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(54) Title: METHOD AND SYSTEM FOR NETWORK-BASED COLLABORATION

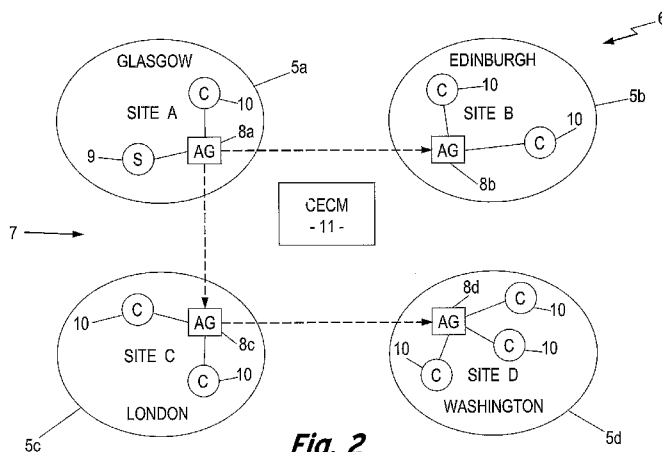


Fig. 2

(57) Abstract: A method and system for establishing a network-based collaboration is described. The method involves the provision of a server-terminal as a data source for the collaboration session, a plurality of client-terminals to allow a user access for participating in the collaboration session and one or more application gateways, the application gateways being configured to relay data between network components during the collaboration session. Both the server-terminal and the client-terminals are allocated an application gateway to which it transmits/and receives data during the collaboration session, the allocation of the application gateways being determined by the location of the server-terminal and client terminals within the network. Also described is a method of data path optimisation for the application gateways employed within the network-based collaboration. A particular application of the present invention is found within the field of Wide Area Network (WAN)-based collaborations.

WO 2010/119287 A3

# INTERNATIONAL SEARCH REPORT

International application No PCT/GB2010/050622
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**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. H04L29/06  
 ADD.

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.
X	Yatin Chawathe: "Scattercast: An Adaptable Broadcast Distribution Framework", Internet Article  2002, pages 1-27, XP002599622, Retrieved from the Internet: URL: <a href="http://research.chawathe.com/people/yatin/publications/docs/scattercast-mmsj.pdf">http://research.chawathe.com/people/yatin/publications/docs/scattercast-mmsj.pdf</a> [retrieved on 2010-09-07] page 1 - page 13  ----- <div style="text-align: center;">-/--</div>	1-53,70



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.
- "&" document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA/

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## INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2010/050622

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>PENDARAKIS D ET AL: "ALMI: An Application Level Multicast Infrastructure", PROCEEDINGS OF THE USENIX SYMPOSIUM ON INTERNET TECHNOLOGIES AND SYSTEMS, XX, XX, 1 March 2001 (2001-03-01), pages 1-12, XP002311475, page 1 - page 7</p> <p style="text-align: center;">-----</p>	1-53,70
A	<p>BANERJEE S ET AL: "Construction of an efficient overlay multicast infrastructure for real-time applications", PROCEEDINGS IEEE INFOCOM 2003. THE CONFERENCE ON COMPUTER COMMUNICATIONS. 22ND. ANNUAL JOINT CONFERENCE OF THE IEEE COMPUTER AND COMMUNICATIONS SOCIETIES. SAN FRANCISCO, CA, MARCH 30 - APRIL 3, 2003; [PROCEEDINGS IEEE INFOCOM. THE CONFERENCE ON COMPU, vol. 2, 30 March 2003 (2003-03-30), pages 1521-1531, XP002478296, ISBN: 978-0-7803-7752-3 page 1521 - page 1523</p> <p style="text-align: center;">-----</p>	1-53,70
A	<p>C.K. Yeo et al.: "A framework for multicast video streaming over IP networks", Internet Article, 16 January 2003 (2003-01-16), pages 273-289, XP002599623, Retrieved from the Internet: URL: <a href="http://www.sciencedirect.com/science?ob=MImg&amp;imagekey=B6WKB-489YY3G-1-10&amp;cdi=6902&amp;user=987766&amp;pii=S1084804503000043&amp;origin=search&amp;coverDate=12%2F31%2F2003&amp;sk=999739996&amp;view=c&amp;wchp=dGLzVzb-zSkWb&amp;md5=7f790a32477d8456f637b231c9b7a972&amp;ie=/sdarticle.pdf">http://www.sciencedirect.com/science?ob=MImg&amp;imagekey=B6WKB-489YY3G-1-10&amp;cdi=6902&amp;user=987766&amp;pii=S1084804503000043&amp;origin=search&amp;coverDate=12%2F31%2F2003&amp;sk=999739996&amp;view=c&amp;wchp=dGLzVzb-zSkWb&amp;md5=7f790a32477d8456f637b231c9b7a972&amp;ie=/sdarticle.pdf</a> [retrieved on 2010-09-08] page 274 - page 278</p> <p style="text-align: center;">-----</p>	1-53,70
A	<p>BEICHUAN ZHANG ET AL: "Host multicast: a framework for delivering multicast to end users", PROCEEDINGS IEEE INFOCOM 2002. THE CONFERENCE ON COMPUTER COMMUNICATIONS. 21ST. ANNUAL JOINT CONFERENCE OF THE IEEE COMPUTER AND COMMUNICATIONS SOCIETIES. NEW YORK, NY, JUNE 23 - 27, 2002; [PROCEEDINGS IEEE INFOCOM. THE CONFERENCE ON COMPUTER COMMUNI, vol. 3, 23 June 2002 (2002-06-23), pages 1366-1375, XP010593703, ISBN: 978-0-7803-7476-8 page 1366 - page 1369</p> <p style="text-align: center;">-----</p> <p style="text-align: center;">-/--</p>	1-53,70

## INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2010/050622

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>YEO C K ET AL: "A survey of application level multicast techniques",            22 September 2004 (2004-09-22), COMPUTER COMMUNICATIONS, ELSEVIER SCIENCE PUBLISHERS BV, AMSTERDAM, NL LNKD-            DOI:10.1016/J.COMCOM.2004.04.003, PAGE(S) 1547 - 1568, XP004527527,            ISSN: 0140-3664            pages 1547-1568,            page 1547 - page 1563</p> <p style="text-align: center;">-----</p>	1-53,70
X	<p>CHU Y ET AL: "ENABLING CONFERENCING APPLICATIONS ON THE INTERNET USING AN OVERLAY MULTICAST ARCHITECTURE",            COMPUTER COMMUNICATION REVIEW, ACM, NEW YORK, NY, US LNKD-            DOI:10.1145/964723.383064,            vol. 31, no. 4,            1 October 2001 (2001-10-01), pages 55-67,            XP001115746,            ISSN: 0146-4833            page 55 - page 60</p> <p style="text-align: center;">-----</p>	54-69,71
A	<p>US 2006/029092 A1 (LUO CHONG [CN] ET AL)            9 February 2006 (2006-02-09)            paragraph [0019] - paragraph [0064]</p> <p style="text-align: center;">-----</p>	1-71
A	<p>MOJTABA HOSSEINI ET AL: "A Survey of Application-Layer Multicast Protocols",            IEEE COMMUNICATIONS SURVEYS, IEEE, NEW YORK, NY, US LNKD-            DOI:10.1109/COMST.2007.4317616,            vol. 9, no. 3, 1 October 2007 (2007-10-01)            , pages 58-74, XP011193007,            ISSN: 1553-877X            page 58 - page 68</p> <p style="text-align: center;">-----</p>	1-71

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB2010/050622

## 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 all searchable 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.:

### 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: 1-53, 70

Claims 1-53 and 70 are directed to performing a collaboration session in a network. This is done by providing a server as a data source; a plurality of client-terminals, each providing a user with an access point for participating session; two or more application gateways, each configured to relay data during the session; wherein the server is provided with a server application gateway determined according to the server-terminal location for transmitting data; and each client is provided with a client application gateway determined according to the client-terminal location for receiving data.

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2. claims: 54-69, 71

Claims 54-69 and 71 are directed to determining an optimised data communication path between two or more application gateways employed within a network-based collaboration session to relay data. This is done by performing a throughput test on the two or more application gateways.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2010/050622

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006029092	A1 09-02-2006	EP 1624632 A1 JP 2006050639 A	08-02-2006 16-02-2006
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