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AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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[Continued on next page]

(54) **Title:** DEVICE, SYSTEM, AND METHOD OF DISTRIBUTING MESSAGES

(57) **Abstract:** Device, system, and method of distributing messages. For example, a data publisher capable of communication with a plurality of subscribers via a network fabric, the data publisher comprising: a memory allocator to allocate a memory area of a local memory unit of the data publisher to be accessible for Remote Direct Memory Access (RDMA) read operations by one or more of the subscribers; and a publisher application to create a message log in said memory area, to send a message to one or more of the subscribers using a multicast transport protocol, and to store in said memory area a copy of said message. A subscriber device handles recovery of lost messages by directly reading the lost messages from the message log of the data publisher using RDMA read operation(s).

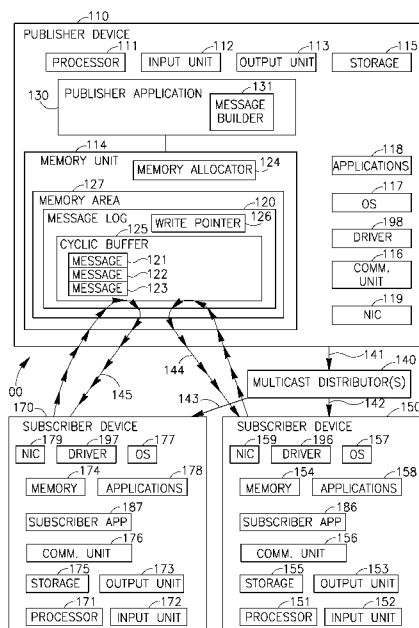


FIG.1



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<p>A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - H04L 12/50 (2010.01) USPC - 370/381 According to International Patent Classification (IPC) or to both national classification and IPC</p>																				
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) IPC(8) - H04L 12/50 (2010.01) USPC - 370/381</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC(8) - H04L 12/50 (2010.01) (text search) USPC - 370/351, 370/381 (text search)</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWEST (USPT, PGPB, EPAB, JPAB); Internet search via Google Web and Google Scholar search engines. Search terms used: server client subscriber message address read user internet log multicast MTP protocol memory RDMA header virtual InfiniBand operating system windows</p>																				
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X ----- Y</td> <td>US 2006/0168070 A1 (Thompson et al.) 27 July 2006 (27.07.2006), Entire document, especially Fig. 1, 3, 4, 4a; Para [0031], [0041], [0047], [0070], [0073], [0086], [0109].</td> <td>1-8 ----- 9-26</td> </tr> <tr> <td>Y</td> <td>US 2007/0208820 A1 (Makhervaks et al.) 06 September 2007 (06.09.2007), Entire document, especially Para [0071], [0127].</td> <td>9-17, 21-26</td> </tr> <tr> <td>Y</td> <td>US 2004/0230624 A1 (Frolund et al.) 18 November 2004 (18.11.2004), Entire document, especially Fig. 5; Para [0028], [0070].</td> <td>16, 18-20</td> </tr> <tr> <td>Y</td> <td>US 2004/0267960 A1 (Riedle) 30 December 2004 (30.12.2004), Entire document, especially Fig. 2A, 2B, 3; Para [0038], [0040].</td> <td>17, 23, 25</td> </tr> <tr> <td>Y</td> <td>US 2004/0190557 A1 (Barron) 30 September 2004 (30.09.2004), Entire document, especially Para [0026].</td> <td>26</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X ----- Y	US 2006/0168070 A1 (Thompson et al.) 27 July 2006 (27.07.2006), Entire document, especially Fig. 1, 3, 4, 4a; Para [0031], [0041], [0047], [0070], [0073], [0086], [0109].	1-8 ----- 9-26	Y	US 2007/0208820 A1 (Makhervaks et al.) 06 September 2007 (06.09.2007), Entire document, especially Para [0071], [0127].	9-17, 21-26	Y	US 2004/0230624 A1 (Frolund et al.) 18 November 2004 (18.11.2004), Entire document, especially Fig. 5; Para [0028], [0070].	16, 18-20	Y	US 2004/0267960 A1 (Riedle) 30 December 2004 (30.12.2004), Entire document, especially Fig. 2A, 2B, 3; Para [0038], [0040].	17, 23, 25	Y	US 2004/0190557 A1 (Barron) 30 September 2004 (30.09.2004), Entire document, especially Para [0026].	26
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<p>Date of the actual completion of the international search 25 January 2010 (25.01.2010)</p>		<p>Date of mailing of the international search report 19 MAY 2010</p>																		
<p>Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201</p>		<p>Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774</p>																		