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Intelligence and Electronic Warfare (IEW) System Fact Sheets

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SYSTEM SUMMARY

FEATURES:

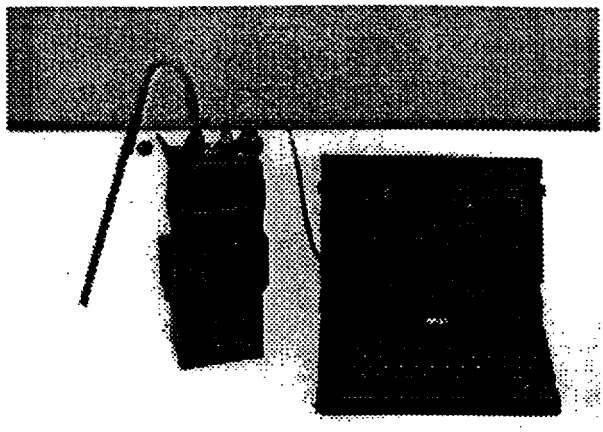
- Multiple sensors:
  - Magnetic
  - Seismic/acoustic
  - Infrared
- Flexible:
  - Field programmable
  - Durable
- Reliable:
  - Low false alarm rate/high nuisance rejection
  - Tamper-proof
  - Sensor status rpts
- Built in EP:
  - Jam resistent
  - LPI
- Long life
- Simple to emplace

PHYSICAL PARAMETERS

- Sensors
  - 11"L x 2"H x 5.7"W
  - 3.5-4.0 lbs
- Monitor
  - 12"H x 4"W x 3"D
  - 5.0 lbs
- Repeater
  - 11"L x 3"H x 4.4"W
  - 6.0 lbs

PERFORMANCE AND CHARACTERISTICS:

- Detection range:
  - Personnel 3-50m
  - Wheeled 15-250m
  - Tracked 25-350m



Improved Remotely Monitored Battlefield Sensor System (IREMBASS)

I-REMBASS is an unattended ground sensor system that detects, classifies, and determines direction of movement of intruding personnel and vehicles. It uses remotely monitored sensors emplaced along likely enemy avenues of approach. These sensors respond to seismic-acoustic energy, infrared energy, and magnetic field changes to detect enemy activities. The sensors process the data and provide detection or classification information which is incorporated into digital messages and transmitted through short burst transmission to the system sensor monitor programmer set. The messages are demodulated, decoded, displayed, and recorded to provide a time-phased record of enemy activity.

irembass.wpd
2 Apr 94

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SYSTEM SUMMARY

FEATURES

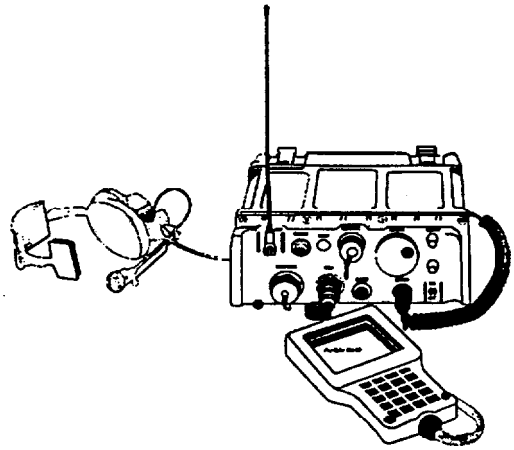
- Search: Manual or auto
- Intercept: HF/VHF/UHF
- Locate:
  - Determines/reports LOB data to other LMRDFS or Teammate systems
  - Graphically displays LOB data
  - Receives/processes LOB data from other LMRDFS
- Communications:
  - Receives/generates taskings; reports results
  - Transmits/receives secure data

MAJOR COMPONENTS SIZE/WEIGHT

- Receiver/processor
  - 12"x12.8"x5" (stowed)
  - 24 lbs
- VHF/UHF antenna
  - 14"x6"x28" (stowed)
  - 27 lbs
- HF Antenna
  - 13" long (stowed)
  - 9 lbs

PERFORMANCE AND CHARACTERISTICS:

- Power:
  - BA-4386/U (Magnesium)
  - BA-5598/U (Lithium)
  - BB-586/U (Nicad)



Lightweight Man-Transportable Radio Direction Finding System (LMRDFS) AN/PRD-12

The AN/PRD-12 is a lightweight manportable communications intercept/DF system. The system's dual channel design gives it speed, high accuracy, and operational flexibility. It can stand alone on intercept and direction-finding missions. On emitter location missions, it works as part of a network that may include larger systems, such as Teammate, AN/TRQ-32A(V)2. The system is ideal for intercept/DF operations in light, airborne, air assault and SOF operations. The 60 pound system can be carried by two soldiers. The receiver/processor subsystem fits in one soldier's ALICE pack and the antenna subsystem goes in another pack. A complete station can be rapidly relocated, optimizing its use in the forward areas of operations. External communications are provided by secure Combat Net Radio (CNR) .

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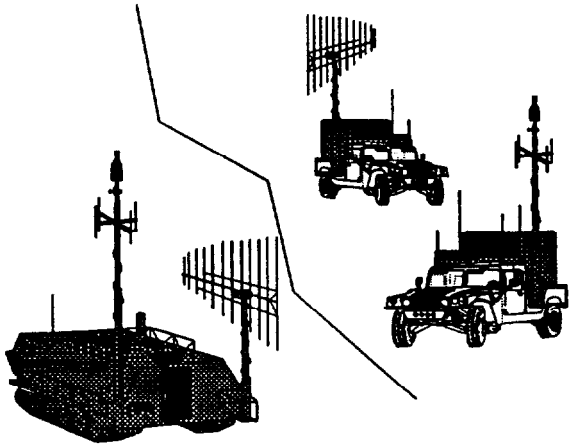

Ground Based Common Sensor (GBCS)

SYSTEM SUMMARY

- Precision (targetable) emitter locations
- Quickfire channel through ACE or CGS to shooters
- Instantaneous signal acquisition, targeting processing, reporting
- COMINT/ELINT correlation for node ID
- Smart "Stealth" jamming
  - reduces jamming interference
  - optimizes effects of jamming on the threat
- Operates against modern modulations and LPI signals
- Expanded frequency range over current systems:
  COMINT: MF to SHF
  ELINT: UHF to EHF
- Commonality simplifies logistics and trng:
  Mission equipment
  Standard Army vehicles
- Open sys arch. for ease of upgrade & horizontal technology insertion
- Interoperable with USA & USMC:
  - Intel fusion systems
  - Fire Spt (wpns/ctrs)
  - Unlike IEW assets

BASIS OF ISSUE:
- 6 per MI BN (HVY, LT, ABN, AASLT, DIV)
- 6 per MI Co; ACR

GBCS is the Army's only on-the-ground, all-weather, all-terrain, self-contained, fully integrated, 24-hour signal intelligence and electronic warfare asset. The Electronic Attack (EA) module includes smart jamming capabilities. GBCS-H, mounted in the Ml097 (EFVS), provides the capability to conduct mission operations on-the-move. The GBCS-L, mounted on the M1001 (HMMWV, heavy), provides light forces with a rapidly deployable ground based SIGINT capability. Using common subsystems in the platform, the system intercepts and jams both single channel and LPI signals and when netted with AQF, provides situation development and targeting information to battlefield commanders. The GBCS preprocesses signal data at the sensor and provides target detection, identification, and location reports in near-real-time. The GBCS is organic to MI units at division and ACR. System collection and precision location results provide input for tasking and mission direction for other divisional IEW assets\ The GBCS-H/L is an element of the IEW Common Sensor (IEWCS) system.

GBCS.WPD
30 Mar 94

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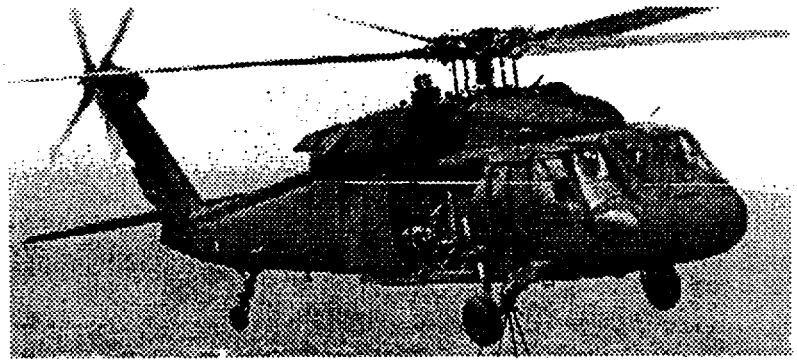

Advanced QUICKFIX (AQF)

AQF is a division level sensor system that provides signals intelligence to the battlefield commander at ranges in excess of the Ground Based Common Sensor capability. The system modularity allows for tailored mission tasking for communications and non-communications intelligence collection, precision location, and Electronic Attack (EA). The system will permit rapid mid-range emitter mapping of the battlefield by using angle and time difference of arrival technology. Its range and accuracy supports the targeting of command and control nodes within the division battle space. The AQF operates in single or multiple aircraft missions. It interoperates with the GBCS-H/L, and other AQF assets, as part of the Intelligence and Electronic Warfare Common Sensor (IEWCS) system, in a network to obtain targetable emitter locations. Each system provides the capability to detect, locate, collect, analyze, and exploit fixed frequency and LPI communications. AQF provides a "smart jamming" capability against communications emitters.

System Summary

- Precision (targetable) emitter locations
- Quickfire channel through ACE or CGS
- Instantaneous signal acquisition, targeting processing, reporting
- COMINT/ELINT correlation for node ID
- Smart "Stealth" Jamming
  - Reduces jamming interference
  - Optimizes effects of jamming on the threat
- Operates against modern modulations and LPI signals
- Expanded freq range:
  COMINT: MF to SHF
  ELINT: UHF to EHF
- Commonality simplifies logistics & trng:
  Mission equipment
  Std Army airframe
- Extended Mission Duration
- Open sys arch. - ease of upgrade & horiz. technology insertion
- Integrated navigation guidance system
  - Provides 10m accuracy on AQF locations
  - Intertial Navvigation Guidance System
  - Miniture Global Positioning Receiver (MAGR)

BASIS OF ISSUE:
- 4 per MI BN (HVY, LT, ABN, AASLT DIV)
- 4 per MI Co, ACR

AQF.WPD
28 Mar 94

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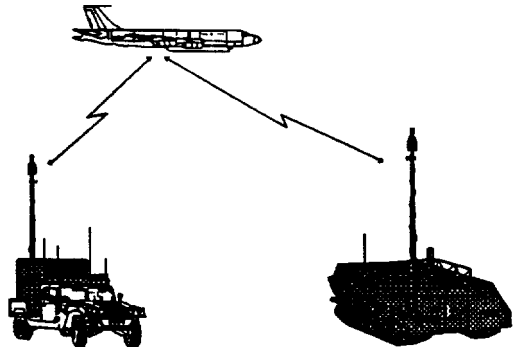
SYSTEM SUMMARY

FEATURES:
- Situation development
- Battle management
- Targeting
- Force protection
- Limited BDA

PHYSICAL PARAMETERS
- 3 variants
  - (L) 2xHMMWV & shelter
  - (M) 2x5-Ton, shelter & 30Kw
  - (H) MLRS chassis w/ armored enclosure

PERFORMANCE AND CHARACTERISTICS:

- **Receipt & Analysis of JSTARs data:**
  - Wide area surveil.
    - MTI
  - Small area surveil
    - Sector search
    - Target class
    - Attack planning
    - Attack support
    - Target tracking
  - Syn Aperture Radar
    - 4Km x 4Km SAR
    - Fixed tgt indicator
  - Receives UAV data
    - MGSM-hard wire
    - LGSM/HGSM-RVT
  - LGSM/HGSM w/CTT rcv's:
    - Guardrail
    - TIBS & TRAP
- **Interoperability:**
  - TACFIRE/AFATDS
  - ASAS
  - Standard comms
- **Operations:**
  - Display/manipulate multi-sensor data
  - Remote display
  - Interactive data link
  - Color hardcopy
  - Man history replay
  - Graphics, masking, map, track display



JSTARS
Ground Station Module . (GSM BLK I)

JSTARS is a joint Army-Air Force **wide-area-** surveillance system that provides battle management and targeting information. It supports situation development and targeting of mobile and fixed ground targets and slow moving rotary wing aircraft. JSTARS consists of Air Force **E8C** aircraft and Army **GSMs.** The **E8C** collects **MTI** and SAR radar data using a multi-mode radar. The GSM is the Army's highly mobile ground station. It receives and analyzes processed radar imagery from the **E8C.** It is also capable of receiving/analyzing data from UAV-SR and SIGINT from the CTT. The GSM is distributed at all echelons brigade and above. It supports intelligence and targeting functions with NRT interactive displays, which can be reproduced on a remote display. The operator provides accurate fixed and moving target locations, speed and direction of movement, and classification of tracked/wheeled vehicles. The GSM is equipped with standard Army communications and dedicated TACFIRE and **ASAS** digital links using pre-formatted auto-fill message formats. The SCDL provides a wideband, anti-jam, two way link between the **E8C** and the GSM. Radar data, flight operations information and RSR status, come from the aircraft. **RSRs** requesting special radar products (see performance characteristics), etc. are sent from the GSM to the aircraft. The **GSM** and **E8C** are also linked by SINCGARS and **UHF** radios.

Basis of **Issue:**
6 per DIV MI BN
2 per EAC MI BDE, Corps MI BDE, **& USAIC&FH**
1 per Corps Arty/Arty **BDE/AVN** BDE
1 per **ACR/SEP** BD

gsm.wpd
7 Mar 94

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SYSTEM SUMMARY

FEATURES:
- Status-at-a-glance
- Situation development
- Battle management
- Targeting
- Force protection
- Limited BDA

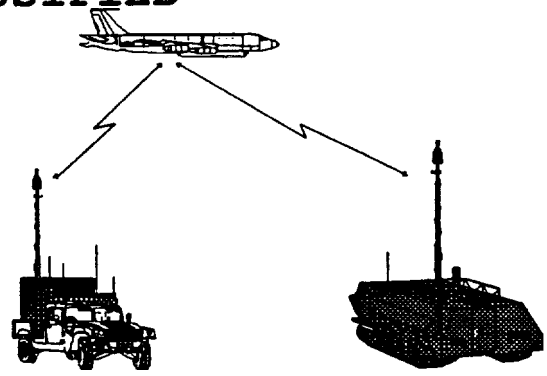
PHYSICAL PARAMETERS
- 3 variants
  - (L) 2xHMMWV & shelter
  - (M) 2x5-Ton, shelter & 30KW
  - (H) Bradley chassis w/ armored enclosure

PERFORMANCE AND CHARACTERISTICS:

- **Receipt & Analysis of JSTARs data:**
  - Wide area surveil.
    - MTI
  - Small area surveil
    - Sector search
    - Target class
    - Attack planning
    - Attack support
    - Target tracking
  - Syn Aperture Radar
    - 4Km x 4Km SAR
    - Fixed tgt indicator
  - Receives UAV data
    - MGSM-hard wire
    - LGSM/HGSM-RVT
  - Receives National SIDS
  - LGSM/HGSM-w/CTT rcv's:
    - Guardrail
    - TIBS & TRAP

- **Interoperability:**
  - TACFIRE/AFATDS
  - ASAS
  - Standard comms

- **Operations:**
  - Display/Manipulate multi-sensor data
  - Remote display
  - Interactive data link
- Color hardcopy
  - Msn history replay
  - Graphics, masking, map, track display



JSTARS
Common Ground Station
(CGS/GSM BLK II)

JSTARS GSM BLK II (CGS) is a product improvement of the GSM BLK I. It includes all GSM BLK I baseline functionality in the same three mobility and survivability configurations: heavy, medium, and light. It incorporates additional mission functionality into a fully mobile targeting, battle management, and surveillance system. It receives, correlates, manipulates, displays, stores, and disseminates imagery to include secondary imagery from national and theater sensors. The CGS operates at the SECRET collateral level. It interfaces with ATCCS and B2C2 to provide tactical commanders and battle staffs at ECB a status-at-a-glance of the battlefield. CGS operations on the move are supported by a robust suite of communications devices that include SATCOM, IHFR, and CTT. The system facilitates intelligence operations and battle command through the use of wargaming, IPB, asset management, and other tactical IEW and targeting working aids. It provides the force with a fully scalable, tailorable, mobile, and responsive intelligence data processing capability to satisfy operational and tactical requirements. The system's open architecture allows performance improvements and physical downsizing through insertion of evolving communications and computer technology.

Basis of Issue:
6 per DIV MI BN
2 per EAC MI BDE, Corps MI BDE, & USAIC&FH
1 per Corps Arty/Arty BDE/AVN BDE
1 per ACR/SEP BD

System Summary

Characteristics

- Backpack-size components
  - aircraft (25 lbs)
  - ground station (40 lbs)
- Assembly time:
  aircraft - 2.5 min
  ground station - 4 min
- Ground Control Station:
  - 2 shrouded, 4"; color monitors (data display)
  - 8 mm video cassette (replay with freeze frame, fast and slow motion, stereo audio channels)
  - 2 video and 2 audio channels
- Aircraft Dimensions:
  - 9' wingspan
  - 6' length
  - 8 lbs

Performance

- Hand launched
- 1 hr flight duration
- Airspeed 22-45 mph
- Patrol radius 3.5 miles
- Climb rate 600.ft/min
- Nominal low alt. 100 ft
- Auto-land by deep stall

Capabilities

- Combat missions
  - Recon/surveillance
  - Target identification
  - Convoy route support
  - BDA
  - Camouflage assessment
- Peacekeeping missions
  - Counter drug
  - Law Enforcement
  - Land management
  - Environmental survey

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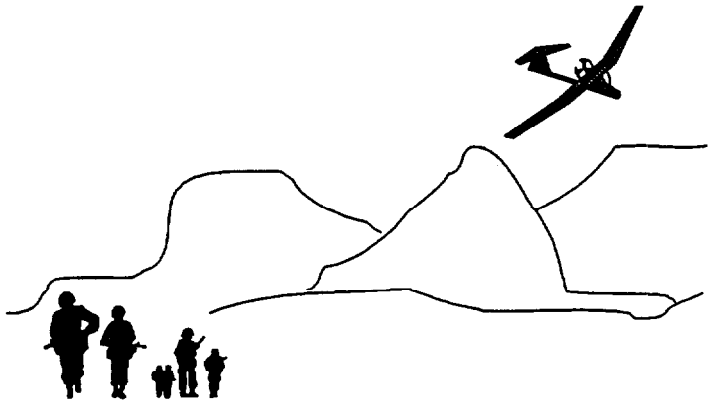


Pointer

Hand Launched
Unmanned Aerial Vehicle

The Pointer is a Hand-Launched Unmanned Aerial Vehicle (HL-UAV) to be employed by battalion scouts for **"over-the-hill"** reconnaissance and surveillance. It is transportable by 2 soldiers in full mission gear and can be set-up and launched in 5 minutes or less. The system has daytime and twilight operation. capabilities and improves the survivability of scout teams. Its mission capabilities traverse the full range of military operations and include such areas as drug enforcement, search and rescue, and natural disaster damage assessment. In its current configuration each HL-UAV team consists of three soldiers; a pilot, a navigator, and a spotter. The system does not require a special nor dedicated vehicle.

SYSTEM SUMMARY

FEATURES:

Payloads:
- EO/FLIR

Potential payloads:
- MTI/SAR
- MET
- Electronic Support
- Electronic Attack
- Mine detection
- NBC recon

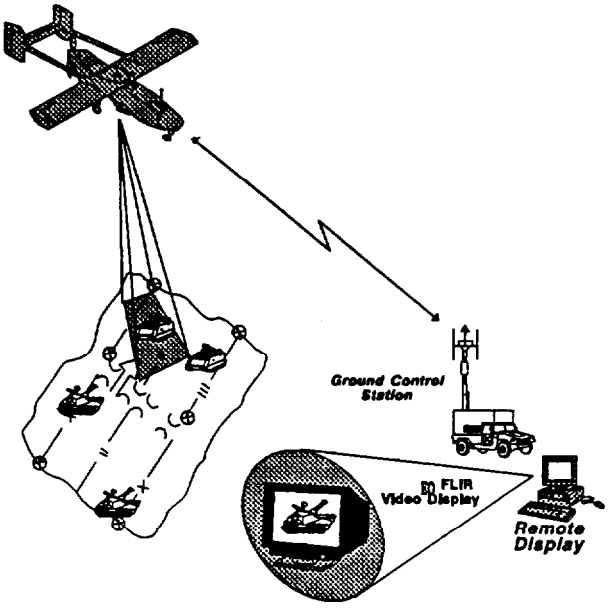
PHYSICAL PARAMETERS

- Payload: 50 lbs

PERFORMANCE AND CHARACTERISTICS:

- Range: 50 km
- Endurance: 3 hrs
- Climb rate: 750' per min
- Operational Alt: 5,000' AGL
- Launch/recover w/ cross winds up to 20 kts
- Capable of min speed of 75 kts
- Launch/recovery area:
  - 30m x 75m with a 10m obstacle
- Deployability:
  - C130 or larger
  - Roll-on/roll-off

BASIS OF ISSUE:
- 3 per Hvy/Air Aslt division
- 5 per light division
- 3 per Abn division
- 3 per ACR
- 5 per light ACR
- 1 per separate Bde
- Total requirement: 74



Unmanned Aerial Vehicle Close Range (UAV-CR)

The UAV-CR will be organic to MI battalions in each type of division, ACR, and separate brigade. The vehicle operates forward of the FLOT, day or night, in limited adverse weather conditions to provide commanders with near-real-time intelligence, reconnaissance, and battlefield surveillance. It has a 50 km radius and a flight endurance of 3 hours. The baseline fielding configuration consisting of: four air vehicles, four EO/FLIR payloads, two ground control stations, two ground data terminals, and one remote video terminal. Additional payloads may include MTI, meteorological sensors, SAR, communications and noncommunications intercept and DF, and jamming payloads for communications and noncommunications.

SYSTEM SUMMARY

FEATURES:

Fielded payloads:
- EO/FLIR
- UAV data relay

Potential payloads:
- MTI
- Comms relay
- SAR
- MET
- Electronic Support
- Electronic Attack
- Mine detection
- PSYOP
- SIGINT
- NBC recon

PHYSICAL PARAMETERS

- Wing span: 29.2'
- Payload: 200 lbs
- Engines: 2 x 65 HP
- Fuel: MOGAS

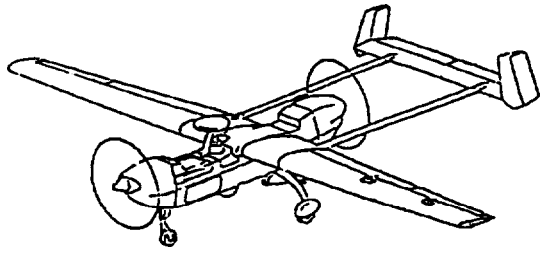
PERFORMANCE AND CHARACTERISTICS:

- Range: 300 km
- Endurance: 10 hrs
- Climb rate: 1050' per min
- Operating Alt: 5000' AGL
- Service ceiling: 15000' MSL

Speed:
- Cruise: 90 kts
- Dash: 110 kts

Launch/recovery area:
- 200m x 75m

BASIS OF ISSUE:
- 1 per Hvy/Air Aslt div
- 2 per EAC & corps
- 1 per Abn div & ACR(E)
- Total requirement: 24



Unmanned Aerial Vehicle Short Range (UAV-SR)

The UAV-SR system will be organic to the Aerial Exploitation Battalions of the corps MI brigade, EAC MI brigades, MI battalions in each heavy division, and the ACR. The vehicle operates throughout the battlefield area, forward of the FLOT, day or night, in limited adverse weather conditions to provide commanders with near-real-time intelligence, target acquisition, battle damage assessment, reconnaissance, and battlefield surveillance. The radius of operation is 300 km from the controlling ground control station, with a flight endurance of 10 hours. Baseline fielding configurations consisting of: eight air vehicles, eight dual EO/FLIR payloads, four data relay payloads, two ground control stations, two ground data terminals, a mission planning station, four remote video terminals, a launch and recovery section, and a mobile maintenance facility. Additional payloads being considered for development include MTI, meteorological sensors, SAR, minefield detectors, communications relay, communications and noncommunications intercept, DF, and jammers.

SYSTEM SUMMARY

FEATURES:

- Payloads:
  - EO/FLIR
  - MTI/SAR
  - SIGINT
  - Comm/data relay
  - MET
  - PSYOP
  - NBC recon

PHYSICAL PARAMETERS

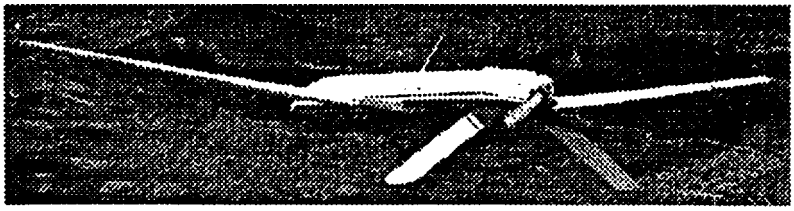
- Payload: 500+ lbs

PERFORMANCE AND CHARACTERISTICS:

- Range: 1200+ km
- Endurance: 24+ hrs
- Climb rate: 750' per min
- Operational Alt: 40,000'+ AGL
- Loiter speed: 50 kts
- Dash speed: 100+ kts
- Launch/recover w/ cross winds up to 20 kts
- Launch/recovery area: 5 1,000' runway or less
- Deployability:
  - C130 or larger
  - Roll-on/roll-off

BASIS OF ISSUE:

- 2 per EAC MI Bde
- 2 per corps MI Bde



Tactical Endurance Unmanned Aerial Vehicle (TE-UAV)

The **TE-UAV** will be organic to the Aerial Exploitation Battalion of the Corps MI Brigade and the EAC MI Brigade. It will operate as a stand-off system behind friendly lines and also penetrate deeply into enemy territory for selected missions. The **TE-UAV** will operate night and day, in near-all-weather conditions, for extended periods of time. Its radius of operation can be up to 1200 km from the controlling GCS, using either a UAV or satellite relay, with an endurance of more than 24 hours on-station. A baseline consists of 8 AV, all payloads, 2 GCS/GDT and **1 LCS/LRT** (if unique from **UAV-SR**), and all necessary support equipment. Payloads will include EO/FLIR, MET, MTI/SAR, SIGINT, NBC Recon, PSYOPS, and comm/data relay.

SYSTEM SUMMARY

FEATURES:

Components:
- 12 x RC-12 aircraft
- 4 x TPE vans
- 3 x IDL trackers
- CTT

Sensors:
- Advanced QUICKLOOK ELINT coll & DF
- COMINT coll & DF
- Comms High Accuracy Airborne Location System

Flexibility:
- Remote relay capability
- Scaleable system for rapid deployment
- Aircraft is self deployable

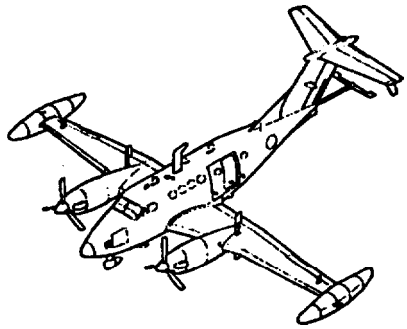
PERFORMANCE AND CHARACTERISTICS:

- Mission altitude: 20,000-30,000 ft
- Stand-off 50-75 km
- Endurance: 5.5 Hrs
- Data link range: 150 mi LOS
- LOS coverage 450 km from aircraft
- Reports via CTT

Targets:
- Communications emitters
- Jammers
- Noncomms emitters

Products:
- Tgt data (50m CEP)
- Intell reports

BASIS OF ISSUE:
- 1 sys per III, V, & XVIII Abn corps, and 501st MI Bde (Korea) (4 total)



Guardrail Common Sensor (GRCS)

GRCS collects selected low, mid, and high-band radio signals, identifies and classifies them, determines the locations of their sources, and provides near-real-time reporting to tactical commanders in the field. The system uses an integrated processing facility (IPF) which is the control, data processing, and message center for the overall system. up to three airborne relay facilities (ARF)/aircraft, intercept communications and noncommunications emitter transmissions and gather LOB, and TDOA data. They then transmit these data to the IPF. The ARF/aircraft also serve as relay platforms for communications between the IPF and the supported commands. This system incorporates the Communication High Accuracy Airborne Location System (CHAALS) to achieve precision target locations for its COMINT system. Targeting accuracy is also provided by the ELINT system. Ground to ground (including CTT) communications links provide the primary interface with fixed locations and tactical users. Automated addressing to CTT field terminals provides automated message distribution to tactical commanders in near real time. Planned improvements include expanded COMINT/ELINT collection, LPI capability, embedded training, CTT (3 channel) retrofit, automated reporting and automated PROFORMA.

GRCS.WPD
01 Apr 94

SYSTEM SUMMARY

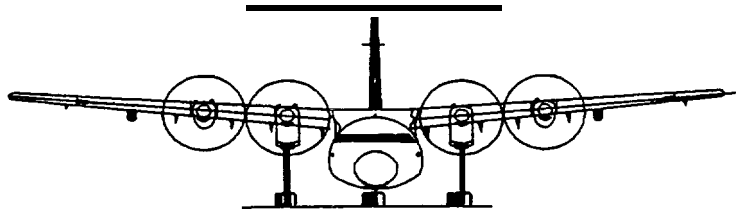
FEATURES:

Components:
- Debavilland Dash 7
- Grd processing station
- ACT 101 remote rcv sets
- TACLINK video rcv sets
- FLIR system
- Daylight imaging sys
- Infrared line scanner
- Radio intercept/DF sys

Flexibility:
- Spts full range of military operations
- Arrives ready for immediate employment
- Joint service capable
- Interop w/ ASAS and CTT
- Low profile collection system
- Small logistics tail
- Multiple sensor system

PHYSICAL CHARACTERISTICS:
- Wing span: 93'
- Length: 81'
- Take off max gross wt: 47,000 lbs
- Mission payload: 2500 lbs
- Crew: 7(incl. 2 pilots)

PERFORMANCE:
- Service ceiling: 25,000' MSL
- Endurance: 8 hrs
- Range: 1500 NM
- Cruise speed: 230 Kts
- Fully IFR certified
- Short take-off/landing capable



ARL
Airborne Reconnaissance Low

ARL is a medium range airborne reconnaissance and surveillance system with COMINT, direction finding, and electro-optic collection capabilities. ARL is deployed to SOUTHCOM in response to CINCSOUTH reconnaissance and surveillance requirements. The initial fielding in FY93 required two separate aircraft configurations, one for **COMINT(HF**, VHF, UHF) intercept and Direction Finding and one for **IMINT**. On-board operators enable ARL to self deploy, perform immediate analysis and real-time imagery dissemination via secure **comms**, and operate with minimal logistical support. The system arrives at the deployment location ready for immediate employment. In FY96 the Multi-function ARL (APL-M) will combine COMINT/DF and imagery capabilities onto one aircraft. A total of 9 aircraft will be fielded by **FY98**. Upgrading of the aircraft engines to the T-800 series is under consideration to improve performance. An open system architecture allows integration of additional capabilities. Options current1y include an **MTI/SAR** sensor, low light television, multi-spectral cameras, a remote COMINT relay, and special **radio** equipment intercept capabilities. **The** ARL-M system will is self deployable and is near self sustainable (except **POL**) for 7 to 10 days.

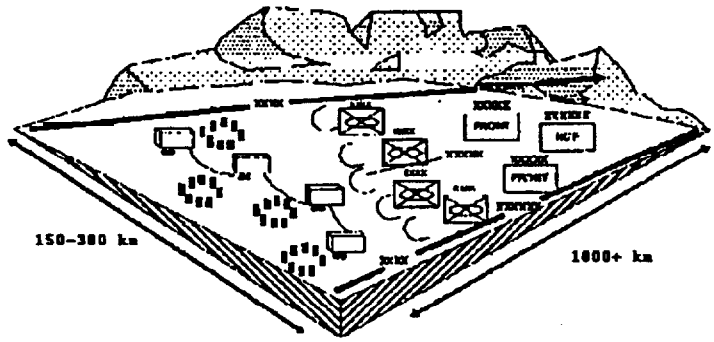
ARL.WPD
01 **Apr** 94

SYSTEM SUMMARY

FEATURES:

- Targets HF:
  - Jammers
  - Emitters
- Products:
  - COMINT
  - Technical rpts
- Preplanned product improvement:
  - NVIS capability
  - LPI capability
- Supports EAC commanders
- Capable of long distance comms w/ organic resources
- DF stations can operate independently or in netted configurations

HF INTERCEPT AND DF



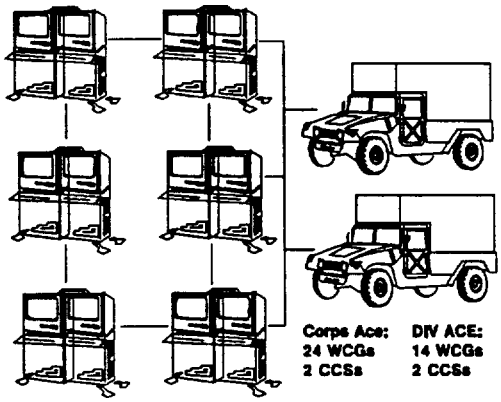
Enhanced TRACKWOLF

The Enhanced TRACKWOLF, AN/TSQ-152(V), is a follow-on to the QRC TRACKWOLF, AN/TSQ 152, system. The Enhanced TRACKWOLF system is an EAC high frequency (HF) skywave communications intellingence (COMINT) collection and direction finding system used to support the theater commander. It consists of two independent but interactive subsystems -- a Collection and Processing Subsystem (CPS), and a Direction Finding Subsystem (DFS). The DF stations may operate independently or in any netted configuration. The Enhanced TRACKWOLF's modularity and rapid deployability enable it to be reconfigured to accomplish COMINT missions across the operational continuum. Communications are provided by a variety of embedded systems, as well as secure voice and data access to the ACUS.

SYSTEM SUMMARY

- All source fusion
- Hosts JDISS software
- Integrates collection mgmt functionality
- IEW tech ctrl sys for ATCCS
- Common ATCCS HW/SW
- Processes collateral & SCI
- Multi-level security
- Auto msg sanitization
- Interface w/Army BFAs, joint, natn'l & allied IEW systems
- Rapidly processes large msg volumes:
  - Auto parse 24 msg types
  - Auto gen. 16 msg types
- Immediate HVT/HPT alarming & reporting
- Auto self-correlation & interactive node analysis
- Spts jump, degraded, & split-based ops
- Comms via UHF, VHF, IHFR, CTT, SATCOM, MSE, TRI-TAC, AUTODIN, & DSNET 3
- Digital terrain/wx prod.
- SID display
- Direct data exchanges w/ joint and national data bases

BASIS OF ISSUE:
- 1 per EAC, corps, div, sep bde, ACR



All Source Analysis System (ASAS)

ASAS is a modular, tactically deployable, computer-assisted IEW processing, analysis, reporting and technical control system. It provides automated intelligence and information management, to include interface data handling. These features couple IEW sensors, pre-processors, the ASAS and the Force Level Control System (FLCS) to meet time and accuracy requirements for decision support and C2W planning and execution. It consists of evolutionary sets of hardware and software modules that perform system operations management and security; communications processing and interfacing; input message processing; intelligence processing and reporting; target identification and nomination; and intelligence collection management. The ASAS collateral enclave subsystem provides automated intelligence support to the G2 Plans and Operations staff elements and also operates as the technical control portion of the IEW C2 node of ATCCS. It provides current IEW and enemy situation information to the FLCS data base for access and use by commanders and other ATCCS/FLCS users.

asas.wpd
1 Apr 94

SYSTEM SUMMARY

FEATURES:

Components:
- Field Terminals
  - Processor Signal Data
  - Radio rcvr/xmtr (RRI)
  - Antenna array
- Radio relay system
- Security data sys
  - Embedded COMSEC

Flexability:
- Quick erect antenna
- Mobile operations
- Mountable in:
  - fixed/rotary AC
  - track/wheeled veh
  - shelters

PHYSICAL PARAMETERS

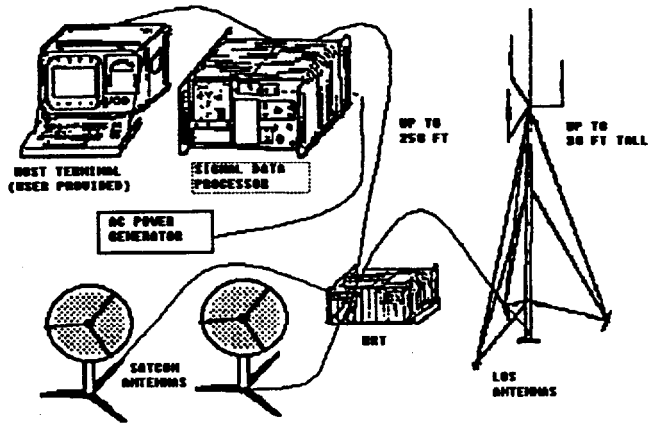
- Mounts in Full Air Transportable Rack

PERFORMANCE AND CHARACTERISTICS:

Receive:
- SECRET & SCI level
- NRT data & voice
- Secondary imagery capable
- 300 Msg/hr (IPF)
- 3 channels of TADIXS/TRAP/TIBS simultaneously
- Text base (BIT & character msgs)
- Selective address up to 100 field addresses

In TRIXS net:
- Built-in EP function
- 4 duplex voice
- Full duplex digital data

BASIS OF ISSUE:
- Deployed to AVN, ADA, FA & MI @ all echelons
- Total: 300-400 systems for the Army



CTT-H

Commander's Tactical Terminal/Hybrid
(AN/USC-55)

An anti-jam, readily transportable COMINT/ELINT tasking and reporting transmitter/receiver designed for near-real-time dissemination of intelligence. The CTT-H provides simultaneous full-duplex (FDX) data and half-duplex (HDX) voice communications between ground processing facilities (GPF) and tactical field units in TRIXS net. The CTT-H also provides the commander access to theater and national assets through 2 additional nets; TIBS and TRAP/TADIXS broadcast. It can provide either one transmit/receive and two receive only channels or three receive only channels. The GPFs are the CARS (AF) and the GRCS IPF (Army). The CTT-H provides the capability for selected Army and Air Force airborne collection systems to forward, on a dedicated basis, perishable intelligence to deep, close, and rear operations weapon systems, aviation assets, air defense artillery, and intelligence centers at all echelons.

SYSTEM SUMMARY

PERFORMANCE AND CHARACTERISTICS

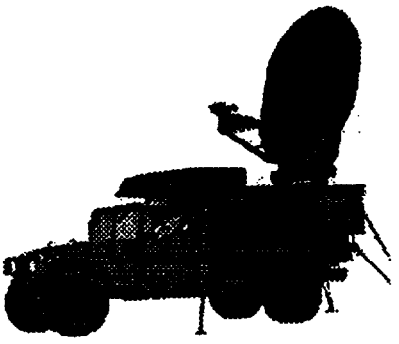
Transmit and receive:
- 14 channels digital voice, data, FAX, and video
- Operates in "C", "Ku", or "X" Bands
- LAN for workstations
- Secondary imagery capability
- Intelligence dissemination capability
- Back-up comms:
  - DSVT (MSE)
  - UHF TACSAT (AN/PSC-5)
  - INMARSAT-M Terminal
  - CTT-H/R (Host)
- 4.8 to 512 Kbps
- Variable rate switching
- GPS

FEATURES

Components:
- 2-SI/TK operator positions (Warrior 2.0)
- 1-collateral position
- 14 channels
  - 4 collateral
  - 10 SI/TK
- Wire and fiber optics connections
- Tunnel-mounted generators

Flexibility:
- Quick erect, satellite auto-tracking antenna
- Mobile opns in HMMWV
  - Maint/spares shelter
  - Mission equip shelter
  - Trailer mounted ant
- Back-up communications
- Airborne/heliborne certified

PHYSICAL PARAMETERS
- Mounts on 2 heavy variant HMMWVs
- Tactical SATCOM trailer
- Under-the-hood power generation subsystem



TROJAN SPIRIT II

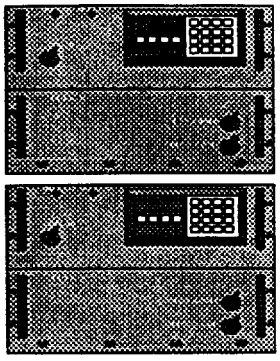
AN/TSQ-190(V)

An intelligence dissemination satellite terminal which provides access for intelligence processing and dissemination systems. This system consists of secure voice, data, facsimile, video and secondary imagery dissemination capabilities. The system will receive, display, and transmit digital imagery, weather and terrain products, templates, graphics and text between CONUS/OCONUS bases and deployed forces. Connectivity is provided through the Fort Belvoir TROJAN switching center which currently connects TROJAN systems at various US bases with front-end antenna arrays located worldwide. The TROJAN SPIRIT II combines this network with mobile switch extensions to offer a worldwide, forward-deployed, quick-reaction reporting and analysis link. The terminal can provide up to 14 circuits (10 SCI/4 collateral) using variable baud rates from 4.8 to 512 kbps per channel and will operate on either C, Ku, or X frequency bands. Validated requirements for the SPIRIT II System include DSNET I/III, MSE, and Tactical Packet Network (TPN) interfaces, as well as LAN connectivity. It is intended to augment EAC and ECB in-theater communications. It will conduct split-based, inter- and intra-theater operations through the range of military operations.

SPIRITII.WPD
30 Mar 94

System Summary

- Designed for use with TENCAP programs
- Simultaneous comms capability when stacked
  - 2 transmit channels
  - 6 receive channels
- SATCOM, point-to-point, TADIXS-B, and direct data downlinks
- Full duplex, half duplex, simplex; voice and data
- Embedded Tactical Receive Equipment (TRE) processor
- 10 data I/O ports
- Compatible with ARC-164, ARC-171, WSC-3, PSC-3, & LST-5
- Built-in test with automatic reconfiguration
- KG-34, KG-84 and TADIXS-B encryption compatible
- Variable baud rates (2.4 -19.2 kbps per channel)
- 32 MB processor parses messages and automatically outputs reports
- TIBS receive capability will be added in FY 94
- On-going efforts to be DAMA-compliant (Demand Assigned Multiple Access)in FY 96



SUCCESS
UHF Radio Subsystem
(Synthetic UHF Computer-Controlled Equipment Subsystem)

The SUCCESS UHF radio is a fully automated microprocessor-based computer-controlled UHF-band radio. Data may be transmitted and received simultaneously over its one transmit and three receive channels. Two SUCCESS radios may be stacked to provide an integrated, fully redundant, two transmit and six receive channel capability. The radio is designed to communicate with selected airborne, terrestrial, and satellite systems. It contains a tactical receive equipment (TRE) processor and can process all TRAP/TADIXS-B formatted transmissions. The control/receiver and transmitter drawers are designed for ground/mobile sheltered environments.

SYSTEM SUMMARY

FEATURES

Robust Communications:
- AUTODIN/DSSCS (R/Y)
- TROJAN, STU III, MSE
- UHF SATCOM
- S-BAND SATCOM
- UHF PT-to-PT terrestrial
- Landlines
- S-Band w/ ROTERM/CHARIOT

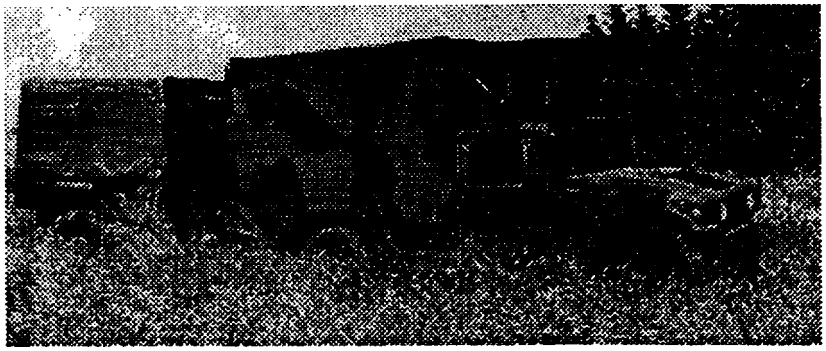
Timely SIGINT/IMINT:
- National/Theater /Tactical sensors
- Immediate reporting by discipline
- Integrates SIGINT/IMINT
- Receives, annotates, and disseminates secondary imagery

PHYSICAL PARAMETERS

- Consists of one shelter-mounted heavy duty HMMWV, 1 cargo HMMWV, and 1 gen. trailer
- Subsystems:
  - 2 remotable analyst work stations
  - Communications
  - Support subsystems
    - Power
    - Environmental
    - Mobility/transport
- Roll-on/Roll-off C130
- Airliftable by CH-47
- Set-up/tear-down ≤1 hr

PERFORMANCE AND CHARACTERISTICS

- Employed at division and corps ACE
- Robust communications
- Timely SIGINT/IMINT
- Split-based operations
- Targeting support
- Target development
- Situation development



Mobile Integrated Tactical Terminal
(MITT)

The MITT is the downsized version of the THMT with a SUN UNIX architecture and will replace the THMT in the force structure. The MITT is a division, corps, and EAC level, mobile, air and ground transportable system capable of providing multiple-source SIGINT and IMINT to Army tactical forces. It provides timely integrated intelligence products in response to the tactical commander's requirements. It receives, annotates, and transmits secondary imagery. It can also receive, process, and disseminate SIGINT data, and maintain a correlated data base. The MITT has the SUCCESS radio which provides stand-alone secure communications capable of receiving TRAP\TADIXS-B, as well as transmitting and receiving via UHF SATCOM, and point-to-point terrestrial communications. The DIA accredited CSP is compatible with TROJAN, MSE, DIN/DSSCS as well as all TENCAP systems. A TIBS (RIVET JOINT) capability will be added in FY94. Other communications listed in the system summary.

SYSTEM SUMMARY

FEATURES:

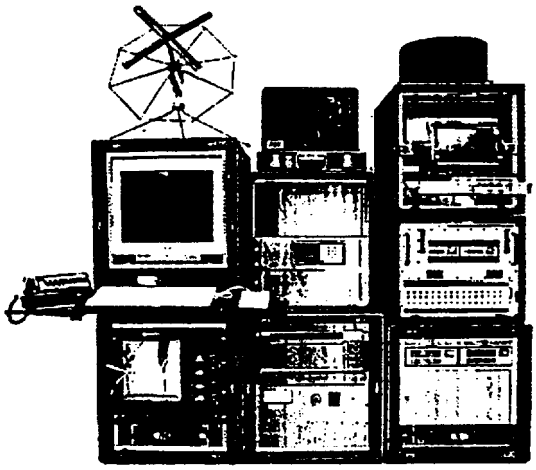
- Robust Communications:
  - AUTODIN/DSSCS (R/T)
  - TROJAN, STU III, MSE
  - UHF SATCOM
  - UHF pt-to-pt terrestrial
  - Landlines
  - S-band w/ ROTERM/CHARIOT
- Timely SIGINT/IMINT:
  - National/theater /tactical sensors
  - Immediate reporting by discipline
  - Integrates SIGINT/IMINT
  - Receives, annotates, and disseminates secondary imagery

PHYSICAL PARAMETERS

- Two work stations:
  - Main:
    - six unit, VME based processor
    - 7 transport cases
    - 1050 lbs auxiliary (forward deployed WS)
  - Briefcase size UNIX processor
    - 2 transport cases
    - 212 lbs
  - Subsystems:
    - 1 remotable analyst workstation
    - Communications
    - Power supply

PERFORMANCE AND CHARACTERISTICS:

- Employed at div (ACE)
- Robust communications
- Timely SIGINT/IMINT
- Split-based operations
- Targeting support
- Target development
- Situation development



Forward Area Support Terminal

FAST

The **FAST** is an intelligence data processing system for the divisions, separate brigades, and ACRs. It is a smaller version of the MITT, operating at the collateral level. It is a transportable, modular, survivable, stand-alone, UNIX based multi-tasking intelligence support system and is capable of receiving secondary imagery. The system consists of seven modularized and downsized components allowing for easy transport and mounting on a variety of vehicles and aircraft. The FAST has SUCCESS radio which provides stand-alone secure communications, capable of receiving TRAP/TADIX-B, as well as transmitting and receiving via UHF SATCOM, and point-to-point terrestrial communications. The FAST CSP is compatible with TROJAN, MSE, DIN/DSSCS as well as all TENCAP systems. A TIBS capability is being added to the system.

SYSTEM SUMMARY

FEATURES

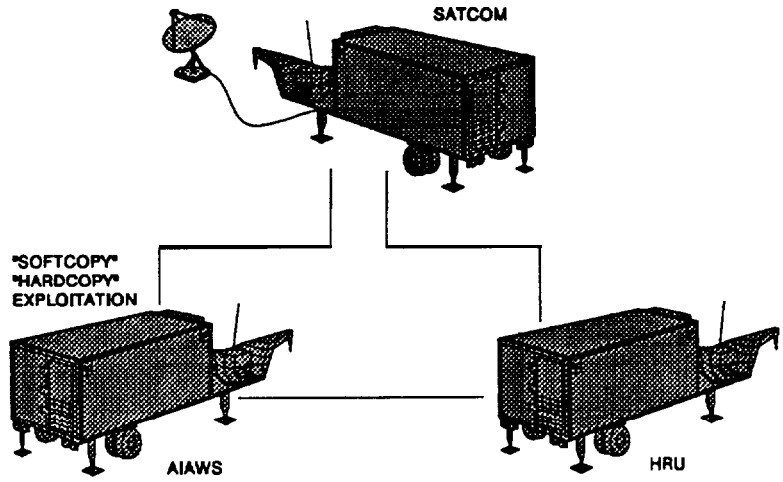
Near-Real-Time IMINT:
- Exploitation
- Receipt
- Exploitation Management
- Reporting
- Secondary Imagery Dissemination
- Archive of imagery and reports

PHYSICAL PARAMETERS

- 40' Hardcopy/ Softcopy exploitation van
- 35' SATCOM Van
- 35' Receive Location Van
- A quick reaction antenna
- Air deployable C-141, C-5

PERFORMANCE AND CHARACTERISTICS

Provides:
- Precise identification and location
- Exploitation management
- Secondary Imagery Dissemination



Modernized Imagery Exploitation system (MIES)

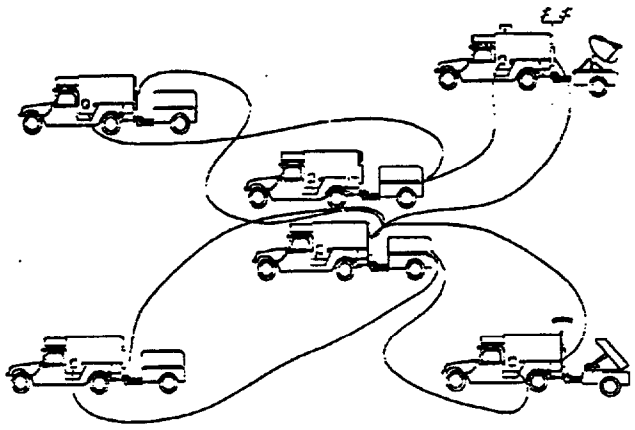
The MIES provides the capability to receive and exploit digital imagery in near-real-time (NRT). It provides exploitation management, reporting, secondary imagery dissemination, limited archives of imagery, and reports. It is used to support all imagery operational areas, intelligence development for indications and warning, situation assessment, order of battle, targeting, and tactical operations. There are two systems in the TENCAP inventory, one located at FT Bragg with XVIII ABC, the second at Augsburg Germany with the 66th MI Brigade. A third system will be fielded in FY96 to the 513th MI Bde at Fort Gordon.

MIES.WPD
1 Apr 94

System Summary

- Consists of three imagery processing elements:
  - Electro-optical
  - Infrared
  - SAR
- Replaces MIES and IPDS
- Flat panel antenna technology
- Prototype SAR processor uses current ETRAC processor scheduled for fielding to XVIII ABC in FY96
- System supports:
  - 8 exploitation wk stns
  - 1 RMS station wk stn
  - 1 supervisor wk stn
- SID file server supports networks via:
  - Point-to-point
  - Terrestrial
  - Satellite
  - UHF broadcast
  - DSNET 1/3
- Supports T1 data rate
- Transmits SID products using NITFS format
- Creates and transmits graphic situation display products
- RORO on C130
- Engineering development model will be fielded to XVIII ABC in 1999

UNCLASSIFIED



MIRS

Miniaturized Imagery Receive System

MIRS is the next generation, down-sized imagery receive system for deployment at corps, EAC, and selected Army S&T, R&D, and training centers. It will be procured as a COTS/GOTS system to replace the Army National Imagery Systems, IES and IPDS. Conceptually, the MIRS consists of three imagery processing elements; electro-optical, infrared, and SAR. The system contains multiple imagery exploitation elements capable of remoted operation with automated target recognition (ATR). It also contains a requirements and dissemination management element and a communications element. The system incorporates a secondary imagery file server capable of supporting multiple imagery dissemination networks. The system is also capable of creating and transmitting graphic situation display products.

mirs.wpd
2 Apr 94

System Summary

Features:

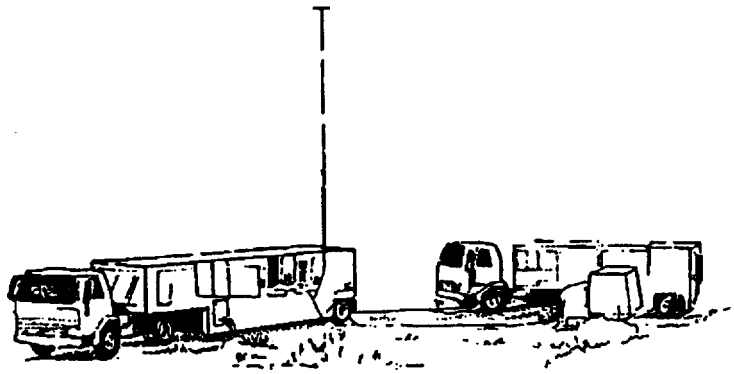
- Near-real-time IMINT
  - Receipt
  - Exploitation
  - Dissemination
- Supports Cdr at:
  - EAC
  - Corps
  - Division
  - Manuever brigade
  - SOF

Physical Parameters:

- Multiple operations shelters
- Air deployable via: C130, C141, C5

Performance and Characteristics:

- Near-real-time IMINT to the Cdr
- Precise Positioning



Enhanced Tactical Radar Correlator (ETRAC)

ETRAC is an advanced development mobile synthetic aperture radar (SAR) processor. It receives direct down-linked radar phase history data, collected by the ASAR-2 SAR system on board the U2R aircraft. The ETRAC converts the radar phase history data into imagery, which is passed to either the IPDS or MIES for subsequent exploitation and dissemination of imagery products to consumers. The ETRAC has a limited organic exploitation capability for stand-alone operations. The ETRAC communications equipment includes the SUCCESS radio, TENCAP communications system processor, STU-III and digital subscriber voice terminal, providing a robust communications capability. It will be fielded to the 18th Airborne Corps.

etrac.wpd
4 Apr 94

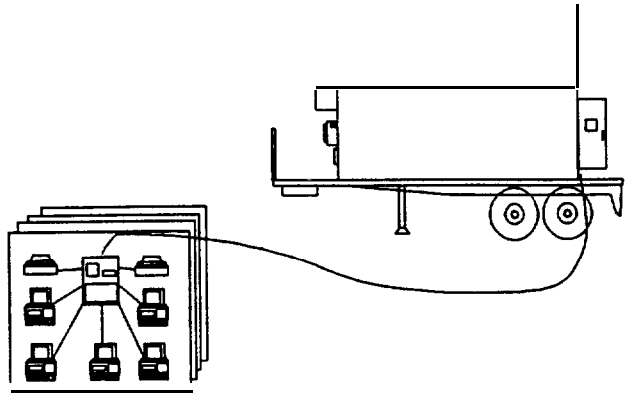
UNCLASSIFIED

SYSTEM SUMMARY

FEATURES:
- Robust communications:
  - AUTODIN/DSSCS (R/T)
  - TROJAN, STU-III, MSE
  - UHF SATCOM
  - UHF pt-pt terrestrial
  - Landlines
  - S-band comms via ROTERM/CHARIOT
- Timely SIGINT/IMINT:
  - National/theater /tactical sensors
  - Immediate reporting
  - Integrates SIGINT/ IMINT, rpts results
  - Cross cues SIGINT/ IMINT processors
  - Receives, annotates, and dissiminates secondary imagery

PHYSICAL PARAMETERS:
- 20' van w/ 5T tractor
- Subsystems:
  - IMINT/ESP/ELINT pos
  - Remote CMST terminal
  - Comms processor
- Air deployable on C130
- Set-up/tear-down <1 hr

PERFORMANCE AND CHARACTERISTICS:
- Employed at corps ACE and selected EAC
- Robust communications
- Timely SIGINT/IMINT
- Split-based opns
- Spts tgt development
- Situation development
- Collection management



ETUT

Enhanced Tactical Users Terminal

The ETUT is a mobile, air and ground transportable, system-high, intelligence and communication system. The system is designed as the interface between the EPDS for SIGINT data, the IPDS for imagery data, and provides an automated collection management capability to the tactical commander. Communications consists of a SUCCESS radio which provides simultaneous connectivity through/to multiple airborne/spaceborne platforms as well as the TRAP/TADIX-B interface. The DIA accredited communication subsystem is compatible with TROJAN, MSE, Top Graphic/Gallant/Gable, as well as all TENCAP systems. The ELINT tactical position maintains a data base which is a reflection of the data manipulated in the EPDS. The imagery management position interfaces with a variety of corps, theater, and national imagery systems to provide soft copy manipulatable imagery, as well as a data base of exploited imagery reports. The collection management support tool's position is remotable in order to provide the collection manager access to the Army baseline collection management system.

SYSTEM SUMMARY

FEATURES:

Robust Communications:
- AUTODIN/DSSCS (R/Y)
- TROJAN
- STU-III
- MSE
- UHF SATCOM
- S-BAND SATCOM
- UHF PT-to-PT terrestrial
- Landlines (leased or dedicated)

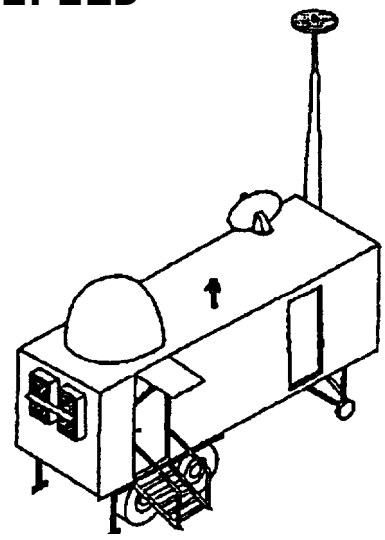
Near-Real-Time SIGINT:
- National/theater /tactical sensors
- Receives, pre-processes
- Correlates & integrates
- Reports refined results

PHYSICAL PARAMETERS:

- Consists of a 30' van pulled by a three axle 10-ton tractor
- Subsystems:
  - 2 analyst positions
  - Data acquisition
  - Comms processor
- Air deployable on C130 or larger aircraft
- Set-up/tear-down <2 hr

PERFORMANCE AND CHARACTERISTICS:

- Employed at corps (rear) and select EAC
- Robust communications
- Near-real-time SIGINT
- Split-based opns
- Spt situation dev
- Target development support (close - deep)
- Timely recognition and warning of WARM



EPDS

Electronic Processing and Dissemination System

EPDS is a mobile, air and ground transportable, system-high, intelligence and communication system. The system receives and processes SIGINT data collected by national, theater, and corps sensors. SIGINT data is correlated and integrated, then forwarded to the tactical commander in response to priority intelligence requirements **and requests for** information. The EPDS maintains the tactical commander's SIGINT data base and serves as a pre-processor for the **ETUT/THMT/MITT/FAST.** The Communications Systems Processor **(CSP)** consists of a SUCCESS radio which provides **uplink** and **downlink** communications with multiple airborne/spaceborne platforms simultaneously, and external ports to enable communication **compatability** with TROJAN, MSE, DIN/DSSCS as well as other **TENCAP** systems. The SUCCESS additionally provides a **TRAP/TADIX-B** interface. The data acquisition system provides direct access to national sensors, as well as, a full-duplex S-band SATCOM capability. **A** TIBS capability will be added in FY 94.

epds.wpd
7 Mar 94

UNCLASSIFIED

Automatic Meteorological Sensor System (AMSS)

The AMSS is a fully-automatic meteorological sensor system capable of measuring wind speed, wind direction, ambient temperature, relative humidity, and barometric pressure in forward areas of the battlefield. AMSS can be mounted on tactical vehicles or hand-emplaced in remote areas. The system is man-portable, automatic, remotely operated, and uses either standard internal battery or external power sources. The AMSS supports fast-paced, flexible AirLand Operations and gives critical surface weather data to support maneuver and targeting requirements. The AMSS assigned to the maneuver force provides local weather data to the brigade/battalion S2, plus provides weather support to the division IMETS. The sensor/transceiver unit (STU) automatically senses, stores, averages, and reports weather data at its location at operator-programmed intervals, when interrogated by the programmer/monitor unit (PMU), or when operator-progammed critical thresholds are met. An interface unit links the system to the weather processor using available area communications.

System Summary

- Automatic meteorological sensor system capable of measuring:
  - wind speed (up to 70 knots, ±2)
  - wind direction (0-360°, ±5)
  - ambient temperature (-40°C to +50°C, ±1)
  - ground surface temp (-10°C to +50°C, ±1)
  - relative humidity (0-100%, ±5%)
  - barometric pressure (600-1080 millibars, ±1)
  - liquid precipitation rate (±2mm per hour)
  - liquid precipitation accumulation, continuously measured (±2.5 mm)
  - illumination (100,000 to 0.0001 lux ±10% actual illum.)
  - soil moisture, 6-inch depth (0-100%, ±5%)

System components:

- Sensor/Transceiver Unit (STU):
  - senses, stores, averages and reports weather data
  - stand alone or vehicle mounted
- Programmer/Monitor Unit (PMU):
  - programs or changes weather reporting intervals and critical threshold values
  - transmits location, elevation, date and time, & STU tilt status
- Interface Unit (IU):
  - provides internal interface between the STU, PMU, and IMETS using available area communications

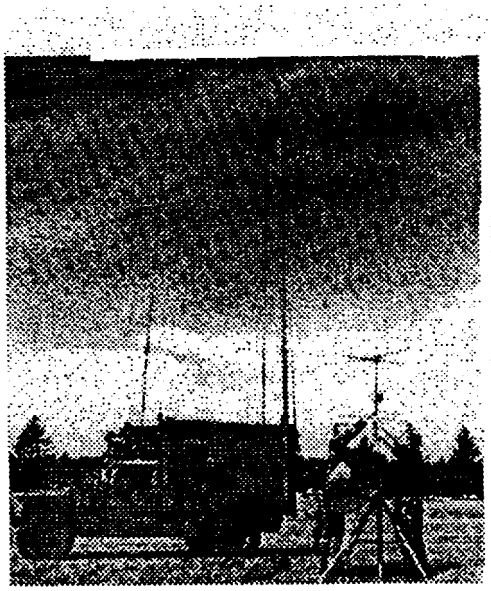
SYSTEM SUMMARY

FUNCTIONS:

- Receives weather data from:
  - Satellites
  - Local & remote sensors
  - Arty meteorology
  - Theater forecast units
  - AF Global Weather Central
- Process and displays:
  - Weather satellite imagery
  - Upper air data
  - Surface reports
  - Manual and automated weather forecasts
  - Tactical decision aids (TDA)
- Disseminates forecasts and TDAs to all users
- Independent opns using HF and satellite comms

PHYSICAL PARAMETERS

- Std Integrated Cmd Post Shelter (SICPS)
- Hvy HMMWV mounted
- Std 10kw generator



Integrated Meteorological system (IMETS)

The Integrated Meteorological System is an automated, mobile, tactical, weather data, receiving, processing and dissemination system. It provides timely weather and environmental effects forecasts, observations, and decision aid information to the tactical commander. IMETS is operated by Air Force weather teams and maintained by Army technicians. The system provides 24 hour automated weather support to commanders at all echelons; EAC, corps, division, separate brigades, ACRs, SOF, aviation brigades and other task organized contingency forces. IMETS provides automated weather data to support Air Defense, Fire Support, Intelligence and Electronic Warfare, Maneuver Control System and Combat Service Support battlefield functional areas.

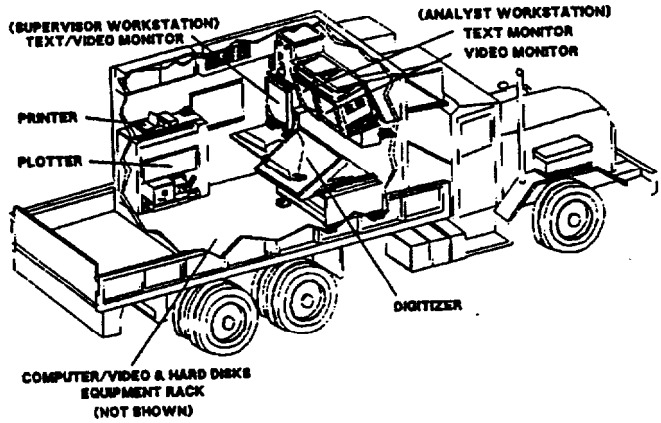
imets.wpd
1 Apr 94

System Summary

- Automates terrain teams
  - Create, (re)format, update, store, retrieve and manipulate
  - Produce terrain analysis products
  - Improve response time for the IRB process
- Co-located with ASAS
- Spts other BEAs via MCS
- Products include:
  - On- and off-road mobility maps
  - Line-of-sight intervisibility maps
  - Concealment maps
  - On-road chokepoint maps
  - Tactical fording/ bridging maps
- Tactically mobile:
  - S-280 shelter
  - Std 5-ton truck
- Pre-planned Product Improvements:
  - Supports MCS
  - Supports emerging Army tactical weapon sys
  - Digital data base creation, update and revision functions
  - Electronic interface with Quick Response Multicolor Printer
  - Downsizing for lt div
  - CHS Block II
  - SCI accreditation
  - Multi-spectral imagery exploitation
  - Advanced terrain analysis functions

BASIS OF ISSUE:
- 1 per div terrain team
- 2 per EAC/corps terrain team

UNCLASSIFIED



Digital Topographic Support System (DTSS)

The DTSS is being developed to provide Engineer Terrain Teams at Division, corps, and Echelons Above Corps (EAC) automated assistance in the performance of terrain analysis and the production of topographic products within the time frames required by the air-land operations concept. Fielding begins in FY94 with the abilities to receive, reformat, store, retrieve, create, update, and manipulate digital topographic data. Products can be provided to users in both softcopy and hardcopy form in significantly reduced time frames compared to the current manual process. Some of the terrain analysis products will include: on- and off-road mobility maps, line-of-sight intervisibility plots, concealment maps, on-road chokepoint maps, and tactical fording/bridging maps.

DTSS.WPD
2 Apr 94

IEW SYSTEM FACT SHEETS
ACRONYM LIST

ABC: AirBorne Corps
ACE: Analysis Control Element
ACR: Armored Cavalry Regiment
ACT 101: Advanced Communications Terminal
ACUS : Area Common User System (**MSE** at ECB and TRI-TAC at **EAC**)
ADA: Air Defense Artillery
AF: Air Force
AFATDS: Advanced Field Artillery Targeting Data System
AGL: Above Ground Level
ARF: Airborne Relay Facility
ARL: Airborne Reconnaissance Low
ARL-C: ARL - COMINT
ARL-I: ARL - **IMINT**
ASARS: Advanced Synthetic Aperture Radar
ASAS: All-Source Analysis System
ATCCS: Army Tactical Command and Control System (name is changing to ABCS: Army Battle Command System)
ATR: Automatic Target Recognition
AQF: Advanced **QUICKFIX**
AQL: **Adanced** QUICKLOOK
AUTODIN: AUTOmatic DIgital Network
B2C2: Brigade and Below Command and Control (name is changing to AB2: ATCCS Brigade and Below)
BDA: Battle Damage Assessment
BFA: Battlefield Functional Area
BIT: Binary **digIT**
CARS: Contingency Airborne Reconnaissance System (Ground processing facility of the **AF's** Tactical Reconnaissance System (**TRS**). U-2R is the airborne platform.)
c2: Command and Control
C2W: Command and Control Warfare
CEP: Circular Error of Probability
CGS : Common Ground Station
CHAALS: Communication High Accuracy Airborne Location System

CHS: Common Hardware/Software
CINCSOUTH: Commander IN Chief, **SOUTHern** command
CMST: Collection Management Support **Tools**
CNR: Combat Net Radio
COMINT: COMmunications **INTelligence**
COMSEC : COMmunications **SECurity**
CONUS: **CONtinental** United States
COTS: Commercial Off-The-Shelf
CPS: Collection and Processing Subsystem
CSP: Communication Systems Processor
CTT-H: Commander's Tactical Terminal **-** Hybrid
DAMA: Demand Assigned Multiple Access
DB: Data Base
DF: Direction Finding
DFS: Direction Finding Subsystem
DIA: Defense Intelligence Agency
DIN: **DIgital** Network
DSNET: Defense Secure **NETwork** (DSNET **1:secret,** DSNET **3:SCI)**
DSSCS: Defense Special Security Communications System
(**R -** denotes the general service **AUTODIN** network;
Y - denotes the **SCI** network on the DSSCS)
DSVT: Digital Subscriber Voice Terminal
DTSS: Digital Topographic Support System
EA: Electronic Attack
EAC: Echelons Above Corps
EACIC: Echelons Above Corps Intelligence Center
ECB: Echelons Corps and Below
EFVS: Electronic Fighting Vehicle System
ELINT: **ELectronic INTelligence**
EO: Electra-Optical
EP: Electronic Protection
EPDS: Electronic Processing and Dissemination System
ETRAC: Enhanced Tactical **RAdar** Correlator
ETUT: Enhanced Tactical Users Terminal
FAISS: FORSCOM Automated Intelligence Support System
FAST: Forward Area Support Terminal
FDW: Forward Deployed Workstation
FDX: Full Duplex
FLCS: Force Level Control System
FLIR: Forward Looking Infrared Radar
FLOT: Forward Line Of Troops
FLTSATCOM: **FLeeT SATellite** COMmunications System
GBCS: Ground Based Common Sensor

Gcs: Ground Control Station (UAV ground station)
GDT: reference uav
GOTS : Government Off-The-Shelf
GPF: Ground Processing Facility
GPS: Global Positioning System
GRCS: **GuardRail** Common Sensor
GSM: Ground Station Module (ground station for JSTARS)
HDX: Half Duplex
HF: High Frequency (3-30 **MHz)**
HL-UAV: Hand-Launched Unmanned Aerial Vehicle
HMMWV: High Mobility Multi-purpose Wheeled Vehicle
HPT: High Priority Target
HVT: High Value Target
HW/SW: HardWare/SoftWare
IDL: Interoperable Data Link (data link between GRCS and IPF)
IES: Imagery Exploitation System
IEW: Intelligence Electronic Warfare
IEWCS: IEW Common Sensor (GBCS and **AQF)**
IFR: Instrument Flight Rules
IHFR: Improved High Frequency Radio
IMETS: Integrated **METeorological** System
INMARSAT: International Maritime Satellite Organization (an international satellite consortium, an INMARSAT-M terminal stores in a briefcase-size case and provides 4.8 kbps voice and a fax rate of 2400 bps, can be used for voice, text, and low rate data messages)
I/O: Input/Output
IPB: Intelligence Preparation of the Battlefield
IPDS: -Imagery Processing and Dissemination System
IPF: Integrated Processing Facility (Ground processing station for the **GRCS)**
IREMBASS: Improved Remotely Monitored Battlefield Sensor System
JCS: Joint Chiefs of Staff
JDISS: Joint Defense Intelligence Service System
JSTARS : Joint Surveillance Target Attack Radar System
kts: **Knots**
LAN: Local Area Network
LCS: reference **uav**
LMRDFS: Lightweight Man-Transportable Radio Direction Finding System **(AN/PRD-12)**
LOB: Line Of Bearing
LPI: Low Probability of Intercept
LRT: reference uav

MCS : Manuever Control System
MET: Meteorological
MF: Medium Frequency (300-3,000 kHz)
MIES: Modernized Imagery Exploitation System
MIRS: Miniaturized Imagery Receive System
MITT: Mobile Integrated Tactical Terminal
MLRS: Multiple Launch Rocket System
MSE: Mobile Subscriber Equipment
MSL: Mean Sea Level
MSI: Multi-Spectral Imagery
MTI: Moving Target Indicator
NITFS: National Imagery Transmission Format Standard
NM: Nautical Miles
NRT: Near-Real Time
NVIS: Near-Vertical Incidence Skywave
OCONUS: Outside CONtinental United States
OPCON: Operational CONtrol
P3I: Pre-Planned Product Improvement
PSYOPS: PSYchological OPerationS
RAM: Random Access Memory
R&D: Research and Development
RMS: Requirements Management System
RORO: Roll-On Roll-Off
RRT: Radio Receiver/Transmitter
RSR: Radar Service Request
RVT: Remote Video Terminal
R/Y: R is the general service AUTODIN network;
Y is the SCI network in the DSSCS
SAR: Synthetic Aperture Radar
SATCOM: SATellite COMmunications
SCDL: Surveillance Control Data Link (data link between the JSTARS aircraft and ground station)
SCI: Sensitive Compartmented Information
SHE': Super High Frequency (3-30 GHz)
SICPS: Standard Integrated Command Post Shelter
SID: Secondary Imagery Dissemination
SIGINT: SIGnals INTelligence
SINCGARS: SINgle Channel Ground Airborne Radio System
SOF: Special Operations Force
SOUTHCOM: SOUTHern COMmand
SPIRIT: Special Purpose Integrated Remote Intelligence Terminal
S&T: Science and Technology

SUCCESS: Synthetic UHF Computer-Controlled Equipment Subsystem

T1: A commercial circuit with a transmission rate of I.544 **Mbps** (Very simplified definition)

TADIXS: **TActical** Data Information exchange System
Broadcast developed to meet multi-service requirements for direct, guaranteed delivery of minimum-essential battlefield information. The information delivered directly to the commanders will support indications and warning, sensor cueing and user mission planning. Locally controlled filters can be set to tailor the received data to the specific unit's mission based on such parameters as time periods, geographical areas, signals, signal parameters and targets of interest.

TDA: Tactical Decision Aids

TDOA: Time Difference Of Arrival

TENCAP: Tactical Exploitation of National **CAPabilities**

TE-UAV: Tactical Endurance - Unmanned Aerial Vehicle

THMT: Tactical High Mobility Terminal

TIBS: Tactical Information Broadcast Service
The TIBS network provides a capability to disseminate correlated, time-sensitive tactical information to Joint operational users via UHF broadcasts from aircraft or FLTSATCOM. It provides an air picture of fast-moving targets. Current sources of data can include RIVET JOINT, JSTARS, GRCS, AWACS, SENIOR TROUPE, SENIOR SCOUT, etc. The network can broadcast data from up to 10 information producers, each with multiple sensors. TIBS can be tasked or queried by specified users. Reports are broadcast periodically, followed by updates, new data, amplifications or deletions. Users can set filters in the CTT to reduce the volume of messages forwarded to the host workstations.

TPN: Tactical Packet Network

TRAC: Tactical **RAdar** Correlator

TRAP: Tactical Related Applications
A network developed to collect information from multiple sources and disseminate it through a UHF SATCOM broadcast to tactical users. It provides global surveillance information for sensor cueing and integration into data bases at the various field receive locations. Data is forwarded from sensor to processor to communications gateways/relays to one of the FLTSATCOM broadcast satellites for dissemination to worldwide military users. Data is transmitted three times for 99-percent guaranteed delivery.

TRE: Tactical Receive Equipment

TRI-TAC: TRI-service TACtical communications system (the Area Common User System (ACUS) for EAC)

TRIXS: Tactical Reconnaissance Intelligence exchange System
The TRIXS network provides the data structure and direct, dedicated links to disseminate critical, time-sensitive tactical reconnaissance, intelligence and surveillance information to batttlefield commanders, via UHF line-of-sight transmissions, from relays aboard military aircraft. The network can support up to five producers and relays, such as, GRCS, CARS, JSTARS, UAV, or EP-3E.

TROJAN SPIRIT: TROJAN Special Purpose Integrated Remote Intelligence Terminal

UHF: Ultra-High Frequency (300-3,000 MHz)

UAV : Unmanned Aerial Vehicle

UAV-CR: Unmanned Aerial Vehicle - Close Range

UAV-E: Unmanned Aerial Vehicle - Endurance

UAV-SR: Unmanned Aerial Vehicle - Short Range

WS: Workstation

WARM: WArtime Reserve Mode

IEW SYSTEM FACT SHEETS

Points of Contact

The IEW System Fact Sheets were produced by the Directorate of Combat Developments, U.S. Army Intelligence Center and Fort Huachuca. Any questions or recommendations regarding edits or updates can be addressed to Concepts Diion, DSN: 879-2257/2258, Commercial: (602)538-2257/2258, Fax extension: -2108. (USAIC&FH, ATTN: ATZS-CDC, FT. Huachuca, AZ 856136000)

System-specific information can be obtained from the appropriate POCs listed below.

TSM GBCS/Ground Systems
ATZS-CDG
DSN: 821-5579/5850
FAX: 821-2534
Commercial: 602-533-xxxx

Common Sensor Team
DSN: 821-2429/1760

GBCS
AQF

Ground Systems Team
DSN: 821-546113022

AN/PRD 12
E-TRACKWOLF
I-REMBASS
TROJAN SPIRIT II

TSM ASAS
ATZS-CDA
DSN: 821-350413507
FAX: 8216369
Commerical: 602-533-xxxx

ASAS

TSM JSTARS
ATZS-CD J
DSN: 821-5301/5201
FAX: 821-5643
Commercial: 602-533-xxxx

CTT
GSM BLK I
GSM BLK II

TSM UAV/AIR SYSTEMS
ATZS-CDU
DSN: 821-2165/1 804
FAX: 821-I 588
Commerical: 602-533-xxxx

Unmanned Systems
DSN: 821-2532/2971

UAV-CR
UAV-SR
TE-UAV
POINTER

Manned Systems
DSN: 821-2208/2774

GRCS
ARL

TSM TENCAP
ATZS-CDT-S
DSN: 8214610
Commercial: 602-533-xxxx

ETUT
EPDS
ETRAC
FAST
MIES
MIRS
MITT
SUCCESS

Integration Division
Weather Team
ATZS-CDI-W
DSN: 879-6472/6647
Commercial: 602-538-xxxx

IMETS
AMSS

Topographic Engineering Center (TEC)
Project Mgr CTIS
DSN: 345-2854
FAX: (703)355-3176

DTSS