# UNITED STATES ARMY
# COMMUNICATIONS-ELECTRONICS COMMAND
# AND
# TRADOC SYSTEM MANAGER, JOINT STARS
# FORT MONMOUTH, NEW JERSEY






# " GROUND STATION MODULE SYMPOSIUM"

**WATTERS HALL**
**OCTOBER 21, 1993**



**DEPARTMENT OF THE ARMY**
HEADQUARTERS, US ARMY COMMUNICATIONS-ELECTRONICS COMMAND
AND FORT MONMOUTH
FORT MONMOUTH, NEW JERSEY 07703-5000

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REPLY TO
ATTENTION OF

**Office of the Commanding General**

Ladies and Gentlemen:

On behalf of the Communications-Electronics Command (CECOM) and the Training and Doctrine Command (TRADOC) System Manager for Joint Stars, I am pleased to present to you the proceedings of the Ground Station Module Symposium. The subject of the Symposium is the Common Ground Station which is an outgrowth of the Joint Stars Ground Station Module program. The objective of this Symposium is to encourage an exchange of information which will assist the Project Manager in formulating a development and acquisition strategy for the Common Ground Station.

Government and Industry must continue working together to meet the Army's needs for earlier system fieldings and lower acquisition cost. I want you to understand the Project Manager's perspective on the Common Ground Station and welcome the business community's feedback to develop a strategy which makes good business sense.

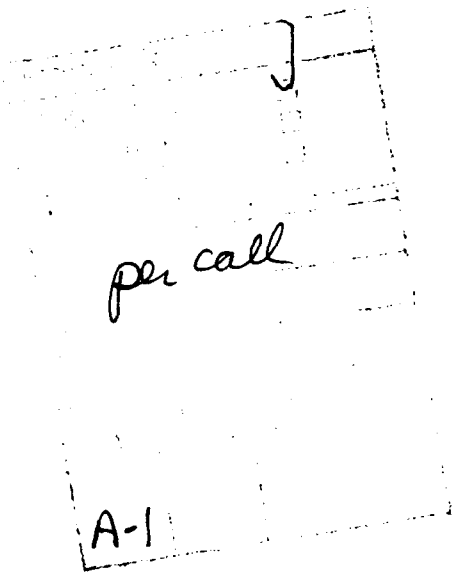
I welcome your participation in our Symposium.

Sincerely,

Otto J. Guenther

Otto J. Guenther
Major General, U.S. Army
Commanding





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The information provided is accurate as of the time of publication, and may be subject to change.

## NOTICE

This publication contains the briefings presented during this Symposium for Industry. Following the Symposium, you may obtain a Preceedings Book for a minimum fee, by contacting the Defense Technical Information Center (DTIC). The telephone number is (703) 274-7633.

We hope that the above publication proves beneficial to your long-range planning efforts. If you have any additional questions and/or suggestions, please contact the Program Analysis and Evaluation Directorate, AMSEL-PE-OD, ATTN: MAJ Corbett, (908) 532-2344.

THE OVERALL CLASSIFICATION

OF THIS PUBLICATIONS IS

UNCLASSIFIED

# GROUND STATION MODULE SYMPOSIUM

OCTOBER 21, 1993
WATTERS HALL AUDITORIUM (BLDG 1207)
FORT MONMOUTH, NEW JERSEY

MEETING CHAIRMAN
COLONEL JEFFREY W. WRIGHT
TRADOC SYSTEM MANAGER, JOINT STARS

## AGENDA

**WEDNESDAY, OCTOBER 20, 1993**

1500-1700 PRE-REGISTRATION

**THURSDAY, OCTOBER 21, 1993**

0700 REGISTRATION

0830 ADMINISTRATIVE REMARKS
Mr. Robert M. Calvello
Program Analysis and Evaluation
Directorate, CECOM

0840 WELCOMING REMARKS
COL Jeffrey W. Wright
TRADOC System Manager, Joint Stars

0850 MILITARY INTELLIGENCE CONCEPT
COL Jeffrey W. Wright
TRADOC System Manager, Joint Stars

0915 COMMON GROUND STATION CONCEPT
COL Jeffrey W. Wright
TRADOC System Manager, Joint Stars

1000 QUESTIONS AND ANSWERS

1010 Break

1030 COMMON GROUND STATION CONCEPT DEMONSTRATION
MAJ (P) John R. Brooks
Chief, Advanced Technology Division
Directorate Combat Development
U.S. Army Intelligence Center

1115 ADVANCED TECHNOLOGY DEMONSTRATIONS (ATDs) RELATED TO COMMON GROUND STATION
Mr. Thomas C. Newsome
Intelligence and Electronic Warfare
Directorate, CECOM

1200 QUESTIONS AND ANSWERS

1215 LUNCH

1345 ACQUISITION STRATEGY
COL James L. Mitchell
Project Manager, Joint Surveillance Target
Attack Radar System

1415 DESERT CAPTURE
COL JEFFREY W. WRIGHT
TRADOC System Manager, Joint Stars

1445 IEW BATTLE LAB
MAJ (P) John R. Brooks
Chief, Advanced Technology Division
Directorate Combat Development
U.S. Army Intelligence Center

1515 QUESTIONS AND ANSWERS

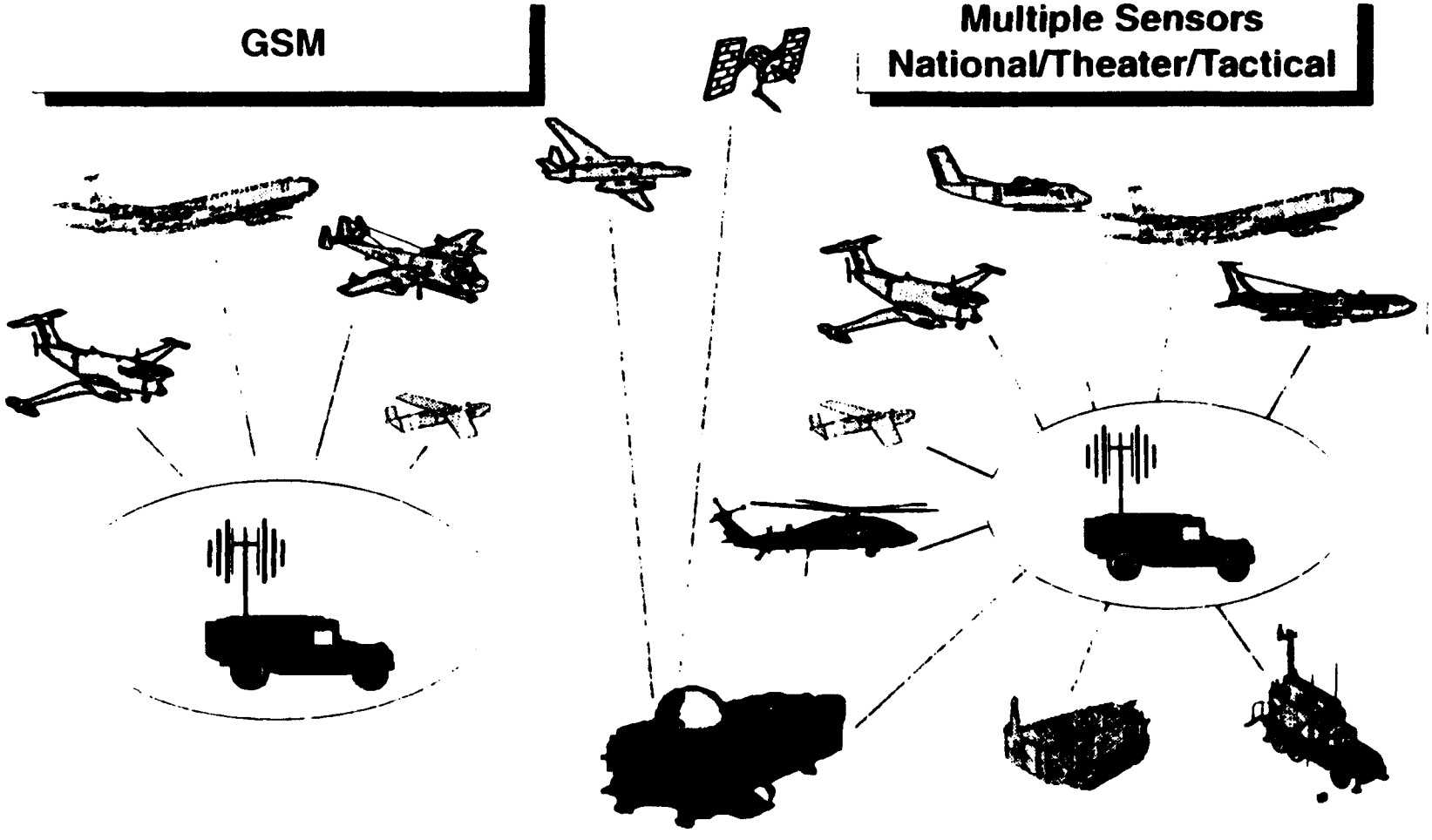
1545 CLOSING REMARKS

1600 ADJOURN

CONTENTS

IEW
PROGRAM EXECUTIVE OFFICE

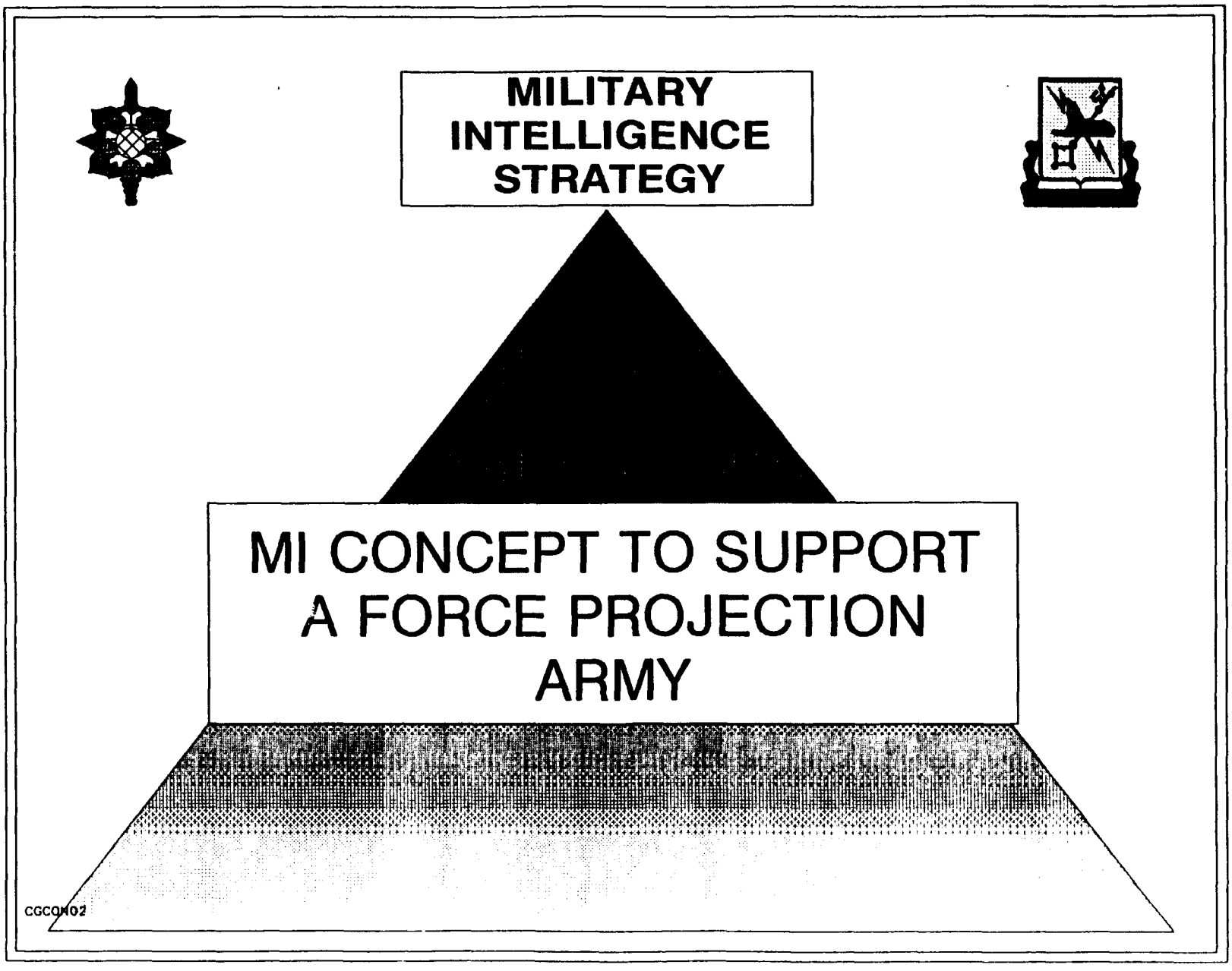
# JOINT STARS
## GSM to Common Ground Station Module



# MILITARY INTELLIGENCE CORPS

**"The Commander Drives Intelligence..."**
**FM 100-5**

CGCON01

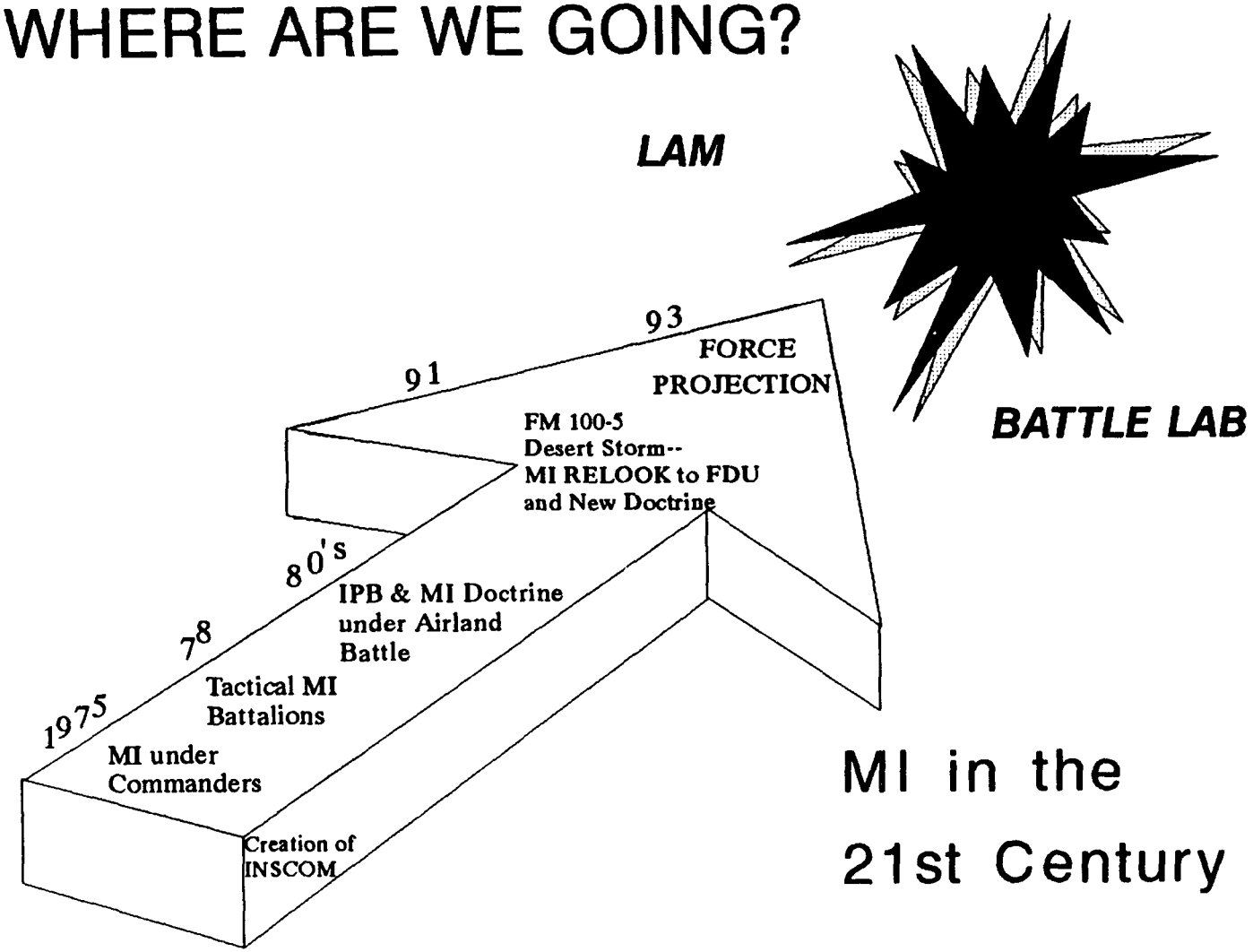

MILITARY
INTELLIGENCE
STRATEGY
MI CONCEPT TO SUPPORT
A FORCE PROJECTION
ARMY
CGCON02

# AGENDA

- MI DOTMLS
- MI IN FORCE PROJECTION

CGCON03

# WHERE ARE WE GOING?

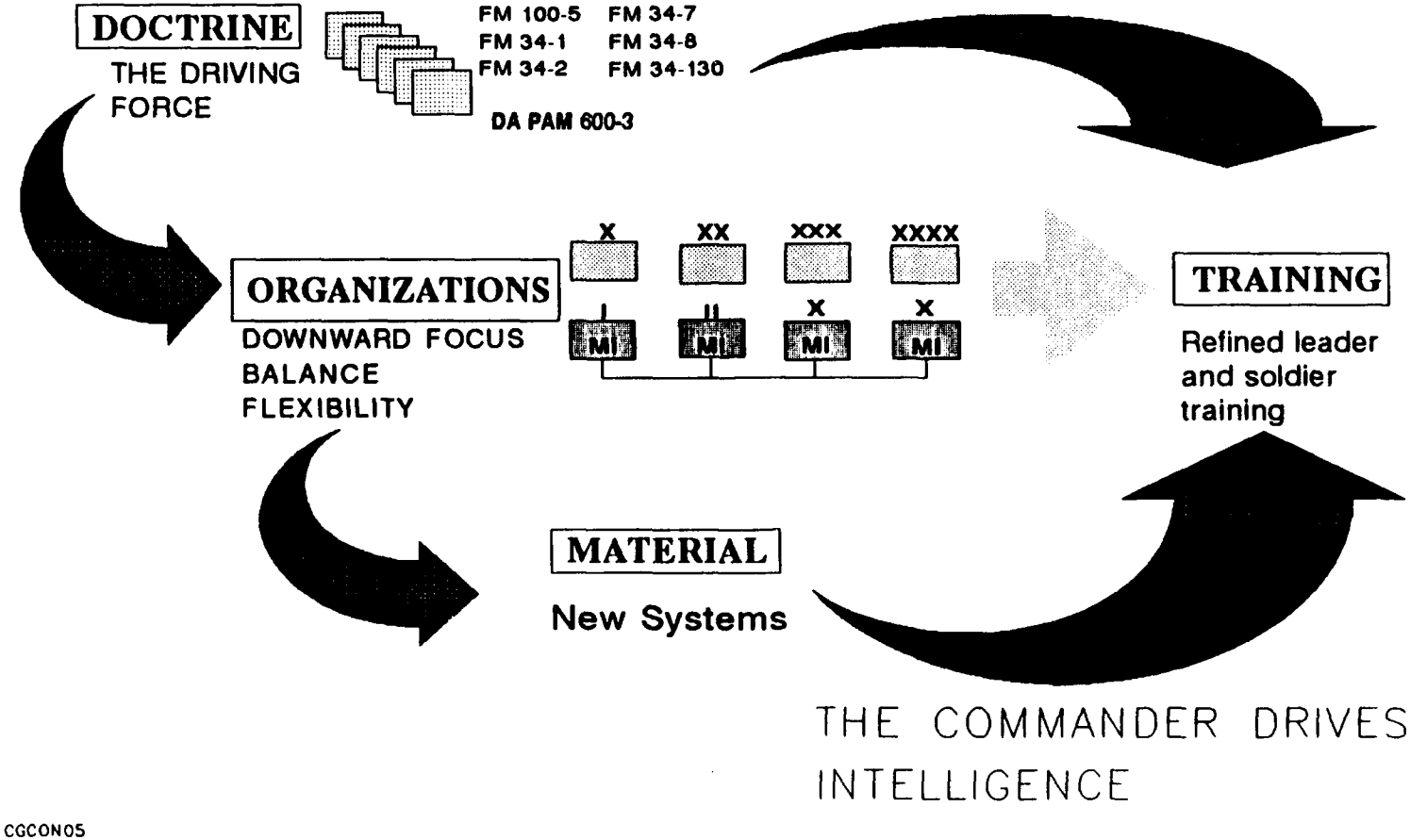



MI in the
21st Century

CGCON04

# MI CONCEPT CHANGES UNDERWAY

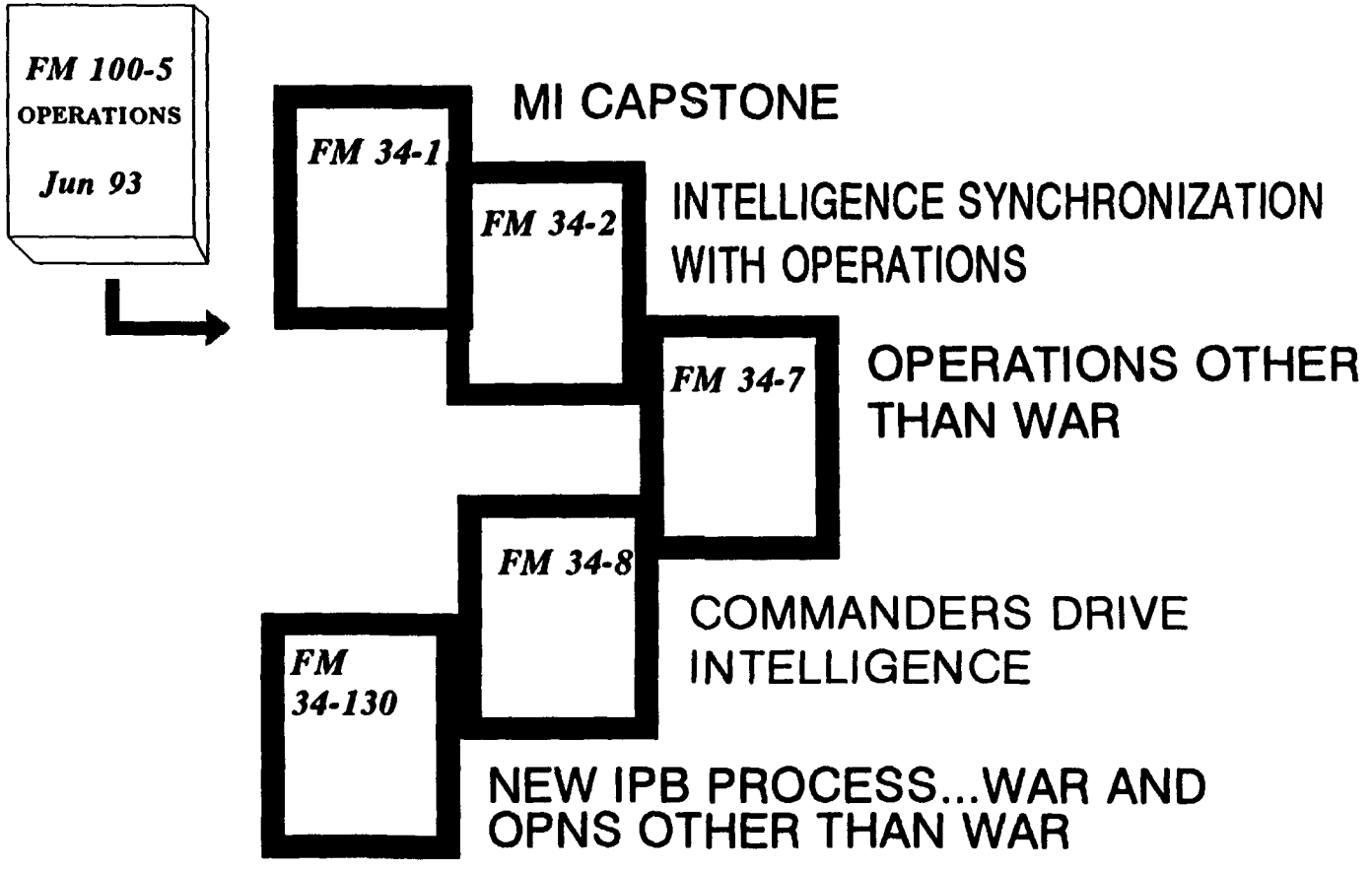
## AIMP - MI Concept Approved




CGCON05

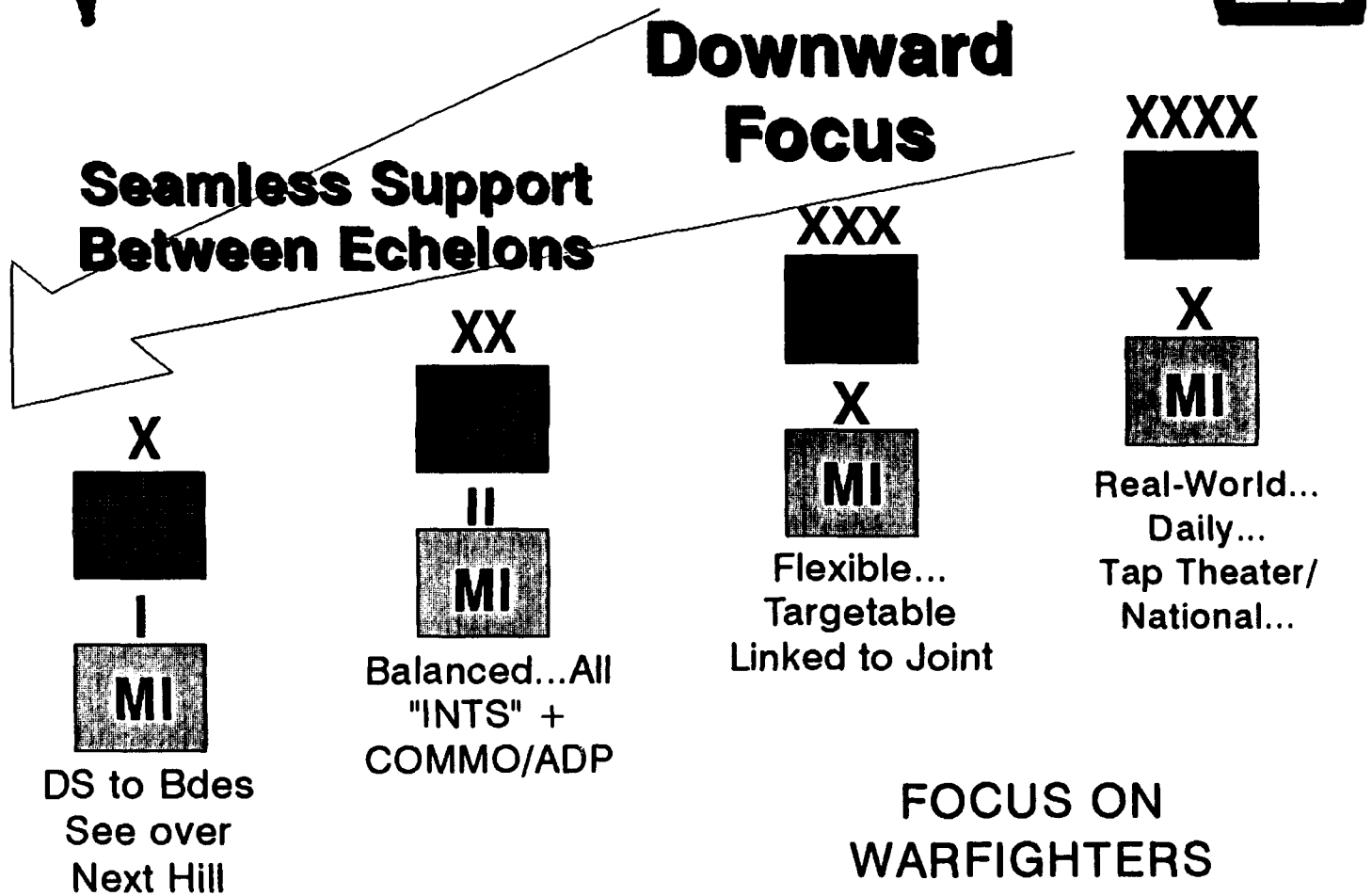
# DOCTRINE

- Driven by New FM 100-5




CGCON06

# New MI Organizations




CGCON07

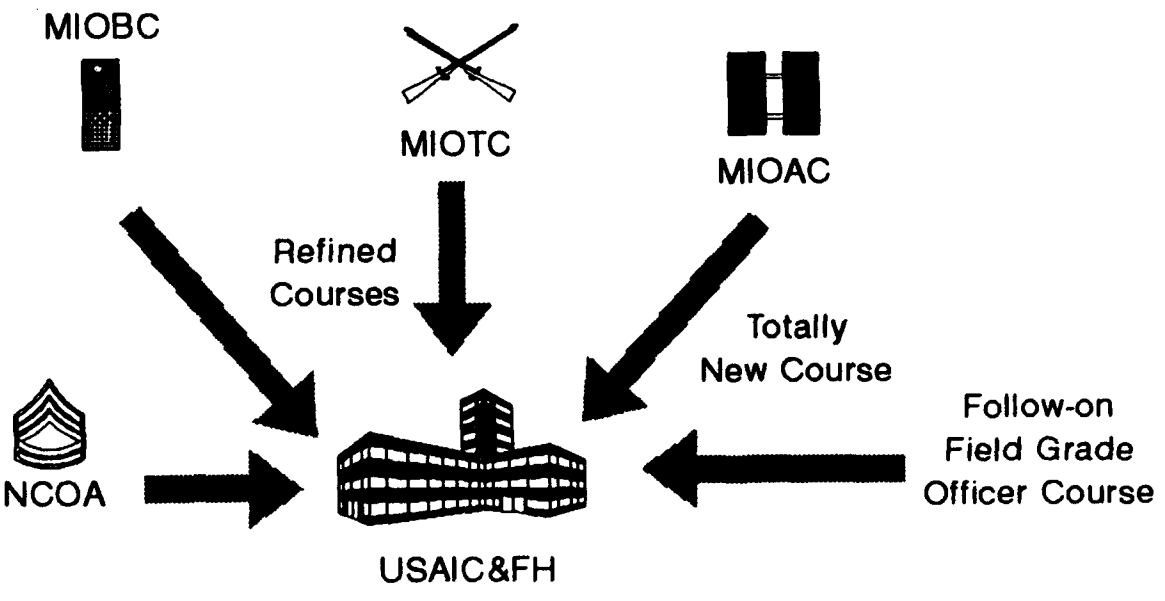
# INTELLIGENCE TRAINING STRATEGY

| COMMANDERS | MI LEADERS | MI SOLDIERS |
|---|---|---|
| • CBT ARMS AND MI ADV CRS EXCH | • INTEL SYNCHRONIZATION | • LANGUAGE |
| • BCTP | • PREDICTIVE INTEL | • MOS CONSOLIDATION |
| • CTC | • TACTICS | • NEW MOS's |
| • SIMULATIONS | • FOCUS ENTIRE INTEL EFFORT | • SOLDIERS FIRST AND MI SECOND TO NONE |
| | • JOINT/COMBINED MI & OPS | |

## TRAIN TO FIGHT

CGCON08

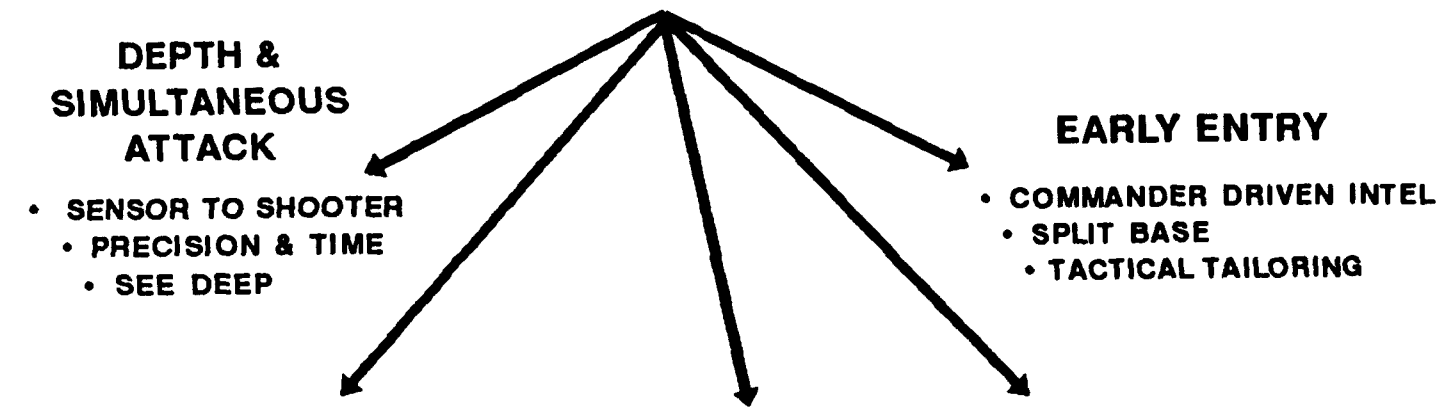
# MI LEADER TRAINING




**90% Fill of OAC Grad MI CPTs in Bn S2 Positions**

CGCON09

# IEW BATTLE LAB "BATTLE FOCUS"



**DEPTH & SIMULTANEOUS ATTACK**

- SENSOR TO SHOOTER
- PRECISION & TIME
- SEE DEEP

**EARLY ENTRY**

- COMMANDER DRIVEN INTEL
- SPLIT BASE
- TACTICAL TAILORING

**MOUNTED/DISMOUNTED BATTLE SPACE**

- LINK MI AND CAV AT THE TACTICAL LEVEL
- COMMON GRAPHIC PICTURE

**COMBAT SERVICE SUPPORT**

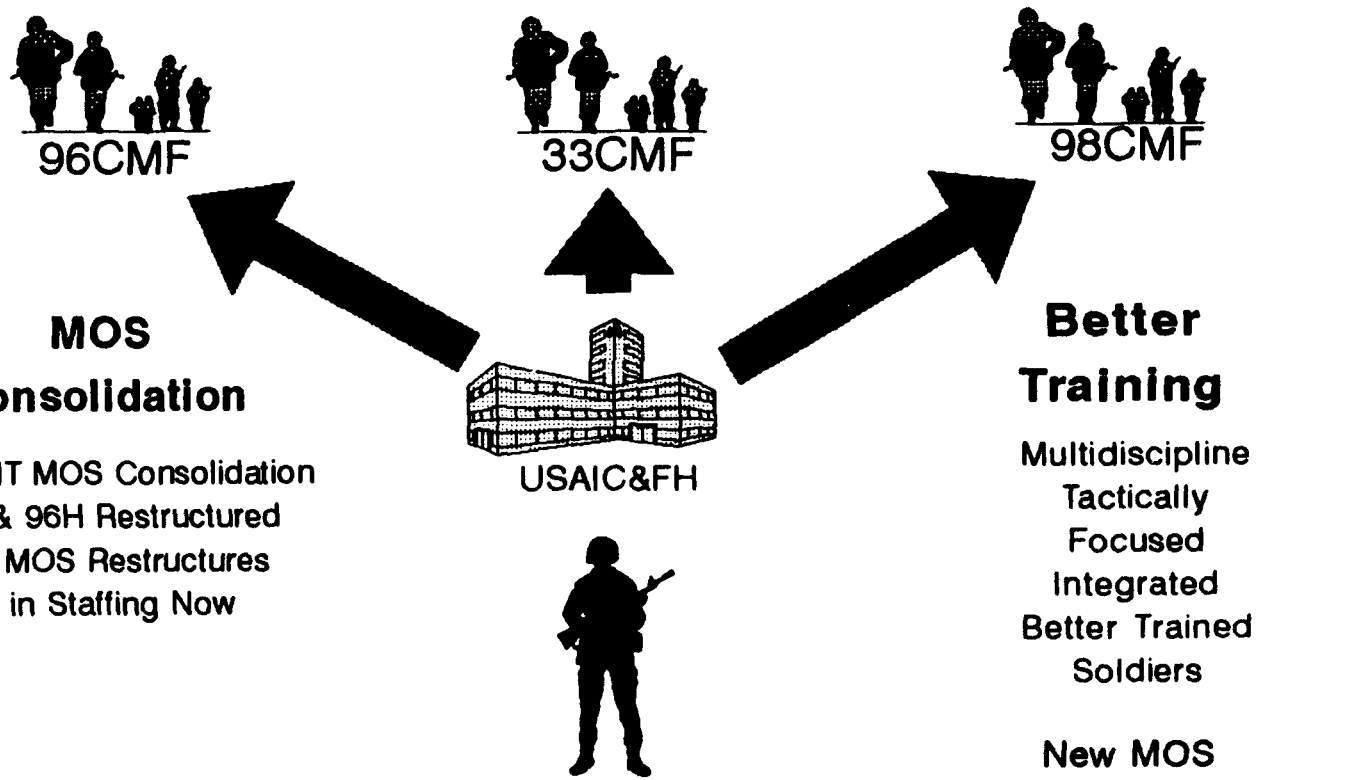
- IPB
- FORCE PROTECTION

**BATTLE COMMAND**

- DISSEMINATION
- ON-TIME/EVERY TIME
- PIR FOCUS

CGCON10

# SOLDIERS




**MOS Consolidation**

SIGINT MOS Consolidation
97G & 96H Restructured
More MOS Restructures
in Staffing Now

**Better Training**

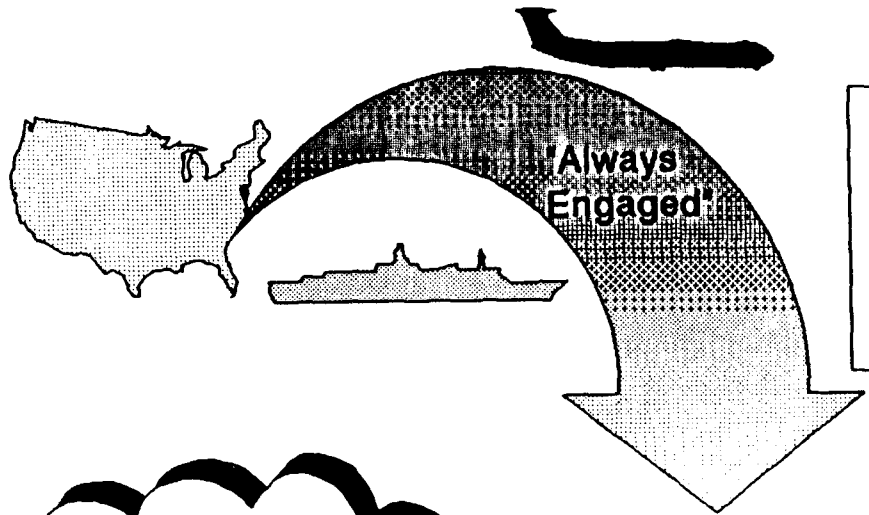
Multidiscipline
Tactically
Focused
Integrated
Better Trained
Soldiers

**New MOS**
**-96U (UAV Oper)**
**97L (Interpreter/Translator)**

CGCON11

# FORCE PROJECTION

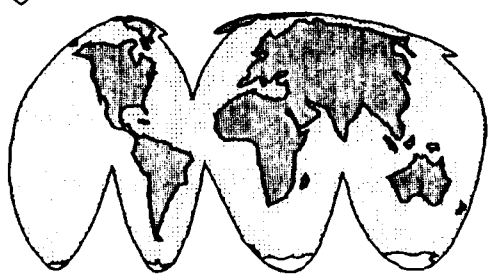
## -NEW REQUIREMENT-




**MISSIONS**

- HUMANITARIAN SUPPORT
- PEACEKEEPING
- NEO
- DISASTER RELIEF
- PEACE ENFORCEMENT
- COMBAT OPERATIONS

- FORCE PROJECTION
- REGIONAL RESPONSE



PEACE | PEACEFUL ENGAGEMENT | CRISIS SHORT OF WAR | CONFLICT/WAR | RESTORATION RETURN TO PEACE

CGCON13

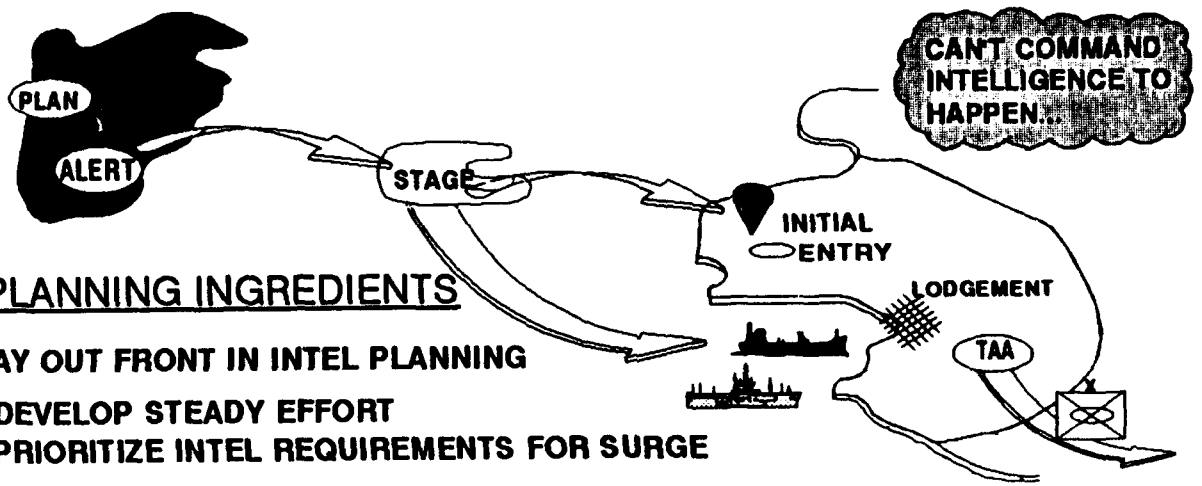
# CHARACTERISTICS

- GRAPHIC INTEL
- PRECISION
- SEE OVER THE HILL
- NEAR REAL TIME
- FOCUS...DOWN AND ONTO OPERATIONS
- SYSTEM OF SYSTEMS

CGCON12

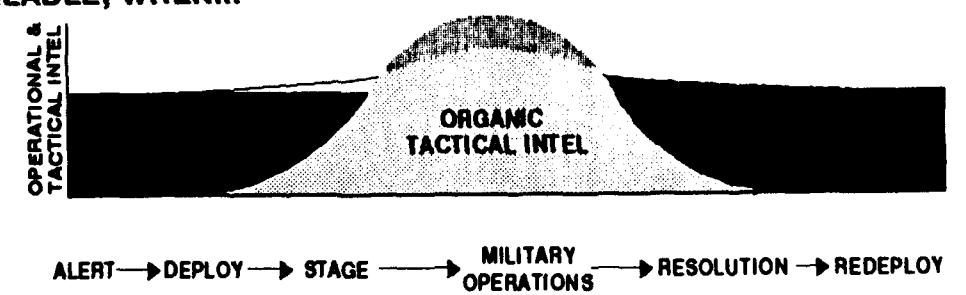
# FORCE PROJECTION

## -INTELLIGENCE PLANNING CONCEPTS-




## KEY PLANNING INGREDIENTS

- **STAY OUT FRONT IN INTEL PLANNING**
  - √ DEVELOP STEADY EFFORT
  - √ PRIORITIZE INTEL REQUIREMENTS FOR SURGE
- **UNDERSTAND HOW TO GET INTEL SUPPORT**
  - √ IDENTIFY WHAT YOU WANT
  - √ KNOW WHAT'S AVAILABLE, WHEN... HOW TO GET IT.



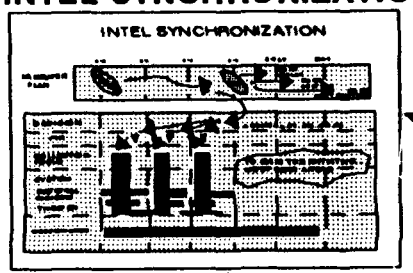

CGCON14

# FORCE PROJECTION
# FIVE MI DOCTRINAL TENETS

THE COMMANDER DRIVES INTELLIGENCE

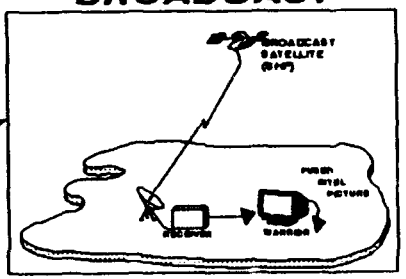
MI

**INTEL SYNCHRONIZATION**



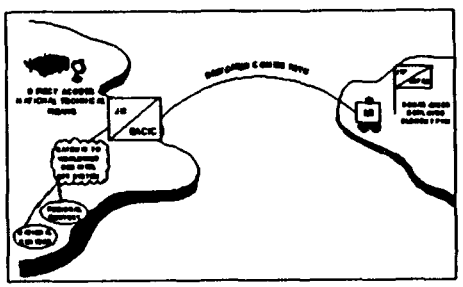

MELD W/OPNS

**BROADCAST**



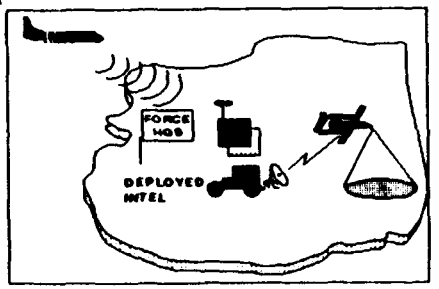
DIAL-UP...QUICK

**SPLIT-BASED**



FOCUS DOWN

**TACTICAL TAILORING**




FLEXIBLE

CGCON15

# COMMANDER DRIVES INTELLIGENCE
## -PRIORITY INTEL REQUIREMENTS-

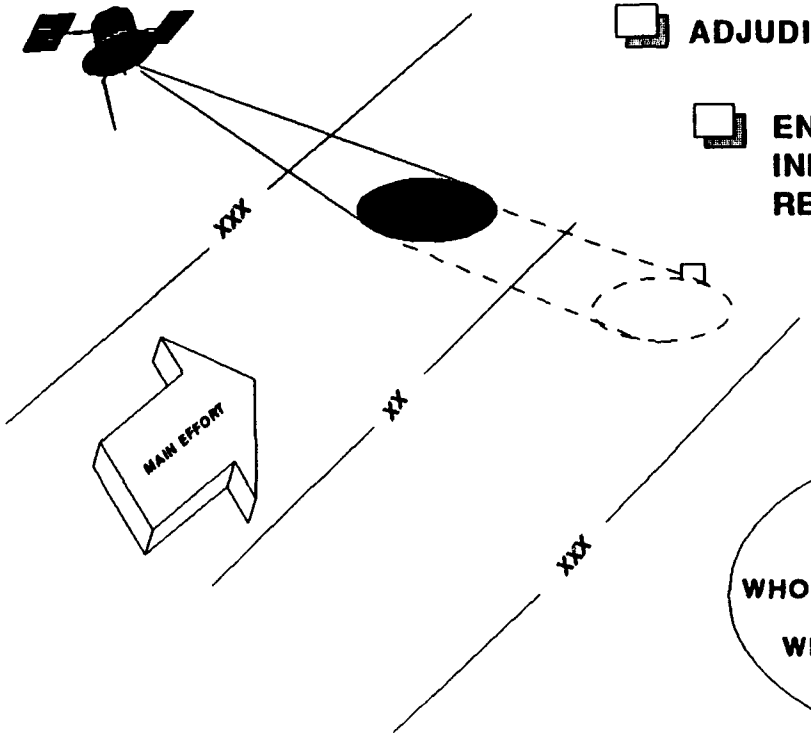
- COMMANDER PERSONALLY SELECTS
  - MUST MELD WITH CONCEPT OF OPERATION AND ANTICIPATED DECISION-MAKING
    - GREATER SPECIFICITY ENSURES INTELLIGENCE PROCESS IS FOCUSED
      - REFINE PIR IN WARGAMING TO SUPPORT COMMANDER'S DECISIONS

The Commander... must ask the right questions and focus the intelligence work.
FM 100-5

CGCON 16

# COMMANDER BROKERS
# -SUBORDINATES' MI REQUIREMENTS-

- WITH NEXT HIGHER (E.G. IMAGERY)
- ADJUDICATES COMPETING DEMANDS
- ENSURES SUBORDINATE CDRS ARE INFORMED WHEN THEIR REQUIREMENTS ARE NOT SATISFIED




**CLOSE THE LOOP**

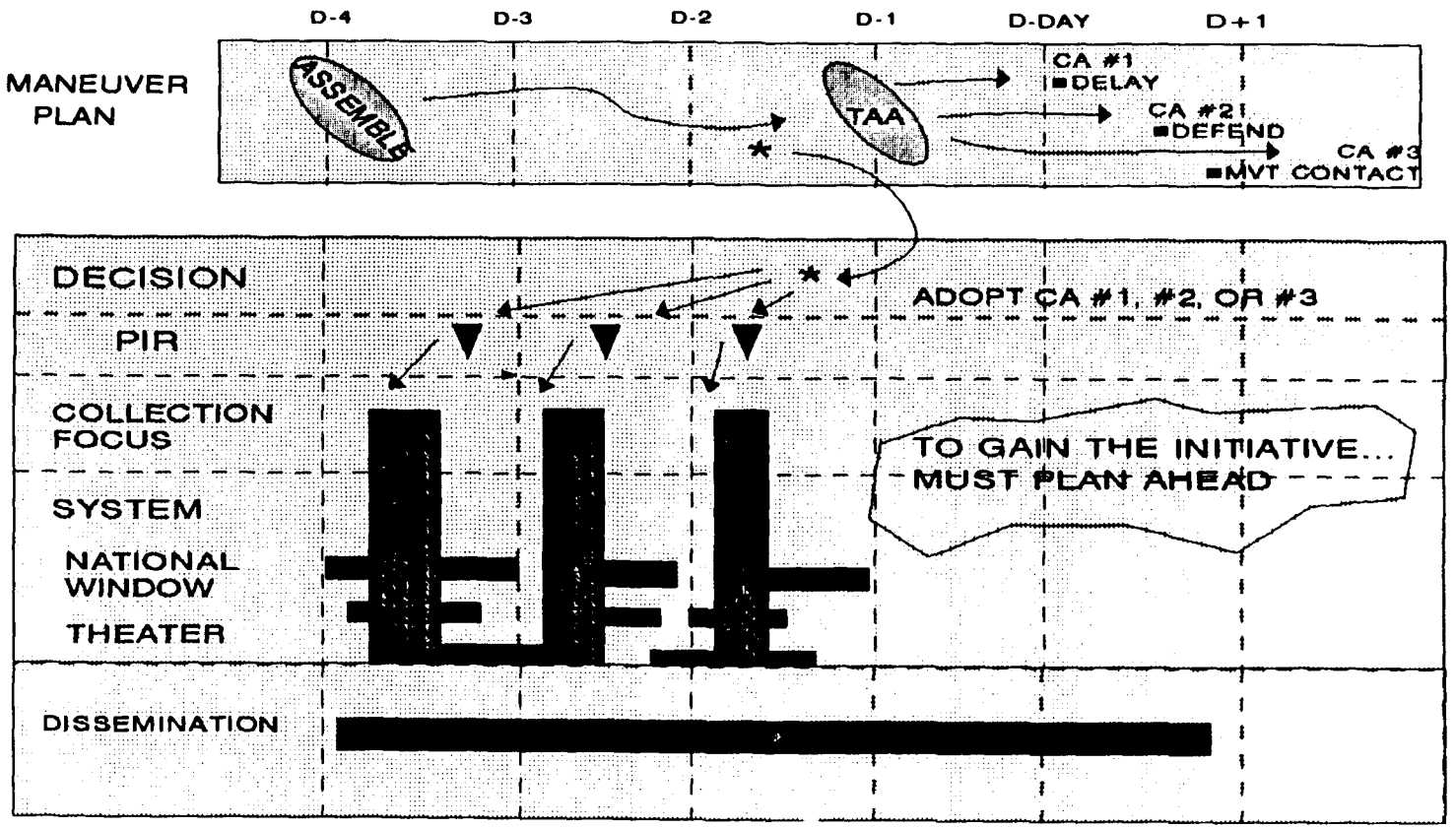
WHO'S GOT IT?--

WHO DO I ASK?-- HOW DO I GET IT?--

WHAT LIMITS IT...TIME, WEATHER, ENEMY, ACTION, TERRAIN

CGCON17

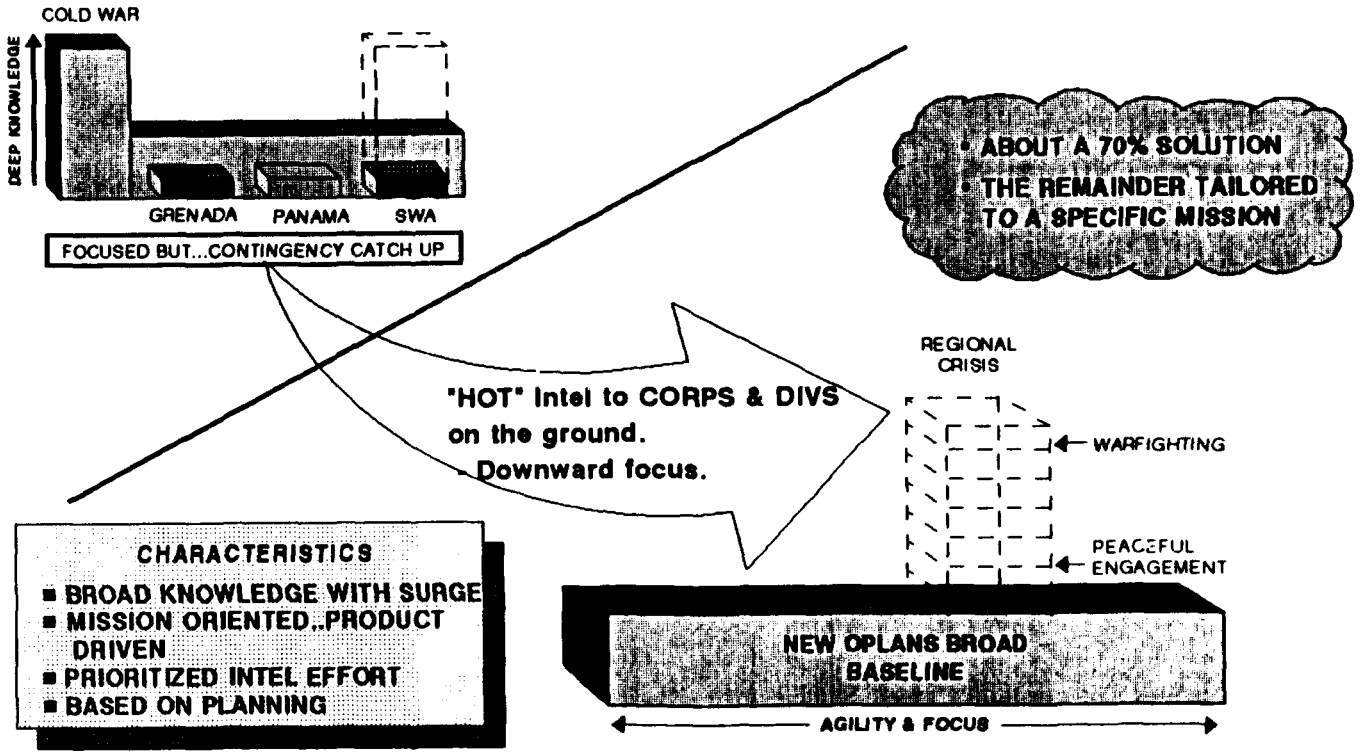
# SYNCHRONIZATION



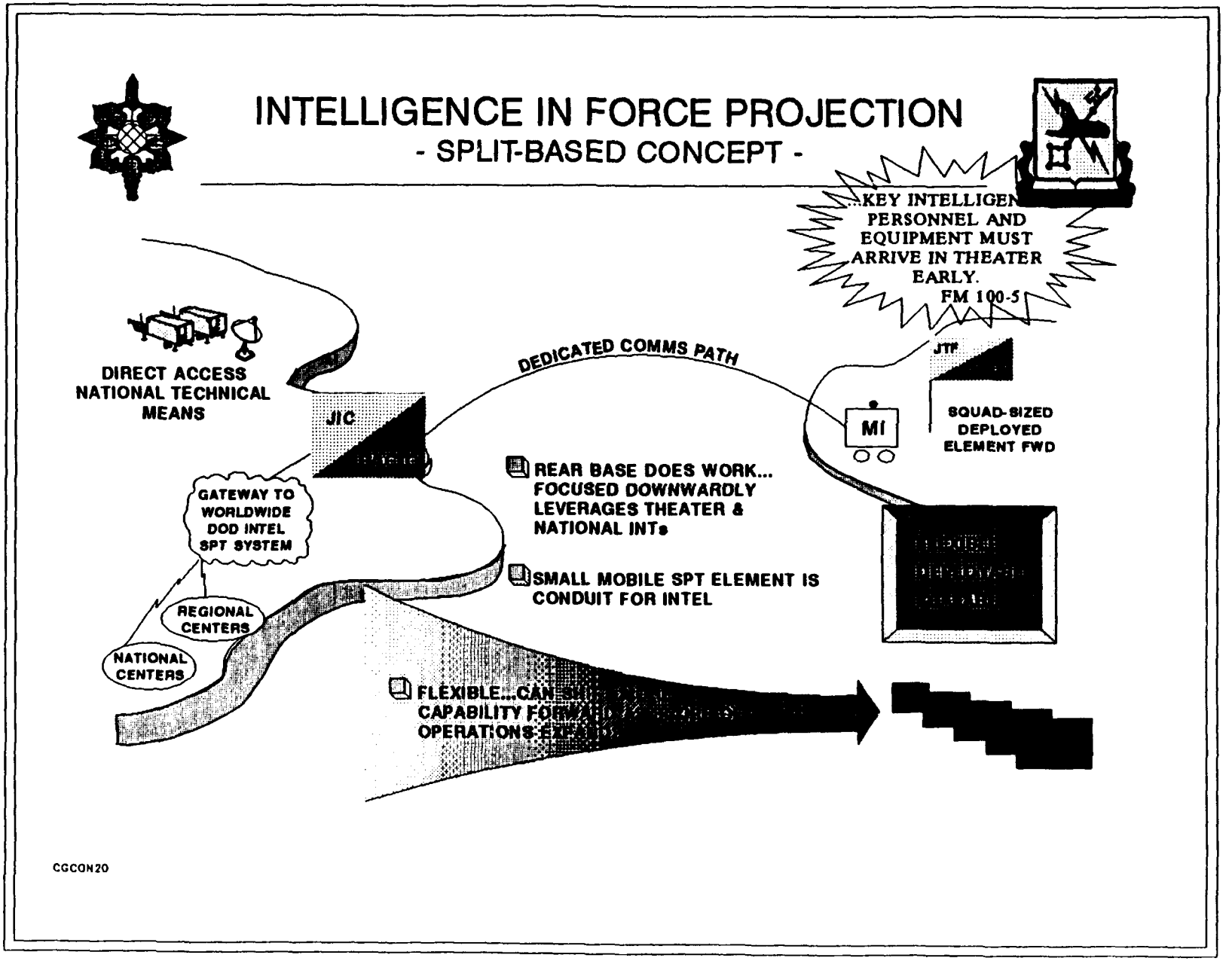

CGCON18

# INTELLIGENCE IN FORCE PROJECTION

## BUILD BASELINE & SURGE CAPABILITY

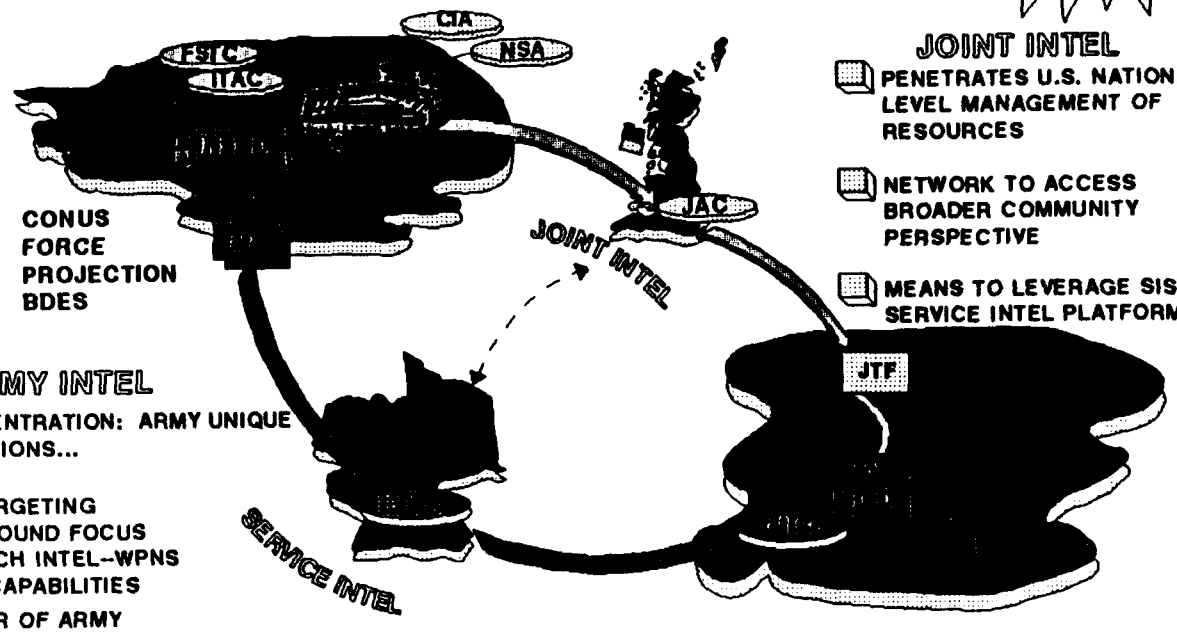



CGCON19


INTELLIGENCE IN FORCE PROJECTION
- SPLIT-BASED CONCEPT -
KEY INTELLIGEN
PERSONNEL AND
EQUIPMENT MUST
ARRIVE IN THEATER
EARLY.
FM 100-5
DIRECT ACCESS
NATIONAL TECHNICAL
MEANS
JIC
DEDICATED COMMS PATH
JTF
MI
SQUAD-SIZED
DEPLOYED
ELEMENT FWD
GATEWAY TO
WORLDWIDE
DOD INTEL
SPT SYSTEM
REAR BASE DOES WORK...
FOCUSED DOWNWARDLY
LEVERAGES THEATER &
NATIONAL INTs
SMALL MOBILE SPT ELEMENT IS
CONDUIT FOR INTEL
REGIONAL
CENTERS
NATIONAL
CENTERS
FLEXIBLE...CAN
CAPABILITY FOR
OPERATIONS EX
CGCON20

# JOINT & ARMY COMPONENT LINKAGES

IN FORCE PROJECTION... INTELLIGENCE OPERATIONS ROUTINELY RELY ON HIGHER LEVELS OF ARMY COMMAND AND SIGNIFICANT JOINT INTELLIGENCE CAPABILITIES FOR INTELLIGENCE SUPPORT
FM 100-5




CONUS FORCE PROJECTION BDES

## JOINT INTEL

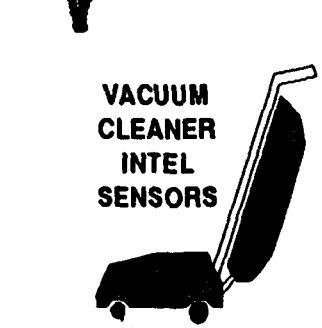
- PENETRATES U.S. NATIONAL LEVEL MANAGEMENT OF RESOURCES
- NETWORK TO ACCESS BROADER COMMUNITY PERSPECTIVE
- MEANS TO LEVERAGE SISTER SERVICE INTEL PLATFORMS

## ARMY INTEL

- CONCENTRATION: ARMY UNIQUE MISSIONS...
  - ✓ IPB
  - ✓ TARGETING
  - ✓ GROUND FOCUS
  - ✓ TECH INTEL--WPNS & CAPABILITIES
- POWER OF ARMY THEATER/NATIONAL INTEL...FOCUSED ON SPECIALIZED NEEDS OF ARFOR & BELOW

CGCON21

# BROADCAST INTELLIGENCE




ELINT

IMINT

COMINT

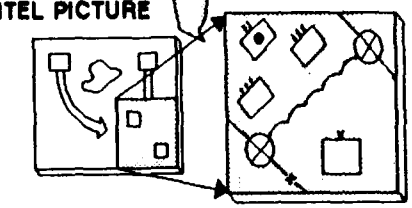
BROADCAST SATELLITE

GETS COMMANDER ACCESS/FOCUS OF NATIONAL/"STAND-OFF" COLLECTORS

ASAS + HUMINT

FUSED INTEL PICTURE

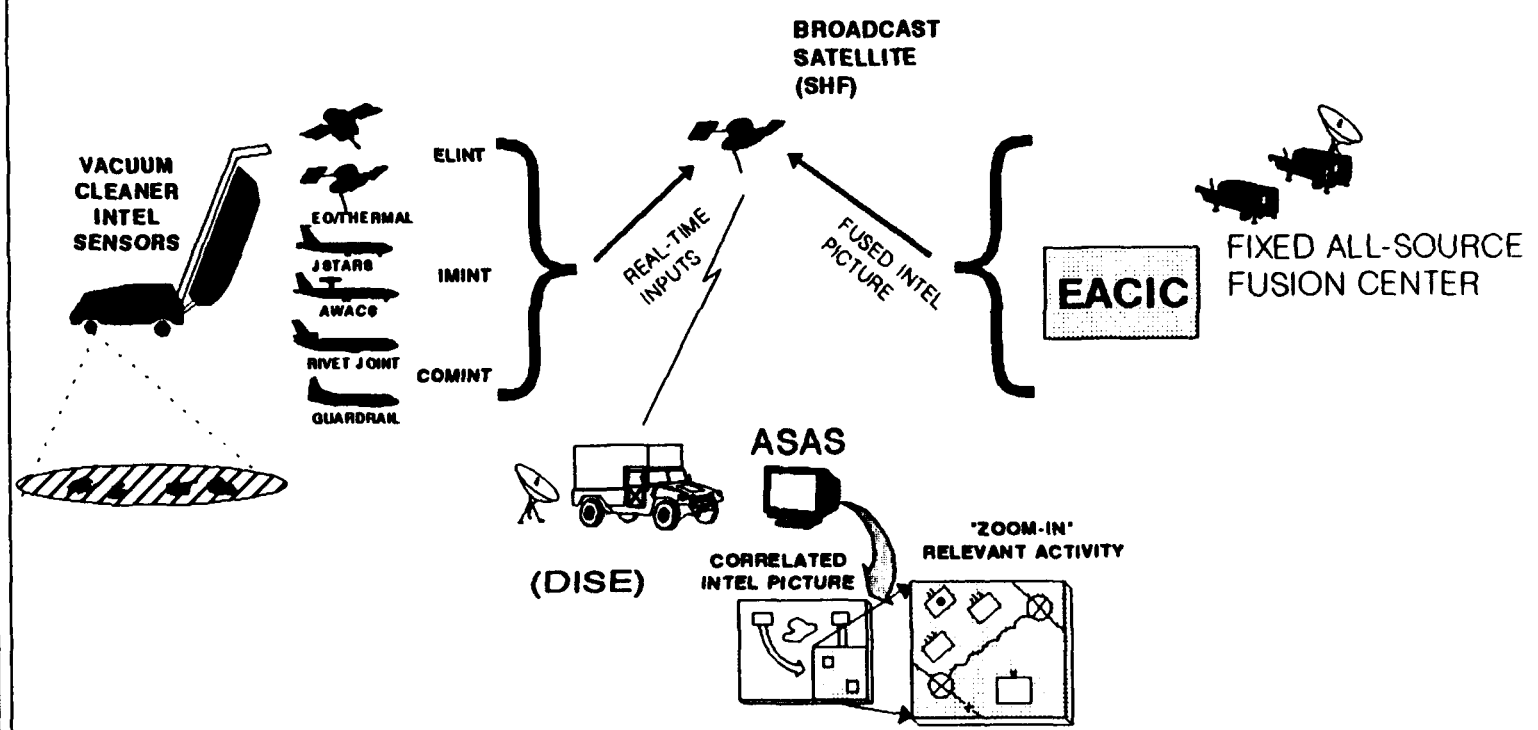
"ZOOM-IN" RELEVANT ACTIVITY



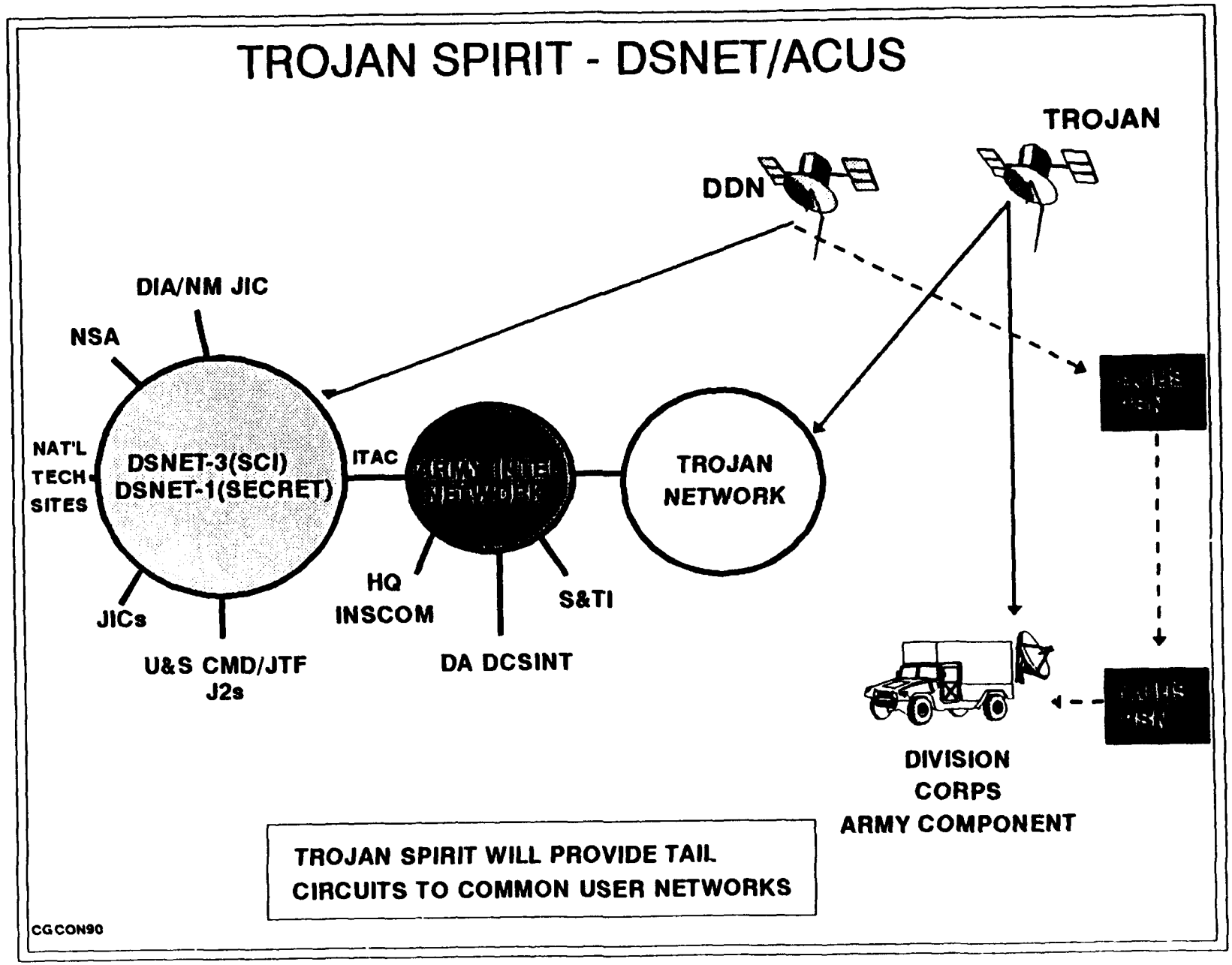
"...An accurate picture of the battlefield requires centralized direction, simultaneous action at all levels of command and timely distribution of information..." FM 100-5

CGCON22

# INTEGRATE SPLIT-BASE AND BROADCAST CONCEPTS



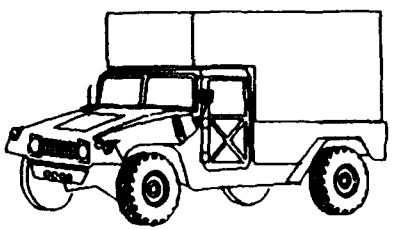

CGCON23


TROJAN SPIRIT - DSNET/ACUS
TROJAN
DDN
DIA/NM JIC
NSA
NAT'L
TECH
SITES
DSNET-3(SCI)
DSNET-1(SECRET)
ITAC
TROJAN
NETWORK
HQ
INSCOM
S&TI
JICs
U&S CMD/JTF
J2s
DA DCSINT
DIVISION
CORPS
ARMY COMPONENT
TROJAN SPIRIT WILL PROVIDE TAIL
CIRCUITS TO COMMON USER NETWORKS
CGCON90

# TROJAN/SPIRIT II

- Multi-based capability through the TROJAN switch to any terminal worldwide

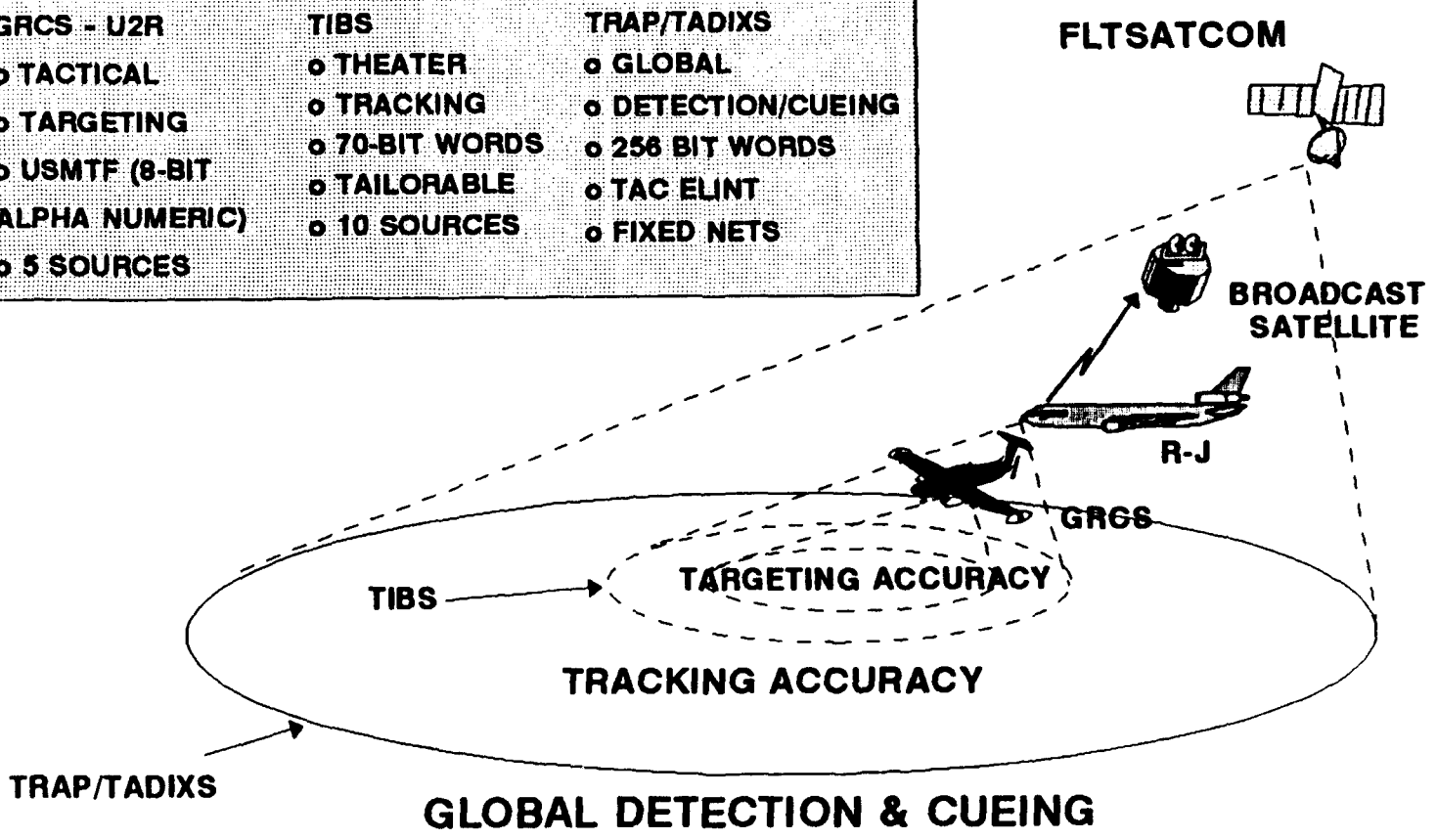
  - SECURE (SCI AND COLLATERAL) VOICE, DATA, AND FACSIMILE
  - POINT-TO-POINT, CONFERENCE, BROADCAST
  - 14 CIRCUITS (10 SCI/4 COLLATERAL)
  - C, Ku, X AND UHF SATELLITE BANDS
  - VARIABLE BAUD RATES (4.8 TO 512 KBPS PER CHANNEL)
  - LOCAL AREA NETWORKS (LAN) FOR SCI AND COLLATERAL
  - ACCESS TO DSNET 1, DSNET 3, JOINT/STRATEGIC NETWORKS
  - SUN SPARC SERVERS, CISCO ROUTERS
  - BACKUP COMMUNICATIONS (HF); DIRECT INTERFACE TO MSE
  - COMPLIANCE WITH COMMON OPERATING ENVIRONMENT (X.25 (PACKET SWITCHING)/802.3 (ETHER NET))
  - ALTERNATE SIDS, JDISS, CTT CAPABILITY
  - SINGLE VEHICLE WITH UNDER HOOD POWER (BASIC CAPABILITY)



CGCON91

# CTT THREE NETS

| GRCS - U2R | TIBS | TRAP/TADIXS |
|---|---|---|
| o TACTICAL | o THEATER | o GLOBAL |
| o TARGETING | o TRACKING | o DETECTION/CUEING |
| o USMTF (8-BIT ALPHA NUMERIC) | o 70-BIT WORDS | o 256 BIT WORDS |
| o 5 SOURCES | o TAILORABLE | o TAC ELINT |
| | o 10 SOURCES | o FIXED NETS |




CGCON92

# CTT-H AND SUCCESS RADIO

**CTT-H**

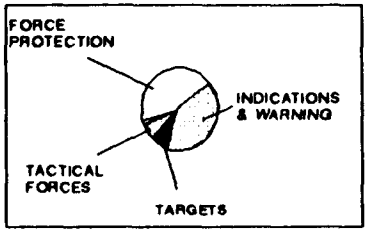
**SUCCESS**

- COMPATIBLE
  - BAUD RATES
  - PROTOCOL
  - FORMATS
  - CRYPTO
- DATA DISTRIBUTION
  - COMINT
  - ELINT
  - IMAGERY
  - ELINT
  - IMAGERY
- OBJECTIVE PROGRAMS
  - JOINT PROGRAM (WIDELY FIELDED THROUGHOUT BATTLEFIELD INCLUDING BDE/BN)
  - PRIMARY TACTICAL PROCESSORS FOR IMAGERY AND ELINT (EPDS/IPDS)

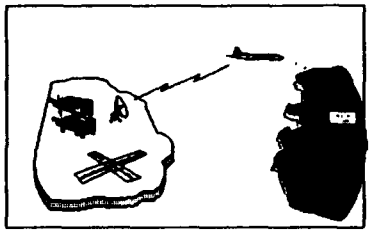
CG CON93

# COMMANDER'S ESTIMATE

**WHAT KINDS OF INTEL NEEDED? ...REQUIREMENTS?**

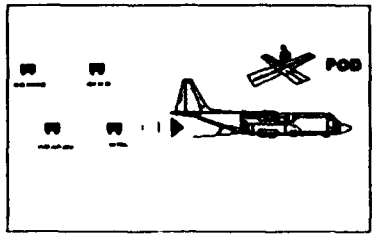



**WHAT CAN BE COLLECTED REMOTELY... "STANDOFF"?**



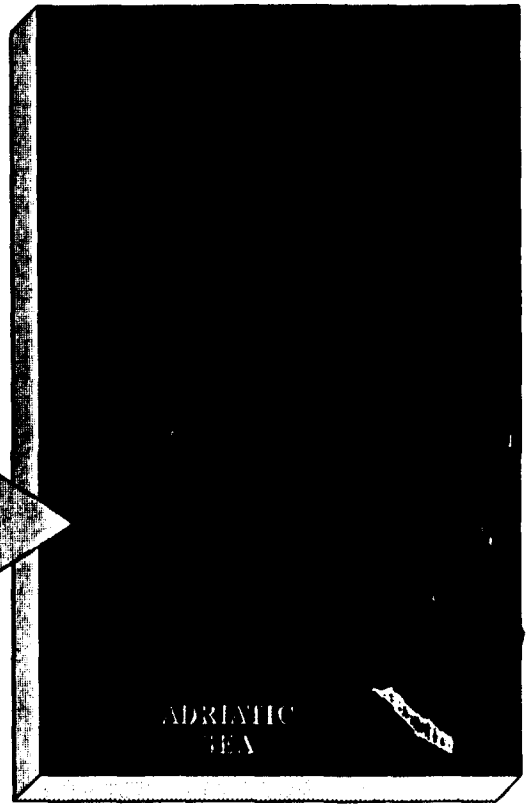
**WHAT MUST ACCOMPANY FORCE?**
- √ ACCESS
- √ RESPONSIVENESS

**HOW PACKAGED... ...SEQUENCED?**




CGCON24

**INTEL TAILORING**

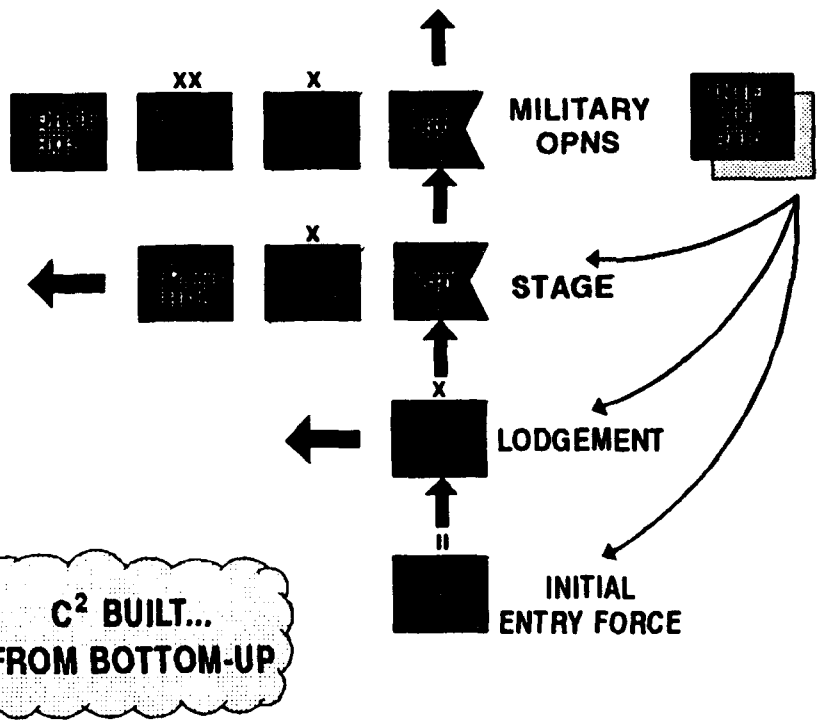



"The rapid introduction of U.S. Forces requires accurate, detailed, continuous and timely intelligence, especially during the critical early deployment decision windows."

FM 100-5

# FORCE PROJECTION
## - TACTICAL TAILORING -

**FORCE PROJECTION: TACTICAL TAILORING**

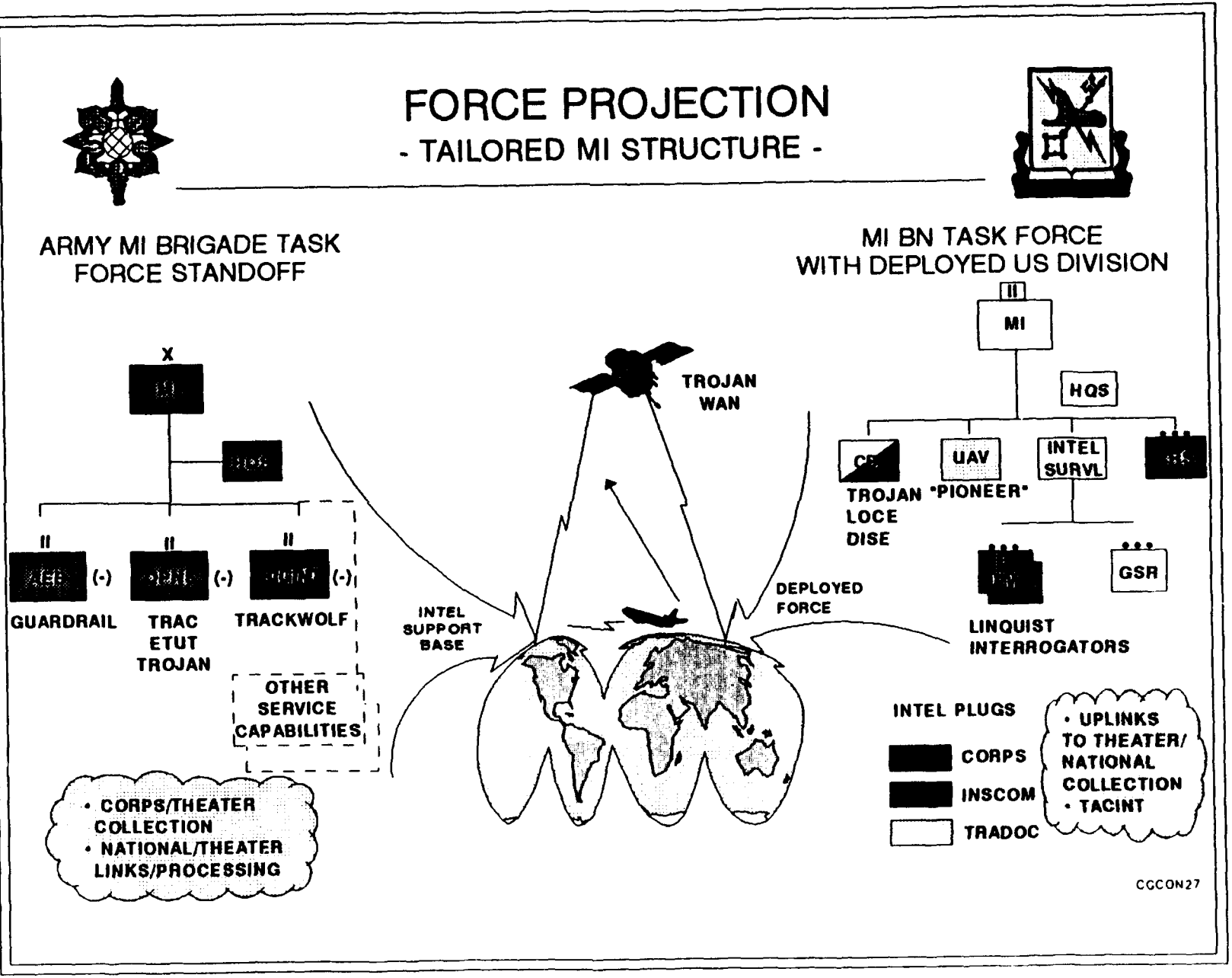



**INTELLIGENCE IMPERATIVES**

- JOINT/COMBINED INTEL OPERATION
- "SKIP ECHELON" INTEL SUPPORT...REACH OUT TO COMMANDER DOING THE WORK
- COMMON COMMUNICATIONS & INTEL PROCESSING CAPABILITY AT EVERY ECHELON
- "PUSH" SYSTEM FOR INTEL INITIALLY
- CRITICAL IMPORTANCE OF HUMINT

CGCON25

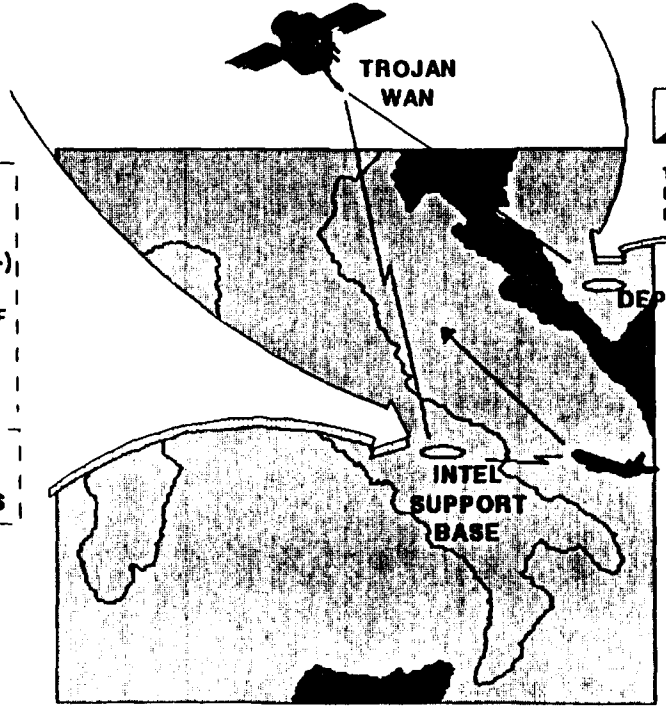
# FORCE PROJECTION
## - TAILORED MI STRUCTURE -



# FORCE PROJECTION
## - TAILORED MI STRUCTURE -

ARMY MI BRIGADE TASK FORCE STANDOFF

X
MI
HQS
II AEB (-) GUARDRAIL
II OPNS (-) TRAC ETUT TROJAN
II [redacted] (-) TRACKWOLF
OTHER SERVICE CAPABILITIES




MI BN TASK FORCE WITH DEPLOYED US DIVISION

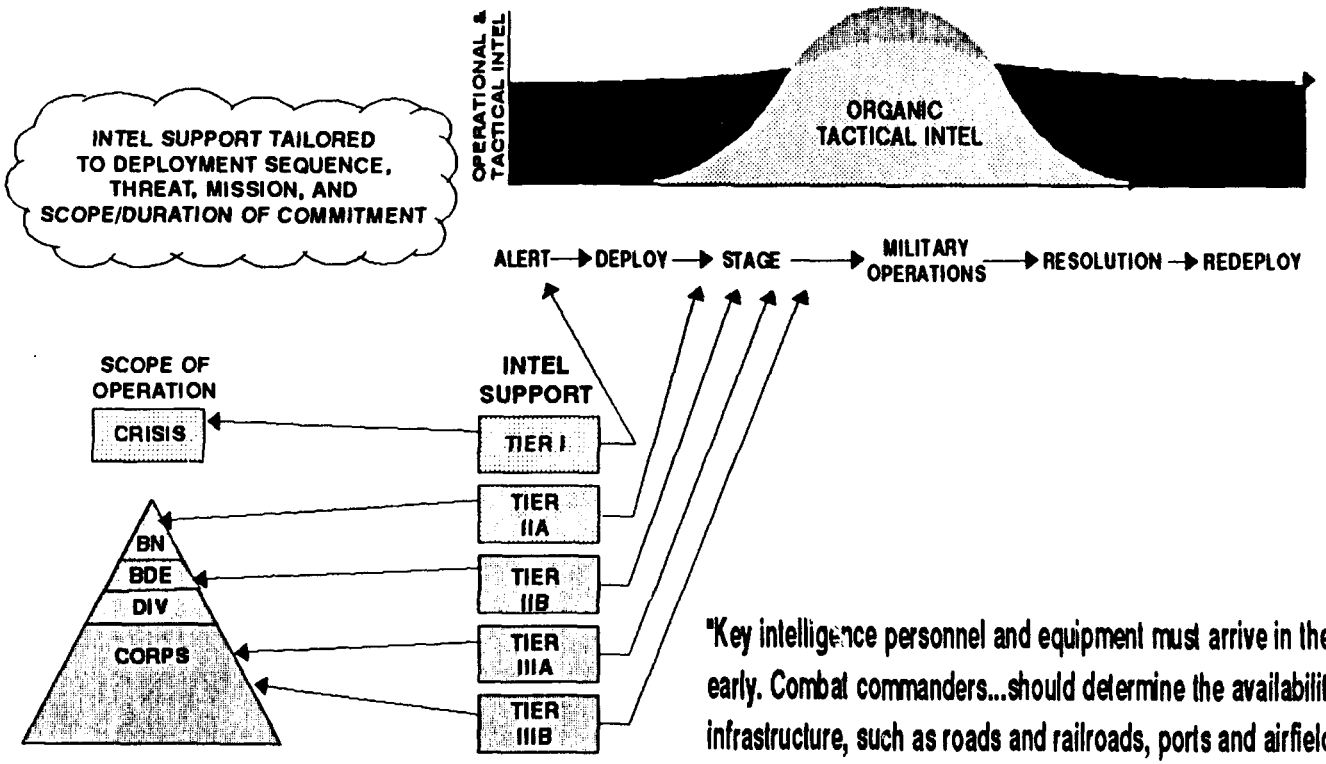
II
MI
HQS
SP [redacted] TROJAN LOCE DISE
HUMINT [redacted] LINQUIST CNTRINTEL IPW/FOR MATERIEL EXPLOIT
UAV "PIONEER"
SIGINT [redacted] (SF) MAN PORTABLE SPEAD SPECTRUM
INTEL SURVL
[redacted] GSR LRS

INTEL PLUGS
CORPS
INSCOM
TRADOC

CGCON26

# FORCE PROJECTION

## - MI FORCE EMPLOYMENT CONCEPT -

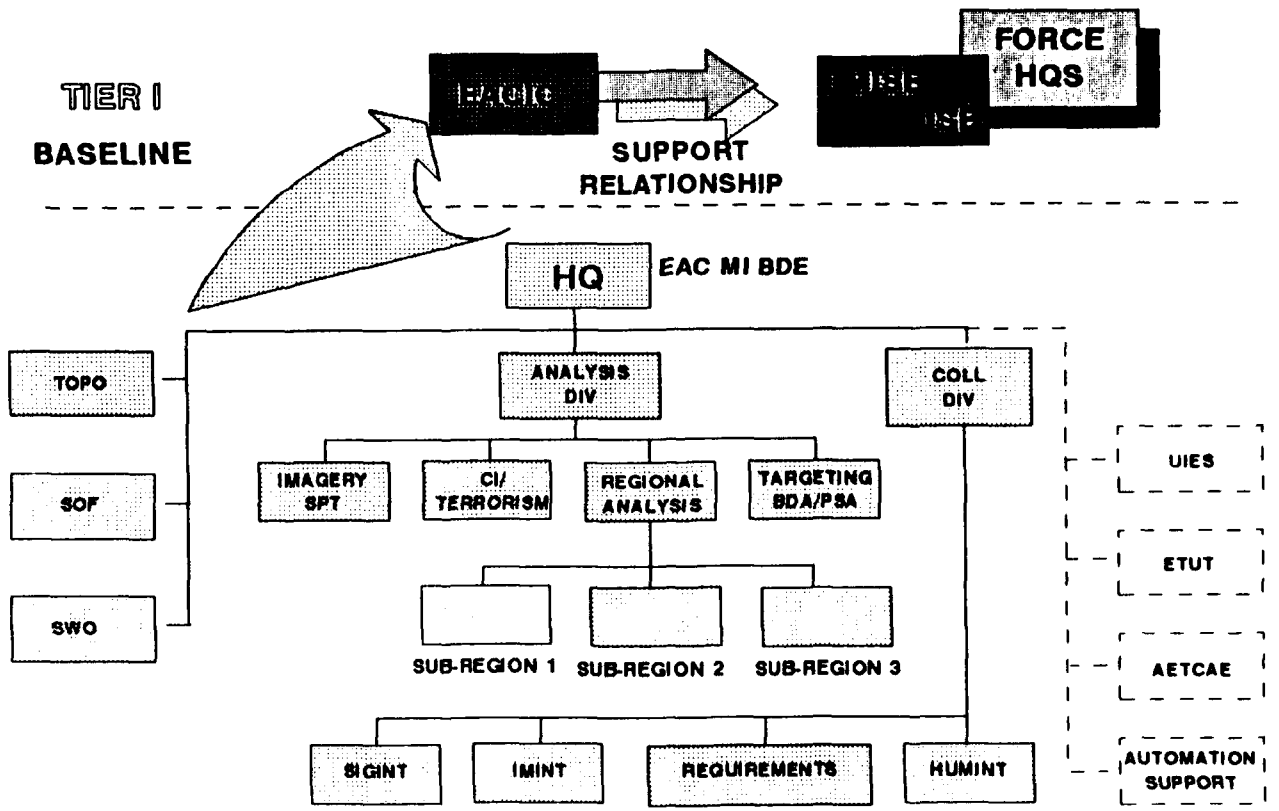



"Key intelligence personnel and equipment must arrive in theater early. Combat commanders...should determine the availability of infrastructure, such as roads and railroads, ports and airfield...etc." FM 100-5

CGCON28

# FORCE PROJECTION

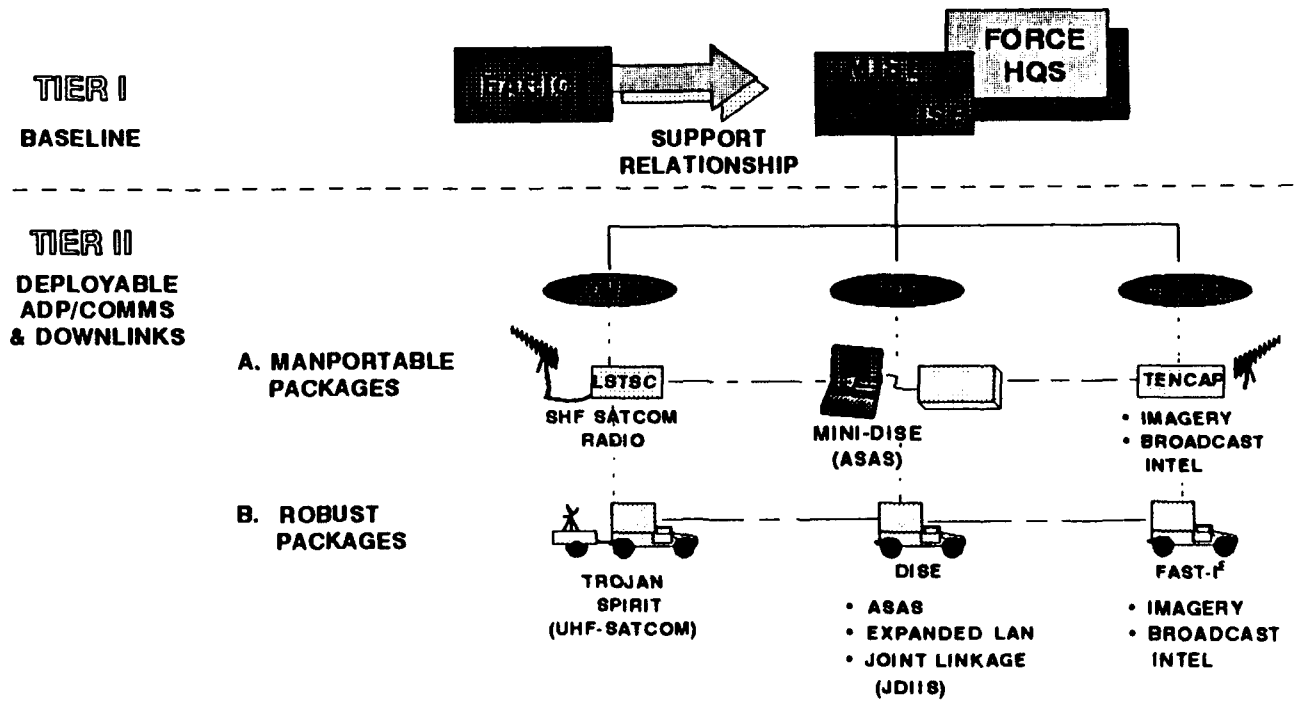
## - TIER I INTELLIGENCE -




CGCON29

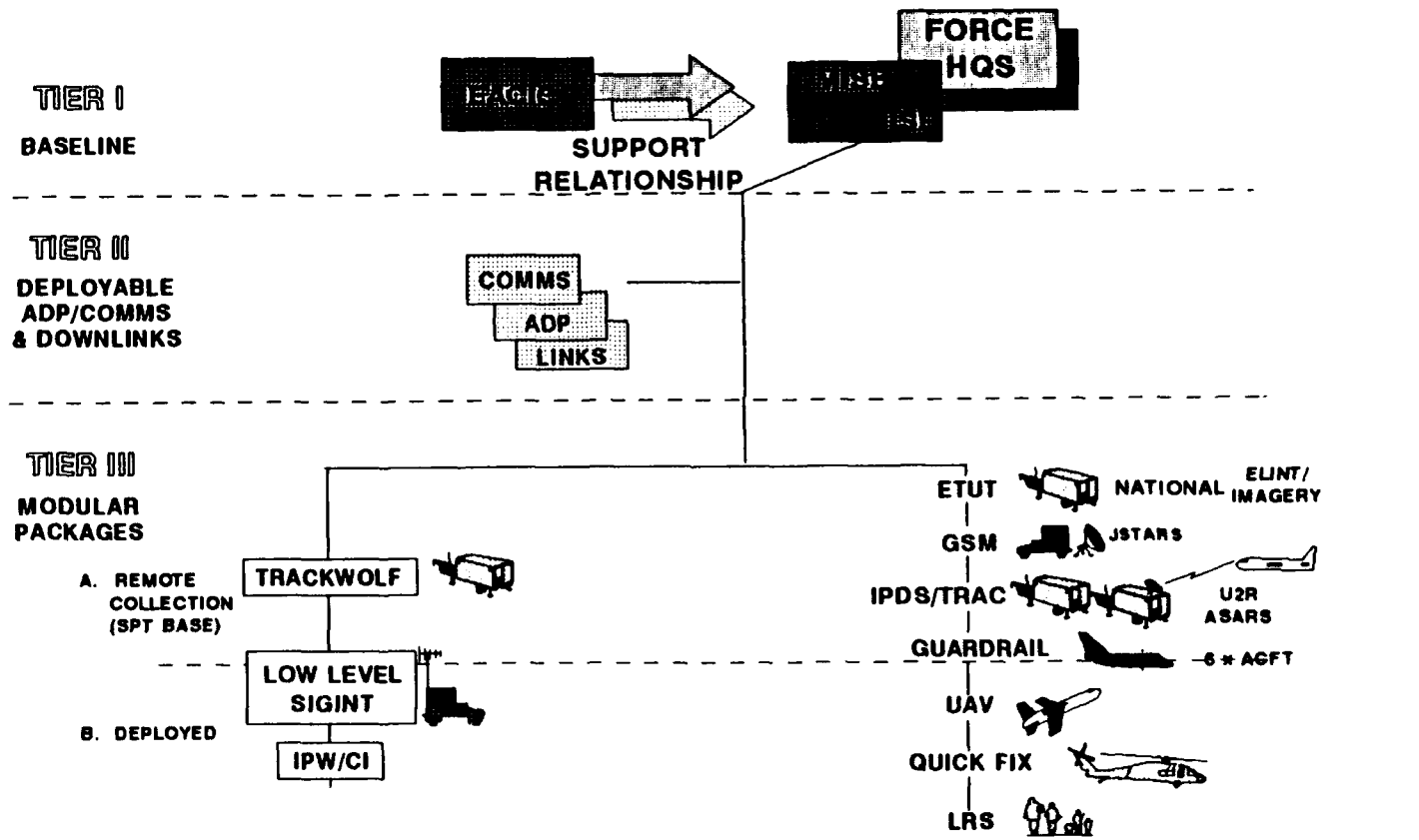
# FORCE PROJECTION

## - TIER II INTELLIGENCE -



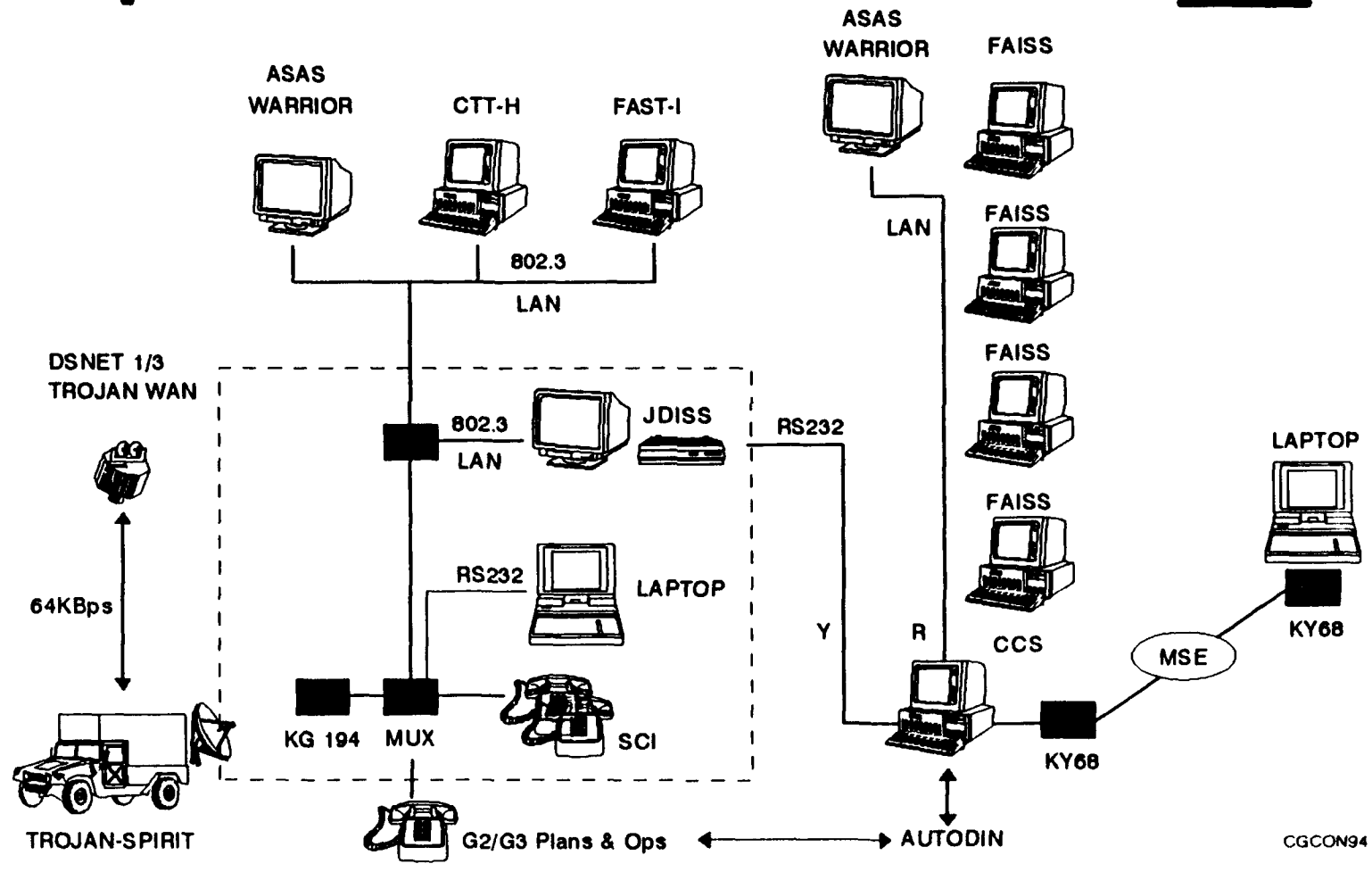

CGCON30

# FORCE PROJECTION
## - TIER III INTELLIGENCE -



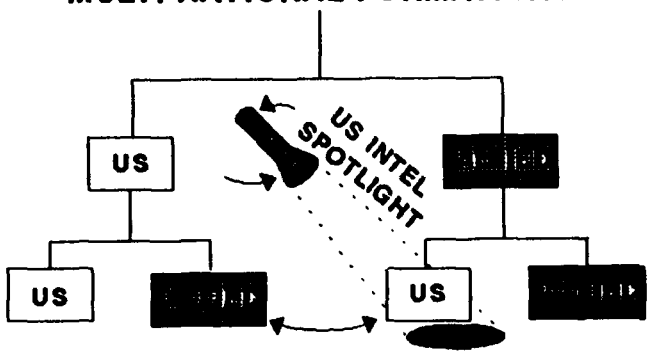

CGCON31

# ARFOR Forward



# FORCE PROJECTION
## - COMBINED ENVIRONMENT -

**MULTI-NATIONAL FORMATIONS**




**"For operational purposes, commanders arrange for the rapid dissemination of military intelligence and the use of available intelligence assets by *all partners.*"**
**FM 100-5**

**"It also necessitates establishing an intelligence network with dedicated communications and liaison officers to link various headquarters."**
**FM 100-5**

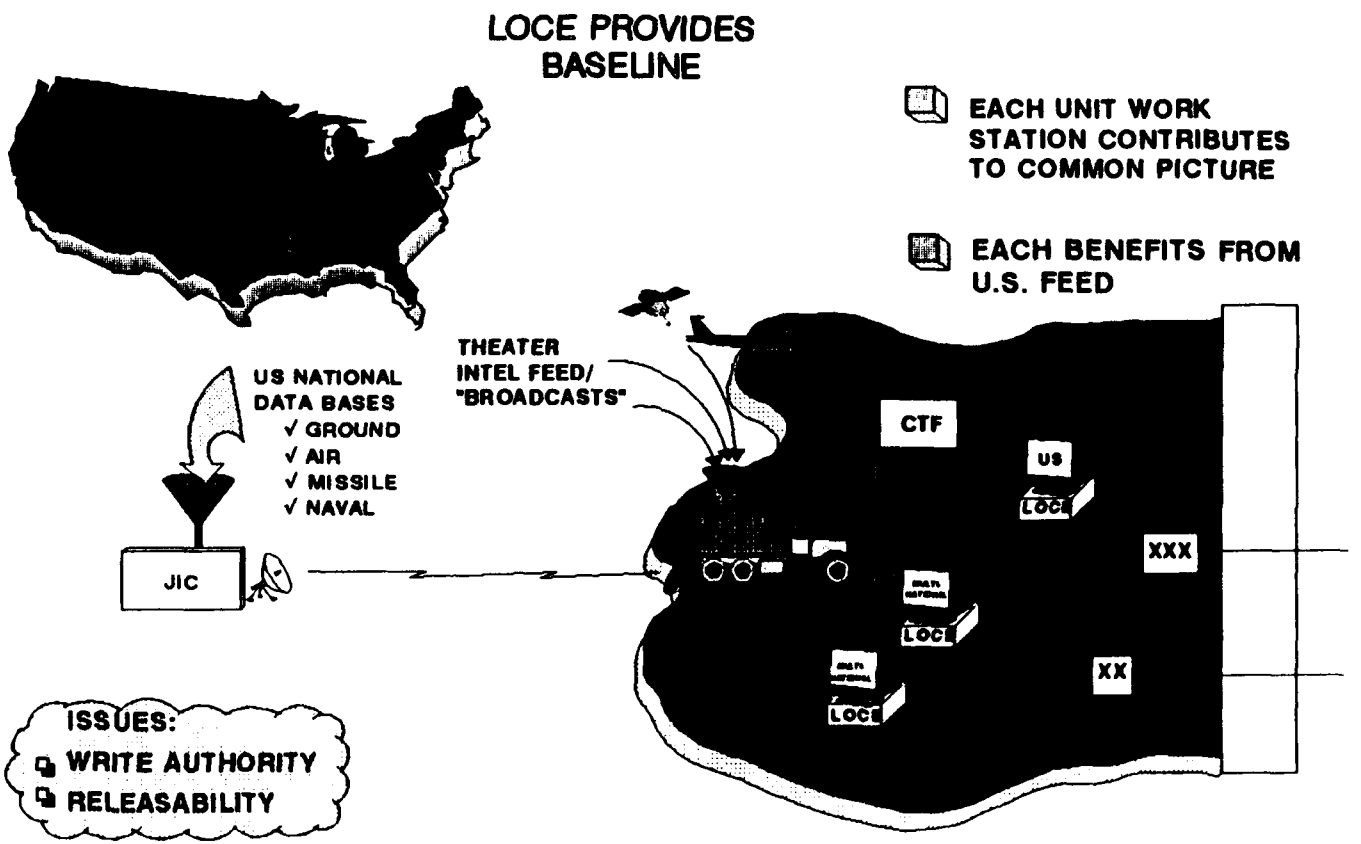
**THE PROBLEM**

- **HOW TO GET COMMON PICTURE...**
- **HOW TO RECONCILE LOPSIDED CAPABILITIES**
- **WHAT CAN ALLIES BRING TO THE TABLE**

CGCON32

# FORCE PROJECTION

## - COMBINED ENVIRONMENT -




CGCON33

# MI STRATEGY TO SUPPORT FORCE PROJECTION

## -CONCLUSIONS-

- MI IS IN THE MIDST OF GREAT CHANGE
  - * ACROSS ALL DOTMLS
- FM 100-5 IS OUR GUIDE
  - * COMMANDER DRIVES INTELLIGENCE
  - * FUTURE IS FORCE PROJECTION
    - - SYNCHRONIZATION
    - - SPLIT BASE
    - - TACTICAL TAILORING
    - - BROADCAST INTELLIGENCE
  - * EMPLOY EARLY AND SHAPE MISSION
- JOINT AND COALITION ENVIRONMENT

CGCON34

IEW
PROGRAM EXECUTIVE OFFICE

# JOINT STARS

## Ground Station Modules

## Joint Surveillance Target Attack Radar System

# BATTLEFIELD SURVEILLANCE

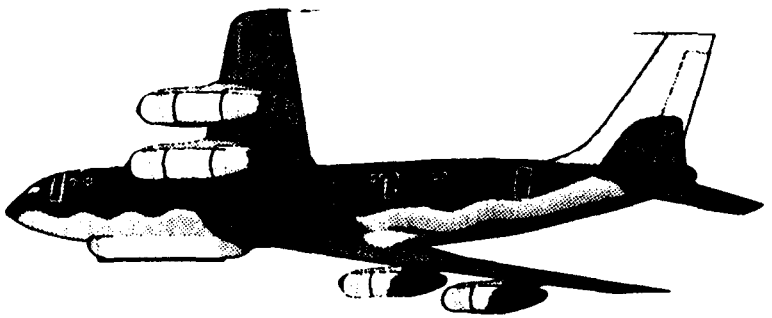
## Lessons Learned From NTC

- 95% correlation between effectiveness of reconnaissance and success of the attack
- A direct relationship between the effectiveness of the security screen (counterreconnaissance battle) and the success of the defense

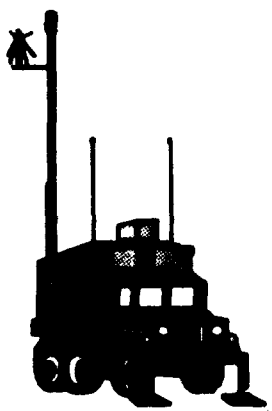
*- "A SMALLER FORCE: THE RIGHT FORCE FOR THE TIMES... A FORCE THAT STOPS THE ENEMY QUICKLY - EXISTING FORCES MUST BE CHANGED ... THE REAL PAYOFF WILL COME FROM HIGH TECH RESPONSES"*

*- "IN SUM THE REQUIREMENT TO HALT REGIONAL INVASIONS EARLY IS CRUCIAL ... WE MUST BE ABLE TO DETECT THE MAIN CONCENTRATIONS OF THE ENEMY FORCE, PROCESS AND ANALYZE THE INFORMATION, THEN PASS IT TO THE 'SHOOTERS' BEFORE IT BECOMES OBSOLETE."*

*LES ASPIN, SECRETARY OF DEFENSE*
*16 JUNE 1993*

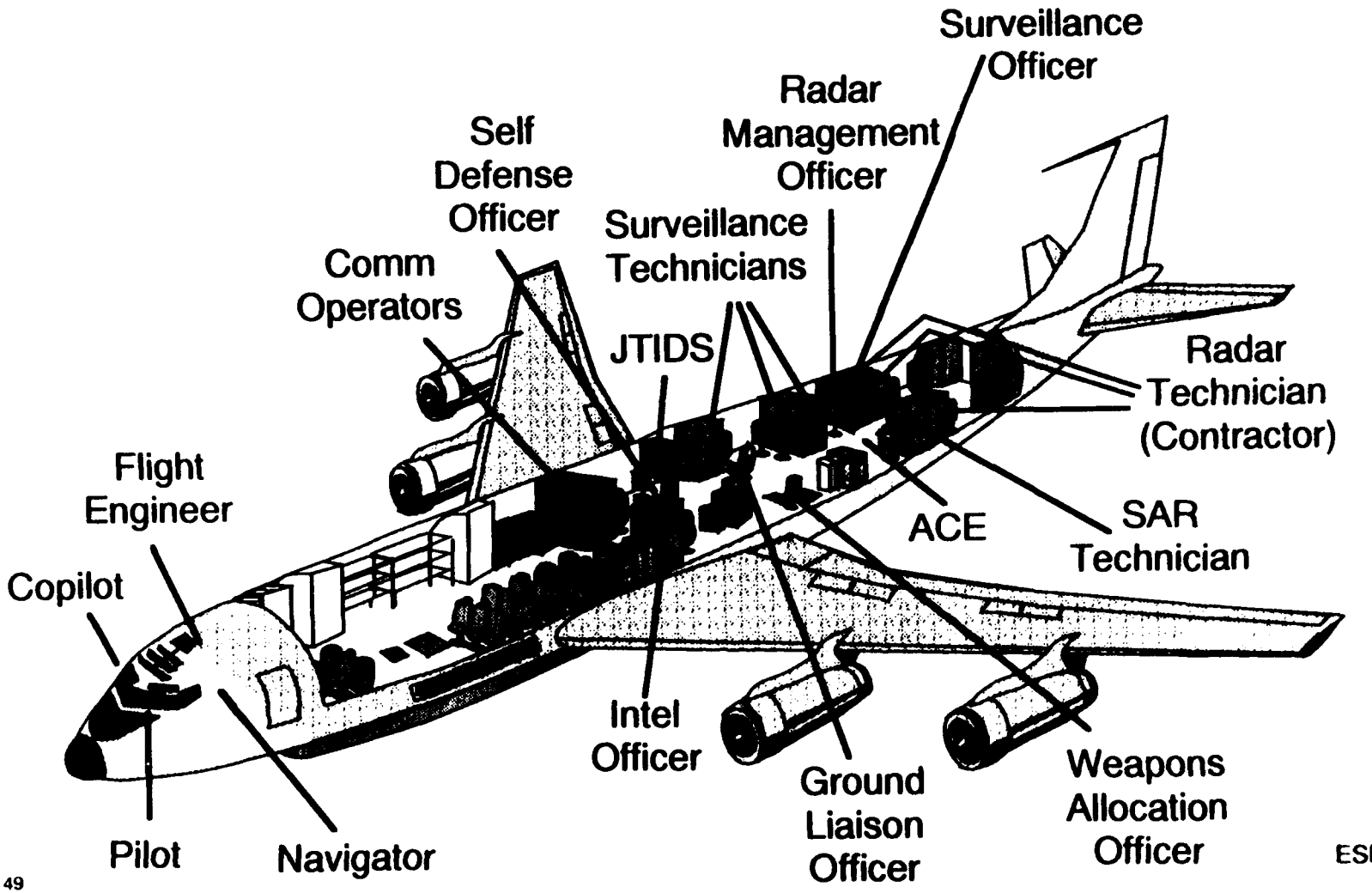



# Joint STARS



ESD 92-050

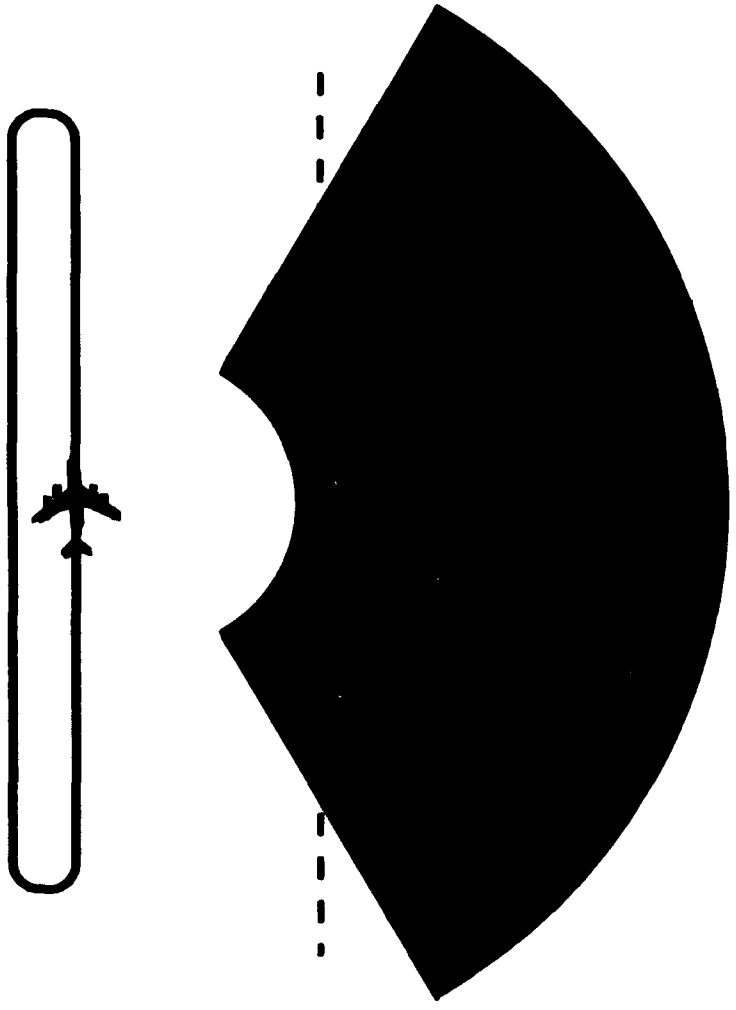
# CREW POSITIONS




ESD 92-050

49

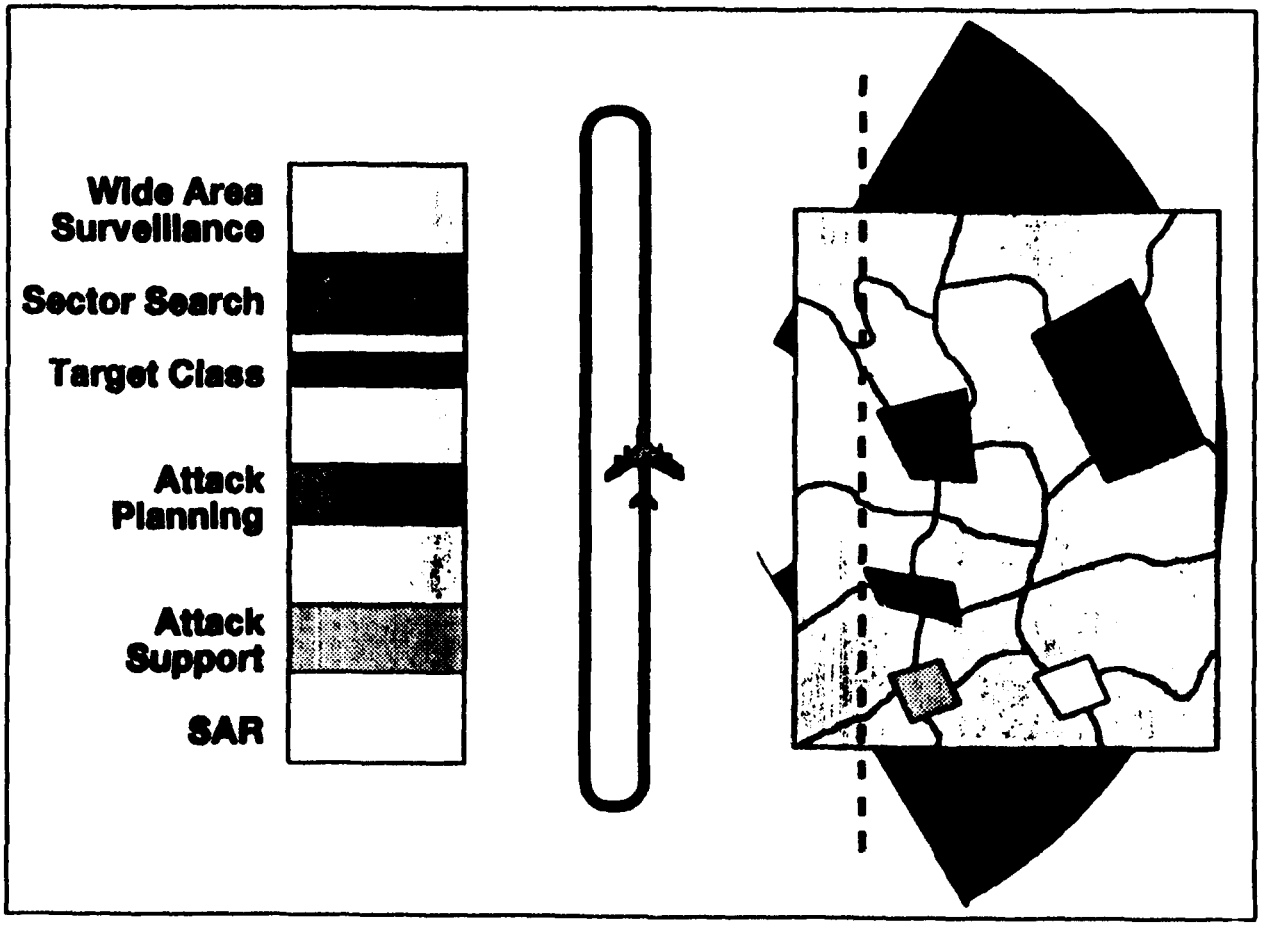
# RADAR COVERAGE





ESD 92-050

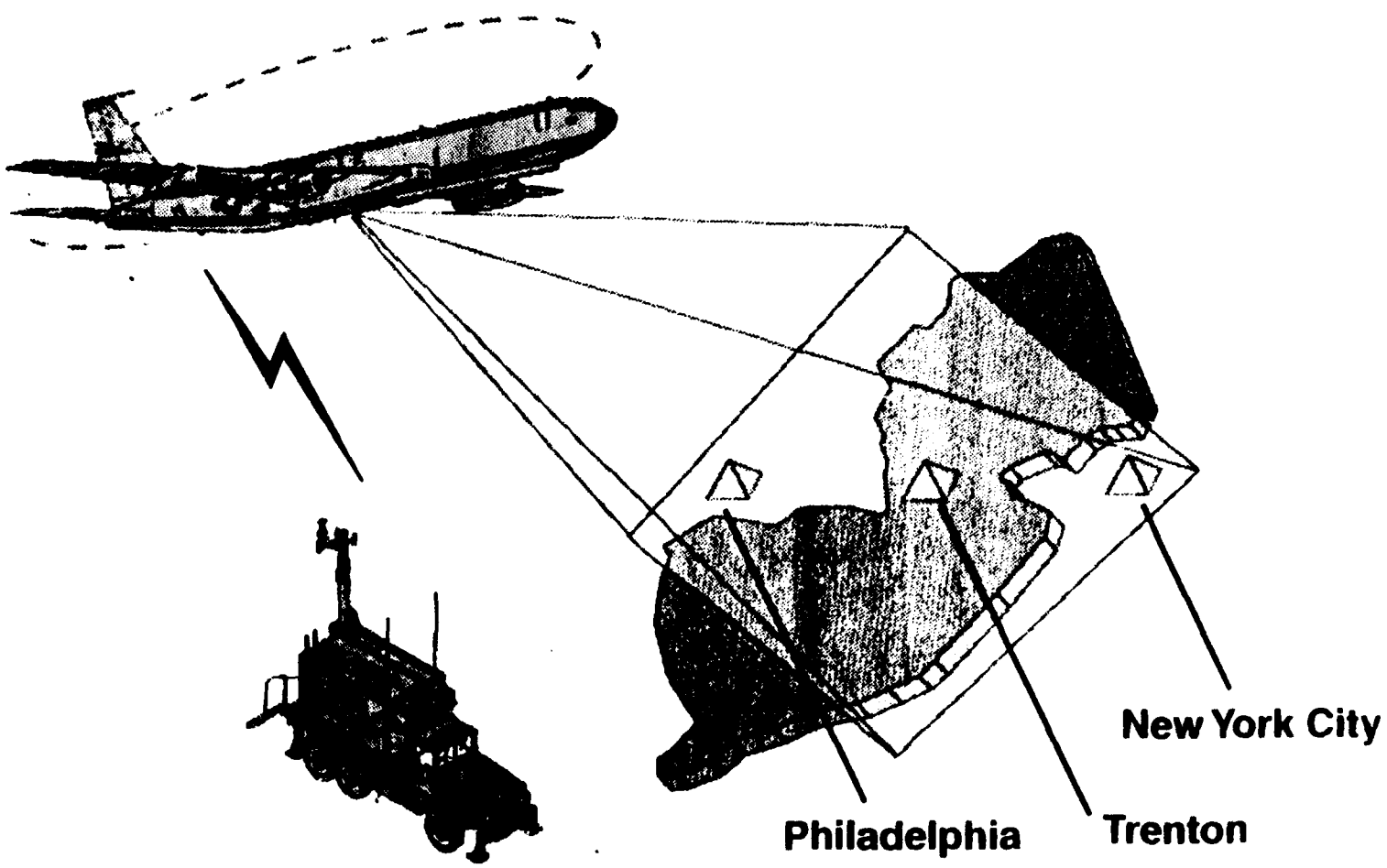
# RADAR OPERATION



IEW
PROGRAM EXECUTIVE OFFICE

# JOINT STARS

## Ground Reference Coverage Area (GRCA)



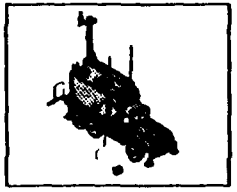

01 JSTARS 03 09

IEW
PROGRAM EXECUTIVE OFFICE

# JOINT STARS

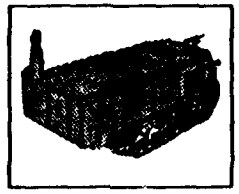
## Joint STARS System

### The Army Developing Ground Station Modules (GSMs):



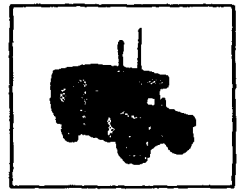
**Block I Medium**

- 5 Ton Mounted
- Simultaneous Multi-Sensor Operations



**Block I Heavy**

- Bradley Variant
- Simultaneous Multi-Sensor Operations



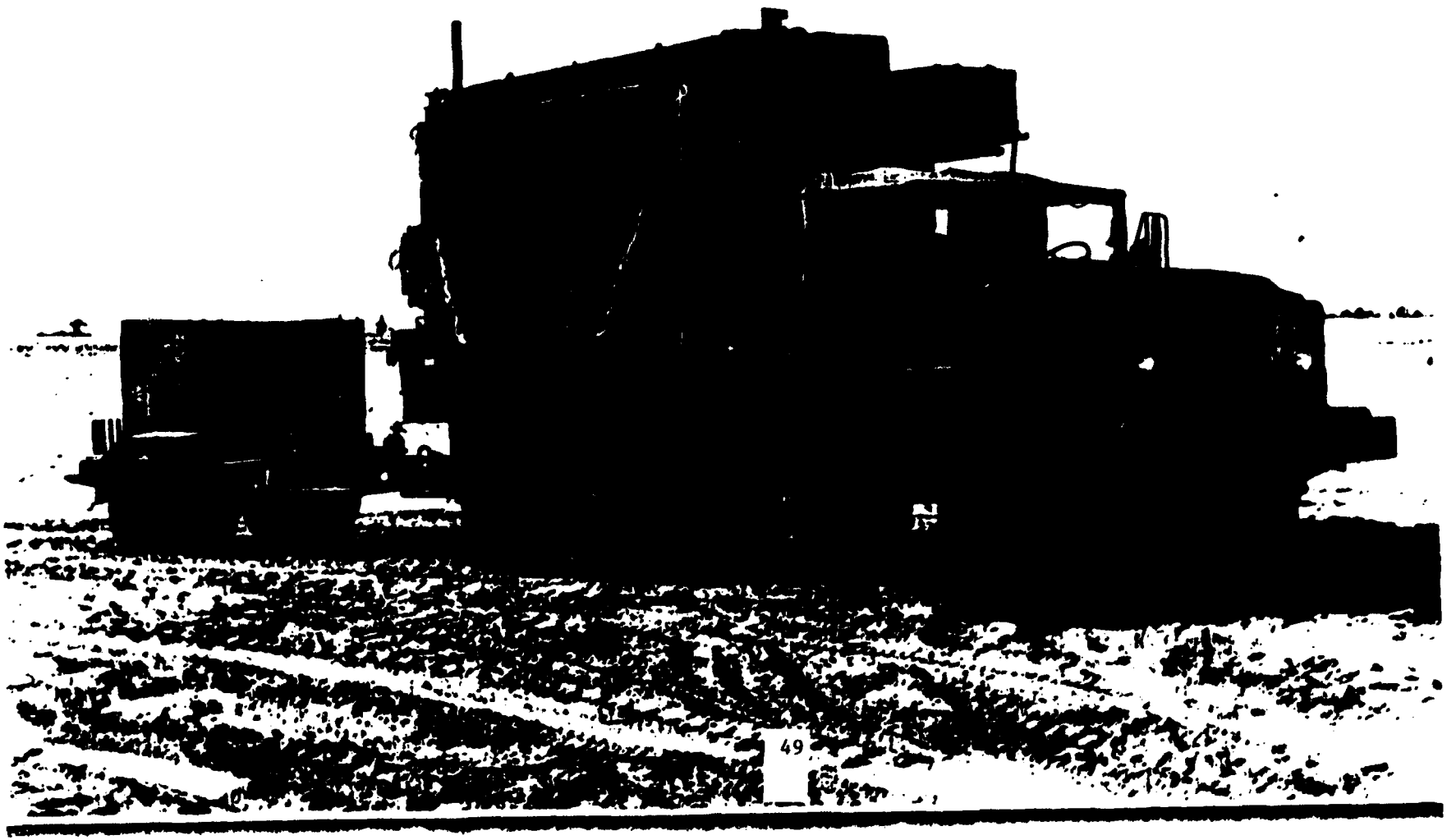
**Block I Light**

- HMMWV Mounted
- Simultaneous Multi-Sensor Operations

### Joint STARS Has Both Airborne and Ground Components:

- **Air Force Developing**
  - **E-8 Aircraft**
  - **Multi-Mode Radar**
  - **Required C2 Systems**
  - **Self-Defense Suite**
  - **Surveillance Control Data Link**

**Block I GSM**



# System Features

- Multi-Sensor Operation
  - MTI/SAR Radar
  - UAV Imagery
  - SIGINT via Commander's Tactical Terminal
- UHF SATCOM for $C^2$ On-the-Move
- Remote Display System for Detached Operations
- Universal I/O Processor
  - Permits virtually unlimited interface with sensors and supporting and supported systems
- VME Based Open Architecture
  - Allows upgrades as technology changes
  - Allows reconfiguration as operational needs change
  - Permits use of components from a wide variety of sources

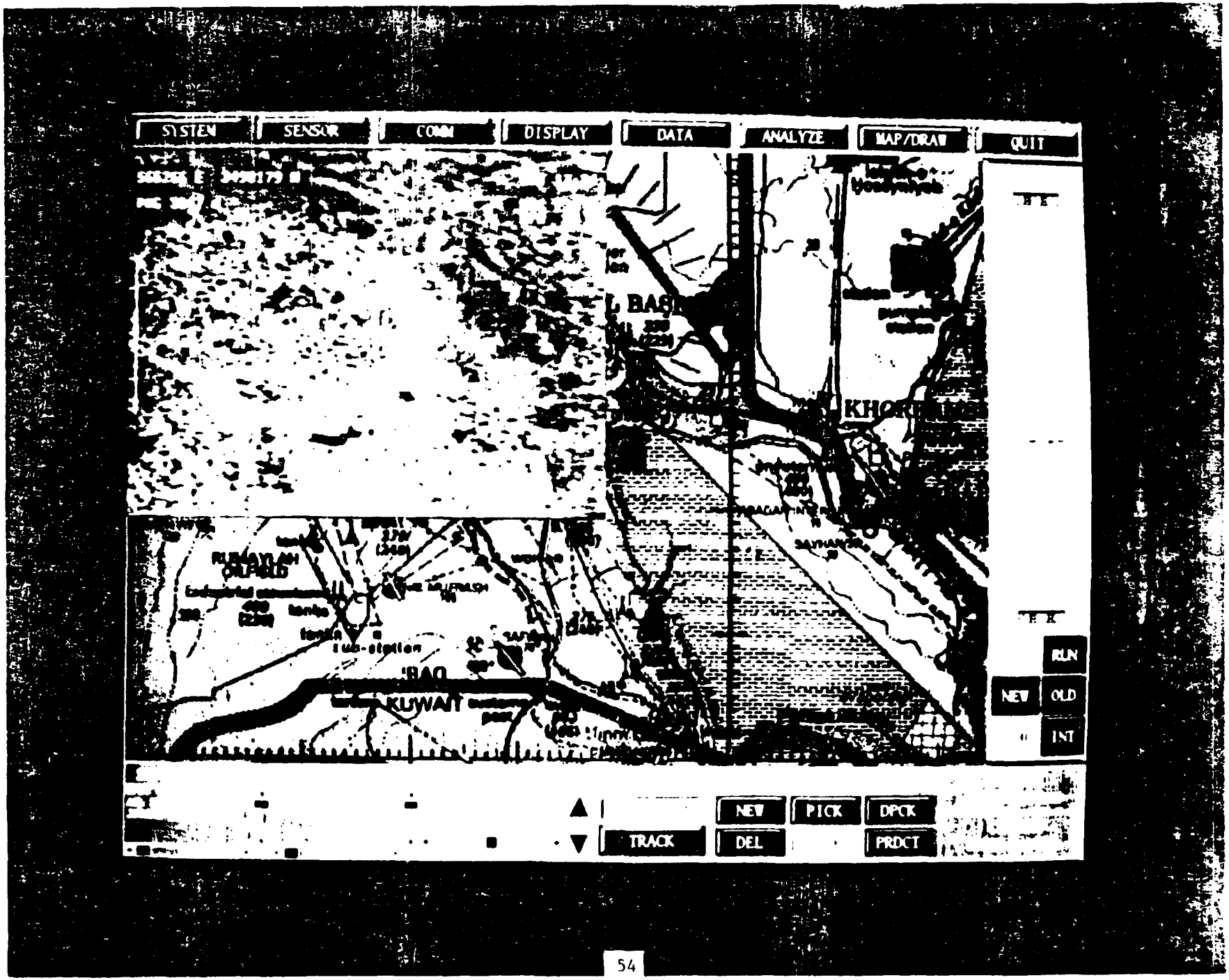
# LGSM

**Major Components**

- 2 High performance graphic workstations
- Commander's Tactical Terminal
- Universal I/O Processor
- Surveillance Control Data Link (SCDL)
- Secure telephone/fax
- Color Printer
- Radios
  - PRC-140 SATURN, SATCOM
  - VRC-83 UHF LOS
  - VRC-92A VHF LOS
- Encryption
  - KY-57
  - KY-68

**Connectivity**

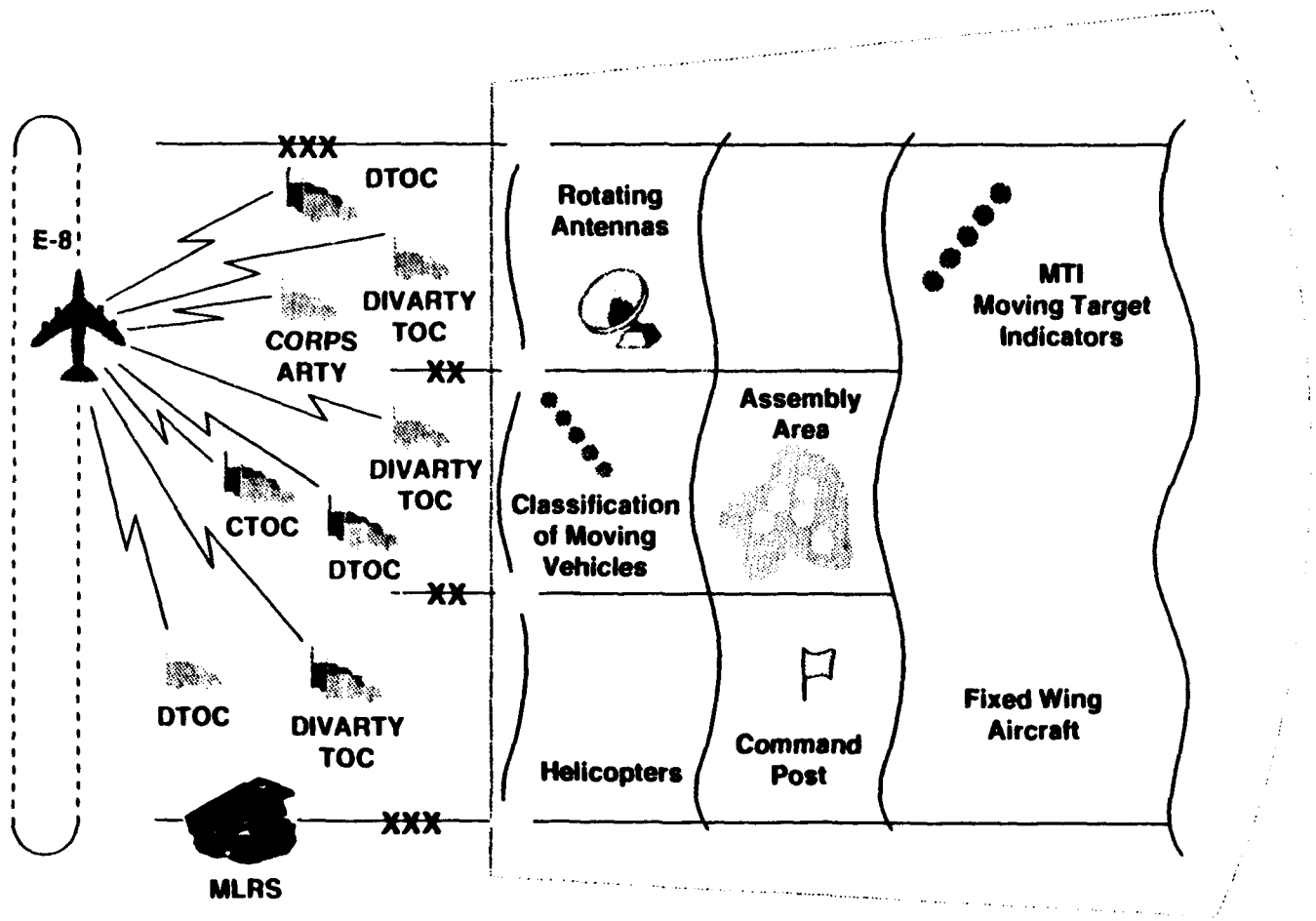
- ATCCS via MSE
- ASAS
- TACFIRE
- TROJAN
- Other GSMs


SYSTEM
SENSOR
COMM
DISPLAY
DATA
ANALYZE
MAP/DRAW
QUIT
KUWAIT
RUN
NEW
OLD
INT
TRACK
NEW
PICK
DPCK
DEL
PRDCT

IEW
PROGRAM EXECUTIVE OFFICE

# JOINT STARS

## GSM Operations




01 JSTARS 03 07

# The Commanders' Perspective

*"...from a warfighter's perspective, tactical intelligence was not good. What I got, I had to get myself. It was late and did not give me the chance to exploit. You would have thought that someone would have given me access to J-STARS."*

**Lieutenant General Ronald Griffith, US Army**
**Commanding General**
**1st Armored Division**
**(during Desert Storm)**

*"At the strategic level, [intelligence] was fine. But we did not get enough tactical intelligence - front-line battle intelligence."*

**Lieutenant General William C. Keys, USMC**
**Commanding General**
**2nd Marine Division**
**(during Desert Storm)**

*"We will never again want to fight without a Joint STARS kind of system."*

**General Merrill A. Mc Peak**
**Chief of Staff**
**United States Air Force**

*"As you know better than I, Joint Stars was an invaluable tool during the Gulf Crisis. Considering the tough environment for development and expansion of projects, I genuinely hope that the upcoming acquisiton board and oversight council will support the continuation of the J-STARS project."*

**Major General John Stewart, Jr.**
**Deputy Chief of Staff for Intelligence**
**United States Army, Europe**
**(former ARCENT G-2 during Desert Storm)**

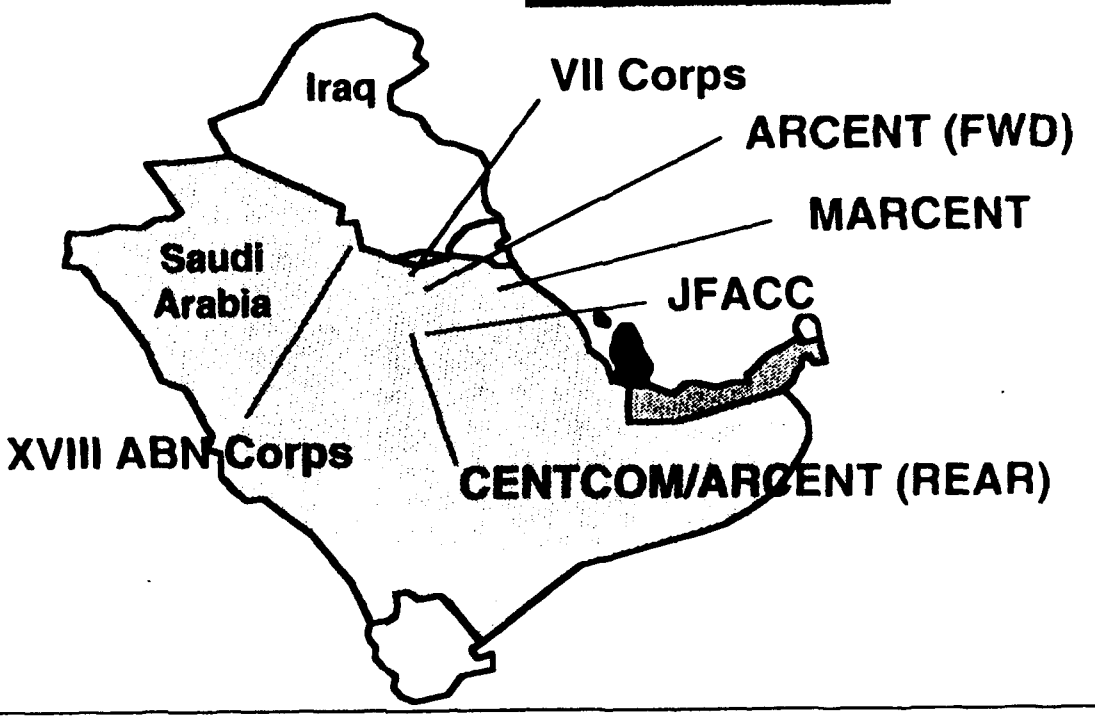
# Ground Station Modules

**Who did not have GSMs**

***The maneuvering units***

- 82nd Abn Div
- 101st Abn Div (AASLT)
- 1st Inf Div (Mech)
- 24th Inf Div (Mech)
- 1st Armd Div
- 3rd Armd Div
- 1st Cav Div
- Tiger Bde
- 2d Armd Cav Regt
- 3d Armd Cav Regt
- 11th Avn Bde
- 12th Avn Bde
- 18th Avn Bde
- SOF

**Who had GSMs**

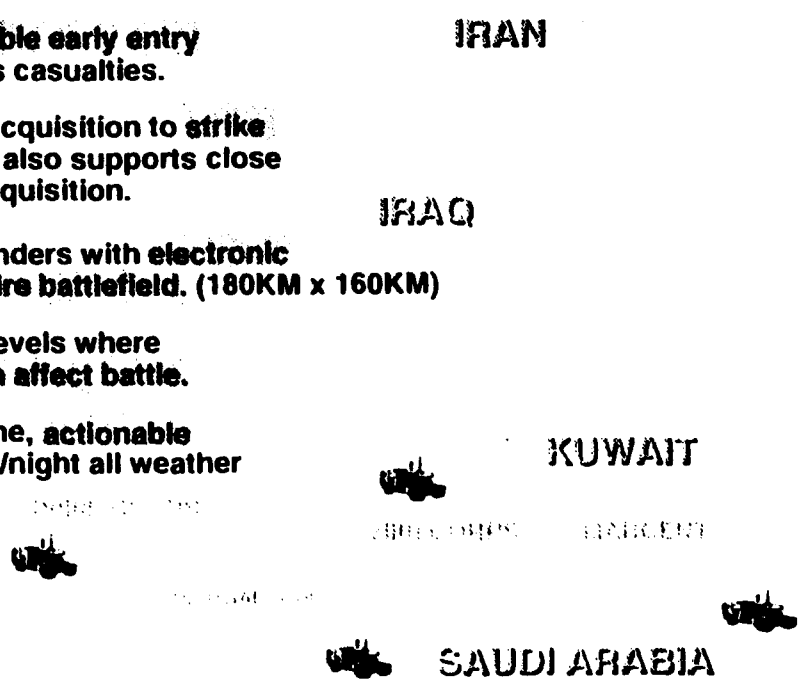



**Impact**

- No real-time actionable intelligence to the fighting units
- Actions tied to processed intelligence from higher headquarters (has corps commander's focus)
- Extended reaction time from sensors to shooters

# Why 24 GSMs?

- Protects vulnerable early entry forces. Reduces casualties.
- Provides target acquisition to strike enemy deep, but also supports close artillery target acquisition.
- Provides commanders with electronic binoculars of entire battlefield. (180KM x 160KM)
- GSM needed at levels where commanders can affect battle.
- Provides real-time, actionable intelligence, day/night all weather limited visibility




**CONTINGENCY CORPS REQUIREMENT**

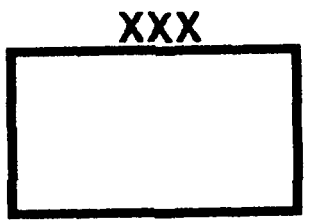
| | | |
|---|---|---|
| 2 per EAC | = | 2 |
| 6 per Corps | = | 6 |
| 5 per Div | = | 15 |
| 1 per ACR | = | 1 |
| Total | = | 24 |

During DESERT STORM 6 IGSMs were insufficient. 3 IGSMs dedicated to EAC. Only 3 IGSMs directly supported maneuver commanders and then only at Corps level.

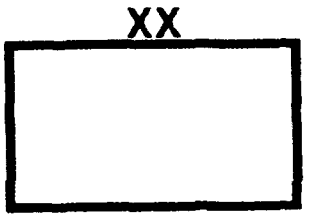
# GSM DISTRIBUTION

**Based on Desert Shield/Storm Demonstrated Capability**

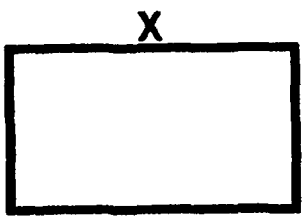

2 Per
- Support to Air Force / JTF



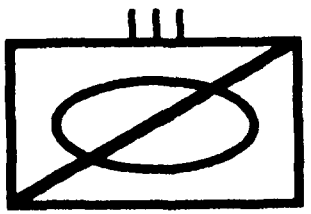

6 Per
- Support to:
  - 2 – Tactical Operations Centers
  - 1 – Analysis Control Element
  - 1 – Aviation Brigade
  - 2 – Corps Artillery




5 Per
- Support to:
  - 2 – Tactical Operations Centers
    - -- Fire Support Element
    - -- Analysis Control Element
  - 3 – Maneuver Brigades

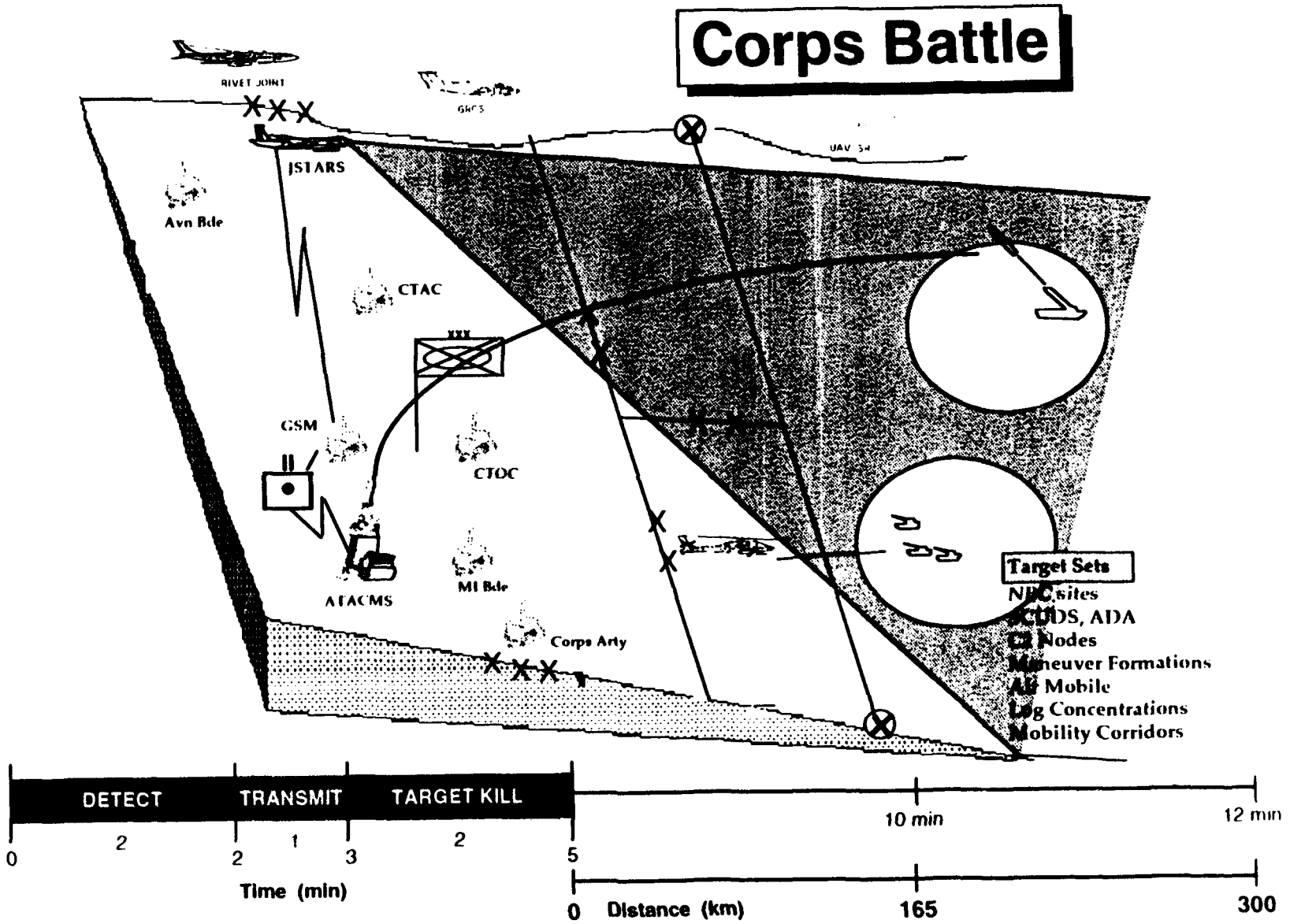



1 Per SEP BDE

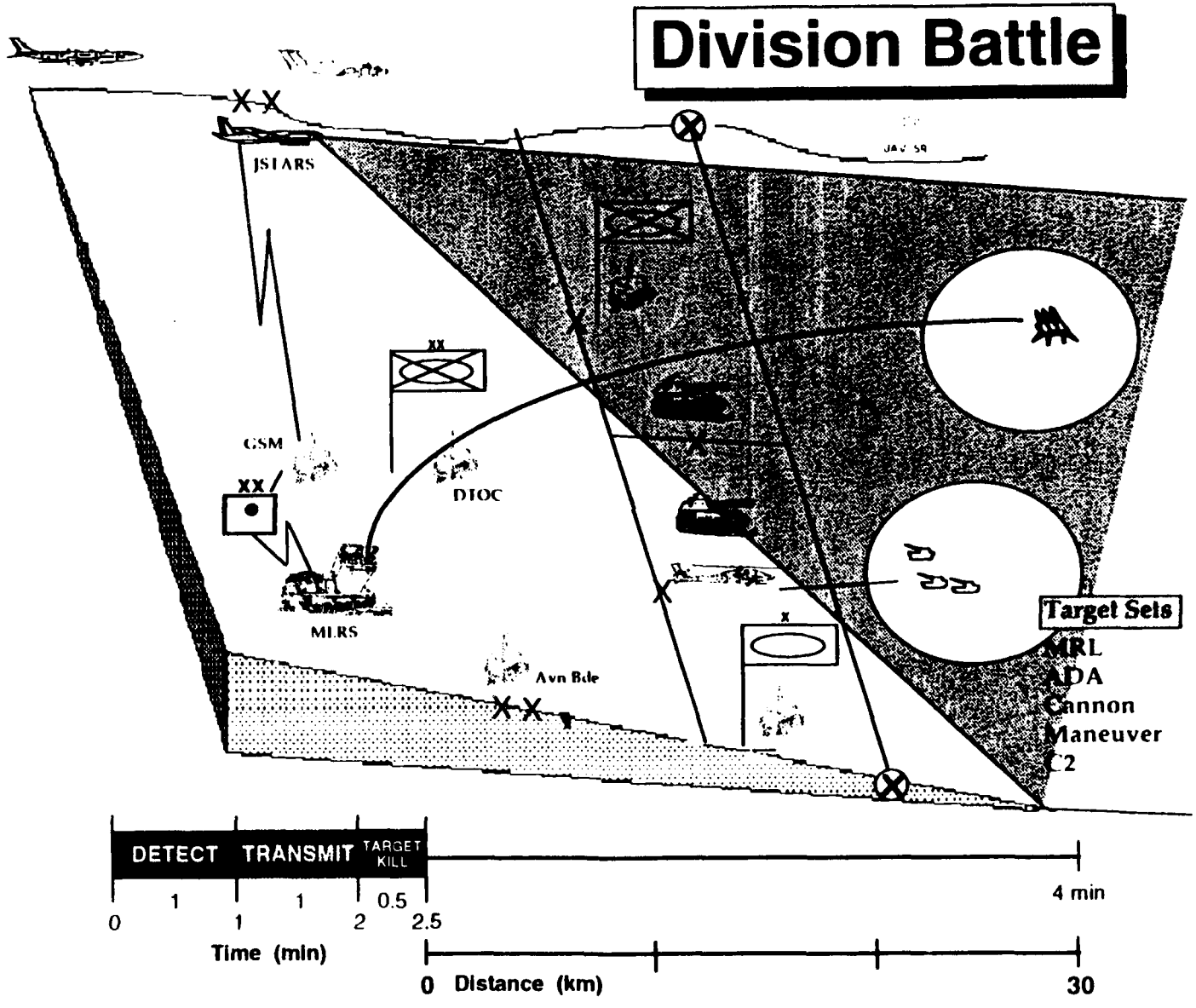


1 Per ACR

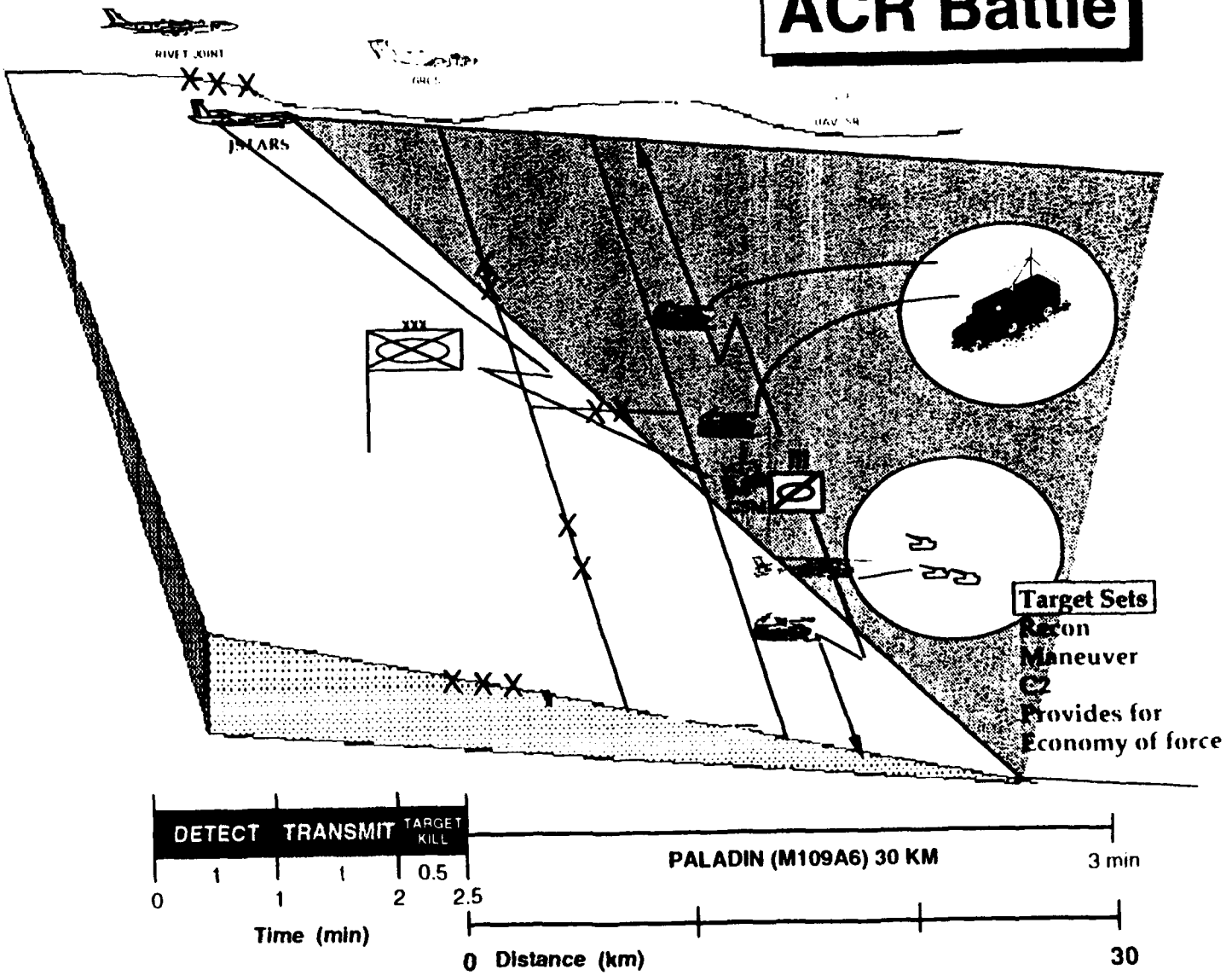
# Corps Battle



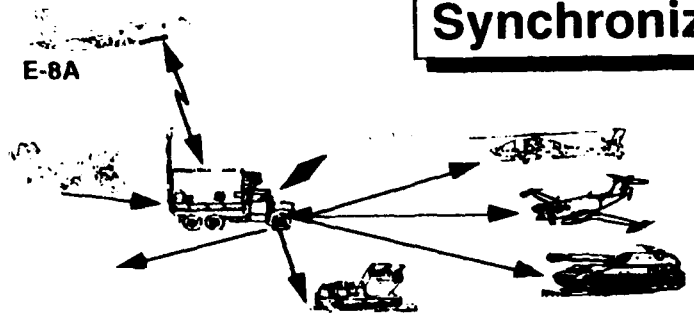
# Division Battle



# ACR Battle


RIVET JOINT
JSTARS
Target Sets
Recon
Maneuver
C2
Provides for
Economy of force
DETECT
TRANSMIT
TARGET KILL
0.5
0
1
2
2.5
Time (min)
PALADIN (M109A6) 30 KM
3 min
0 Distance (km)
30

# Synchronizing the "SMART" Battle




FULL CONTINGENCY CORPS CAPABILITY

FY94 FY95 FY96 FY97 FY98 FY99

OV-1D

GRCS

PALADIN

UAV-SR

ER - ATACMS

GSM LRIP

LONGBOW

BAT

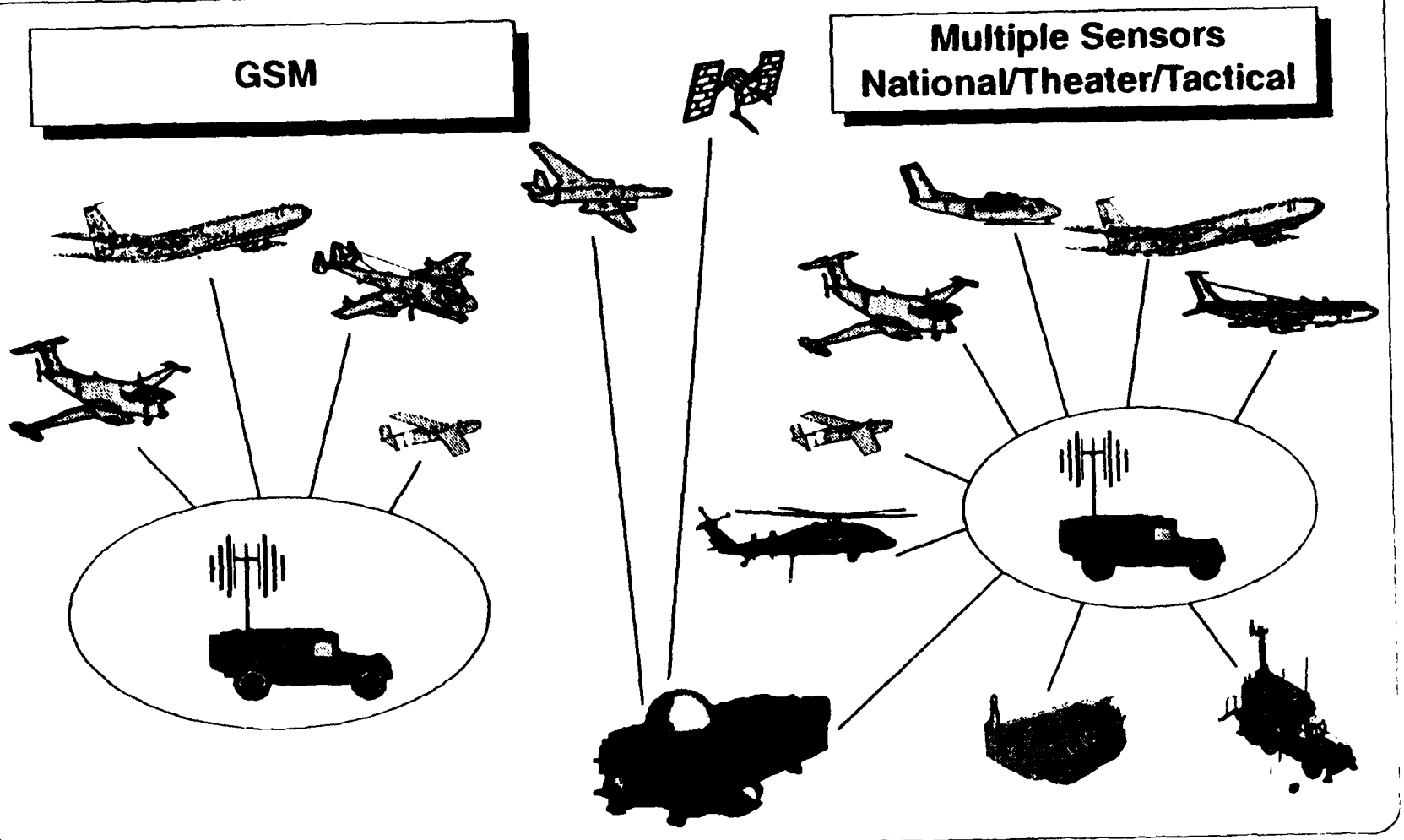
JSTARS E-8 (ORBIT)

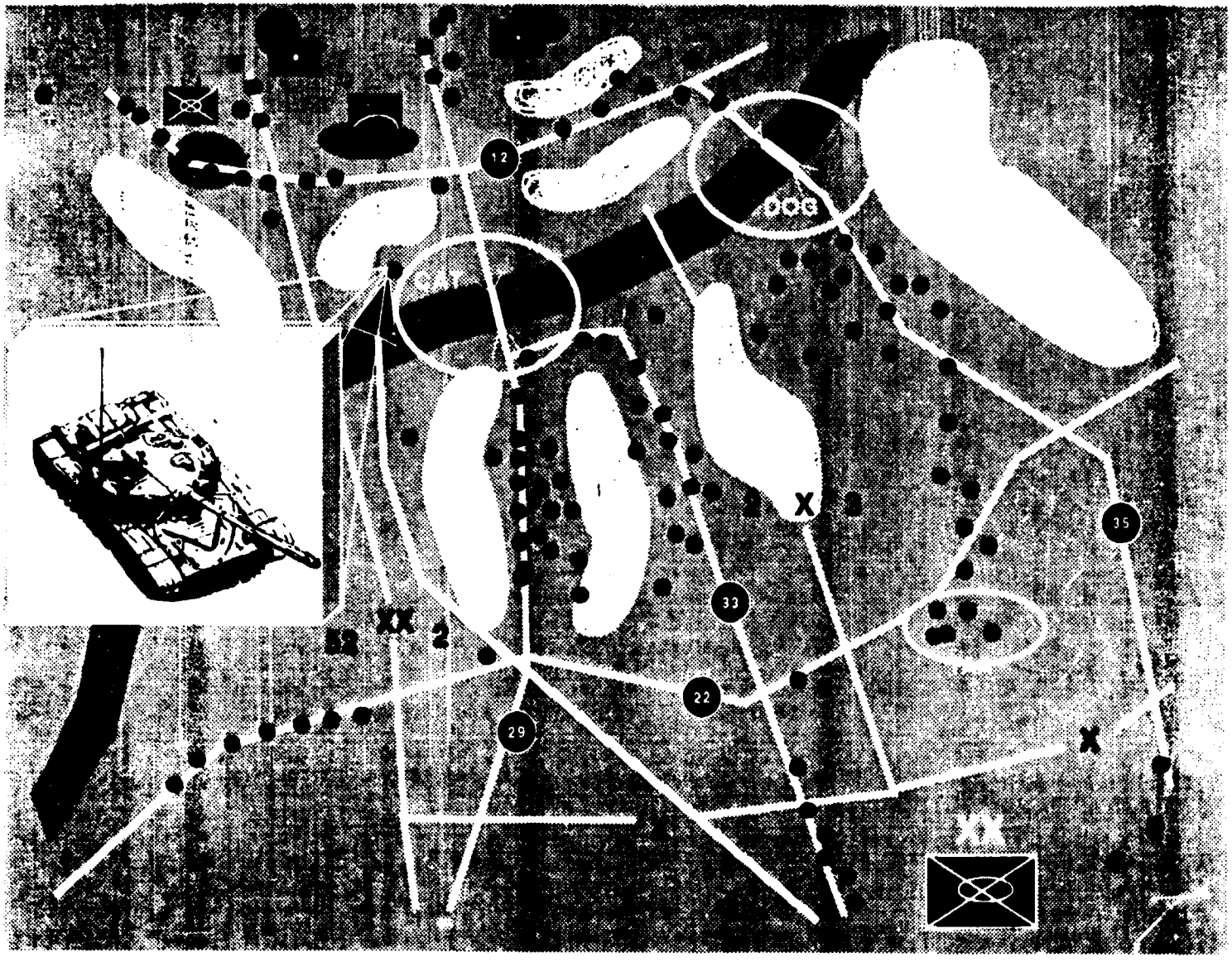
GSM w/o LGSM LRIP

WINDOW OF VULNERABILITY

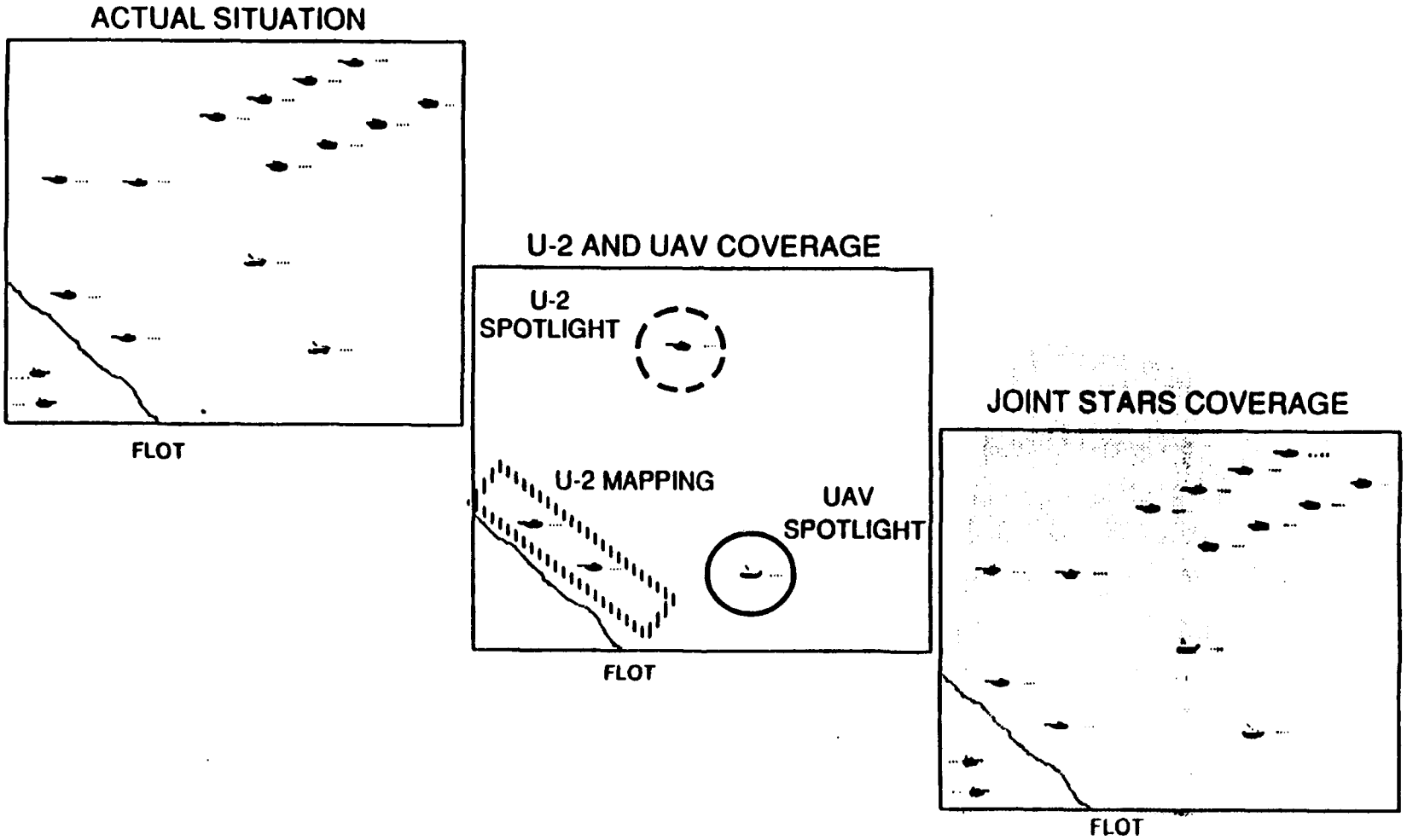
IEW
PROGRAM EXECUTIVE OFFICE

# JOINT STARS
## GSM to Common Ground Station Module


12
33
35
22
29

# JOINT STARS PAYOFF




***JOINT STARS SEES THE ENTIRE BATTLEFIELD CONTINUOUSLY IN REAL TIME***

- FRIENDLY AND ENEMY
- DEEP AND CLOSE

# CANDIDATE TECHNOLOGY INSERTION
## Functions/ Capabilities

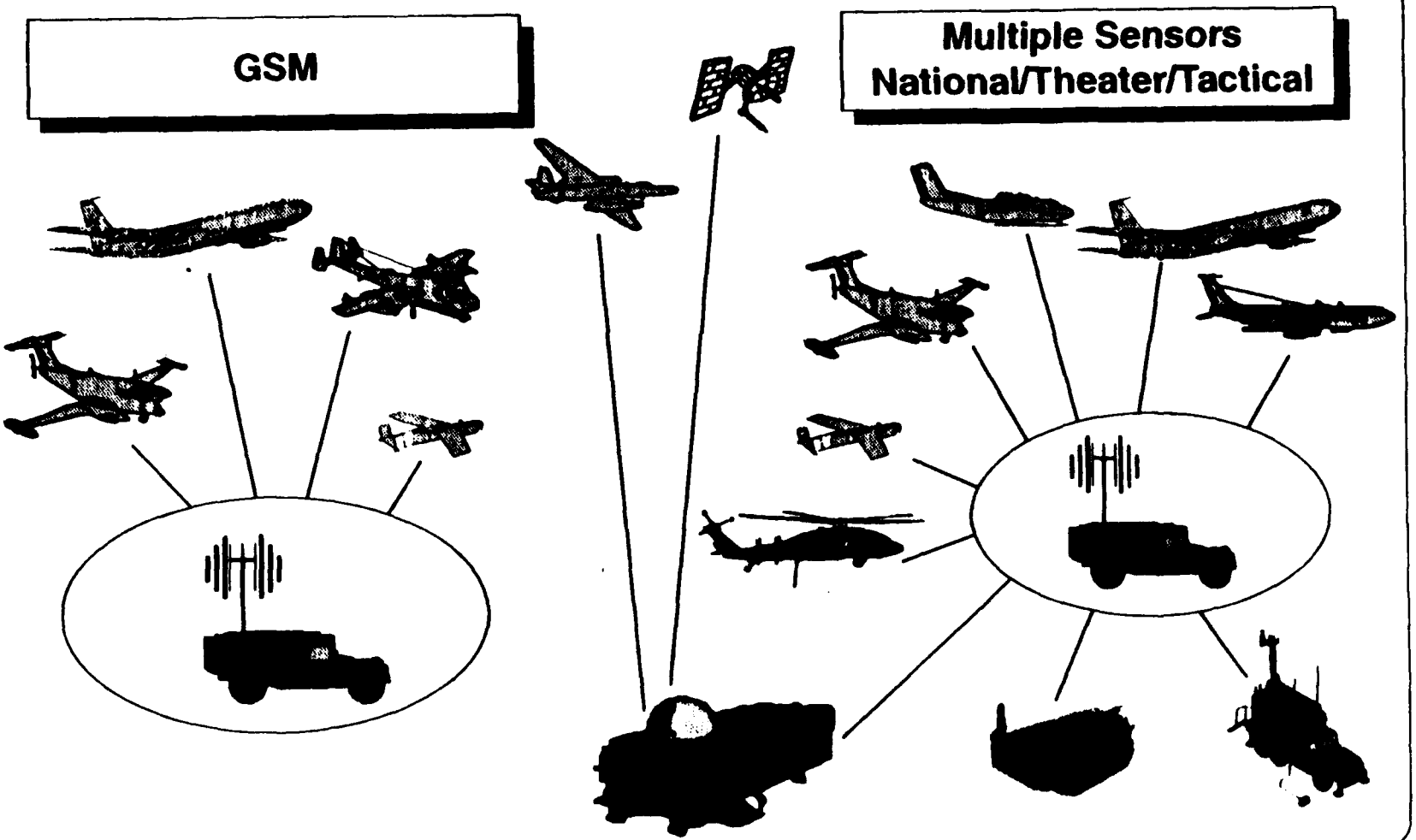
- Robust "On the Move" Capability
- Auto Target Recognition
- Advanced Work Aids & A.I. Algorithms
- Wireless LAN for GSM's Remote Work Station
- Helicopter Detection
- Improved SW Interface to ASAS & S2 WS at Brigade
- Extended Range SCDL
- Beyond Line Of Sight Operations
- Advanced Autotracking and Battle Damage Assesment
- Live Full-Motion Video
- Downsize/ More Robust/ Portable
- Expanded Commo ie. SATCOM, A/C Relay, etc.

# CANDIDATE TECHNOLOGY INSERTIONS
## Sensor Inputs

- Apache Longbow Fire Control Radar
- ISAR on Navy P-3
- Helicopter Video Imagery - Phototelesis
- TR-1 Radar and Electro-Optical Products
- UAV Close Range
- MITT Functionalility
- ATARS Products
- Selected NATO Systems

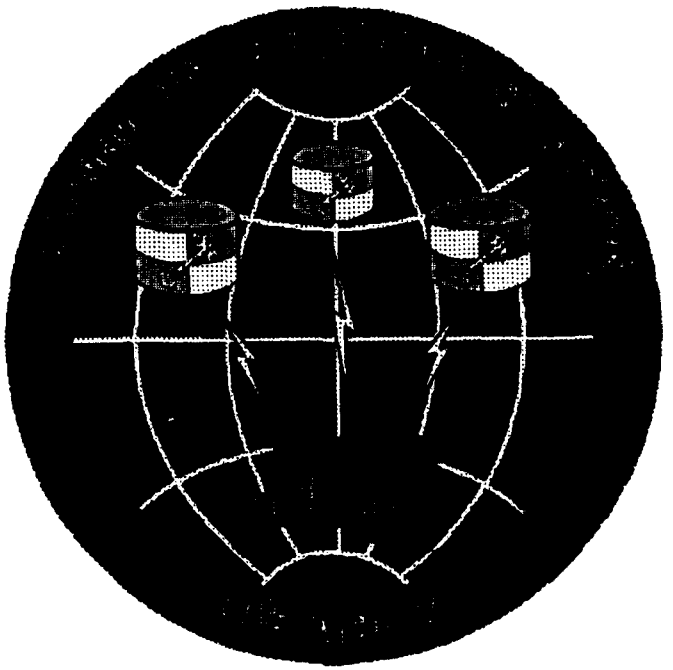
IEW
PROGRAM EXECUTIVE OFFICE

# JOINT STARS
## GSM to Common Ground Station Module




01 JSTARS01 08

# COMMON GROUND STATION
# Advanced Technology Demonstration




**THOMAS C. NEWSOME, JR.**
**ATD Technical Manager**
**Intelligence and Electronic Warfare Directorate**
**CECOM Research, Development and Engineering Center**

# COMMON GROUND STATION (CGS) ATD

***OBJECTIVE:***

- DEVELOP & DEMONSTRATE THE PROOF-OF-CONCEPT TECHNOLOGY FOR PROVIDING RESPONSIVE, TIMELY AND USABLE COMBAT INFORMATION AND INTELLIGENCE DATA TO BRIGADE COMMANDER.
- DEMONSTRATE CRITICAL TECHNOLOGY SOLUTIONS FOR THE JOINT STARS BLOCK II EMD AND RECOMMEND IEW STANDARD MODULES THUS REDUCING THE PROLIFERATION OF UNIQUE GROUND STATIONS.

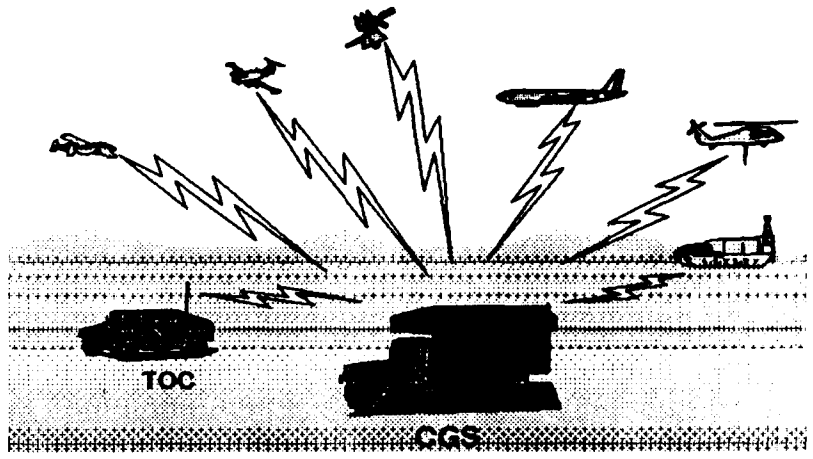
***JUSTIFICATION:***

- TRADOC APPROVED UPDATE TO JOINT STARS ROC - 18 NOV 92
- DRAFT TRADOC OPERATIONAL CONCEPT – COMMON GROUND STATION, 30 SEP 1991
- ARMY IEW MODERNIZATION PLAN (APPROVED FY96 FSD AWARD)
- LINKS TO BDP'S 003, 015, 018, 041, 060 & 076

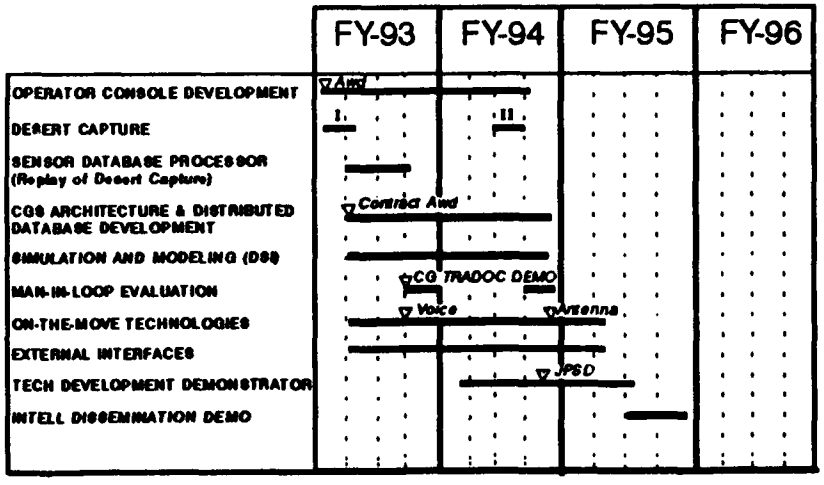
***BATTLELAB***

DEPTH AND SIMULTANEOUS ATTACK BATTLE LAB
BATTLE FOCUS BATTLE LAB

***PEO***
IEW




## PROGRAM SCHEDULE




APPROACH:

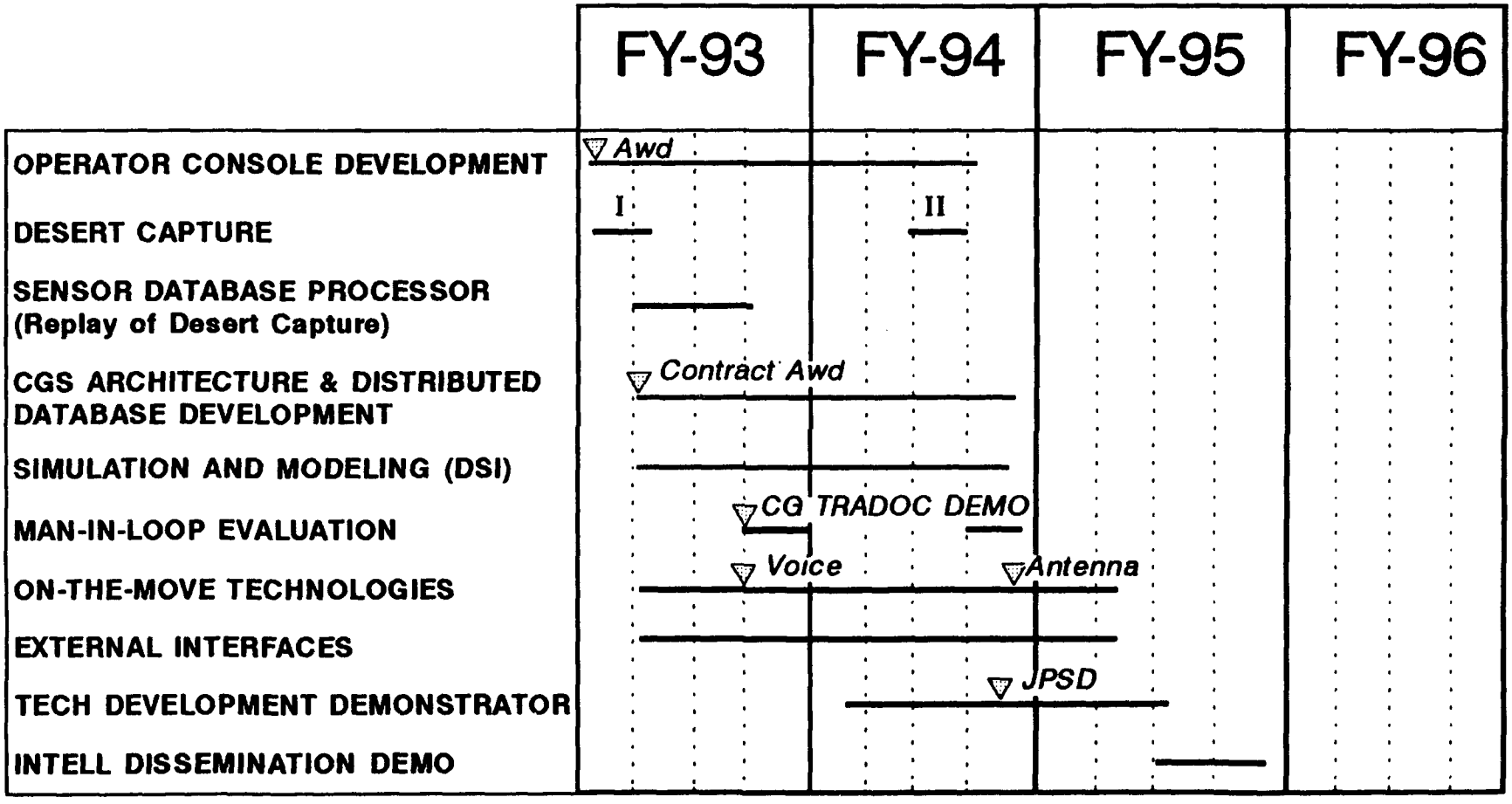
- EARLY EFFORTS TO CONCENTRATE ON SIMULATION AND MODELING
- SIMULATE CGS FUNCTIONALITY DEVELOPMENT USING MAN-IN-THE-LOOP CONCEPT
- DEVELOP BRIGADE DEMONSTRATOR BUILT AROUND A SCALABLE, PLATFORM-INDEPENDENT, TAILORABLE OPEN ARCHITECTURE APPROACH ON A HMMWV
- INTEGRATE, DEMONSTRATE & SIMULATE DISSEMINATION OF INTEL PRODUCTS FOR THE BRIGADE ON-THE-MOVE

APPLICATIONS:

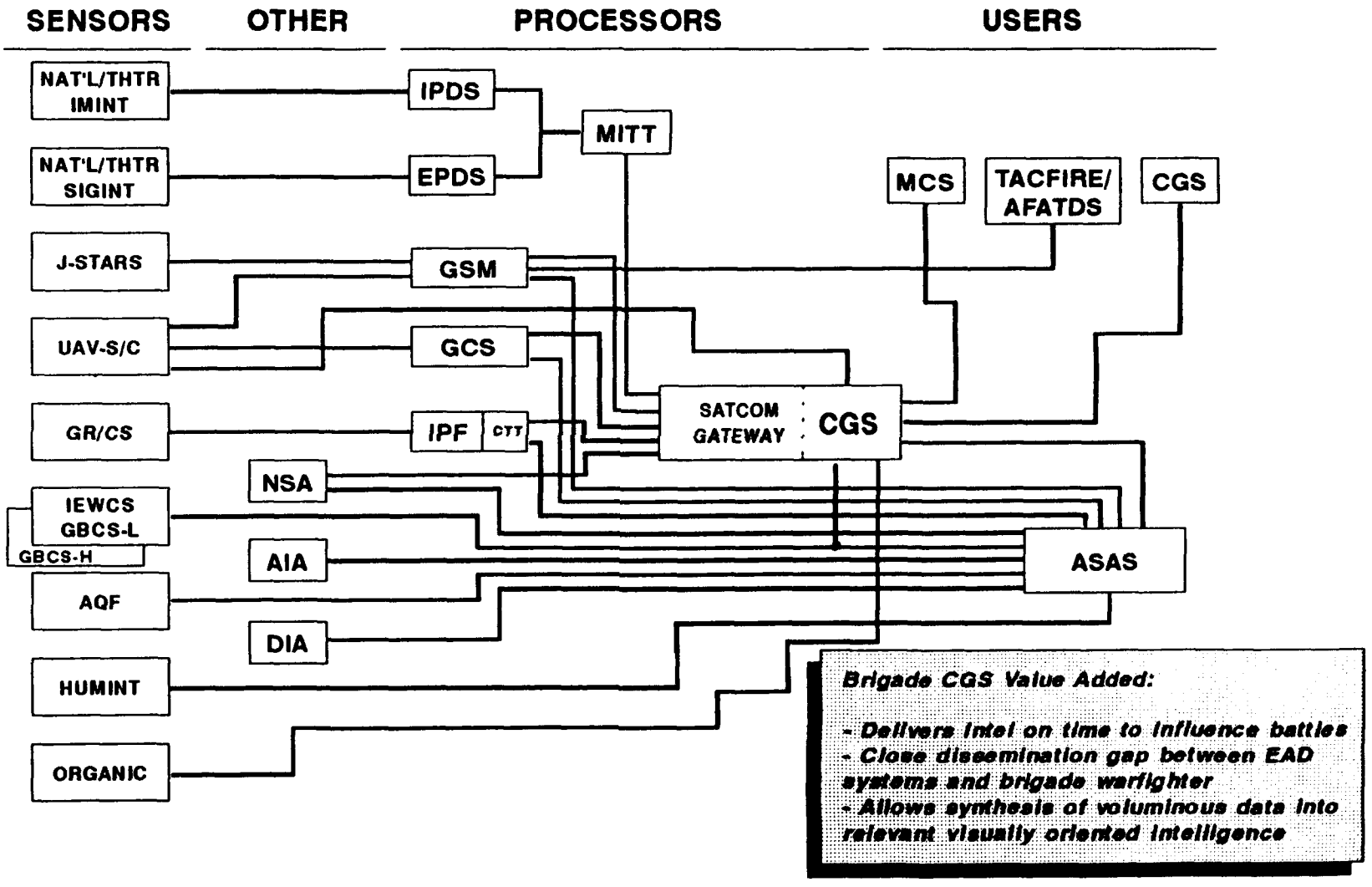
- JSTARS GROUND STATION
- DoD THRUST AREA 2/ JOINT PRECISION STRIKE
- INTELLIGENCE COMMUNITY
- SATCOM ON-THE-MOVE
- ASAS

CGS_QUAD

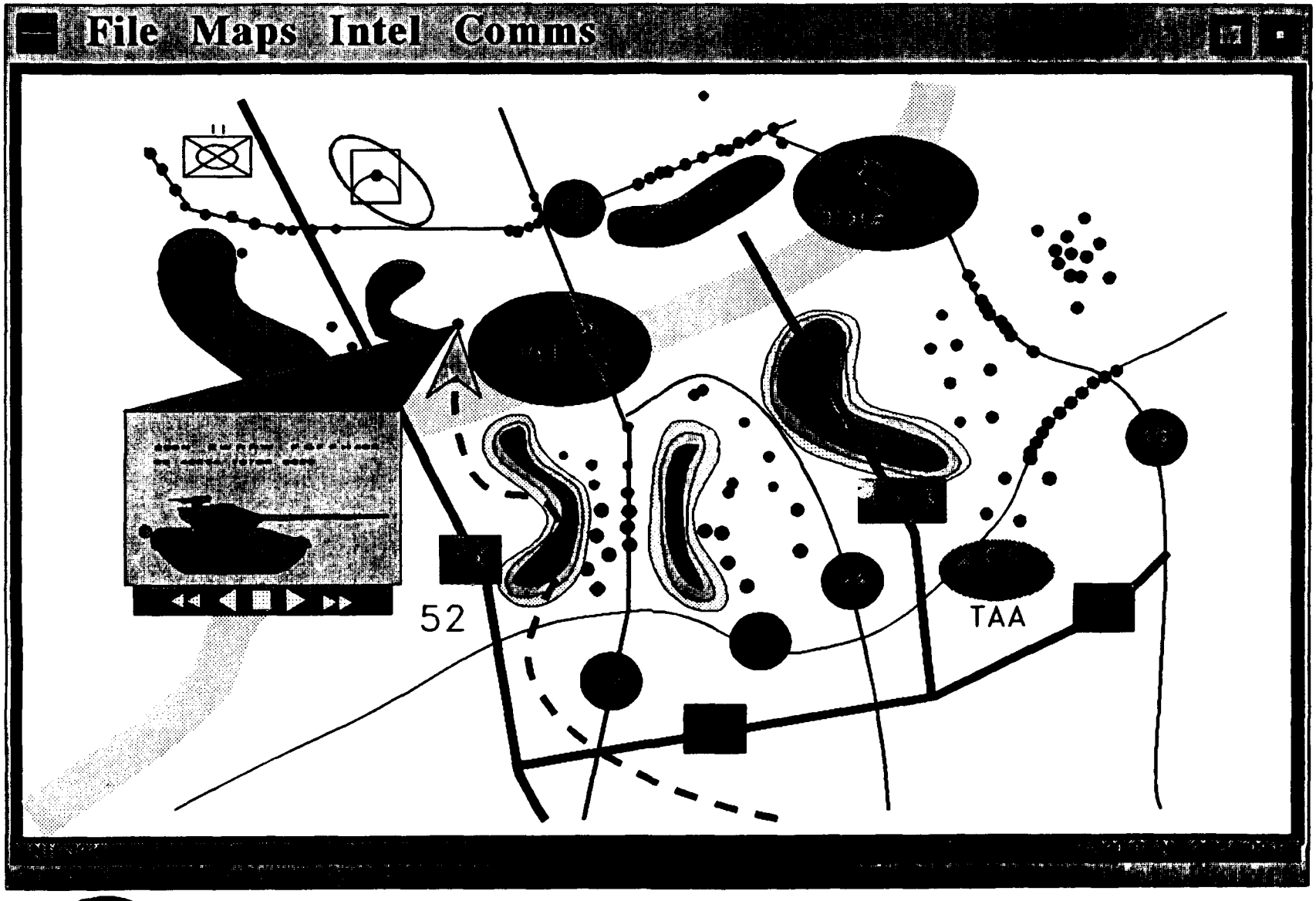
# CGS ATD Program Schedule



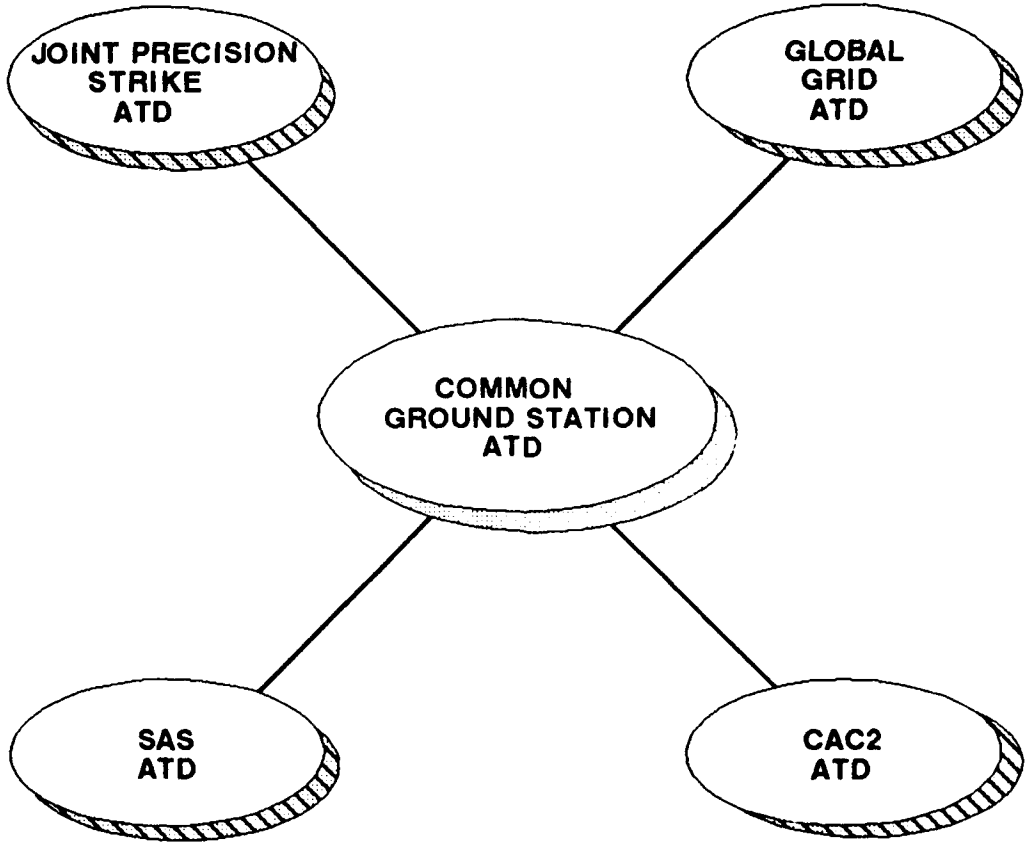
# BRIGADE LEVEL COMMON GROUND STATION
## WITH SATCOM GATEWAY INTEGRATION
## EXTRA-PLATFORM FUNCTIONAL FLOW



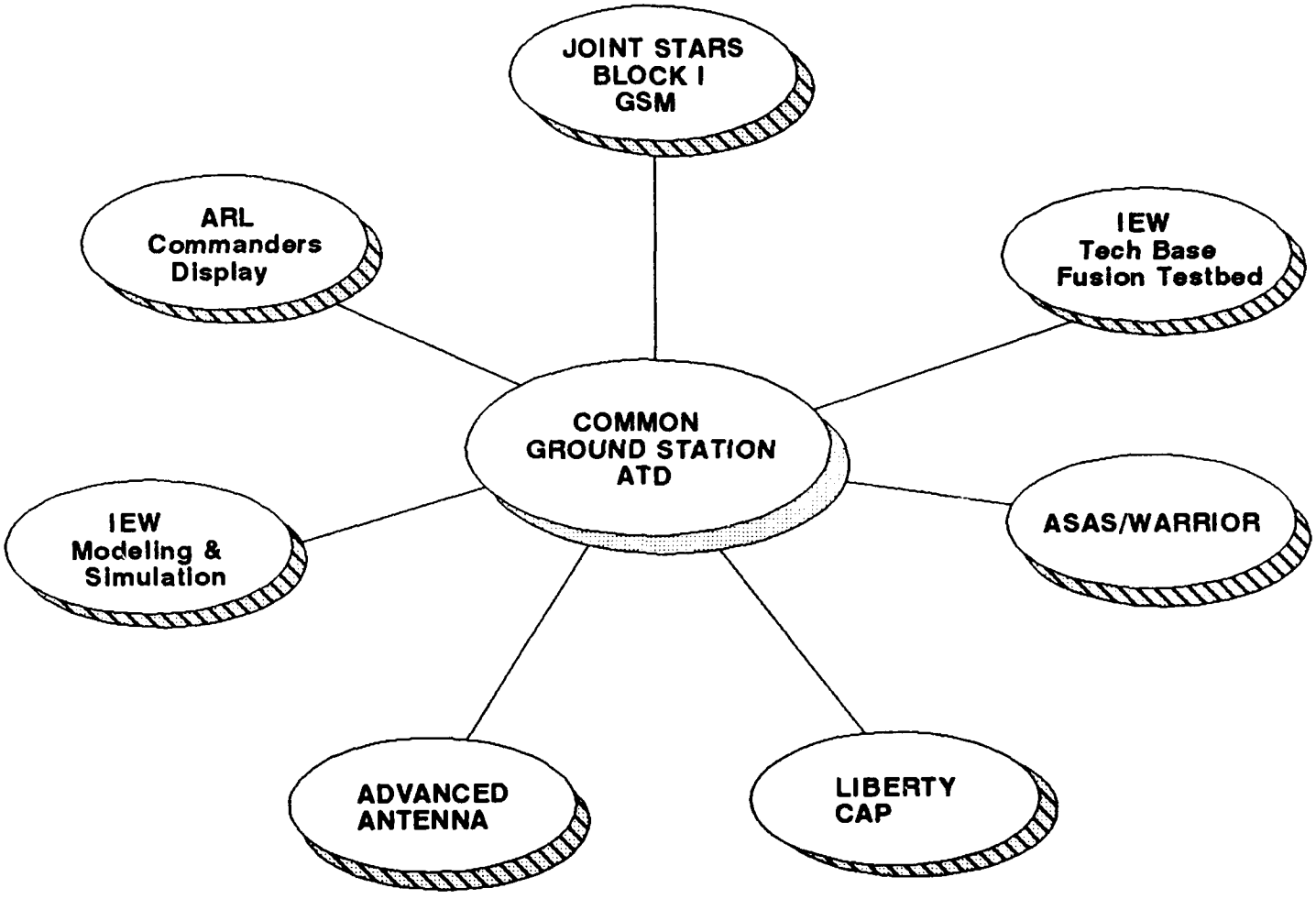
# CGS - MAP DISPLAY



# CGS SUPPORTING PROGRAMS
## ATD



# CGS SUPPORTING PROGRAMS



# CGS ATD PERFORMANCE

| Technical Performance Parameters | Exit Criteria Operational Capability Thresholds |
|---|---|
| Advanced Antenna On-The-Move capability | Intell Function- On-The-Move Operation and Sensor Tasking |
| Distributed IEW multisensor Database Development | Intell Function- On-Demand Responsiveness, Timeliness |
| Man-In-The-Loop Simulation | Input/Output (Man Machine) |
| Commander Display/Improved symbology | Dissemination Media (Improved graphics and imagery) |
| Voice I/O | |
| Operation Desert Capture | |
| DSI | |
| Sensor Correlation | Target Location Accuracy |

# TEST PLAN

- Interactive testing of the CGS ATD in 3 seperate demonstrations

  a. Gen Franks demonstration and follow up on Technology Assessment Center evaluation using Operation Desert Capture Sensor Data

  b. Joint Precision Strike 94 Demonstration

  c. CGS Final 95 Demonstation at Fort Huachuca
     - Shelter Mounted Systems
     - Advanced Antenna integrated with CGS System
     - Technology Assessment Center (TAC) Evaluation

- Depth and Simultaneous Attack Battle Lab is the identified Battle Lab. USAICS Technology Assessment Center/Battle Focus Battle Lab is the TRADOC Cognizant Element.

- Test Plan Participants include:
  - USAICS
  - PM Joint Stars
  - TSM Joint Stars
  - JPSD
  - PEO-IEW
  - IEWD

# EXIT CRITERIA FOR COMMON GROUND STATION

| OPERATIONAL CAPABILITY | CURRENT BASELINE | ATD MINIMUM | ATD GOAL | TENTATIVE FSED REQUIREMENT |
|---|---|---|---|---|
| INTELLIGENCE FUNCTION | NONE AT BRIGADE | RECEIVE INTELL PRODUCT ON DEMAND, FOR SPECIFIC AREA | SAME AS MINIMUM PLUS ON-THE-MOVE OPERATION & SENSOR TASKING CAPABILITY | SAME AS GOAL, PLUS INCREASED PROCESSING AND TASKING CAPABILITIES |
| RESPONSIVENESS * | HOURS | DEEP BATTLE: 3 HRS<br>CLOSE BATTLE: 30 MIN | DEEP BATTLE: 2 HRS<br>CLOSE BATTLE: 15 MIN | DEEP BATTLE < 2 HRS<br>CLOSE BATTLE < 10 MIN |
| TIMELINESS ** | SENSOR DEPENDENT (MINUTES TO HOURS) | DEEP BATTLE: 30 MIN<br>CLOSE BATTLE: 2 MIN | DEEP BATTLE: 2 MIN<br>CLOSE BATTLE: 1 MIN | DEEP BATTLE < 2 MIN<br>CLOSE BATTLE < 1 MIN |
| DISSEMINATION MEDIA | TEXT REPORT | TEXT REPORT, GRAPHICS & IMAGERY | TEXT REPORT, IMPROVED GRAPHICS & IMAGERY | TEXT REPORT, GRAPHICS, ANNOTATED IMAGERY |
| TARGET LOCATION ACCURACY (SENSOR DEPENDENT) | INDIVIDUAL SENSOR ACCURACIES | ENHANCED BY COMBINED SENSOR REPORTS | ADDITIONAL ENHANCEMENTS USING PREDICTIVE LOCATION ALGORITHMS | ADDITIONAL ENHANCEMENTS USING MORE AUTOMATION |
| INPUT/OUTPUT (MAN-MACHINE) | KEYBOARD ENTRY AT EACH GROUND STATION | SOME VOICE I/O AND SYMBOLOGY OVERLAYS | PRIMARILY VOICE I/O & SIGNIFICANTLY IMPROVE SYMBOLOGY | IMPROVEMENTS OVER GOAL PLUS EMBEDDED TRAINING |

* TIME FROM INTELL REQUIREMENTS TO USER RECEIVING PRODUCT

** TIME FROM RAW DATA COLLECTION TO FINAL PRODUCT

# CGS MODELING AND SIMULATION

- DSI Node Installation Planned for 1QFY94
  - Limited MTI DIS Integration
  - Exploring Alternate Funding for Remaining Sensors
- Operation Desert Capture (ODC) Data
  - Collected Dec 92
  - Drives Current Man-in-Loop Simulation
  - Capability for Simultaneous Replay of ODC Data into CGS Technology Demonstration will be operational FY94

# CGS FY93 ACCOMPLISHMENTS

- Demonstrated CGS with Operation Desert Capture Data
- FY93 Man-In-Loop CGS Simulation Completed
- Integrated Efforts of CECOM, ARL and USAICS for CGS Prototype
- Participated in Operation Desert Capture Exercise and Tested Concept of Cueing a UAV FLIR Package with MTI Radar Data
- Initiated Design and Development of CGS for Brigade Demonstration
- Began Advanced Antenna Development and Integration
- Supported Joint Precision Strike Demonstration First Light Demo

# PLANNED ACCOMPLISHMENTS

## FY94 - FY95

### PLANNED ACCOMPLISHMENTS FY94

- Advanced Antenna Proof-of-Concept Stationary Demo and HQ TRADOC coordinated OPSCON
- Joint Precision Strike Surface-to-Surface 94 Demo
- DSI Node installation and limited MTI DIS compatibility
- Lab Demo of Multimedia Distributed Data Base

### PLANNED ACCOMPLISHMENTS FY95

- Common Ground Station Brigade Proof-of-Concept Demo
  - Advanced Antenna On-the-Move
  - Close Battle Exit Criteria
  - SAS ATD Integration
  - CAC2 Integration

# TRANSITION PLAN

- Transition to FY96 Joint STARS EMD
- Supports SATCOM On-the-Move
- Supports ASAS

# Joint STARS Ground Station Module

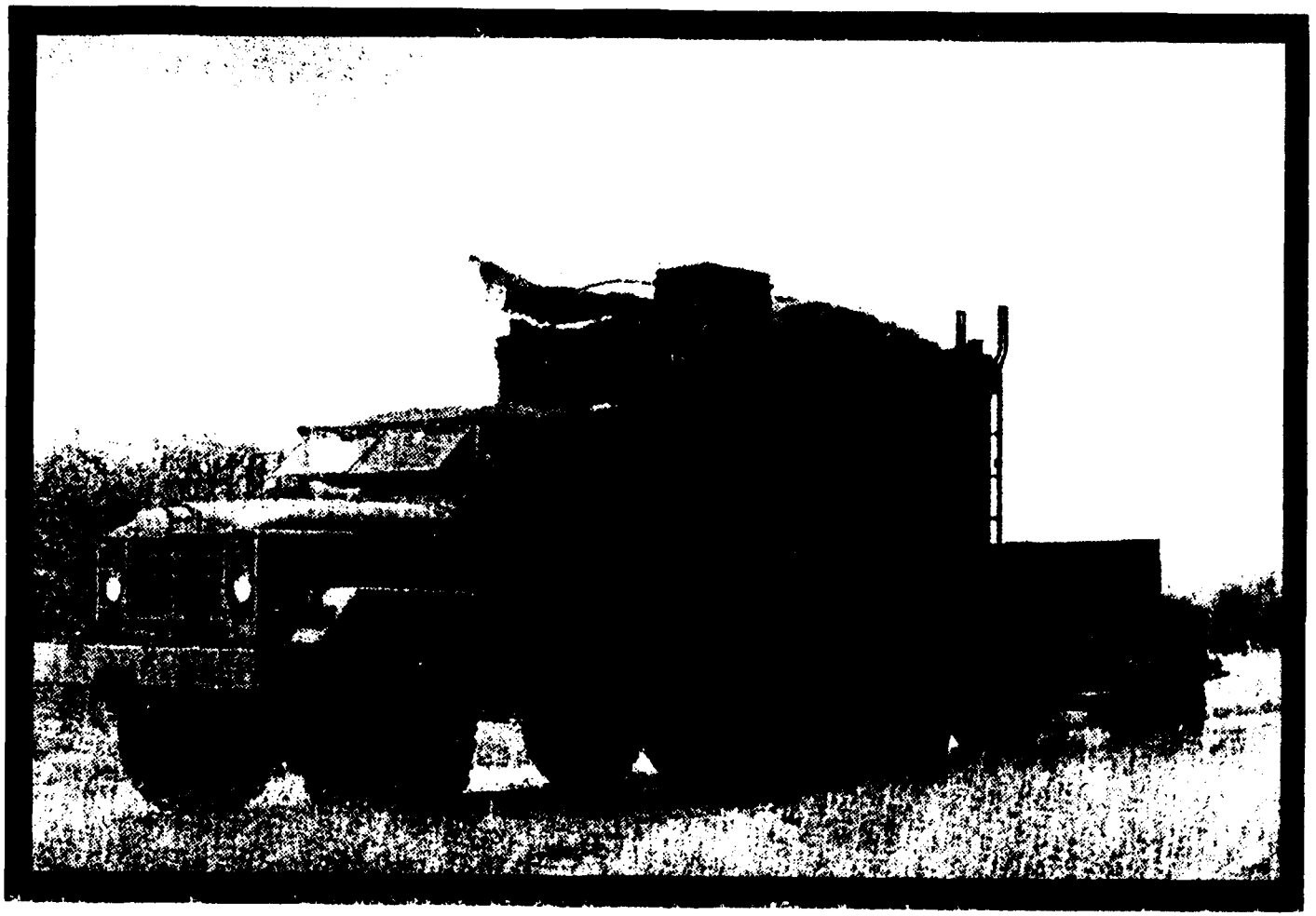
**COL James L. Mitchell**
**Project Manager - Joint STARS**
**PEO-IEW**

UNCLASSIFIED

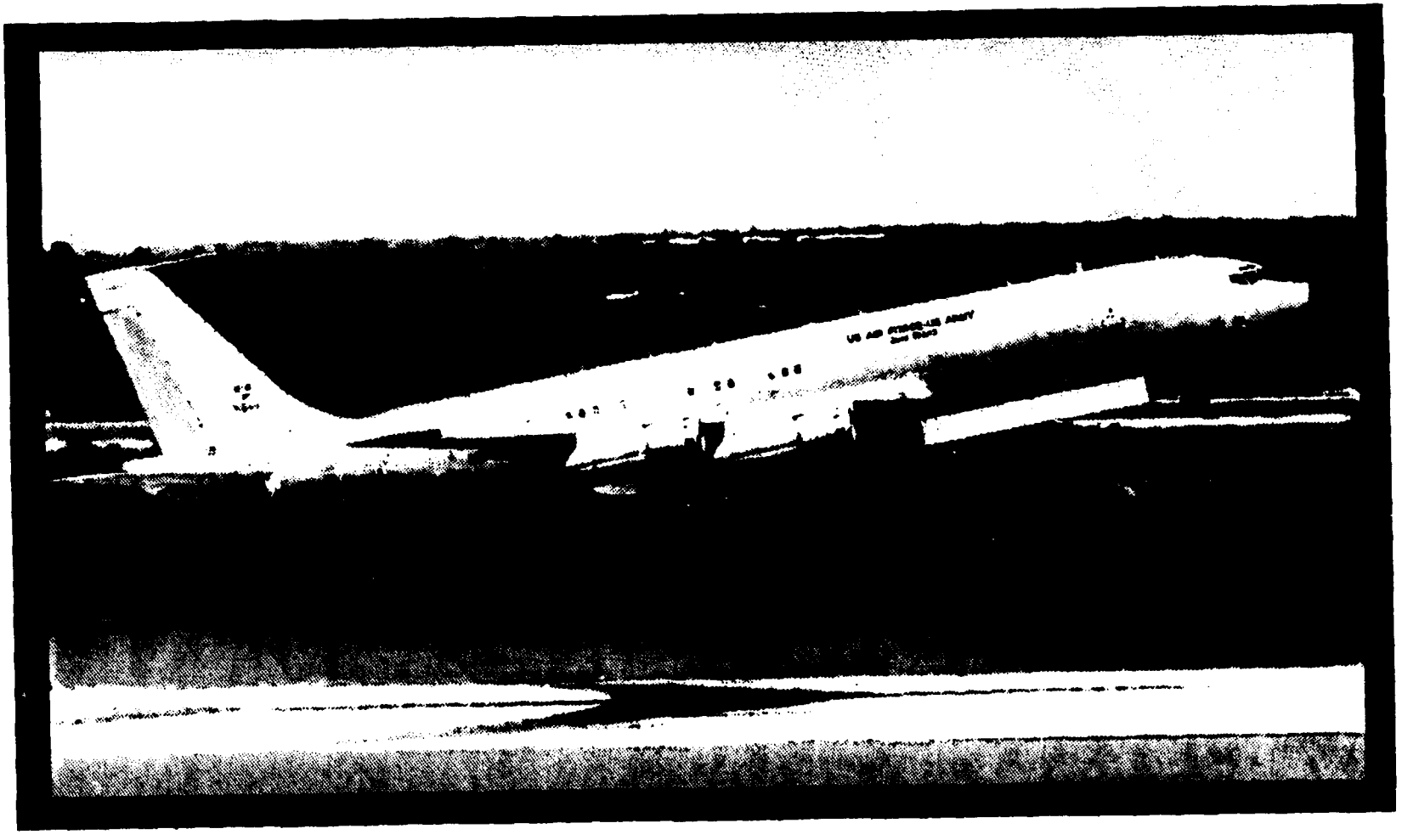
# JOINT STARS Ground Station Module Description

The Ground Station Module is an Element of The Joint Army Air Force Surveillance Target Attack Radar System. Using Common Subsystems in Different Carriers (5 Ton Truck, Enhanced Electronic Fighting Vehicle System and HMMWV) the System Disseminates Intelligence and Target Data in Near Real-Time to Army C3I Nodes Via Wire or Radio. GSM's Will Support Situation Development, Targeting and Battle Management Functions at All Echelons Where Fielded.

# Joint STARS Ground Station Module



# Joint STARS E-8 Aircraft



IEW
PROGRAM EXECUTIVE OFFICE

# JOINT STARS
## Ground Station Module (GSM) Evolutionary Program


Interim
- Sequential Multi-Sensor
- Remote Display
- Ballistic Hardening
- Test Bed
- Receives Sensor Data From JSTARS MOHAWK
- Interfaces With ASAS, TACFIRE

**JSTARS or MOHAWK**

Block I Medium
- Simultaneous Multi-Sensor Processing
- Downsize Electronic Suite
- Common IEW Modules
- CHEM/BIO Protection
- EMP/TREE
- Receives Sensors Data From JSTARS, MOHAWK
- Interfaces With ASAS, TACFIRE, AFATDS

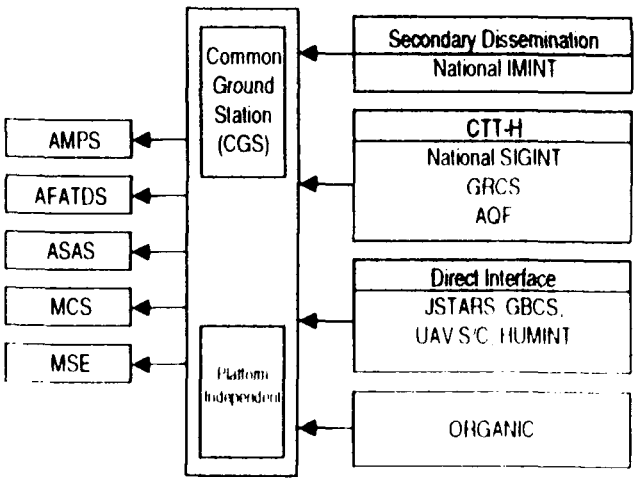
**JSTARS and MOHAWK**


Block I (Heavy Forces)
- Same PME as Blk I Med
- Nuclear Hardened Enclosure (Blast/Therm)
- Commander's Tactical Terminals (CTT-H)
- Receives Sensor Data From JSTARS, UAV
- Interfaces With ASAS, TACFIRE, AFATDS


Block I (Light Forces)
- Same PME as BLK I Med
- Survivable as Supported Force
- Receives Sensor Data From JSTARS, UAV
- Interfaces With ASAS, TACFIRE, AFATDS

**JSTARS and UAV**

**Block II**




* **Block II CGS in Heavy and Light Variants**

# Joint STARS Ground Station Module Objectives

- Receive, Process, Analyze, and Disseminate JSTARS Radar Data
- Receive, Process, Analyze, and Disseminate Additional Sensor Data
- Will be Configured to Support All Army Forces
- Evolve Into a Common Ground Station at Tactical & Operational Echelons

# Joint STARS Ground Station Module Long Term Milestones

**FY-96 and Beyond**

- **Award Competitive Contract For Block I Light Ground Station Module Production (FY96)**
- **Award Competitive Contract For Block I Heavy Ground Station Module Production (FY96)**
- **Award Competitive Contract For Block II Common Ground Station Development (FY96)**
- **Award Competitive Contract For Common Ground Station Production (FY99)**

# Joint STARS Ground Station Module Funding Profile

| | RDTE $M | PROC $M | OMA $M |
|---|---|---|---|
| FY 94 | 25-35 | 60-70 | 1-5 |
| FY 95 | 15-25 | 70-80 | 1-5 |
| FY 96 | 15-25 | 80-90 | 1-5 |
| FY 97 | 20-30 | 75-85 | 1-10 |
| ETC. | 45-55 | 430-450 | 1-40 |
| Total | 120-170 | 715-775 | 5-65 |

# Joint STARS Ground Station Module Contract Opportunity

| | |
|---|---|
| **Title:** | **Joint STARS Ground Station Modules (Heavy & Light)** |
| **Objective:** | **Procure 42 Block I Production Models** |
| **Proposed Contract Type:** | **Competitive Firm Fixed Price** |
| **Key Milestones:** | **Contract Award 2Q FY96** |
| **Estimated Value:** | **$345-365M** |
| **POC Telephone:** | **COL James L. Mitchell**<br>**(908) 544-5165** |

# Joint STARS Ground Station Module Contract Opportunity

| | |
|---|---|
| **Title:** | **Joint STARS Common Ground Station (CGS)** |
| **Objective:** | **Development of CGS** |
| **Proposed Contract Type:** | **Cost Plus** |
| **Key Milestones:** | **Contract Award 2Q FY96** |
| **Estimated Value:** | **$50-80M** |
| **POC Telephone:** | **COL James L. Mitchell** |
| | **(908) 544-5165** |

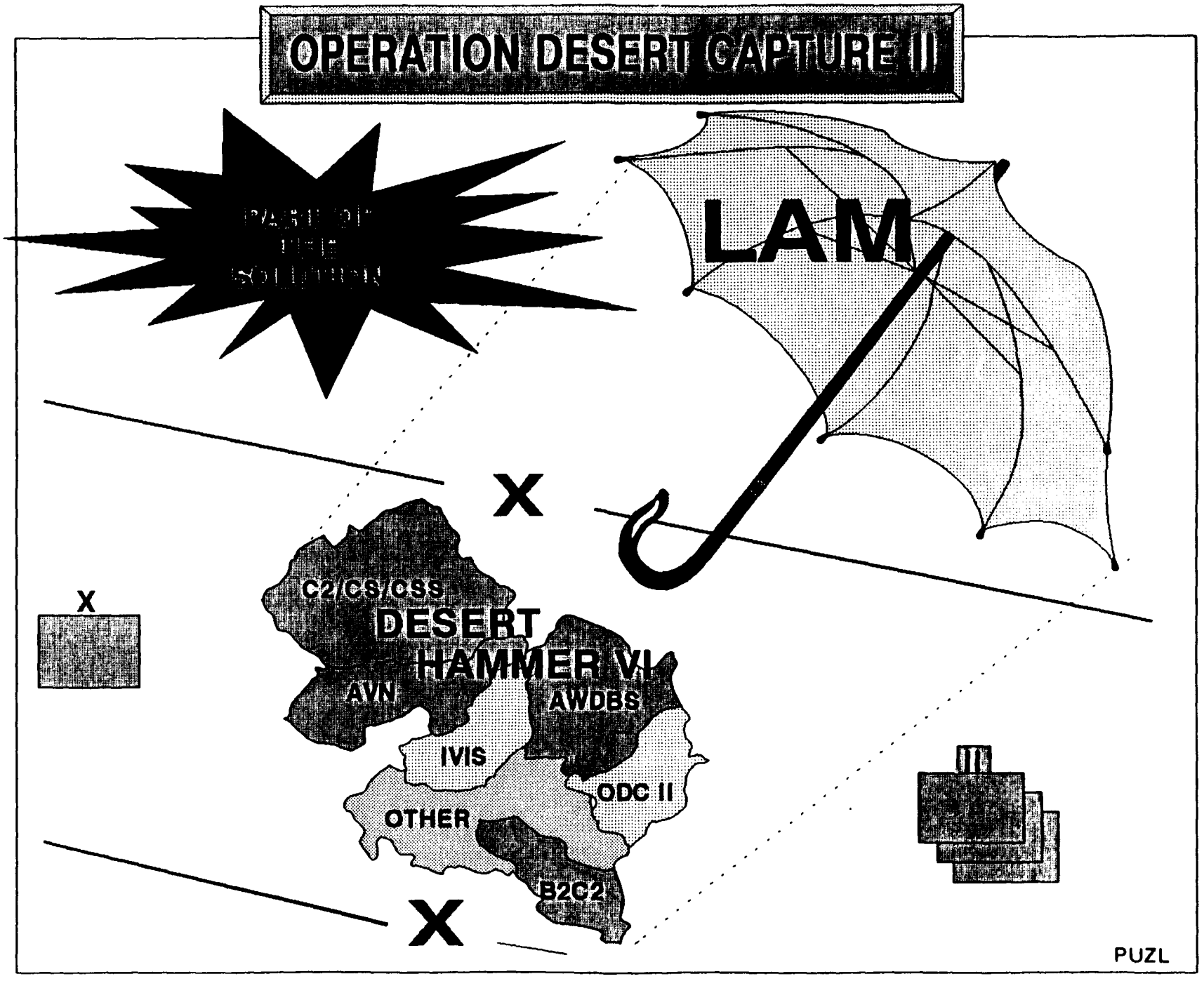
# Joint STARS Ground Station Module Contract Opportunity

| | |
|---|---|
| **Title:** | **Joint STARS Common Ground Station (CGS)** |
| **Objective:** | **Procure 31 ( Heavy & Light) Production Models of CGS** |
| **Proposed Contract Type:** | **Competitive Firm Fixed Price** |
| **Key Milestones:** | **Contract Award 3Q FY99** |
| **Estimated Value:** | **$240-260M** |
| **POC Telephone:** | **COL James L. Mitchell**<br>**(908) 544-5165** |

TACTICAL INTELLIGENCE SUPPORT TO THE FORCE PROJECTION ARMY

# *NTC ROTATION 94-07*
# *OPERATION DESERT CAPTURE II*

U.S. ARMY INTELLIGENCE CENTER, FORT HUACHUCA, AZ 85613-6000


OPERATION DESERT CAPTURE II
LAM
X
C2/CS/CSS
DESERT
HAMMER VI
AVN
AWDBS
IVIS
ODC II
OTHER
B2C2
X
X
II
PUZL

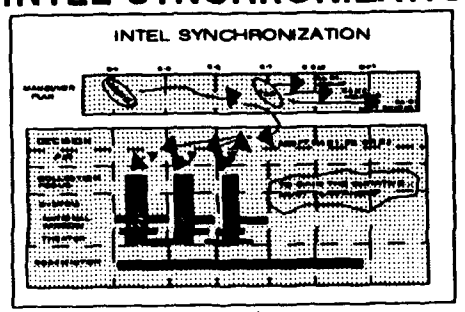
# OPERATION DESERT CAPTURE II

## FORCE PROJECTION
## FIVE MI DOCTRINAL CONCEPTS

**THE COMMANDER DRIVES INTELLIGENCE**

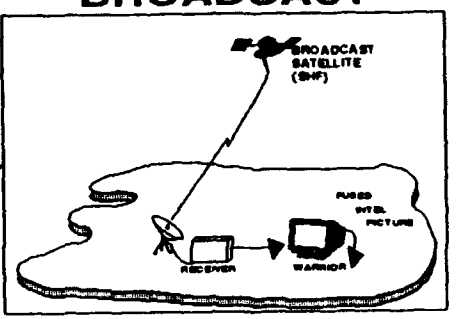
**MI**

### INTEL SYNCHRONIZATION



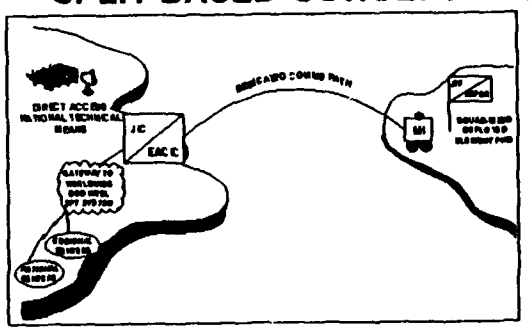

MELD W/OPNS

### BROADCAST



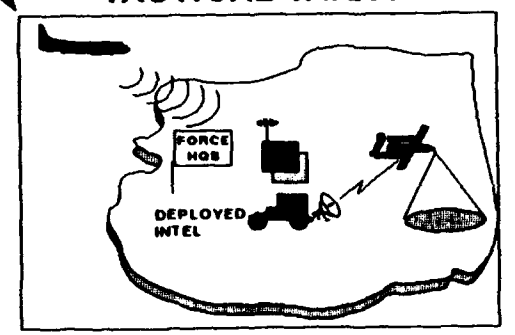

DIAL–UP...QUICK

### SPLIT-BASED CONCEPT




FOCUS DOWN

### TACTICAL TAILORING



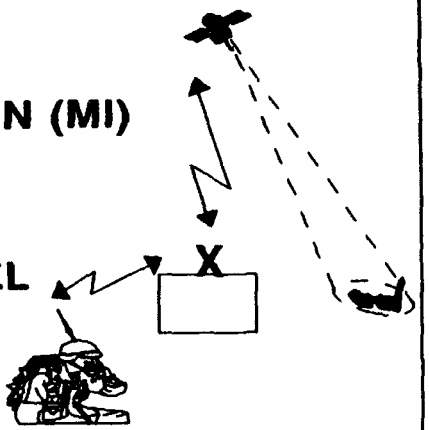

FLEXIBLE

CGSLI015 CH3

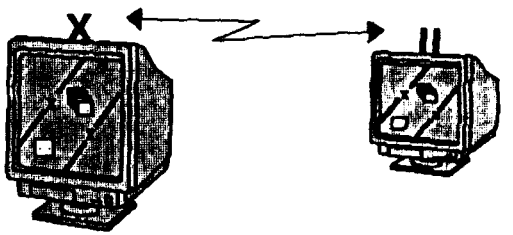
# OPERATION DESERT CAPTURE II

## OBJECTIVES

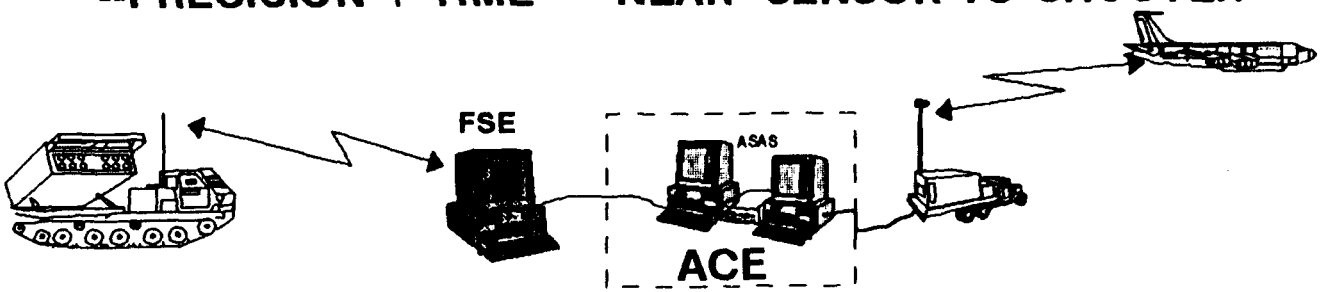
- AUTOMATE BOTTOM UP (CAV), WITH TOP DOWN (MI)
  - --COMMON GRAPHIC OF ENEMY SITUATION
  - --FOCUS INTEL SENSORS ON TACTICAL LEVEL




- LINK INTERACTIVE GRAPHIC INTEL
  - --FUSION DIV - BDE
  - --MAYBE DOWN TO BN LEVEL



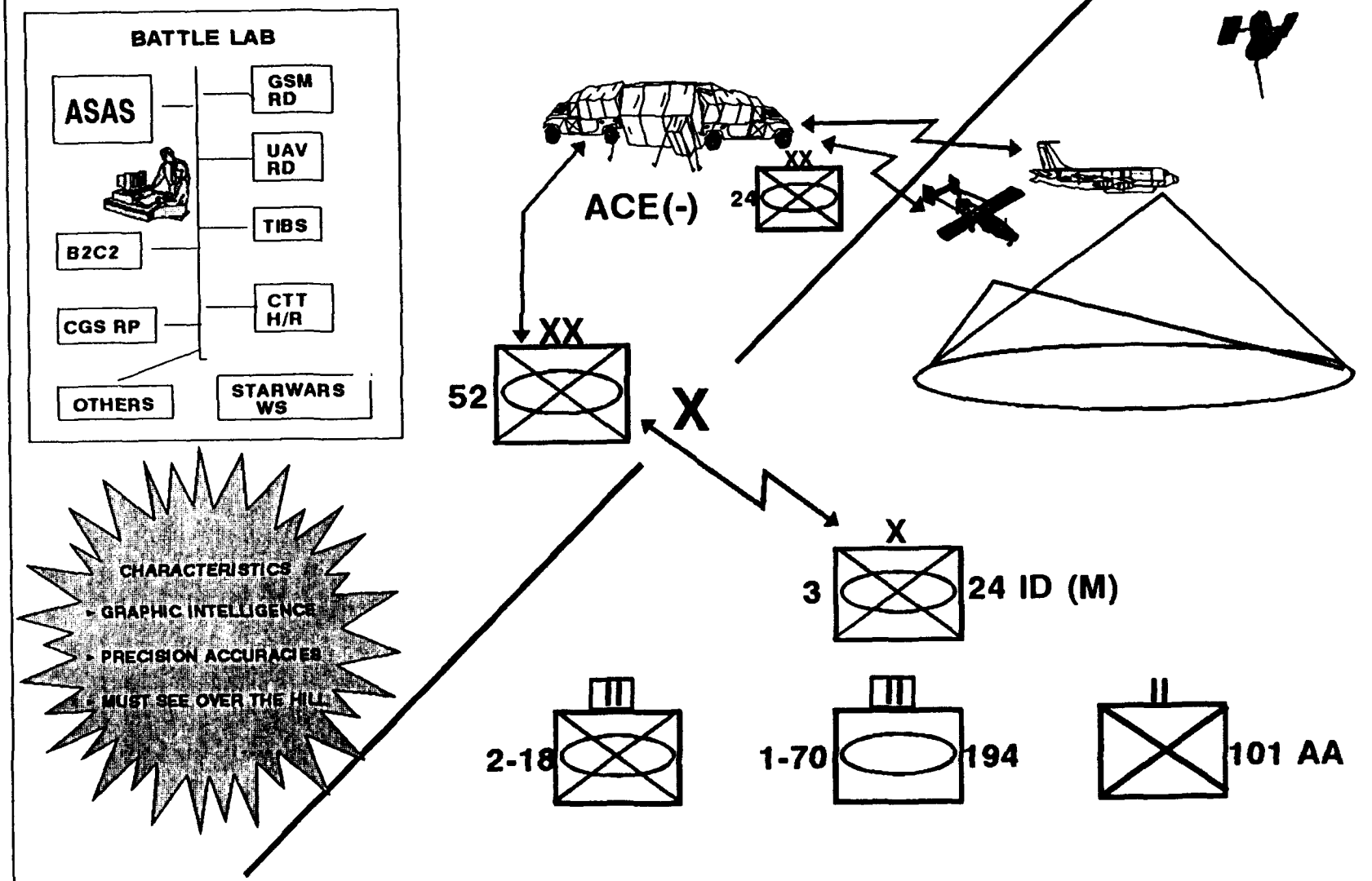

- ENHANCE INTEL SUPPORT TO TARGETING & BDA
  - --PRECISION + TIME = "NEAR" SENSOR TO SHOOTER

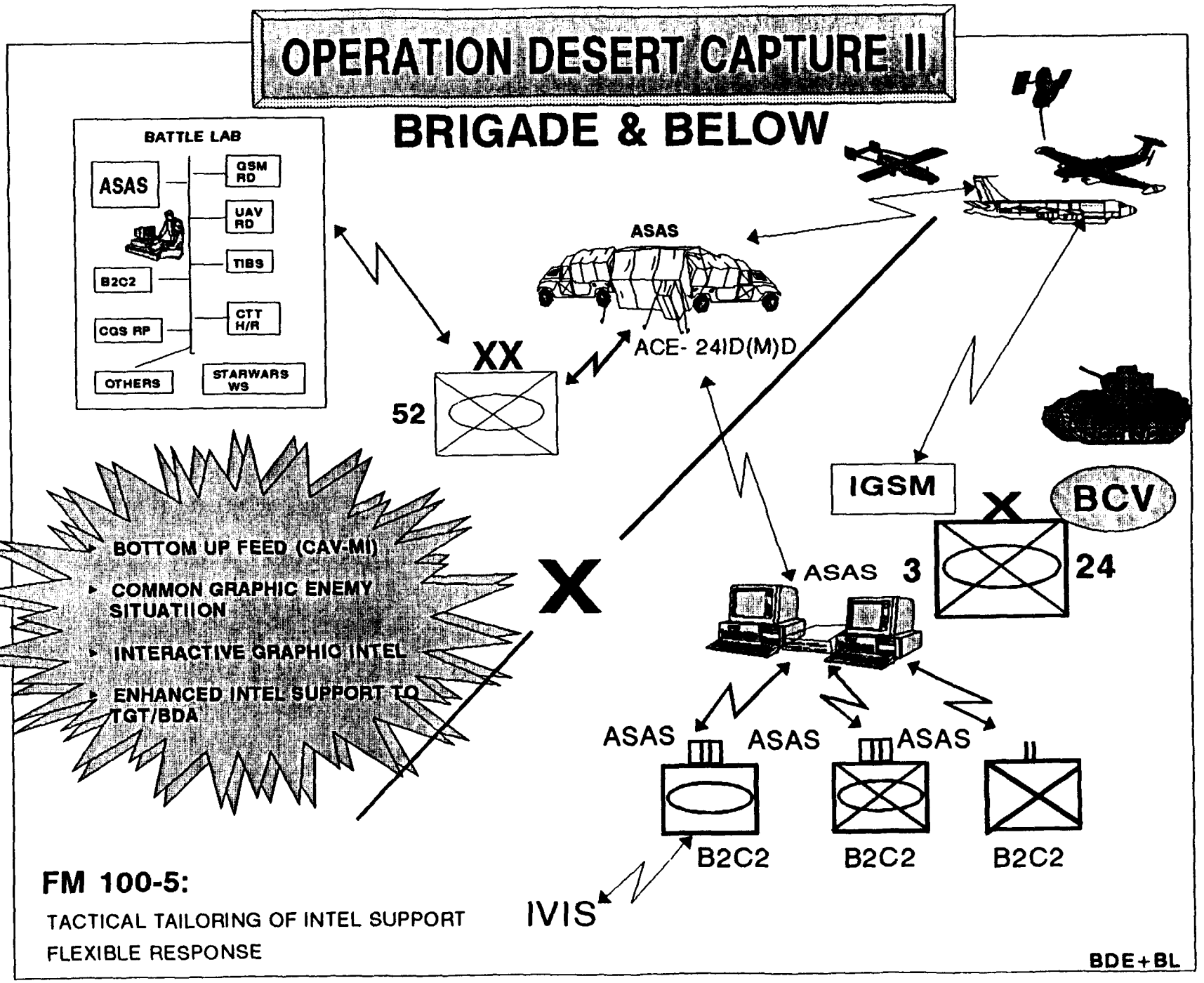



OBJTVS

# OPERATION DESERT CAPTURE II

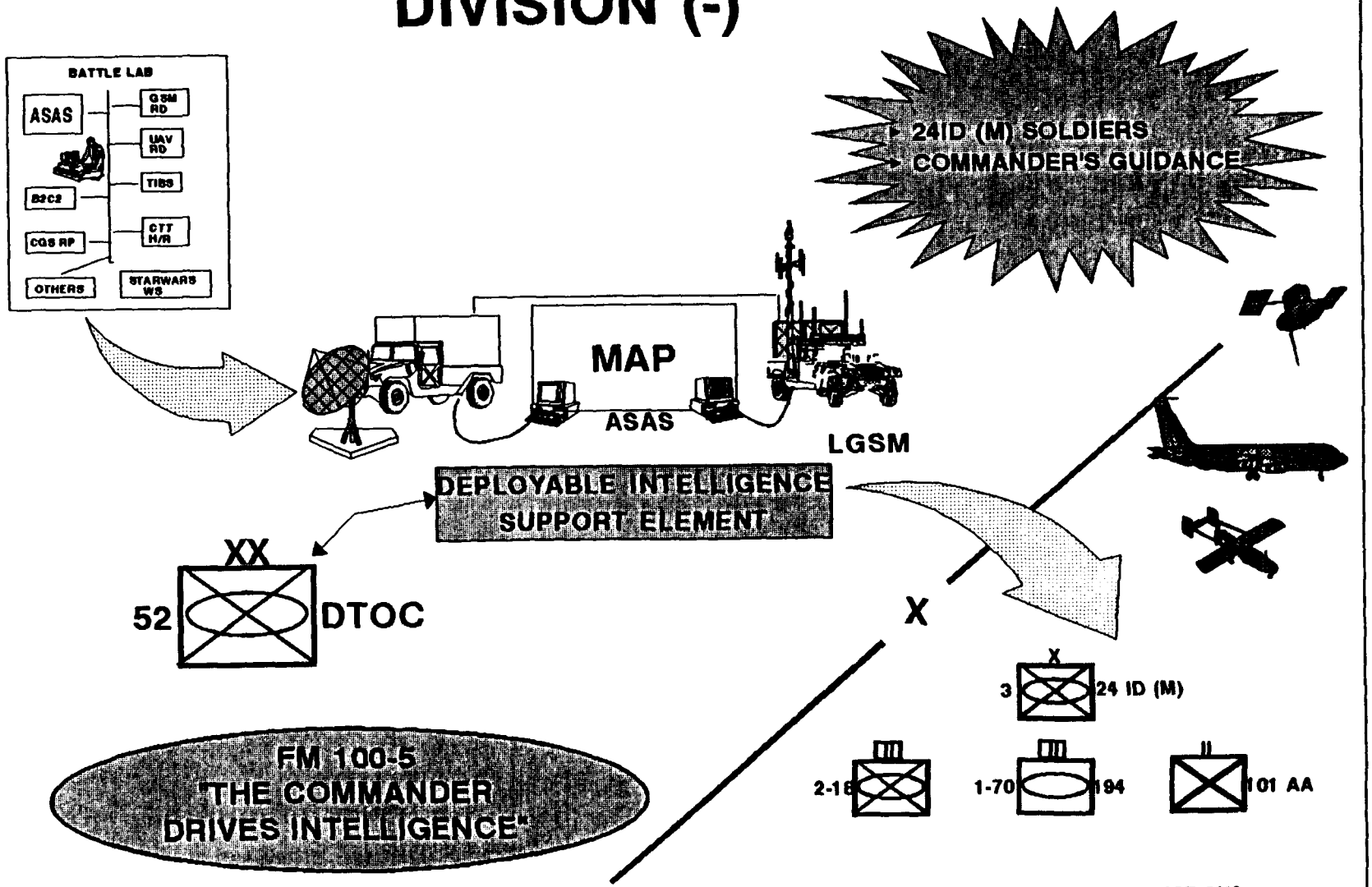
## EXERCISE ARCHITECTURE




OPERATION DESERT CAPTURE II
BRIGADE & BELOW
BATTLE LAB
ASAS
GSM RD
UAV RD
TIBS
B2C2
CTT H/R
CGS RP
OTHERS
STARWARS WS
ASAS
XX
52
ACE- 24ID(M)D
IGSM
X
BCV
24
3
ASAS
BOTTOM UP FEED (CAV-MI)
COMMON GRAPHIC ENEMY SITUATIION
INTERACTIVE GRAPHIC INTEL
ENHANCED INTEL SUPPORT TO TGT/BDA
X
ASAS
ASAS
ASAS
B2C2
B2C2
B2C2
IVIS
FM 100-5:
TACTICAL TAILORING OF INTEL SUPPORT
FLEXIBLE RESPONSE
BDE+BL

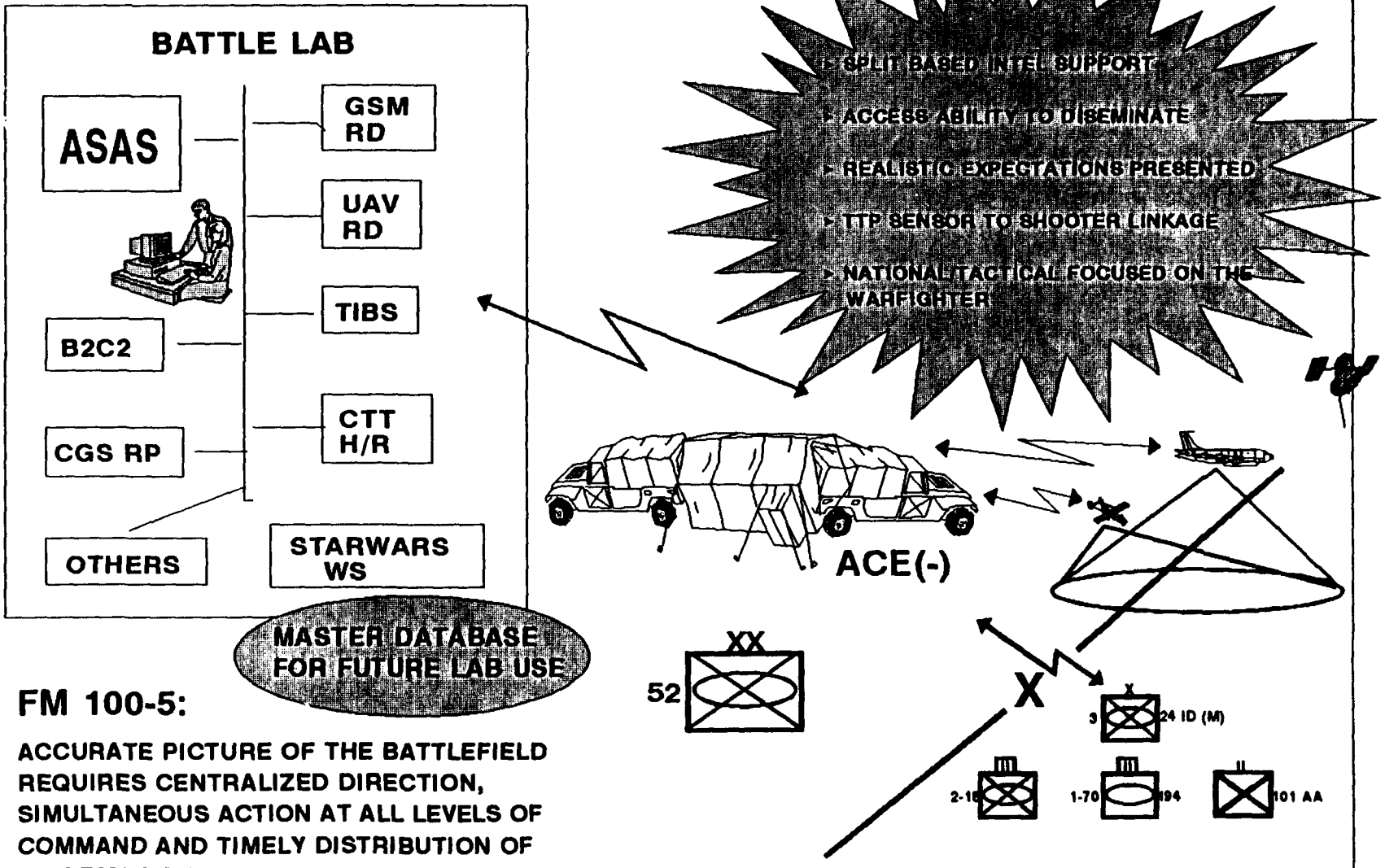
# OPERATION DESERT CAPTURE II

## DIVISION (-)



# OPERATION DESERT CAPTURE II

## DIVISION & ABOVE



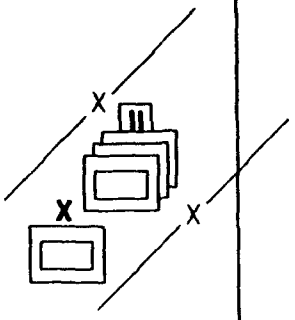

**FM 100-5:**

**ACCURATE PICTURE OF THE BATTLEFIELD REQUIRES CENTRALIZED DIRECTION, SIMULTANEOUS ACTION AT ALL LEVELS OF COMMAND AND TIMELY DISTRIBUTION OF INFORMATION**

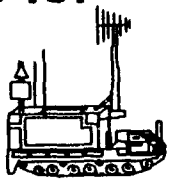
# OPERATION DESERT CAPTURE II

## LAM ISSUES

- Develop and deliver a Common Enemy Picture.




- Work tactics, techniques, and procedures for electronic warfare.



- Work split-based operations.

- Examine Analysis and Control Element at division and above.


- Work early entry intelligence support to 2K and 10K forces.

- Examine requirements for space resources.

# OPERATION DESERT CAPTURE II

## SEP OCT NOV DEC JAN FEB MAR APR

GOOD IDEA CUT-OFF

ASAS INTERFACE WITH B2C2

ASAS FIELD/TRNG

CPX,24 ID(M)

3BDE, 24 ID(M) VICTORY FOCUS

IVIS/GSM INTEROPERABILITY DEMO

IVIS VERSION 2.3 LOADED IN VEHICLES

IFTX-ASAS/WARRIOR/ MSE/CTT PROCESSING ARCH

AWDBS SIMULATION

B2C2 TEST WITH IVIS

TF1-70 AT VICTORY FOCUS

BCV DESIGNED

ASAS/GSM/B2C2/ IVIS DEMO

B2C2 NETT

TF 1-70 MOVES TO NTC

IFTX-ASAS/WARRIOR/ CGS/CTT COMMS ARCH

BFBL MOVES TO NTC FOR TRAIN-UP

CGS CONNECTIVITY WITH WARRIOR

2xIGSM TO 224 MI BN FIELD/NETT

NTC ROTATION 94-07

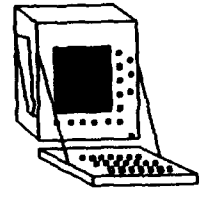
BCV FIELDED

3xIGSM TO 525 MI BDE FIELD/NETT

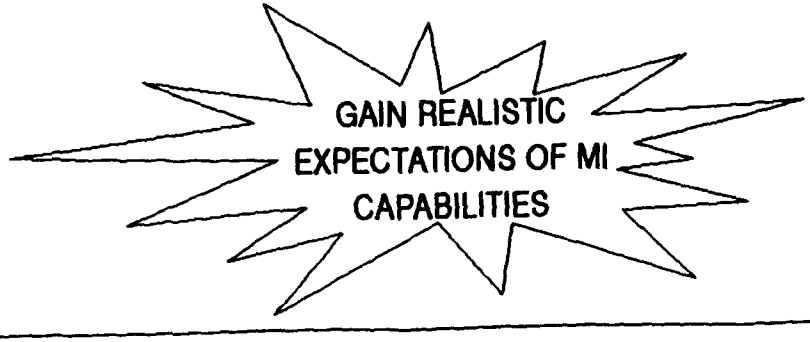
# OPERATION DESERT CAPTURE II

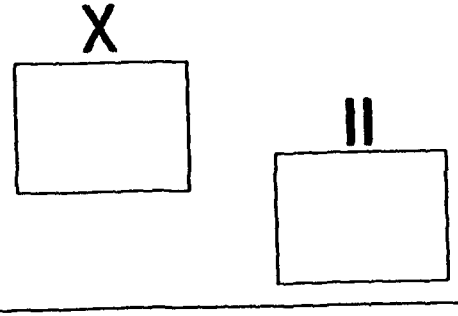
## ISSUES/IMPACTS

- RESOURCES (FORSCOM - TRADOC - HQDA)
  - FUNDS
  - PEOPLE - OC's/Operators/Assessors (FORSCOM TRADOC)
  - SYSTEMS AVAILABILITY:
    UAV/JOINT STARS/GRCS/GSMs/BCV/SIMULATIONS



- TRAINING IMPACTS
  + MINIMIZE INTERFERENCE
  + MAXIMIZE TRAINING VALUE TO UNIT (G2 S2)
- EMBED "ARMY MI CAPABILITIES" DEEPER INTO THE UNIT
- DIRECT SOLDIER INVOLVEMENT IN MI COMBAT DEVELOPMENTS

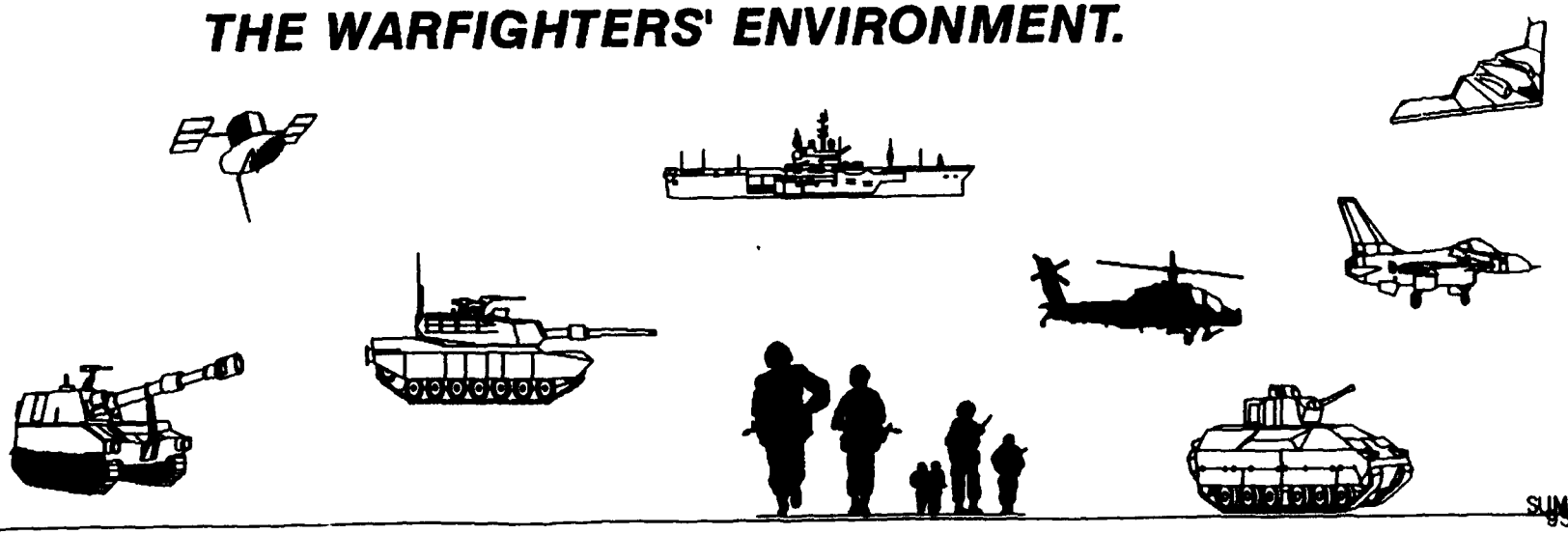


# OPERATION DESERT CAPTURE II

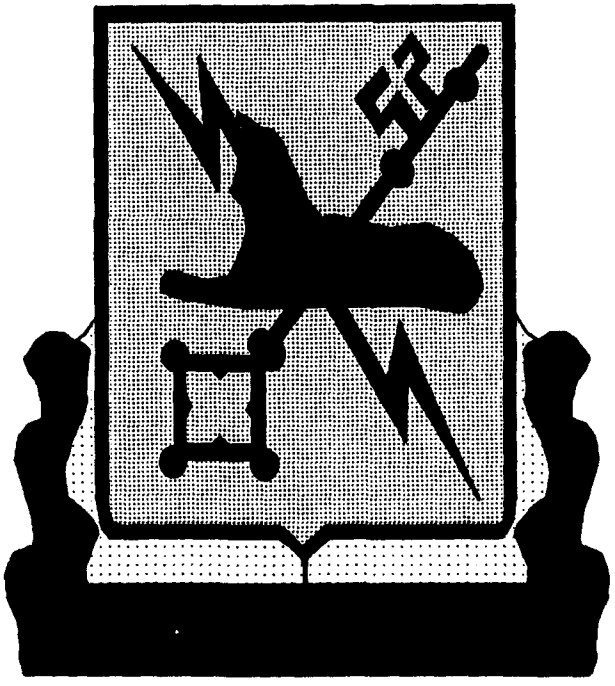
## SUMMARY

***ODC II IS PART OF THE PROCESS TO OPTIMIZE THE INTEGRATION OF IEW CAPABILITYIES INTO THE WARFIGHTERS' ENVIRONMENT.***



SUMMARY
9SEP93

# BATTLE FOCUS SUPPORT BATTLE LAB



**THE COMMANDER DRIVES INTELLIGENCE**

# WHY BATTLE LABS?

## CAUSES FOR CHANGE

CHANGE IN BATTLEFIELD DYNAMICS

POWER PROJECTION ARMY
* WIN DECISIVELY
* WIN QUICKLY
* MINIMUM CASUALTIES

REVISED PRIORITIES
* UNPREDICTABLE THREAT
* REDUCED RESOURCES
* REVISED PROCURMENT POLICIES

## WHAT HAS NOT CHANGED

MODERNIZATION REQUIREMENTS

TECHNOLOGICAL OPPORTUNITIES

ESSENCE OF CBRS

BATTLE LABS ARE A MEANS TO DEVELOP CAPABILITIES FOR A POWER PROJECTION ARMY IN THE CONTEXT OF THE NEW BATTLEFIELD DYNAMIC AND ENCOURAGES EXPERIMENTATION VIA SIMULATIONS OR VIRTUAL PROTOTYPING TO DETERMINE TECHNOLOGY INSERTIONS OR REQUIREMENTS.

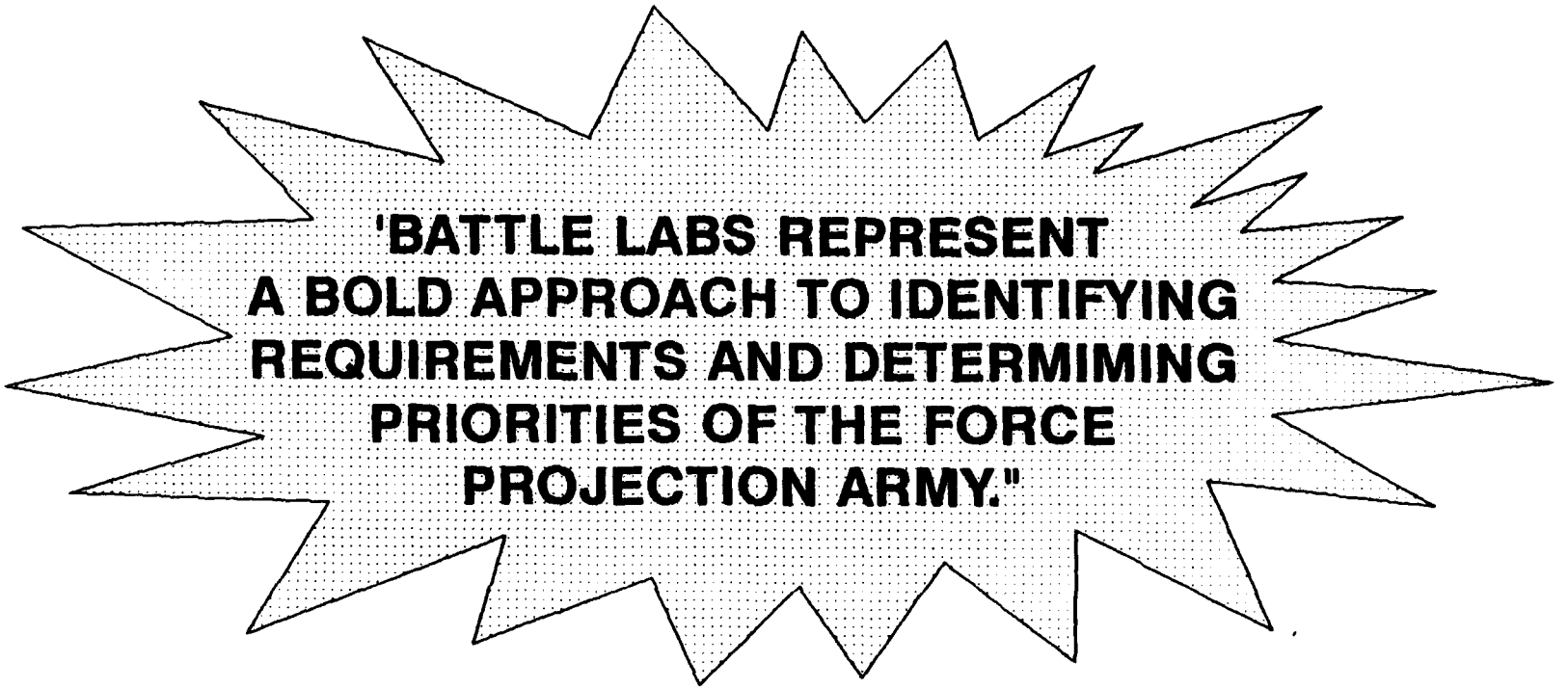
# ARMY ENTERPRISE STRATEGY

**...SEARCHING FOR FORCE MULTIPLIERS TO MAINTAIN OUR WARFIGHTING EDGE...**

**... WE WILL EXPLOIT CURRENT AND FUTURE INFORMATION TECHNOLOGIES, ADOPTING NEW SYSTEMS AND USING EXECUTION PERCISION MAKING AS A MEANS TO ADVANCE THE CAPABILITIES OF THE TOTAL ARMY FORCE.**

**GENERAL SULLIVAN, CSA**

**SUPPORT THE WARFIGHTER IN COMBAT & IN GARRISON**




**ENTERPRISE STRATEGY**

**'A NEW WAY OF DOING BUSINESS!"**

**GENERAL FRANKS**

# BATTLE FOCUS SUPPORT BATTLE LAB VISION

INSTITUTIONALIZE LAB AS ENGINE OF CHANGE:

- IDENTIFY REQUIREMENTS
- INTEGRATE IEW CAPABILITIES INTO WARFIGHTING SYSTEMS
- FOCAL POINT FOR IEW ARCHITECTURE
- ENCOURAGE INDUSTRY AND GOVERNMENT TO FEELY EXCHANGE IDEAS
- DEMONSTRATE IEW CAPABILITIES

# BATTLE FOCUS SUPPORT BATTLE LAB

## MISSION

- in support of the Primary TRADOC Battle Labs -

Identify requirements, define capabilities, and prototype advanced materiel solutions, concepts and tactics techniques and procedures to support the warfighter.

Work towards a commonality of systems, including protocols and interfaces across Army and the joint community.

Demonstrate advanced concepts of IEW support to future warfare.

# *BATTLE FOCUS SUPPORT BATTLE LAB*

## MISSION ESSENTIAL TASK LIST

* EXPLORE and INVESTIGATE current and emerging TECHNOLOGIES, CONCEPTS, TACTICS, TECHNIQUES and PROCEDURES to OPTIMIZE the INTEGRATION of IEW CAPABILITIES into WARFIGHTING systems.

* DEVELOP PROTOTYPES, INTEGRATED HORIZONTALLY and VERTICALLY to ENABLE the IEW CAPABILITY.

* DEMONSTRATE the INTEGRATED PROTOTYPE through SIMULATIONS and FIELD EXERCISES, to EXECUTE the IEW CAPABILITY as part of the WARFIGHTING system

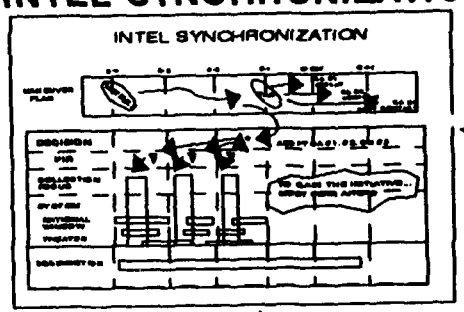
* VALIDATE and DOCUMENT the prototyped IEW CAPABILITY to HARNESS the potential of the DEMOSTRATED EFFORT.

# BATTLE FOCUS SUPPORT BATTLE LAB CHARTER

THE COMMANDER DRIVES INTELLIGENCE

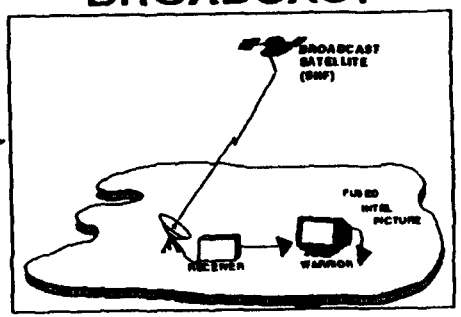
MI

**INTEL SYNCHRONIZATION**



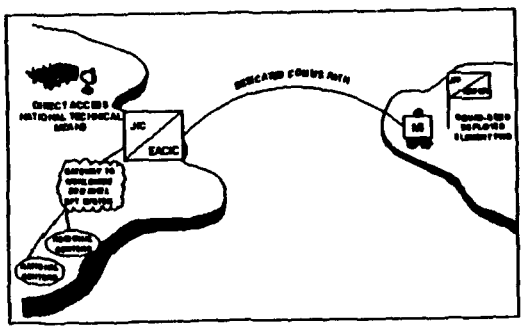

MELD W/OPNS

**BROADCAST**



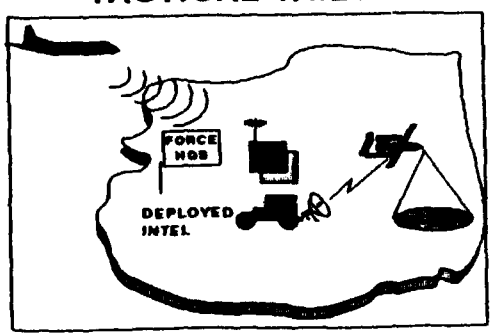

DIAL–UP...QUICK

**SPLIT-BASED**




FOCUS DOWN

**TACTICAL TAILORING**

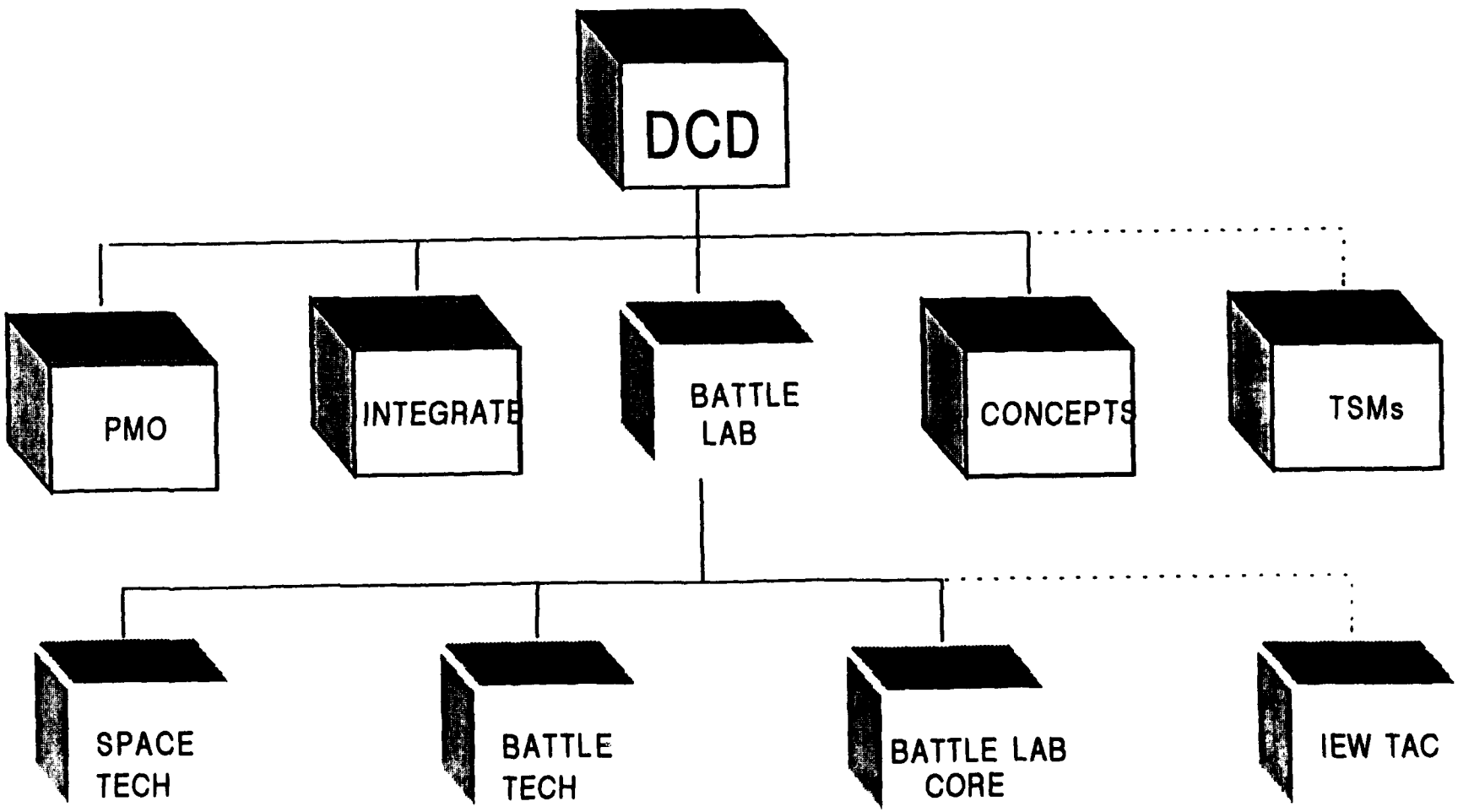



FLEXIBLE

CGCON15

# BATTLE FOCUS SUPPORT BATTLE LAB

## TDA ORGANIZATION

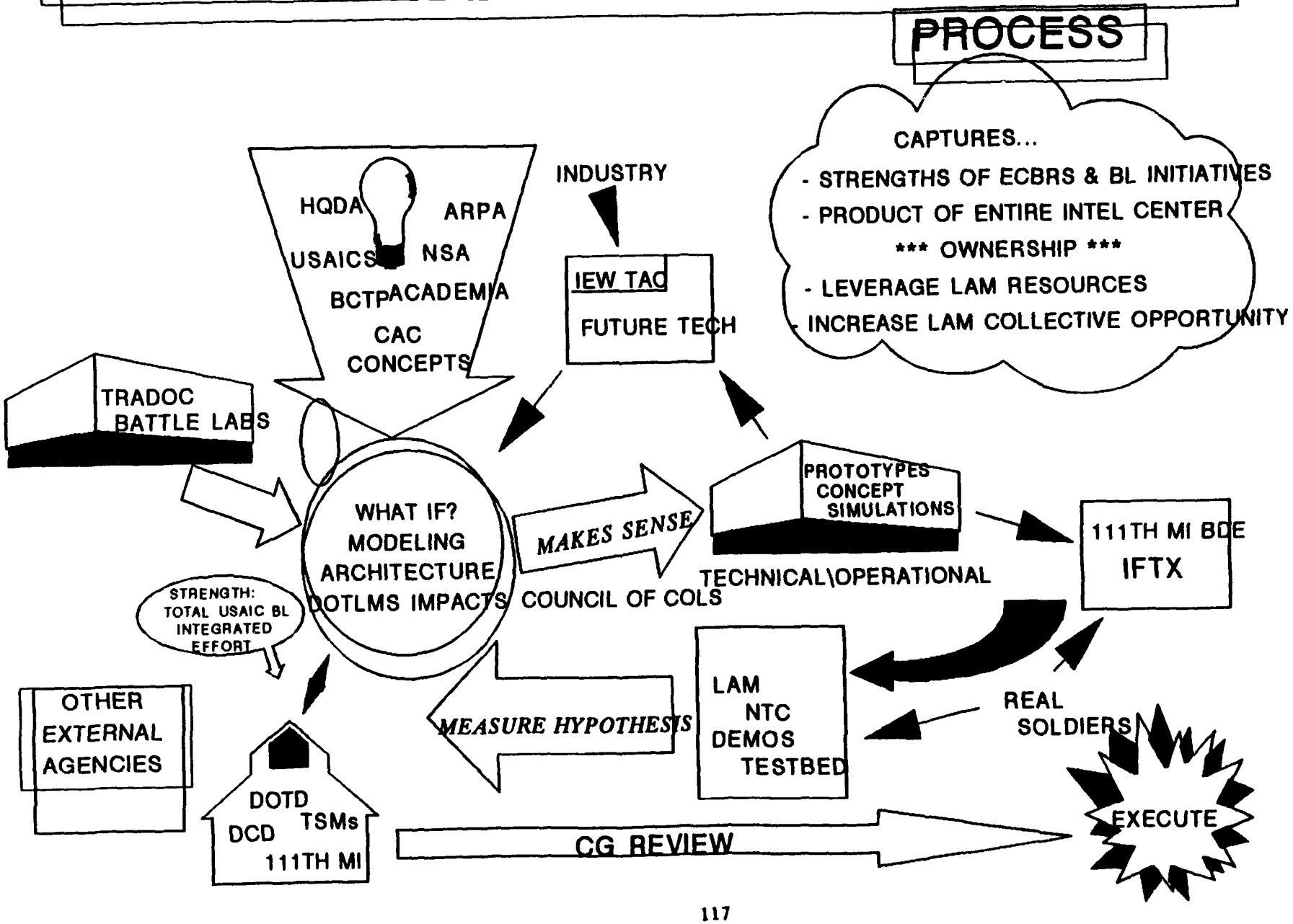


# *BATTLE FOCUS SUPPORT BATTLE LAB*

## BATTLE LAB CORE

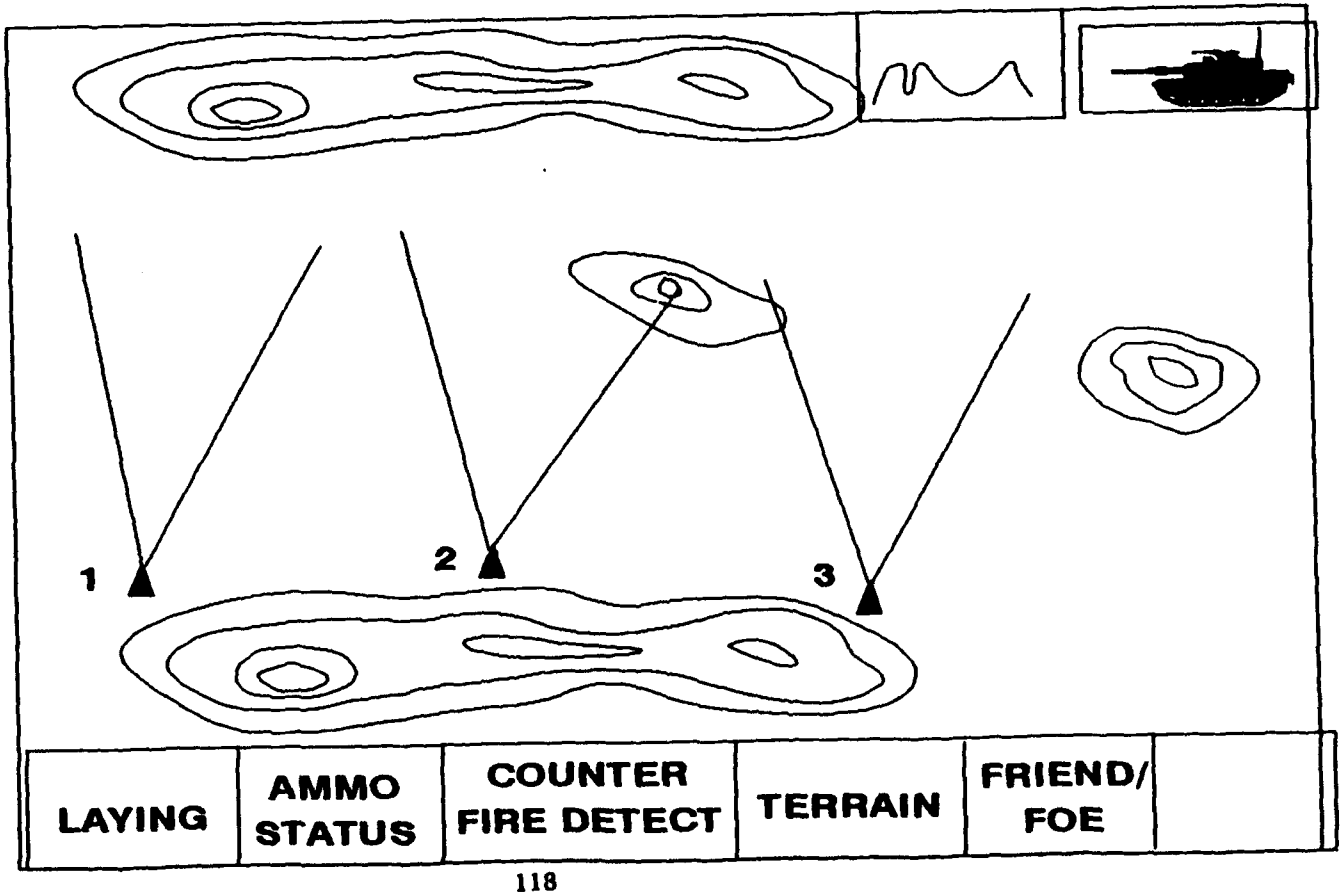
| | | |
|---|---|---|
| DIRECTOR | /08/XX | MG STEWART |
| VICE DIRECTOR | /O6/35 | COL WILLIAMSON |
| DEPUTY DIRECTOR | /05/35-53 | MAJ BROOKS |
| CONCEPTS | /GS12/00132 | MS SILVESTRI |
| MI OFFICER | /04/35 | CPT FAHEY |
| ELECTRONICS ENG | /GS-13/00855 | MR PETERS |
| LAM COOR | /W4/35 | CW4 MARTIN |
| MI OFFICER | /O4/353Y | MAJ MORTENSEN |
| COMBAT ARMS OFFICER | /04/XX | MAJ BALDERSTON |
| COMBAT ARMS OFFICER | /04/XX | CPT GATICA |
| COMBAT ARMS OFFICER | /04/XX | |
| COMBAT ARMS OFFICER | /04/XX | |
| SIGNAL OFFICER | /04/25 | CPT VEGA |
| DOCTRINE\TRAINING | /GS-12/00132 | DOTD |
| INSCOM LNO | /04/35 | MAJ CRAWFORD |
| NSA LNO | | NSA |

# BATTLE FOCUS SUPPORT BATTLE LAB



# END STATE

OPTIMIZE THE INTEGRATION OF IEW CAPABILITIES INTO THE WARFIGHTING DECISION CYCLE



# BATTLE FOCUS SUPPORT BATTLE LAB
# III CORPS ROLE

- HEAVY TEST BED (W/2D ARMORED DIV)
  - FORCE PROJECTION
    - TTP (BDE & BELOW)
    - JOINT ELECTRONIC WARFARE
    - COMMON PICTURE
    - BOTTOM UP
- EXERCISE AND DEMONSTRATION INVOLVEMENT
  - NIGHT HAWK & NIGHT STALKER
  - ASAS
    - ODC II (GUARDRAIL & IPF)
    - IMETS
    - STDN
- SENDING III CORPS GOOD IDEAS TO BATTLE LAB