ITCN Demos 1553 Bus Testing Gear for B-2 Bomber

The Aeronautical Systems Center's 726th Aeronautical Systems Group (B-2 Program Office) successfully demonstrates a prototype B-2 1553 avionics databus diagnostic performance characterization and cable plant integrity test capabilities under an "enhanced" Phase II Small Business Innovative Research (SBIR) initiative. The supporting SBIR vendor, ITCN, Dayton, OH, responded to B-2 Spirit maintainer requirements by adapting and integrating an existing high-end ITCN engineering test instrumentation capability. This capability was established by ITCN under an alternative SBIR effort, with time domain reflectometry technology to give B-2 flightline avionics maintainers at Whiteman AFB, MO the ability to characterize individual databus performance and to isolate avionics network health anomalies.

Incorporated TDR functionality will assist B-2 technicians with isolating 1553 wiring cable problems to within 6-12 inches, enabling them to identify performance discrepancies with pinpoint accuracy. The prototype unit, developed over a 13-month period, will be exercised by B-2 technicians, involving direct connectivity with multiple B-2 aircraft data buses, later this month at Whiteman AFB, MO. The B-2 Spirit bomber's (Figure 1) avionics systems are the heart of the stealth bomber's combat capability, linked together through a 1553 network. Enhanced 1553 diagnostic tools and embedded logistics data tracking features will have a direct effect on B-2 aircraft availability/mission readiness.

Figure 1

The B-2 Spirit avionics systems are the heart of the stealth bomber's combat capability, linked together through a 1553 network. Enhanced 1553 diagnostic tools and embedded logistics data tracking features have a direct effect on B-2 aircraft availability and mission readiness.

ITCN
Dayton, OH.
800-439-4039
[www.itcninc.com]

From: October 2007 COTS Journal, The Inside Track.