ACM Systems
A Wholly Owned Subsidiary of SNC

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HSDS

High Speed Data System

ACM Systems' High Speed Data System (HSDS) lets the Army retrieve stored data collected during exercises and tests directly from instrumented vehicles and platforms over a wireless network instead of having to gain physical access to each player on the range in order to retrieve a tape or disc.

The HSDS supports a reliable wireless communications link over a 20 km line-of sight (LOS) range between motionless player units and repeater, and between repeater and base station. HSDS radios are EMI and EMC compatible with military radios. The HSTMS provides a communication channel between multiple Improved Field Data Collector Version 3 player units and a base station at data rate of approximately 2 Mbps (HSDS operates as a polled system). The complete HSDS system consists of three subsystems: the Command Center, Repeaters (both fixed and mobile), and the Player Unit.

The repeaters are needed to extend coverage across the test area and to overcome line-of sight obstacles (hills, mountains). The range for both repeater-to-command center and repeater-to-player units is 20km. HSDS player units are interfaced to the data collectors via the IEEE 1394 bus (Firewire), and operate off vehicle/battery power. The HSTMS takes advantage of a commercial wireless standard (IEEE 802.11b/g) to provide much of the receiver/transmitter/modulation/error control/multi-path equalization functions. The HSDA provides an interface for future data encryption in the wireless LAN player units.

FEATURES

- HCCC (HSDS Command Control Center) - Can be at a fixed site or mounted in HMMWV vehicle for mobile use.
- HRU (HSDS Repeater Unit) – Mounted in a HMMWV vehicle for mobile use.
- HPU (HSDS Player Unit) - Radio kit mounted into existing Mass Storage Modules, which are part of the IFDCv3 system.
- Search Feature - HCCC/HRU capable of finding the GPS location of player units. Uses either MAIS based search mode or stand-alone search mode.
- 802.11b radio hardware - Capable of providing required asymmetric data link between HPU, HRU, and HCCC.
- HCCC Operating System - LINUX OS is used which permits flexibility and compatibility with IFDCV3 and future systems.
- Global Positioning System – Internal 8-channel GPS receiver for platform position and standard time tagging.
- Data Collection and Interfaces – Data collection and storage are the main functions of the HCCC. Capable of constructing download schedule for the entire exercise field. Schedule takes RF path margins, amount of data to transfer, and relative priority of HPU into account.
- Post Use Data Transfer - Data may be transferred from HCCC via three methods:
  - 802.3 Ethernet connection
  - Removable hard disk assembly
  - Satellite Terminal (VSAT) uplink

SPECIFICATIONS

- Wireless Data Link
  - Frequency: 2.4 GHz ISM Band
  - Data Rate: 2 Mbps minimum
  - Modulation rate: 11Mbps
  - Modulation: CCK per 802.11 b
  - Channel Bandwidth: 22 MHz
  - Range: 20 Km maximum
  - Power level: 1 W transmit
- Key Interfaces
  - 802.3 Ethernet ports for Data Output and MAIS interface
  - 110VAC and 24VDC from vehicle power
  - Workstation system user interface
  - 802.11b radio nodes
  - GPS antenna per each radio unit
  - Interface for future data encryption module
- Enclosure Specifications
  - Environmentally rugged per MIL-E-5400T
- Weight
  - 20 pounds (9.1 Kg)
- Temperature
  - 30°F (-34°C) to 120°F (49°C) Operating
- Input Power
  - 110VAC/24VDC

ISO International Organization for Standardization

ISO 9000 : 2001
Registered for Quality

All specifications are preliminary and are subject to change by ACM Systems. Revision 2.0 – 1 July, 2006

Call ACM Systems at 916-859-4777 for additional information...