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**Standard Form 298 (Rev. 8-98)**  
Prescribed by ANSI Std Z39-18
Leggat/Andrews Summit
April 2002

- Project teams directed to collaborate
MMEV TDP Project

- Core Capabilities
  - Immersive displays with SA Aids, ATR, DAS, Adaptive Camo
  - Multi-Mission Weapon System Direct, Indirect, BLOS and Air Defence
  - Unmanned Ground & Air Vehicles

- Evaluations of Candidate Technologies & Experiments:
  - Crew Performance
  - Joint Operations
  - Coalition Operations with TARDEC and ARDEC

Defence R&D Canada • R & D pour la défense Canada
MMEV Goals

- Predict battlefield effectiveness of Multi-Mission capability in Complex and Open Terrain
- Assess ability of a two and three-man crew to operate an MMEV
- Determine effectiveness of individual technologies
- Refine the Future Army model (Future Army Model Experiment 3)
- Identify cost, schedule, and risk drivers
- Explore interoperability issues and technological implications of the Future Combat Systems project
Direct MMEV Participants

CANADIAN ARMY
- Land Strategic Concepts, Doctrine, Training, Requirements, Simulation & Experimentation Center

General Dynamics Canada

DRDC Toronto

DRDC Suffield

Tank Automotive RDEC
- Future Combat Systems Recce

TTCP JSA TP1
- US, UK and Australia
- Vehicle Systems Optimization Task

Operational Research Division

DRDC Ottawa

DAR 7

DRDC Valcartier

Armaments RDEC
- Future Fire Control
- Multi-Role Munition

Ft Knox
- Doctrine Development
TARDEC Data Exchange Agreement with Canada

Overview
- TARDEC entered Soldier-Machine Interface Data Exchange Agreement with Canada in 2002
- Each group has unique approach to SMI development
- Evaluation of unique features would further each country’s development

FY03-04
- Comparison of CAT with Multi-Mission Effects Vehicle (MMEV)
- Build relevant scenarios/doctrine
- Integrate and execute scenarios

UAMBL Fort Knox Assistance
- Provided evaluation on Canadian scenario coalition doctrine
  (Scouting/engagement mission, handoff of targets, route adjustment for robots)
- Provide Soldier CAT crew for experiments
  (4 soldiers for 3 weeks in Ottawa, January, 2004)
• Begin to address joint coalition support between US and Canadian troops
• Evaluate target handoffs from CAT/ARV and Canadian MMEV
• Engage targets from handoff
• Evaluate the integration and interoperation of Canadian UGVs and ARVs
• Evaluate interoperation with Canadian Helicopters, air support is used to:
  1. Help position ARVs on the battlefield
  2. Detect targets and direct ARVs into the target area
• Evaluate the CAT/MMEV ability to work collaboratively
• Compare the performance of the MMEV SMI against CAT SMI
• Evaluate MMEV ability to receive direct and indirect fire targets from US forward observers and then engage those targets.
• Evaluate integration and interoperation of a Canadian unit working alongside an US unit with forward placed ARVs.
  - Ability to navigate and place the unmanned systems
  - Battlefield combat identification
  - Detection of targets
• Evaluate MMEV ability to work collaboratively with the US CAT vehicle.
• Compare the performance of the MMEV WMI with the CAT WMI.
• Explore command relationships between both countries.
• Address coalition support between US and Canadian troops.
TARDEC Phase I Results

Overall Interaction

49. I was never lost when operating the system.
50. Shapes and icons were helpful.
51. Color coding on the displays was helpful.
52. I was always in control of the system.

Statements
MMEV Phase II Objectives

- Explore ‘network centric’ operational concepts
  - System performance
  - Individual and crew workload
  - Situational awareness
- Evaluate the ability to interact with UAVs and UGVs
  - Effectiveness of unmanned sensor information
  - Evaluate tactics, techniques, and procedures
- Evaluate Operator-Machine Interfaces
- Evaluate in urban terrain and in Operations Other Than War
- Enhance distributed simulation experiments with coalition forces