

ABSTRACT

Redundant facility payload signals (12, 14) received by redundant interface modules (16, 18) are redundantly provided (28, 30; 32, 34) to redundant downstream modules (24, 26) in an equipment (10). A non-symmetrical facility protection algorithm is resident in the B interface module (18). Symmetrical equipment protection algorithms are independently resident and operative in each module of pairs of identical A and B modules at each stage of the data stream. Module or data failures result in switchover only of the disabled data path or module so that the ability to transport payload is maintained and other modules or data paths are unaffected. Facility switchover is effected by detecting a working line failure and transmitting commands to switch the protection line to the A path modules. Equipment switchover is effected by checking for a working or protection module failure independently in each path and independently communicating independent switchover decisions to the other side and downstream. The methodology and mechanism are disclosed in a SONET element embodiment, although the invention is applicable in other contexts.

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