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(54) Title: METHODS AND APPARATUS TO PROVIDE FAIRNESS FOR WIRELESS LOCAL AREA NETWORKS THAT USE EXTENDED PHYSICAL LAYER PROTECTION MECHANISMS

(57) Abstract: Methods and apparatus to provide fairness for wireless local area networks that use extended physical layer (a.k.a. PHY) protection mechanisms are disclosed. A disclosed example method comprises choosing a length field value (530) for a frame header (520) such that, when a transmit operation is ended (544), a legacy wireless station and a non-legacy wireless station of a wireless local area network are able to start contending for a wireless medium at substantially a same instant (555), and sending a frame (522) across the wireless medium that includes the frame header.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US07/60131

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **H04J 3/24(2006.01),3/16(2006.01);H04B 7/216(2006.01)**

 USPC: 370/349,470,335
 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)
 U.S. : 370/349,470,335

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 200/50058151 A1 (YEH) 17 March 2005 (17.03.2005)	1-20
Y	US 2004/0136396 A1 (YONGE, III et al.) 15 July 2004 (15.07.2004)	1-20
X	Yan Wu et al., Wireless and Mobile Computing, Networking, and Communications, 2005., "A Credit-based Distributed Protocol for Long-term Fairness in IEEE 802.11 Single-Hop Networks", August 2005, Vol. 2, pgs. 98-105 (herein pgs. 98, 2-8).	1-20

Further documents are listed in the continuation of Box C. See patent family annex.

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"A"	document defining the general state of the art which is not considered to be of particular relevance	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
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"P"	document published prior to the international filing date but later than the priority date claimed	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
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