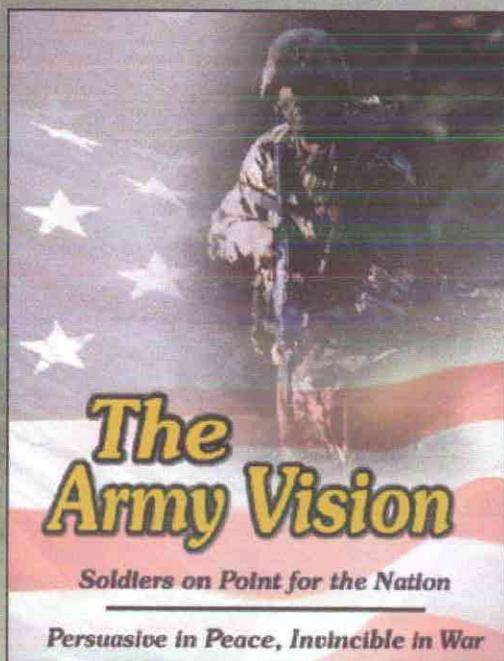


Signal Modernization

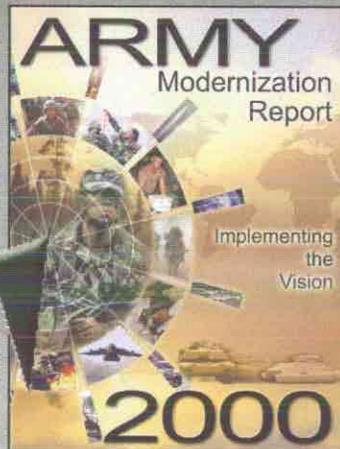


Signal Modernization to Support the Army Vision

*Integrated Tactical, Operational and Strategic
Communications Architectures to Support the Army Vision*

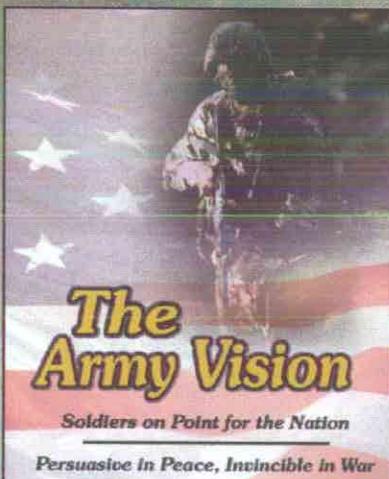


Achieving the Vision



Transform to a Force that is:

- ⊖ Responsive
- ⊖ Deployable
- ⊖ Agile
- ⊖ Versatile
- ⊖ Lethal
- ⊖ Survivable
- ⊖ Sustainable



Army
Vision

Current
Signal Support

Modernization
Strategy

Signal
Programs

Special
Topics



Responsive



**Integrated Tactical, Operational and Strategic
Communications Architectures Enable
Sufficient Warning to Respond Rapidly**

Army
Vision

Current
Signal Support

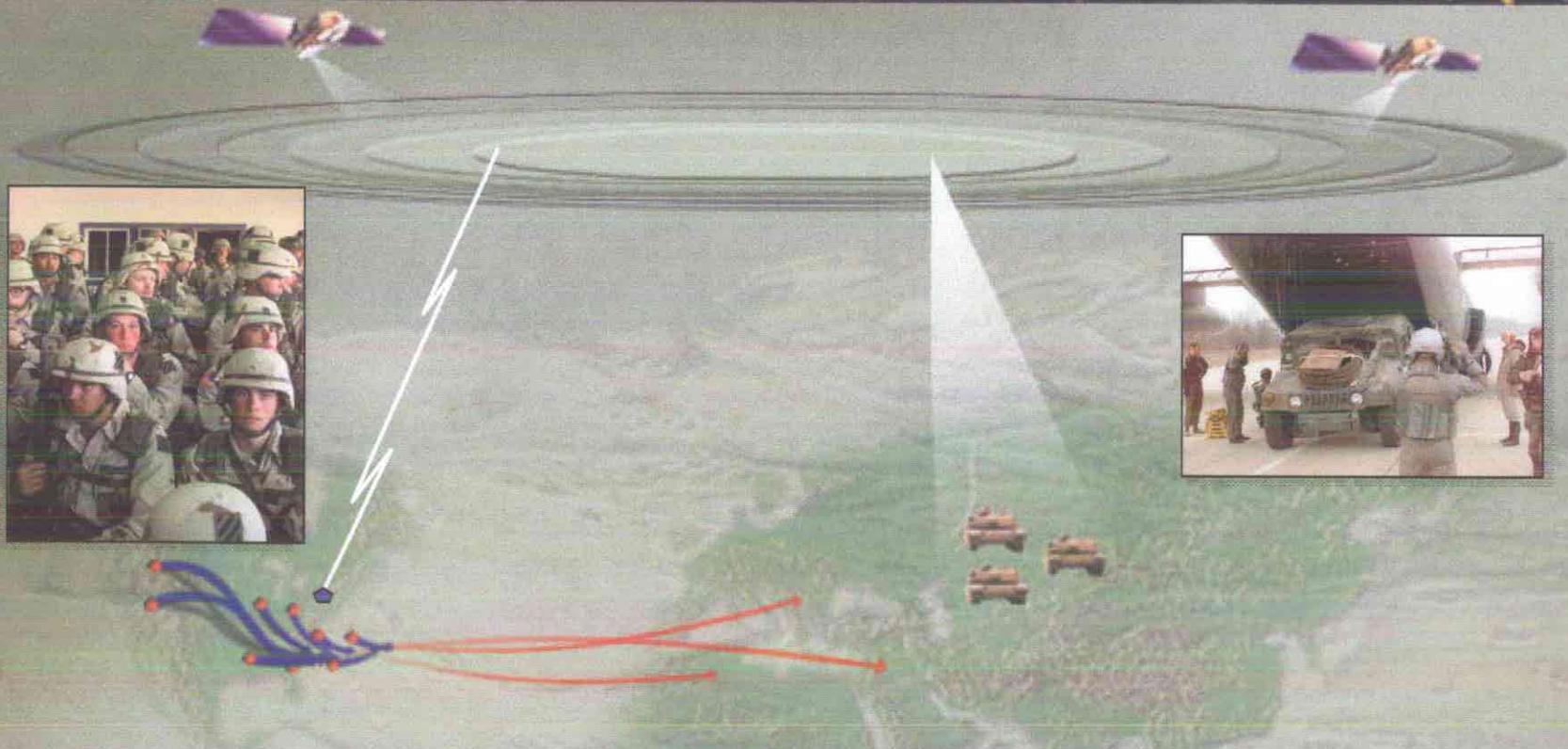
Modernization
Strategy

Signal
Programs

Special
Topics



Deployable

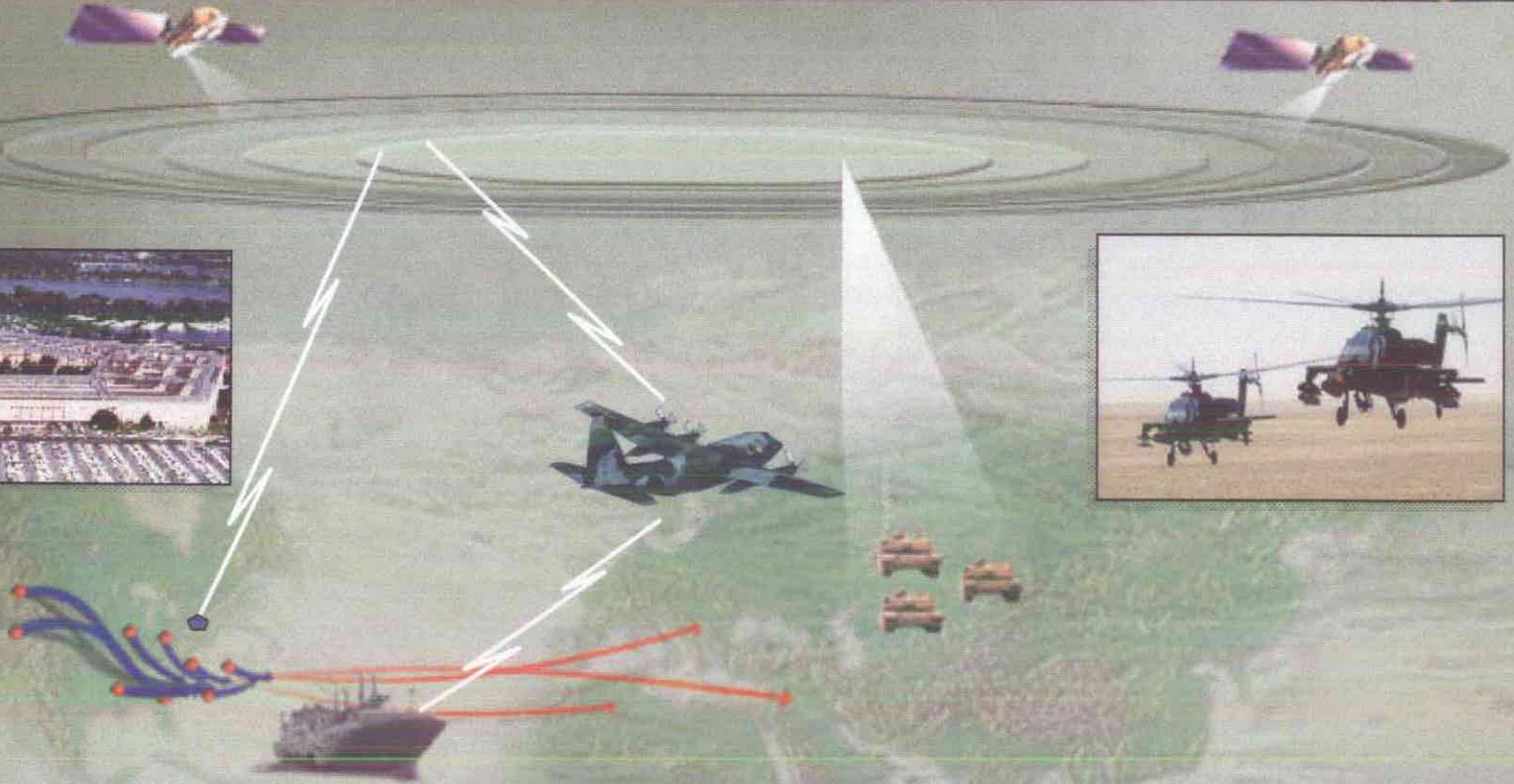
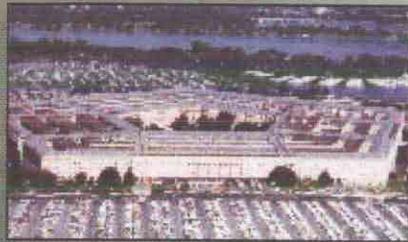


**Smaller, Multi-mission Equipment and
Reachback Capability Reduces Lift**

Deploy a Brigade within 96 Hours



Agile



Asset Embedded Simulation

Agility Through Continuous C2 and Rehearsal Capability

Army
Vision

Current
Signal Support

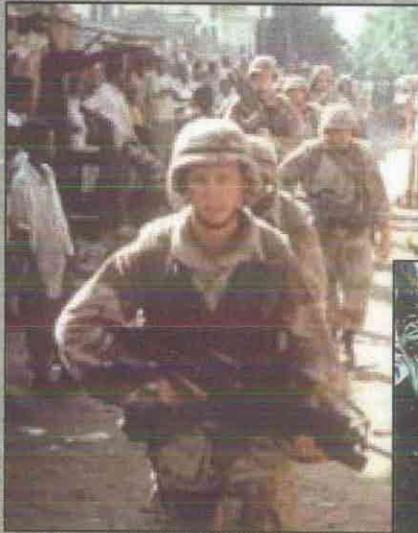
Modernization
Strategy

Signal
Programs

Special
Topics



Versatile



Situational Awareness

Supports Full-Spectrum Capabilities

Versatility Through Interoperability and Open Architectures

Army
Vision

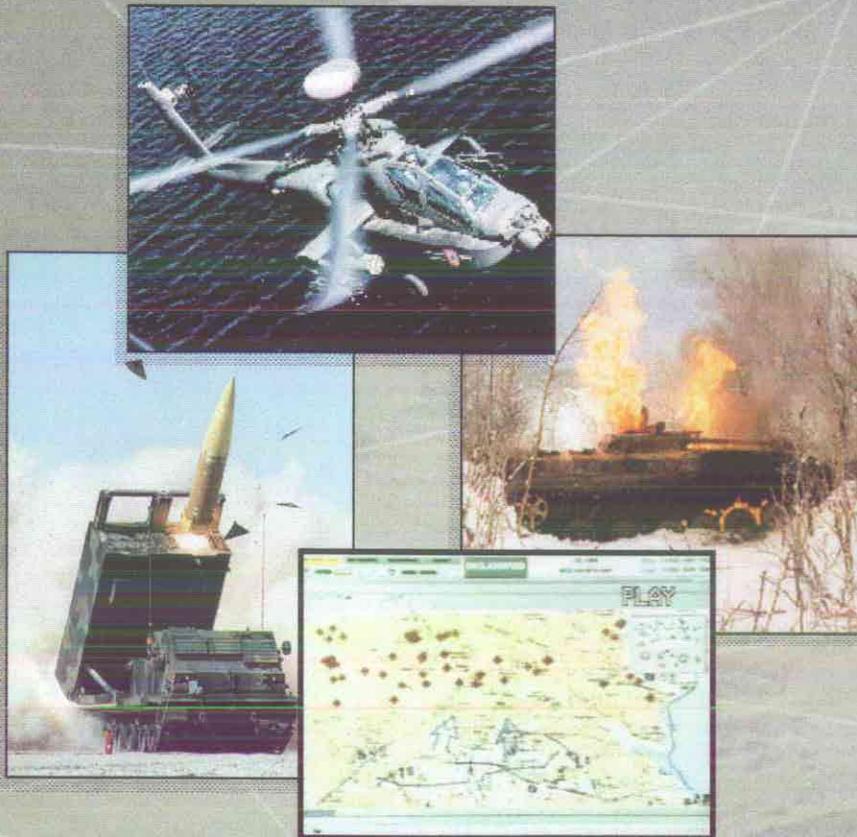
Current
Signal Support

Modernization
Strategy

Signal
Programs

Special
Topics



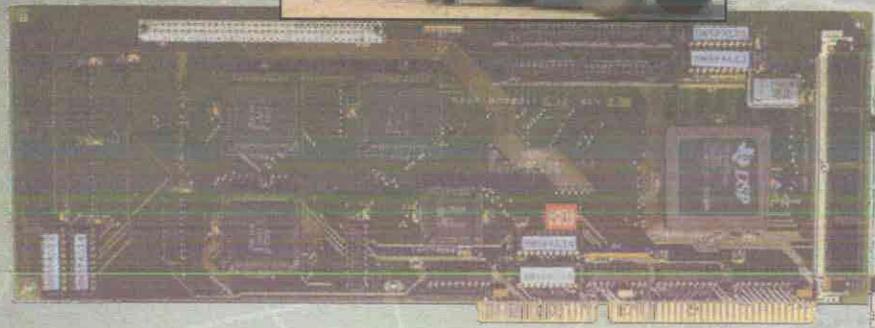


**Improved Sensor
to Shooter
Capabilities and
Rapid
Distribution of
Information**

***Lethality through Data Distribution,
Synchronization, and Timing***



Survivable



⊖ **Smaller Footprint**

⊖ **Reduced Vulnerability**

⊖ **Better Situational Awareness**



Survivability Through Multiple Levels of Security, Redundancy, and Technology



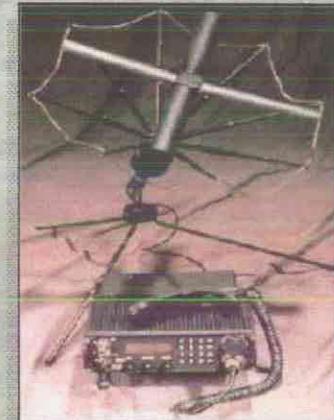
Sustainable



⊖ **Reduced Footprint**

⊖ **Common Hardware and Software**

⊖ **Reachback**



Sustainability Through Reduced Footprint and Reachback



Digital Battlefield Considerations . . .



Increased Reliance

Flexible, reliable communications are the KEY enabler for future Warfighter

- ① *National Security Strategy calls for defense against hostile information operations and protection of National and defense information infrastructure*
- ① *Future threats will be asymmetric and focused on attacking our military and DOD networks to deny friendly Information Superiority.*
- ① *To achieve Dominant Battlefield Awareness and Information Superiority, communicators must support planning to:*
 - *Protect friendly C4I*
 - *Develop Operational Concepts and Doctrine*
 - *Disrupt, suppress and destroy enemy C4I Infrastructure*

Increased Vulnerability

Increased reliance on non-hardened/non-encrypted commercial assets

. . . for Supporting the Warfighter



The Modernization Challenge ...



① Balanced Investment for Warfighter's Needs



Combat Platforms

Logistics



Signal Systems

Robust Interoperable Network Required for All Enhanced Joint Operational Concepts

Army
Vision

Current
Signal Support

Modernization
Strategy

Signal
Programs

Special
Topics



Current Capabilities



⊖ **Limited Data and Voice**

⊖ **Increasing Demands**

⊖ **Limited Strategic to Tactical Transport**

TRI-TAC

MSE

70s Technology

**We Need to Make
the Current
System Better.**

Network Systems

Army
Vision

Current
Signal Support

Modernization
Strategy

Signal
Programs

Special
Topics



Area Common User System



TRI-TAC

70s Technology

MSE

Theater
Army

Corps

BN

DIV

BDE

- Ⓞ *Increased Demand from Digital & Digitized Platforms*
- Ⓞ *More Digital Supporting Systems into ATTCS*
- Ⓞ *Limited Information Transport Between Strategic and Tactical Systems*

Army
Vision

Current
Signal Support

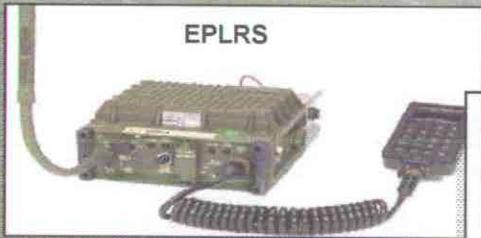
Modernization
Strategy

Signal
Programs

Special
Topics



Current Capabilities



EPLRS



SINGARS



NTDR

TRI-TAC

- ⓐ Limited Voice and Data From Platform Level into Backbone Networks
- ⓑ Limited Throughput

MSE

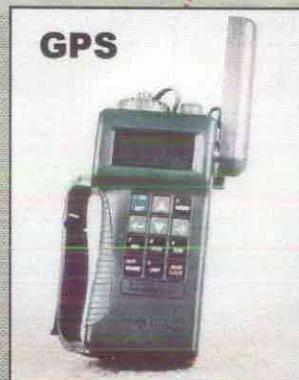
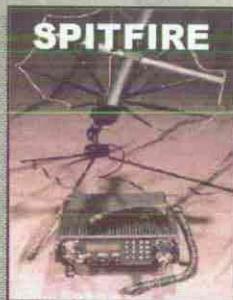
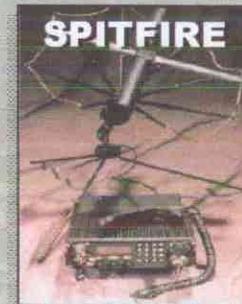
SINGARS/
EPLRS

SINGARS/
EPLRS

**Transmission
Systems**
Tactical Radios



Current Capabilities



**Transmission
Systems
Satellite Terminals**

Army
Vision

Current
Signal Support

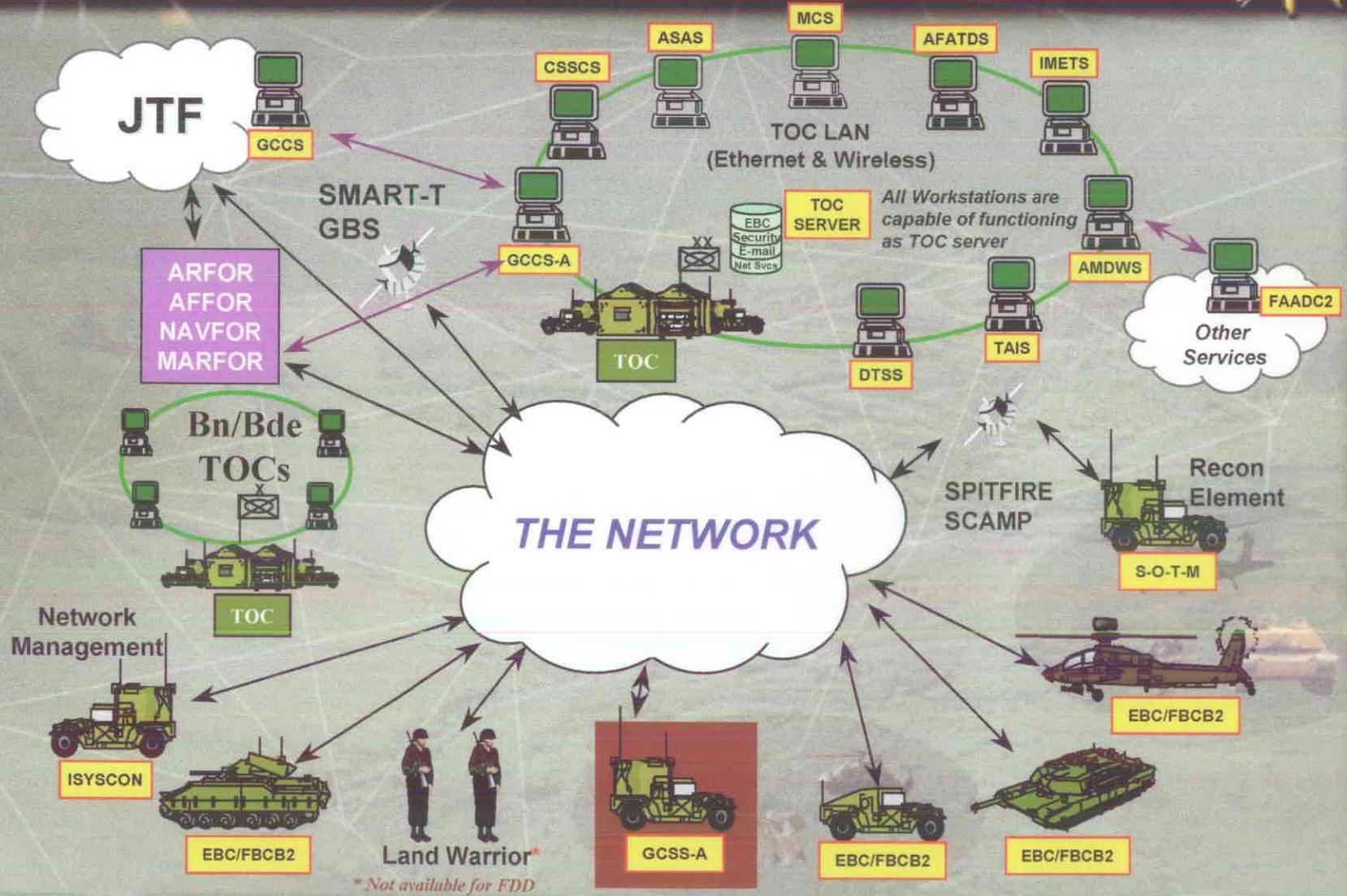
Modernization
Strategy

Signal
Programs

Special
Topics



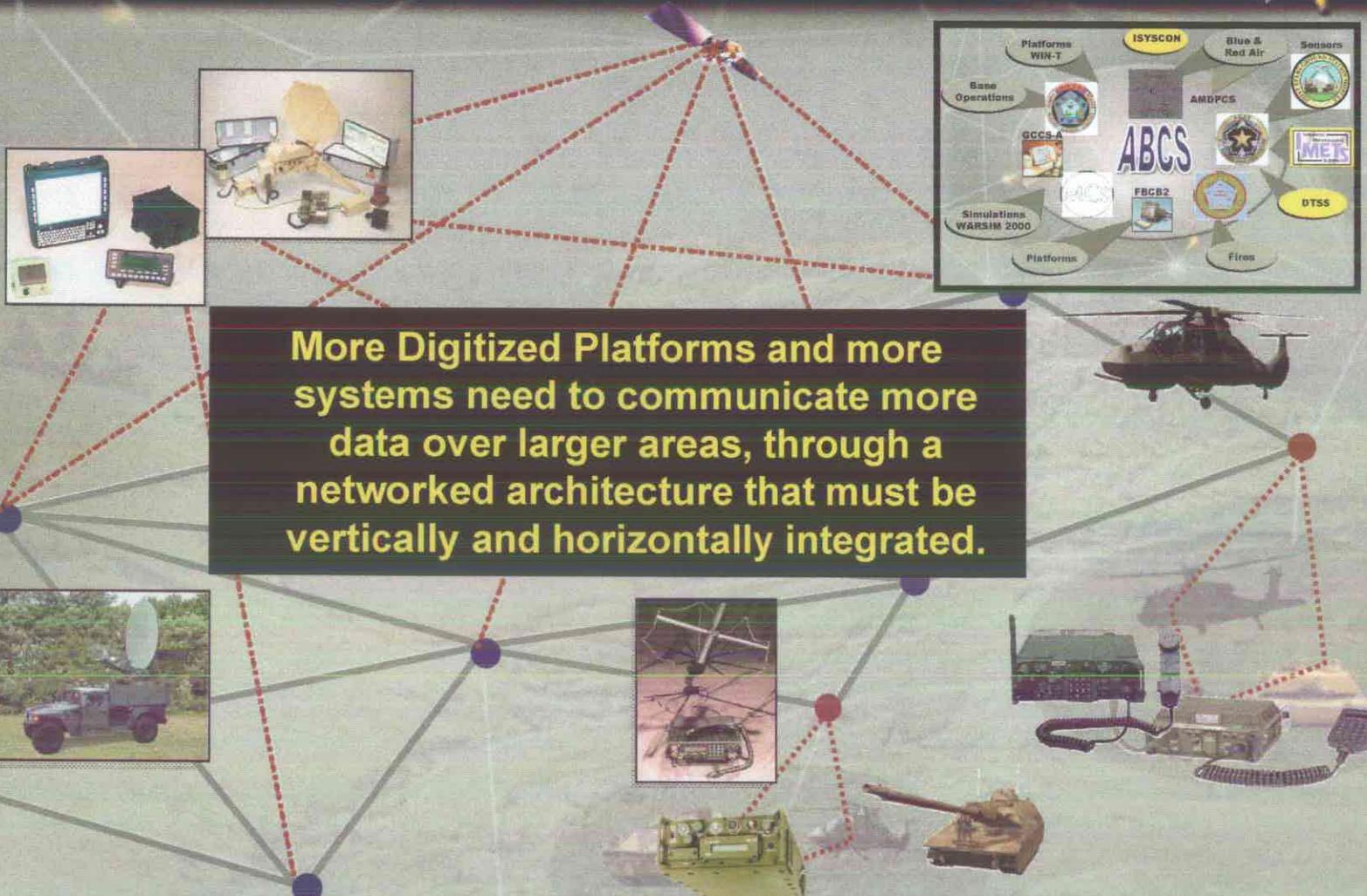
Key Components of the Digitized Force



* Not available for FDD



Signal Modernization Requirements



More Digitized Platforms and more systems need to communicate more data over larger areas, through a networked architecture that must be vertically and horizontally integrated.

... Just to Meet Today's Demands

Army Vision

Current Signal Support

Modernization Strategy

Signal Programs

Special Topics



Army Modernization Strategy



① Transform in order to meet future challenges



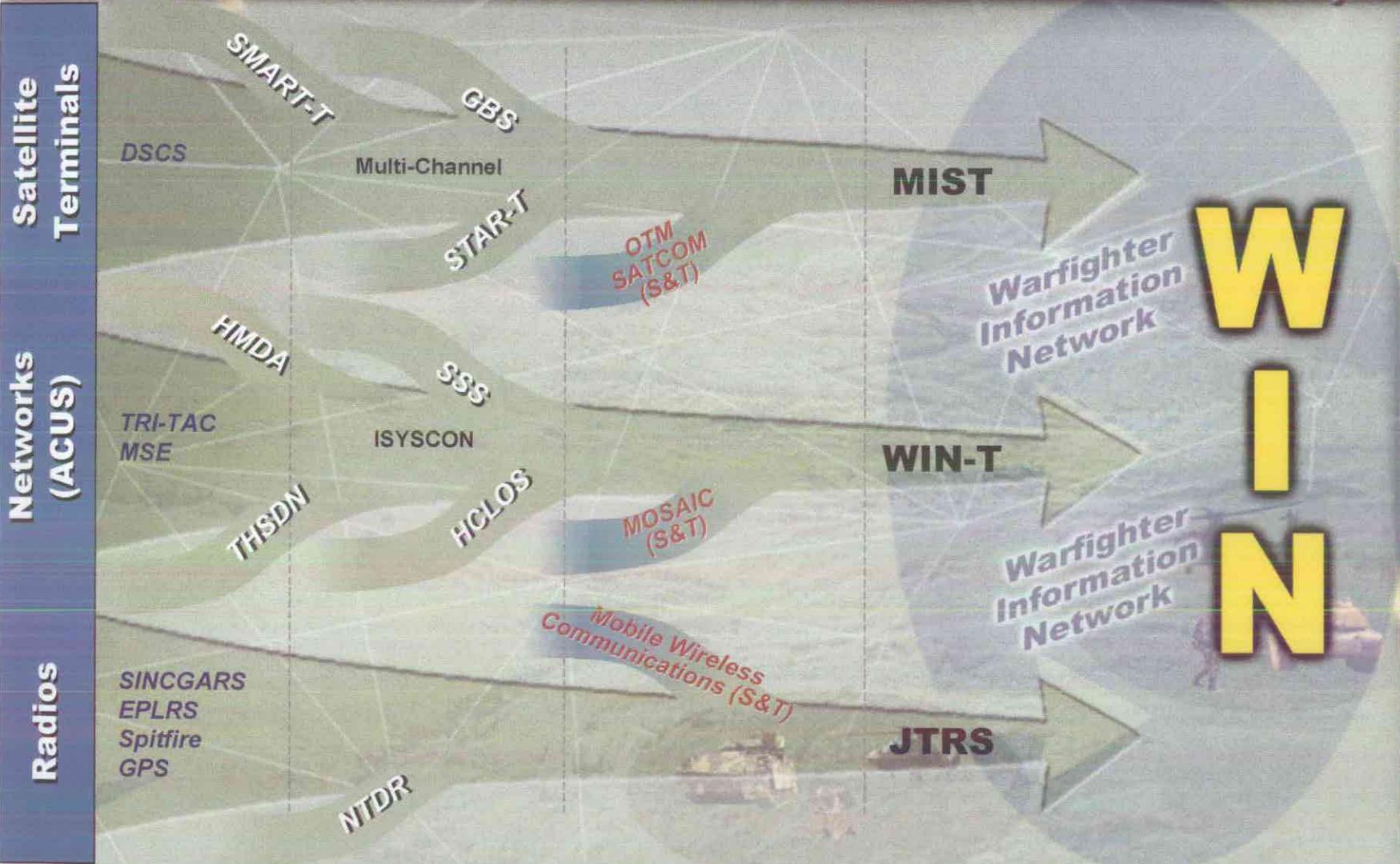
Maintain Legacy Force warfighting capability through overmatch, digitization and recapitalization



Focus S&T to timely field the Objective Force



Road to the Objective



Army Vision

Current Signal Support

Modernization Strategy

Signal Programs

Special Topics



Signal Modernization Requirements



- ① Field FDC by 04
- ① Improve The Network
- ① Begin Transformation to the Objective Force



*Combat
Platforms*

Logistics

**The
Network**



Signal Systems

“We MUST Have Information Superiority”

-JV2010

Army
Vision

Current
Signal Support

Modernization
Strategy

Signal
Programs

Special
Topics



Summary



- ① **The Army will become Full Spectrum... Common Chassis... Common Organizations... meeting the National Security requirements of the future**
- ① **A phased approach coupled with a sound investment strategy will facilitate transformation**



Army
Vision

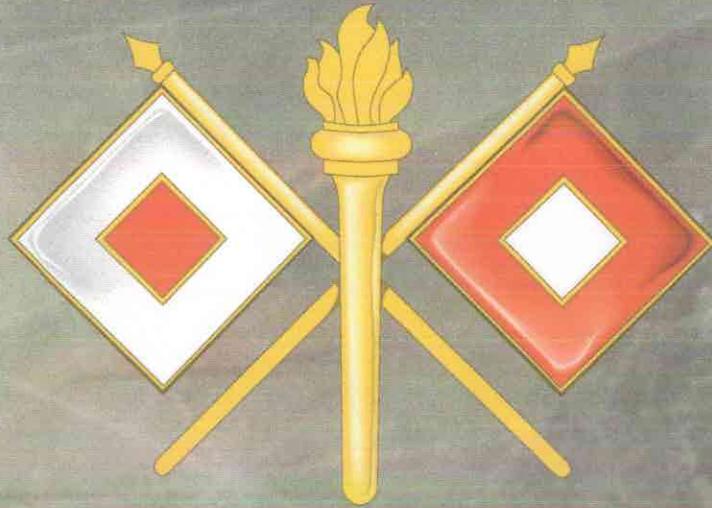
Current
Signal Support

Modernization
Strategy

Signal
Programs

Special
Topics





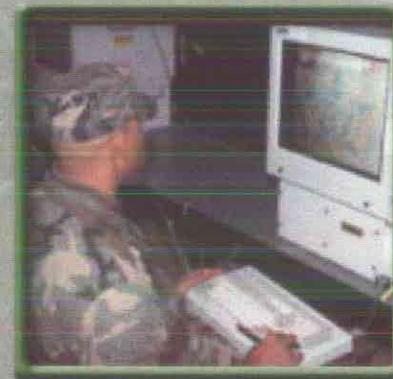
Signal Systems/Programs



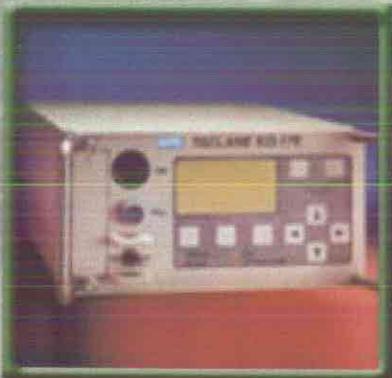
C2 Systems



Satellite Terminals



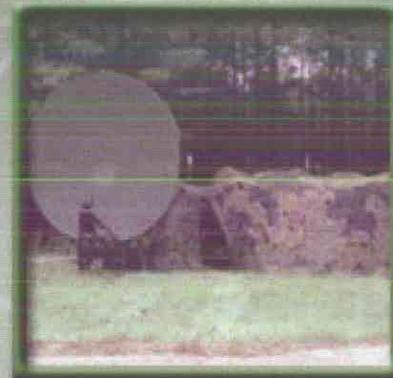
**Area Common
User Systems**



**Information Systems
Security COMSEC**



**Transmission
Systems**



Other

Army
Vision

Current
Signal Support

Modernization
Strategy

Signal
Programs

Special
Topics



Special Topics



Key Issues



ATCCS

Army
Vision

Current
Signal Support

Modernization
Strategy

Signal
Programs

Special
Topics



ATCCS



Army
Vision

Current
Signal Support

Modernization
Strategy

Signal
Programs

Special
Topics



