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(54) Title: MULTI-TIER PUSH HYBRID SERVICE CONTROL ARCHITECTURE FOR LARGE SCALE CONFERENCING OVER INFORMATION CENTRIC NETWORK, ICN

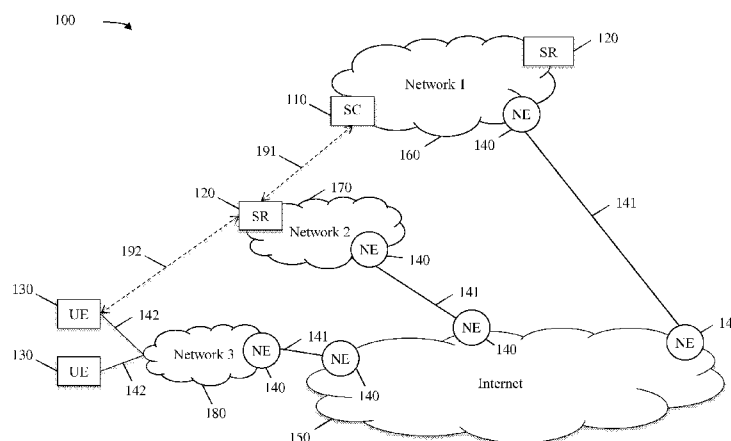


FIG. 1

(57) Abstract: A network element (NE) comprising a memory configured to store a digest log for a conference, a receiver coupled to the memory and configured to receive a first message from a first of a plurality of service proxies of the conference, wherein the first message comprises a signature profile of a first of a plurality of participants of the conference associated with the first service proxy, a processor coupled to the receiver and the memory and configured to track a state of the conference by updating the digest log according to the first message, and a transmitter coupled to the processor and configured to send a plurality of second messages to indicate the digest log update to the service proxies without a transmission request from the service proxies.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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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 practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012/221715 A1 (HAMADA YUUTA [JP]) 30 August 2012 (2012-08-30) page 2, paragraph 29 - page 14, paragraph 177; figures 1,7,10,12 -----	1-20
X,P	RAVINDRAN RAVISHANKAR ET AL: "Towards software defined ICN based edge-cloud services", 2013 IEEE 2ND INTERNATIONAL CONFERENCE ON CLOUD NETWORKING (CLOUDNET), IEEE, 11 November 2013 (2013-11-11), pages 227-235, XP032550318, DOI: 10.1109/CLOUDNET.2013.6710583 the whole document ----- -/--	1-20



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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2011/027475 A1 (TOSHIBA KK [JP]; UENO KOJI [JP]; SHIMOGORI NOBUHIRO [JP]; TSUBOI SOGO) 10 March 2011 (2011-03-10) the whole document -----	1-20
A	US 2012/142324 A1 (KIM TAESU [KR] ET AL) 7 June 2012 (2012-06-07) page 8, paragraph 91 - page 9, paragraph 99; figures 12,13 -----	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2012221715 A1	30-08-2012	JP 2012195925 A	11-10-2012
		US 2012221715 A1	30-08-2012

WO 2011027475 A1	10-03-2011	NONE	

US 2012142324 A1	07-06-2012	CN 103190139 A	03-07-2013
		EP 2647188 A1	09-10-2013
		JP 2013546282 A	26-12-2013
		KR 20130063542 A	14-06-2013
		US 2012142324 A1	07-06-2012
		WO 2012074843 A1	07-06-2012
