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June 22, 2011

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 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:

   $810.00 Request for Continued Examination;

2. Request for Continued Examination (RCE) Transmittal (PTO/SB/30); and

3. Submission under 37 C.F.R. §1.114 and Preliminary Amendment and Reply Under 37 C.F.R. § 1.115.

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.

43447

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GJP/A-S/rns
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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 06/22/2011

	(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	** 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

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:
/MYRTLE LEIGH/

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.

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 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;

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. (Currently Amended) The method of claim 28, further comprising:

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causing the node to determine at least one client proxy with which the client communicates;

~~routing~~ causing the node to route the data to the client proxy; and

~~routing the data from~~ causing the client proxy to route the data 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 from an input source, the update message identifying a live object and containing data for updating a property of the live object,

identify a category of the update message based on the input source;

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; 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. (Previously Presented) The routing network of claim 34, 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.

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. (Previously Presented) 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 client communicates and to route the data to the client proxy.

39. (Currently Amended) A method comprising:

providing, using a processing device <u>of an input source</u>, 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 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,

~~such that~~ 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 ~~from the gateway device~~ to the node, having the node type, at the routing network,

[[and]] wherein the node is configured to identify the client device as a registered device ~~, wherein the node routes~~ and to route 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. (Previously Presented) The method of claim 39, wherein providing the data representation to the client device 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,

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~~ wherein a gateway device at the 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 ~~from the gateway device~~ to a node of the node type 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 of an input source, 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 of the input source, 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~~ 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 ~~from the gateway device at the routing network~~ to a node of the node type 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 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, 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

instructions for providing, using a processing device of an input source, 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~~ 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 ~~from the gateway device~~ to a node of the node type 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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, 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 [[a]] the gateway device ~~at the routing network~~ to a node having the node type at the routing network, and causing the node to route the update message to the client device.

64. (Currently Amended) 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 identify a category of the update message based on the input source, determine a node type associated with the category, and to route the update message from a gateway device at the routing network to a node having the node type 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 non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:

instructions for providing a live object to a client device; and

instructions for providing an update message from an input source to a routing network identifying the live object and containing update data for updating the live object at the client device,

wherein a category of the update message is identified based on the input source, a node type associated with the category is determined, and the update message is routed from a gateway device at the routing network to a node having the node type 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.

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.

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

26111 7590 08/03/2011

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EXAMINER	
DAO, TUAN C.	

ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
08/03/2011	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 *06/22/2011*.

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, and 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)	4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.	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 06/22/2011 has been entered.

2. Claims 26, 28-31, 33-64, and 66-67 have been examined.

Response to Amendment

3. In the instant amendment, claims 26, 29, 31, 39, 45, 51, 57, 63, 64, and 66 have been amended.

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 Stocker et al. (US 6,510,323 hereinafter "Stocker") in view of Trenbeath et al. (US 6,324,578 hereinafter "Trenbeath").

As per claim 26, Stocker discloses a method comprising:

receiving, using a processing device, an update message from an input source (FIGs. 1-2 and 4; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: receiving Location Update (LU) message 220 from mobile station MS 110 (input source as claimed));

identifying a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (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 (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110), the mapping controlling an amount of update message traffic through nodes of a routing network (FIGs 3-4; column 6: 35-65; column 7: 40-65: the general message could be sent to all subscribers or none depending on the type of LU message; blocks 425-435: controlling the general message traffic through nodes 210/served area 195);

routing, using the processing device, the update message to the node having the determined node type (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195);

causing the node, through the update message, to determine a client that has registered for updates of the live object (FIG. 3-4; column 6: 50-65; column 7: 50-60: receiving the general information message including other data/information of MS 110, message control node 210 determining/identifying the ID of the MS 110 which has registered/subscribed for the general information message; in further, since GIMR 300 can be implemented in the control node (column 6: 25-37), it also perform GIMR functionalities);

causing the node to route the data from the node to the client (FIGs. 3-4; column 6: 10-30; column 7: 50-60: sending general information messages to MS 110).

Stocker indeed discloses update message in a message publish/subscribe system (LU message 220 (i.e., NLU, PL, IMSI attached IA and other type of LU message) containing information about CGI of the cell 135 as well as an identity of the subscriber presently using MS 110 (FIGs. 3; column 4: 50-67; column 5: 15-65)), however, Stocker does not explicitly disclose the update message identifying a live object and containing data for updating a property of the live object; and causing the client to process the data and to update the property of the live object.

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);

and causing the client to process the data and to 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).

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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 28, Stocker 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 Stocker's teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 33, Stocker discloses a routing network comprising:

a gateway device configured to (FIGs. 1 and 3; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: MSC/VLR 150/160):

receive an update message from an input source (FIGs. 1-2 and 4; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: receiving Location Update (LU) message 220 from mobile station MS 110 (input source as claimed)),

identify a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source));

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 (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110), the mapping controlling an amount of update message traffic through nodes of a routing network (FIGs 3-4; column 6: 35-65; column 7: 40-65: the general message could be sent to all subscribers or none depending on the type of LU message; blocks 425-435: controlling the general message traffic through nodes 210/served area 195);

and route the update message (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195);

and the node configured to:

receive the update message from the gateway device (FIGs. 3 and 4), wherein the node is configured to be mapped to the node type (FIG. 3 and 4; message control node 210/determined severed area 195 are mapped/set/identified in GIMR 300 (i.e., MSC area 1 or LA 77)), determine a client that has registered for updates of the live object (FIG. 3-4; column 6: 50-65; column 7: 50-60: receiving the general information message including other data/information of MS 110, message control node 210 determining/identifying the ID of the MS 110 which has registered/subscribed for the general information message; in further, since GIMR 300 can be implemented in the control node (column 6: 25-37), it also perform GIMR functionalities), and

route the data from the node to the client (FIGs. 3-4; column 6: 10-30; column 7: 50-60: sending general information messages to MS 110).

Stocker indeed discloses update message in a message publish/subscribe system (LU message 220 (i.e., NLU, PL, IMSI attached IA and other type of LU message) containing information about CGI of the cell 135 as well as an identity of the subscriber presently using MS 110 (FIGs. 3; column 4: 50-67; column 5: 15-65)), however, Stocker does not explicitly disclose the update message identifying a live object and containing data for updating a property of' the live object; and wherein the client is adapted to process the data and to update the property of the live object.

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);

and wherein the client is adapted to process the data and to 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).

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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 34, Stocker 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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As pre claim 39, Stocker discloses a method comprising:

providing, using a processing device of an input source, a data representation to a client device coupled to a routing network (FIG. 1; column 4: 1-45: representing data/information of radio network and/or geographical area to an MS 110), wherein the data representation includes at least one live object recognizable by the client device (FIG. 1; column 1: 1-45: information about radio network 100 such as network identifier, type/protocol of network, location of MS 110 and Base Transceiver Station BTS 120, and other information associated with a particular geographical area), 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 (FIGs. 1 and 3; column 2: 10-35; 60-67; column 3: 25-45; column 4: 25-45: registering a general information/local information using location/geographical area/MS ID), such that registering the client device with the routing network provides client connection information to a node in the routing network (FIG. 2-4: routing the local information/general information messages to the registered MS 111);

and sending, using the processing device of the input source, an update message to the routing network (FIGs. 1-2 and 4; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: receiving Location Update (LU) message 220 from mobile station MS 110 (input source as claimed),

wherein a gateway device at the routing network (FIGs. 1 and 3; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: MSC/VLR 150/160) is configured to identify a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)),

to determine a node type to which the identified category maps network (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110), and to route the update message to the node, having the node type, at the routing (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195),

wherein the node is configured to identify the client device as a registered device (FIG. 3-4; column 6: 50-65; column 7: 50-60: receiving the general information message including other data/information of MS 110, message control node 210 determining/identifying the ID of the MS 110 which has registered/subscribed for the general information message; in further, since GIMR 300 can be implemented in the control node (column 6: 25-37), it also perform GIMR functionalities) and to route the update message to the client device (FIGs. 3-4; column 6: 10-30; column 7: 50-60: sending general information messages to MS 110),

Stocker indeed discloses update message in a message publish/subscribe system (LU message 220 (i.e., NLU, PL, IMSI attached IA and other type of LU message) containing information about CGI of the cell 135 as well as an identity of the subscriber presently using MS 110 (FIGs. 3; column 4: 50-67; column 5: 15-65)), however, Stocker does not explicitly disclose wherein the update message identifies the live object and contains update data that updates a property of the live object, and wherein the client device processes the update message upon receipt to update the property of the live object at the client device.

Trenbeath further discloses 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), and wherein the client device processes the update 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).

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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 42, Stocker 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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 43, Stocker 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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 44, Stocker 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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 45, Stocker discloses an apparatus comprising:

an input source device configured to provide a data representation to a client device coupled to a routing network (FIG. 1; column 4: 1-45: representing data/information of radio network and/or geographical area to an MS 110), wherein the data representation includes at least One live object that is recognizable by the client device (FIG. 1; column 1: 1-45: information about radio network 100 such as network identifier, type/protocol of network, location of MS 110 and Base Transceiver Station BTS 120, and other information associated with a particular geographical area), 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 (FIGs. 1 and 3; column 2: 10-35; 60-67; column 3: 25-45; column 4: 25-45: registering a general information/local information using location/geographical area/MS ID), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 2-4: routing the local information/general information messages to the registered MS 111),

wherein the input source device is configured to route an update message to the routing network (FIGs. 1-2 and 4; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: receiving Location Update (LU) message 220 from mobile station MS 110 (input source as claimed),

wherein a gateway device at the network (FIGs. 1 and 3; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: MSC/VLR 150/160) is configured to identify a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)), to determine a node type to which the identified category maps (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110), and to route the update message device to a node of the node type at the routing network (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195),

wherein the node is configured to identify the client device as a registered device (FIG. 3-4; column 6: 50-65; column 7: 50-60: receiving the general information message including other data/information of MS 110, message control node 210 determining/identifying the ID of the MS 110 which has registered/subscribed for the general information message; in further, since GIMR 300 can be implemented in the control node (column 6: 25-37), it also perform GIMR functionalities) and route the update message containing the update data to the client device (FIGs. 3-4; column 6: 10-30; column 7: 50-60: sending general information messages to MS 110).

Stocker indeed discloses update message in a message publish/subscribe system (LU message 220 (i.e., NLU, PL, IMSI attached IA and other type of LU message) containing information about CGI of the cell 135 as well as an identity of the subscriber presently using MS 110 (FIGs. 3; column 4: 50-67; column 5: 15-65)), however, Stocker does not explicitly disclose wherein the update message identifies the live object and contains update data for updating a property of the live object, 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.

Trenbeath further discloses 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), 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 (FIG. 5; column 9-10: subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A).

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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 48, Stocker 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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 49, Stocker 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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 50, Stocker 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 Stocker' teaching because it would

provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 51, Stocker discloses 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 (FIG. 1) comprising:

providing, using a processing device of an input source, a data representation to a client device coupled to a routing network (FIG. 1; column 4: 1-45: representing data/information of radio network and/or geographical area to an MS 110), wherein the data representation includes at least one live object that is recognizable by the client device (FIG. 1; column 1: 1-45: information about radio network 100 such as network identifier, type/protocol of network, location of MS 110 and Base Transceiver Station BTS 120, and other information associated with a particular geographical area), 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 (FIGs. 1 and 3; column 2: 10-35; 60-67; column 3: 25-45; column 4: 25-45: registering a general information/local information using location/geographical area/MS ID), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 2-4: routing the local information/general information messages to the registered MS 111);

and sending, using the processing device of the input source, an update message to the routing network (FIGs. 1-2 and 4; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: receiving Location Update (LU) message 220 from mobile station MS 110 (input source as claimed),

wherein a gateway device at the routing network (FIGs. 1 and 3; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: MSC/VLR 150/160) is configured to identify a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)), to determine a node type to which the identified category maps (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110), and to route the update message to a node of the node type at the routing network (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195),

wherein the node is configured to identify the client device as a registered device (FIG. 3-4; column 6: 50-65; column 7: 50-60: receiving the general information message including other data/information of MS 110, message control node 210 determining/identifying the ID of the MS 110 which has registered/subscribed for the general information message; in further, since GIMR 300 can be implemented in the control node (column 6: 25-37), it also perform GIMR functionalities) and to route the update message to the client device (FIGs. 3-4; column 6: 10-30; column 7: 50-60: sending general information messages to MS 110).

Stocker indeed discloses update message in a message publish/subscribe system (LU message 220 (i.e., NLU, PL, IMSI attached IA and other type of LU message) containing information about CGI of the cell 135 as well as an identity of the subscriber presently using MS

110 (FIGs. 3; column 4: 50-67; column 5: 15-65)), however, Stocker does not explicitly disclose wherein the update message identifies the live object and contains update data for updating a property of the live object, 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.

Trenbeath further discloses 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), 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 (FIG. 5; column 9-10: subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A).

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 Stocker' 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, Stocker discloses a non-transitory computer readable storage medium having instructions stored thereon (FIG. 1), the instructions comprising:

instructions for providing a data representation to a client device coupled to a routing network (FIG. 1; column 4: 1-45: representing data/information of radio network and/or geographical area to an MS 110), wherein the data representation includes at least one live object recognizable by the client device (FIG. 1; column 1: 1-45: information about radio network 100 such as network identifier, type/protocol of network, location of MS 110 and Base Transceiver Station BTS 120, and other information associated with a particular geographical area), 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 (FIGs. 1 and 3; column 2: 10-35; 60-67; column 3: 25-45; column 4: 25-45: registering a general information/local information using location/geographical area/MS ID),

such that registering the client device with the routing network provides client connection information to the routing network (FIG. 2-4: routing the local information/general information messages to the registered MS 111);

and instructions for providing, using a processing device of an input source, an update message to the routing network (FIGs. 1-2 and 4; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: receiving Location Update (LU) message 220 from mobile station MS 110 (input source as claimed),

wherein a gateway device at the routing network (FIGs. 1 and 3; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: MSC/VLR 150/160) is configured to identify a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)), to determine a node type to which the identified category maps (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110), and to route the update message to a node of the node type at the routing network (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195),

wherein the node is configured to identify the client device as a registered device (FIG. 3-4; column 6: 50-65; column 7: 50-60: receiving the general information message including other data/information of MS 110, message control node 210 determining/identifying the ID of the MS

110 which has registered/subscribed for the general information message; in further, since GIMR 300 can be implemented in the control node (column 6: 25-37), it also perform GIMR functionalities) and to route the update message containing the update data to the client device (FIGs. 3-4; column 6: 10-30; column 7: 50-60: sending general information messages to MS 110).

Stocker indeed discloses update message in a message publish/subscribe system (LU message 220 (i.e., NLU, PL, IMSI attached IA and other type of LU message) containing information about CGI of the cell 135 as well as an identity of the subscriber presently using MS 110 (FIGs. 3; column 4: 50-67; column 5: 15-65)), however, Stocker does not explicitly disclose wherein the update message identifies the live object and contains update data for updating a property of the live object, 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.

Trenbeath further discloses 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), 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 (FIG. 5; column 9-10: subscribed clients C, D, E receives update data, attached data object in update messages from a publishing client A).

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 Stocker' 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 non-transitory computer readable storage medium 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 non-transitory computer readable storage medium 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 non-transitory computer readable storage medium 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 clam 63, Stocker discloses a method comprising:

providing a live object to a client device (FIG. 1; column 1: 1-45: information about radio network 100 such as network identifier, type/protocol of network, location of MS 110 and Base

Transceiver Station BTS 120, and other information associated with a particular geographical area);

sending, using a processing device of an input source, an update message to a routing network (FIGs. 1-2 and 4; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: receiving Location Update (LU) message 220 from mobile station MS 110 (input source as claimed)),

wherein in response to determining that the client device is registered to receive update data for the live object (FIG. 2-4: routing the local information/general information messages to the registered MS 111), causing a category of the update message to be identified based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)), a node type associated with the category be determined (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110), and the update message be routed from the gateway device to a node having the node type at the routing network (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195), and causing the node to route the update message to the client device (FIGs. 3-4; column 6: 10-30; column 7: 50-60: sending general information messages to registered MS 110).

Stocker indeed discloses update message in a message publish/subscribe system (LU message 220 (i.e., NLU, PL, IMSI attached IA and other type of LU message) containing

information about CGI of the cell 135 as well as an identity of the subscriber presently using MS 110 (FIGs. 3; column 4: 50-67; column 5: 15-65)), however, Stocker does not explicitly disclose identifying the live object and containing update data to update the live object at the client device.

Trenbeath further discloses 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.

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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 64, Stocker discloses an apparatus comprising:

an input source arranged to provide a live object to a client device (FIG. 1; column 1: 1-45: information about radio network 100 such as network identifier, type/protocol of network, location of MS 110 and Base Transceiver Station BTS 120, and other information associated with a particular geographical area);

and the input source arranged to provide an update message to a routing network (FIGs. 1-2 and 4; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: receiving Location Update (LU) message 220 from mobile station MS 110 (input source as claimed),

wherein the routing network is configured to identify a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)), determine a node type associated with the category (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110), and to route the update message from a gateway device at the routing network to a node having the node type at the routing network (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195), and wherein the node is configured to route the update message to the client device (FIGs. 3-4; column 6: 10-30; column 7: 50-60: sending general information messages to registered MS 110) if the client device is registered to receive the update data for the live object (FIG. 3-4; column 6: 50-65; column 7: 50-60: receiving the general information message including other data/information of MS 110, message control node 210 determining/identifying the ID of the MS 110 which has registered/subscribed for the general information message; in further, since GIMR 300 can be implemented in the control node (column 6: 25-37), it also perform GIMR functionalities).

Stocker indeed discloses update message in a message publish/subscribe system (LU message 220 (i.e., NLU, PL, IMSI attached IA and other type of LU message) containing information about CGI of the cell 135 as well as an identity of the subscriber presently using MS

110 (FIGs. 3; column 4: 50-67; column 5: 15-65)), however, Stocker does not explicitly disclose identifying the live object and containing update data to update the live object at the client device.

Trenbeath further discloses 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.

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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 66, Stocker discloses a non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:

instructions for providing a live object to a client device (FIG. 1; column 1: 1-45: information about radio network 100 such as network identifier, type/protocol of network, location of MS 110 and Base Transceiver Station BTS 120, and other information associated with a particular geographical area);

and instructions for providing an update message from an input source to a routing network (FIGs. 1-2 and 4; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: receiving Location Update (LU) message 220 from mobile station MS 110 (input source as claimed)

identifying the live object and containing update data for updating the live object at the client device,

wherein a category of the update message is identified based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)), a node type associated with the category is determined (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110), and the update message is routed from a gateway device at the routing network to a node having the node type at the routing network (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195), wherein the update message is routed from the node to the client device (FIGs. 3-4; column 6: 10-30; column 7: 50-60: sending general information messages to registered MS 110) in response to a determination that the client device is registered to receive the update data for the live object (FIG. 3-4; column 6: 50-65; column 7: 50-60: receiving the general information message including other data/information of MS 110, message control node 210 determining/identifying the ID of the MS 110 which has registered/subscribed for the general information message; in further, since GIMR 300 can be implemented in the control node (column 6: 25-37), it also perform GIMR functionalities).

Stocker indeed discloses update message in a message publish/subscribe system (LU message 220 (i.e., NLU, PL, IMSI attached IA and other type of LU message) containing information about CGI of the cell 135 as well as an identity of the subscriber presently using MS 110 (FIGs. 3; column 4: 50-67; column 5: 15-65)), however, Stocker does not explicitly disclose identifying the live object and containing update data to update the live object at the client device.

Trenbeath further discloses 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.

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 Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 67, Stocker discloses wherein the node type is configured to identify the node that receives the update message from the gateway device (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110).

6. Claims 29-31 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stocker in view of Trenbeath as applied to claims 28 and 33- 34 above, and further in view of Campbell et al. (US 7,209,959, hereinafter "Campbell").

As per claim 29, Stocker in view of Trenbeath does not explicitly disclose causing the node to determine at least one client proxy with which the client communicates; causing the node to rout to the client proxy; and causing the client proxy to rout the data 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; causing the node to rout to the client proxy; and causing the client proxy to rout the data 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 Stocker's 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, Stocker discloses causing the node to maintain client registration information concerning the client connection (FIG. 3; column 6: 10-50: GIMR 300 and MSC/VLR implemented in the control node).

As per claim 31, Stocker 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 Stocker's 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, Stocker 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 Stocker's 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, Stocker discloses wherein client registration information concerning the client connection is configured to be maintained at the node (FIG. 3-4; column 6: 50-65; column 7: 50-60: receiving the general information message including other data/information of MS 110, message control node 210 determining/identifying the ID of the MS 110 which has registered/subscribed for the general information message; in further, since GIMR 300 can be implemented in the control node (column 6: 25-37), it also perform GIMR functionalities).

As per claim 37, Stocker 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 Stocker's 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, Stocker 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 (FIGs 1-3; column 6: 1-30: different categories depending on different types of LU messages).

Stocker 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 Stocker' 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 Stocker 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, Stocker 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 Stocker' 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, Stocker 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 Stocker' 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, Stocker 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 Stocker' 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, Stocker 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 Stocker' 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 non-transitory computer readable storage medium 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 non-transitory computer readable storage medium 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 aforementioned newly added limitations taught by the new references (please refer to section 4 below for further details).

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.

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

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
East text search	7/28/2011	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	01/11/2010	06/14/2010	10/13/2010	03/16/2011	07/29/2011			
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	32	✓	✓	✓	✓	-	-			
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	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	03/16/2011	07/29/2011			
	37	✓	✓	✓	✓	✓	✓			
	38	✓	✓	✓	✓	✓	✓			
	39	✓	✓	✓	✓	✓	✓			
	40	✓	✓	✓	✓	✓	✓			
	41	✓	✓	✓	✓	✓	✓			
	42	✓	✓	✓	✓	✓	✓			
	43	✓	✓	✓	✓	✓	✓			
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	63		✓	✓	✓	✓	✓			
	64		✓	✓	✓	✓	✓			
	65		✓	✓	-	-	-			
	66		✓	✓	✓	✓	✓			
	67			✓	✓	✓	✓			

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-6,510,323 B1	01-2003	Stocker et al.	455/466
	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.

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;	AND	ON	2009/07/14 13:45

			JPO; DERWENT; IBM_TDB			
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	US-PGPUB;	AND	ON	2009/07/18

		delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2000"	USPAT			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
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)	US-PGPUB; USPAT	AND	ON	2009/07/18 12:36

		(creat$5 with delet$5 with rout$5) 7?? /$.ccls. @ay<"2002"				
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
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
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;	AND	ON	2010/01/10 14:21

			DERWENT; IBM_TDB			
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
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;	AND	ON	2010/03/05 09:30

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
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
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	US-PGPUB;	AND	ON	2010/10/11

		distribu$5 same mult$7) 7??/$.ccls. @ay<"2000" (node same message) (rout$6 node dyna$4).clm.	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			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
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;	AND	ON	2010/10/11 17:33

			IBM_TDB			
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
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;	AND	ON	2010/10/12 14:00

			JPO; DERWENT; IBM_TDB			
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
S101	1	"20020165977" (subscr$8 publish$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/10/12 16:20
S102	1	11/396251 (node near4 type)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/12/09 09:07
S103	2	11/396251 (amount)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/12/09 09:10
S104	2	11/396251 (gateway)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/12/09 09:19
S105	0	"20020165977" (socket)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/12/09 09:33
S106	0	"20020165977" (gateway)	US-PGPUB; USPAT;	AND	ON	2010/12/09 09:34

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S107	2	"20020165977" (rout$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/12/09 09:35
S108	1	11/396251 (node near3 type)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/03/15 17:05
S109	0	"10020165977" (IP or tunnel)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/03/15 19:22
S110	1	"20020165977" (IP or tunnel)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/03/15 19:22
S111	2	11/396251 (map$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/03/16 08:55
S112	2	11/396251 (gateway)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/03/16 10:22
S113	0	"10020165977" ((routing or leader) near3 node)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/03/16 11:02
S114	0	"10020165977" ((routing or leader) near6 node)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/03/16 11:02

S115	2	"20020165977" ((routing or leader) near6 node)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/03/16 11:02
S116	2	"20020165977" ((routing or leader) near3 node)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/03/16 11:02
S117	1	"20020165977" (DMR)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/03/16 11:05
S118	1	11/396251 (category)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/10 13:10
S119	0	08/996785 (category or topic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/10 13:18
S120	4	((independ$5 with message) same delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2000" ((category or topic) near6 message)	US-PGPUB; USPAT	AND	ON	2011/05/10 13:19
S121	6	((independ$5 with message) same delive$5) 7??/$.ccls. @ay<"2000" ((category or topic) near6 message)	US-PGPUB; USPAT	AND	ON	2011/05/10 13:25
S122	1	08/996785 (message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/10 13:29
S123	7123	@ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:51
S124	54	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	AND	ON	2011/07/28 09:51

			DERWENT; IBM_TDB			
S125	46	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:51
S126	46	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:52
S127	20	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm. ((message near2 type))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:52
S128	8	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm. ((message near2 type) near9 (trig$6 or receiv$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:55
S129	5	"6510323" (MSC)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 13:10
S130	1	"6510323".pn. (MSC)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 13:11
S131	2	"6510323".pn. (LU)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 13:30
S132	3	11/396251 (live near3 object)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 13:39
S133	1	"6510323".pn. (LU cgi)	US-PGPUB; USPAT; USOCR;	AND	ON	2011/07/28 13:43

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S134	2	"6510323".pn. (general near3 information)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 16:00
S135	2	"6510323".pn. (registe$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/29 11:20

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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 09/23/2011

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
09/23/2011	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.

Applicant-Initiated 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) *Glenn J. Perry*.

(3) *Amirali Sharifi*.

(4) _____.

Date of Interview: *20 September 2011*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

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

Issues Discussed ☐101 ☐112 ☐102 ☒103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *26,33,39,45,51,57,63,64 and 66*.

Identification of prior art discussed: *Stocker et al. (US PAT. 6,510,323) and Trenbeath et al. (US PAT. 6,324,578)*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

See Continuation Sheet.

Applicant recordation instructions: 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

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/TUAN DAO/ 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.

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:

Applicant's representative (attorney Perry hereinafter) and the examiner discussed the rejection 103 on claims 26 and the other independent claims.

Attorney Perry discussed the following claim elements i.e., receiving, using a processing, an update message from an input source, … causing the client to process the update message and to update the property of the live object.

The Examiner points out that Stocker discloses a method comprising: receiving, using a processing device, an update message from an input source (FIGs. 1-2 and 4; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: receiving Location Update (LU) message 220 from mobile station MS 110 (input source as claimed)); identifying a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)).
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); and causing the client to process the data and to update the property of the live object (FIG. 5; column 9-10: subscribed clients C, D, E receives update data, extracting copy sent from A, creates a directory to store/maintain an object, and edits/modifies data object).

The Examiner further suggested amendment to claim 26 and other independent claims by adding features discloses in paragraph 0046 of the specification, "the input source is not the client and the live object has properties selected from a first property may affect an internal aspect of the live object and, thus, a change to the property may not have any direct effect on a web page containing the live object, a second property may also have a direct effect on how the live object is displayed, and a third property may occupy parts of the spectrum between having no effect on the visible representation of the live object and having a direct effect on the visible representation of the live object" to further differentiate claims from Stocker in view of Trenbeath.

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)**

Attention: Examiner Tuan Dao

From: Glenn J. Perry (Reg.# 28,458)

Pages (including cover sheet): 3

Fax No: (571) 270-4387

Date: September 9, 2011

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.

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.

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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 Stocker 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 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;
> 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]] update message from the node to the client; and
> causing the client to process the [[data]] update message 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.

> ***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;
> ***causing the client to process the update message and to update*** the property of the live object.

Unofficial Communication, Not To Be Entered

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

PAGE 3/3 * RCVD AT 9/9/2011 3:12:19 PM [Eastern Daylight Time] * SVR:W-PTOFAX-002/20 * DNIS:2704387 * CSID:202 371 2540 * DURATION (mm-ss):01-18

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 **August 3, 2011**, 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 **13** 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 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;

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, different from the input source, that has registered for updates of the live object;

causing the node to route the [[data]] update message from the node to the client; and

causing the client to process the [[data]] update message 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. (Currently Amended) The method of claim 28, further comprising:

causing the node to determine at least one client proxy with which the client communicates;

causing the node to route the [[data]] update message to the client proxy; and

causing the client proxy to route the [[data]] update message 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 from an input source, the update message identifying a live object and containing data for updating a property of the live object,

identify a category of the update message based on the input source;

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; 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, different from the input source, that has registered for updates of the live object, and

route the [[data]] update message from the node to the client, wherein the client is adapted to process the [[data]] update message 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 the connection by determining at least one client proxy with which the client communicates and to route the [[data]] update message 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. (Previously Presented) 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 client communicates and to route the data to the client proxy.

39. (Currently Amended) A method comprising:

providing, using a processing device of an input source, a data representation to a client device, different from the input source, 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 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,

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 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. (Previously Presented) The method of claim 39, wherein providing the data representation to the client device 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, different from the input source, 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,

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,

wherein a gateway device at the 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 a node of the node type 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.

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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 of an input source, a data representation to a client device, different from the input source, 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 of the input source, 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,

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 a node of the node type 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 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, 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

instructions for providing, using a processing device of an input source, different from the client 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,

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 a node of the node type 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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, using a processing device of an input source, different from the client device, 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.

64. (Currently Amended) An apparatus comprising:

an input source arranged to provide a live object to a client device, different from the input source; 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 identify a category of the update message based on the input source, determine a node type associated with the category, and to route the update message from a gateway device at the routing network to a node having the node type 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 non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:

instructions for providing a live object to a client device; and

instructions for providing an update message from an input source, different from the client device, to a routing network identifying the live object and containing update data for updating the live object at the client device,

wherein a category of the update message is identified based on the input source, a node type associated with the category is determined, and the update message is routed from a gateway device at the routing network to a node having the node type 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.

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.

68. (New) The method of claim 26, wherein the property of the live object has a direct effect on a visual representation of the live object in a data representation, has an effect on an internal aspect of the live object and has no effect on the visual representation of the live object in the data representation, or has a direct effect on one aspect of the visual representation of the live object in the data representation and has no

effect on other aspect of the visual representation of the live object in the data representation.

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EX1002

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 26, 28-31, 33-64, and 66-68 are pending in the application, with claims 26, 33, 39, 45, 51, 57, 63, 64, and 66 being the independent claims. Claims 1-25, 27, 32, and 65 were previously cancelled without prejudice to or disclaimer of the subject matter therein. Claims 26, 29, 33, 35, 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 FIGs. 7 and 10 of the originally filed application. New dependent claim 68 is sought to be added. Support for new claim 68 can be found throughout the originally filed specification, claims, and figure, and more specifically, for example, at paragraph [0046] of the originally filed specification. 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 is thanked for his time during a telephonic interview with Applicants' representatives Glenn Perry and Amirali Sharifi on September 20, 2011. Applicants' representatives explained proposed amendments to independent claim 26 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 his interpretation of the claims and references. More specifically, the Examiner requested that the claims clearly recite that the input source and the client device are different devices. Although Applicants believe the claims clearly differentiate between the input source and the client device, and 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. The Examiner indicated that these claim amendments would likely overcome the current rejections.

The Examiner further noted that if additional features from paragraph [0046] of the originally filed specification are added to independent claims, the claims would be in a better condition for allowance. Applicants thank the Examiner for his suggestion. New dependent claim 68 is sought to be added based on the Examiner's suggestion.

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 No. 6,510,323 to Stocker *et al.* ("Stocker") in view of U.S. Patent No. 6,324,587 to Trenbeath *et al.* ("Trenbeath"). Applicants respectfully traverse this rejection.

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;
>
> causing the node, through the update message, to determine ***a client, different from the input source,*** that has registered for updates of the live object;
>
> causing the ***node to route the update message from the node to the client***.

Independent claim 33 recites similar distinguishing features, using its respective language. Further, independent claim 39 recites, *inter alia*, (emphasis added):

> ***providing, using a processing device of an input source, a data representation to a client device, different from the input source,*** coupled to a 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***.

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, different from the client device, 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.

As discussed during the interview and agreed by the Examiner, these feature are neither disclosed nor suggested by the applied references.

Stocker discloses "[i]n the field of mobile radio technology, a method and system are provided for sending general information messages to users in a mobile radio network on a geographical selective basis." (Stocker, Abstract.) FIG. 2 of Stocker illustrates "an exemplary flow of messages within the mobile radio network." (Stocker, col. 5, lines 66-67.) "An MS 110 sends a LU [location update] message 220 to an MSC/VLR 150/160. The MSC/VLR 150/160 then analyzes the LU message 220, and determines whether there is a general information message 240 which should be sent to the MS 110. If so, a send general information message invocation 230 is sent to a message control node 210. Included in the send general information message invocation 230 is the message text string, which is to be sent the MS 110, as well as an identification of the MS 110. Upon reception of the send message invocation 230, the message control node 210 sends a general information message 240 to the MS 110." (Stocker, col. 5, line 67 through col. 6, line 11.)

First, it appears that the Examiner is analogizing both the "input source" and the "client device" of the independent claims to the same mobile station (MS) of Stocker. (Office Action, page 3: "PLU is set/identified based on field 320 indicated/classified in **MS 110 (input source)**;" page 4: "causing the node to route the data from the node to the **client** (FIGs. 3-4; column 6:10-30; column 7:50-60: sending general information messages to **MS 110**)" emphasis added.) Applicants respectfully disagrees. The independent claims, as previously presented and further clarified in this response, clearly recite "a client, different from the input source," or "an input source, different from the client device," using their respective language.

Second, as discussed above, in the system and the method of Stocker, a mobile station (MS) sends **a location update (LU)** to a Mobile Services switching center/ Visitor Location Register (MSC/VLR); the MSC/VLR sends **a send general information message invocation** to a message control node; and the message control node sends **a general information message** to the MS. In contrast to the system of Stocker, claim 26 recites, *inter alia*, "receiving, using a processing device, ***an update message from an input source***," "routing, using the processing device, ***the update message to the node*** having the determined node type," and "causing the ***node to route the update message from the node to the client***." Independent claims 33, 39, 45, 51, 57, 63, 64, and 66 recite similar distinguishing features, using their respective language.

Further, the Office Action, for example, on pages 4 and 5, states, which Applicants do not acquiesce to, that Trenbeath teaches "PublicationID," "update message updating/modifying/deleting data object," and "subscribed clients C, D, E receives [sic] update data, attached data object in update messages from a publishing client A." 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 Stocker. Thus, the combination of Stocker 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 Stocker 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.

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, Stocker 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 31-34, 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; causing the node to route to the client proxy; and causing the client proxy to rout the data 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 Stocker 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 Stocker in view of Trenbeath, and further in view of U.S. Patent No. 6,314,459 to Freeman *et al.* ("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, Stocker 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 35-37, 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 Stocker 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.

New Dependent Claim 68

New dependent claim 68 is sought to be added. Support for new claim 68 can be found throughout the originally filed specification, claims, and figure, and more specifically, for example, at paragraph [0046] of the originally filed specification.

During the telephonic interview, the Examiner suggested that features similar to the features of claim 68 would put the application in a better condition for allowance. Accordingly, at least based on its dependency to claim 26, claim 68 should be found allowable over the applied references, 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 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: 26 Oct. 2011

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1400848_1.DOC

IPR2025-00200 / 722 Patent Page 887 of 1171 EX1002

Electronic Acknowledgement Receipt

EFS ID:	11268582
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:	26-OCT-2011
Filing Date:	30-MAR-2006
Time Stamp:	13:38:17
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	2516008 53af8a17e660566e86727758132d850c83ad369b	yes	22

	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	13
	Applicant Arguments/Remarks Made in an Amendment	14	22
Warnings:			
Information:			
	Total Files Size (in bytes):	2516008	

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

October 26, 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.

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/A-S/rns
1437618_1.DOCX

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	300
☐ 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	300

APPLICATION AS AMENDED – PART II

AMENDMENT 10/26/2011	(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	** 39	= 0	X $ =		OR	X $60=	0
Independent (37 CFR 1.16(h))	* 9	Minus	***9	= 0	X $ =		OR	X $250=	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:
/TAMMY MCBETH BROWN/

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 12/30/2011

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**
12/30/2011	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 *16 October 2011*.

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

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ 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

5)☒ Claim(s) *26,28-31,33-64 and 66-68* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *26,28-31,33-64 and 66-68* is/are rejected.

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

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

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ 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).

12)☐ 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

13)☐ 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 10/16/2011.

2. Claims 26, 28-31, 33-64 and 66-68 have been examined.

Response to Amendment

3. In the instant amendment, claims 26, 29, 33, 39, 45, 51, 57, 63-64, and 66 have been amended. Claim 68 is newly added.

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, 60-62, and 67-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandra et al. (US 6,091,724 hereinafter "Chandra") in view of Stocker et al. (US 6,510,323 hereinafter "Stocker") and Trenbeath et al. (US 6,324,578 hereinafter "Trenbeath").

As per claim 26, Chandra discloses a method comprising:

receiving, using a processing device (FIG. 1; column 4: 10-40: networking devices), an update message from an input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: networking devices receiving a message related to a stock market (an update message as

claimed) sent from a publisher node (input source as claimed)), the update message identifying a live object and containing data for updating a property of the live object (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value);

identifying a category of the update message based on the input source (in view of paragraphs 0103 and 0105 of the specification, Chandra column 1: 25-35; column 5: 45-65 discloses "publisher post messages and subscribers independently specify categories or event in which they are interested" and "if the data content of the message matches the specified value of the subscription, then the message is delivered the one or more subscribers (or clients)" ➔ identifying each category based on the category/topic of the message content);

determining a node (FIG. 1; column 4: 10-40: determining a router) 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. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: "publisher post messages and subscribers independently specify categories or event in which they are interested" and "… searching a data structure using the data content of the message to determine the zero or more links …"), the mapping controlling an amount of update message traffic through nodes of a routing network (column 1: 25-35; column 2: 1-3; column 5: 45-65: the content based subscription determines zero or more links to rout the message to the subscribers, therefore the router controls the amount of update message traffic since there are only specific subscribers get the routed message not every subscribers as in multicast/broadcast communication);

routing, using the processing device, the update message to the node (FIG. 1; column 4: 10-60: sending/forwarding the message to the router) having the determined node type;

causing the node, through the update message, to determine a client, different from the input source, that has registered for updates of the live object ((column 1: 25-35; column 2: 1-3; column 5: 45-65: "if the data content of the message matches the specified values of the subscription, then the message is delivered to the one or more subscribers (or clients) of the subscription …" ➔ router is an intermediate node and the client/subscriber is different from the publisher);

causing the node to route the update message from the node to the client (FIG. 1; column 4: 10-40 and column 5: 45-65: routing the message to subscribers/clients);

and causing the client to process the update message and to update the property of the live object.

Chandra does not disclose a node having a node type based on a mapping of categories of update messages to node types, and routing the update message to the node having the determined node type; and causing the client to process the update message and to update the property of the live object.

However, Stocker discloses a node having a node type based on a mapping of categories of update messages to node types (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110), and routing the update message to the node having the determined node type (FIGs 3-4;

column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

Chandra discloses an update message is sent to the subscribers (column 5: 55-65), however, Chandra in view of Stocker does not explicitly disclose causing the client to process the update message and to update the property of the live object.

Trenbeath further discloses causing the client to process the data and to 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).

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 Chandra's teaching and Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 28, Chandra in view of Stocker 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 Chandra's teaching and Stocker's teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 33, Chandra discloses a routing network comprising:

a gateway device configured to:

receive an update message from an input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: receiving a message related to a stock market (an update message as claimed) sent from a publisher node (input source as claimed)), the update message identifying a live object and containing data for updating a property of the live object (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value),

identify a category of the update message based on the input source (in view of paragraphs 0103 and 0105 of the specification, Chandra column 1: 25-35; column 5: 45-65 discloses "publisher post messages and subscribers independently specify categories or event in which they are interested" and "if the data content of the message matches the specified value of

the subscription, then the message is delivered the one or more subscribers (or clients)" ➔ identifying each category based on the category/topic of the message content);

determine a node (FIG. 1; column 4: 10-40: determining a router) 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. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: "publisher post messages and subscribers independently specify categories or event in which they are interested" and "… searching a data structure using the data content of the message to determine the zero or more links …"), the mapping controlling an amount of update message traffic through nodes of a routing network (column 1: 25-35; column 2: 1-3; column 5: 45-65: the content based subscription determines zero or more links to rout the message to the subscribers, therefore the router controls the amount of update message traffic since there are only specific subscribers get the routed message not every subscribers as in multicast/broadcast communication);

and route the update message (FIG. 1; column 4: 10-60: sending/forwarding the 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, different from the input source, that has registered for updates of the live object ((column 1: 25-35; column 2: 1-3; column 5: 45-65: "if the data content of the message matches the specified values of the subscription, then the message is delivered to the one or more subscribers (or clients) of the subscription …" ➔ router is an intermediate node and the client/subscriber is different from the publisher),

and route the update message from the node to the client (FIG. 1; column 4: 10-40 and column 5: 45-65: routing the message to subscribers/clients), wherein the client is adapted to process the update message and to update the property of the live object.

Chandra does not explicitly disclose a gateway device configured to: a node having a node type based on a mapping of categories of update messages to node types, receive the update message from the gateway device, wherein the node is configured to be mapped to the node type, and wherein the client is adapted to process the update message and to update the property of the live object.

Stocker further discloses disclose a gateway device (FIGs. 1 and 3; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: MSC/VLR 150/160) configured to:

a node having a node type based on a mapping of categories of update messages to node types (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110),

receive the update message from the gateway device (FIGs. 3 and 4), wherein the node is configured to be mapped to the node type (FIG. 3 and 4; message control node 210/determined severed area 195 are mapped/set/identified in GIMR 300 (i.e., MSC area 1 or LA 77)).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

Chandra discloses an update message is sent to the subscribers (column 5: 55-65), however, Chandra in view of Stocker does not explicitly disclose wherein the client is adapted to process the update message and to update the property of the live object.

Trenbeath further discloses wherein the client is adapted to process the update message and to 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).

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 Chandra's teaching and Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 34, Chandra in view of Stocker 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 Chandra's teaching, Stocker' teaching

because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 39, Chandra discloses a method comprising:

providing, using a processing device of an input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher), a data representation to a client device (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: subscriber/client receiving a message related to a stock market (data representation as claimed)), different from input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher is different from subscriber), coupled to a routing network, wherein the data representation includes at least one live object recognizable by the client device (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value), 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 (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value i.e., IBM, 100, 200 interested/registered/subscribed by the subscribers), such that registering the client device with the routing network provides client connection information to a node in the routing network (FIG. 2; column 5: 10-40: “spanning tree which is associated with router 108(a), ... a path from

router 108a to every other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link);

and sending, using the processing device of the input source, an update message to the routing network (FIG. 1; column 4: 10-60: sending/forwarding the message to the router), wherein the update message identifies the live object and contains update data that updates a property of the live object (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value),

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,

wherein the node is configured to identify the client device as a registered device and to route the update message to the client device (FIG. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: "publisher post messages and subscribers independently specify categories or event in which they are interested" and "… searching a data structure using the data content of the message to determine the zero or more links …" and in further FIG. 2; column 5: 10-40: "spanning tree which is associated with router 108(a), ... a path from router 108a to every other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link),

and wherein the client device processes the update message upon receipt to update the property of the live object at the client device.

Chandra does not explicitly disclose 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, and wherein the client device processes the update message upon receipt to update the property of the live object at the client device.

Stocker further discloses wherein a gateway device at the routing network (FIGs. 1 and 3; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: MSC/VLR 150/160) is configured to identify a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (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 (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

Chandra discloses an update message is sent to the subscribers (column 5: 55-65), however, Chandra in view of Stocker does not explicitly disclose wherein the client device processes the update message upon receipt to update the property of the live object at the client device.

Trenbeath further discloses wherein the client device processes the update 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).

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 Chandra's teaching and Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 42, Chandra in view of Stocker 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 Chandra's teaching and Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 43, Chandra in view of Stocker 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 Chandra's teaching and Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 44, Chandra in view of Stocker 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 Chandra's teaching into Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 45, Chandra discloses an apparatus comprising:

an input source device (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher) configured to provide a data representation to a client device (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: subscriber/client receiving a message related to a stock market (data representation as claimed)), different from the input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher is different from subscriber), coupled to a routing network, wherein the data representation includes at least one live object that is recognizable by the client device (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message

object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value), 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 (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value i.e., IBM, 100, 200 interested/registered/subscribed by subscribers), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 2; column 5: 10-40: “spanning tree which is associated with router 108(a), ... a path from router 108a to every other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link),

wherein the input source device is configured to route an update message to the routing network (FIG. 1; column 4: 10-60: sending/forwarding the message to the router), wherein the update message identifies the live object and contains update data for updating a property of the live object (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value),

wherein a gateway device at the 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 a node of the node type 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 (FIG. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: "publisher post messages and subscribers independently specify categories or event in which they are interested" and "… searching a data structure using the data content of the message to determine the zero or more links …" and in further FIG. 2; column 5: 10-40: "spanning tree which is associated with router 108(a), ... a path from router 108a to every other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link), 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.

Chandra does not explicitly disclose wherein a gateway device at the 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 a node of the node type at the routing network, 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.

Stocker further discloses wherein a gateway device at the network (FIGs. 1 and 3; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: MSC/VLR 150/160) is configured to identify a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)), to determine a node type to which the identified

category maps, and to route the update message to the node of the node type at the routing network (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

Chandra discloses an update message is sent to the subscribers (column 5: 55-65), however, Chandra in view of Stocker does not explicitly disclose wherein the client device processes the update message upon receipt to update the property of the live object at the client device.

Trenbeath further discloses wherein the client device processes the update 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).

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 Chandra's teaching and Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 48, Chandra in view of Stocker 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 Chandra's teaching and Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 49, Chandra in view of Stocker 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 Chandra's teaching and Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 50, Chandra in view of Stocker 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 Chandra's teaching and Stocker' teaching because it would provide for the purpose of routing publication/subscription messages (Trenbeath, column 13: 4-10).

As per claim 51, Chandra discloses 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 of an input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher), a data representation to a client device (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: subscriber/client receiving a message related to a stock market (data representation as claimed)), different from the input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher is different from subscriber), coupled to a routing network (FIG. 1), wherein the data representation includes at least one live object that is recognizable by the client device (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value), 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 (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value i.e., IBM, 100, 200 interested/registered/subscribed by subscribers/clients), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 2; column 5: 10-40: “spanning tree which is associated with router 108(a), ... a path from router 108a to every other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link);

and sending, using the processing device of the input source, an update message to the routing network (FIG. 1; column 4: 10-60: sending/forwarding the message to the router),

wherein the update message identifies the live object and contains update data for updating a property of the live object (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value),

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 a node of the node type at the routing net york,

wherein the node is configured to identify the client device as a registered device and to route the update message to the client device (FIG. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: "publisher post messages and subscribers independently specify categories or event in which they are interested" and "… searching a data structure using the data content of the message to determine the zero or more links …" and in further FIG. 2; column 5: 10-40: "spanning tree which is associated with router 108(a), ... a path from router 108a to every other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link),

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.

Chandra does not explicitly disclose 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 a node of

the node type at the routing net york, 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.

Stocker further discloses wherein a gateway device at the routing network (FIGs. 1 and 3; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: MSC/VLR 150/160) is configured to identify a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)), to determine a node type to which the identified category maps, and to route the update message to the node of the node type at the routing network (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

Chandra discloses an update message is sent to the subscribers (column 5: 55-65), however, Chandra in view of Stocker does not explicitly disclose wherein the client device processes the update message upon receipt to update the property of the live object at the client device.

Trenbeath further discloses wherein the client device processes the update 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).

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 Chandra's teaching and Stocker' 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, Chandra 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 (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: subscriber/client receiving a message related to a stock market (data representation as claimed)) coupled to a routing network (FIG. 1), wherein the data representation includes at least one live object recognizable by the client device (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value), 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 (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value i.e., IBM, 100, 200 interested/registered/subscribed by subscribers/clients), such that registering the client device with the routing network provides client connection information to the routing network (FIG. 2; column 5: 10-40: “spanning tree which is associated with router 108(a), ... a path from

router 108a to every other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link);

and instructions for providing, using a processing device of an input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher), different from the client device (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher is different from subscriber), 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 (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value),

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 a node of the node type 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 (FIG. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: “publisher post messages and subscribers independently specify categories or event in which they are interested” and “… searching a data structure using the data content of the message to determine the zero or more links …” and in further FIG. 2; column 5: 10-40: “spanning tree which is associated with router 108(a), ... a path from router

108a to every other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link).

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.

Chandra does not explicitly disclose 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 a node of the node type at the routing net york, 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.

Stocker further discloses wherein a gateway device at the routing network (FIGs. 1 and 3; column 4: 55-67, 40-50; column 6: 1-12 and 53-65: MSC/VLR 150/160) is configured to identify a category of the update message based on the input source (FIG. 3; column 5: 1-15; column 6: 25-50: LU message has different types/categories (i.e., IA, NLU, PLU and other types), where the type/category IA, NLU, or PLU is set/identified based on field 320 indicated/classified in MS 110 (input source)), to determine a node type to which the identified category maps, and to route the update message to the node of the node type at the routing network (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would

provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

Chandra discloses an update message is sent to the subscribers (column 5: 55-65), however, Chandra in view of Stocker does not explicitly disclose wherein the client device processes the update message upon receipt to update the property of the live object at the client device.

Trenbeath further discloses wherein the client device processes the update 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).

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 Chandra's teaching and Stocker' 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 non-transitory computer readable storage medium 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 non-transitory computer readable storage medium 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 non-transitory computer readable storage medium 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 67, Chandra does not explicitly disclose wherein the node type is configured to identify the node that receives the update message from the gateway device.

Stocker discloses wherein the node type is configured to identify the node that receives the update message from the gateway device (FIGs. 2-4; column 6: 1-25; column 40-60: block 330: GIMR 300 determining a message control node 210 to send a general information message 220 to the MS 110; block 425: "if the cell serving mobile station in part of the served area 195, the step 430 is entered" ➔ determining if the served area 195 (node 210 as claimed) associated with the MS 110).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

As per claim 68, Chandra discloses wherein the property of the live object has a direct effect on a visual representation of the live object in a data representation, has an effect on an internal aspect of the live object and has no effect on the visual representation of the live object in the data representation, or has a direct effect on one aspect of the visual representation of the live object in the data representation (column 5: 45-60: stock update live object including different properties stock issue, stock value, and stock price, i.e., IBM 100 200).

6. Claims 29-31 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandra in view of Stocker and Trenbeath as applied to claims 28 and 33 above, and further in view of Campbell et al. (US 7,209,959, hereinafter "Campbell").

As per claim 29, Chandra discloses a routing data which is the update message (FIG. 1; column 5: 45-65), however, Chandra in view of Stocker and Trenbeath does not explicitly disclose causing the node to determine at least one client proxy with which the client communicates; causing the node to rout the data to the client proxy; and causing the client proxy to rout the data 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; causing the node to rout to the client proxy; and causing the client proxy to rout the data 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 Chandra's teaching, Stocker's

teaching and 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, Chandra discloses causing the node to maintain client registration information concerning the client connection (FIG. 2; column 5: 10-40: "spanning tree which is associated with router 108(a), ... a path from router 108a to every other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link).

It is noted that Stocker also discloses causing the node to maintain client registration information concerning the client connection (FIG. 3; column 6: 10-50: GIMR 300 and MSC/VLR implemented in the control node).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

As per claim 31, Chandra in view of Stocker and 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 Chandra's teaching, Stocker's teaching and 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, Chandra discloses a routing data which is the update message (FIG. 1; column 5: 45-65), however, Chandra in view of Stocker and 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 Chandra's teaching, Stocker's 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, Chandra discloses wherein client registration information concerning the client connection is configured to be maintained at the node connection (FIG. 2; column 5: 10-40: "spanning tree which is associated with router 108(a), ... a path from router 108a to every

other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link).

It is noted that Stocker also discloses wherein client registration information concerning the client connection is configured to be maintained at the node (FIG. 3-4; column 6: 50-65; column 7: 50-60: receiving the general information message including other data/information of MS 110, message control node 210 determining/identifying the ID of the MS 110 which has registered/subscribed for the general information message; in further, since GIMR 300 can be implemented in the control node (column 6: 25-37), it also perform GIMR functionalities).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

As per claim 37, Chandra in view of Stocker and 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 Chandra's teaching, Stocker's

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, Chandra does not explicitly disclose 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 client communicates and to route the data to the client proxy.

Stocker discloses the gateway device is configured to route the update message to the node adapted to receive messages of more than one message category (FIGs 1-3; column 6: 1-30: different categories depending on different types of LU messages).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

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 Chandra's teaching, Stocker's 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 Chandra, Stocker and 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, Chandra in view of Stocker and 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 Chandra's teaching, Stocker' 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, Chandra in view of Stocker and 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 Chandra's teaching, Stocker' 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, Chandra in view of Stocker and 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 Chandra's teaching and Stocker' 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, Chandra in view of Stocker and 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 Chandra's teaching and Stocker' 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 non-transitory computer readable storage medium 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 non-transitory computer readable storage medium 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.

8. Claims 63, 64 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandra in view of Stocker.

As per claim 63, Chandra discloses a method comprising:

providing a live object to a client device (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value i.e., IBM, 100, 200 interested/registered/subscribed by subscribers/clients);

sending, using a processing device of an input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher), different from the client device (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher is different from subscriber), an update message to a routing

network identifying the live object and containing update data to update the live object at the client device(in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value),

wherein in response to determining that the client device is registered to receive update data for the live object (FIG. 2; column 5: 10-40: "spanning tree which is associated with router 108(a), ... a path from router 108a to every other node in the spanning tree" ==> routing table associates a client address with the identifier of the network link), causing a category of the update message to be identified based on the input source (in view of paragraphs 0103 and 0105 of the specification, Chandra column 1: 25-35; column 5: 45-65 discloses "publisher post messages and subscribers independently specify categories or event in which they are interested" and "if the data content of the message matches the specified value of the subscription, then the message is delivered the one or more subscribers (or clients)" ➔ identifying each category based on the category/topic of the message content), 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 (FIG. 1; column 4: 10-60: sending/forwarding the message to the router).

Chandra does not explicitly disclose 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.

Stocker further discloses a node type associated with the category be determined (FIG. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: "publisher post messages and subscribers independently specify categories or event in which they are interested" and "… searching a data structure using the data content of the message to determine the zero or more links …"), and the update message be routed from the gateway device to a node having the node type at the routing network (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

As per claim 64, Chandra discloses an apparatus comprising:

an input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher) arranged to provide a live object to a client device (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: subscriber/client receiving a message related to a stock market (live object as claimed)), different from the input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher is different from subscriber);

and the input source arranged to provide an update message to a routing network (FIG. 1; column 4: 10-60: sending/forwarding the message to the router) identifying the live object and containing update data for updating the live object (in view of paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-

time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value i.e., IBM, 100, 200 interested/registered/subscribed by subscribers/clients),

wherein the routing network is configured to identify a category of the update message based on the input source (in view of paragraphs 0103 and 0105 of the specification, Chandra column 1: 25-35; column 5: 45-65 discloses "publisher post messages and subscribers independently specify categories or event in which they are interested" and "if the data content of the message matches the specified value of the subscription, then the message is delivered the one or more subscribers (or clients)" ➔ identifying each category based on the category/topic of the message content), determine a node type associated with the category, and to route the update message from a gateway device at the routing network to a node having the node type at the routing network, and wherein the node is configured to route the update message to the client device (FIG. 1; column 4: 10-40 and column 5: 45-65: routing the message to subscribers/clients) if the client device is registered to receive the update data for the live object (FIG. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: "publisher post messages and subscribers independently specify categories or event in which they are interested" and "… searching a data structure using the data content of the message to determine the zero or more links …").

Chandra does not explicitly disclose determine a node type associated with the category, and to route the update message from a gateway device at the routing network to a node having the node type at the routing network.

Stocker further discloses determine a node type associated with the category (FIG. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: "publisher post messages and subscribers independently specify categories or event in which they are interested" and "… searching a data structure using the data content of the message to determine the zero or more links …"), and to route the update message from a gateway device at the routing network to a node having the node type at the routing network (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

As per claim 66, Chandra discloses a non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:

instructions for providing a live object to a client device (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: subscriber/client receiving a message related to a stock market (live object as claimed));

and instructions for providing an update message from an input source (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher), different from the client device (FIG. 1; column 4: 50-65; column 5: 1-20 and 45-65: publisher is different from subscriber), to a routing network (FIG. 1; column 4: 10-60: sending/forwarding the message to the router) identifying the live object and containing update data for updating the live object at the client device (in view of

paragraphs 0053 and 0059, the live object includes stock/weather/sports message object, which contains the updated/live/real-time information, therefore Chandra column 5: 45-65 discloses message related to stock market containing data for at least 3 properties: stock issue, stock price, and stock value i.e., IBM, 100, 200 interested/registered/subscribed by subscribers/clients),

wherein a category of the update message is identified based on the input source (in view of paragraphs 0103 and 0105 of the specification, Chandra column 1: 25-35; column 5: 45-65 discloses "publisher post messages and subscribers independently specify categories or event in which they are interested" and "if the data content of the message matches the specified value of the subscription, then the message is delivered the one or more subscribers (or clients)" ➔ identifying each category based on the category/topic of the message content), a node type associated with the category is determined, and the update message is routed from a gateway device at the routing network to a node having the node type at the routing network, wherein the update message is routed from the node to the client device (FIG. 1; column 4: 10-40 and column 5: 45-65: routing the message to subscribers/clients) in response to a determination that the client device is registered to receive the update data for the live object (FIG. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: "publisher post messages and subscribers independently specify categories or event in which they are interested" and "… searching a data structure using the data content of the message to determine the zero or more links …").

Chandra does not explicitly disclose a node type associated with the category is determined, and the update message is routed from a gateway device at the routing network to a node having the node type at the routing network.

Stocker further discloses a node type associated with the category is determined, (FIG. 1; column 1: 25-35; column 2: 1-3; column 5: 45-65: "publisher post messages and subscribers independently specify categories or event in which they are interested" and "… searching a data structure using the data content of the message to determine the zero or more links …"), and the update message is routed from a gateway device at the routing network to a node having the node type at the routing network (FIGs 3-4; column 6: 1-25; column 7: 45-60: sending general message invocation 230 to determined message control node 210/determined served area 195).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Stocker's teaching into Chandra' teaching because it would provide for the purpose of a mobile station is capable of sending location update messages to the mobile radio network (Stocker, column 2: 5-10).

Response to Arguments

9. 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 (i.e., *"... different from the input source ... causing the node to route the update message ..., and causing the client to process the update message ..."* The aforementioned newly added limitations taught by the new references (please refer to section above for further details).

Conclusion

10. 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.

11. 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.

12. 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

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-6,091,724 A	07-2000	Chandra et al.	370/390
	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.

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
East text search	7/28/2011	TD
East text search	12/22/2011	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;	AND	ON	2009/07/14 13:45

			JPO; DERWENT; IBM_TDB			
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
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)	US-PGPUB; USPAT	AND	ON	2009/07/18 12:26

		7??/$.ccls. @ay<"2001"				
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
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;	AND	ON	2010/01/09 10:43

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
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
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;	AND	ON	2010/01/10 14:21

			JPO; DERWENT; IBM_TDB			
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
S120	4	((independ$5 with message) same delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2000" ((category or topic) near6 message)	US-PGPUB; USPAT	AND	ON	2011/05/10 13:19
S121	6	((independ$5 with message) same delive$5) 7??/$.ccls. @ay<"2000" ((category or topic) near6 message)	US-PGPUB; USPAT	AND	ON	2011/05/10 13:25
S123	7123	@ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:51
S124	54	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:51
S125	46	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:51
S126	46	(update adj message).clm.	US-PGPUB;	AND	ON	2011/07/28

		@ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			09:52
S127	20	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm. ((message near2 type))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:52
S128	8	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm. ((message near2 type) near9 (trig$6 or receiv$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:55
S138	140	(subscri$9 with publish$4 with message) (rout$3 near4 message) @ay<"2002" (message near2 (type or category))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/21 18:41
S139	104	(subscri$9 with publish$4 with message) (rout$3 near4 message) @ay<"2002" (message near2 (type or category)) message.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/21 18:42
S140	17	(subscri$9 with publish$4 with message) (rout$3 near4 message) @ay<"2002" (message near2 (type or category)) message.clm. (message near4 (type or category or updat$4)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/21 18:42
S147	123	@ay<"2001" ((message or notification) same (game near3 score))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/23 11:29
S148	3	@ay<"2001" ((message or notification) same (game near3 score) same object)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/23 11:29
S149	9	@ay<"2001" ((message or notification) same (game near3 score) same (site or page))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	ON	2011/12/23 11:31

			IBM_TDB			

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S137	3	11/396251 (input)	US-PGPUB; USPAT; UPAD	AND	ON	2011/09/20 10:09

12/23/2011 2:24:33 PM
C:\Users\tdao2\Documents\EAST\Workspaces\11396251.wsp

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	07/29/2011	12/23/2011		
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	4	-	-	-	-	-	-	-		
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	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	03/16/2011	07/29/2011	12/23/2011		
	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			✓	✓	✓	✓	✓		
	68							✓		

Amendment Under 37 C.F.R. § 1.116
Expedited Procedure – Art Unit 2194

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**	

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 Final Office Action dated **December 30, 2011,** ("Office Action"), Applicants submit the following Amendment and Remarks.

Status of the Claims is reflected in the listing of claims which begins on page **2** of this paper.

Remarks and Arguments begin on page **16** 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.

Status of the Claims

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

1-25. (Cancelled)

26. (Previously Presented) A 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 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;

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, different from the input source, that has registered for updates of the live object;

causing the node to route the update message from the node to the client; and

causing the client to process the update message and to update the property of the live object.

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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;

causing the node to route the update message to the client proxy; and

causing the client proxy to route the update message 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)

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33. (Previously Presented) A routing network comprising:

a gateway device configured to:

receive 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,

identify a category of the update message based on the input source;

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; 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, different from the input source, that has registered for updates of the live object, and

route the update message from the node to the client, wherein the client is adapted to process the update message 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.

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35. (Previously Presented) The routing network of claim 34, 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 update message 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. (Previously Presented) 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 client communicates and to route the data to the client proxy.

39. (Previously Presented) A method comprising:

providing, using a processing device of an input source, a data representation to a client device, different from the input source, 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 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,

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 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. (Previously Presented) The method of claim 39, wherein providing the data representation to the client device 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. (Previously Presented) An apparatus comprising:

an input source device configured to provide a data representation to a client device, different from the input source, 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,

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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,

wherein a gateway device at the 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 a node of the node type 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.

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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. (Previously Presented) 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 of an input source, a data representation to a client device, different from the input source, 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 of the input source, 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,

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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 a node of the node type 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.

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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. (Previously Presented) 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, 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

instructions for providing, using a processing device of an input source, different from the client 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,

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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 a node of the node type 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) A method comprising:

providing a live object to a client device;

sending, using a processing device of an input source, different from the client device, 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.

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64. (Previously Presented) An apparatus comprising:

an input source arranged to provide a live object to a client device, different from the input source; 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 identify a category of the update message based on the input source, determine a node type associated with the category, and to route the update message from a gateway device at the routing network to a node having the node type 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. (Previously Presented) A non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:

instructions for providing a live object to a client device; and

instructions for providing an update message from an input source, different from the client device, to a routing network identifying the live object and containing update data for updating the live object at the client device,

wherein a category of the update message is identified based on the input source, a node type associated with the category is determined, and the update message is routed from a gateway device at the routing network to a node having the node type at the

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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.

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.

68. (Previously Presented) The method of claim 26, wherein the property of the live object has a direct effect on a visual representation of the live object in a data representation, has an effect on an internal aspect of the live object and has no effect on the visual representation of the live object in the data representation, or has a direct effect on one aspect of the visual representation of the live object in the data representation and has no effect on other aspect of the visual representation of the live object in the data representation.

Remarks

Reconsideration of this Application is respectfully requested.

Claims 26, 28-31, 33-64, and 66-68 are pending in the application, with claims 26, 33, 39, 45, 51, 57, 63, 64, and 66 being the independent claims. No claim amendments are sought.

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

Rejections under 35 U.S.C. § 103

Claims 26, 28, 33, 34, 39, 42-45, 48-51, 54-57, 60-62, 67, and 68

Claims 26, 28, 33, 34, 39, 42-45, 48-51, 54-57, 60-62, 67, and 68 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No 6,091,724 to Chandra et al. ("Chandra") in view of U.S. Patent No. 6,510,323 to Stocker et al. ("Stocker") and further in view of U.S. Patent No. 6,324,578 to Trenbeath et al. ("Trenbeath"). Applicants respectfully traverse this rejection.

Independent claims 26, 33, 39, 45, 51, and 57 recite features that distinguish over the applied references. For example, claim 26 recites, *inter alia*, (emphasis added):

> ***identifying a category of the update message based on the input source***.

Independent claim 33 recites similar distinguishing features, using its respective language. Further, independent claim 39recites, *inter alia*, (emphasis added):

> 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

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> 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.

These features are neither disclosed nor suggested by the applied references.

The Examiner, for example, on page 3 of the Office Action relies on columns 1:25-35 and 5:45-65 of Chandra (in view of paragraphs 103 and 105 of the specification of instant application) to allegedly show the above-noted distinguishing features of independent claims 26, 33, 39, 45, 51, and 57. Applicants respectfully disagree.

Chandra discloses a method for "routing messages within a network using the data content of the message." (Chandra, Title.) When discussing the background art, Chandra discloses that (emphasis added):

> One example of a system that includes such a network environment is a publish/subscribe system. In publish/subscribe systems, publishers post messages and ***subscribers independently specify categories of events in which they are interested.*** The system takes the posted messages and includes in each message header the destination information of those subscribers indicating interest in the particular message. The system then uses the destination information in the message to forward the message through the network to the appropriate subscribers.
>
> (Chandra, 1:26-35.)

This section of Chandra, relied on by the Examiner, merely discloses that subscribers can specify categories of event in which they are interested. This is not the same as "identify a category of the update message based on the input source," as recited in claims 26, 33, 39, 45, 51, and 57, using their respective language.

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Chandra further discusses the content based subscription, where "one or more of the clients can specify a subscription. Each subscription provides a set of conditions indicating the types of messages those clients are interested in receiving." (Chandra, 5:45-48.) Chandra discloses that (emphasis added):

> Consider an example in which messages are related to the stock market. In such an example, a subscription may have the following three fields (or attributes): stock issue, stock price and stock value. The client specifies values for these fields, e.g., IBM, 100, 200, and then, these fields are used to determine if the client is interested in a particular message. ***If the data content of the message matches the specified values of the subscription, then the message is delivered to the one or more subscribers (or clients) of that subscription.*** It will be apparent to those skilled in the art that the use of three fields in the subscription is only one example. Subscriptions may include any number of desired fields and tests may include relationships other than equality. Further, the stock market scenario is only one example. Messages and subscriptions can be used for any type of data or events.
>
> (Chandra, 5:53-67.)

This section of Chandra, relied on by the Examiner, discloses that if the ***data content of the message*** matches the specified values of the subscription, then the message is delivered to the one or more subscribers (or clients) of that subscription. This is not the same as "identify a category of the update message based on the input source," as recited in claims 26, 33, 39, 45, 51, and 57, using their respective language.

The Examiner, for example, on page 3 of the Office Action, relies on the above sections of Chandra to allegedly show "identifying each category based on the category/topic of the message content." By this statement, the Examiner appears to agree that Chandra teaches identifying categories **based on category/topic of the message content**. In contrast, claims 26, 33, 39, 45, 51, and 57 recite, *inter* alia,

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"identify a category of the update message based on the input source," using their respective language.

The Office Action, for example, on pages 4 and 5, states, which Applicants do not acquiesce to, that Stocker teaches "GIMR 300 determining a message control node 210 to send a general information message 220 to MSS 110," "if the cell serving mobile station in part of the served area 195, the step 430 is entered," "determining if the served area ... associated with the MS 100," "routing the update message to the node having determined node type," and "sending general message invocation ... to determined message control nod." However, the Office Action does not use Stocker to disclose, nor does it teach or suggest, at least the above-noted distinguishing features of claims 26, 33, 39, 45, 51, and 57. Therefore, Stocker does not cure the deficiencies of Chandra.

Further, the Office Action, for example, on page 5, states, which Applicants do not acquiesce to, that Trenbeath teaches "subscribed clients C, D, E receives [sic] update data, attached data object in update messages from a publishing client A." 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, and 57. Therefore, Trenbeath does not cure the deficiencies of Chandra and Stocker. Thus, the combination of Chandra, Stocker, 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, and 57 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, 67, and 68 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 Chandra in view of Stocker, further in view of Trenbeath, and in further 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, Chandra, Stocker, 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 30-34, 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; causing the node to route to the client proxy; and causing the client proxy to rout the data 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 Chandra, Stocker, and Trenbeath.

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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 Chandra in view of Stocker, further in view of Trenbeath, and in further 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, Chandra, Stocker, 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 35-38, 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

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suggest, at least the above-noted distinguishing features of claims 39, 45, 51, and 57. Therefore, Freeman does not cure the deficiencies of Chandra, Stocker, 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.

Claims 63, 64, and 66

Claims 63, 64, and 66 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chandra in view of Stocker. Applicants respectfully traverse this rejection.

Independent claims 63, 64, and 66 recite features that distinguish over the applied references. For example, independent claim 63recites, *inter alia*, (emphasis added):

> 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.

Further, independent claim 64 recites, *inter alia*, (emphasis added):

> wherein the routing network is configured to ***identify a category of the update message based on the input source***, determine a node type associated with the category, and to route the update message from a gateway device at the routing network to a node having the node type 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.

Also, independent claim 66 recites, *inter alia*, (emphasis added):

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> wherein ***a category of the update message is identified based on the input source***, a node type associated with the category is determined, and the update message is routed from a gateway device at the routing network to a node having the node type 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.

As discussed above with respect to independent claims 26, 33, 39, 45, 51, and 57, Chandra and Stocker, taken alone or in combination, fail to disclose the above-noted distinguishing features of claims 63, 64, and 66. Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 63, 64, and 66 under 35 U.S.C. § 103(a).

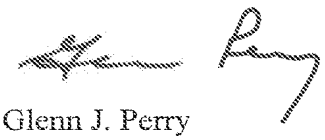
Conclusion

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
Attorney for Applicants
Registration No. 28,458

Date: 9 Feb. 2012

1100 New York Avenue, N.W.
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1465715_1.DOCX

IPR2025-00200 / 722 Patent Page 973 of 1171 EX1002

Electronic Acknowledgement Receipt

EFS ID:	12037066
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:	09-FEB-2012
Filing Date:	30-MAR-2006
Time Stamp:	12:47:33
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_AfterFinalReply.pdf	2743117 3b2a82d4ab4b2f644cc5433c20d3a225a1c8f50d	yes	25

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Miscellaneous Incoming Letter	1	1
	Amendment After Final	2	2
	Claims	3	16
	Applicant Arguments/Remarks Made in an Amendment	17	25
Warnings:			
Information:			
	Total Files Size (in bytes):	2743117	

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
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Sterne Kessler Goldstein Fox
ATTORNEYS AT LAW

February 9, 2012

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

Confirmation No. 1129
Art Unit 2194
Attn: Mail Stop AF

Re: U.S. Utility Patent Application
Appl. 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. 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.

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

GJP/A-S/rns
1482366_1.DOCX

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 02/09/2012	(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))	* 37	Minus	** 39	= 0	X $ =		OR	X $60=	0
Independent (37 CFR 1.16(h))	* 9	Minus	***9	= 0	X $ =		OR	X $250=	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:
/DEBRA R. WYATT/

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
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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 02/28/2012

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
02/28/2012	PAPER

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

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

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 09 February 2012 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 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: *NONE*.
   Claim(s) objected to: *NONE*.
   Claim(s) rejected: *26,28-31,33-64 and 66-68*.
   Claim(s) withdrawn from consideration: *NONE*.

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: See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/H. S. Sough/
Supervisory Patent Examiner, Art Unit 2194

Continuation of 11. does NOT place the application in condition for allowance because:

Applicant's arguments filed on 02/09/2012 have been fully considered but they are not persuasive for the following reasons:

1) Rejection under 35 U.S.C 103

a) claim 26, 28, 33-34, 39, 42-45, 48-51, 54-57, 60-62, and 67-68
Applicants argue "Independent claims 26, 33, 39, 45, 51, and 57 recite features that distinguish over the applied references. For example, claim 26 recites, inter alia, (emphasis added): identifying a category of the update message based on the input source." (Remark, page 16)

Paragraphs 0015 and 0105 of the specification state that:

[0015] 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. Each gateway keeps track of these mappings. When a gateway receives messages from input sources, the gateway identifies the categories of the messages and routes the messages to the nodes of the types to which the categories are mapped. To ensure that clients have access to the messages they need, clients are allowed to communicate with nodes of several types using client proxies connected between the clients and the nodes. There are at least two ways to implement the client proxy embodiment. The implementations differ primarily in where the client registration information is stored. In the first implementation, client registration information is stored at the nodes, and the client proxy merely passes messages among the clients and nodes. When a node directs a message to the client, the node passes the message to the client proxy along with a pointer to the client socket. When the client proxy receives the message, it simply pushes it to the client socket.

[0105] There are multiple ways to assign the messages into categories. One way is to assign all messages from a given input source 710 into a certain category. Another way is to explicitly specify the category in the object ID for the message. Yet another way is to utilize a hashing function or lookup table to partition messages into categories based on object IDs or other values. For example, in one embodiment a hash function is applied to the object ID to generate an integer between 1 and N, and this integer is the message category.

In view of the above pragraphs of the specifcation, the recited limitation, "identifying a category of the update message based on the input source", is reasonable interpreted as - - identifying a category of the update message based on a plurality of available categories of the input source - -

Chandra (e.g., column 1: 25-35, "publisher post messages and subscribers independently specify categories or event in which they are interested" and column 5: 45-65, "if the data content of the message matches the specified value of the subscription, then the message is delivered the one or more subscribers (or clients)") discloses identifying each category based on the category/topic of the message content/input source. More specifiaclly, in Chandra, a publish/subscriber system and publisher is equivalent as input source and a specific publisher publishes/posts messages related to "sport", "weather", and "stocks". A particular subscriber selects category "stocks" (which he/she is interested" is equivalent identifying a category "stocks" of update messages based on available categories ("sport", "weather", and "stock") of the publisher/input source. Put another way, if said specific publisher only publishes/posts messages related to "sports", "weather", and "celebrities", then the particular subscriber cannot identify the category "stocks" (which he/she is interested) and should subscribes for another publisher based on available categories of the another publisher. Accordingly, Chandra indeed fully discloses identifying a category of the update message based a plurality of available categories of the input source.

b) claims 29-31 and 35-38 (Remarks, page 20)
Claims 29-31 and 35-38 (Remarks, page 10) are also rejected based on virtue of their dependencies on the rejected base claims 26 and 33.

c) claims 40-41, 46-47, 52-53, and 58-59 (Remarks, page 21)
Claims 40-41, 46-47, 52-53, and 58-59 (Remarks, page 21) are also rejected based on virtue of their dependencies on the rejected base claims 39, 45 and 57.

d) claims 63-64, and 66 (Remarks, page 22)

The similar responses apply as in claims 26..

OK TO ENTER: /T.D./ 02/13/2012

Amendment Under 37 C.F.R. § 1.116
Expedited Procedure – Art Unit 2194

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**	

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 Final Office Action dated **December 30, 2011,** ("Office Action"), Applicants submit the following Amendment and Remarks.

Status of the Claims is reflected in the listing of claims which begins on page **2** of this paper.

Remarks and Arguments begin on page **16** 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.

Doc Code: AP.PRE.REQ

PTO/SB/33 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): 2222.775000E

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 AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on _____

Signature _____

Typed or printed name _____

Application Number	Filed
11/396,251	March 30, 2006

First Named Inventor: Timothy TUTTLE

Art Unit	Examiner
2194	DAO, TUAN C.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- [ ] applicant/inventor.
- [ ] assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)
- [X] attorney or agent of record. Registration number 54,463
- [ ] attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

Signature

Michael D. Specht
Typed or printed name

(202) 371-2600
Telephone number

3/28/12
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

[X] *Total of one (1) forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop AF, 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**	

Arguments to Accompany the Pre-Appeal Brief Request for Review

Mail Stop AF

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

Applicants hereby submit the following Arguments, in five (5) or less total pages, as attachment to the Pre-Appeal Brief Request for Review (Form PTO/SB/33). A Notice of Appeal is concurrently filed.

Arguments

Applicants' arguments in an Amendment and Reply under 37 C.F.R. § 1.116 filed on February 9, 2012, in response to a Final Office Action mailed on December 30, 2011, were not properly considered or responded to by the Examiner in an Advisory Action mailed on February 28, 2012. The Examiner's response in the Advisory Action was legally and factually deficient, and thus clear error, because (1) U.S. Patent No. 6,091,724 to Chandra et al. ("Chandra"), U.S. Patent No. 6,510,323 to Stocker et al. ("Stocker"), and U.S. Patent No. 6,324,587 to Trenbeath et al. ("Trenbeath"), taken alone or in combination, fail to teach or suggest, at least, "identifying a category of the update message based on the input source," as recited in independent claim 26 (independent claims 33, 39, 45, 51, 57, 63, 64, and 66 recite similar distinguishing features, using their respective language); and (2) the Examiner has failed to properly consider all claim features.

Claims 26, 28, 33, 34, 39, 42-45, 48-51, 54-57, 60-62, 67, and 68 (Independent Claims 26, 33, 39, 45, 51, 57)

The Examiner rejected claims 26, 28, 33, 34, 39, 42-45, 48-51, 54-57, 60-62, 67, and 68 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chandra in view of Stocker, and further in view of Trenbeath. (Final Office Action, p. 2.) Applicants respectfully assert the rejection, the "Response to Arguments" section at page 44 of the Final Office Action, and Examiner's arguments on page 2 of the Advisory Action are clear errors. Independent claims 26, 33, 39, 45, 51, and 57 recite at least the above noted distinguishing features, using their respective language, which are not taught or suggested by the applied references.

The Examiner, for example, on page 3 of the Final Office Action relies on columns 1:25-35 and 5:45-65 of Chandra (in view of paragraphs 103 and 105 of the specification of instant application) to allegedly show the above-noted distinguishing features of independent claims 26, 33, 39, 45, 51, and 57. Applicants respectfully disagree.

As discussed in detail in the After Final Response filed on February 9, 2012, Chandra teaches identifying categories **based on category/topic of the message content**. In contrast, claims 26, 33, 39, 45, 51, and 57 recite, *inter* alia, "identify a category of the update message based on the input source," using their respective language.

When discussing the background art, Chandra discloses that (emphasis added):

> One example of a system that includes such a network environment is a publish/subscribe system. In publish/subscribe systems, publishers post messages and ***subscribers independently specify categories of events in which they are interested.*** The system takes the posted messages and includes in each message header the destination information of those subscribers indicating interest in the particular message. The system then uses the destination information in the message to forward the message through the network to the appropriate subscribers. (Chandra, 1:26-35.)

Chandra further discusses the content based subscription, where "one or more of the clients can specify a subscription. Each subscription provides a set of conditions indicating the types of messages those clients are interested in receiving." (Chandra, 5:45-48.) Chandra discloses that (emphasis added):

> Consider an example in which messages are related to the stock market. In such an example, a subscription may have the following three fields (or attributes): stock issue, stock price and stock value. The client specifies values for these fields, e.g., IBM, 100, 200, and then, these fields are used to determine if the client is interested in a particular message. ***If the data content of the message matches the specified values of the subscription, then the message is delivered to the one or more subscribers (or clients) of that subscription.*** It will be apparent to those skilled in the art that the use of three fields in the subscription is only one example. Subscriptions may include any number of desired fields and tests may include relationships other than equality. Further, the stock market scenario is only one example. Messages and subscriptions can be used for any type of data or events. (Chandra, 5:53-67.)

These sections of Chandra, relied on by the Examiner, merely disclose that subscribers can specify categories of events in which they are interested and if the ***data content of the message*** matches the specified values of the subscription, then the message is delivered to the one or more subscribers (or clients) of that subscription. This is not the same as "identif[ying] a category of the update message based on the input source," as recited in claims 26, 33, 39, 45, 51, and 57, using their respective language.

The Examiner, on page 2 of the Advisory Action, and in response to Applicants' arguments in After Final Response of February 9, 2012, states:

> More specifically, in Chandra, a publish/subscriber system and publisher is equivalent as input source and a specific publisher publishes/posts messages related to "sport", "weather", and "stocks". A particular subscriber selects category "stocks" (which he/she is interested" [sic] is equivalent identifying a category "stocks" of update messages based on available categories ("sport", "weather", and "stock") of the publisher/input source. Put another way, if said specific publisher only publishes/posts messages related to "sports", "weather", "celebrities", then the particular subscriber cannot identify the category "stocks" (which he/she is interested) and should subscribes [sic] for another publisher based on available categories of the another publisher. Accordingly, Chandra

> indeed fully discloses identifying a category of the update message based [sic] a plurality of available categories of the input source.

Applicants respectfully disagree.

First, the Examiner states that "if said specific publisher only publishes/posts messages related to 'sports', 'weather', 'celebrities', then the ***particular subscriber cannot identify the category 'stocks' (which he/she is interested)***." (Advisory Action, p. 2, emphasis added.) Applicants respectfully disagree. Chandra specifically discloses that subscriptions are based on the ***type of messages those clients are interested*** in receiving (Chandra, 5:46-48.) Therefore, following the Examiner's example, if the particular subscriber is interested in "stocks" type of messages, Chandra discloses that the particular subscriber will subscribe to "stocks" type of messages no matter what a specific publisher publishes. Therefore, the Examiner's statement that "particular subscriber cannot identify the category 'stocks' (which he/she is interested)" because the specific publisher only publishes/posts messages related to "sports," "weather," and "celebrities" (Advisory Action, p. 2, emphasis added) is not correct.

Further, the Examiner states that "if said specific publisher only publishes/posts messages related to 'sports', 'weather', 'celebrities', then the particular subscriber cannot identify the category 'stocks' (which he/she is interested) and ***should subscribes [sic] for another publisher based on available categories of the another publisher***." (Advisory Action, p. 2, emphasis added.) Applicants respectfully disagree. Chandra specifically states that "[e]ach subscription provides a set of conditions indicating the ***type of messages those clients are interested*** in receiving." (Chandra, 5:46-48, emphasis added.) Therefore, Chandra discloses that subscriptions are based on type of messages that clients are interested in, and not based on available categories of another publisher, as the Examiner suggests.

Moreover, following the Examiner's example, if a particular subscriber selects a category of "stocks", the particular subscriber is subscribed to "stocks" type of messages. Chandra determines whether a data content of a message matches the specified values of the subscription (such as "stock"), then the message is delivered to the particular subscriber. Chandra does not identify messages based on the publisher, which the Examiner analogizes as input source of independent claims, to which Applicants do not concede.

Stocker and Trenbeath are not used by the Examiner to disclose, nor do they teach or suggest, at least the above-noted distinguishing features of claims 26, 33, 39, 45, 51, and 57. Thus, as neither Stocker nor Trenbeath cures the deficiencies of Chandra, the applied references cannot be used to establish a prima facie case of obviousness.

Accordingly, independent claims 26, 33, 39, 45, 51, and 57 are allowable over the applied references. Also, dependent claims 28, 34, 42-44, 48-50, 54-56, 60-62, 67, and 68 are allowable for at least the same reasons as independent claims 26, 33, 39, 45, 51, and 57 are allowable, and further for their own respective features.

Dependent 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 Chandra in view of Stocker, further in view of Trenbeath, and in further 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, the combination of Chandra, Stocker, and Trenbeath fails to disclose all of the features of claims 26 and 33. Further, Campbell is not used by the Examiner to disclose, nor does it teach or suggest, at least the above noted distinguishing features of claims 26 and 33. Thus, as Campbell fails to cure the deficiencies of Chandra, Stocker, and Trenbeath, 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 dependency to claim 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.

Dependent 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 Chandra in view of Stocker, further in view of Trenbeath, and in further 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, the combination of Chandra, Stocker, and Trenbeath fails to disclose all of the features of claims 39, 45, 51, and 57. Further, Freeman is not used by the Examiner to disclose, nor does it teach or suggest, at least the above noted distinguishing features of claims 39, 45, 51, and 57. Thus, as Freeman fails to cure the deficiencies of Chandra, Stocker, and Trenbeath, 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 dependency to claim 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.

Independent Claims 63, 64, and 66

Claims 63, 64, and 66 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chandra in view of Stocker. Applicants respectfully traverse this rejection.

Independent claims 63, 64, and 66 recite features that distinguish over the applied references. For example, independent claim 63 recites, *inter alia*, (emphasis added):

> 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.

Further, independent claim 64 recites, *inter alia*, (emphasis added):

> wherein the routing network is configured to ***identify a category of the update message based on the input source***, determine a node type associated with the category, and to route the update message from a gateway device at the routing network to a node having the node type 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.

Also, independent claim 66 recites, *inter alia*, (emphasis added):

> wherein ***a category of the update message is identified based on the input source***, a node type associated with the category is determined, and the update message is routed from a gateway device at the routing network to a node having the node type 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.

As discussed above with respect to independent claims 26, 33, 39, 45, 51, and 57, Chandra and Stocker, taken alone or in combination, fail to disclose at least the above-noted distinguishing features of claims 63, 64, and 66. Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 63, 64, and 66 under 35 U.S.C. § 103(a).

Conclusion

Therefore, because the Examiner's rejections are legally and factually deficient, and are clear errors, claims 26, 28-31, 33-64, and 66-68 should be found allowable. 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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1493360_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:	Michael David Specht/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:				
Notice of appeal	1401	1	620	620
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**620**

Electronic Acknowledgement Receipt

EFS ID:	12414842
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:	Michael David Specht/Raiza Singh
Filer Authorized By:	Michael David Specht
Attorney Docket Number:	2222.775000E
Receipt Date:	28-MAR-2012
Filing Date:	30-MAR-2006
Time Stamp:	17:09:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

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Payment Type	Credit Card
Payment was successfully received in RAM	$620
RAM confirmation Number	4307
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1		2222775000E_NoticeOfAppeal.pdf	1126655 5e8c6bc9d1555fe48e10e449c4ad505d9c786474	yes	8

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Miscellaneous Incoming Letter	1	1
Notice of Appeal Filed	2	2
Pre-Brief Conference request	3	8

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30036 10bfdf987eca2d1e232d3b74eab3084f6a788063	no	2

Warnings:

Information:

Total Files Size (in bytes):	1156691

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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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ATTORNEYS AT LAW

March 28, 2012

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

Confirmation No. 1129
Art Unit 2194
Attn: Mail Stop AF

Re: U.S. Non-Provisional Patent Application
Appl. 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

Commissioner:

Transmitted herewith for appropriate action are the following documents:

1. Online Credit Card Payment Authorization in the amount of **$620.00** to cover:

   $620.00 Notice of Appeal;

2. Notice of Appeal (PTO/SB/31);

3. Pre-Appeal Brief Request for Review (PTO/SB/33); and

4. Arguments to Accompany the Pre-Appeal Brief Request for Review.

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.

Michael D. Specht
Attorney for Applicants
Registration No. 54,463

1504846_1.DOCX

PTO/SB/31 (07-09)
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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.

NOTICE OF APPEAL FROM THE EXAMINER TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

Docket Number (Optional): 2222.775000E

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on _____

Signature _____

Typed or printed name _____

In re Application of: TUTTLE et al.

Application Number	Filed
11/396,251	March 30, 2006

For: Asynchronous Messaging Using a Node Specialization Architecture in the Dynamic Routing Network

Art Unit	Examiner
2194	DAO, TUAN C.

Applicant hereby **appeals** to the Board of Patent Appeals and Interferences from the last decision of the examiner.

The fee for this Notice of Appeal is (37 CFR 41.20(b)(1)) $ 620.00

☐ Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is: $ _____

☐ A check in the amount of the fee is enclosed.

☒ Payment by credit card. ~~Form PTO-2038 attached~~ XXX

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 19-0036 .

☐ A petition for an extension of time under 37 CFR 1.136(a) (PTO/SB/22) is 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.

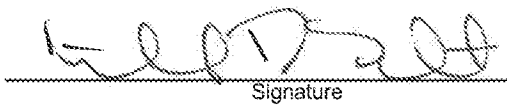
I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record. Registration number 54,463

☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____



Signature

Michael D. Specht
Typed or printed name

(202) 371-2600
Telephone number

3/28/12
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of one (1) forms are submitted.

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

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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 05/01/2012

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
05/01/2012	PAPER

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

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

Notice of Panel Decision from Pre-Appeal Brief Review	Application No. 11/396,251	Applicant(s) TUTTLE ET AL.
	Examiner EMERSON PUENTE	Art Unit 2196

This is in response to the Pre-Appeal Brief Request for Review filed 28 March, 2012.

1. ☐ **Improper Request** – The Request is improper and a conference will not be held for the following reason(s):

☐ The Notice of Appeal has not been filed concurrent with the Pre-Appeal Brief Request.
☐ The request does not include reasons why a review is appropriate.
☐ A proposed amendment is included with the Pre-Appeal Brief request.
☐ Other: .

The time period for filing a response continues to run from the receipt date of the Notice of Appeal or from the mail date of the last Office communication, if no Notice of Appeal has been received.

2. ☒ **Proceed to Board of Patent Appeals and Interferences** – A Pre-Appeal Brief conference has been held. The application remains under appeal because there is at least one actual issue for appeal. Applicant is required to submit an appeal brief in accordance with 37 CFR 41.37. The time period for filing an appeal brief will be reset to be one month from mailing this decision, or the balance of the two-month time period running from the receipt of the notice of appeal, whichever is greater. Further, the time period for filing of the appeal brief is extendible under 37 CFR 1.136 based upon the mail date of this decision or the receipt date of the notice of appeal, as applicable.

☒ The panel has determined the status of the claim(s) is as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: *26,28-31,33-64, and 66-68*.
Claim(s) withdrawn from consideration: _____.

3. ☐ **Allowable application** – A conference has been held. The rejection is withdrawn and a Notice of Allowance will be mailed. Prosecution on the merits remains closed. No further action is required by applicant at this time.

4. ☐ **Reopen Prosecution** – A conference has been held. The rejection is withdrawn and a new Office action will be mailed. No further action is required by applicant at this time.

All participants:

(1) *EMERSON PUENTE*.	(3) *Tuan Dao*.
(2) *Hyung Sough*.	(4)_____.

/Emerson C Puente/
Supervisory Patent Examiner, Art Unit 2196

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**	

Brief on Appeal Under 37 C.F.R. § 41.37

Mail Stop Appeal Brief - Patents

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

Sir:

A Notice of Appeal from the Final Office Action, dated December 30, 2011, was filed March 28, 2012, along with a Pre Appeal Conference Request and Arguments. The Pre Appeal Brief Conference Decision was mailed May 1, 2012. Appellants hereby file one copy of this Appeal Brief, together with the required fee set forth in 37 C.F.R. § 41.20(b)(2).

It is not believed that extensions of time 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.

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IPR2025-00200 / 722 Patent Page 998 of 1171 EX1002

I. Real Party In Interest (37 C.F.R. § 41.37(c)(1)(i))

The real party in interest in this appeal is the Shaw Parsing LLC, having its principal place of business at 2215-B Renaissance Drive, Suite 5, Las Vegas, Nevada, 89119. An Assignment assigning all right, title, and interest in and to the patent application from the inventors to Bang Networks, Inc. was recorded in the Assignment Branch of the United States Patent and Trademark Office on June 21, 2007, at reel 019462, frame 0914. An Assignment assigning all right, title, and interest in and to the patent application from the Bang Networks, Inc. to Shaw Parsing LLC was recorded in the Assignment Branch of the United States Patent and Trademark Office on June 21, 2007, at reel 019462, frame 0936.

IPR2025-00200 / 722 Patent Page 999 of 1171 EX1002

II. Related Appeals and Interferences (37 C.F.R. § 41.37(c)(1)(ii))

To the best of the knowledge of Appellants, Appellants' legal representative, and Appellants' assignee, there are no other appeals, interferences, or judicial proceedings which are related to, directly affect, or are directly affected by or have a bearing on a decision by the Board of Patent Appeals and Interferences ("the Board") in the pending appeal.

Appellants will comply with 37 C.F.R. § 41.8(a) and will notify the Board of any change during the proceeding, within 20 days of the change, in (1) the real party-in-interest, and (2) each judicial or administrative proceeding that could affect, or be affected by, the Board proceeding.

IPR2025-00200 / 722 Patent Page 1000 of 1171 EX1002

III. Summary of Claimed Subject Matter (37 C.F.R. § 41.37(c)(1)(iii))

A concise explanation of the subject matter recited in the independent claims on appeal (i.e., claims 26, 33, 39, 45, 51, 57, 63, 64, and 66) is provided below. The explanation refers to the specification by page and line number and to the drawings by reference characters. Reference is made to example supporting embodiments disclosed in the specification, although it is understood that the claims should not be limited to the specific embodiments to which reference is made.

A. Independent Claim 26

Claim Element	***Example Support***
A method comprising:	FIGs. 7, 8, and 10
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;	FIG. 7, element 724A; FIG. 8, element 810; FIG. 10, element 1010; page 6, lines 2-10; page 38, lines 10-11; page 46, line 20 – page 47, line 1
identifying a category of the update message based on the input source;	FIG. 7, element 724A; FIG. 10, element 1020; page 39, lines 3-7; page 40, lines 3-18; page 47, lines 2-3 [emphasis added for at least one distinguishing feature of the claim]
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;	FIG. 7, elements 724A and 726A; FIG. 10, element 1030; page 39, lines 3-7; page 47, lines 3-5
routing, using the processing device, the update message to the node having the determined node type;	FIG. 7, elements 724A and 726A; FIG. 10, element 1040; page 47, lines 3-5
causing the node, through the update message, to determine a client, different from the input source, that has registered for updates of the live object;	FIG. 7, elements 724A, 726A, 712; FIG. 8, element 850; FIG. 10, element 1050; page 38, lines 14-16; page 47, lines 5-9
causing the node to route the update	FIG. 7, elements 724A, 726A, 712; FIG. 8,

message from the node to the client; and	element 860; FIG. 10, elements 1060 and 1070; page 38, lines 14-16; page 47, lines 9-12
causing the client to process the update message and to update the property of the live object.	page 16, line 18 – page 17, line 5

B. Independent Claim 33

Claim Element	***Example Support***
A routing network comprising:	FIG. 3, element 110
a gateway device configured to:	FIG. 7, element 724A
receive 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,	FIG. 7, element 724A; FIG. 8, element 810; FIG. 10, element 1010; page 6, lines 2-10; page 38, lines 10-11; page 46, line 20 – page 47, line 1
identify a category of the update message based on the input source;	FIG. 7, element 724A; FIG. 10, element 1020; page 39, lines 3-7; page 40, lines 3-18; page 47, lines 2-3 [emphasis added for at least one distinguishing feature of the claim]
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; and	FIG. 7, element 724A; FIG. 10, element 1030; page 39, lines 3-7; page 47, lines 3-5
route the update message; and	FIG. 7, element 724A; FIG. 10, element 1040; page 47, lines 3-5
the node configured to:	FIG. 7, element 726A
receive the update message from the gateway device, wherein the node is configured to be mapped to the node type,	FIG. 7, elements 724A and 726A; FIG. 10, element 1040; page 39, lines 3-7; page 47, lines 3-5
determine a client, different from the input source, that has registered for updates of the live object, and	FIG. 7, elements 724A, 726A, 712; FIG. 8, element 850; FIG. 10, element 1050; page 38, lines 14-16; page 47, lines 5-9
route the update message from the node to the client, wherein the client is adapted to process the update message and to update the property of the live object.	FIG. 7, elements 724A, 726A, 712; FIG. 8, element 860; FIG. 10, elements 1060 and 1070; page 16, line 18 – page 17, line 5; page 38, lines 14-16; page 47, lines 9-12

C. Independent Claim 39

Claim Element	***Example Support***
A method comprising:	FIGs. 7, 8, and 10
providing, using a processing device of an input source, a data representation to a client device, different from the input source, 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	FIG. 3, element 210; FIG. 7, element 710; page 11, lines 3-19
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,	FIG. 3, element 210; FIG. 7, element 710; FIG. 8, element 810; FIG. 10, element 1010; page 6, lines 2-10; page 38, lines 10-11; page 46, line 20 – page 47, line 1
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,	FIG. 7, element 724A; FIG. 8, element 810; FIG. 10, elements 1010, 1020, and 1030; page 6, lines 2-10; page 38, lines 10-11; page 39, lines 3-7; page 40, lines 3-18; page 46, line 20 – page 47, lines 1-5 [emphasis added for at least one distinguishing feature of the claim]
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	FIG. 7, elements 724A, 726A, 712; FIG. 8, elements 850 and 860; FIG. 10, elements 1050, 1060, and 1070; page 38, lines 14-16; page 47, lines 5-12
wherein the client device processes the update message upon receipt to update the property of the live object at the client device.	page 16, line 18 – page 17, line 5

D. Independent Claim 45

Claim Element	***Example Support***
An apparatus comprising:	FIGs. 3 and 7
an input source device configured to provide a data representation to a client device, different from the input source, 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,	FIG. 3, element 210; FIG. 7, element 710; page 11, lines 3-19
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,	FIG. 3, element 210; FIG. 7, element 710; FIG. 8, element 810; FIG. 10, element 1010; page 6, lines 2-10; page 38, lines 10-11; page 46, line 20 – page 47, line 1
wherein a gateway device at the 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 a node of the node type at the routing network,	FIG. 7, element 724A; FIG. 8, element 810; FIG. 10, elements 1010, 1020, and 1030; page 6, lines 2-10; page 38, lines 10-11; page 39, lines 3-7; page 40, lines 3-18; page 46, line 20 – page 47, lines 1-5 [emphasis added for at least one distinguishing feature of the claim]
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	FIG. 7, elements 724A, 726A, 712; FIG. 8, elements 850 and 860; FIG. 10, elements 1050, 1060, and 1070; page 38, lines 14-16; page 47, lines 5-12
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.	page 16, line 18 – page 17, line 5

E. Independent Claim 51

Claim Element	***Example Support***
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:	FIGs. 7, 8, and 10; page 12, line 20 – page 13, line 11; page 20, line 14-18; page 21, line 13 – page 22, line 15
providing, using a processing device of an input source, a data representation to a client device, different from the input source, 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	FIG. 3, element 210; FIG. 7, element 710; page 11, lines 3-19
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 for updating a property of the live object,	FIG. 3, element 210; FIG. 7, element 710; FIG. 8, element 810; FIG. 10, element 1010; page 6, lines 2-10; page 38, lines 10-11; page 46, line 20 – page 47, line 1
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 a node of the node type at the routing network,	FIG. 7, element 724A; FIG. 8, element 810; FIG. 10, elements 1010, 1020, and 1030; page 6, lines 2-10; page 38, lines 10-11; page 39, lines 3-7; page 40, lines 3-18; page 46, line 20 – page 47, lines 1-5 [emphasis added for at least one distinguishing feature of the claim]
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	FIG. 7, elements 724A, 726A, 712; FIG. 8, elements 850 and 860; FIG. 10, elements 1050, 1060, and 1070; page 38, lines 14-16; page 47, lines 5-12
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.	page 16, line 18 – page 17, line 5

F. Independent Claim 57

Claim Element	***Example Support***
A non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:	FIGs. 7, 8, and 10; page 12, line 20 – page 13, line 11; page 20, line 14-18; page 21, line 13 – page 22, line 15
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	FIG. 3, element 210; FIG. 7, element 710; page 11, lines 3-19
instructions for providing, using a processing device of an input source, different from the client 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,	FIG. 3, element 210; FIG. 7, element 710; FIG. 8, element 810; FIG. 10, element 1010; page 6, lines 2-10; page 38, lines 10-11; page 46, line 20 – page 47, line 1
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 a node of the node type at the routing network,	FIG. 7, element 724A; FIG. 8, element 810; FIG. 10, elements 1010, 1020, and 1030; page 6, lines 2-10; page 38, lines 10-11; page 39, lines 3-7; page 40, lines 3-18; page 46, line 20 – page 47, lines 1-5 [emphasis added for at least one distinguishing feature of the claim]
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	FIG. 7, elements 724A, 726A, 712; FIG. 8, elements 850 and 860; FIG. 10, elements 1050, 1060, and 1070; page 38, lines 14-16; page 47, lines 5-12
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.	page 16, line 18 – page 17, line 5

G. Independent Claim 63

Claim Element	*Example Support*
A method comprising:	FIGs. 7, 8, and 10
providing a live object to a client device;	page 11, lines 3-19
sending, using a processing device of an input source, different from the client device, an update message to a routing network identifying the live object and containing update data to update the live object at the client device,	FIG. 3, element 210; FIG. 7, element 710; FIG. 8, element 810; FIG. 10, element 1010; page 6, lines 2-10; page 38, lines 10-11; page 46, line 20 – page 47, line 1
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.	FIG. 7, elements 724A, 726A, 712; FIG. 8, element 810, 850, and 860; FIG. 10, elements 1010, 1020, 1030, 1050, 1060, and 1070; page 6, lines 2-10; page 38, lines 10-16; page 39, lines 3-7; page 40, lines 3-18; page 46, line 20 – page 47, lines 1-12 [emphasis added for at least one distinguishing feature of the claim]

H. Independent Claim 64

Claim Element	*Example Support*
An apparatus comprising:	FIGs. 3 and 7
an input source arranged to provide a live object to a client device, different from the input source; and	FIG. 3, element 210; FIG. 7, element 710; page 11, lines 3-19
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,	FIG. 3, element 210; FIG. 7, element 710; FIG. 8, element 810; FIG. 10, element 1010; page 6, lines 2-10; page 38, lines 10-11; page 46, line 20 – page 47, line 1
wherein the routing network is configured to ***identify a category of the update message based on the input source,*** determine a node type associated with the category, and to route the update message from a gateway device at the routing network to a node having the node type 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	FIG. 7, elements 724A, 726A, 712; FIG. 8, element 810, 850, and 860; FIG. 10, elements 1010, 1020, 1030, 1050, 1060, and 1070; page 6, lines 2-10; page 38, lines 10-16; page 39, lines 3-7; page 40, lines 3-18; page 46, line 20 – page 47, lines 1-12 [emphasis added for at least one distinguishing feature of the claim]

the update data for the live object.	

I. Independent Claim 66

Claim Element	***Example Support***
A non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:	FIGs. 7, 8, and 10; page 12, line 20 – page 13, line 11; page 20, line 14-18; page 21, line 13 – page 22, line 15
instructions for providing a live object to a client device; and	page 11, lines 3-19
instructions for providing an update message from an input source, different from the client device, to a routing network identifying the live object and containing update data for updating the live object at the client device,	FIG. 3, element 210; FIG. 7, element 710; FIG. 8, element 810; FIG. 10, element 1010; page 6, lines 2-10; page 38, lines 10-11; page 46, line 20 – page 47, line 1
wherein ***a category of the update message is identified based on the input source***, a node type associated with the category is determined, and the update message is routed from a gateway device at the routing network to a node having the node type 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.	FIG. 7, elements 724A, 726A, 712; FIG. 8, element 810, 850, and 860; FIG. 10, elements 1010, 1020, 1030, 1050, 1060, and 1070; page 6, lines 2-10; page 38, lines 10-16; page 39, lines 3-7; page 40, lines 3-18; page 46, line 20 – page 47, lines 1-12 [emphasis added for at least one distinguishing feature of the claim]

IV. Argument (37 C.F.R. § 41.37(c)(1)(iv))

A. The Office committed reversible errors as the references lack at least the claimed identifying based on input source and rather Chandra teaches using a category/topic of message content

Appellants demonstrate Chandra, Stocker, Trenbeath, Campbell and Freeman do not teach or suggest at least the claimed identifying a category of the update message based on the input source ***or*** an updated message is identified based on the input source. Rather, the reference relied upon by the Office, Chandra, merely teaches using a category/topic of message content. Thus, as the claims are allowable over the references, the Office should be reversed and the claims passed to issue.

B. Chandra, Stocker, and Trenbeath do not teach or suggest at least identifying a category of the update message based on the input source as respectively recited in claims 26, 33, 39, 45, 51, and 57

The Examiner maintained the rejection of claims 26, 28, 33, 34, 39, 42-45, 48-51, 54-57, 60-62, 67, and 68 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chandra in view of Stocker, and further in view of Trenbeath. (Final Office Action mailed December 30, 2011 ("Final Office Action"), pp. 2-30; Advisory Action mailed February 28, 2012 ("Advisory Action"), pp. 2.)

Independent claims 26, 33, 39, 45, 51, and 57 recite a combination of features not taught or suggested by the applied references.

For example, independent claim 26 recites, *inter alia*, (emphasis added):

> ***identifying a category of the update message based on the input source.***

Independent claim 33 recites similar distinguishing features, using its respective language. Further, independent claim 39 recites, *inter alia*, (emphasis added):

> 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.

The combination of Chandra, Stocker, and Trenbeath does not teach or suggest at least the above-noted distinguishing features, and the Examiner's rejection based on 35 U.S.C. § 103(a) is therefore improper as being legally and factually deficient.

The Examiner relies on Chandra for this claim feature. (Final Office Action, p. 3 citing Chandra 1:25-35 and 5:45-65 (in view of paragraphs 103 and 105 of the specification of instant application).) Appellants disagree. Rather than teaching or suggesting at least "identify a category of the update message ***based on the input source,***" as respectfully recited in claims, Chandra teaches identifying categories ***based on category/topic of the message content***.

Chandra discloses a method for "routing messages within a network using the data content of the message." (Chandra, Title.) When discussing the background art, Chandra discloses that (emphasis added):

> One example of a system that includes such a network environment is a publish/subscribe system. In publish/subscribe systems, publishers post messages and ***subscribers independently specify categories of events in which they are interested.*** The

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> system takes the posted messages and includes in each message header the destination information of those subscribers indicating interest in the particular message. The system then uses the destination information in the message to forward the message through the network to the appropriate subscribers.
>
> (Chandra, 1:26-35.)

Chandra also discusses the content based subscription, where "one or more of the clients can specify a subscription. Each subscription provides a set of conditions indicating the types of messages those clients are interested in receiving." (Chandra, 5:45-48.) Chandra further discloses that:

> Consider an example in which messages are related to the stock market. In such an example, a subscription may have the following three fields (or attributes): stock issue, stock price and stock value. The client specifies values for these fields, e.g., IBM, 100, 200, and then, these fields are used to determine if the client is interested in a particular message. ***If the data content of the message matches the specified values of the subscription, then the message is delivered to the one or more subscribers (or clients) of that subscription.*** It will be apparent to those skilled in the art that the use of three fields in the subscription is only one example. Subscriptions may include any number of desired fields and tests may include relationships other than equality. Further, the stock market scenario is only one example. Messages and subscriptions can be used for any type of data or events.
>
> (Chandra, 5:53-67; emphasis added.)

These sections of Chandra, relied on by the Examiner, merely disclose that subscribers can specify categories of events in which they are interested and if the ***data content of the message*** matches the specified values of the subscription, then the message is delivered to the one or more subscribers (or clients) of that subscription. This is not the same as "identif[ying] a category of the update message ***based on the input source,***" as recited in claims 26, 33, 39, 45, 51, and 57, using their respective language.

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The Examiner also states:

> Chandra column 1:25-35; column 5:45-65 discloses "publisher post messages and subscribers independently specify categories or [sic] event [sic] in which they are interested" and :if the data content of the message matches the specified value of the subscription, then the message is delivered [to] the one or more subscribers (or clients)" → ***identifying each category based on the category/topic of the message content***);

(Final Office Action, p. 3; emphasis added.) This proves the Examiner agrees that Chandra teaches identifying categories ***based on category/topic of the message content***. In contrast, claims 26, 33, 39, 45, 51, and 57 recite, *inter* alia, "identify a category of the update message ***based on the input source,***" using their respective language.

Appellant rebutted the Examiner stating:

> The Examiner, for example, on page 3 of the Office Action, relies on the above sections of Chandra [Chandra, 1:25-35 and 5:45-65] to allegedly show "identifying each category based on the category/topic of the message content." By this statement, the Examiner appears to agree that Chandra teaches identifying categories **based on category/topic of the message content**. In contrast, claims 26, 33, 39, 45, 51, and 57 recite, *inter* alia, "identify a category of the update message based on the input source," using their respective language.
>
> (Reply under 37 C.F.R. 1.116 filed February 9, 2012 ("After Final Response"), pp. 18-19)

The Examiner then responded:

> More specifically, in Chandra, a publish/subscriber system and publisher is equivalent as input source and a specific publisher publishes/posts messages related to "sport", "weather", and "stocks". A particular subscriber selects category "stocks" (which he/she is interested" [sic] is equivalent identifying a category "stocks" of update messages based on available categories ("sport", "weather", and "stock") of the publisher/input source. Put another way, if said specific publisher only

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> publishes/posts messages related to "sports", "weather", "celebrities", then the particular subscriber cannot identify the category "stocks" (which he/she is interested) and should subscribes [sic] for another publisher based on available categories of the another publisher. Accordingly, Chandra indeed fully discloses identifying a category of the update message based [sic] a plurality of available categories of the input source.
>
> (Advisory Action, p. 2.) Appellants respectfully disagree.

First, the Examiner states that "if said specific publisher only publishes/posts messages related to 'sports', 'weather', 'celebrities', then the ***particular subscriber cannot identify the category 'stocks' (which he/she is interested)***." (Advisory Action, p. 2, emphasis added.) Appellants respectfully disagree. Chandra specifically discloses that subscriptions are based on the ***type of messages those clients are interested*** in receiving (Chandra, 5:46-48.) Therefore, following the Examiner's example, if the particular subscriber is interested in "stocks" type of messages, Chandra discloses that the particular subscriber will subscribe to "stocks" type of messages no matter what a specific publisher publishes. Therefore, the Examiner's statement that "particular subscriber ***cannot identify*** the category 'stocks' (which he/she is interested)" because the specific publisher only publishes/posts messages related to "sports," "weather," and "celebrities" (Advisory Action, p. 2, emphasis added) is not correct.

Second, the Examiner states that "if said specific publisher only publishes/posts messages related to 'sports', 'weather', 'celebrities', then the particular subscriber cannot identify the category 'stocks' (which he/she is interested) and ***should subscribes [sic] for another publisher based on available categories of the another publisher***." (Advisory Action, p. 2, emphasis added.) Appellants respectfully disagree. Chandra specifically states

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that "[e]ach subscription provides a set of conditions indicating the ***type of messages those clients are interested*** in receiving." (Chandra, 5:46-48, emphasis added.) Therefore, Chandra discloses that subscriptions are based on ***type of messages*** that clients are interested in, and not based on available categories of ***another publisher***, as the Examiner suggests.

Moreover, following the Examiner's example, if a particular subscriber selects a category of "stocks", the particular subscriber is subscribed to "stocks" type of messages. Chandra determines whether a data content of a message matches the specified values of the subscription (such as "stock"), then the message is delivered to the particular subscriber. Chandra does not identify messages based on the publisher, which the Examiner analogizes as input source of independent claims, to which Applicants do not concede.

Therefore, Chandra, the only reference relied upon by the Examiner, does not teach or suggest "identifying a category of the update message based on the input source" ***or*** "an updated message is identified based on the input source," as respectively claimed in claims 26, 33, 39, 45, 51, and 57, but rather Chandra teaches identifying categories based on category/topic of the message content. The Examiner does not rely on Stocker, Trenbeath, Campbell, and Freeman to disclose at least this distinguishing feature, nor do these references teach or suggest at least the above noted distinguishing feature.

With regards to Stocker, the Examiner alleges Stocker teaches "GIMR 300 determining a message control node 210 to send a general information message 220 to MSS 110," "if the cell serving mobile station in part of the served area 195, the step 430 is entered," "determining if the served area … associated with the MS 100," "routing the update message to the node having determined node type," and "sending general message

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invocation ... to determined message control nod." (Final Office Action, pp. 4-5.) However, the Examiner does not use Stocker to disclose, nor does it teach or suggest, at least the above-noted distinguishing features of claims 26, 33, 39, 45, 51, and 57. Therefore, Stocker does not cure the deficiencies of Chandra.

With regards to Trenbeath, the Examiner alleges Trenbeath teaches "subscribed clients C, D, E receives [sic] update data, attached data object in update messages from a publishing client A." (Final Office Action, p. 5.) However, the Examiner 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, and 57. Therefore, Trenbeath does not cure the deficiencies of Chandra and Stocker.

Thus, as neither Stocker nor Trenbeath cures the deficiencies of Chandra, the applied references cannot be used to establish a prima facie case of obviousness.

Accordingly, Appellants respectfully request reconsideration and withdrawal of the rejection of independent claims 26, 33, 39, 45, 51, and 57, and they be found allowable over the applied references. Also, dependent claims 28, 34, 42-44, 48-50, 54-56, 60-62, 67, and 68 are allowable for at least the same reasons as independent claims 26, 33, 39, 45, 51, and 57 are allowable, and further for their own respective features.

C. Campbell does not cure the deficiencies of Chandra, Stocker, and Trenbeath

The Examiner rejected claims 29-31 and 35-38 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chandra in view of Stocker, further in view of Trenbeath, and in further view of Campbell.

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, the combination of Chandra, Stocker, and Trenbeath fails to disclose all of the features of claims 26 and 33.

The Examiner alleges Campbell teaches "causing the node to determine at least one client proxy with which the client communicates; causing the node to route to the client proxy; and causing the client proxy to rout the data 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." (Final Office Action, pp. 30-34). Appellants disagree. However, the Examiner 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, as Campbell does not cure the deficiencies of Chandra, Stocker, and Trenbeath, 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 dependency to claim 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.

D. Freeman does not cure the deficiencies of Chandra, Stocker, and Trenbeath

The Examiner rejected claims 40, 41, 46, 47, 52, 53, 58, and 59 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chandra in view of Stocker, further in view of Trenbeath, and in further view of Freeman.

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, the combination of Chandra, Stocker, and Trenbeath fails to disclose all of the features of claims 39, 45, 51, and 57.

The Examiner alleges 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." (Final Office Action, on pages 35-38.) Appellants disagree. However, the Examiner 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, as Freeman does not cure the deficiencies of Chandra, Stocker, and Trenbeath, 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 dependency to claim 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.

E. Chandra and Stocker do not teach or suggest at least the claimed category of an updated message is identified based on the input source as respectively recited in claims 63, 64, and 66

The Examiner maintained the rejections of claims 63, 64, and 66 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chandra in view of Stocker. (Final Office Action, pp. 38-44; Advisory p, 2.)

Independent claims 63, 64, and 66 recite features that distinguish over the applied references. For example, independent claim 63 recites, *inter alia*, (emphasis added):

> 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.

Further, independent claim 64 recites, *inter alia*, (emphasis added):

> wherein the routing network is configured to ***identify a category of the update message based on the input source***, determine a node type associated with the category, and to route the update message from a gateway device at the routing network to a node having the node type 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.

Also, independent claim 66 recites, *inter alia*, (emphasis added):

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> wherein ***a category of the update message is identified based on the input source***, a node type associated with the category is determined, and the update message is routed from a gateway device at the routing network to a node having the node type 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.

The Examiner again relies on Chandra to allegedly teach the above-noted distinguishing features. (Final Office Action, pp. 38-44.) Appellant disagrees for reasons similar to those discussed above. While these claims recite different distinguishing features, i.e., an updated message is identified based on the input source, the reference relied upon by the Office, Chandra, merely teaches using a category/topic of message content. Thus, for similar reasons as discussed above with respect to independent claims 26, 33, 39, 45, 51, and 57, Chandra and Stocker, taken alone or in combination, fail to disclose at least the above-noted distinguishing features of claims 63, 64, and 66. Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 63, 64, and 66 under 35 U.S.C. § 103(a).

F. Conclusion

Therefore, as the Office has failed to show the applied references teach at least the claimed identifying a category of the update message based on the input source ***or*** an updated message is identified based on the input source, Appellants respectfully request that the Board reverse the Office's final rejection of claims 26, 28-31, 33-64, and 66-68, and remand this application for allowance of claims 26, 28-31, 33-64, and 66-68.

Respectfully submitted,

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

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V. ***Claims Appendix (37 C.F.R. § 41.37(c)(i)(v))***

1-25. (Cancelled)

26. A 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 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;

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, different from the input source, that has registered for updates of the live object;

causing the node to route the update message from the node to the client; and

causing the client to process the update message and to update the property of the live object.

27. (Cancelled)

28. 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. The method of claim 28, further comprising:

causing the node to determine at least one client proxy with which the client communicates;

causing the node to route the update message to the client proxy; and

causing the client proxy to route the update message to the client to determine the connection.

30. The method of claim 29, further comprising causing the node to maintain client registration information concerning the client connection.

31. 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. A routing network comprising:

a gateway device configured to:

receive 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,

identify a category of the update message based on the input source;

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; 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, different from the input source, that has registered for updates of the live object, and

route the update message from the node to the client, wherein the client is adapted to process the update message and to update the property of the live object.

34. 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.

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35. The routing network of claim 34, 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 update message to the client proxy.

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

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

38. 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 client communicates and to route the data to the client proxy.

39. A method comprising:

providing, using a processing device of an input source, a data representation to a client device, different from the input source, 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 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,

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 processes the update message upon receipt to update the property of the live object at the client device.

40. 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. 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. The method of claim 39, wherein providing the data representation to the client device includes providing an activation module that is executed by the client device and that registers the live object with the routing network.

43. 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. 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. An apparatus comprising:

an input source device configured to provide a data representation to a client device, different from the input source, 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,

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,

wherein a gateway device at the 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 a node of the node type 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. 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. 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. 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. 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. 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. 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 of an input source, a data representation to a client device, different from the input source, 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 of the input source, 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,

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 a node of the node type 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. 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. 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. 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. 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. 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. 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, 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

instructions for providing, using a processing device of an input source, different from the client 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,

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 a node of the node type 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. The 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. The 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. The 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. The 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. The 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. A method comprising:

providing a live object to a client device;

sending, using a processing device of an input source, different from the client device, 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.

64. An apparatus comprising:

an input source arranged to provide a live object to a client device, different from the input source; 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 identify a category of the update message based on the input source, determine a node type associated with the category, and to route the update message from a gateway device at the routing network to a node having the node type 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. A non-transitory computer readable storage medium having instructions stored thereon, the instructions comprising:

instructions for providing a live object to a client device; and

instructions for providing an update message from an input source, different from the client device, to a routing network identifying the live object and containing update data for updating the live object at the client device,

wherein a category of the update message is identified based on the input source, a node type associated with the category is determined, and the update message is routed from a gateway device at the routing network to a node having the node type 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.

67. 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.

68. The method of claim 26, wherein the property of the live object has a direct effect on a visual representation of the live object in a data representation, has an effect on an internal aspect of the live object and has no effect on the visual representation of the live object in the data representation, or has a direct effect on one aspect of the visual representation of the live object in the data representation and has no effect on other aspect of the visual representation of the live object in the data representation.

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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/Valee Bartels
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:				
Filing a brief in support of an appeal	1402	1	620	620
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**620**

Electronic Acknowledgement Receipt

EFS ID:	12903046
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/Valee Bartels
Filer Authorized By:	Jason Daniel Eisenberg
Attorney Docket Number:	2222.775000E
Receipt Date:	31-MAY-2012
Filing Date:	30-MAR-2006
Time Stamp:	15:08:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$620
RAM confirmation Number	1764
Deposit Account	190036
Authorized User	STERNE, KESSLER, GOLDSTEIN & FOX
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2222_775000E_brief_on_appeal.pdf	4169813 c2f77536c3c03a633ebe30e33bce54d5f7774b78	yes	35

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Miscellaneous Incoming Letter	1	1
Appeal Brief Filed	2	35

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30051 1a1cf4f21f95c177ec7fba14e26da0b6878a54ec	no	2

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Total Files Size (in bytes):	4199864

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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.

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ATTORNEYS AT LAW

May 31, 2012

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

Confirmation No. 1129
Art Unit 2194
Attn: Mail Stop Appeal Brief - Patents

Re: U.S. Nonprovisional Patent 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

Commissioner:

Transmitted herewith for appropriate action are the following documents:

1. Online Credit Card Payment Authorization in the amount of $620.00 to cover Filing a Brief in Support of an Appeal; and

2. Brief on Appeal Under 37 C.F.R. §41.37.

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.

Jason D. Eisenberg
Attorney for Applicants
Registration No. 43,447

JDE/A-S/vb
Enclosure(s)

1538372_1

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NOTICE OF ALLOWANCE AND FEE(S) DUE

26111 7590 08/13/2012

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	

DATE MAILED: 08/13/2012

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

TITLE OF INVENTION: ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1740	$300	$0	$2040	11/13/2012

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26111 7590 08/13/2012

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

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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

TITLE OF INVENTION: ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1740	$300	$0	$2040	11/13/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
DAO, TUAN C.	2194	719-316000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

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This collection of information is required by 37 CFR 1.311. 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, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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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 08/13/2012

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	

DATE MAILED: 08/13/2012

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 711 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 711 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

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

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

Examiner-Initiated 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*. (3)_____.

(2) *Amirali Sharifi*. (4)_____.

Date of Interview: *07/27/2012*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

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

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☒Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *26, 33, 39, 45, 51, 57, 63-64, and 66*.

Identification of prior art discussed: *N/A*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Applicant authorizes Examiner to amend claims 28, 34, 39, 45, 51, and 57 as presented in the examiner's amendment..

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/Andy Ho/ Primary Examiner, Art Unit 2194	

Notice of Allowability	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--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *05/31/02012*.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *26, 28-31, 33-62, and 77-78 (renumbered as 1-37)*.
4. ☐ 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 the:
      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)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *08/01/2012* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Andy Ho/
Primary Examiner, Art Unit 2194

DETAILED ACTION

1. This action is responsive to the Appeal Brief dated 05/31/2012.

2. Claims 26, 28-31, 33-64, and 66-68 have been examined, and all remained pending claims are allowed (renumbered 1-37).

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

4. Authorization for this examiner's amendment was given in a telephone interview with Mr. Amirali Sharifi (Registration No. 68887) on 07/31/2012.

PROPOSED AMENDMENTS TO THE CLAIMS

Listing of Claims

1-25. (Cancelled)

26. (Previously Presented) A 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 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;

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, different from the input source, that has registered for updates of the live object;

causing the node to route the update message from the node to the client; and

causing the client to process the update message 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]] identifier (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;

causing the node to route the update message to the client proxy; and

causing the client proxy to route the update message 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. (Previously Presented) A routing network comprising:

a gateway device configured to:

receive 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,

identify a category of the update message based on the input source;

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; 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, different from the input source, that has registered for updates of the live object, and

route the update message from the node to the client, wherein the client is adapted to process the update message and to update the property of the live object.

34. (Currently Amended) The routing network of claim 33, wherein the node is configured to extract an object [[ID]] identifier (ID) from the update message and to determine a connection to the client to route the data to the client.

35. (Previously Presented) The routing network of claim 34, 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 update message 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. (Previously Presented) 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 client communicates and to route the data to the client proxy.

39. (Currently Amended) A method comprising:

providing, using a processing device of an input source, a data representation to a client device, different from the input source, 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]] identifier (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 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,

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 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. (Previously Presented) The method of claim 39, wherein providing the data representation to the client device 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, different from the input source, 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]] identifier (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,

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,

wherein a gateway device at the 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 a node of the node type 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 of an input source, a data representation to a client device, different from the input source, 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]] identifier (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 of the input source, 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,

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 a node of the node type 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 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, and wherein the client device is configured to respond to the live object of the data representation by determining an object [[ID]] identifier (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

instructions for providing, using a processing device of an input source, different from the client 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,

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 a node of the node type 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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. (Previously Presented) The 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. (Cancelled)

64. (Cancelled)

65. (Cancelled)

66. (Cancelled)

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.

68. (Previously Presented) The method of claim 26, wherein the property of the live object has a direct effect on a visual representation of the live object in a data representation, has an effect on an internal aspect of the live object and has no effect on the visual representation of the live object in the data representation, or has a direct effect on one aspect of the visual representation of the live object in the data representation and has no effect on other aspect of the visual representation of the live object in the data representation.

Examiner's Statement of Reasons for Allowance

5. As Applicants pointed out in the Brief, the prior art of record (Chandra in view of Stocker and Trenbeath) does not disclose and/or fairly suggest at least claimed limitations recited in such manners in independent claim 1 and similarly recited in such manners in other independent claims 33, 39, 45, 51, and 57.

These claimed limitations are not present in the prior art of record and would not have been obvious, thus all pending claims 26, 28-31, 33-62, and 67-68 are allowed.

Conclusion

6. 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.

7. 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

/Andy Ho/

Primary Examiner, Art Unit 2194

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
East text search	7/28/2011	TD
East text search	12/22/2011	TD
consulted with primary Andy Ho	7/25/2012	TD
east text search	8/1/2012	TD
NPL search: Google, ACM Digital Library, and IEEEXplore	8/1/2012	TD

INTERFERENCE SEARCH

Class	Subclass	Date	Examiner
719	316	8/1/2012	TD
709	206	8/1/2012	TD

topic node proxy router category object identifier update inp

Search

Page 5 of about 2,600 results (0.49 seconds)

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by G Fox - Related articles
We designed a distributed **publish-subscribe** system NaradaBrokering for specified **.... nodes**. Communication within NaradaBrokering is asynchronou the **...** and those that do result in **updates** to the **routing** caches, containing shortest **.....** system, after which the **proxy** subscribes to a **topic** identifying a **...**

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Figure 4: SUPER platform delivered as integration of four **nodes**. 9 **..... pub subscriber** infrastructure (called Event Sink) which enables SBPELEE and

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Jul 31, 2011 – Internet technology development and standardisation **topics** (DONA) and **Publish-Subscribe** Internetworking **Routing** Paradigm (PSIR **source** of information via authentication and securing the data channel via encryption **...** responsible NRS **node** where the **object** ID is translated into

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www.cisco.com/en/US/docs/cable/cmts/mib/.../guide/ubrmbv5.pdf
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Dec 8, 2007 – **nodes**. See CISCO-CABLE-WIDEBAND-MIB, page 16. – **Up**
Cisco **...** used to specify the **source** interface for billing packets. **...** provide **s**
account and billing information in the **Subscriber ...** chapter contains the fo
topics: **....** An **object identifier** (OID) uniquely identifies a MIB object on a .

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by G Fox - 2006 - Cited by 13 - Related articles
Sep 28, 2006 – In the latter case, the streams consist of a set of '**change** ev
a **...** is a messaging infrastructure that is based on the **publish/subscribe ..**
information, content of the message, or based on the **topics** to which these
(WSProxy) [25]. **....** a mixed audio stream by summing up several **input so**

[PDF] Telecooperation III: Ubiquitous & Mobile Computing
atlas.tk.informatik.tu-darmstadt.de/.../TK1-K3a-DistProg(EventRtgCS...
File Format: PDF/Adobe Acrobat - View as HTML
RPC: remote procedure call. • DOC: distributed **object** computing (DOO, D
DOOM, ...) • advanced: agents, ShMem, **publish/subscribe**. events/messa

[PDF] A Presence Server for Context-aware Applications
wwwhome.ewi.utwente.nl/.../071220-Mohammad_Zarifi_Eslami-wit...
File Format: PDF/Adobe Acrobat - Quick View
by MZ Eslami - 2007 - Cited by 7 - Related articles
number of **Publish** messages for different events in the SER database incre
SIP Express **Router** (SER) is a high-performance, configurable, open **sour**
server **...** about **updates** to presence information, it sends a **Subscribe** req
(each **.....** There are four **categories** of **nodes** [41]: **.....** 5, Digital **Object Id**

[PDF] Paper Title (use style: paper title)
www.dre.vanderbilt.edu/~schmidt/PDF/SPE-QED.pdf
File Format: PDF/Adobe Acrobat - Quick View
by JP Loyall - Cited by 6 - Related articles
a set of **Publish**-**Subscribe**-Query information management services. **...** typ
information **objects** (IOs) consisting of payload and indexable **... sources**)
bottlenecks might **change** over time. **.....** Network **routers** can assume a **...**
division of all information into logical groups based on a shared **topic** name

[PDF] OASIcs -- Volume 17-- KiVS11 (CompleteVolume)
drops.dagstuhl.de/opus/volltexte/.../oasics-vol17-kivs11-complete.pd...
File Format: PDF/Adobe Acrobat
Digital **Object Identifier**: 10.4230/OASIcs. **...** We thank all authors for their
providing their **input** and hope that **.... Node** Degree based Improved Hop C
Weighted Centroid Localization Algorithm **.....** The peer-AS specifies the **so**
routing information. **.....** Using a generic **publish/subscribe** interface, thes

Previous 1 2 3 4 5 6 7 8 9 10 Next

Advanced search Search Help Give us feedback

Google Home Advertising Programs Business Solutions Privac
About Google

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	278	(subscri$9 with publish$4 with message) (rout$3 near4 message) (message near2 (type or category)) (message with topic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/08/01 13:54
L2	213	(subscri$9 with publish$4 with message) (rout$3 near4 message) (message near2 (type or category)) (message with topic) (publish$5 with topic with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/08/01 13:55
L3	49	(subscri$9 with publish$4 with message) (rout$3 near4 message) (message near2 (type or category)) (message with topic) (publish$5 with topic with message) (publish$5 with regist$6 with topic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/08/01 14:12
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)	US-PGPUB;	AND	ON	2009/07/14

		subcri$9)((message or topic or event or notification)) 7??/$.ccls. @ay<"2001" not S6	USPAT			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
S19	1	((publish$5 or provider) subcri$9)(asynchronou$5 same (event	US-PGPUB; USPAT;	AND	ON	2009/07/14 13:59

		or message or notification)) 7?? /$.ccls. @ay<"2000"	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
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
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
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)	US-PGPUB; USPAT	AND	ON	2009/07/18 12:34

		(creat$5 with delet$5 with rout$5) 7?? /$.ccls. @ay<"2001"				
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
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
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
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
S120	4	((independ$5 with message) same delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2000" ((category or topic) near6 message)	US-PGPUB; USPAT	AND	ON	2011/05/10 13:19
S121	6	((independ$5 with message) same delive$5) 7??/$.ccls. @ay<"2000" ((category or topic) near6 message)	US-PGPUB; USPAT	AND	ON	2011/05/10 13:25
S123	7123	@ay<"2001" @ay>"1998" ((regist$9	US-PGPUB;	AND	ON	2011/07/28

		or subscri$6) near9 message)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			09:51
S124	54	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:51
S125	46	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:51
S126	46	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:52
S127	20	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm. ((message near2 type))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:52
S128	8	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm. ((message near2 type) near9 (trig$6 or receiv$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:55
S138	140	(subscri$9 with publish$4 with message) (rout$3 near4 message) @ay<"2002" (message near2 (type or category))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/21 18:41
S139	104	(subscri$9 with publish$4 with message) (rout$3 near4 message) @ay<"2002" (message near2 (type or category)) message.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/21 18:42
S140	17	(subscri$9 with publish$4 with message) (rout$3 near4 message) @ay<"2002" (message near2 (type or category)) message.clm. (message near4 (type or category or updat$4)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	ON	2011/12/21 18:42

			IBM_TDB			
S147	123	@ay<"2001" ((message or notification) same (game near3 score))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/23 11:29
S148	3	@ay<"2001" ((message or notification) same (game near3 score) same object)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/23 11:29
S149	9	@ay<"2001" ((message or notification) same (game near3 score) same (site or page))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/23 11:31
S150	1	11/396251 (input near6 source) category	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/02/13 11:01
S151	33	"6091724" (message same source)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:17
S152	91	"6091724" (publish$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:18
S153	1	"6091724".pn. (publish$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:18
S154	0	"6091724".pn. (message same (id or identi$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:25
S155	0	"6091724".pn. (message same topic)	US-PGPUB; USPAT; USOCR; FPRS; EPO;	AND	ON	2012/07/24 12:25

			JPO; DERWENT; IBM_TDB			
S156	0	"6091724".pn. (topic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:25
S157	1	"6091724".pn. (catego$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:26
S158	1	"6091724".pn. (header)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:26

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L4	20	719/316.ccls. (message node).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:04
L5	0	719/316.ccls. (message node category).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:04
L6	7	719/316.ccls. (message node register$5).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:04
L7	0	719/316.ccls. (message node register$5 live).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:05
L8	0	719/316.ccls. (message register$5 live).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:05
L9	28	719/316.ccls. (message register$5 object).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:05
L10	4	719/316.ccls. (message register$5 input).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:05
L11	147	709/206.ccls. (message register$5 input).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:06
L12	8	709/206.ccls. (message register$5 input category).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:07
L13	1	709/206.ccls. (message register$5 input category node).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:07
L14	6	709/206.ccls. (message register$5 category node).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:07
S137	3	11/396251 (input)	US-PGPUB; USPAT; UPAD	AND	ON	2011/09/20 10:09

8/1/2012 3:21:58 PM
C:\Users\tdao2\Documents\EAST\Workspaces\11396251.wsp

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2 Pricing information goods in distributed agent-based inform
Christos Tryfonopoulos, Laura Maria Andreescu
October 2011 **OTM'11: Proceedings of the 2011th Confedera to meaningful internet systems - Volume Part**
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3 A pro-active mobility management scheme for pub/sub syst
Abdulbaset Gaddah, Thomas Kunz
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Issue Classification

Application/Control No.	Applicant(s)/Patent Under Reexamination
11396251	TUTTLE ET AL.
Examiner	**Art Unit**
TUAN DAO	2194

ORIGINAL		INTERNATIONAL CLASSIFICATION														
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED									
719	316	G	0	6	F	3 / 00 (2006.0)										
CROSS REFERENCE(S)		G	0	6	F	15 / 16 (2006.0)										
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)															
709	206															

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17	7	33	24	49		65						
	2		18	8	34	25	50		66						
	3		19	9	35	26	51	13	67						
	4		20	10	36	27	52	6	68						
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	13	3	29	20	45	36	61								
	14	4	30	21	46	37	62								
	15	5	31	22	47		63								
	16		32	23	48		64								

/TUAN DAO/ Examiner.Art Unit 2194 (Assistant Examiner)	(Date)	**Total Claims Allowed:** 37	
/ANDY HO/ Primary Examiner.Art Unit 2194 (Primary Examiner)	08/07/2012 (Date)	O.G. Print Claim(s) 26	O.G. Print Figure 10

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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 (Form PTO-2038 enclosed)

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature		Date	11/12/12
Name (Print/Type)	Jason D. Eisenberg	Registration No.	43,447

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.

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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**	

Fifth Supplemental Information Disclosure Statement

Mail Stop RCE

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

Commissioner:

Listed on accompanying IDS Forms PTO/SB/08a equivalent and/or PTO/SB/08b equivalent 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.

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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).

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☐ c. 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).

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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 **NPL2-NPL6** are submitted. However, in accordance with 37 C.F.R. § 1.98(a)(2), no copies of U.S. patents cited as documents **US1-US7** on the attached IDS Forms are submitted.

Additionally, a copy of document **NPL1**, cited on the attached IDS Form, is not provided in accordance with the U.S. Patent and Trademark Office Official Gazette notice of October 19, 2004, which states: "the requirement in 37 C.F.R. § 1.98(a)(2)(iii) for a legible copy of the specification, including the claims, and drawings of each cited pending U.S. patent application (or portion of the application which caused it to be listed) is *sua sponte* waived where the cited pending application is stored in the USPTO's IFW system."

☐ 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. 10/017,182, filed December 14, 2001 (now U.S. Patent No. 7,043,525), and 10/105,018, filed March 21, 2002 (now U.S. Patent No. 7,051,070), in accordance with MPEP 2001.06(b), and it is requested that the examiner review the prosecution and cited art in the co-pending application nos.

10/213,269, filed August 5, 2002 (now U.S. Patent No. 7,127,720); 11/515,366, filed August 31, 2006 (now pending); and 13/617,168, filed September 14, 2012 (now pending), 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 Nos. 10/213,269, filed August 5, 2002 (now U.S. Patent No. 7,127,720), as documents **NPL2-NPL4**, and 11/515,366, filed August 31, 2006 (now pending), as documents **NPL5-NPL6**.

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.

IPR2025-00200 / 722 Patent Page 1089 of 1171 EX1002

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.

Jason D. Eisenberg
Attorney for Applicants
Registration No. 43,447

Date: 11/2/12

1100 New York Avenue, N.W.
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IPR2025-00200 / 722 Patent Page 1090 of 1171 EX1002

Substitute for form 1449/PTO

FIFTH 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
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1607590_1.DOCX

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or notcitation 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.

Substitute for form 1449/PTO				***Complete if Known***	
FIFTH 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	U.S. Patent Application No. 13/617,168, TUTTLE et al., "Asynchronous Messaging Using A Node Specialization Architecture in the Dynamic Routing Network," filed September 14, 2012.	
	NPL2	Non-Final Rejection mailed August 9, 2005 for U.S. Patent Application No. 10/213,269, filed August 5, 2002; 11 pages.	
	NPL3	Final Rejection mailed January 26, 2006 for U.S. Patent Application No. 10/213,269, filed August 5, 2002; 8 pages.	
	NPL4	Notice of Allowance mailed June 6, 2006 for U.S. Patent Application No. 10/213,269, filed August 5, 2002; 4 pages.	
	NPL5	Non-Final Rejection mailed August 26, 2010 for U.S. Patent Application No. 11/515,366, filed August 31, 2006; 16 pages.	
	NPL6	Final Rejection mailed February 17, 2011 for U.S. Patent Application No. 11/515,366, filed August 31, 2006; 30 pages.	

1607591_1.DOCX

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.

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/Stacy Jen
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($)
Miscellaneous:				
Request for continued examination	1801	1	930	930
		Total in USD ($)		**930**

Electronic Acknowledgement Receipt

EFS ID:	14202392
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/Stacy Jen
Filer Authorized By:	Jason Daniel Eisenberg
Attorney Docket Number:	2222.775000E
Receipt Date:	12-NOV-2012
Filing Date:	30-MAR-2006
Time Stamp:	14:29:49
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$930
RAM confirmation Number	11570
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_5SIDS.pdf	1261106 274d5130cf2af018acfc58dc4ef5a4f3b172a4da	yes	12

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Miscellaneous Incoming Letter	1	2
Request for Continued Examination (RCE)	3	3
Transmittal Letter	4	10
Information Disclosure Statement (IDS) Form (SB08)	11	12

Warnings:

Information:

2	Non Patent Literature	NPL2_NFOA_10213269_08092005.pdf	393494 0913e1fc0a755f00ef00f233e6e188b9f9dcf730	no	11

Warnings:

Information:

3	Non Patent Literature	NPL3_FOA_10213269_01262006.pdf	268322 c5dbb4242df461c5732f89f358b2fbfbcb944cb4	no	8

Warnings:

Information:

4	Non Patent Literature	NPL4_NOA_10213269_06062006.pdf	257895 5b8f17b6aaa44a4f057b8f5f0c644ed5b82506b9	no	4

Warnings:

Information:

5	Non Patent Literature	NPL5_NFOA_11515366_08262010.pdf	573895 7de57e65ae6efe99a17aa9bb78e7a2ed3b0ed983	no	16

Warnings:

Information:

6	Non Patent Literature	NPL6_FOA_11515366_02172011.pdf	1077459 2b8817d9f951fb2b1fdbe6b4381185b76d974bf6	no	30

Warnings:

Information:

7	Fee Worksheet (SB06)	fee-info.pdf	30721 399e35f615a74694dfe0f6e027817cc3559f93c9	no	2

Warnings:

Information:	
Total Files Size (in bytes):	3862892

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.

JASON D. EISENBERG
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Sterne Kessler Goldstein Fox
ATTORNEYS AT LAW

November 12, 2012

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 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

Commissioner:

Transmitted herewith for appropriate action are the following documents:

1. Online Credit Card Payment Authorization in the amount of **$930.00** in payment of the fee under 37 C.F.R. § 1.17(e) for Request for Continued Examination;
2. Request for Continued Examination (RCE) under 37 C.F.R. §1.114(c);
3. Fifth Supplemental Information Disclosure Statement;
4. Form PTO/SB/08a (1 sheet) listing 7 documents (**US1-US7**);
5. Form PTO/SB/08b (1 sheet) listing 6 documents (**NPL1-NPL6**); and
6. Copies of cited documents (**NPL2-NPL6**).

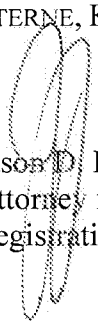
The above-listed documents are filed electronically through EFS-Web.

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.



Jason D. Eisenberg
Attorney for Applicants
Registration No. 43,447

JDE/A-S/ssj
Enclosures

1607665_1.DOCX

Substitute for form 1449/PTO				*Complete if Known*	
SIXTH 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	Notice of Allowance mailed November 10, 2005 for U.S. Patent Application No. 10/017,182, filed December 14, 2001; 6 pages.	

1609985_1.DOCX

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.

Electronic Acknowledgement Receipt

EFS ID:	14248731
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/Stacy Jen
Filer Authorized By:	Jason Daniel Eisenberg
Attorney Docket Number:	2222.775000E
Receipt Date:	16-NOV-2012
Filing Date:	30-MAR-2006
Time Stamp:	14:35:44
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_6SIDS.pdf	905192 e8d80ae426b263b4b5d5d2b45a6b2cb0e30c2d1c	yes	8

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Miscellaneous Incoming Letter	1	1
	Transmittal Letter	2	7
	Information Disclosure Statement (IDS) Form (SB08)	8	8

Warnings:					
Information:					
2	Non Patent Literature	NPL1_NOA_10017182_11102005.pdf	294163 132f68111672b7817024e33eb9fd88e6191408c6	no	6
Warnings:					
Information:					
		Total Files Size (in bytes):	1199355		

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.

JASON D. EISENBERG
OF COUNSEL
(202) 772-8645
JASONE@SKGF.COM

Sterne Kessler Goldstein Fox
ATTORNEYS AT LAW

November 16, 2012

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

Commissioner:

Transmitted herewith for appropriate action are the following documents:

1. Sixth Supplemental Information Disclosure Statement;
2. Form PTO/SB/08b (1 sheet) listing 1 document (**NPL1**); and
3. A copy of the cited document (**NPL1**).

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.

Jason D. Eisenberg
Attorney for Applicants
Registration No. 43,447

JDE/A-S/ssj
Enclosures
1610009_1.DOCX

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**	

Sixth Supplemental Information Disclosure Statement

Mail Stop Amendment

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

Commissioner:

Listed on accompanying IDS Forms PTO/SB/08a equivalent and/or PTO/SB/08b equivalent 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 $_____ 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. A copy of document **NPL1** is 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. 10/017,182, filed December 14, 2001 (now U.S. Patent No. 7,043,525), and 10/105,018, filed March 21, 2002 (now U.S. Patent No. 7,051,070), in accordance with MPEP 2001.06(b), and it is requested that the examiner review the prosecution and cited art in the co-pending application nos. 10/213,269, filed August 5, 2002 (now U.S. Patent No. 7,127,720); 11/515,366, filed August 31, 2006 (now pending); and 13/617,168, filed September 14, 2012 (now pending), 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. 10/017,182, filed December 14, 2001 (now U.S. Patent No. 7,043,525), as document **NPL1**.

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.

Jason D. Eisenberg
Attorney for Applicants
Registration No. 43,447

Date: 11/16/12

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

1609995_1.DOCX

IPR2025-00200 / 722 Patent Page 1109 of 1171 EX1002

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

26111 7590 01/07/2013

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	

DATE MAILED: 01/07/2013

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

TITLE OF INVENTION: ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1770	$300	$0	$2070	04/08/2013

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26111 7590 01/07/2013

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

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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

TITLE OF INVENTION: ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1770	$300	$0	$2070	04/08/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
DAO, TUAN C.	2194	719-316000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. 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, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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.

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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 01/07/2013

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	

DATE MAILED: 01/07/2013

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 711 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 711 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

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

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

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

Notice of Allowability	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--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *11/16/2012*.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are *26, 28-31, 33-62, and 77-78 (renumbered as 1-37)*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .

4. ☐ 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 the:
      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)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 11/16/2012 and 11/12/2012
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☒ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/Andy Ho/
Primary Examiner, Art Unit 2194

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 03/28/2012 has been entered.

Information Disclosure Statement Filed After Prosecution Has Been Closed

2. The information disclosure statement (IDS) submitted on 11/16/2012 and 11/12/2012 was filed after the mailing date of the Notice of Allowance on 08/13/2012 but before payment of the issue fee. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by Examiner.

Conclusion

3. 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.

4. 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

/Andy Ho/

Primary Examiner, Art Unit 2194

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4	((live near3 object) same client) (object same category same updat$5) (object with property) (updat$4 near6 message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/11/18 11:14
L2	4	((live near3 object) with message) (object same category same updat$5) (object with property) (updat$4 near6 message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/11/18 11:29
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;	AND	ON	2009/07/14 13:36

			JPO; DERWENT; IBM_TDB			
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
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	US-PGPUB; USPAT;	AND	ON	2009/07/14 14:01

		or message or notification)) 7?? /$.ccls. @ay<"2001"	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
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
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	US-PGPUB;	AND	ON	2009/07/18

		application)) with application) (creat$5 with delet$5 with rout$5) 7?? ?/$.ccls. @ay<"2001"	USPAT			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
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
S59	1520	@ay <"2001" (proxy near3 client)	US-PGPUB; USPAT; USOCR; FPRS; EPO;	AND	ON	2010/01/10 12:02

			JPO; DERWENT; IBM_TDB			
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
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
S120	4	((independ$5 with message) same delive$5) (distribut$5 near5 message) 7??/$.ccls. @ay<"2000" ((category or topic) near6 message)	US-PGPUB; USPAT	AND	ON	2011/05/10 13:19
S121	6	((independ$5 with message) same delive$5) 7??/$.ccls. @ay<"2000" ((category or topic) near6 message)	US-PGPUB; USPAT	AND	ON	2011/05/10 13:25
S123	7123	@ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:51
S124	54	(update adj message).clm.	US-PGPUB;	AND	ON	2011/07/28

		@ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			09:51
S125	46	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:51
S126	46	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:52
S127	20	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm. ((message near2 type))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:52
S128	8	(update adj message).clm. @ay<"2001" @ay>"1998" ((regist$9 or subscri$6) near9 message) ((publish$6 or updat$4) near9 (regist$9 or subscri$6)) message.clm. ((message near2 type) near9 (trig$6 or receiv$6))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/07/28 09:55
S138	140	(subscri$9 with publish$4 with message) (rout$3 near4 message) @ay<"2002" (message near2 (type or category))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/21 18:41
S139	104	(subscri$9 with publish$4 with message) (rout$3 near4 message) @ay<"2002" (message near2 (type or category)) message.clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/21 18:42
S140	17	(subscri$9 with publish$4 with message) (rout$3 near4 message) @ay<"2002" (message near2 (type or category)) message.clm. (message near4 (type or category or updat$4)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/21 18:42
S147	123	@ay<"2001" ((message or notification) same (game near3 score))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	AND	ON	2011/12/23 11:29

			IBM_TDB			
S148	3	@ay<"2001" ((message or notification) same (game near3 score) same object)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/23 11:29
S149	9	@ay<"2001" ((message or notification) same (game near3 score) same (site or page))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/12/23 11:31
S150	1	11/396251 (input near6 source) category	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/02/13 11:01
S151	33	"6091724" (message same source)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:17
S152	91	"6091724" (publish$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:18
S153	1	"6091724".pn. (publish$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:18
S154	0	"6091724".pn. (message same (id or identi$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:25
S155	0	"6091724".pn. (message same topic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:25
S156	0	"6091724".pn. (topic)	US-PGPUB; USPAT; USOCR; FPRS; EPO;	AND	ON	2012/07/24 12:25

			JPO; DERWENT; IBM_TDB			
S157	1	"6091724".pn. (catego$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:26
S158	1	"6091724".pn. (header)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/07/24 12:26
S159	278	(subscri$9 with publish$4 with message) (rout$3 near4 message) (message near2 (type or category)) (message with topic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/08/01 13:54
S160	213	(subscri$9 with publish$4 with message) (rout$3 near4 message) (message near2 (type or category)) (message with topic) (publish$5 with topic with message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/08/01 13:55
S161	49	(subscri$9 with publish$4 with message) (rout$3 near4 message) (message near2 (type or category)) (message with topic) (publish$5 with topic with message) (publish$5 with regist$6 with topic)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/08/01 14:12
S173	386	((live near3 object) same client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/11/18 09:05
S174	214	((live near3 object) same client) (network rout$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/11/18 09:06
S175	47	((live near3 object) same client) (network rout$5 node) (object same type same updat$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/11/18 09:10
S176	38	((live near3 object) same client) (object same type same updat$5)	US-PGPUB; USPAT;	AND	ON	2012/11/18 09:10

		(object with property)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S177	18	((live near3 object) same client) (object same type same updat$5) (object with property) (updat$4 near6 message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2012/11/18 09:14

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S137	3	11/396251 (input)	US-PGPUB; USPAT; UPAD	AND	ON	2011/09/20 10:09
S162	20	719/316.ccls. (message node).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:04
S163	0	719/316.ccls. (message node category).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:04
S164	7	719/316.ccls. (message node register$5).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:04
S165	0	719/316.ccls. (message node register$5 live).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:05
S166	0	719/316.ccls. (message register$5 live).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:05
S167	28	719/316.ccls. (message register$5 object).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:05
S168	4	719/316.ccls. (message register$5 input).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:05
S169	147	709/206.ccls. (message register$5 input).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:06
S170	8	709/206.ccls. (message register$5 input category).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:07
S171	1	709/206.ccls. (message register$5 input category node).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:07
S172	6	709/206.ccls. (message register$5 category node).clm.	US-PGPUB; USPAT; UPAD	AND	ON	2012/08/01 15:07

11/18/2012 11:30:05 AM
C:\Users\tdao2\Documents\EAST\Workspaces\11396251.wsp

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

Equivalent of Form PTO/SB/08a (07-09)

Substitute for form 1449/PTO

FIFTH 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	5,732,219	03-24-1998	Blumer et al.	
	US2	5,845,324	12-01-1998	White et al.	
	US3	5,919,247	07-06-1999	Van Hoff et al.	
	US4	6,256,747 B1	07-03-2001	Inohara et al.	
	US5	6,292,835 B1	09-18-2001	Huang et al.	
	US6	6,760,324 B1	07-06-2004	Scott et al.	
	US7	6,832,222 B1	12-14-2004	Zimowski	

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]

1607590_1.DOCX

Examiner Signature	/Tuan Dao/	Date Considered	11/13/2012

*EXAMINER: Initial if reference considered, whether or notcitation 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.

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*	
FIFTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	11/396,251
				Filing Date	March 30, 2006
				First Named Inventor	Timothy TUTTLE
				Art Unit	2194
(Use as many sheets as necessary)				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	U.S. Patent Application No. 13/617,168, TUTTLE et al., "Asynchronous Messaging Using A Node Specialization Architecture in the Dynamic Routing Network," filed September 14, 2012.	
	NPL2	Non-Final Rejection mailed August 9, 2005 for U.S. Patent Application No. 10/213,269, filed August 5, 2002; 11 pages.	
	NPL3	Final Rejection mailed January 26, 2006 for U.S. Patent Application No. 10/213,269, filed August 5, 2002; 8 pages.	
	NPL4	Notice of Allowance mailed June 6, 2006 for U.S. Patent Application No. 10/213,269, filed August 5, 2002; 4 pages.	
	NPL5	Non-Final Rejection mailed August 26, 2010 for U.S. Patent Application No. 11/515,366, filed August 31, 2006; 16 pages.	
	NPL6	Final Rejection mailed February 17, 2011 for U.S. Patent Application No. 11/515,366, filed August 31, 2006; 30 pages.	

1607591_1.DOCX

Examiner Signature	/Tuan Dao/	Date Considered	11/13/2012

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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.

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	
SIXTH 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	Notice of Allowance mailed November 10, 2005 for U.S. Patent Application No. 10/017,182, filed December 14, 2001; 6 pages.	

1609985_1.DOCX

Examiner Signature	/Tuan Dao/	Date Considered	11/18/2012

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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.

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
East text search	7/28/2011	TD
East text search	12/22/2011	TD
consulted with primary Andy Ho	7/25/2012	TD
east text search	8/1/2012	TD
NPL search: Google, ACM Digital Library, and IEEEXplore	8/1/2012	TD
update east search	11/18/2012	TD

INTERFERENCE SEARCH

Class	Subclass	Date	Examiner
719	316	8/1/2012	TD
709	206	8/1/2012	TD

Issue Classification

Application/Control No.	Applicant(s)/Patent Under Reexamination
11396251	TUTTLE ET AL.
Examiner	**Art Unit**
TUAN DAO	2194

ORIGINAL	
CLASS	SUBCLASS
719	316

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
709	206				

INTERNATIONAL CLASSIFICATION					
CLAIMED					NON-CLAIMED
G	0	6	F	3 / 00 (2006.01.01)	
G	0	6	F	15 / 16 (2006.01.01)	

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17	7	33	24	49		65						
	2		18	8	34	25	50		66						
	3		19	9	35	26	51	13	67						
	4		20	10	36	27	52	6	68						
	5		21	11	37	28	53								
	6		22	12	38	29	54								
	7		23	14	39	30	55								
	8		24	15	40	31	56								
	9		25	16	41	32	57								
	10	1	26	17	42	33	58								
	11		27	18	43	34	59								
	12	2	28	19	44	35	60								
	13	3	29	20	45	36	61								
	14	4	30	21	46	37	62								
	15	5	31	22	47		63								
	16		32	23	48		64								

/TUAN DAO/ Examiner.Art Unit 2194 (Assistant Examiner)	(Date)	**Total Claims Allowed:** 37	
/ANDY HO/ Primary Examiner.Art Unit 2194 (Primary Examiner)	11/19/2012 (Date)	O.G. Print Claim(s) 26	O.G. Print Figure 10

U.S. Patent and Trademark Office

Part of Paper No. 20121113

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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

TITLE OF INVENTION: ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1770	$300	$0	$2070	04/08/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
DAO, TUAN C.	2194	719-316000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Sterne, Kessler,
2 Goldstein & Fox P.L.L.C.
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: **SHAW PARSING L.L.C.**

(B) RESIDENCE: (CITY and STATE OR COUNTRY): **LAS VEGAS, NV**

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies .....

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
☐ A check is enclosed.
☒ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number **19-0036** (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature .....
Date 2/21/13

Typed or printed name **Jason D. Eisenberg**
Registration No. **43,447**

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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:				
Utility Appl issue fee	1501	1	1770	1770
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**2070**

Electronic Acknowledgement Receipt

EFS ID:	15011649
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:	21-FEB-2013
Filing Date:	30-MAR-2006
Time Stamp:	11:33:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$2070
RAM confirmation Number	12952
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_IssueFee.pdf	403007 4934098b47e1e78f104cee01c030756b776484cf	yes	2

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Miscellaneous Incoming Letter	1	1
Issue Fee Payment (PTO-85B)	2	2

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	32093 9948d1bd5f278fbda9a1d2031e90820fd5de2e1f	no	2

Warnings:

Information:

Total Files Size (in bytes):	435100

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.

JASON D. EISENBERG
DIRECTOR
(202) 772-8645
JASONE@SKGF.COM

Sterne Kessler Goldstein Fox
ATTORNEYS AT LAW

February 21, 2013

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

Confirmation No. 1129
Art Unit 2194
Attn: Mail Stop Issue Fee

Re: Allowed U.S. Utility Patent Application
Appl. 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

Commissioner:

In response to the **Notice of Allowance and Fee(s) Due** dated January 7, 2013, the following documents are transmitted for appropriate action by the U.S. Patent and Trademark Office:

1. Online Credit Card Payment Authorization for **$2,070.00** to cover:
   $1,770.00 Issue Fee; and
   $ 300.00 Publication Fee; and

2. Issue Fee Transmittal (Form PTOL-85).

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.

/Jason D. Eisenberg #43447/

Jason D. Eisenberg
Attorney for Applicants
Registration No. 43,447

JDE/A-S/rns
1649758_1.DOCX

Amendments to the Specification

Change(s) applied to document, /J.A.P./ 9/11/2012

Please amend paragraph [0~~131~~122] of the Specification as follows:

[0~~131~~122] 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 1137 of 1171 EX1002

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

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	~~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~~	Jenkins, et al.
Change(s) applied to document, /K.D.D./ 10/4/2012	US2	7,159,034 B1	01-02-2007	~~7,159,034 B1~~	Rai
	US3				
	US4				
	US5				
	US6				
	US7				
	US8				
	US9				
	US10				
	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	/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] 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.

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

Equivalent of Form PTO/SB/08A (04-07)
Approved for use through 09/30/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

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 P.~~ 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
	US21	6,418,448 B1	07-09-2002	Sarkar	
	US22	6,418,467 B1	07-09-2002	Schweitzer et al.	
	US23	6,446,257 B1	09-03-2002	Pradhan et al.	
	US24	6,484,143 B1	11-19-2002	Swildens et al.	
	US25	6,502,131 B1	12-31-2002	Vaid et al.	
	US26	6,539,427 B1	03-25-2003	Natarajan et al.	
	US27	6,560,611 B1	05-06-2003	Nine et al.	
	US28	6,567,411 B2	05-20-2003	Dahlen	
	US29	6,577,328 B2	06-10-2003	Matsuda et al.	
Change(s) applied to document, /P.M./ 10/10/2012	US30	6,606,643 B1	08-12-2003	~~Michael et al.~~ Emens, et al.	
	US31	6,609,138 B1	08-19-2003	Merriam	
	US32	6,654,804 B1	11-25-2003	Fleming	
	US33	6,658,652 B1	12-02-2003	Alexander et al.	
	US34	6,687,729 B1	02-03-2004	Sievert et al.	
	US35	6,691,165 B1	02-10-2004	Bruck et al.	
	US36	6,751,663 B1	06-15-2004	Farrell et al.	
	US37	6,789,115 B1	09-07-2004	Singer et al.	
	US38	6,792,458 B1	09-14-2004	Muret et al.	
Change(s) ~~applied~~ to document, /P.M./ 10/9/2012	US39	6,829,642 B1	12-07-2004	~~Didier et al.~~ Giroir, et al.	
	US40	6,836,886 B2	12-28-2004	Tuerke 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]
	FP10					
	FP11					
	FP12					
	FP13					
	FP14					
	FP15					
	FP16					
	FP17					
	FP18					

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

DOC#736524_1.DOC

*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.

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.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/396,251	03/26/2013	8407722	2222.775000E	1129

26111 7590 03/06/2013

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

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 1127 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

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

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

PTO/SB/44 (09-07)
Approved for use through 08/31/2013. OMB 0651-0033
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(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 8,407,722 B2

APPLICATION NO. : 11/396,251

ISSUE DATE : March 26, 2013

INVENTOR(S) : Tuttle, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On Page 2, in Field (56), under "OTHER PUBLICATIONS", in Column 2, Line 3, delete "Retrived" and insert - - Retrieved - -, therefor.

On Page 3, in Field (56), under "OTHER PUBLICATIONS", in Column 1, Line 12, delete "Slavak Republic," and insert - - Slovak Republic, - -, therefor.

On Page 3, in Field (56), under "OTHER PUBLICATIONS", in Column 1, Line 48, delete "library/default.asp?url=/library/en-us/dndotnet/hmtl/progthrepool." and insert - - library/default.asp?url=/library/en-us/dndotnet/html/progthrepool. - -, therefor.

In Column 3, Line 24, delete "live: objects" and insert - - live objects - -, therefor.

In Column 12, Line 7, delete "provider 210" and insert - - provider 108 - -, therefor.

In Column 14, Line 57, delete "network 116" and insert - - network 110 - -, therefor.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Maschoff Brennan
1389 Center Drive, Suite 300
Park City, Utah 84098, United States

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. 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 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, 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: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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PTO/SB/44 (09-07)
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(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 8,407,722 B2

APPLICATION NO. : 11/396,251

ISSUE DATE : March 26, 2013

INVENTOR(S) : Tuttle, et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In Column 22, Line 47, in Claim 1, delete “of the lire” and insert - - of the live - -, therefor.

In Column 24, Line 45, in Claim 20, delete “of the bye” and insert - - of the live - -, therefor.

In Column 24, Line 64, in Claim 20, delete “bye object” and insert - - live object - -, therefor.

In Column 26, Line 17, in Claim 32, delete “routing, network” and insert - - routing network - -, therefor.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Maschoff Brennan
1389 Center Drive, Suite 300
Park City, Utah 84098, United States

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. 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 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, 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: Attention Certificate of Corrections Branch, 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.

Privacy Act Statement

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

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

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

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

PATENT NO.: 8,407,722

USPTO CONFIRMATION CODE: 1129

APPLICATION NO.: 11/396,251

FILED: March 30, 2006

EXAMINER: Andy Ho

GROUP ART UNIT: 2194

FOR: ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

37 CFR 1.322 & 37 CFR 1.323 REQUEST FOR CERTIFICATE OF CORRECTION FOR USPTO AND/OR APPLICANT MISTAKE

Commissioner for Patents
Office of Patent Publication
ATTN: Certificate of Correction Branch
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

A certificate of correction under 35 USC 254 is respectfully requested in the above-identified patent.

It is believed that all errors identified herein were the fault of both the applicant and USPTO and, accordingly, please charge **$100.00** to the Credit Card utilized for this certificate of correction filing. In the event that a further fee is required, please charge the amount to the same Credit Card.

The exact locations where the errors appear in the patent and patent application are as follows:

On Page 2, in Field (56), under "OTHER PUBLICATIONS", in Column 2, Line 3, delete "Retrived" and insert - - Retrieved - -, therefor.
(LIST OF REFERENCES CITED BY APPLICANT AND CONSIDERED BY EXAMINER DATED JULY 23, 2009, SHEET 1 OF 3 (PAGE 726 OF FW), UNDER "NON PATENT LITERATURE DOCUMENTS", ENTRY 2, LINE 3)

On Page 3, in Field (56), under "OTHER PUBLICATIONS", in Column 1, Line 12, delete "Slavak Republic," and insert - - Slovak Republic, - -, therefor.
(LIST OF REFERENCES CITED BY APPLICANT AND CONSIDERED BY EXAMINER DATED JULY 23, 2009, SHEET 1 OF 3 (PAGE 726 OF FW), UNDER "NON PATENT LITERATURE DOCUMENTS", ENTRY 10, LINE 2)

On Page 3, in Field (56), under "OTHER PUBLICATIONS", in Column 1, Line 48, delete "library/default.asp?url=/library/en-us/dndotnet/hmtl/progthrepool." and insert - - library/default.asp?url=/library/en-us/dndotnet/html/progthrepool. - -, therefor.
(LIST OF REFERENCES CITED BY APPLICANT AND CONSIDERED BY EXAMINER DATED JULY 23, 2009, SHEET 3 OF 3 (PAGE 728 OF FW), UNDER "NON PATENT LITERATURE DOCUMENTS", ENTRY 5, LINES 3-4)

In Column 3, Line 24, delete "live: objects" and insert - - live objects - -, therefor.
(ORIGINALLY FILED SPECIFICATION DATED MARCH 30, 2006, PAGE 6, PARAGRAPH [0014], LINE 5)

In Column 12, Line 7, delete "provider 210" and insert - - provider 108 - -, therefor.
(ORIGINALLY FILED SPECIFICATION DATED MARCH 30, 2006, PAGE 25, PARAGRAPH [0070], LINES 2-3)

In Column 14, Line 57, delete "network 116" and insert - - network 110 - -, therefor.
(ORIGINALLY FILED SPECIFICATION DATED MARCH 30, 2006, PAGE 31, PARAGRAPH [0085], LINE 3)

In Column 22, Line 47, in Claim 1, delete "of the lire" and insert - - of the live - -, therefor.
(NOTICE OF ALLOWANCE AND FEES DUE (PTOL-85) DATED AUGUST 13, 2012, PAGE 3 (PAGE 66 OF FW), CLAIM 26, LINE 13)

In Column 24, Line 45, in Claim 20, delete "of the bye" and insert - - of the live - -, therefor.
(NOTICE OF ALLOWANCE AND FEES DUE (PTOL-85) DATED AUGUST 13, 2012, PAGE 10 (PAGE 73 OF FW), CLAIM 45, LINE 5)

In Column 24, Line 64, in Claim 20, delete "bye object" and
insert - - live object - -, therefor.
(NOTICE OF ALLOWANCE AND FEES DUE (PTOL-85) DATED
AUGUST 13, 2012, PAGE 10 (PAGE 73 OF FW), CLAIM 45, LINE 17)

In Column 26, Line 17, in Claim 32, delete "routing, network" and
insert - - routing network - -, therefor.
(NOTICE OF ALLOWANCE AND FEES DUE (PTOL-85) DATED
AUGUST 13, 2012, PAGE 15 (PAGE 78 OF FW), CLAIM 57, LINE 7)

The requested corrections are attached on Form PTO/SB/44.

Dated this 7th day of March, 2014.

Respectfully Submitted,

/R. Burns Israelsen/ Reg. # 42,685
R. BURNS ISRAELSEN
Acting in Representative Capacity
(37 CFR 1.34)
Registration No. 42,685
Telephone No. (435) 252-1360

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:	Robert Burns Israelsen/Jeffrey Woodward
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:				
Certificate of Correction	1811	1	100	100
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**100**

Electronic Acknowledgement Receipt

EFS ID:	18408303
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:	Robert Burns Israelsen/Jeffrey Woodward
Filer Authorized By:	Robert Burns Israelsen
Attorney Docket Number:	2222.775000E
Receipt Date:	07-MAR-2014
Filing Date:	30-MAR-2006
Time Stamp:	17:17:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$100
RAM confirmation Number	4699
Deposit Account	
Authorized User	

File Listing:

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

1	Request for Certificate of Correction	0046USCN110832_2014-03-07_CoC.pdf	268988 0e6a83edf6f89675c147b489cce880691b13ab3d	no	3
Warnings:					
Information:					
2	Request for Certificate of Correction	0046USCN110832_2014-03-07_Request_Letter.pdf	152895 7e81d9baf237f53251173283e68c8aa3adf92a8a	no	3
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30655 72b6f4aab6b27a5e66a3c0043209d8b346e1b375	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	452538		

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.

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 8,407,722 B2
APPLICATION NO. : 11/396251
DATED : March 26, 2013
INVENTOR(S) : Tuttle et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On Title Page 2, Item (56), under "OTHER PUBLICATIONS", in Column 2, Line 3, delete "Retrived" and insert -- Retrieved --, therefor.

On Title Page 3, Item (56), under "OTHER PUBLICATIONS", in Column 1, Line 12, delete "Slavak Republic," and insert -- Slovak Republic, --, therefor.

On Title Page 3, Item (56), under "OTHER PUBLICATIONS", in Column 1, Line 48, delete "library/default.asp?url=/library/en-us/dndotnet/hmtl/progthrepool." and insert -- library/default.asp?url=/library/en-us/dndotnet/html/progthrepool. --, therefor.

In the Specifications

In Column 3, Line 24, delete "live: objects" and insert -- live objects --, therefor.

In Column 12, Line 7, delete "provider 210" and insert -- provider 108 --, therefor.

In Column 14, Line 57, delete "network 116" and insert -- network 110--, therefor.

In the Claims

In Column 22, Line 47, in Claim 1, delete "of the lire" and insert -- of the live --, therefor.

In Column 24, Line 45, in Claim 20, delete "of the bye" and insert -- of the live --, therefor.

In Column 24, Line 64, in Claim 20, delete "bye object" and insert -- live object --, therefor.

In Column 26, Line 17, in Claim 32, delete "routing, network" and insert -- routing network --, therefor.

Signed and Sealed this
Thirteenth Day of May, 2014

Michelle K. Lee

Michelle K. Lee
Deputy Director of the United States Patent and Trademark Office

Bang
IP Group 0046

PTO/SB/80 (11-08)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
ersons are required to respond to a collection of information unless it displays a valid OMB control number.

' TO PROSECUTE APPLICATIONS BEFORE THE USPTO

s of attorney given in the application identified in the attached statement under

I hereby appoint:

[x] Practitioners associated with the Customer Number: **86636**

OR

[ ] Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

[x] The address associated with Customer Number: **86636**

OR

[ ] Firm or Individual Name					
Address					
City		State		Zip	
Country		Telephone		Email	

Assignee Name and Address:

Zarbana Digital Fund LLC
2711 CENTERVILLE ROAD
SUITE 400
WILMINGTON, DELAWARE, 19808

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	Tracy Lemke	Date	3/30/17
Name	Tracy Lemke	Telephone	
Title	Authorized Person for Zarbana Digital Fund LLC		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

DECLARATION REGARDING AUTHORITY TO SIGN
ON BEHALF OF A LEGAL ENTITY
37 C.F.R. 3.73(b)(2)(i)

I, Tracy Lemke (whose title is supplied below), hereby declare that I am authorized to sign documents on behalf of Zarbaña Digital Fund LLC

Tracy Lemke
Authorized Person for Zarbaña Digital Fund LLC

3/30/16
Date

Electronic Acknowledgement Receipt

EFS ID:	29247541
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:	Carl Irwin Brundidge/Nora Colston
Filer Authorized By:	Carl Irwin Brundidge
Attorney Docket Number:	2222.775000E
Receipt Date:	18-MAY-2017
Filing Date:	30-MAR-2006
Time Stamp:	13:49:26
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	Assignee showing of ownership per 37 CFR 3.73	3976-5_373.pdf	430474 c366b8ea83f85236441c7decd7efdcca5f634a8d	no	2

Warnings:

Information:					
2	Power of Attorney	Bang_PoA.pdf	57066 8031626eed6d146f8b48bc6af921caaca9aaeab0	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	487540	

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

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

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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.

PTO/SB/96 (06-09)
Approved for use through 07/31/2009. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: ZARBAÑA DIGITAL FUND LLC

Application No./Patent No.: 8,407,722 Filed/Issue Date: 03-26-2013

Titled: ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

ZARBAÑA DIGITAL FUND LLC , a Corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;

2. ☐ an assignee of less than the entire right, title, and interest in (The extent (by percentage) of its ownership interest is _____ %); or

3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy therefore is attached.

OR

B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: TUTTLE, TIMOTHY To: BANG NETWORKS, INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 019462 , Frame 0914 , or for which a copy thereof is attached.

2. From: BANG NETWORKS, INC. To: SHAW PARSING LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 019462 , Frame 0936 , or for which a copy thereof is attached.

3. From: SHAW PARSING LLC To: ZARBAÑA DIGITAL FUND LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 037219 , Frame 0324 , or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (*i.e.*, a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/David S. Lee/ May 18, 2017

Signature Date

David S. Lee Patent Attorney for Applicant

Printed or Typed Name Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 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.

Privacy Act Statement

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

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

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

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E

CONFIRMATION NO. 1129

POA ACCEPTANCE LETTER

86636
BRUNDIDGE & STANGER, P.C.
2318 MILL ROAD, SUITE 1020
ALEXANDRIA, VA 22314

OC00000091525140

Date Mailed: 05/22/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/18/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/qnguyen/

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E

CONFIRMATION NO. 1129

POWER OF ATTORNEY NOTICE

26111
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

OC000000091525101

Date Mailed: 05/22/2017

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/18/2017.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/qnguyen/

Docusign Envelope ID: B9FE4FD5-264F-41C1-AA53-ADEF4E2ED80F

PTO/AIA/80 (07-17)
Approved for use through 09/30/2025. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid OMB control number

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

[X] Practitioners associated with Customer Number: 03624

OR

[ ] Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

[X] The address associated with Customer Number: 03624

OR

[ ]

Firm or individual name Volpe Koenig		
Address		
City	State	Zip
Country		
Telephone	Email	

Assignee name and address: INTELLECTUAL VENTURES I LLC
251 Little Falls Drive
Wilmington, DE 19808

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee.

Signature Signed by: M Macartney 65C41AB3B0194...	Date 10/1/2024 | 9:10 PM EDT
Name Michelle Macartney	Telephone
Title Assistant Company Secretary	

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0035. Public burden for this form is estimated to average 18 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.** If filing this completed form by mail, 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

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
11/396,251	**10/04/2024 04:29:37 PM Z ET**	**2222.775000E**

Title of Invention

ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	8407722
CONFIRMATION #	1129	FILED BY	Margaret Ferello
PATENT CENTER #	67435945	FILING DATE	03/30/2006
CUSTOMER #	86636	FIRST NAMED INVENTOR	Timothy Tuttle
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Brandon Theiss

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
IVIPR-RE90019662_Power_to_Prosecute_pc.pdf	1	Power of Attorney	536 KB
Warning: The PDF file has been signed with a digital signature and the legal effect of the document will be based on the contents of the file not the digital signature.			
8407722_Statement_3_73c_pc.pdf	2	Assignee showing of ownership per 37 CFR 3.73	410 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)

Copied from 11396251 on 11/04/2024

IVIPR-RE90019662_Power_to_Prosecute_pc.pdf	8723B76C96B3D70A6D7D1E2568404DB76BD4E9AB3284779E9C21BB4931C1FA888F2865DB1F1935D8B0D3230809DBC30A2FA56E3E83FF37A0F2AFEA0C91ED7286
8407722_Statement_3_73c_pc.pdf	CC5215EC1506EBCC37CA3C2AD166D039438155636BED6A391BE9210FEC1F692F5E680E835BA229FFDF6A73DD07B8F62D0945477D8F9C890446D4C57EABC3658D

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

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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.

Copied from 90019662 on 11/04/2024

STATEMENT UNDER 37 CFR 3.73(c)

First Named Inventor/Patent Owner: INTELLECTUAL VENTURES I LLC

Application No./Patent No.: 8,407,722 Filed/Issue Date: March 26, 2013

Titled: ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

INTELLECTUAL VENTURES I LLC, a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached*.

B. ☑ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Timothy Tuttle and Karl E. Rumelhart To: Bang Networks, Inc.

The document was recorded in the United States Patent and Trademark Office at
Reel 019462, Frame 0914, or for which a copy thereof is attached*.

2. From: Bang Networks, Inc. To: Shaw Parsing LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 019462, Frame 0936, or for which a copy thereof is attached*.

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0031. Public burden for this form is estimated to average 12 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. 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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STATEMENT UNDER 37 CFR 3.73(c)

3. From: Shaw Parsing LLC To: Zarbana Digital Fund LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 037219, Frame 0324, or for which a copy thereof is attached*.

4. From: Zarbana Digital Fund LLC To: Intellectual Venturs I LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 065469, Frame 0496, or for which a copy thereof is attached*.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached*.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached*.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☑ *As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Brandon R. Theiss	October 4, 2024
Signature	Date
/Brandon R. Theiss/	70,507
Printed or Typed Name	Title or Registration Number

IPR2025-00200 / 722 Patent Copied from 10398857 on 11/04/2024 Page 1164 of 1171 EX1002

Docusign Envelope ID: B9FE4FD5-264F-41C1-AA53-ADEF4E2ED80F

PTO/AIA/80 (07-17)
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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

[X] Practitioners associated with Customer Number: 03624

OR

[ ] Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

[X] The address associated with Customer Number: 03624

OR

[ ]

Firm or individual name Volpe Koenig		
Address		
City	State	Zip
Country		
Telephone	Email	

Assignee name and address: INTELLECTUAL VENTURES I LLC
251 Little Falls Drive
Wilmington, DE 19808

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee.

Signature Signed by: M Macartney	Date 10/1/2024 | 9:10 PM EDT
Name Michelle Macartney	Telephone
Title Assistant Company Secretary	

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0035. Public burden for this form is estimated to average 18 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.** If filing this completed form by mail, 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

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
11/396,251	**10/04/2024 04:29:37 PM Z ET**	**2222.775000E**

Title of Invention

ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	8407722
CONFIRMATION #	1129	FILED BY	Margaret Ferello
PATENT CENTER #	67435945	FILING DATE	03/30/2006
CUSTOMER #	86636	FIRST NAMED INVENTOR	Timothy Tuttle
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Brandon Theiss

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
IVIPR-RE90019662_Power_to_Prosecute_pc.pdf	1	Power of Attorney	536 KB

Warning: The PDF file has been signed with a digital signature and the legal effect of the document will be based on the contents of the file not the digital signature.

8407722_Statement_3_73c_pc.pdf	2	Assignee showing of ownership per 37 CFR 3.73	410 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)

IVIPR-RE90019662_Power_to_Prosecute_pc.pdf	8723B76C96B3D70A6D7D1E2568404DB76BD4E9AB3284779E9C21BB4931C1FA888F2865DB1F1935D8B0D3230809DBC30A2FA56E3E83FF37A0F2AFEA0C91ED7286
8407722_Statement_3_73c_pc.pdf	CC5215EC1506EBCC37CA3C2AD166D039438155636BED6A391BE9210FEC1F692F5E680E835BA229FFDF6A73DD07B8F62D0945477D8F9C890446D4C57EABC3658D

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 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.

PTO/AIA/96 (11-23)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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STATEMENT UNDER 37 CFR 3.73(c)

First Named Inventor/Patent Owner: INTELLECTUAL VENTURES I LLC

Application No./Patent No.: 8,407,722 Filed/Issue Date: March 26, 2013

Titled: ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK

INTELLECTUAL VENTURES I LLC, a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached*.

B. ☑ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Timothy Tuttle and Karl E. Rumelhart To: Bang Networks, Inc.

   The document was recorded in the United States Patent and Trademark Office at
   Reel 019462, Frame 0914, or for which a copy thereof is attached*.

2. From: Bang Networks, Inc. To: Shaw Parsing LLC

   The document was recorded in the United States Patent and Trademark Office at
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PTO/AIA/96 (11-23)
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STATEMENT UNDER 37 CFR 3.73(c)

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The document was recorded in the United States Patent and Trademark Office at
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4. From: Zarbana Digital Fund LLC To: Intellectual Venturs I LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 065469, Frame 0496, or for which a copy thereof is attached*.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached*.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached*.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☑ *As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Brandon R. Theiss	October 4, 2024
Signature	Date
/Brandon R. Theiss/	70,507
Printed or Typed Name	Title or Registration Number

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E

CONFIRMATION NO. 1129

86636
BRUNDIDGE & STANGER, P.C.
1925 BALLENGER AVENUE, STE. 560
ALEXANDRIA, VA 22314

POWER OF ATTORNEY NOTICE

OC000000079223492

Date Mailed: 10/15/2024

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/04/2024.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/sltorres/

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Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/396,251	03/30/2006	Timothy Tuttle	2222.775000E

CONFIRMATION NO. 1129

3624
VOLPE KOENIG
30 SOUTH 17TH STREET, 18TH FLOOR
PHILADELPHIA, PA 19103

POA ACCEPTANCE LETTER

OC000000079223496

Date Mailed: 10/15/2024

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/04/2024.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/sltorres/