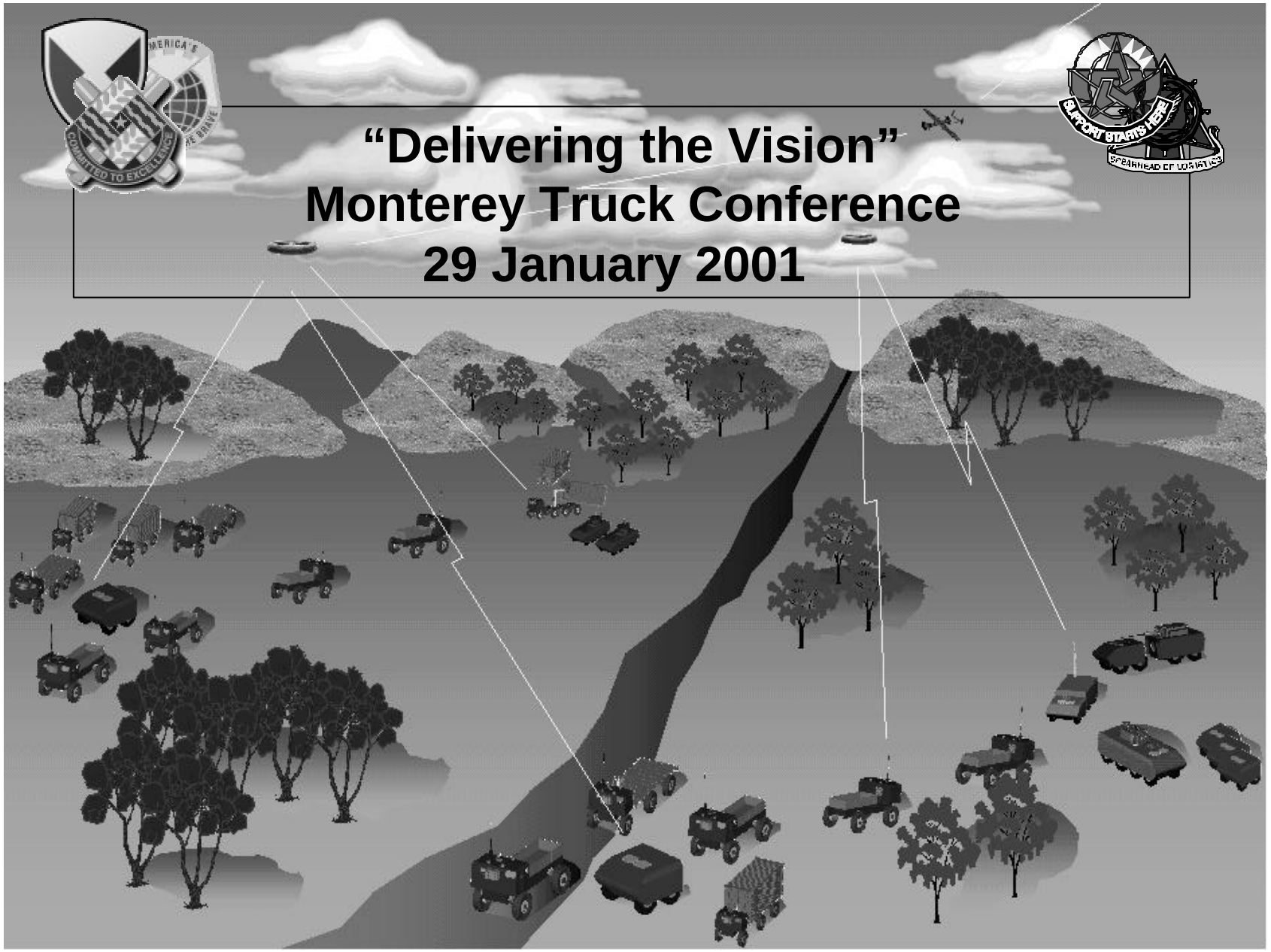
“Delivering the Vision”
Monterey Truck Conference
29 January 2001



Overview of Future Tactical Truck System - FTTS Program

- Integrated Concept Team
  - Scope
  - Objectives
  - Participants
  - Products
- Current Vehicle Concepts Overview
- Summary

FTTS Scope

- FTTS encompasses all Army TWV to include trailers/semi-trailers and shelter kits
- Initial effort will focus on heavy class
- Program will expand to other payloads as identified in future analysis

FTTS ICT Objectives

- Tie future truck requirements into FCS requirements, Objective Force Capabilities (TP 525-66), and Objective Force Operation and Organization (O&O) (TP 525-5).
- Identify concepts and technologies for FTTS unit mobility and distribution missions to support Legacy, Interim, and Objective Forces.
- Identify the optimum payload configurations.
- Explore opportunities to satisfy Joint and Coalition force requirements.
- Develop FTTS mission area and needs analysis.
- Define the analyses to support acquisition documentation - link to requirements.
- Prepare the necessary requirements documentation.

FTTS ICT Participants

- ASA(ALT)-ZCS
- DCSOPS
- DCSPRO
- DCSLOG
- HQ TRADOC
- MTMCTEA
- TWVRMO
- CASCOM
- TARDEC
- TSM-TWVM, PM LTV, FMTV, HTV, BCT and Force Projection-Enabling Systems

- NAC
- TRAC-Lee
- Test and Evaluation Coordination Office (TECO)
- Human Engineering Laboratories (HEL)
- Premier Technology Group (PTG)
- On-call core members (including DARPA, ARL, and Industry)

FTTS ICT Products

- **Draft requirements documents**
- **Draft Mission Needs Statement (MNS)**
- **Draft Operational Requirements Document (ORD) (e.g., O&O, Operational Mode Summary / Mission Profile (OMS/MP), System Training Plan (STRAP), etc.)**

Concepts for 21st Century Truck-based Tactical Vehicles (STO: # IV.F.15)

Demonstrate, through virtual prototyping, modeling, and simulation the feasibility and operational potential of advanced commercial and military technologies with application to new and existing tactical vehicles. Additionally, describe the capabilities of future tactical vehicle applications.

FTTS Concept Design Goals

Deployability

- C130J
- Rail envelopes GIC, B, AAR, British Rail gauge W5
- Meets US and NATO highway requirements
- Transport an 8’6” ISO container under a 4m overhead obstruction

Mobility

- Improved fuel economy
- Improved cross-country traversing characteristics
- Increased range

FTTS Concept Design Goals

Survivability

- Improved levels of ballistic protection
- Improved self-defense
- Improved communication

Payload

- ISO container capability (L 20’, W 8’, H 8’6” (max))
- Flatrack/LHS compatible
- All payloads - Light to Heavy
- Compatibility with existing assets

FTTS Concept Design Goals

Electronic Enablers

- Integrated Electronic Technical Manuals (IETM)
- On board diagnostics and prognostics
- Remote data collection, trend analysis, vehicle status, parts ordering
- Situational Awareness
  - Movement Tracking System, FBCB2, RF Tags, IFF and Collision Warning

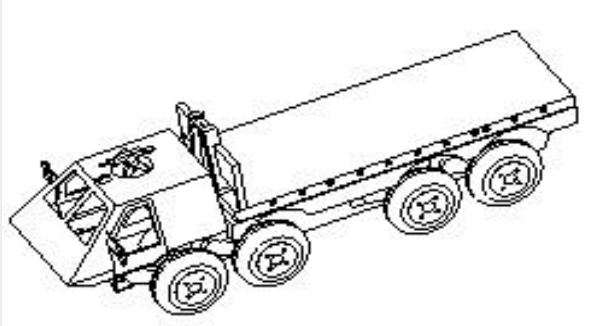
Supportability

- Improved system and subcomponent reliabilities
- Improved maintainability characteristics

Concept Technologies

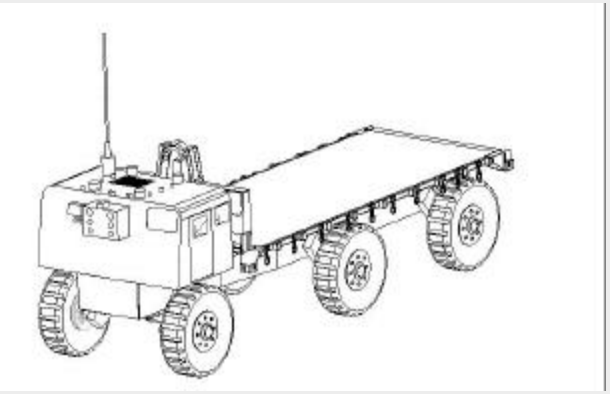
Emerging Technology Concept (ETC)

- Electronic Steering
- Hybrid Electric Drive
- Variable Height Suspension
- Advanced Diesel Engine



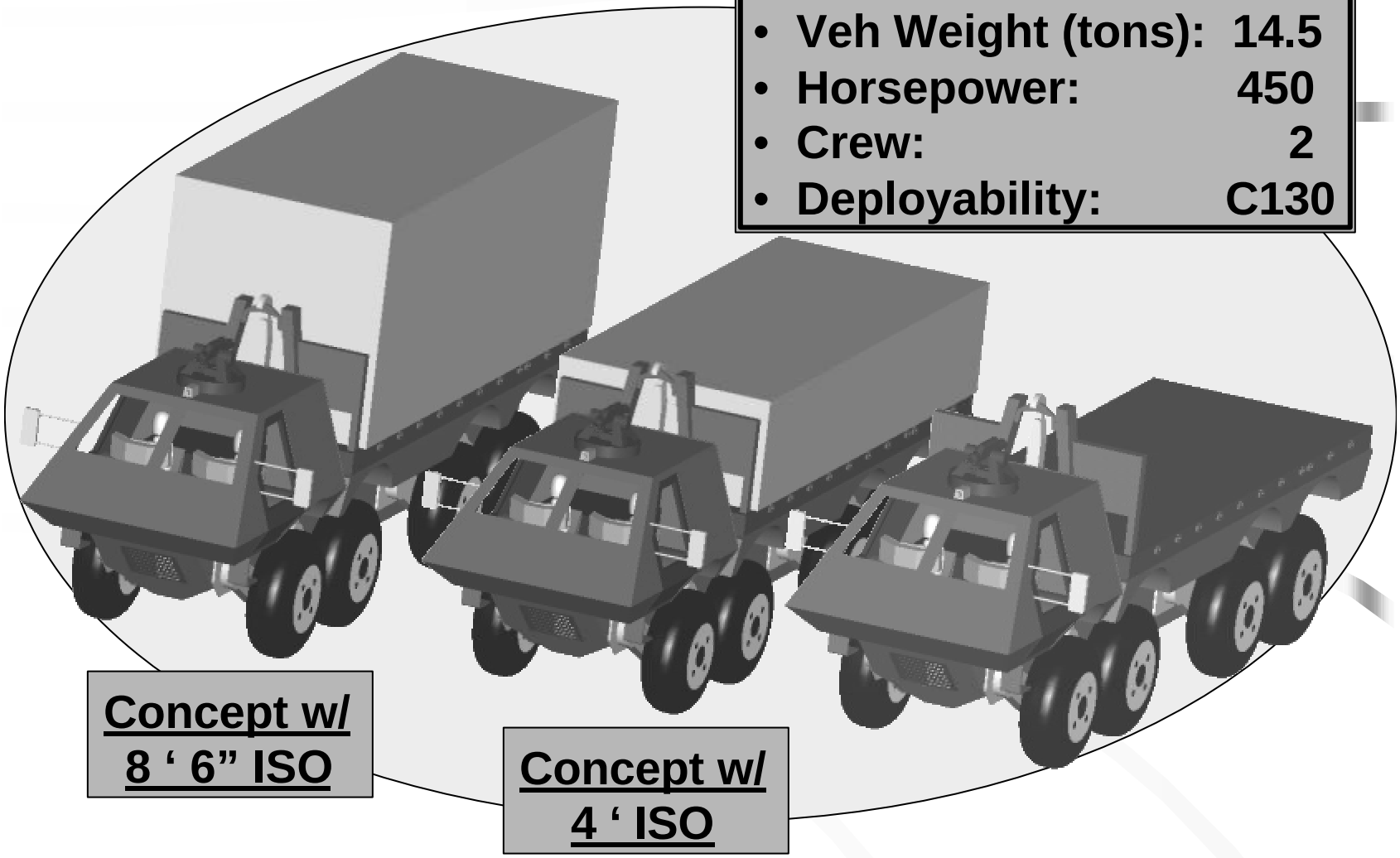
Robotic Technology Concept (RTC)

- All Electronic Steering
- Electric Drive
- Variable Height Suspension
- Leader/Follower
- Complete Autonomous Capability



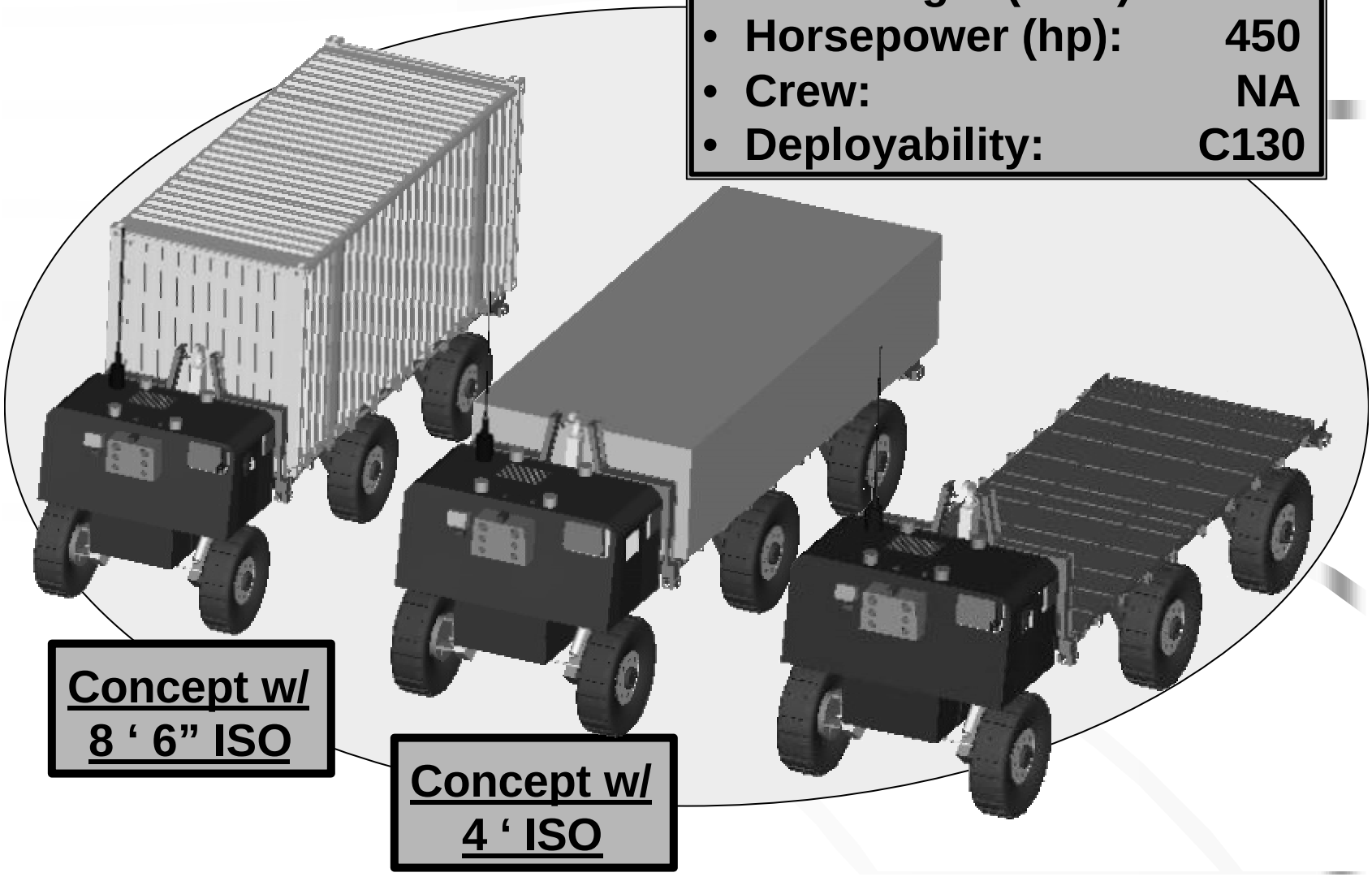
FTTS - Emerging Technology Concept

- Veh Weight (tons): 14.5
- Horsepower: 450
- Crew: 2
- Deployability: C130

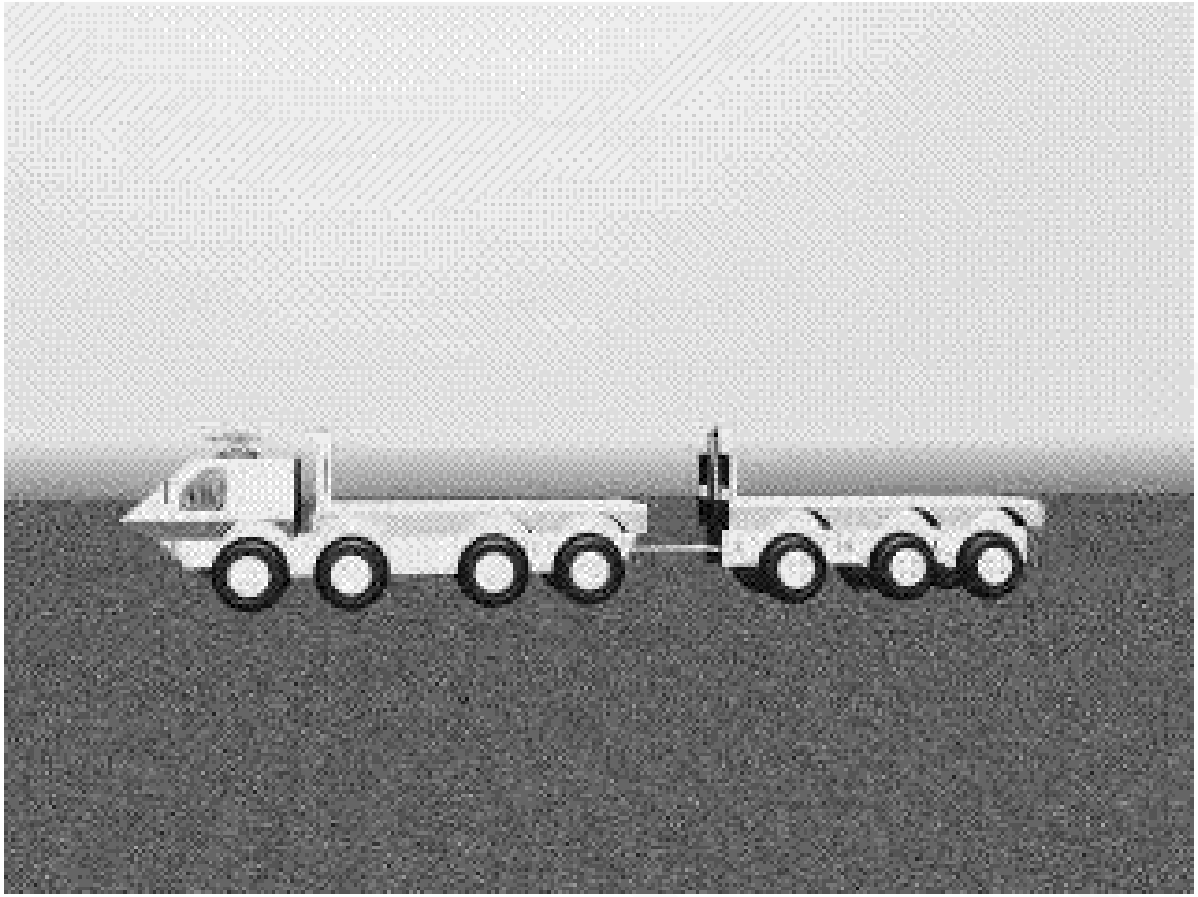


FTTS - Robotic Technology Concept

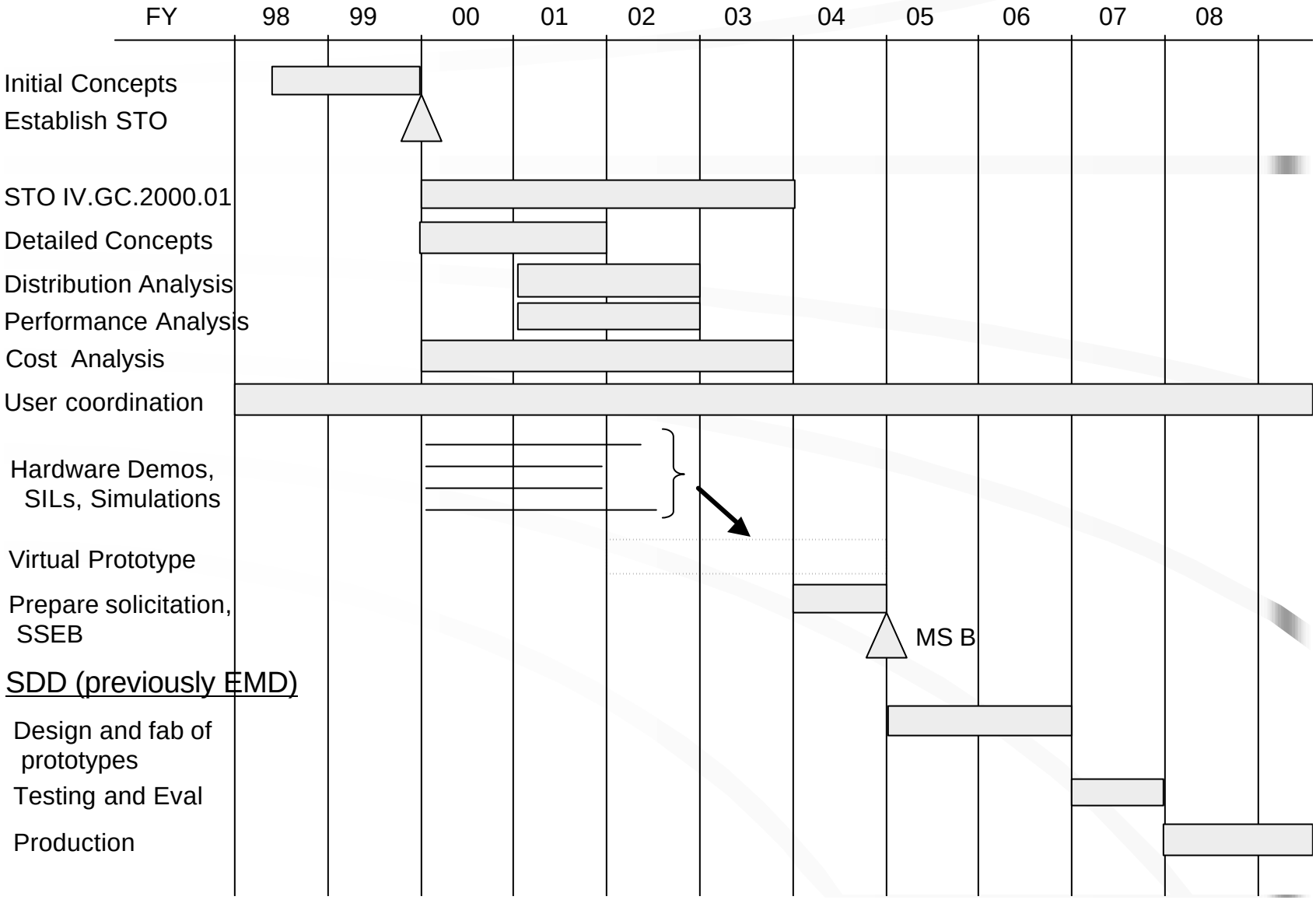
- Veh Weight (tons): 10
- Horsepower (hp): 450
- Crew: NA
- Deployability: C130



FTTS - Conceptual Animation



FTTS Acquisition Schedule



Summary

- FCS O&O - We must develop FTTS
- Tactical Wheel Fleet must support Legacy, Interim & Objective Force
- To ensure FTTS success, program participants (Gov't/Industry/Academia) must work together in a collaborative and integrated environment