

DUPLICATED-MEMORY SYNCHRONIZATION ARRANGEMENT

Abstract

A shared-buffer-memory-based ATM switch module (1) is duplicated (2) and operates in active-standby mode for fault-tolerance. Following failure and repair of a module, buffer memory (12) contents of the two modules are resynchronized as follows. At the time of commencing the synchronizing, contents of the memory of the standby, repaired, module are cleared, all writes to the active module's memory also commence to be made to the standby module's memory, and track begins to be kept of overwriting of the contents of the active module's memory that existed at the time of commencing the synchronizing. This is done by a function which sets a flag (64) in a queue-length-counter monitor (60) for every active-module queue-length counter (200) that reaches a count of zero to indicate that its corresponding buffer-memory queue (100) has been emptied. When all monitor flags have been set in response to each queue-length counter having reached a count of zero, it indicates that the original contents of the active module's memory have been overwritten and the memories again have identical contents, and consequently that resynchronization of the two memories has been achieved and fault-tolerance has been re-established.

Figure 1

This Sheet Has Been Replaced

