Future Tactical Truck System (FTTS)

MG Robert T. Dail
Chief of Transportation
United States Army
Strategic Landscape

• Army Transitioning to a Fighting Force
  – All the “ilities”
  – Less Support “Smaller Logistical Footprint”

• Scarce Recourses “$”
  – FCS getting the lions share
  – CSS Community paying a large price

We Must Focus Our Limited R&D Resources On High Payoff Initiatives

Nearsightedness Will Cause a Train Wreck Down the Road!
From The Army G-4

- We must challenge Defense Contractors and their engineers to design systems that meet tough requirements.
  - Self reporting
  - No vehicles that get less than 30 mpg
  - No reparables
  - No spares
  - No Systems w/o embedded diagnostics/prognostics

- Future systems must be built with ultra reliable components that require minimal preventive maintenance, and when maintenance is required repairs and services are easily and quickly performed.
  - No special tools
  - No external TMDE
  - MTBF > Duration of pulsed operations

- We may have to pay up front for such “Ultra-reliable” systems, but our future warfighting concepts depend on them. If systems don’t perform as advertised, there should be penalties.

“Significant reduction in the logistics footprint and costs will occur when reliability, maintainability, And fuel efficiency are effectively balanced with Cost, Schedule and Performance”
OBJECTIVE FORCE

FY 03
TRANSITION FROM FY03 TO OBJECTIVE FORCE

FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11

CURRENT FORCE (HET, PLS, HEMTT, M915)

M1A2SEP TANKS IN SERVICE IN FY30
REPLACE & UNIT ACTIVATIONS (ADRS)
PLS contract ends FY07
HEMTT funding linked to ESP

OBJECTIVE FORCE

RDT&E

FTTS
MANEUVER SUSTAINMENT UTILITY

INTERIM FORCE (HEMTT-LHS, FMTV, HMMWV)

HEMTT ESP contract ends FY07
FMTV contract ends FY08
HMMWV contract ends FY07

GOAL: REDUCE MEDIUM & HEAVY FLEET TO ONE

Where we Focus our R&D $ is Critical
The Need for FTTS

**Transformational Changes**
- Deployable
- Responsive
- Versatile
- Agile
- Survivable
- Sustainable
- Lethal

**Deployability**
- SBCT CoC Transportability Findings:
  - >5 hrs to remove/Install S280 Shelters
  - >1 hr to remove/install ring mounts
  - Added an additional 45 Light Cranes (MHE)
  - 144 TWVs required MHE for C-130
  - Long RSOI times
  - TWVs C-130 deployable w/o loads

**Theme: “Reduced Logistics Footprint”**

**Responsiveness**
- Current TWVs:
  - Less than 10% have Comms Capability
  - Average range is 300 miles w/o refueling

**FTTS:**
- Imbedded C4ISR will provide 100% Comms with the Warfighter in the UoA
- Fuel Efficiency will increase range 100-200% allowing fluid distribution over greater operational distances (600 – 900 miles) w/o increase in tank capacity

**Versatility**
- Increased Range thru fuel efficiency and dynamic movement tracking

**C-130 Roll-on/ Roll-off w/ load**
- Seamless Distribution System

- Truck Variants
- Material Handling Equipment
- Delivery Platforms
- Interface Devices

Fuel is 70% of the Logistics Burden
The Need for FTTS

Agility

Cross Country
HEMTT 16 mph
FTTS 24 mph

ROI = 50%

Survivability

HEMTT 79.5%
FTTS w/armor 84%

Faster Throughput

Sustainability

FCS / FTTS Pure Fleet

<table>
<thead>
<tr>
<th>System</th>
<th># UA Platforms</th>
<th># FSB Mechs</th>
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<tbody>
<tr>
<td>FCS</td>
<td>431</td>
<td>18</td>
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<tr>
<td>FTTS</td>
<td>U-150 MS-200</td>
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<tr>
<td>Totals</td>
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FCS w/ Current Fleet mix

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Commonality = Reduction in Log Foot Print

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* Current Fleet = (HMMWV, FMTV, HEMTT)

Analysis Supported Requirements

- ~50% improvement in cross country speeds (DADS)
- 10-46% improvements in mission speed ratings (NRMM)
- 18-36% improvement in survivability (VCAM)
- ~60% reduction in supply time (Smart Distribution)
- ~70% reduction in load reconfiguration time (Smart Distribution)
- Fuel efficiency increase 30 to 50% (further advances needed)
FTTS CONCEPTS

DESCRIPTION:
The FTTS-UV is a multi-purpose tactical truck family based upon a common chassis design.

MISSION:
Provides light TWV support to the Unit of Action (UA) and the Unit of Employment (UE) in terms of C2, system support platform, and unit mobility.

DESCRIPTION:
The FTTS-MSV is a multi-functional, multi proponent single tactical truck family based upon a common chassis design.

MISSION:
Provides direct support to Unit of Action Brigades in terms of transportation and distribution of cargo, equipment, and personnel.

Two fleets promote:
- Reduction in Logistics Footprint
- Commonality among fleets

~ 200 FTTS-MSV Per UoA

~ 150 FTTS-UV Per UoA
TWV Fleet Transformation

Source: Tactical Wheeled Vehicle Requirements Management Office

**Current Fleet:** 234,560 TWVs

**EAD Fleet:** 155,735 TWVs

Based on Current AAO

60 UAs & 18 UEs Converted by FY30

**Assumptions**

- Avg 3 UAs per yr, FY 09-30
- 1 UE Per 3 UAs up to 18 UEs
- CATK = 3 1/3 Div, drops to 2 1/3 Div in FY17.
- 3 UAs & 1 UE TWVs = Current Div. TWVs

Unquantified Future Reductions of EAD/EAC Vehicles With Implementation of Objective Force Concepts
Roll-Up

Sustainability
- Reliability - MTBF > duration of Pulsed Operations
- Maintainability - Self-reporting, no special tools, No TMDE, and No Spares

Agility
- Higher Mobility Rated Speed: 50% increase
- Must be able to go where FCS goes and bypass built up Areas to deliver support

Versatility
- Advanced Load Handling
- Interchangeable/Intermodal Operation
- On Board Power & water Generation
- Deliver integrated, common, formed Packaging

Responsiveness
- Greater Fuel Efficiency 100 - 200%
- Dynamic Movement Tracking and Re-routing
- Greater Range 600 - 900 miles
- Integrated C4ISR

Lethality

Deployability
- C130 Roll on/ Roll off w/ load
- Ready to support off the ramp Without vehicle preparation or Transportability waivers

Survivability
- Designed upfront to Provide Time Definite and Assured delivery

ORD Starting Point
### Transition Schedule

#### FTTS Schedule
- **FTTS-UV Schedule**: Currently 4 years behind FTTS-MSV with procurement funding beginning in FY12.
- **Proposed ACTD**: Can accelerate the PM’s schedule by one year.

#### Status:
- **Feb 03**: MAA/MNA
- **Apr 03**: ACTD Proposal
- **May 03**: CDD
- **Sep 03**: ICD
- **Aug 07**: CPD
- **Aug 10**: FUE (MSV)

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<tr>
<th>Phase</th>
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**Full Scale Production**
Comments