Verification of New Avionics Technologies for Interplanetary Space Missions.

The inclusion of new technology into avionics for interplanetary space missions provides opportunities to utilize the increased processing power, the higher speed computer busses, and the increased memory densities that have been developed commercially in the past few years. In order to guarantee that these new devices will survive the rigors of the space environment, and perform over the long life times of these missions, the verification and qualification of the system from the component level to the complete integrated system is critical. This paper describes the integration and verification activities for the avionics system being developed by the X2000 Integrated First Delivery Project for use on various upcoming deep space missions.