

**10th ICCRTS**

# **Experimentation for Combat Service Support**

**Lessons Learnt**

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# Overview

- Adaptive & Agile logistics capability integral part of network centric operations
- Experiment on transformation of mass based logistics concept to sense & respond based on-demand logistics



# Trial Hypothesis

## Key hypothesis for validation

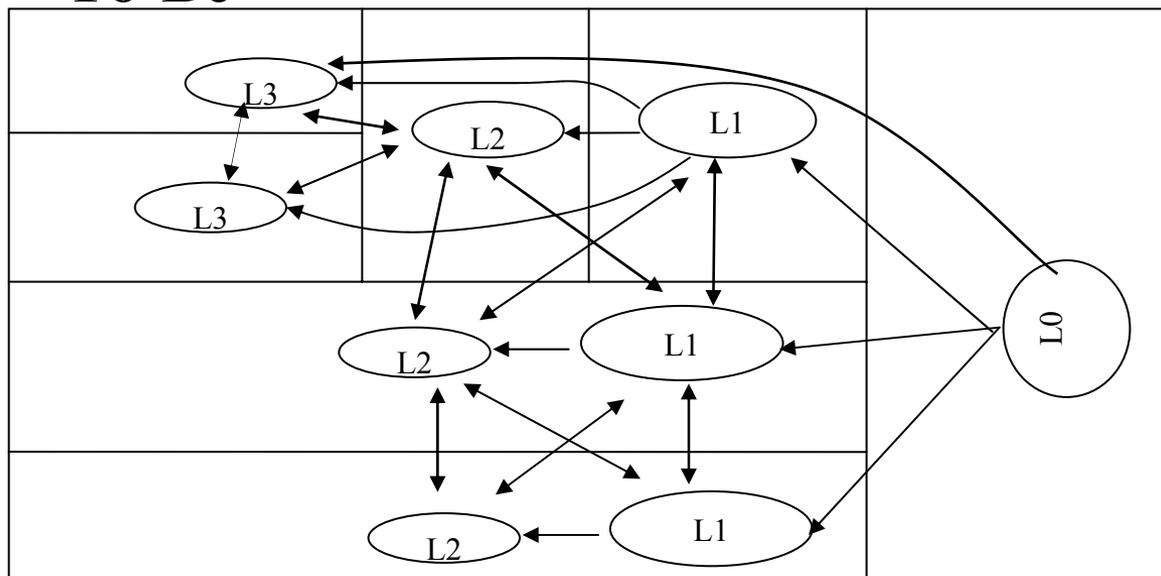
- De-layer hierarchical stovepipe logistics network and configured into a responsive distribution network
- Combatants need can be better met with customised combat configured loads
- Pervasive availability of logistics information reduces the OODA decision cycle



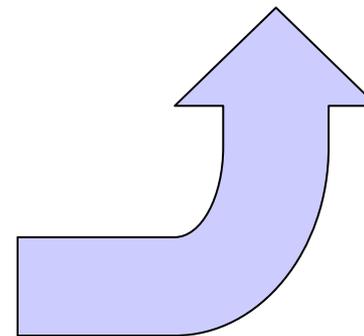
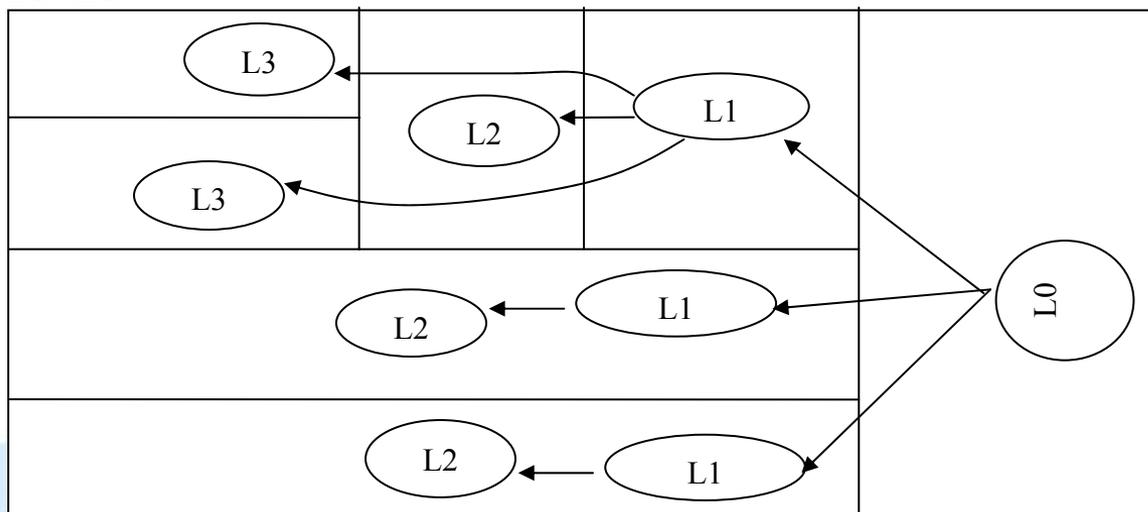
# Hypothesis #1

Network Centric Supply Operations (Information and Physical) to achieve “**Sense and Response**” capability & to enhance survivability and flexibility.

## To-Be



## As-Is



Layered Army Supply Chain



# Hypothesis #1 Results

- Units able to provide real time visibility of locations and stock status
- Units able to communicate demands
- Higher HQ able to re-direct supply units when required
- Reduction of supply footprint by 30%



# Hypothesis #2

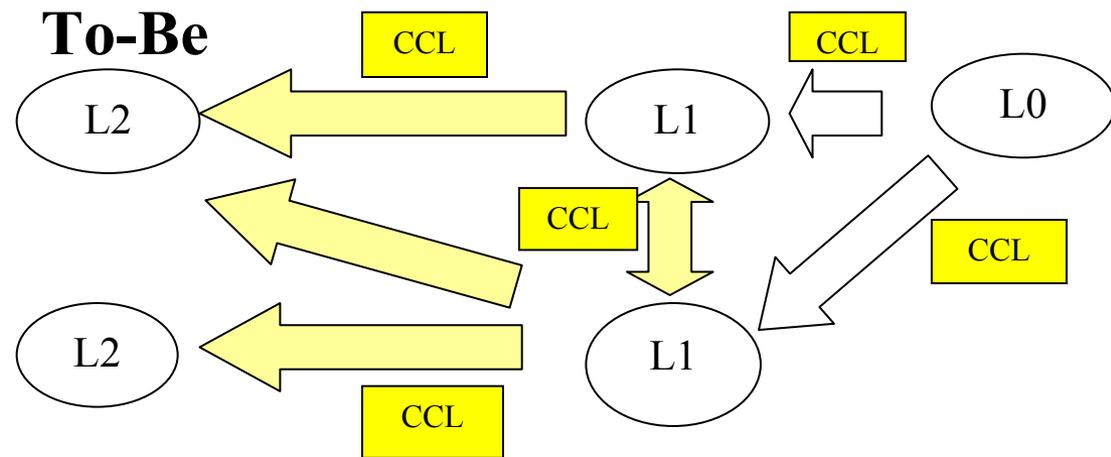
Contact Rate (CR)



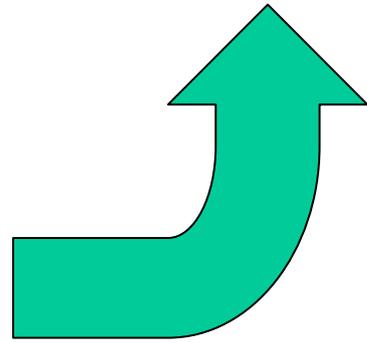
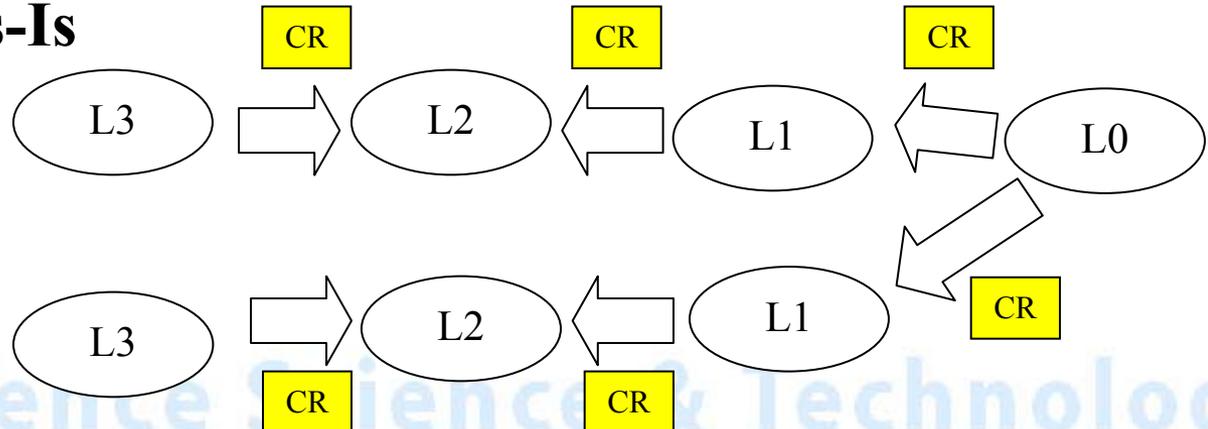
Combat Configured Load (CCL)

## Combat Configured Loads

- Eliminates 'Break bulk'
- Reduces convoy size (Survivability and Flexibility)



## As-Is





## Hypothesis #2 Results

- Higher HQ was able to configure loads to meet needs and execute re-supply
- Higher HQ can opt to push or pull supplies to the sub-units
- Reduction of break bulk activities by 60% through configured loads

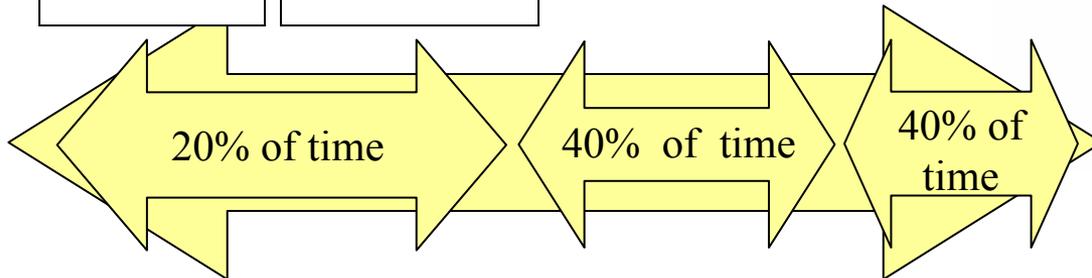
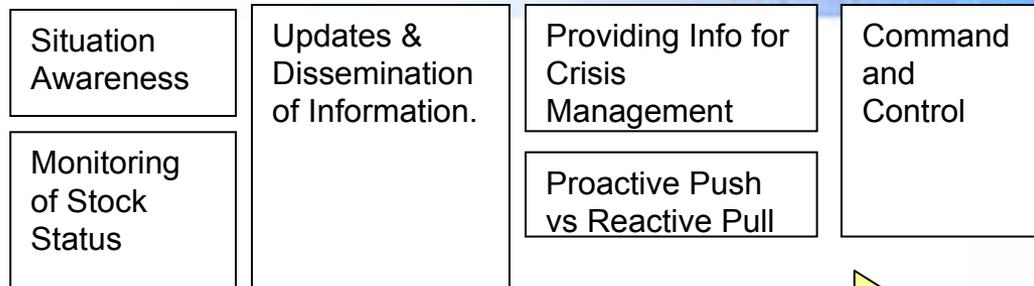


# Hypothesis #3

**To-Be**

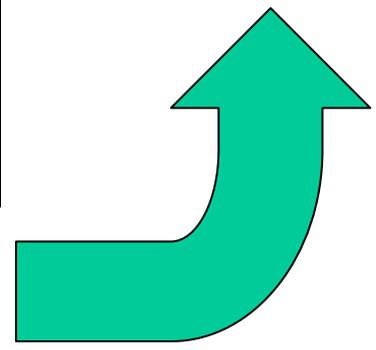
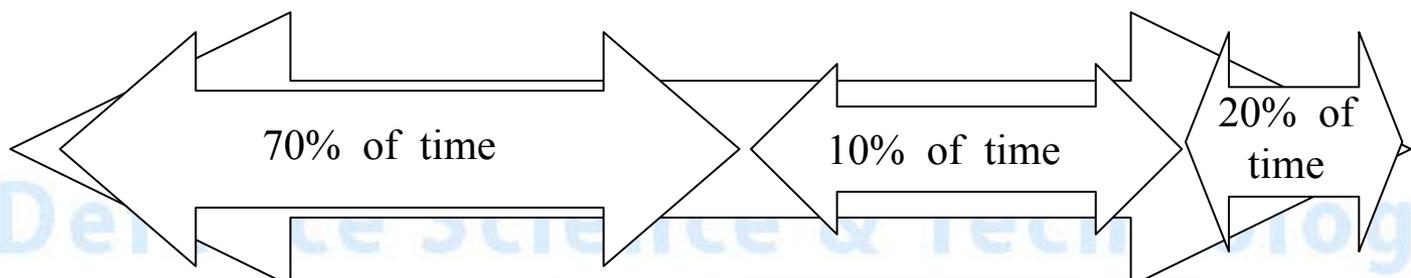
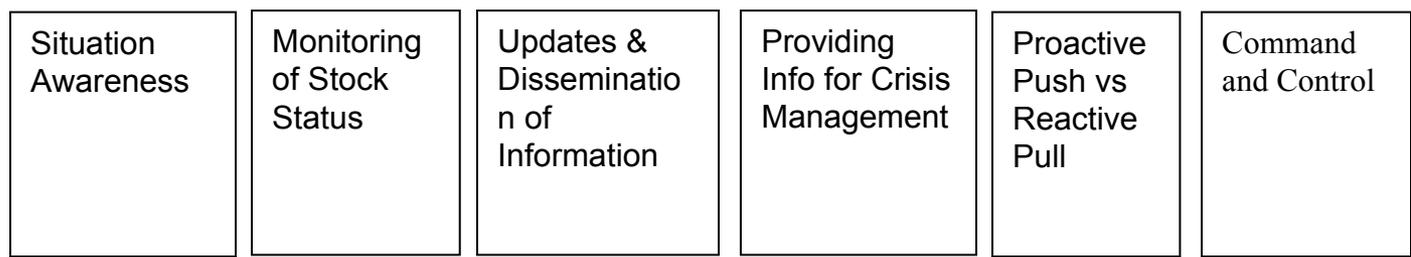
## Shorten Decision Cycle Time

- Accurate logistics command & control to enhance mission success.
- To enhance the ability of logistics command to provide timely and relevant information in support of combat and logistics decision.



← Reduction of overall time by 40% →

## As-Is





## Hypothesis #3 Results

- Higher HQ able to collate stock status instantaneously and disseminate information
- Information facilitate faster decision making to support combat operations
- Increase the reach of information dissemination by 40%



## Lessons Learnt (1/2)

- Deployment of intelligent communication server to manage adaptive point-to-point communication channels
- Key design consideration for MMI is to balance reach and richness. MMI is intuitive, easy to use and learn. One useful function is Short Message Function

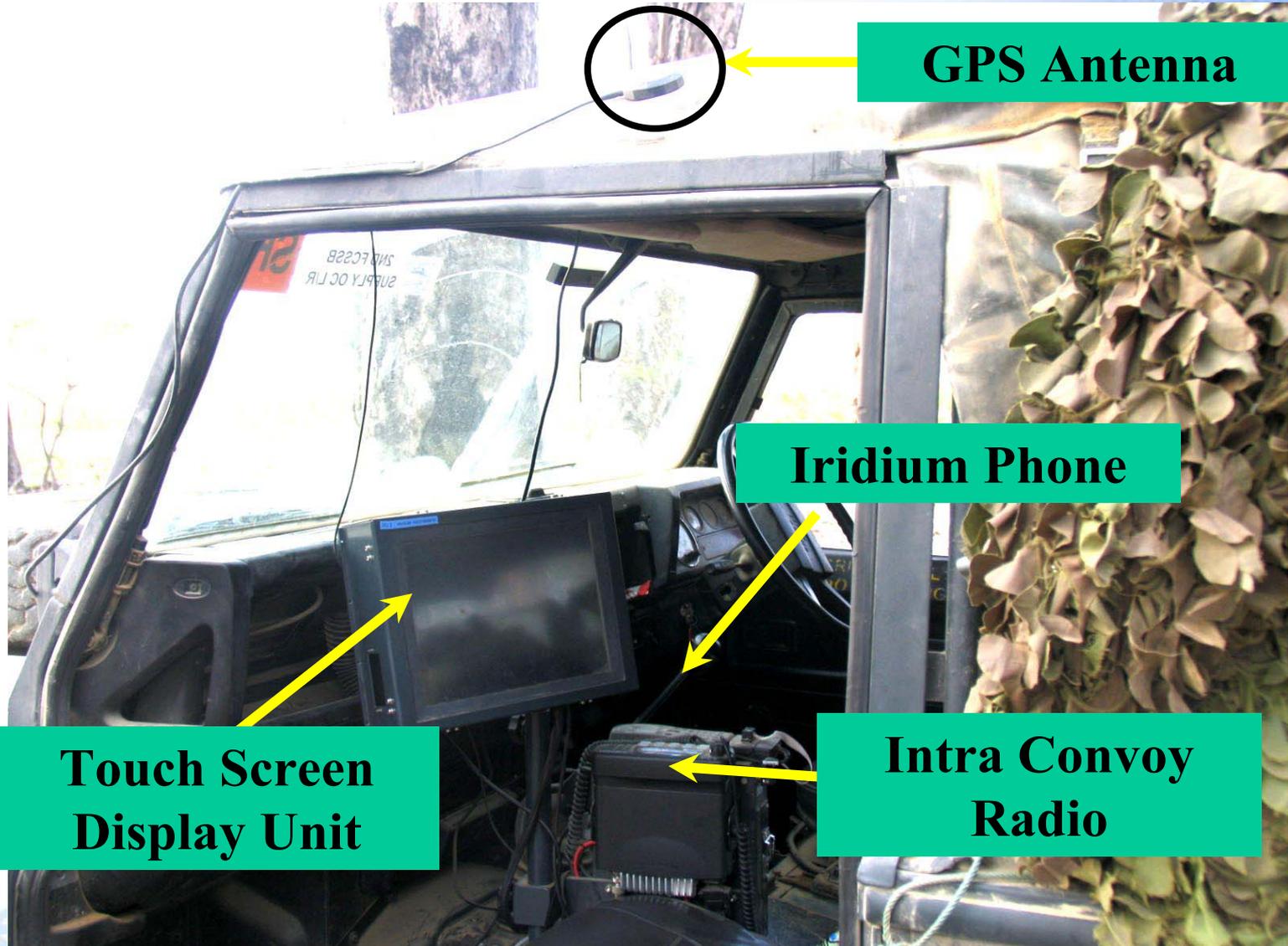


## Lessons Learnt (2/2)

- Warehouse in the field capability allows for small, dispense and agile logistics elements.
- Basic Sense & Response Logistics capabilities developed transforms logistics operation. Superior awareness improve supply velocity and reduces customer wait time.

# Trial System

# In-Vehicle-Unit



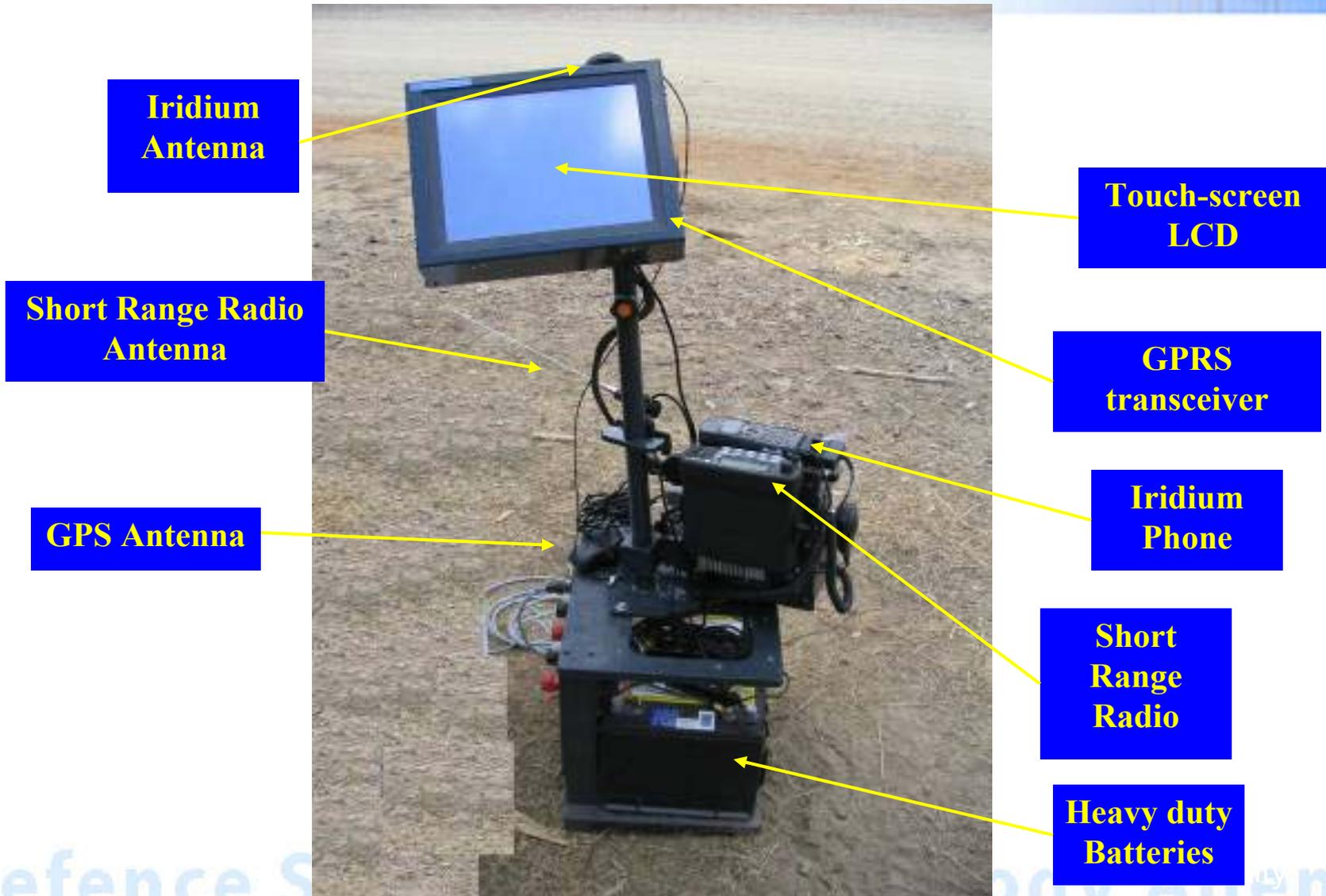
**GPS Antenna**

**Iridium Phone**

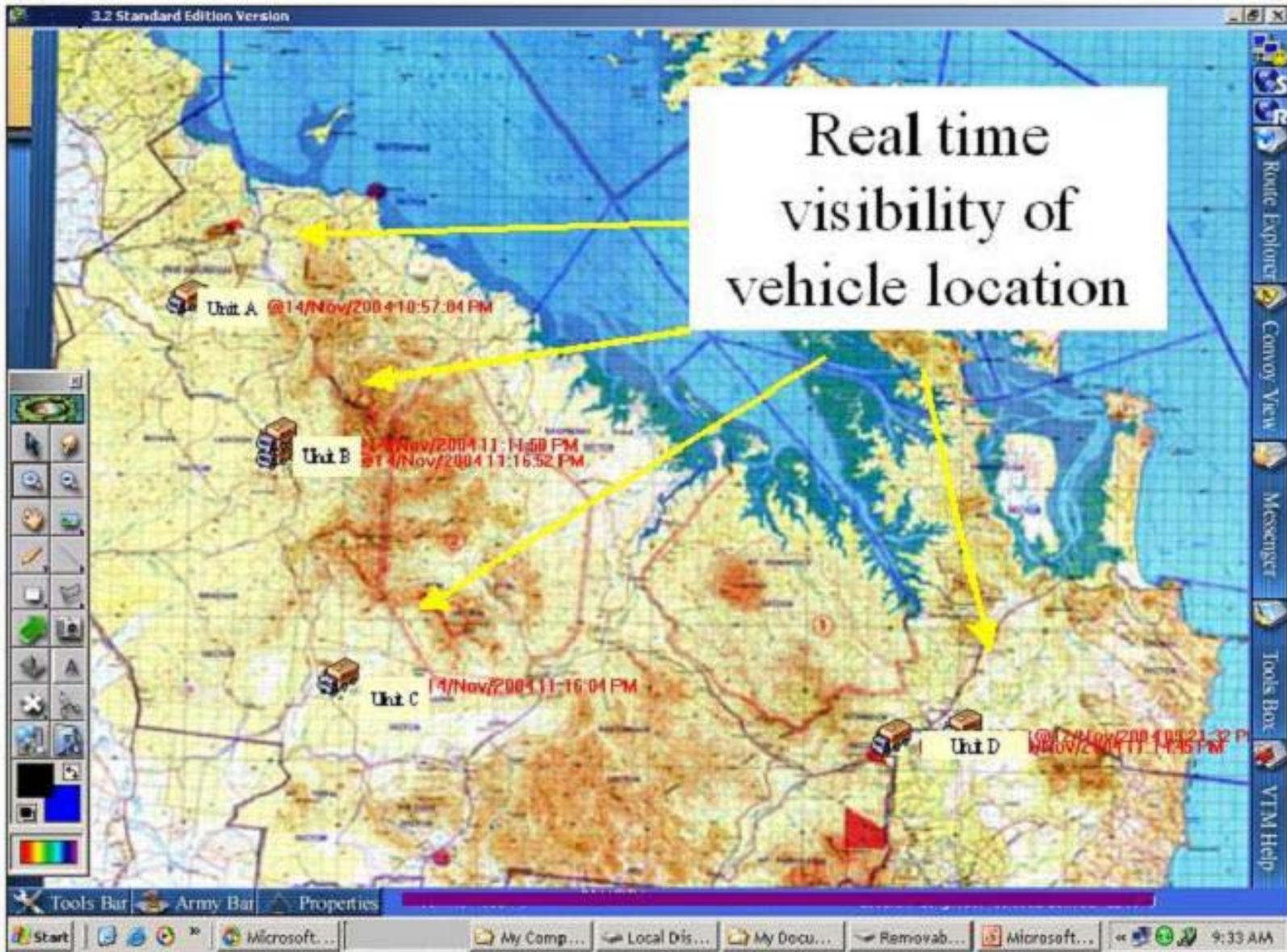
**Touch Screen  
Display Unit**

**Intra Convoy  
Radio**

# In-Vehicle-Unit



# Vehicle Tracking



# Dashboard



# Thank You

## Q & A