to cause the client device to register with a client proxy of the routing network," and "wherein the live object of the data representation is configured to cause the client device to register with the node of the routing network," However, the Office Action does not use Freeman to disclose, nor does it teach or suggest, at least the above-noted distinguishing features of claims 39, 45, 51, and 57. Therefore, Freeman does not cure the deficiencies of Novaes and Trenbeath.

Accordingly, at least based on their respective dependency to claims 39, 45, 51, and 57, claims 40, 41, 46, 47, 52, 53, 58, and 59 should be found allowable over the applied references, as well as for their additional distinguishing features.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Glenn J. Perry
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Date: 24 Jan. 2011

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1278565_2.DOC

Electronic Acknowledgement Receipt

EFS ID:	9287639
Application Number:	11396251
International Application Number:	
Confirmation Number:	1129
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Customer Number:	26111
Filer:	Glenn J. Perry/Raiza Singh
Filer Authorized By:	Glenn J. Perry
Attorney Docket Number:	2222.775000E
Receipt Date:	24-JAN-2011
Filing Date:	30-MAR-2006
Time Stamp:	11:51:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2222775000E_AMENDMENT.PDF	1461191 b6ff6c33c437954f3b9f5daf42bdbfc46768a6ff	yes	24

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Miscellaneous Incoming Letter	1	1
	Amendment/Req. Reconsideration-After Non-Final Reject	2	2
	Claims	3	12
	Applicant Arguments/Remarks Made in an Amendment	13	24

Warnings:	
Information:	
Total Files Size (in bytes):	1461191

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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ATTORNEYS AT LAW

January 24, 2011

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Confirmation No. 1129
Art Unit 2194
Attn: Mail Stop Amendment

Re: U.S. Utility Patent Application
Application No. 11/396,251; Filing Date: March 30, 2006
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**
Inventors: TUTTLE *et al.*
Our Ref: 2222.775000E

Sir:

Transmitted herewith for appropriate action is the following document:

1. Amendment and Reply Under 37 C.F.R. § 1.111.

The above-listed document is filed electronically through EFS-Web.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

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GJP/A-S/rms
Enclosure

1311541_1.DOC

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/396,251	03/30/2006	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☐ RATE ($)	SMALL ENTITY ☐ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT	01/24/2011	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 39	Minus	** 39	= 0	X $ =		OR	X $52 =	0
	Independent (37 CFR 1.16(h))	* 9	Minus	*** 9	= 0	X $ =		OR	X $220 =	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	**0**

* 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 number found in the appropriate box in column 1.

Legal Instrument Examiner:
/THERESA LINDSAY/

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.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E	1129

26111 7590 03/23/2011

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EXAMINER	
DAO, TUAN C.	

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
03/23/2011	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.

Office Action Summary	Application No.	Applicant(s)	
	11/396,251	TUTTLE ET AL.	
	Examiner	Art Unit	
	TUAN DAO	2194	

-- 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 *24 January 2011*.

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) *26,28-31,33-64,66 and 67* 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) *26,28-31,33-64,66 and 67* 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 _____ 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 _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to Amendment filed 01/24/2011.

2. Claims 26, 28-31, 33-64, and 66 have been examined.

Response to Amendment

3. In the instant amendment, claims 26, 33, 35, 38, 42, 45, 51, 57-63 and 66 have been amended. Claim 32 has been cancelled.

- The 35 USC §101 rejection over claims 51-62 and 66 is withdrawn in view of Applicant's amendments.

Claim Rejections - 35 USC § 103

4. 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.

5. Claims 26, 28, 33-34, 39, 42-45, 48-51, 54-57, 60-64, and 66-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novaes (US 2002/0165977) in view of Trenbeath et al. (US 6,324,587, hereinafter "Trenbeath").

As per claim 26, Novaes discloses a method comprising:

receiving, using a processing device, an update message (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …));

determining a node having a node type to which the update message is to be routed based on a mapping categories of update messages to node types (FIG. 4-5; FIG. 5-7; paragraphs 0020, 0030, 0057-0059, 0060, 0062-0063, and 0067-0079: multicast message/multicast datagram are routed to a node which may be a known address node, regular node, leader node, multicast routing node, or failed node), the mapping controlling an amount of update message traffic through nodes of a routing network ((FIG. 5-6; paragraphs 0076-0078: only multicasting messages to multicast routing nodes 2, 4, 6; paragraph 0028: stopping routing messages to a failed multicast routing node, reassigning a new multicast routing node; FIG. 5-6; paragraphs 0058-0059 and 0062-0063: DMR facility monitoring a health of routing nodes and determining which node should act as an end-point for a tunnel of the routing);

routing, using the processing device, the update message to the node having the determined node type (FIG. 5-6; paragraphs 0076-0079: only multicasting messages to multicast routing nodes 2, 4, 6 --> within Network A, multicast routing node 2 forwarding received messages to regular nodes in said Network A);

causing the node, through the update message, to determine a client that has registered for updates of the live object (paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered);

causing the node to route the data from the node to the client, and causing the client to process the data and to update the property of the live object (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message identifying a live object and containing data for updating a property of the live object.

However, Trenbeath further discloses the update message identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing data for updating a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 28, Novaes does not explicitly disclose causing the node to extract an object ID from the update messages, to establish a connection with the client, and to determine if the client has registered for updates of the live object based on the object ID.

However, Trenbeath further discloses the node to extract an object ID from the update messages, to establish a connection with the client (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages),

and to determine if the client has registered for updates of the live object based on the object ID (FIG. 8; column 13: 40-65 – column 14: 1-20: Store and Transport protocol).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 33, Novaes discloses a routing network comprising:

a gateway device configured to (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)):

receive an update message (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)),

determine a node having a node type to which the update message is to be routed based on a mapping of a categories of update messages to node types (FIG. 5-7; paragraphs 0020, 0030, 0057-0059, 0060, 0062-0063, and 0067-0079: multicast message/multicast datagram are routed to a node which may be a known address node, regular node, leader node, multicast routing node, or failed node), the mapping controlling an amount of update message traffic through nodes of a routing network (FIG. 5-6; paragraphs 0076-0078: only multicasting messages to multicast routing nodes 2, 4, 6; paragraph 0028: stopping routing messages to a

failed multicast routing node, reassigning a new multicast routing node; FIG. 5-6; paragraphs 0058-0059 and 0062-0063: DMR facility monitoring a health of routing nodes and determining which node should act as an end-point for a tunnel of the routing);

and route the update message (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed);

and the node configured to:

receive the update message from the gateway device, wherein the node is configured to be mapped to the node type (FIG. 5-6; paragraphs 0076-0079: only multicasting messages to multicast routing nodes 2, 4, 6 --> within Network A, multicast routing node 2 forwarding received messages to regular nodes in said Network A),

determine a client that has registered for updates of the live object (paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered),

and route the data from the node gea4ee to the client, wherein the client is adapted to process the data and to update the property of the live object (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message identifying a live object and containing data for updating a property of the live object.

However, Trenbeath further discloses the update message identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing data for updating a property of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 34, Novaes does not disclose wherein the node is configured to extract an object ID from the update message and to determine a connection to the client to route the data to the client.

However, Trenbeath further discloses wherein the node is configured to extract an object ID from the update message (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages) and to determine a connection to the client to route the data to the client (FIG. 5E; column 10: 40-55: the revised object data sent from the publication folder to the subscription folder located in subscription client).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 39, Novaes discloses a method comprising:

providing, using a processing device, a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object

recognizable by the client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), and causing the client device to respond to the live object of the data representation to register for updates message with the routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)); publishing/subscribing messages is considered registering for updates of the news/topics/events), such that registering the client device with the routing network provides client connection information to a node in the routing network (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes; paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered);

and sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), such that a gateway device at the routing network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) is configured to route the update message from the gateway device to the node at the routing network (FIG. 5-7; paragraphs 0020, 0030, 0057-0059, 0060, 0062-0063, and 0067-0079: multicast message/multicast datagram are routed to a node which may be a known address node, regular

node, leader node, multicast routing node, or failed node) and the node is configured to identify the client device as a registered device (FIG. 5; paragraphs 0030, 0058-0059 and 0061-0063: DMR facility containing a location of registry servers/nodes)),

wherein the node routes the update message to the client device (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed),

and wherein causing the client device processes the update message upon receipt to update the property of the live object at the client device (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message of the live object, and determining an object ID of the live object;

However, Trenbeath further discloses the update message of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object), determining an object ID of the live object (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 42, Novaes does not explicitly disclose wherein providing the data representation to the client device including providing an activation module that is executed by the client device and that registers the live object with the routing network.

However, Trenbeath further discloses wherein providing the data representation to the client device (FIG. 4, 14; column 9-10; column 25: 15-25: software located in both publication client and subscription client) including providing an activation module that is executed by the client device and that registers the live object with the routing network (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 43, Novaes does not explicitly disclose wherein providing the activation module includes providing the activation module that is configured to determine a node type that handles registration and that causes the client device to register with the node corresponding to the node type.

However, Trenbeath further discloses wherein providing the activation module includes providing the activation module that is configured to determine a node type that handles registration and that causes the client device to register with the node corresponding to the node type (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and

they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 44, Novaes does not explicitly disclose wherein providing the activation module includes providing the activation module that is configured to determine a message category of the data representation and that causes the client device to register with a node having a node type corresponding to the message category.

However, Trenbeath further discloses wherein providing the activation module includes providing the activation module that is configured to determine a message category of the data representation and that causes the client device to register with a node having a node type corresponding to the message category (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217, message categories updating/deleting/modifying).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 45, Novaes discloses an apparatus comprising:

an input source device configured to provide a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object that is recognizable by the client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), and that causes the client device to determine the live object to register for updates message with the routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes; paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered),

wherein the input source device is configured to route an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), such that a gateway device at the network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) is configured to

route the update message from the gateway device to a node at the routing network (FIG. 5-7; paragraphs 0020, 0030, 0057-0059, 0060, 0062-0063, and 0067-0079: multicast message/multicast datagram are routed to a node which may be a known address node, regular node, leader node, multicast routing node, or failed node),

wherein the node is configured to identify the client device as a registered device (FIG. 5; paragraphs 0030, 0058-0059 and 0061-0063: DMR facility containing a location of registry servers/nodes)

and route the routed update message containing the update data to the client device (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed),

and wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message of the live object and determining an object ID of the live object;

However, Trenbeath further discloses the update message of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object) and determining an object ID of the live object (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would

provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 48, Novaes does not explicitly disclose wherein the received data representation includes an activation module that is configured to be executed by the client device and adapted to register the live object with the routing network.

However, Trenbeath further discloses wherein the received data representation (FIG. 4, 14; column 9-10; column 25: 15-25: software located in both publication client and subscription client) includes an activation module that is configured to be executed by the client device and adapted to register the live object with the routing network (FIG. 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 49, Novaes does not explicitly disclose wherein the activation module is configured to determine a node type for handling registration and to cause the client device to register with the node of the node type.

However, Trenbeath further discloses wherein the activation module is configured to determine a node type for handling registration and to cause the client device to register with the

node of the node type (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 50, Novaes does not explicitly disclose wherein the activation module determines a message category of the data representation and causes the client device to register with the node having a node type corresponding to the message category.

However, Trenbeath further discloses wherein the activation module determines a message category of the data representation and causes the client device to register with the node having a node type corresponding to the message category (FIG. 6 and 8; column 3:30-50, column 13 and 14: the client subscribes/registers topics and they are determined based on Subscription Client ID 213, Permissions 215, Subscriber Status 216, Flags 217, message categories updating/deleting/modifying).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 51, Novaes discloses an article of manufacture including a computer-storage readable medium having instructions stored thereon (FIG. 1-2; paragraphs 0046-0048), execution of which by a computing device causes the computing device to perform operations comprising:

providing, using a processing device, a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object that is recognizable by the client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), and that causes the client device to respond to the live object by determining the live object to register for updates message with the routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes; paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered);

and sending, using the processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)),

such that a gateway device at the routing network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) is configured to route the update message from the gateway device at the routing network to a node at the routing network (FIG. 5-7; paragraphs 0020, 0030, 0057-0059, 0060, 0062-0063, and 0067-0079: multicast message/multicast datagram are routed to a node which may be a known address node, regular node, leader node, multicast routing node, or failed node), wherein the node is configured to identify the client device as a registered device (FIG. 5; paragraphs 0030, 0058-0059 and 0061-0063: DMR facility containing a location of registry servers/nodes) and to route the update message to the client device (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed), and wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes does not explicitly disclose determining an object ID of the live object;

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message of the live object, and determining an object ID of the live object;

However, Trenbeath further discloses the update message of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object), determining an object ID of the live object (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 54, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 48, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 54.

As per claim 55, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 49, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 55.

As per claim 56, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 50, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 56.

As per claim 57, Novaes discloses a non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:

instructions for providing a data representation to a client device coupled to a routing network, wherein the data representation includes at least one live object recognizable by the client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), and wherein the client device is configured to respond to the live object of the data representation to register for updates message with the routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes; paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered);

instructions for providing, using a processing device, an update message to the routing network, wherein the update message identifies the live object and contains update data for updating a property of the live object (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed)), such that a gateway device at the routing network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) is configured to route the update message from the gateway device to a node at the routing network (FIG. 5-7; paragraphs 0020, 0030, 0057-0059, 0060, 0062-0063, and 0067-0079: multicast

message/multicast datagram are routed to a node which may be a known address node, regular node, leader node, multicast routing node, or failed node), wherein the node is configured to identify the client device as a registered device (FIG. 5; paragraphs 0030, 0058-0059 and 0061-0063: DMR facility containing a location of registry servers/nodes) and to route the update message containing the update data to the client device (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed), and wherein the client device is configured to process the update message upon receipt to update the property of the live object at the client device (paragraphs 0018-0019: update/display events which have been subscribed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message of the live object, and determining an object ID of the live object;

However, Trenbeath further discloses the update message of the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object), determining an object ID of the live object (FIG. 8; column 13: 10-20, 25-30, and 40-65: Publication ID (live object as claimed) is extracted from the publishing/subscribing messages).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 60, it is a device claim, which recite(s) the same limitations as those of claims 48, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 60.

As per claim 61, it is a device claim, which recite(s) the same limitations as those of claims 49, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 61.

As per claim 62, it is a device claim, which recite(s) the same limitations as those of claims 50, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 62.

As per claim 63, Novaes discloses a method comprising:

providing a live object to a client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed));

sending an update message to a routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular

messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …));

wherein in response to determining that the client device is registered to receive update data for the live object (paragraphs 0018-0019 and 0041: publishing/subscribing messages is considered registering for updates of the news/topics/events), the update message is routed from a gateway device at the routing network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) to a node at the routing network (FIG. 5-7; paragraphs 0020, 0030, 0057-0059, 0060, 0062-0063, and 0067-0079: multicast message/multicast datagram are routed to a node which may be a known address node, regular node, leader node, multicast routing node, or failed node), wherein the node routes sends the update routed message to the client device (FIG. 5; paragraphs 0030, 0058-0059 and 0061-0063: DMR facility containing a location of registry servers/nodes; paragraphs 0076-0079: publishing/subscripting messages are routed).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message identifying the live object and containing update data to update the live object at the client device.

However, Trenbeath further discloses the update message identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing update data to update the live object at the client device (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would

provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 64, Novaes discloses an apparatus comprising:

an input source a content provider arranged to provide a live object to a client device (paragraphs 0018-0019 and 0041: in publish/subscribe system, messages containing information/data identifying news/events/topic (live object as claimed));

and the input source an information provider arranged to provide an update message to a routing network (paragraphs 0018-0019: in publisher/subscriber system, a message published by the publisher which is a topic of interest to the subscriber is considered as an update message (when subscribing to receive particular messages, the received messages would be the latest/up-to-date/update messages related to the interested/particular topics (such as news, sports events/scores, stocks, movies, celebrities …)),

wherein the routing network is configured to route the update message from a gateway device at the routing network (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device)) to a node at the routing network (FIG. 5-7; paragraphs 0020, 0030, 0057-0059, 0060, 0062-0063, and 0067-0079: multicast message/multicast datagram are routed to a node which may be a known address node, regular node, leader node, multicast routing node, or failed node), and wherein the node is configured to route the update message to the client device (FIG. 5-6; paragraphs 0076-0079: publishing/subscripting messages are routed) if the client device is registered to receive the

update data for the live object (FIG. 5; paragraphs 0030, 0058-0059 and 0061-0063: DMR facility containing a location of registry servers/nodes).

Novaes indeed discloses update message in a message publish/subscribe system, however, Novaes does not explicitly disclose the update message identifying a live object and containing update data for updating the live object.

However, Trenbeath further discloses the update message identifying a live object (FIG. 8; column 13: 40-65 – column 14:1-20: PublicationID) and containing update data for updating the live object (FIG. 4-5 and 13; column 3:45-50; column 9: 20-35; column 20: 15-45: update message updating/modifying/deleting data object).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Trenbeath's teaching into Novaes' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 66, it is a device claim, which recite(s) the same limitations as those of claims 63, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 66.

As per claim 67, Novaes discloses the routing network of claim 33, wherein the node type is configured to identify the node that receives the update message from the gateway device (FIG. 4-5; paragraphs 0023-0226, 0055, 0066 and 0076: multicast messages are routed to a node

which may be a regular node, leader node, multicast routing node, or failed node; FIG. 5-6; paragraphs 0076-0079: only multicasting messages to multicast routing nodes 2, 4, 6 --> within Network A, multicast routing node 2 forwarding received messages to regular nodes in said Network A).

6. Claims 29-31 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novaes in view of Trenbeath, as applied to claims 28 and 34 respectively, and further in view of Campbell et al. (US 7,209,959, hereinafter "Campbell").

As per claim 29, Novaes in view of Trenbeath does not explicitly disclose causing the node to determine at least one client proxy with which the client communicates; routing the data to the client proxy; and routing the data from the client proxy to the client to determine the connection.

However, Campbell further discloses causing the node to determine at least one client proxy with which the client communicates; routing the data to the client proxy; and routing the data from the client proxy to the client to determine the connection (column 2: 8-20).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20: a proxy server is considered as a client server).

As per claim 30, Novaes discloses causing the node to maintain client registration information concerning the client connection (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes).

As per claim 31, Novaes in view of Trenbeath does not explicitly disclose causing the node to maintain client registration information concerning the client connection at the client proxy.

However, Campbell further discloses causing the node to maintain client registration information concerning the client connection at the client proxy (column 2: 8-20: client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20).

As per claim 35, Novaes in view of Trenbeath does not explicitly disclose wherein the node is configured to determine the connection by determining at least one client proxy with which the client communicates and to route the data to the client proxy.

However, Campbell further discloses wherein the node is configured to determine a connection by determining at least one client proxy with which the client communicates and to route the data to the client proxy (column 2: 8-20).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20: a proxy server is considered as a client server).

As per claim 36, Novaes discloses wherein client registration information concerning the client connection is configured to be maintained at the node (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes).

As per claim 37, Novaes in view of Trenbeath does not explicitly disclose wherein client registration information concerning the client connection is configured to be maintained at the client proxy.

However, Campbell further discloses wherein client registration information concerning the client connection is configured to be maintained at the client proxy (column 2: 8-20: client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20).

As per claim 38, Novaes discloses wherein:

the gateway device is configured to route the update message to the node adapted to receive messages of more than one message category (FIG. 5-6; paragraphs 0022, 0024, 0026, and 0030: routing node and also leader node (considered as gateway device) receiving/sending more than one different publishing/subscripting message categories from/to different nodes).

Novaes in view of Trenbeath does not explicitly disclose the node is configured to determine a connection with at least one client proxy with which the client communicates and to route the data to the client proxy.

However, Campbell further discloses the node is configured to determine a connection with at least one client proxy with which the client communicates and to route the data to the client proxy (column 2: 8-20: client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the proxy server of Campbell into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of hiding the client from the web server (Campbell, column 2: 8-20).

7. Claims 40-41, 46-47, 52-53, and 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novaes in view of Trenbeath as applied to claims 39, 45, 51 and 57 above, and further in view of Freeman et al. (US 6,314,459 hereinafter "Freeman").

As per claim 40, Novaes in view of Trenbeath does not disclose wherein providing the data representation to the client device includes providing the live object that causes the client device to register with a client proxy of the routing network.

However, Freeman further discloses wherein providing the data representation to the client device includes providing the live object that causes the client device to register with a client proxy of the routing network (FIG. 7; column 4: 5-35).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 41, Novaes in view of Trenbeath does not explicitly disclose wherein providing the data representation to the client device includes providing the live object that causes the client device to register with the node of the routing network.

However, Freeman further discloses wherein providing the data representation to the client device includes providing the live object that causes the client device to register with the node of the routing network (FIG. 7; column 4: 5-35: node 102 and 104 containing registry 124 and 126 respectively).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of

enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 46, Novaes in view of Trenbeath does not explicitly disclose wherein the live object of the data representation is configured to cause the client device to register with a client proxy of the routing network.

However, Freeman further discloses wherein the live object of the data representation is configured to cause the client device to register with a client proxy of the routing network (FIG. 7; column 4: 5-35).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 47, Novaes in view of Trenbeath does not explicitly disclose wherein the live object of the data representation is configured to cause the client device to register with the node of the routing network.

However, Freeman further discloses wherein the live object of the data representation is configured to cause the client device to register with the node of the routing network (FIG. 7; column 4: 5-35: node 102 and 104 containing registry 124 and 126 respectively).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the registry 124 supporting client/server proxy of Freeman into Novaes' teaching in view of Trenbeath's teaching because it would provide for the purpose of enabling automatic configuration of a network in order to share resource or services (Freeman, column 2: 5-15).

As per claim 52, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 46, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 52.

As per claim 53, it is an article of manufacture claim, which recite(s) the same limitations as those of claims 47, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 53.

As per claim 58, it is a device claim, which recite(s) the same limitations as those of claims 46, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 58.

As per claim 59, it is a device claim, which recite(s) the same limitations as those of claims 47, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 59.

Response to Arguments

8. Applicant's arguments filed on 01/24/2011 have been fully considered but they are not persuasive for the following reasons:

a) Claims 26, 28, 32-34, 39, 42-45, 48-51, 54-57, 60-64, and 66-67 (Remarks, page 13)

1) Regarding Independent claims 26 and 33

Applicants argue "Therefore, Novaes discloses that each of the leader nodes (nodes 2, 4, and 6) merely forward the multicasts messages to **any** node in their networks. This is in contrast to 'determine a node having a node type to which the update message is to be routed based on a mapping of a categories of update messages to node types,' as recited in claims 26 and 33, using their respective language."

As an initial matter, the Examiner notes that, in view of FIG. 12, paragraphs 0017, 0112, 0113, and 0126 of the specification:

[0017] In another embodiment, all messages from an input source are assigned to one or more of N categories. Also, the nodes are assigned to one or more of M types, and mappings are created between message categories and node types...

[0112] FIG. 9 is a block diagram illustrating a high-level view of the routing network 110 of FIG. 7 in an embodiment adapted to use the approach having message categories and node types. Although FIG. 9 illustrates only two node types--nodes of type 1 726 and nodes of type 2 726--for purposes of

simplicity, this embodiment of the network 10 can have any number of node types. FIG. 9 also illustrates a client proxy 740 for reasons described below. However, an embodiment of the present invention using message categories and node types does not necessarily utilize a client proxy 740.

that is to say, nodes in M types include any processing unit such as a host comprises a computer which is capable of supporting network protocol. Node can be regular node, leader node, multicast node, or failed node.

In further, the Examiner respectfully disagrees on Applicants' argument "Therefore, Novaes discloses that each of the leader nodes (nodes 2, 4, and 6) merely forward the multicasts messages to **any** node in their networks" and would like direct Applicants' attention to at least paragraphs 0024-0026 of Novaes.

As per Novaes, the Multicast network still has different node types: computing nodes and multicast routing node (paragraph 0024), group leader nodes group nodes (paragraph 0025), failed nodes and active nodes (paragraphs 0024 and 0026). Said network also have non-multicast nodes including processor/node which is not a member of the group (paragraphs 0053 and 0055) or any node/machine which does not a communication interface (paragraph 0066). Therefore, the multicast message cannot be sent to any nodes in the network as Applicants stated.

The Examiner also respectfully directs Applicants' attention to paragraphs 0030, 0058-0059, and 0062-0063 of Novaes.

[0030] The DMR facility described herein has multiple applications in a distributed computing environment such as a cluster or parallel system. For example, the DMR facility could be used when sending a multicast datagram to a known address for service. An example of the need for a dynamic service facility is the location of the registry servers at boot time. Another use of a DMR facility in accordance with this invention is in the distribution of a given file to a large number of nodes. For example, propagation of a password

file by multicast is an efficient way to distribute information. The DMR facility presented herein ensures that the multicast message gets routed to all subnets, independently of which nodes are down at any one time and independent of router box support.

[0058] In certain cases, multicast messages have to be routed through IP routers which do not support multicast routing. In such cases, a virtual interface or "tunnel" has to be configured, such that two nodes in different networks can interface and act as routing points for multicast messages. Tunneling is described in greater detail in the above-incorporated publication by Gary Wright and Richard Stevens entitled "TCP/IP Illustrated". Again, tunneling end-points are traditionally configured manually by a network administrator.

[0059] In accordance with the principles of the present invention, a Dynamic Multicast Routing (DMR) facility is provided which utilizes the above-described Group Services software. As noted, the Group Services software provides facilities for other distributed processes to form "groups". A group is a distributed facility which monitors the health of its members and is capable of executing protocols for them. The DMR facility of the present invention utilizes, in one example, Group Services to monitor the health of the routing nodes, and in executing its election protocols which ultimately determine which node of a plurality of nodes in the group should act as an end-point for a tunnel for multicast routing.

That is to say, combining IP router, interface/tunnel, the DMR facility executing its election protocols to determine a node is used as an end-point (known address/node for service as disclosed in paragraph 0030) to receive a multicast datagram, therefore not every node gets the message as Applicants stated.

As per Applicants' argument "no mapping of categories of update message to node type", the Examiner respectfully disagrees. In view of paragraphs 0038 and 0113 of the specification, the plain language of the claims does not exclude the message has a mapping to a known address/node (i.e., one-to-one or many-to-one relationship), the message has a mapping to a particular leader node (i.e., one-to-one or many-to-one relationship), and the multicast network has a mapping of all categories of update message to node type "multicast" (i.e., a relationship ALL to 1).

Novaes discloses at least:

A routing table to map/rout a message to a known address/node (paragraph 0030), to a particular leader node of the network (paragraphs 0058-0059 and 0062-0063), and all categories of update message to multicast node type (paragraphs 0020, 0057, 0060);

routing, using the processing device, the update message to the node having the determined node type (FIG. 5-6; paragraphs 0076-0079: only multicasting messages to multicast routing nodes 2, 4, 6 (a first node type) --> within Network A, routing messages to multicast routing node 2 first (the first node type) and laster forwarding received messages to regular nodes (a second node type) in said Network A).

Since Novaes discloses determining a node having a node type to which the update message is to be routed based on a mapping of categories of update messages to node types (FIG. 5-7; paragraphs 0020, 0030, 0057-0059, 0060, 0062-0063, and 0067-0079: multicast message/multicast datagram are routed to a node which may be a known address node, regular node, leader node, multicast routing node, or failed node), Novaes also discloses the mapping controlling an amount of update message traffic through nodes of a routing network (FIG. 5-6;

paragraphs 0076-0078: only multicasting messages to multicast routing nodes 2, 4, 6; paragraph 0028: stopping routing messages to a failed multicast routing node, reassigning a new multicast routing node; FIG. 5-6; paragraphs 0058-0059 and 0062-0063: DMR facility monitoring a health of routing nodes and determining which node should act as an end-point for a tunnel of the routing)

Claims 28-31, 34-38 and 67 (Remarks, page 10) are also rejected based on virtue of their dependencies on the rejected base claims 1 and 33.

2) **Regarding Independent claims 39, 45, 51, 57, 63, and 66**

Applicants argue "Therefore, Novaes discloses that each of the leader nodes (nodes 2, 4, and 6) merely forward the multicasts messages to any node in their networks. Novaes's method does not identify and/or determine the client device as a registered device, as recited in independent claims 39, 45, 51, 57, 63, 64, and 66, using their respective language." (Remarks, page 9)

As an initial matter, the Examiner notes that the reasonable broadest interpretation of "gateway" includes any network node equipped for interfacing with another network that uses different protocols.

Therefore, Novaes fully discloses at least leader nodes and routing nodes including DMR facility (FIGS. 5-6, paragraphs 0029-0030, 0060 and 0063) equivalent to gateways as claimed. As per Novaes, the Multicast network still has different node types: computing nodes and multicast routing node (paragraph 0024), group leader nodes group nodes (paragraph 0025),

failed nodes and active nodes (paragraphs 0024 and 0026). Said network also have non-multicast nodes including processor/node which is not a member of the group (paragraphs 0053 and 0055) or any node/machine which does not a communication interface (paragraph 0066). Therefore, the multicast message cannot be sent to any nodes in the network as Applicants stated.

The Examiner also respectfully directs Applicants' attention to paragraphs 0030, 0058-0059, and 0062-0063 of Novaes.

[0030] The DMR facility described herein has multiple applications in a distributed computing environment such as a cluster or parallel system. For example, the DMR facility could be used when sending a multicast datagram to a known address for service. An example of the need for a dynamic service facility is the location of the registry servers at boot time. Another use of a DMR facility in accordance with this invention is in the distribution of a given file to a large number of nodes. For example, propagation of a password file by multicast is an efficient way to distribute information. The DMR facility presented herein ensures that the multicast message gets routed to all subnets, independently of which nodes are down at any one time and independent of router box support.

[0058] In certain cases, multicast messages have to be routed through IP routers which do not support multicast routing. In such cases, a virtual interface or "tunnel" has to be configured, such that two nodes in different networks can interface and act as routing points for multicast messages. Tunneling is described in greater detail in the above-incorporated publication by Gary Wright and Richard Stevens entitled "TCP/IP Illustrated". Again, tunneling end-points are traditionally configured manually by a network administrator.

[0059] In accordance with the principles of the present invention, a Dynamic Multicast Routing (DMR) facility is provided which utilizes the above-described Group Services software. As noted, the Group Services software provides facilities for other distributed processes to form "groups". A group is a

distributed facility which monitors the health of its members and is capable of executing protocols for them. The DMR facility of the present invention utilizes, in one example, Group Services to monitor the health of the routing nodes, and in executing its election protocols which ultimately determine which node of a plurality of nodes in the group should act as an end-point for a tunnel for multicast routing.

That is to say, combining IP router, interface/tunnel, the DMR facility executing its election protocols to determine a node is used as an end-point (known address/node for service as disclosed in paragraph 0030) to receive a multicast datagram, therefore not every node gets the message as Applicants stated.

As per Applicants' argument "Novaes's method does not identify and/or determine the client device as a registered device" (Remarks, page 19), the Examiner respectfully disagrees.

Novaes discloses Multicast network having different node types such as computing nodes and multicast routing node (paragraph 0024), group leader nodes group nodes (paragraph 0025), failed nodes and active nodes (paragraphs 0024 and 0026). Said network also have non-multicast nodes including processor/node which is not a member of the group (paragraphs 0053 and 0055) or any node/machine which does not a communication interface (paragraph 0066). In further, Novaes also discloses registering the client device with the routing network provides client connection information to a node in the routing network (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes; paragraphs 0018-0019: FIG.6, determining which nodes in Networks A-B-C have subscribed/registered).

Since Novaes discloses determining a node having a node type to which the update message is to be routed based on a mapping of categories of update messages to node types (FIG. 5-7; paragraphs 0020, 0030, 0057-0059, 0060, 0062-0063, and 0067-0079: multicast

message/multicast datagram are routed to a node which may be a known address node, regular node, leader node, multicast routing node, or failed node), Novaes also discloses the node is configured to identify the client device as a registered device (FIG. 5; paragraphs 0030 and 0061: DMR facility containing a location of registry servers/nodes)).

Claims 39-44, 46-50, and 58-66 (Remarks, page 19) are also rejected based on virtue of their dependencies on the rejected base claims 39, 45, and 57.

Conclusion

9. **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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 date of this final action.

10. Any inquiry concerning this communication should be directed to examiner Tuan Dao, whose telephone/fax numbers are (571) 270 3387 and (571) 270 4387, respectively. The

examiner can normally be reached on every Monday-Thursday and the second Friday of the bi-week from 7:30AM to 5:00PM.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough, can be reached at (571) 272 6799.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

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).

/Tuan C. Dao/

Examiner, Art Unit 2194

/H. S. SOUGH/
Supervisory Patent Examiner, Art Unit 2194
03/18/11

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11396251	TUTTLE ET AL.
	Examiner	Art Unit
	Tuan C Dao	4142

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/18/2009	01/11/2010	06/14/2010	10/13/2010	03/16/2011				
	1	-	-	-	-	-				
	2	-	-	-	-	-				
	3	-	-	-	-	-				
	4	-	-	-	-	-				
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	9	-	-	-	-	-				
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	24	-	-	-	-	-				
	25	-	-	-	-	-				
	26	✓	✓	✓	✓	✓				
	27	✓	✓	-	-	-				
	28	✓	✓	✓	✓	✓				
	29	✓	✓	✓	✓	✓				
	30	✓	✓	✓	✓	✓				
	31	✓	✓	✓	✓	✓				
	32	✓	✓	✓	✓	-				
	33	✓	✓	✓	✓	✓				
	34	✓	✓	✓	✓	✓				
	35	✓	✓	✓	✓	✓				
	36	✓	✓	✓	✓	✓				

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=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	07/18/2009	01/11/2010	06/14/2010	10/13/2010	03/16/2011				
	37	✓	✓	✓	✓	✓				
	38	✓	✓	✓	✓	✓				
	39	✓	✓	✓	✓	✓				
	40	✓	✓	✓	✓	✓				
	41	✓	✓	✓	✓	✓				
	42	✓	✓	✓	✓	✓				
	43	✓	✓	✓	✓	✓				
	44	✓	✓	✓	✓	✓				
	45	✓	✓	✓	✓	✓				
	46	✓	✓	✓	✓	✓				
	47	✓	✓	✓	✓	✓				
	48	✓	✓	✓	✓	✓				
	49	✓	✓	✓	✓	✓				
	50	✓	✓	✓	✓	✓				
	51	✓	✓	✓	✓	✓				
	52	✓	✓	✓	✓	✓				
	53	✓	✓	✓	✓	✓				
	54	✓	✓	✓	✓	✓				
	55	✓	✓	✓	✓	✓				
	56	✓	✓	✓	✓	✓				
	57	✓	✓	✓	✓	✓				
	58	✓	✓	✓	✓	✓				
	59	✓	✓	✓	✓	✓				
	60	✓	✓	✓	✓	✓				
	61	✓	✓	✓	✓	✓				
	62	✓	✓	✓	✓	✓				
	63		✓	✓	✓	✓				
	64		✓	✓	✓	✓				
	65		✓	✓	-	-				
	66		✓	✓	✓	✓				
	67			✓	✓	✓				

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E	1129

26111 7590 05/16/2011

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
DAO, TUAN C.	

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
05/16/2011	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.

Interview Summary	Application No.	Applicant(s)	
	11/396,251	TUTTLE ET AL.	
	Examiner	Art Unit	
	TUAN DAO	2194	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Tuan Dao*.

(2) *Zhen Li B*.

(3) *Glenn J. Perrry*.

(4) *Amirali Sharifi*.

Date of Interview: *11 May 2011*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☒ No.
If Yes, brief description: _____.

Claim(s) discussed: *26*.

Identification of prior art discussed: *Novaes (US 2002/0165977)*.

Agreement with respect to the claims f)☐ was reached. g)☐ was not reached. h)☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *See Continuation Sheet*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/TUAN DAO/ Examiner, Art Unit 2194	/Li B. Zhen/ Supervisory Patent Examiner, Art Unit 2197

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Applicants discusses the 103 rejection of claims 26, especialy on the limitation "indentifying a category of the update message among a plurality of categories".

In view of paragarph 0015 of the specification, the category of the updating message can be intepreted based on a type of a recepient.

Therefore, Novaes fully discloses indentifying a category of the update message among a plurality of categories (FIG. 6, paragarphs 0018, 0059, and 0072-0076: recepients grouped by type (leader, regular, failed …), and the message is categoried routed to recepients based on a type of node.

Upon receving formal response, the examiner will further consider the above issues..

.

Sterne Kessler Goldstein Fox
ATTORNEYS AT LAW

Fax

☒ Urgent ☐ Return reply requested ☐ Original will be sent as confirmation

To: **USPTO (Art Unit 2194)**

Date: May 4, 2011

Attention: Examiner Tuan Dao

Re: Appl. No. 11/396,251; Filed 3/30/2006
Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network
Inventors: Tuttle et al.

From: Glenn J. Perry (Reg.# 28,458)

Pages (including cover sheet): 2

Fax No: (571) 270-4387

Our Reference: 2222.775000E

Message

See Attached

If any portion of this transmission is not received clearly or in full, contact us at the numbers below.

This message is intended for the exclusive use of the individual or entity to which it is addressed. The message may contain information that is privileged, confidential, or otherwise exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, copying or use of this communication in any way is strictly prohibited. If you have received this communication in error, please call us collect immediately, and return the original message to us at the above address via the U.S. Postal Service.

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Unofficial Communication, Not To Be Entered, Privileged and Confidential

Proposed Agenda for Examiner Telephonic Interview
TO BE DETERMINED
Ser. No. 11/396,251

Participants:
For PTO: Examiner Tuan C. Dao
For representatives: Glenn J. Perry (Reg.# 28,458) and Amirali Sharifi

Dear Examiner Dao:

We would appreciate the opportunity to discuss independent claims, the outstanding 35 U.S.C. § 103(a) rejections, the applied references (in particular the Novaes and Trenbeath references), and any suggestions you might be able to provide that might advance the prosecution of this application.

For example, we would like to discuss the following proposed amendment to independent claim 26. Similar amendments can be made to other independent claims.

> 26. (Currently Amended) A method comprising:
> receiving, using a processing device, an update message identifying a live object and containing data for updating a property of the live object;
> identifying a category of the update message among a plurality of categories;
> determining a node having a node type to which the update message is to be routed based on a mapping of categories of update messages to node types, the mapping controlling an amount of update message traffic through nodes of a routing network;
> routing, using the processing device, the update message to the node having the determined node type;
> causing the node, through the update message, to determine a client that has registered for updates of the live object;
> causing the node to route the data from the node to the client; and
> causing the client to process the data and to update the property of the live object.

For example, we would like to discuss the following claim elements, among other feature, of independent claim 26 (emphasis added). Similar features are presented in other independent claims, using their respective language.

> ***identifying a category of the update message among a plurality of categories.***

Please contact us if you have any questions or comments:

Glenn J. Perry (GJPerry@SKGF.com) 202-772-8703
Amirali Sharifi (ASharifi@SKGF.com) 202-772-8871

Best regards,
Amirali Sharifi

IPR2025-00200 / 722 Patent Page 772 of 1171 EX1002

PTO/SB/30 (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 contains a valid OMB control number.

Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	11/396,251
Filing Date	March 30, 2006
First Named Inventor	Timothy TUTTLE
Art Unit	2194
Examiner Name	DAO, TUAN C.
Attorney Docket Number	2222.775000E

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, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

   a. ☐ 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 previously filed on _____

      ii. ☐ Other _____

   b. ☒ Enclosed

      i. ☒ Amendment/Reply

      ii. ☐ Affidavit(s)/ Declaration(s)

      iii. ☐ Information Disclosure Statement (IDS)

      iv. ☐ Other _____

2. Miscellaneous

   a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

   b. ☐ Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

   a. ☒ The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to Deposit Account No. 19-0036

      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 $ _____ enclosed

   c. ☒ Payment by credit card (XXXXXXXXXXXXXXXX)

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 AGENT REQUIRED

Signature	43447	Date	6/22/11
Name (Print/Type)	Glenn J. Perry	Registration No.	28,458

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark 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.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No.: 1129
TUTTLE *et al.*	Art Unit: 2194
Appl. No.: 11/396,251	Examiner: DAO, TUAN C.
Filed: March 30, 2006	Atty. Docket: 2222.775000E
For: **Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network**	

Submission under 37 C.F.R. §1.114 and Preliminary Amendment and Reply Under 37 C.F.R. § 1.115

Mail Stop RCE

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the Final Office Action dated **March 23, 2011**, ("Office Action") Applicants submit the following Amendment and Remarks (filed along with a RCE).

Amendments to the Claims are reflected in the listing of claims which begins on page **2** of this paper.

Remarks and Arguments begin on page **12** of this paper.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Remarks

Upon entry of the foregoing amendment, claims 26, 28-31, 33-64, 66, and 67 are pending in the application, with claims 26, 33, 39, 45, 51, 57, 63, 64, and 66 being the independent claims. Claims 26, 29, 33, 39, 45, 51, 57, 63, 64, and 66 are sought to be amended. Support for amendments to the independent claims can be found throughout the originally filed specification, claims, and figure, and more specifically, for example, at paragraphs [0105] and [0106] of the originally filed specification. Claims 1-25, 27, 32, and 65 were previously cancelled without prejudice to or disclaimer of the subject matter therein. Applicants reserve the right to prosecute similar or broader claims, with respect to the amended and/or cancelled claims, in the future. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Statement of Substance of Examiner Interview

Examiner Dao and Supervisor Zhen are thanked for their time during a telephonic interview with Applicants' representatives Glenn Perry and Amirali Sharifi on May 10, 2011. Applicants' representatives explained proposed claim amendments similar to those presented herein, and how it is believed that the proposed amended claims distinguish from the applied references. The Examiners provided some guidance as to their interpretation of the claims and references. The Examiners also suggested that an amendment to independent claim 26 with features of dependent claims 28 and 32 be

considered. Further, the Examiners stated that a double patenting rejection over U.S. Patent No. 7,051,070 may be made. No final agreement was reached.

Rejections under 35 U.S.C. § 103

Claims 26, 28, 33, 34, 39, 42-45, 48-51, 54-57, 60-64, 66, and 67

Claims 26, 28, 33, 34, 39, 42-45, 48-51, 54-57, 60-64, 66, and 67 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2002/0165977 to Novaes ("Novaes") in view of U.S. Patent No. 6,324,587 to Trenbeath et al. ("Trenbeath"). Applicants respectfully traverse this rejection and the "Response to Arguments" section on pages 32-39 of the Office Action.

While not conceding the basis for the rejection and solely to expedite prosecution, independent claims 26, 33, 39, 45, 51, 57, 63, 64, and 66 are sought to be amended.

Independent claims 26, 33, 39, 45, 51, 57, 63, 64, and 66 recite features that distinguish over the applied references. For example, claim 26 recites, *inter alia*, (emphasis added):

> ***receiving, using a processing device, an update message from an input source***, the update message identifying a live object and containing data for updating a property of the live object;
>
> ***identifying a category of the update message based on the input source;***
>
> determining a node having a node type to which the update message is to be routed based on a mapping of categories of update messages to node types, the mapping controlling an amount of update message traffic through nodes of a routing network.

IPR2025-00200 / 722 Patent Page 776 of 1171 EX1002

Independent claim 33 recites similar distinguishing features, using its respective language. Further, independent claim 39 recites, *inter alia*, (emphasis added):

> ***sending, using the processing device of the input source, an update message*** to the routing network, wherein the update message identifies the live object and contains update data that updates a property of the live object,
>
> wherein a gateway device at the routing network is configured to ***identify a category of the update message based on the input source***, to determine a node type to which the identified category maps, and to route the update message to the node, having the node type, at the routing network

Independent claims 45, 51, and 57 recite similar distinguishing features, using their respective language. Further, independent claim 63 recites, *inter alia*, (emphasis added):

> ***sending, using a processing device of an input source, an update message*** to a routing network identifying the live object and containing update data to update the live object at the client device,
>
> wherein in response to determining that the client device is registered to receive update data for the live object, causing ***a category of the update message to be identified based on the input source***, a node type associated with the category be determined, and the update message be routed from the gateway device to a node having the node type at the routing network, and causing the node to route the update message to the client device.

Independent claims 64 and 66 recite similar distinguishing features, using their respective language.

These feature are neither disclosed nor suggested by the applied references.

It appears that the Examiner, on pages 33-35 of the Office Action and in response to Applicant's previously filed arguments, relies on paragraphs [0030], [0058], [0059],

[0062], and [0063] of Novaes to allegedly teach the recited "a mapping of categories of update messages to node types" of independent claims. Applicants respectfully disagree.

Assuming, *arguendo*, that the cited portions of Novaes teach the recited "a mapping of categories of update messages to node types," which Applicants do not agree, Novaes does not teach or suggest *identifying a category of the update message based on the input source*, as recited in independent claims 26, 33, 39, 45, 51, 57, 63, 64, and 66, using their respective language.

The Examiner, on page 35 of the Office Action, states:

> Novaes discloses at least:
>
> A routing table to map/rout [sic] a message to a known address/node (paragraph 0030), to a particular leader node of the network (paragraphs 0058-0059 and 0062-0063), and all categories of update message to multicast node type (paragraphs 0020, 0057, 006);

A routing table to map/route a message to a known address/node, as stated by the Examiner on page 35 of the Office Action, maps or routes a message based on the address of the recipient ("to a known address/node"). In contrast to mapping/routing a message based on the address of recipient, as suggested by the Examiner, independent claims recite, using their respective language, the **category** of the update message **is identified based on the input source**, where **the update message is sent by the input source**.

To map/route a message to a particular leader node, as stated by the Examiner on page 35 of the Office Action, also depends on the recipient of the message ("to a particular leader node"). In contrast to mapping/routing a message based on a particular recipient, as suggested by the Examiner, independent claims recite, using their respective

IPR2025-00200 / 722 Patent Page 778 of 1171 EX1002

language, the **category** of the update message **is identified based on the input source,** where **the update message is sent by the input source.**

Further, mapping/routing all categories of update message to multicast node type, as stated by the Examiner on page 35 of the Office Action, means no identification of the category of the message is done, as all categories are mapped/routed to a node. Therefore, this Examiner's statement also does not teach or suggest identifying a category of the update message based on the input source, where the update message is sent by the input source, as recited in independent claims, using their respective language.

Therefore, Novaes, as suggested by the Examiner, does not teach or suggest at least the above-noted distinguishing features of claims 26, 33, 39, 45, 51, 57, 63, 64, and 66. Specific sections of Novaes, relied on by the Examiner, are discussed in more detail below.

Paragraph [0020] of Novaes states that "[m]ulticast messages must be routed in order to reach multiple networks in a large distributed computing environment. Multicast routing is complicated by the fact that some older routers do not support such routing. In that case, routing is conventionally solved by manually configuring selected hosts (i.e., computing nodes) as 'routing points'. Such routing points are capable of running host discovery protocols that enable them to configure their routing tables in such a way that all nodes of the system will then be reachable via multicast. In some cases, the multicast messages have to be routed through IP routers which do not support multicast routing. In such cases, a "tunnel" has to be configured such that two hosts in different networks can act as routing points for multicast messages." Although paragraph [0020] of Novaes

discloses use of routing tables at routing nodes, however, there is no teaching or suggestion of *identifying a category of the update message based on the input source*, as recited in independent claims 26, 33, 39, 45, 51, 57, 63, 64, and 66.

Paragraph [0030] of Novaes states that "... the DMR facility could be used when sending a multicast datagram to a known address for service." Therefore, this section of Novaes, relied on by the Examiner, merely teaches that a multicast message is sent to a known address. There is no teaching or suggestion of *identifying a category of the update message based on the input source*, as recited in independent claims 26, 33, 39, 45, 51, 57, 63, 64, and 66.

Paragraph [0058] of Novaes states that "[i]n certain cases, multicast messages have to be routed through IP routers which do not support multicast routing. In such cases, a virtual interface or 'tunnel' has to be configured, such that two nodes in different networks can interface and act as routing points for multicast messages. ... Again, tunneling end-points are traditionally configured manually by a network administrator." This section of Novaes, relied on by the Examiner, discloses that a virtual interface (or tunnel) is configured for multicast messages that are routed through IP routers which do not support multicast routing. There is no teaching or suggestion of *identifying a category of the update message based on the input source*, as recited in independent claims 26, 33, 39, 45, 51, 57, 63, 64, and 66.

Paragraph [0059] of Novaes states that "[t]he DMR facility of the present invention utilizes, in one example, Group Services to monitor the health of the routing nodes, and in executing its election protocols which ultimately determine which node of a plurality of nodes in the group should act as an end-point for a tunnel for multicast

IPR2025-00200 / 722 Patent Page 780 of 1171 EX1002

routing." This section of Novaes, relied on by the Examiner, discloses the election protocols can determine which node (of a plurality of nodes in a group) should be an end-point for a tunnel. There is no teaching or suggestion of *identifying a category of the update message based on the input source*, as recited in independent claims 26, 33, 39, 45, 51, 57, 63, 64, and 66.

Paragraph [0060] of Novaes states that "[t]he DMR facility of this invention utilizes the mrouted daemon in such a way that it does not require any of a node's host discovery mechanisms to be deployed; and does not alter the established IP routing tables of the node. This behavior is desirable because the IP routes are configured separately." Although paragraph [0060] of Novaes discloses use of IP routing tables of the node, however, there is no teaching or suggestion of *identifying a category of the update message based on the input source*, as recited in independent claims 26, 33, 39, 45, 51, 57, 63, 64, and 66.

Paragraphs [0062] and [0063] of Novaes state that "[t]he circles around nodes 2 , 4 & 6 identify these nodes as multicast routing points or routing nodes selected by the DMR facility for multicast message forwarding as described further herein. ... The DMR facility of this invention runs a special group protocol described below that ensures that only two nodes between two groups will be chosen. This DMR facility monitors the health of these chosen routing points, and does immediate, automatic reconfiguration in the case of failure." These sections of Novaes, relied on by the Examiner, disclose a distributed computing environment having a plurality of nodes, where some nodes are selected as multicast routing nodes. These sections of Novaes further disclose that these nodes can be sued as routing nodes to tunnel across a router. There is no teaching or

IPR2025-00200 / 722 Patent Page 781 of 1171 EX1002

suggestion of *identifying a category of the update message based on the input source*, as recited in independent claims 26, 33, 39, 45, 51, 57, 63, 64, and 66.

Further, the Office Action, for example, on page 4, states, which Applicants do not acquiesce to, that Trenbeath teaches "PublicationID" and "update message updating/modifying/deleting data object." However, the Office Action does not use Trenbeath to disclose, nor does it teach or suggest, at least the above-noted distinguishing features of claims 26, 33, 39, 45, 51, 57, 63, 64, and 66. Therefore, Trenbeath does not cure the deficiencies of Novaes. Thus the combination of Novaes and Trenbeath does not render the claims obvious.

Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 26, 33, 39, 45, 51, 57, 63, 64, and 66 under 35 U.S.C. § 103(a). Accordingly, at least based on their respective dependencies to claims 26, 33, 39, 45, 51, and 57, claims 28, 34, 42-44, 48-50, 54-56, 60-62, and 67 should be found allowable over the applied references, as well as for their additional distinguishing features.

Claims 29-31 and 35-38

Claims 29-31 and 35-38 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Novaes in view of Trenbeath, and further in view of U.S. Patent No. 7,209,959 to Campbell et al. ("Campbell"). Applicants respectfully traverse this rejection and the "Response to Arguments" section on pages 32-39 of the Office Action.

Dependent claims 29-31 and 35-38 are allowable at least because they recite all of the features of independent claims 26 and 33, from which they depend. As discussed

above, Novaes and Trenbeath, taken alone or in combination, fail to disclose all of the features of claims 26 and 33.

Further, the Office Action, on pages 25-28, states, which Applicants do not acquiesce to, that Campbell teaches "causing the node to determine at least one client proxy with which the client communicates; routing the data to the client proxy; and routing the data from the client proxy to the client to determine the connection," "DMR facility containing a location of registry servers/nodes," "client information is extracted and replaced with predetermined substitute information at server proxy which is considered as a client proxy," and "wherein the node is configured to determine a connection by determining at least one client proxy with which the registered client communicates and to route the data to the client proxy." However, the Office Action does not use Campbell to disclose, nor does it teach or suggest, at least the above-noted distinguishing features of claims 26 and 33. Therefore, Campbell does not cure the deficiencies of Novaes and Trenbeath.

Accordingly, at least based on their respective dependencies to claims 26 and 33, claims 29-31 and 35-38 should be found allowable over the applied references, as well as for their additional distinguishing features.

Claims 40, 41, 46, 47, 52, 53, 58, and 59

Claims 40, 41, 46, 47, 52, 53, 58, and 59 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Novaes in view of Trenbeath, and further in view of U.S. Patent No. 6,314,459 to Freeman ("Freeman"). Applicants respectfully traverse this rejection.

IPR2025-00200 / 722 Patent Page 783 of 1171 EX1002

Dependent claims 40, 41, 46, 47, 52, 53, 58, and 59 are allowable at least because they recite all of the features of independent claims 39, 45, 51, and 57, from which they depend. As discussed above, Novaes and Trenbeath, taken alone or in combination, fail to disclose all of the features of claims 39, 45, 51, and 57.

Further, the Office Action, on pages 29-32, states, which Applicants do not acquiesce to, that Freeman teaches "wherein providing the data representation to the client device includes providing the live object that causes the client device to register with a client proxy of the routing network," "wherein providing the data representation to the client device includes providing the live object that causes the client device to register with the node of the routing network," "wherein the live object of the data representation is configured to cause the client device to register with a client proxy of the routing network," and "wherein the live object of the data representation is configured to cause the client device to register with the node of the routing network," However, the Office Action does not use Freeman to disclose, nor does it teach or suggest, at least the above-noted distinguishing features of claims 39, 45, 51, and 57. Therefore, Freeman does not cure the deficiencies of Novaes and Trenbeath.

Accordingly, at least based on their respective dependencies to claims 39, 45, 51, and 57, claims 40, 41, 46, 47, 52, 53, 58, and 59 should be found allowable over the applied references, as well as for their additional distinguishing features.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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43447

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IPR2025-00200 / 722 Patent Page 785 of 1171 EX1002

Electronic Patent Application Fee Transmittal

Application Number:	11396251
Filing Date:	30-Mar-2006
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Filer:	Jason Daniel Eisenberg/Raiza Singh
Attorney Docket Number:	2222.775000E

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for continued examination	1801	1	810	810
		Total in USD ($)		**810**

Electronic Acknowledgement Receipt

EFS ID:	10361464
Application Number:	11396251
International Application Number:	
Confirmation Number:	1129
Title of Invention:	Asynchronous messaging using a node specialization architecture in the dynamic routing network
First Named Inventor/Applicant Name:	Timothy Tuttle
Customer Number:	26111
Filer:	Jason Daniel Eisenberg/Raiza Singh
Filer Authorized By:	Jason Daniel Eisenberg
Attorney Docket Number:	2222.775000E
Receipt Date:	22-JUN-2011
Filing Date:	30-MAR-2006
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Payment Type	Credit Card
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Deposit Account	
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1		2222775000E_RCE_Amendment.pdf	2866936 5d548c709b06c72fe6c3702f21c18edfdab675bc	yes	24

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Miscellaneous Incoming Letter	1	1
Request for Continued Examination (RCE)	2	2
Amendment Submitted/Entered with Filing of CPA/RCE	3	3
Claims	4	13
Applicant Arguments/Remarks Made in an Amendment	14	24

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30258 51cfad683d5cd0f9d8503f3e2a6452b8ac68ac7c	no	2

Warnings:

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.