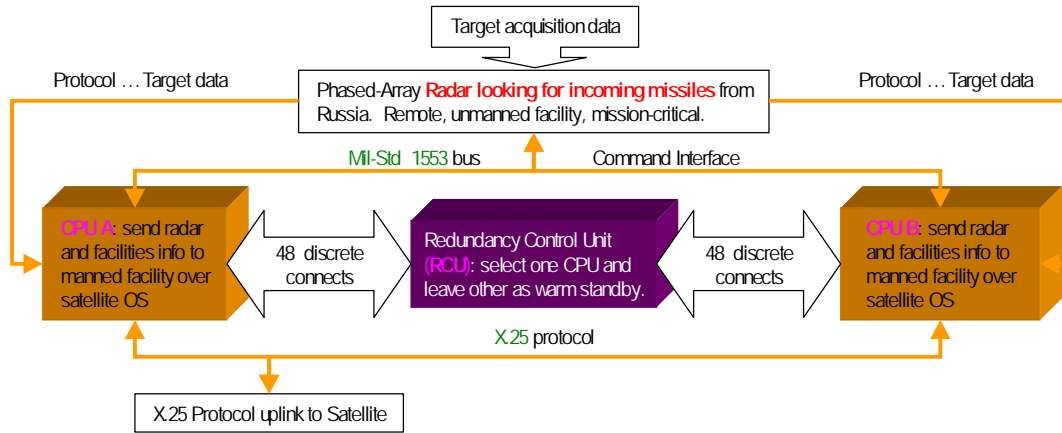
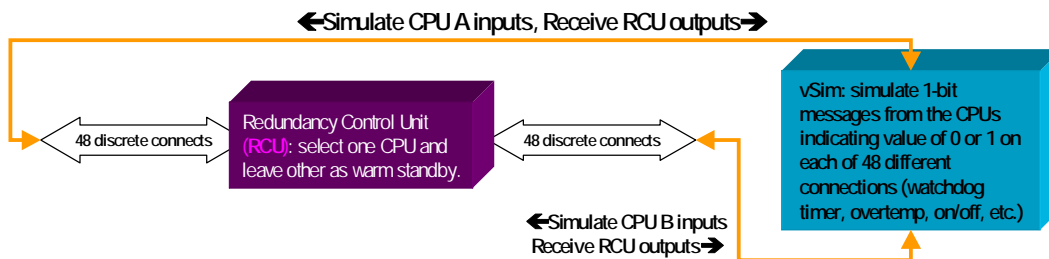


CPU & RADAR CONTROL UNIT TESTING:



vSIM is used on the Radar System, a redundancy control unit (RCU) sat between two identical computers (CPU A & B), one running, and the other on warm standby (these were remote and unmanned radar systems that were controlled from a central command facility over a satellite link). The RCU had 48 pins connecting it to each computer. It could then automatically sense the health of both, and switch between them either automatically, or upon receiving a command from a central site. The RCU had no code in it at all. An early version of the vSIM technology was used to connect to both sets of 48 pins, and simulate every condition the RCU might encounter, by transmitting 1-bit messages (high or low) in combination to the pins and thereby automatically testing the entire device functionality (did it turn on the other computer when it received a fail-over indication, etc).



vSIM was also used to test the functionality of hardened redundant computers (CPU B). There were several protocols including X.25, Mil-Std 1553, JSS (target acquisition data), and IEEE-488 interfaces to the computers. The vSIM technology was used to simulate each interface, and was able to simulate the CPU with every possible command and situation it would encounter on site. Then the outputs were logged, and every functional requirement in the B5 Requirements Specification were tested successfully.

