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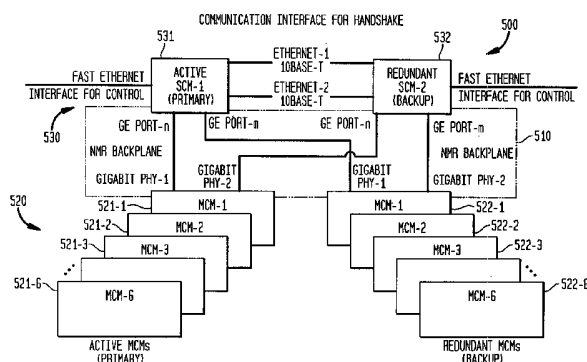
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(54) Title: APPARATUS FOR REDUNDANT MULTIPLEXING AND REMULTIPLEXING OF PROGRAM STREAMS AND BEST EFFORT DATA



(57) Abstract: A redundant remultiplexer (500) is described which is capable of remultiplexing fixed length transport stream packets. Illustratively, at least some of the packets contain program data, i.e., data with a sensitive delivery schedule, such as variably compressed audio-video data. An example of such variably compressed data is MPEG-2 encoded video. The redundant remultiplexer has a chassis architecture with input modules (521) that receive externally originating transport packets, output modules (521) that output externally selected transport stream packets and switch modules (531, 532). The switch modules perform a packet switch function, i.e., they switch selected packet received by the input modules to respective output modules on a packet by packet basis, e.g., based on address information in each respective switched packet. The switch modules can also receive externally supplied packets and output externally respective packets. Each module has a backup module (522) that assumes the role of the modules for which it is a backup in the event of failure. In the case of input and output modules, the backup module is actually running, even while standby mode, but otherwise disables its output. The reason is that packets must be processed as a preliminary step to outputting them (e.g., to ensure that the strict delivery schedule is maintained). This manner of operation enables quicker recovery and fewer lost packets, especially where retransmission of lost packets (e.g., program bearing packets) to an ultimate receiver is not possible.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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US CL : 370/537

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. : 370/537,242,230,320.1,235,236,389,390,392,395.4,428,437

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,E ---	US 2003/0133476 A1 (STONE et al) 17 July 2003, fig. 2, paragraph[0012]	11
A,E		1-10, 12, 16
A	US 5,835,493 A (MAGEE et al) 10 November 1998, entire document	1-10 and 13
A,P	US 6,556,594 B2 (UCHIDE) 29 April 2003, entire document	13



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See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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