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[Continued on next page]

(54) Title: MULTIMEDIA COMMUNICATIONS APPARATUS

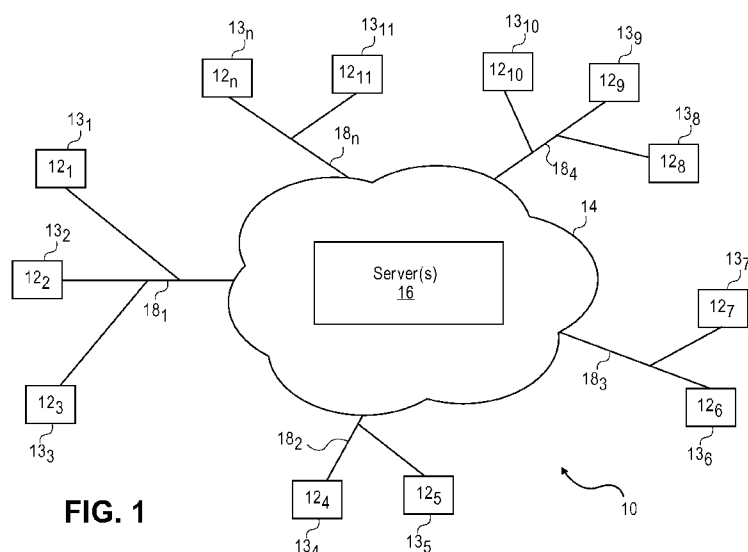


FIG. 1

(57) Abstract: A communication system for sending media between a sending node and receiving node during a conversation. The system provides real time call functionality using a best-efforts mode of message delivery at rate "good enough" for rendering as soon as possible, and the guaranteed eventual delivery of exact copies of the messages as transmitted by requesting retransmission of full copies of any good enough copies of media, or any missing or corrupted data from the originally saved perfect copy. The system also optimizes the utilization of network bandwidth by making tradeoffs between timeliness and media quality, using the presence and intentions of the recipient (s) (i.e., to either review the media in real-time or in a time-shifted mode), as well as measures of instantaneous latency and packet on the network.

WO 2009/055221 A3



NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

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- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
INV. H04L29/06 H04L12/58 H04L1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 202 531 A (LUCENT TECHNOLOGIES INC [US]) 2 May 2002 (2002-05-02) paragraph [0020] - paragraph [0027] -----	1-69, 75-84
A	US 2005/144247 A1 (CHRISTENSEN JAMES E [US] ET AL) 30 June 2005 (2005-06-30) paragraph [0038] -----	1-69, 75-84
A	WO 2006/114673 A (NOKIA CORP) 2 November 2006 (2006-11-02) page 16, line 22 - page 23, line 11 -----	1-69, 75-84

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/078472

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-69 and 75-84

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-69 and 75-84

Apparatus for transmitting media of a conversation while respecting the timeliness constraint of a time sensitive conversation regardless of the bandwidth available.

2. claims: 70-74

Apparatus for reliably transmitting the full representation of time-sensitive media in case of network congestion without regard to the timeliness constraint of the media.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/078472

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1202531	A	02-05-2002	JP 2002185526 A US 7321557 B1	28-06-2002 22-01-2008
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WO 2006114673	A	02-11-2006	CA 2605921 A1 US 2006248149 A1	02-11-2006 02-11-2006