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(12) EX PARTE REEXAMINATION CERTIFICATE (12886th)

United States Patent

Tuttle et al.

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(54) **ASYNCHRONOUS MESSAGING USING A NODE SPECIALIZATION ARCHITECTURE IN THE DYNAMIC ROUTING NETWORK**

(75) Inventors: **Timothy Tuttle**, San Francisco, CA (US); **Karl E. Rumelhart**, Palo Alto, CA (US)

(73) Assignee: **INTELLECTUAL VENTURES I LLC**

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Related U.S. Application Data

(63) Continuation of application No. 10/105,018, filed on Mar. 21, 2002, now Pat. No. 7,051,070, which is a continuation-in-part of application No. 10/017,182, filed on Dec. 14, 2001, now Pat. No. 7,043,525.

(60) Provisional application No. 60/278,303, filed on Mar. 21, 2001, provisional application No. 60/280,627, filed on Mar. 29, 2001, provisional application No. 60/279,608, filed on Mar. 28, 2001, provisional application No. 60/276,847, filed on Mar. 16, 2001, provisional application No. 60/256,613, filed on Dec. 18, 2000.

(51) **Int. Cl.**

G06F 3/00	(2006.01)
G06F 15/16	(2006.01)
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H04L 67/55	(2022.01)
H04L 67/63	(2022.01)
H04L 67/1001	(2022.01)
H04L 67/1008	(2022.01)
H04L 67/1014	(2022.01)
H04L 67/1029	(2022.01)

(52) **U.S. Cl.**
CPC ***H04L 67/55*** (2022.05); ***H04L 45/306*** (2013.01); ***H04L 67/63*** (2022.05); *H04L 67/1001* (2022.05); *H04L 67/1008* (2013.01); *H04L 67/1014* (2013.01); *H04L 67/1029* (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

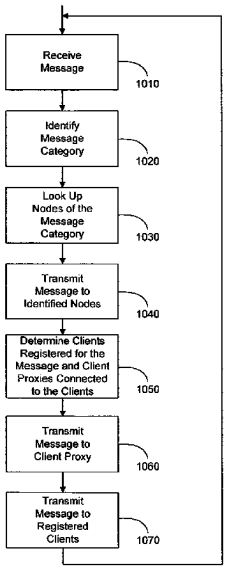
(56) **References Cited**

To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/019,662, please refer to the USPTO's Patent Electronic System.

Primary Examiner — Woo H Choi

(57) **ABSTRACT**

A network routes update messages containing updates to properties of live objects from input sources to clients having the objects. When the clients receive live objects, the clients identify the object IDs associated with the objects and register the object IDs with the routing network. The routing network is adapted to selectively send update messages to nodes in the network and the nodes forward the messages to the clients. One implementation uses a hierarchy of registries to indicate which nodes and clients receive which update messages. Another implementation assigns update messages to one or more of N categories and nodes to one or more of M types, and the gateways maintain mapping between categories and types. To ensure that clients receive all of the update messages for which they register, the clients connect to client proxies that in turn connect to at least one node of each type.



EX PARTE REEXAMINATION CERTIFICATE

NO AMENDMENTS HAVE BEEN MADE TO THE PATENT

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

The patentability of claims **1**, **6-7**, **14-17**, **20-23**, **26-29** and **32-35** is confirmed.

Claims **2-5**, **8-13**, **18-19**, **24-25**, **30-31** and **36-37** were not reexamined.

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