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(54) Title: QUALITY OF SERVICE CONTROL IN MULTIPLE HOP WIRELESS COMMUNICATION ENVIRONMENTS

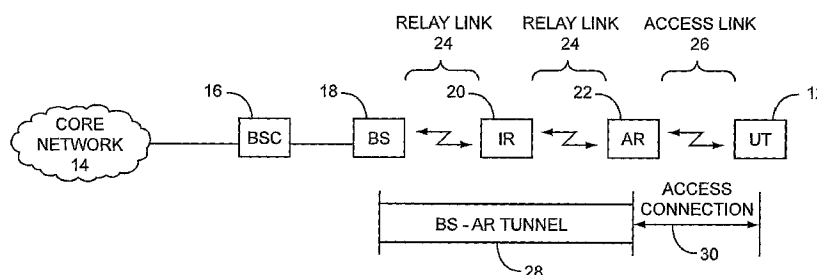


FIG. 2

(57) Abstract: One or more relay stations may be employed along a wireless communication access path between an ingress station and an egress station. A logical communication tunnel is established between the ingress and egress stations through any number of intermediate relay stations to handle session flows of PDUs. As PDUs arrive, the ingress station may determine and add scheduling information to the PDUs before they are delivered to the downstream intermediate relay stations or egress stations. The scheduling information is used by the downstream stations to schedule the PDUs for further delivery. The scheduling information may also be used by the egress station to schedule the PDUs for delivery. The scheduling information added to the PDU by the ingress station bears on a QoS class associated with the PDU, a deadline for the egress station to deliver the PDU, or a combination thereof.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC: H04W 88/18 (2009.01) , H04W 40/22 (2009.01) , H04W 88/08 (2009.01) 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) IPC: H04W 88/18 (2009.01) , H04W 40/22 (2009.01) , H04W 88/08 (2009.01)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used) Database: EPOQUE, Delphion, West, Espacenet, Canadian Patent Database, QPAT, IEEE, Google. Keywords: ingress/egress/relay/packet/tunnel/scheduling information/quality/qos		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2007/019672 A1 (WANG) 22 February 2007 (22-02-2007) • entire document •	1-32
A	WO 2005/025110 A2 (SARTORI et al.) 17 March 2005 (17-03-2005) • entire document •	1-32
A	US 2005/0014464 A1 (LARSSON) 20 January 2005 (20-01-2005) • entire document •	1-32
A	PABST et al., "Relay-Based Deployment Concepts for Wireless and Mobile Broadband Radio", IEEE Communications Magazine, vol. 42, no. 9, pp. 80-89. Sept 2004 (09-2004) • entire document •	1-32
☐ 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 application or patent 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	
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Name and mailing address of the ISA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001-819-953-2476	Authorized officer Xiaoyun Hu 819- 934-7569	

INTERNATIONAL SEARCH REPORT
Information on patent family members

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