CABLE MODEM DOWNSTREAM CHANNEL BONDING RE-SEQUENCING MECHANISM

Abstract: An apparatus and method of packet re-sequencing applicable to systems wherein packets are assigned sequence numbers and transmitted over multiple channels with the requirement they be re-ordered at the receiving side. The mechanism (60) is particularly suitable for use in cable systems adapted to implement the DOCSIS 3.0 specification which permits the bonding of a plurality of downstream channels (76) into a single virtual high data rate pipe. In operation, received packets are stored in a memory whereby a pointer to the memory storage location is written into a context table diagram in accordance with the sequence number extracted from the packet. Packets are released in sequence order regardless of the order in which they were received.
Declarations under Rule 4.17:
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(U))
— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(Hi))

Published:
— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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For two-letter codes and other abbreviations, refer to the “Guidance Notes on Codes and Abbreviations” appearing at the beginning of each regular issue of the PCT Gazette.
### A CLASSIFICATION OF SUBJECT MATTER

**IPC(8) -** H04L 12/56 (2007.01)

**USPC -** 370/494

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(8) - H04L 12/56 (2007.01)

USPC - 370/494

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)

- MicroPatent

### C DOCUMENTS CONSIDERED TO BE RELEVANT

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**Date of the actual completion of the international search**

11 October 2007

**Date of mailing of the international search report**

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