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(54) Title: ARRANGEMENT IN AN IP NODE FOR PRESERVING SECURITY-BASED SEQUENCES BY ORDERING IP PACKETS ACCORDING TO QUALITY OF SERVICE REQUIREMENTS PRIOR TO ENCRYPTION

(57) Abstract: A router has at least one outbound interface configured for establishing multiple IP-based secure connections (i.e., tunnels) with respective destinations based on transmission of encrypted data packets via the IP-based secure connections. The encrypted data packets are generated by a cryptographic module, where each encrypted packet successively output from the cryptographic module includes a corresponding successively-unique sequence number. The supply of data packets to the cryptographic module is controlled by a queue controller: the queue controller assigns, for each secure connection, a corresponding queuing module configured for outputting a group of data packets associated with the corresponding secure connection according to a corresponding assigned maximum output bandwidth. Each queuing module also is configured for reordering the corresponding group of data packets according to a determined quality of service policy and the corresponding assigned maximum output bandwidth.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **G06F 15/16**(2006.01)

USPC: 709/232
 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. : 709/232

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.
X	US 2003/0093563 A1 (YOUNG et al) 15 May 2003 (15.05.2003), see entire document.	1-35

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

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