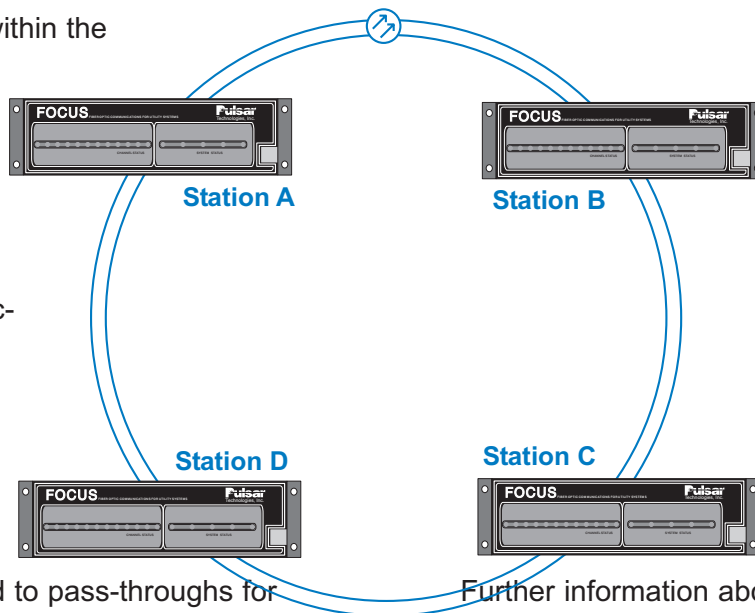


## ALTERNATE PATH MODE

The Alternate Path Mode (APM) software allows for any channel module, in a loop configured network, to link to its complement should the primary path become non-functional. All channels, except those dropped in a failed node, are automatically rerouted if any single node or link fails. Each of the 24/30 channels in the T1/E1 stream may be used only once within the loop. When a link or node fails, adjacent nodes detect the failure and send a message in the opposite direction around the ring. The message specifies which channels have been affected by the failure. Each node containing an affected channel drop reverses the transmit direction for that channel. Nodes located between the affected channel drop nodes are converted to pass-throughs for these channels.

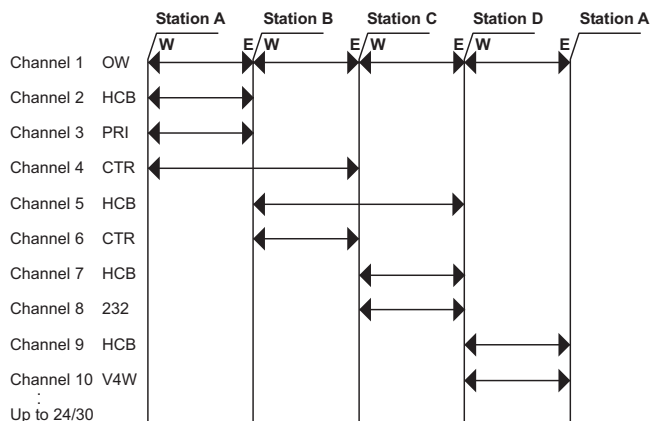


This flip-flop procedure quickly reconnects all broken channels in the opposite direction around the loop. When the link is re-established, a complementary message is sent causing each node to flop back to its original settings. All APM messages are sent between nodes using the overhead of the Extended Super

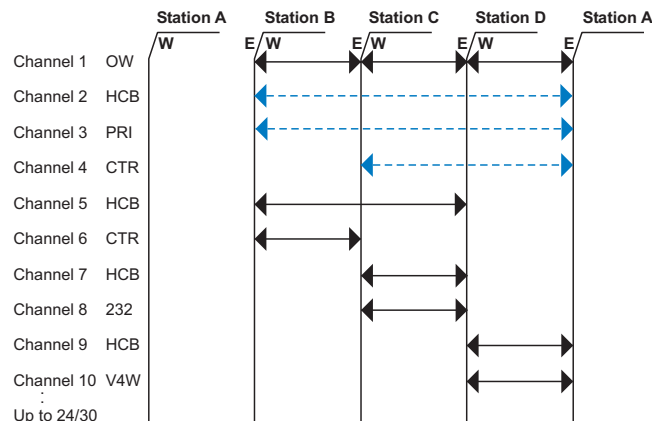
Frame coding. This makes all 24/30 channels available to the user for channel assignment. The Alternate Path Mode software provides enhanced redundancy not traditionally offered by T1/E1 systems for pilot relaying, SCADA or other critical circuits.

The channel maps below graphically demonstrate the operation of FOCUS dedicated channel redirection (APM).

Further information about the complete APM concept can be found in the FOCUS system manual.



Channel Map Under Normal Conditions



Channel Map with a Break Between Station A and Station B