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BRIDGE TECHNOLOGIES
AND
INFORMATION SYSTEMS

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Common Logistics Command & Control System (CLC2S) is a combat service support management tool which provides a simple LogC2 capability. CLC2S provides improved management and control of tactical-level resources and service support requirements while providing the MAGTF Commander and his staff with an automated means to quickly view his warfighting readiness posture.

fact sheet

RRTS+ is a web-based application that allows supported ground units to request supply items and services and check the status of those requests. The server is typically maintained at a central location and accessed remotely through a web browser.

CLC2S has a set of Asset Management capabilities accessible from the login page through the Enhanced CSSOC System, or ECS application. The Personnel, Equipment, and Supply Visibility functions enable the user to review and modify records.

Components:
CLC2S consists of a portable ruggedized server and associated laptops.

MOBILE SERVER SUITE **CF-29 TOUGHBOOK** **CF-18 TABLET**

Technical Characteristics:
CLC2S requires a nominal bandwidth of 4.8 KBps (SINCGARS/IRIDIUM). CLC2S utilizes an Oracle database and operates in a Windows 2000 environment. Additionally, users (account holders) require a web browser and network connectivity.

Concept of Employment:
*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:
Training is available through LMT-W in conjunction with Impact Resources Technologies @ bldg# 14121, DSN: 365-4430.

Procurement:
CLC2S can be procured through the Program Manager, Logistics Information Systems (PM-LIS) at MARCORSYSCOM or http://www.marcorsyscom.usmc.mil/sites/clc2s/

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Battle Command Sustainment Support System (BCS3) is a map-centric display on a commercial laptop, which provides a technical and visual picture of the battlefield. This system provides the commander with a Common Operating Picture (COP) and supports the Chief of Staff for Logistics (G-4) focus area by connecting logisticians, integrating the supply chain, improving force reception, and modernizing theater distribution. BCS3 provides actionable logistics information to commanders, and for the first time, a visual logistics picture of the battlefield.

Components:
BCS3 Components – BCS3 consists of an IBM T-41 or T-42 COTS laptop with a minimum of 80GB hard drive, 2GB RAM, 1.7 GHz processing speed. The software operates on a Windows XP platform.
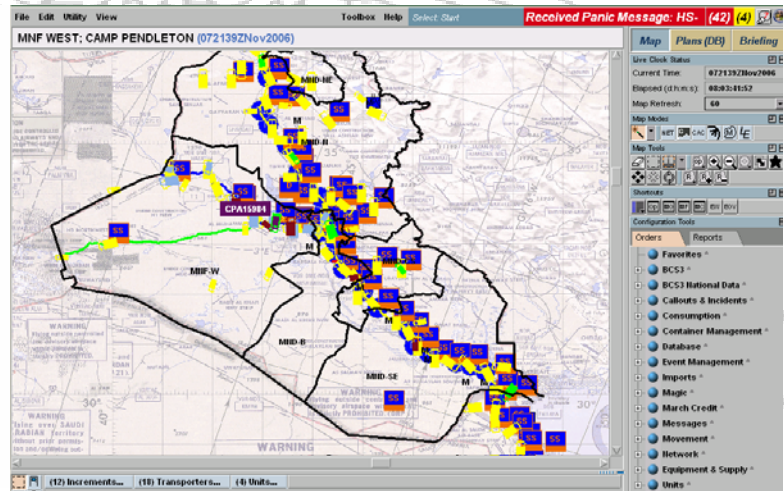
Technical Characteristics:
BCS3 is an Oracle based platform that contains a database structure, map display, and web based reporting capability. It requires an internet connection across ports 443 and 1521 to operate fully. BCS3 can be operated in both classified and unclassified environments.

Concept of Employment:
*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:
Training is available through LMT-W in conjunction with Tapestry Solutions @ bldg# 14121, DSN: 365-4430.

Procurement:
BCS3 can be procured through PM GCSS-MC office. Funding is provided by MarCorSysCom following justification submission and approval. I MEF mapping of BCS3 machines was determined during FY06 based upon MSC input.

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SecNet 11™ is the only National Security Agency (NSA) certified, Type 1 encrypted 802.11b wireless Network Interface Card (NIC) available that is capable of delivering secure data, video, and voice over IP (VoIP) at the secret level via a wireless network.

fact sheet

SecNet 11® Plus

Components:
The SecNet 11 product line, consisting of the PC Card, Wireless Bridge, and Key Fill Cable.

Technical Characteristics:
Encryption Features
Encryption
NSA Type 1 (BATON) up to Secret level data
Network Compatibility
Via AP/WB to wired networks
(802.3, TCP/IP, UDP, etc.)
Encrypted Payload
Entire IEEE 802.11b MAC Protocol
Data Unit (MPDU)
Data Key Port Load Mechanism
Manual, via DS-102
Common Fill Device (CFD) AN/CYZ-10
Key Fill Single key; symmetrical
PC Card Classification
– Unclassified Key or Without Key
Controlled Cryptographic Item (CCI)
– With Secret Key
Secret COMSEC item
Customers/Users
COMSEC-approved government agencies
and government contract suppliers
Radio Characteristics
Wireless Medium
Unlicensed, ISM band, 2412–2462 MHz (U.S.)
Number of Channels
11 (3 nonoverlapping)
Link Rate Per Channel
1, 2, 5.5, & 11 Mbps
Transmit Power (nominal)
Setting EIRP IRP
Maximum 16–18 dBm 14–16 dBm (25–40 mW)
Minimum 10–12 dBm 8–10 dBm (6–10 mW)
Standard Antenna
Dual 2.0 dBi dipoles
Antenna Connector Interface
Standard SMA supports external accessories

Interfaces
Host Computer
233 MHz minimum processor; Type II PC Card
(PCMCIA) slot supporting 3.3 VDC-only
operations; 10 MB free hard disk space
Operating System Compatibility
Windows® 98, Windows® Me,
Windows® 2000, Windows NT®,
Windows® XP, Pocket PC®, Linux
Graphical User Interface (GUI)
Keyboard, mouse, and Configuration
Management Monitoring Utility (CMMU)
LED Status Indicators
Fill, Ready, Alarm
Zeroize Encryption Key
Two physical buttons or via CMMU GUI
Physical Characteristics
Size (L x W x H); Antenna; Weight
5.9" x 2.13" x 0.19"; 3.38"; 3.1 oz.
Input Voltage 3.3 ± 0.3 VDC
Rx and Tx Power Consumption
1.5 W (typical) and 2.5 W (typical)
Rx Sensitivity
–78.5 dBm @ 11 Meg
FCC Certification
Exempt, Part 15.247 Compliant
Operating and Storage Temperatures
0 ° to +55 °C and –20 ° to +65 °C
Safety
Meets OET 65 Supplement C,
RF Exposure Limits

Concept of Employment:
*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:
Training is available through the vendor (Marine Corps Account Manager @ Harris Corporation) .

Procurement:
The SecNet 11 Plus PC card and SecNet 54 can only be procured, installed and operated by U.S. Government departments or agencies and their contractors, NATO, and foreign military customers with valid COMSEC accounts through the NSA.
Website:www.secnet11.harris.com

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SecNet 54™ is the generic name for Harris Corporation's new Family of Internet Protocol (IP) communications encryption products, designed to keep data, voice, and video communications secure. Its modular design enables the attachment of a variety of XMODs, allowing secure yet quick and easy utilization of standard communication technologies such as wired 802.3 ethernet, ISDN/PSTN, and wireless 802.11 and 802.16.

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SecNet 54™
Secure Wireless Local Area Network

Semper Fidelis

Components:

SecNet 54 is comprised of a modular architecture with two components: a Cryptographic Module (CMOD) that provides all security-critical functions, and an External Module (XMOD) that handles the transport of encrypted data over specific protocols.

Technical Characteristics:

Size: 3.18" x 5.26" x 1.13"
Weight: 11 oz (with antennas)
Operating –10°C to +40°C
Temperature: –10°C to +60°C
(with optional heat sink)
Storage Temp: –10°C to +70°C
Power Usage: CMOD: 5.5 W
RMOD: 2.5 W
Total: 8.0 W
IEEE 802.11a/b/g Standard Compatible
Data Rates:
802.11b: 1, 2, 5.5, 0, 11 Mbps
802.11a/g: 6, 12, 18, 24, 36, 48, 54 Mbps
Frequency Bands:
2.4 Ghz (802.11b/g modes)
5 GHz (802.11a mode)
Channels:
802.11a/b/g: 3 nonoverlapping
802.11a: 12 nonoverlapping
Configurable Modes:
AP, bridge, infrastructure, or ad hoc station

Transmit Power:
14 dBm @ 54 Mbps
17 dBm @ 11 Mbps
Antenna:
Included: dual diversity dipoles, 2.4- and 5-GHz bands Standard SMA connector supports external PAs, converters, or antennas
Transmit Power Settings:
Full, 1/2, 1/4, 1/8, minimum
Rx Sensitivity: dBm Mbps GHz
–94 1 2.4
–87 11 2.4
–88 6 5
–82 24 5
–75 54 2.4
–73 54 5
Range (outdoor, with included antennas):
54 Mbps: 500 ft
12 Mbps: 2,000 ft
1 Mbps: 3,000 ft *Actual values will vary with conditions. Extended Range Kits are available.

Concept of Employment:

*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:

Training is available through the vendor (Marine Corps Account Manager @ Harris Corporation) .

Procurement:

SecNet 54 is designed for use by all branches of the U.S. Department of Defense, Federal and Homeland Security agencies, and the Intelligence Community. SecNet 54 products are Controlled Cryptographic Items (CCI) that can only be procured by organizations with COMSEC or DODDAC accounts including the U.S. Department of Defense and Federal Agencies.
Website:www.secnet54.harris.com

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The Logistics Support Wide Area Network (LSWAN) is a commercial-off-the-shelf non-developmental item (COTS/NDI) expeditionary satellite communications capability. It provides increased dedicated bandwidth per node (1.5Mbs) using commercial satellite providers. In fact, LSWAN provides ten times as much bandwidth as the PSC-5 mobile satellite system for distances greater than 10km. Furthermore, deployment of this capability provides unique communications support since LSWAN accommodates both NIPRNET (Unclassified) and SIPRNET (Classified) operations. LSWAN is an experimental capability that fills a critical equipment need in the Marine Corps Logistics communication architecture. It provides MAGTF logisticians with vastly increased data capability while requiring minimal additional training. The LSWAN unit is packaged for easy transportation and deployment. Logistics personnel can install it and organizational communicators can provide the tactical network configuration. There are eight systems employed as part of the tactical network supporting units in the Iraqi Theater of Operations.

Components:
The major functional groups of the LSWAN package are: Ku VSAT antenna, power amplifier, modem, routers, accelerators, KG-175/TACLANE, and CISCO Call Manager suite for VoIP. The Ku VSAT terminal and baseband are packaged in transit cases--all HMMWV transportable.
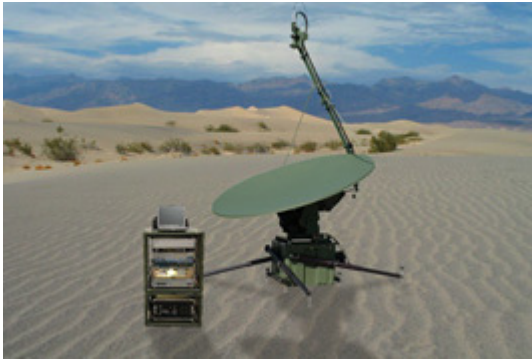
Technical Characteristics:
Orthogonal Frequency Division Multiplexing (form of 802.16 – WiMax)
AN-50 system operates in the license-exempt 5.8 GHz band.
Delivers rates between 1.5 - 72 Mbps.
Robust NLOS capability.
The essence of OFDM is that it breaks up the transmitted signal into many smaller signals.
For example, instead of one signal carrying 72 Mbps of data, there are 48 separate carriers, each carrying about 1.5 Mbps of data.

Concept of Employment:
*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:
Training is available through the vendor. Additional assistance can be obtained from MCTSSA support center @ DSN 365-0533.

Procurement:
The system can be procured through the LSWAN Project Officer at MARCORSYSCOM.

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The Marine Corps' Last Tactical Mile In-Transit Visibility, Warehouse to Warfighter (LTMITV-W2W) system is a man-packable, non-nodal communications platform that provides innovative solution sets that sharply augment existing supply visibility and accountability capabilities. LTMITV-W2W is to support both garrison and tactical distribution operations from a USMC 'warehouse' forward. Based on a COTS platform that uses hardware proven and deployed within other DoD programs, the system enables near real time in-transit visibility of gear flow to supply support activities and consignees from upstream distribution points.

Components:
The W2W kit consists of a Tablet PC with power supply which runs the Visibility Tracking Program (VTP) and associated kit items to include a barcode scan, GPS and data communications via satellite transceiver (USB connection to tablet), integrated cable for data communications/power, and a power inverter for plug-in power utilized with transceiver and tablet

Technical Characteristics:
-Relies on satellite transceiver and GPS to communicate data to Location Server
    -Designed to use minimal bandwidth
    -Provides robust seamless satellite data communications to ensure data that is sent up is not 'lost in the ether'
    -All communications between Field Kit and Satellite are encrypted
-Does not depend on a localized server
-Tablet PC does not use mapping software– it is purely an input/filter for data up to the Location Server

Concept of Employment:
*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:
Training is available through LMT-W @ bldg# 14121(DSN: 365-4430) in conjunction with the Supply Management Unit @ DSN: 361-0423.

Procurement: W2W kits are available through the standard Marine Corps purchasing process.

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Iridium delivers essential communications services to and from remote areas where no other form of communication is available. Iridium makes this possible through its constellation of 66 low-earth orbiting (LEO), cross-linked satellites and 12 in-orbit spares. The Iridium service is ideally suited to complement BCS3. The Marine Corps is using this Iridium satellite-enabled equipment identification and tracking system to provide a critical in-transit visibility and asset tracking capability in support of the warfighter.

fact sheet

IRIDIUM

Components:

In order to effectively utilize iridium modem technology, the following items are recommended:

-Satellite tracker w/antenna
-DC power cable
-battery charger

Technical Characteristics:

Dimensions: 4.39" L x 2.10" W x 1.00" D (112 mm x 53 mm x 25 mm)
Weight: ~0.38 pounds (170 g)
I/O Interface: Circular Connector
Antennas: SMA Female Connectors
Cooling: Convection
Enclosure: Aluminum/EMI shielding
Input Voltage Range: +4.0VDC to +5.5VDC (Option: +2.7VDC to +5.5VDC)
Input Nominal Voltage: +5.0VDC
Input Ripple Voltage: 40mV pp
Operating Frequency: 1616 to 1626.5 MHz
Duplexing Method: Time Division Duplex
Multiplexing Method: TDMA/FDMA
Link Margin Downlink: 13 dB average
Link Margin Uplink: 7 dB average
SBD Mobile Originated: 205 Bytes/message
SBD Mobile Terminated: 135 Bytes/message
Hardware Interface: RS232
Software Interface: AT Commands
Operating Temperature: –22oF to +140oF
(–30oC to +60oC)
Operating Humidity: < 75% RH
Storage Temperature: –40oF to +185oF

Concept of Employment:

*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:

Training is necessary and should be included as part of the contract purchase request.

Procurement:

Iridium modems can be procured through means of open purchase and the utilization of a preexisting UUNS. Contact Iridium Project Officer @ (703) 432-4362.
The following websites are available for more information:
http://www.disa.mil
https://www.ditco.disa.mil/products/asp/emss_info.asp

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Blue Force Tracking (BFT) is a capability and system that identifies and tracks "friendly forces," cutting through the fog of war to save lives. Positions are automatically updated by satellite at specific user-defined time intervals. The result is a near-real time picture of friendly BFT-equipped vehicle locations that helps with tracking mission progress and could provide a last known point, should the need arise, to assist with lost or downed aircraft. The technology identifies friendly forces and allows Army and Marine units to communicate with each other through instant messaging.

fact sheet

Components:
BFT is a "system of software and ruggedized computer hardware that links satellites, sensors, communications devices, vehicles, aircraft and weapons in a seamless digital network."

Technical Characteristics:
These systems can form a tiered architecture using ground, airborne, over-the-horizon (OTH) relay, and national asset segments to prevent fratricide, track valuable military assets, provide emergency communication, exfiltrate data from sensor systems, and allow search and rescue forces to quickly locate, identify, and communicate with at-risk personnel.

Concept of Employment:
*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:
Training is available through the I MEF MISTC @ bldg# 53318, DSN: 361-2180.

Procurement:
Though the BFT system is not a Marine Corps Program of Record, HQMC designed it as a "Low-Density, High-Demand" Asset and to be centrally controlled by MCSC. Most of the BFT systems are supporting OEF/OIF units. The BFT Project Officer can be contacted @ (703) 432-4273, DSN: 378-4273.

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Command and Control for the PC (C2PC) facilitates the creation and visualisation of the Common Tactical Picture (CTP) or Common Operational Picture (COP) in a Microsoft Windows environment. C2PC provides an open architecture using Microsoft technologies to seamlessly integrate with desktop applications such as Microsoft Word and PowerPoint, and other applications developed using these industry standards. C2PC maps can be quickly and simply copied into briefings and reports generated by such applications.
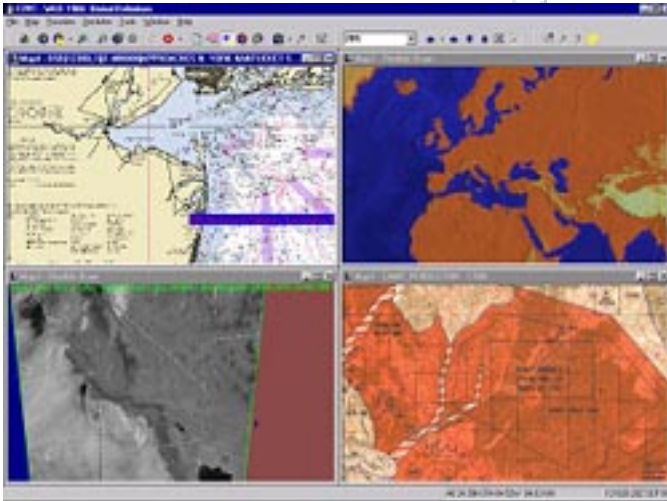
Components:
Provides a fully scaleable installation via CD-ROM that runs on Windows NT 4.0©, and Windows 2000©, and Windows XP©.

Technical Characteristics:
Provides full COP track database add, edit, and delete capabilities as well as manual or auto declutter.
Provides a tactical unit/target database and editor for planning.
Capable of stand-alone, peer-to-peer, or client-server operations in a disconnected mode over military tactical radios.
Supports the Variable Message Format (VMF) standard for increased communications interoperability.
Provides a single-point configuration for units of measure, accuracy and other options.
Provides a full set of Tactical Decision Aids (TDAs), including a range and bearing tool, Quick CPA, Quick Intercept, CrossFix, Four Whiskey Formations, and Screen Kilo Formations.
Allows simultaneous display of multiple independent map windows. Each map window can display a different area, using different digital map products with various filtered views of the track database.
Provides support for digital map data, including NIMA's ADRG, RPF: CADRG, CIB; VPF: DNC, VMAP, WVS, DTOP; DTED; NITF; WBD I & II; NOAA's BSB and Vector Shoreline; GeoTiff, ETOP, and Shape.
Provides a means to print the map background or foreground to scale.

Concept of Employment:
*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:
Training is available through the I MEF MISTC @ bldg# 53318, DSN: 361-2180.

Procurement:
C2PC is the de facto Joint standard NT COP client and has been fielded to all three
MEFs down to the battalion and squadron level.

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The Portable Deployment Kit (PDK) provides a complete RFID solution for real-time, end-to-end visibility of goods and critical assets moving through the supply chain - at any location. The system collects and processes data from active RFID tags on equipment pallets and containers, then transmits it through the Iridium network to the DoD ITV network server.

fact sheet

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PEO ENTERPRISE INFORMATION SYSTEMS

Components:
The PDK is completely portable and contains the laptop, modems, antennas, printer and software needed for remote communication in a self-contained durable carrying case.

Technical Characteristics:
Physical-Dimensions: 22 in. Length x 18.1 in Width x 10.9 in. Height
Weight: 57 lbs - Complies with MIL-STD-1472 One Man Lift Guidelines
Packaging: Rugged, weatherproof packaging for indoor and outdoor use. Sealed to NEMA 3 when system case is closed.
Power Supply-Input DC Source: 12 or 24 VDC (Fuse Protected Input)
Input DC Cable Length: 10 Feet
Input DC Cable: NATO Slave Connector +24 Vdc Input Only; Cigarette Lighter Adapter +12 Vdc Only
Internal System Power: 4.4-6.5 Vdc, 2.2A; 5 Vdc, 1 A; 12 Vdc, 2A; 19.2 Vdc, 5A; 24 Vdc, 1A.
Interfaces-Internal System Data: USB from PC to RS-232 for Iridium Modem & Intermec Communications Cable and Zebra PT403 RS-232 from SMR-650-213, to PC
External System Data: Iridium Satellite Link to ITV Network. Case Equipped with External SATCOM and GPS antenna connectors
External RS-232 pass through for SMR-650-213 Support
External DC Power input: 6-pin, Male, Panel Mount, Weathertight
Environment-Temperature: -20° C to 50° C operating temperature (Case Lid Open)
Humidity: 100% Condensing
Shock and Vibration-Vibration: MIL-STD-810F Method 514.4 Category 10
Shock: MIL-STD-810F Method 516.5 Procedure IV
Regulatory Safety Approval: U.S. UL 60950 Approvals
Indicators-Iridium Signal Strength: NAL Corp. Iridium Signal Strength Indicator
Accessories-Subscriber Interface Required for Iridium activation Purchase from Module: DISA: http://www.disa.mil
Fuse Spares: Type 3AG, 250V, 5A
External Power Supply: Universal AC input to PDK compatible DC output
Serial Cable: 10 ft. Serial Cable: DB 9 F to DB 9 M, RS-232
Input DC Cable: US Marines Cobra Slave Connector, 10 ft.

Concept of Employment:
*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:
Training is available through LMT-W, DSN: 365-4430 in conjunction with the I MEF AIT coordinator @ DSN: 361-2864.

Procurement:
PM J-AIT is the Army Product Management Office for total AIT and RFID solutions. They offer a single point of contact for acquisition support and technical expertise for Joint Services, Federal agencies, NATO, and multi-national forces. As an RFID technology leader, we provide global asset tracking, Web-based RF-ITV services, and complete program life cycle support. When purchasing either the Portable Deployment Kit (PDK) CLINs X015 CA - CB or the Early Entry Deployment Support Kit (EEDSK) CLINs X050BA – ER, the user must also acquire a SIM card, purchased separately from the Defense Information Systems Agency (DISA). The PDKs and EEDSKs communicate with the ITV servers via Iridium modems. These modems contain a SIM card that activates service. The SIM cards have a monthly service cost tied to their use, as well as a one-time procurement fee for the SIM card itself, and can be obtained from DISA. The SIM cards can be purchased already activated or inactive, if needed, for future use.
There are no other fees for use.

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The Marine Corps Equipment Readiness Information Tool (MERIT) is the first of its kind ground equipment readiness management decision support tool. MERIT is a web-based program that pulls data from the supply and maintenance management legacy systems used by the Marine Corps. The tool uses a specialized graphical user interface that transforms the legacy data into information that can be used to analyze trends and identify emerging challenges in order to provide a dynamic, adaptable view of equipment readiness for the Marine Corps. MERIT's breadth, versatility, and user-friendly environment make it a crucial tool for anyone who needs fast, comprehensive analysis of equipment readiness.

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Components:
N/A.
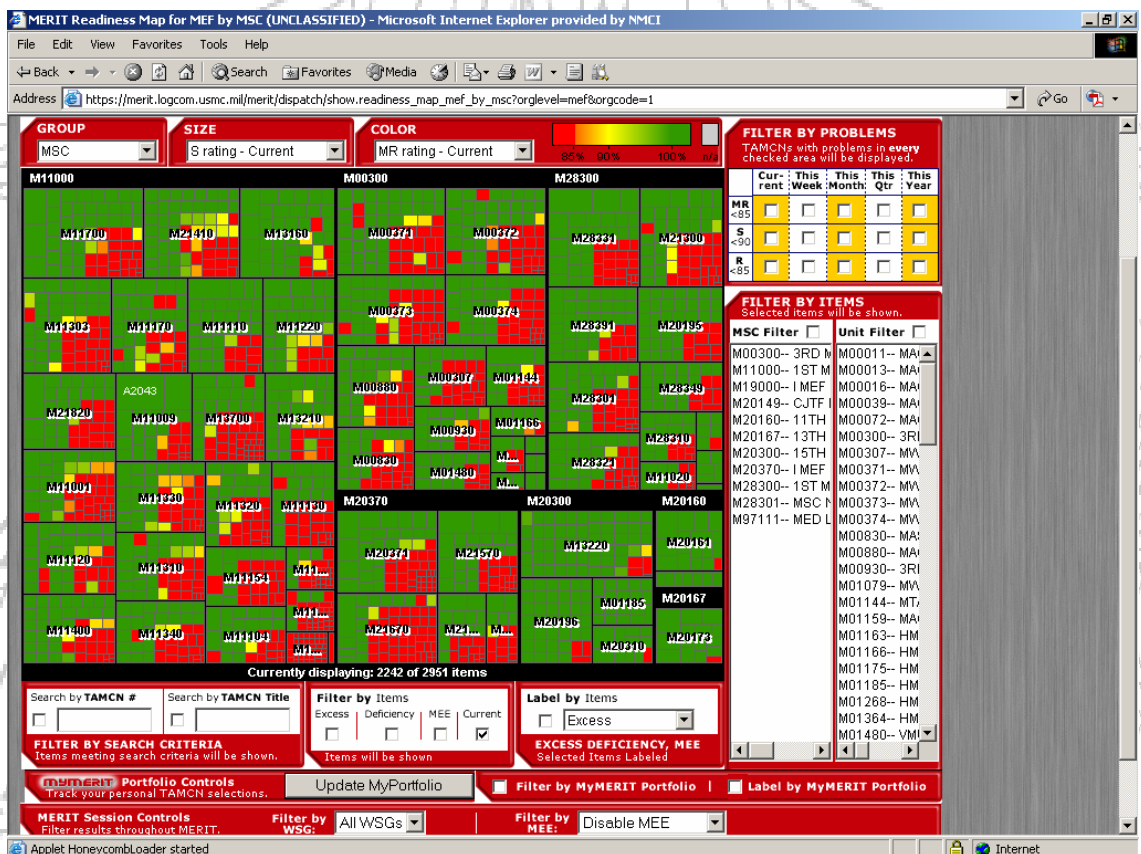
Technical Characteristics:
MERIT's technical architecture has been developed to work with existing Logistics legacy systems as well as future USMC logistics systems.

Concept of Employment:
*Information on the concept of employment can be obtained through the LMT-W office.

Sustainment:
Training is available through the LMT-W @ bldg# 14121, DSN: 365-4430 in conjunction with MarCorLogCom @ (229) 639-6005.

Procurement:
MERIT simply requires the establishment of an account.
Available from .mil domain only.
Apply online @ https://merit.logcom.usmc.mil
or SIPRNET @ https://www.logcom.usmc.smil.mil/merit

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<u>NOTES</u>

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