

Integrated System Control (ISYSCON) (V)4

ISYSCON is a family of systems that provide the signal commander, G-6, and S-6 personnel the capability to maximize the availability of communications and data distribution systems in support of the combat commander. The ISYSCON requirements document provides a blocked strategy for both versions of ISYSCON: the ISYSCON Version (V)1-3 and the ISYSCON (V)4. Blocks 1, 3, and 6 of the ISYSCON requirements document pertain to ISYSCON (V)1-3 and are covered under a separate program. Blocks 2, 4, and 5 of the requirements document are for ISYSCON (V)4, the program covered by this report. The Initial Operational Test and Evaluation (IOT&E) for ISYSCON (V)4 will validate that Block 4 requirements are met.

The ISYSCON (V)4 supports information operations and automation in support of the Army's digitized combat forces, their weapon systems, and the other related Battlefield Automation Systems. The ISYSCON (V)4 consists of commercial off-the-shelf, government off-the-shelf, and government-developed software applications implemented on the Force XXI Battle Command Brigade and Below (FBCB2) Appliqué hardware and the Panasonic CF-28 Toughbook. Although most functions can be performed on both hardware platforms, ISYSCON (V)4 is a bifurcated system as some functionality can only be performed on one of the platforms. At division through battalion, ISYSCON (V)4 provides signal personnel a system to manage the combat net radio based Wide Area Network (WAN) for the digitized force. The combat net radio based WAN is commonly referred to as the Lower Tactical Internet. The ISYSCON (V)4 also provides Local Area Network (LAN) management services for wired and wireless LANs at all echelons. LAN management includes planning, configuring, fault identification, and fault resolution for all LAN network devices located within the Tactical Operations Centers that support internal, as well as external, communications.

TEST & EVALUATION ACTIVITIES

ISYSCON (V)4 participated in Field Test 4 in September and October 2001 (Development Test), as well as the FBCB2/ISYSCON (V)4 Limited User Test (LUT) 2A in December 2001.

It completed System Segment Acceptance Testing at the contractor's facility in May 2002, and participated in the combined FBCB2/Maneuver Control System(MCS)/ISYSCON (V)4 Field Test 5 in September 2002 (Development Test).

The FBCB2/MCS/ISYSCON (V)4 IOT&E was scheduled in April/May 2003, but has been indefinitely postponed due to preparations for anticipated real-world operations.

TEST & EVALUATION ASSESSMENT

Field Test 4 indicated that the FBCB2 and MCS programs were not ready for the scheduled FBCB2/MCS/ISYSCON (V)4 IOT&E in December 2001. The test was downgraded to a LUT due to shortcomings with interoperability and test documentation for FBCB2 and immature software for MCS. ISYSCON is a critical enabler of the digital battlefield; without sufficiently mature systems for it to support, the Army postponed the ISYSCON (V)4 IOT&E until all three systems were ready for test.

The ISYSCON (V)4 Block 4 software successfully completed technical testing at the contractor facilities in May 2002. All three programs went to Field Test 5 in September 2002. Results of this event



Integrated System Control (V)4 provides the ability to maximize availability of communications and data distribution systems for the digitized force. At division through battalion, it is used to manage the combat net radio based Wide Area Network and provides Local Area Network management services for wired and wireless LANs at all echelons.

ARMY PROGRAMS

have not been released by the Army as of this writing. However, DOT&E observed improved stability and performance of all systems and the supporting network.

The ISYSCON (V)4 software is stable and was expected to support FBCB2 and MCS during the MCS/FBCB2/ISYSCON (V)4 IOT&E in April/May 2003 before the event was postponed.

The development of key enablers like ISYSCON has shown the importance of system-of-systems testing, and the difficulties that arise in coordinating requirements, development and fielding schedules, threats, scenarios, and test architectures. As the Army continues to move towards the Objective Force and Future Combat System, it should derive many lessons learned from these programs and the combined test events.