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GUARDRAIL/Common Sensor System Description



GR/CS is a Corps-Level, Airborne SIGINT Collection and Location System Capable of Providing Tactical Commanders Near-Real Time Targeting Information



- Collection and Location of Threat Communications and Non-communications Emitters Throughout the Corps AO
- Near-Real Time Targeting Accuracy's
- Broadcast Dissemination From Corps Through Brigade
- Joint Collection and Dissemination

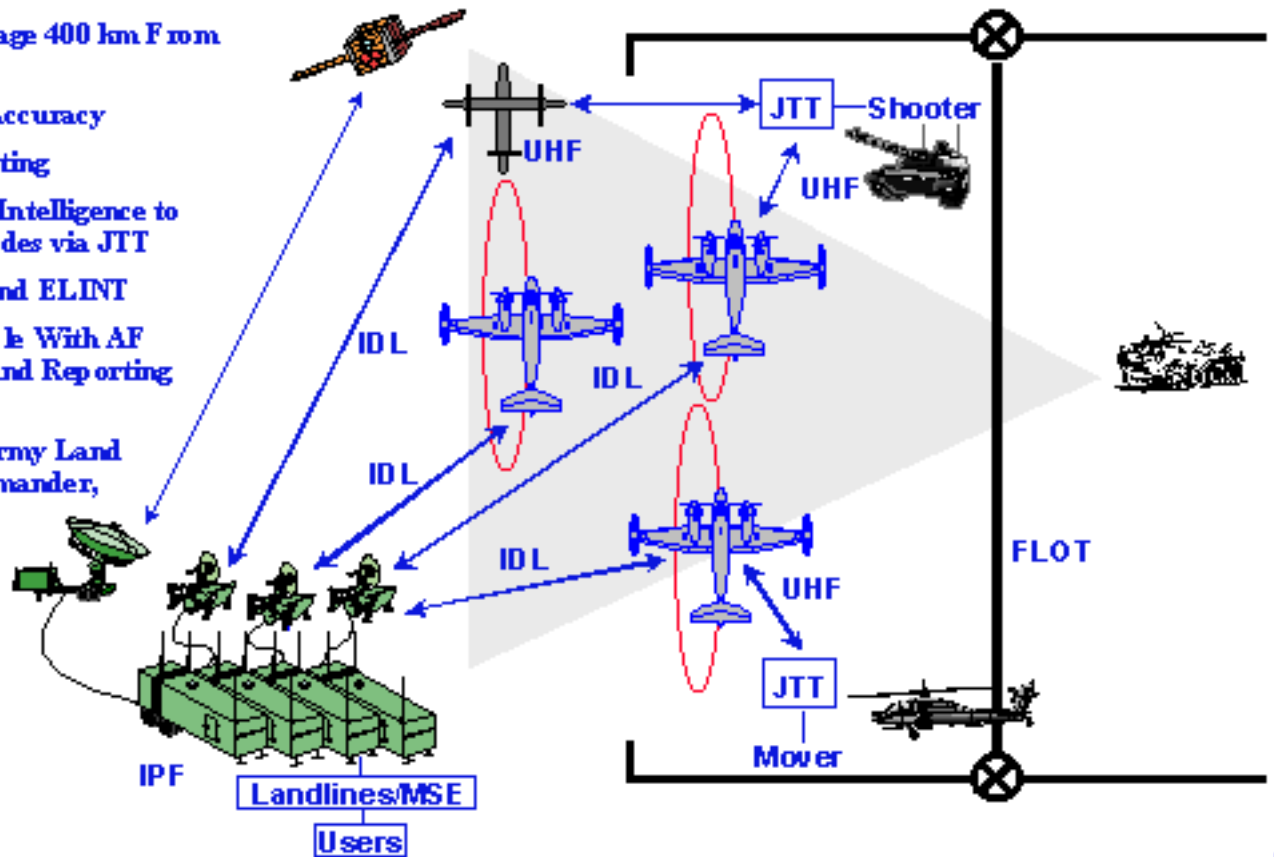
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GUARDRAIL/Common Sensor Operational Concept



- LOS Coverage 400 km From Aircraft
- Targeting Accuracy
- NRT Reporting
- Broadcasts Intelligence to Multiple Nodes via JTT
- COMINT and ELINT
- Interoperable With AF Collection and Reporting System
- Supports Army Land Force Commander, EAC



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GUARDRAIL/Common Sensor System 2 Composition



Nine (9) RC-12P Aircraft



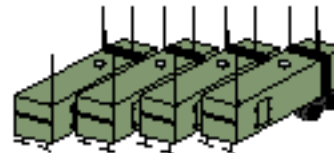
Three (3) RC-12Q Aircraft



Repeater and
Ancillary Equipment
(RAE)



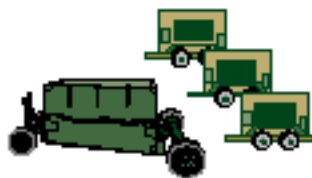
Commander's Tactical
Terminal (CTDH-3)



Four (4) Integrated Processing
Facility (IPF) Vans



Modular Interoperable
Surface Terminal
(MIST)



Power Plant Electric (PPE)



Maintenance and
Storage Vans



One (1) Mobile
Maintenance Van (MMV)



SATCOM Terminal
(TMET)

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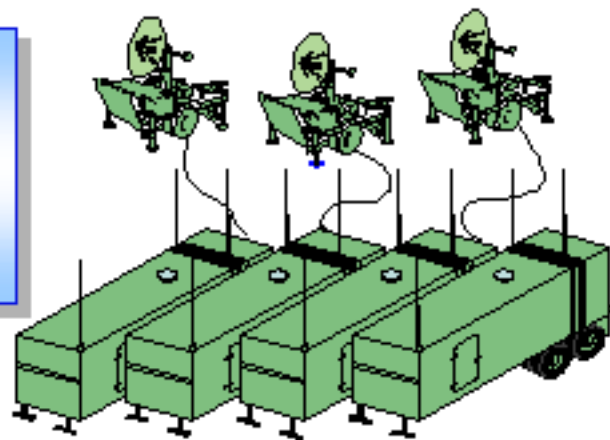
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GUARDRAIL/Common Sensor Integrated Processing Facility System 1 & 2



- Interoperable Data Links
- ARF-IPF Link
- Carries TRIXS Net
- 8' x 36' Trailers
- Removable Boggies
- C130 Transportable



ARF Control
Analysis and
Reporting

- Data Link
- Data Distribution System
- DF Processor
- 1 Reconfigurable Workstation *

- Mainframe Computers (2)
- 6 Reconfigurable Workstations *

- 9 Reconfigurable Workstations *

* ELINT, COMINT and Precision Location

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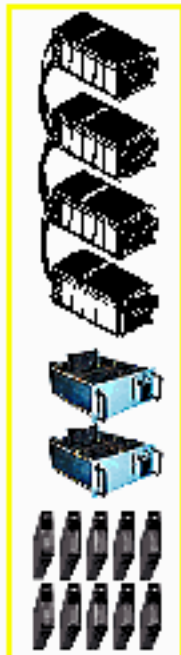


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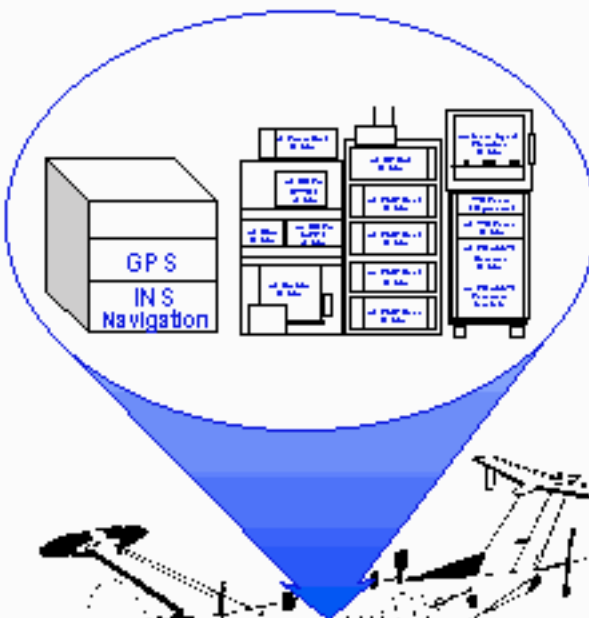
System 2 ARF Subsystem



Data Link



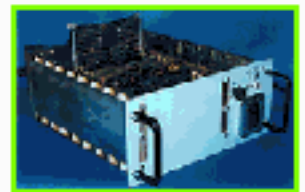
COMINT



Joint Tactical Terminals (JTT)



ELINT (AQL)



Precision Location (CHALS-X)

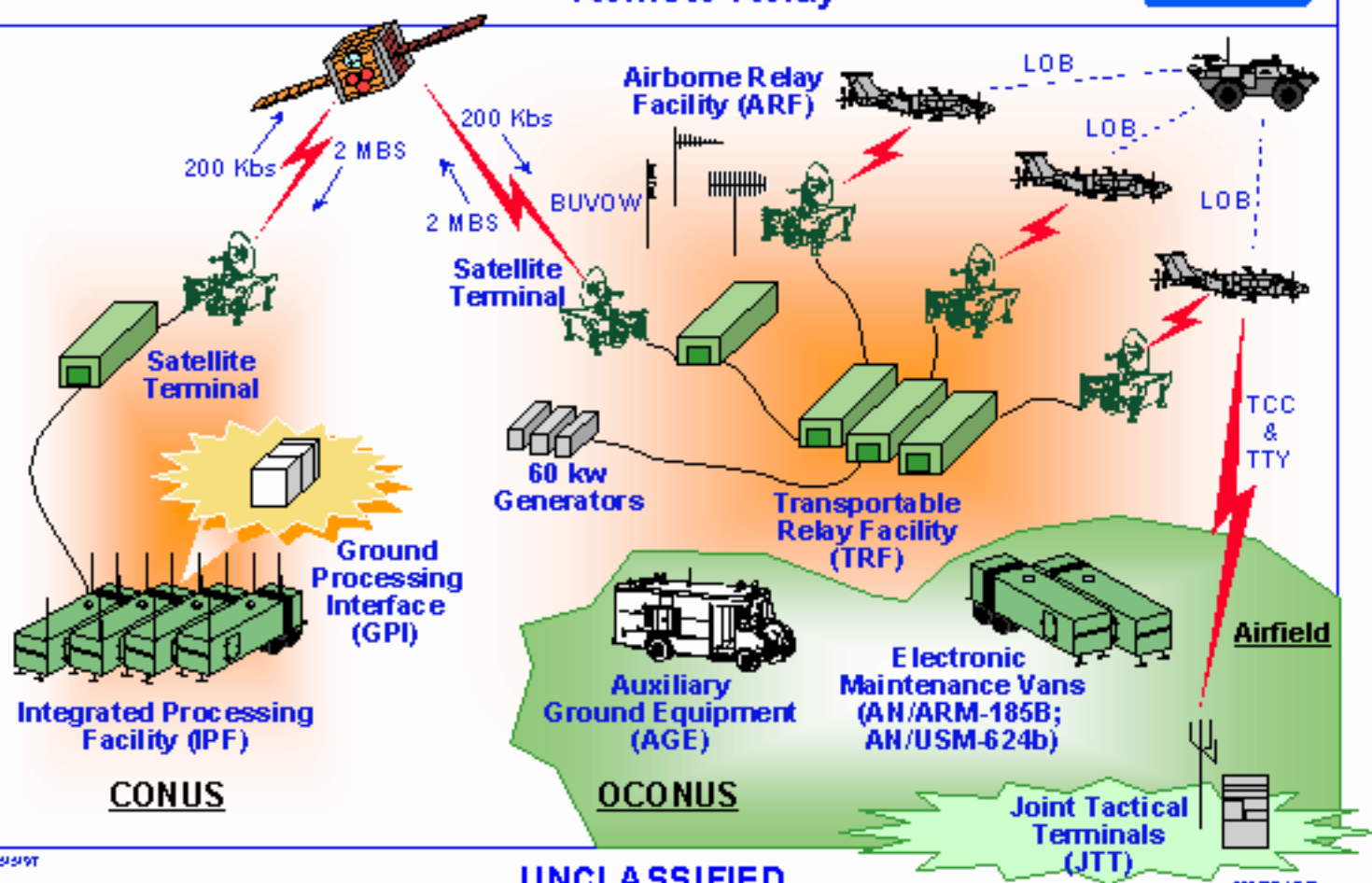


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GUARDRAIL/Common Sensor System 1 Remote Relay



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GUARDRAIL/Common Sensor
Direct Air-to-Satellite Relay (DASR)
Platform RC-12Q



**First DoD Class 5 Air-to-Air and
Air-to-Satellite Relay System**

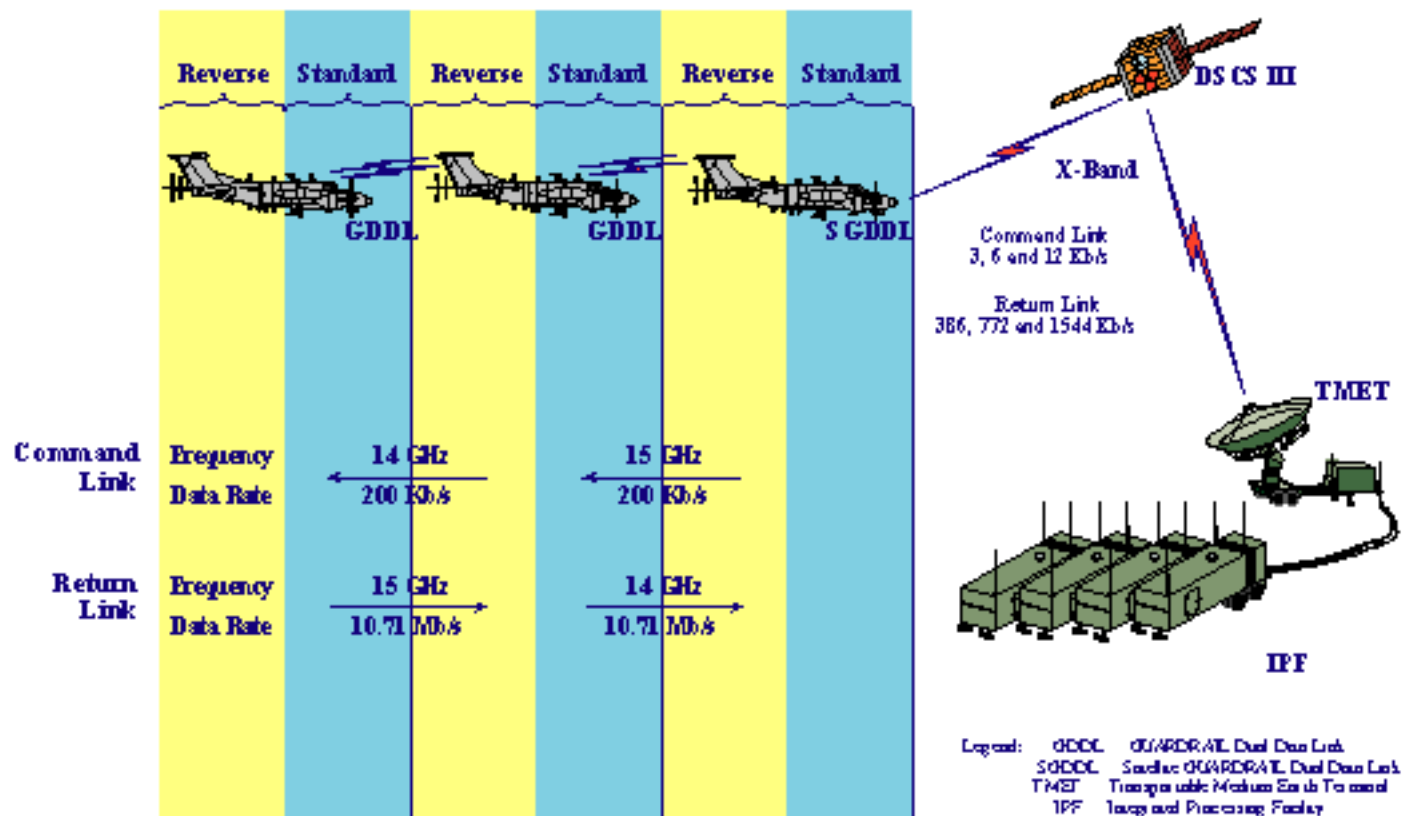
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GR/CS System 2

Direct Air-to-Satellite Relay (DASR)



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GUARDRAIL/Common Sensor Repeater



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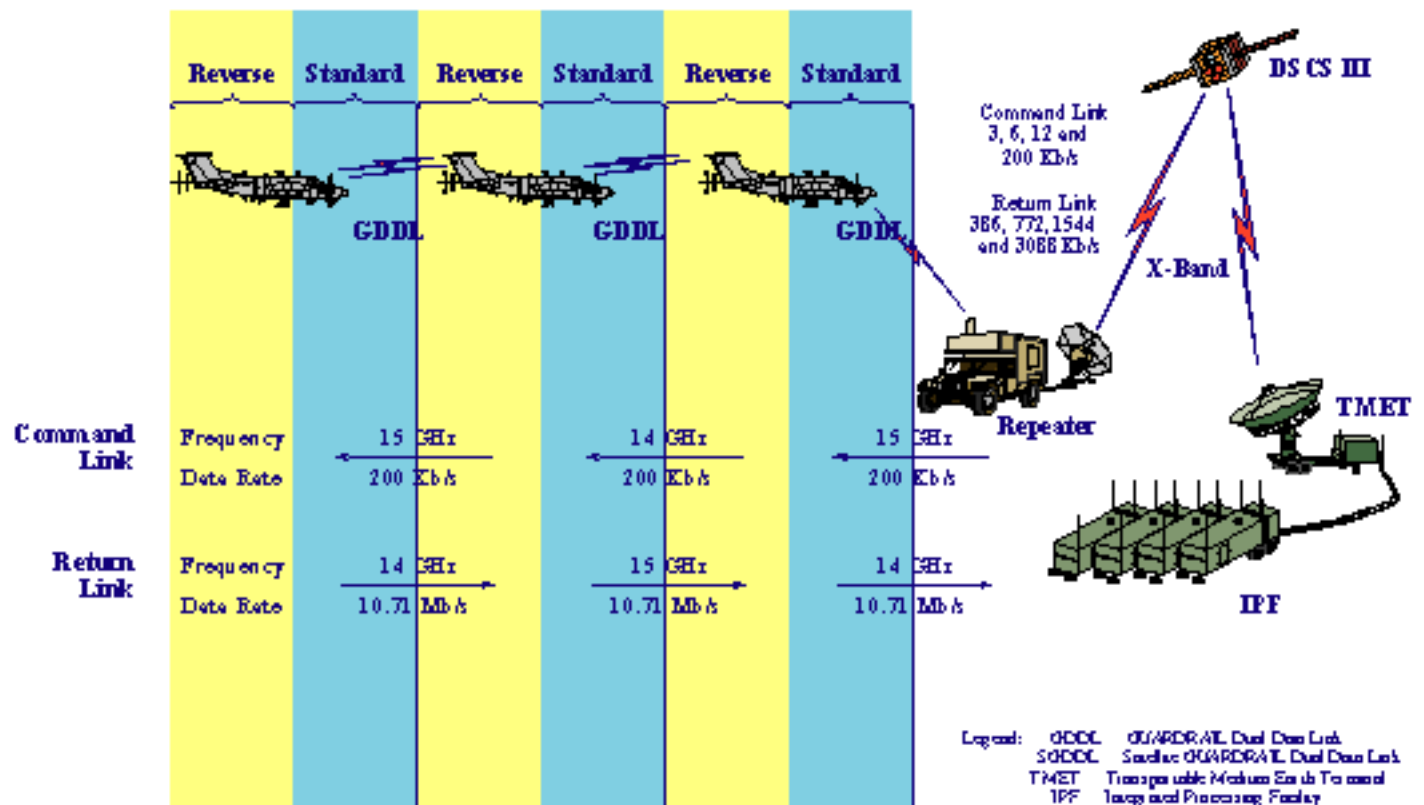
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GR/CS System 2

Repeater Air-to-Satellite Relay



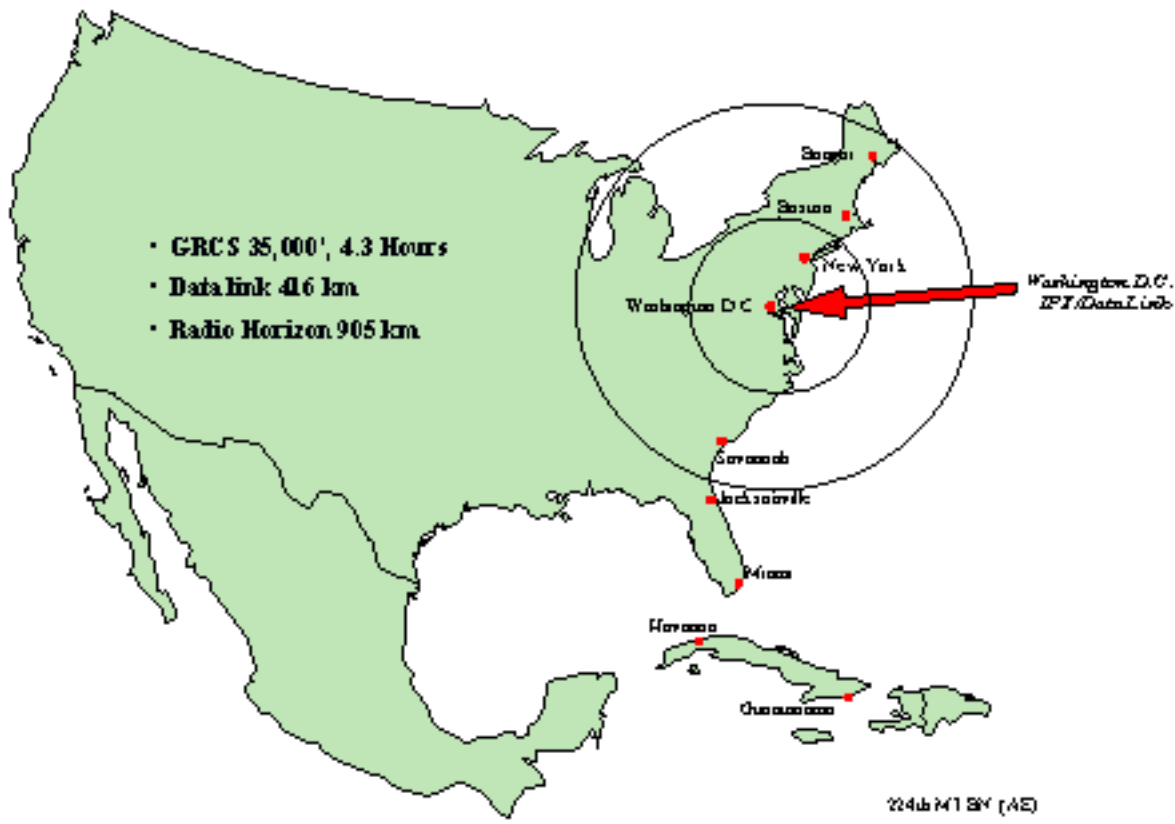
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GUARDRAIL/Common Sensor

Washington D.C. Mission Area

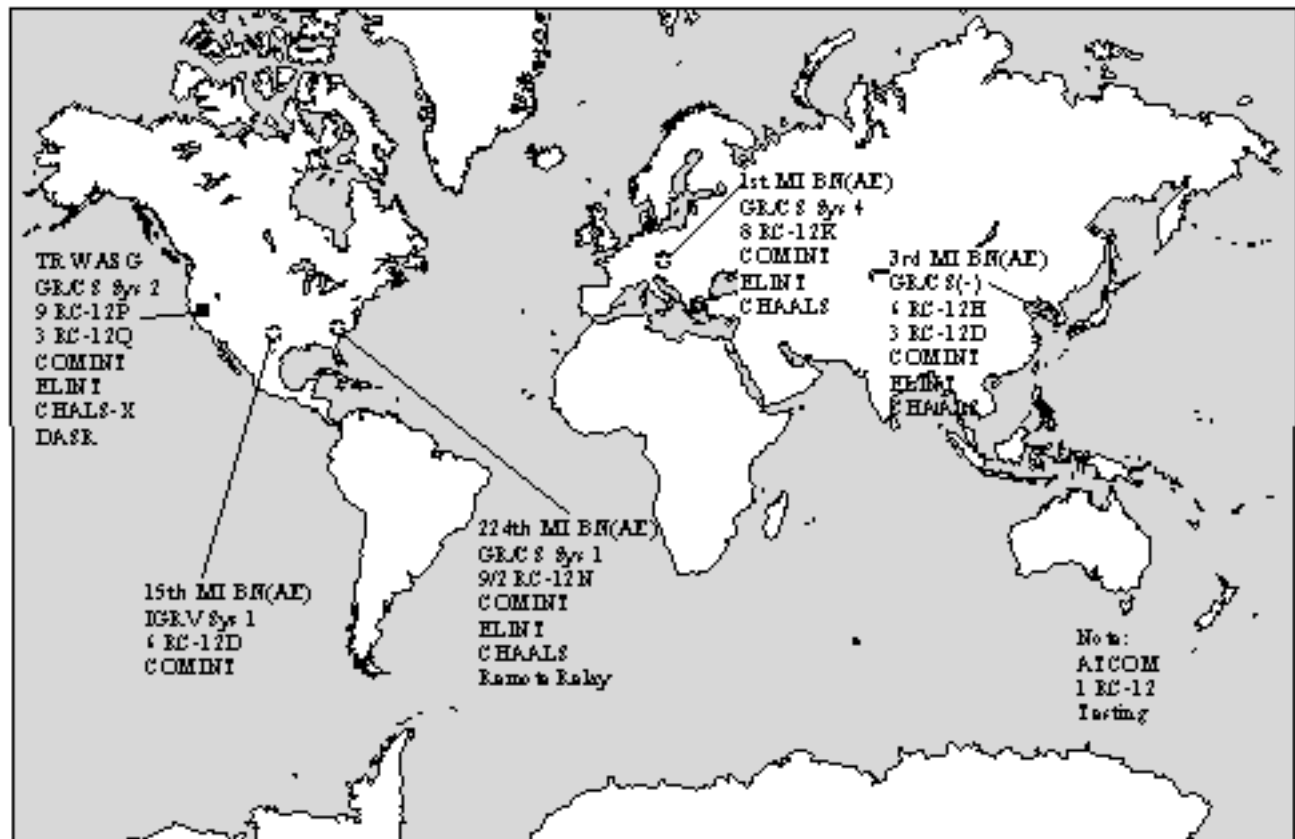


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GUARDRAIL/Common Sensor Units Worldwide



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