

RFID AND PACKAGING LESSONS LEARNED FROM THE BATTLEFIELD



Colonel Alan B. Will

5-6 April 2006



REQUIREMENT

Protect repair parts and other critical items from the harsh desert environment while tracking these items in a near real time manner from the port of entry to the user on the battlefield



CURRENT

Active RFID tags, often referred to as data rich tags, are currently being utilized. These tags require interrogator infrastructure in order for a location update and they should be recovered from the container once the container has been delivered to the customer unit on the battlefield.



PROBLEM

- Tags must be separated from container once delivery is complete
- Tag cost is between \$80 and \$110
- Tag recovery rate is 20%
- Interrogation infrastructure is difficult to maintain



DESIRED

Containers need a license plate only. The master database will have the container contents data. Passive RFID tags attached to the container will provide license plate capability. Vehicles will be equipped with satellite communications equipment with GPS capability will provide location updates. RFID tag recovery is eliminated.



FUTURE

- **Passive RFID capable printers write license plate information to the tag and various human readable information associated with the shipment on the label.**
- **Hand held passive RFID interrogators collect delivery data at unit location and transmit to master data base via satellite communications**
- **Large durable container (ISO 20') will have a permanent passive RFID license plate**