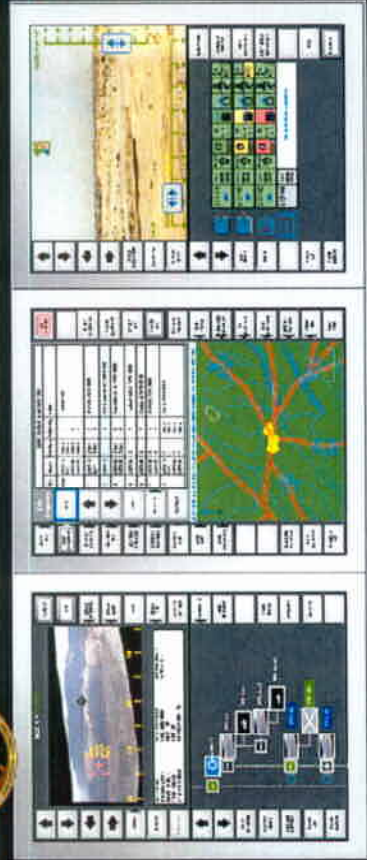




Vetronics Technology Integration



INTERACTIVE TOUCH SCREEN

OBSTACLE DETECTION

DISPLAY SUITE

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Report Documentation Page

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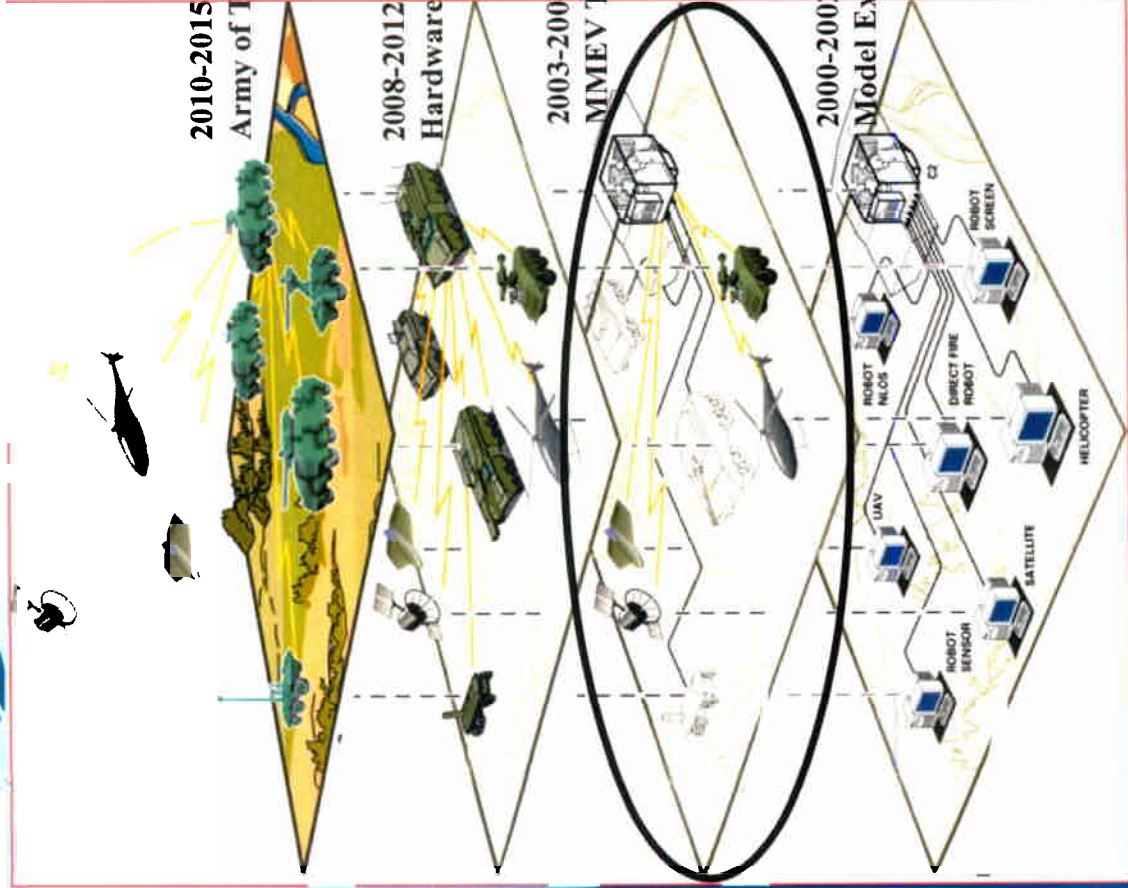
Leggat/Andrews Summit April 2002



- 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

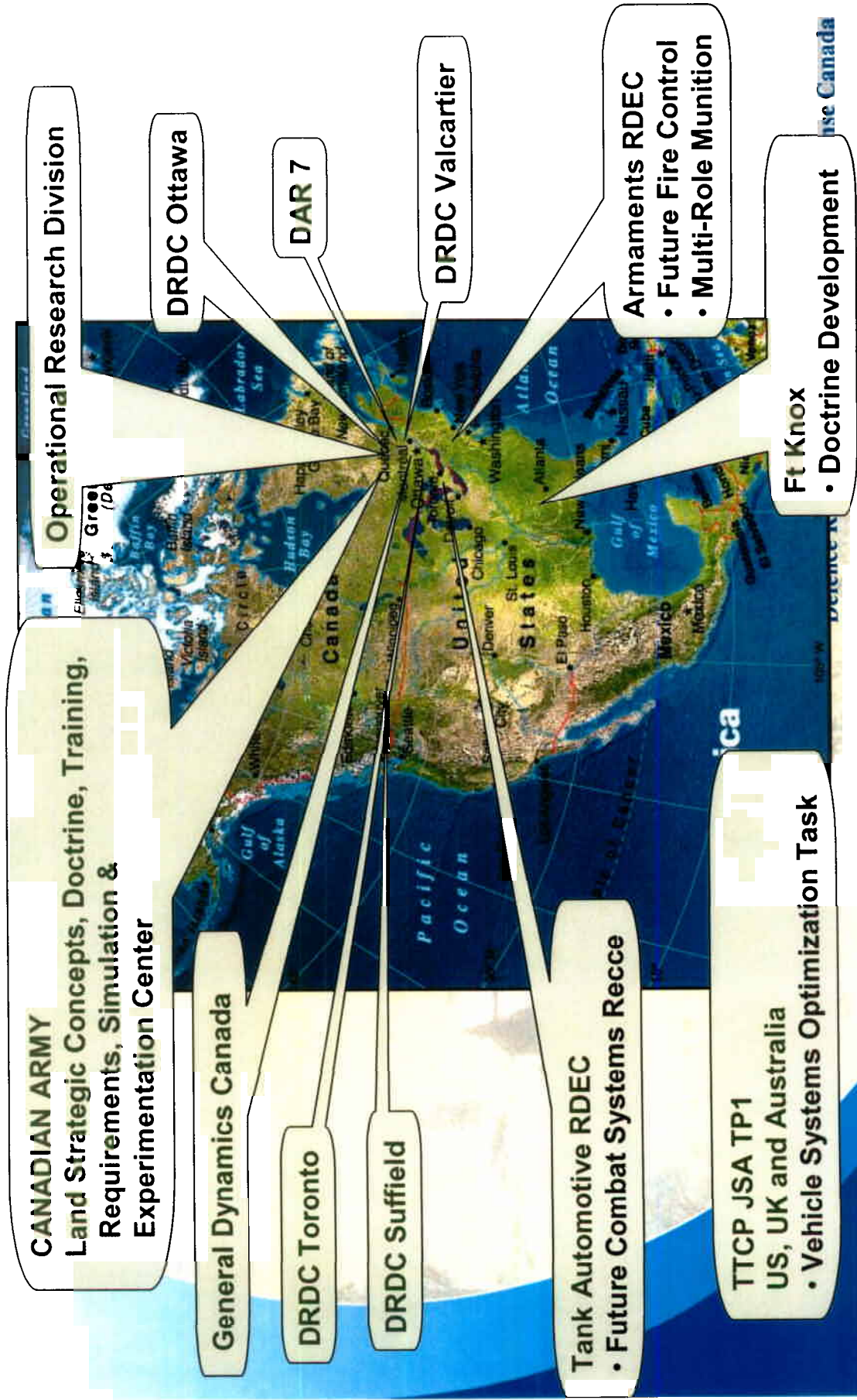


MMEV Goals

- 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





MMEV HLA Build 3 Federation



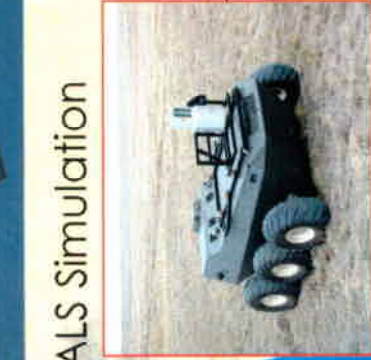
TAMSS TDP



TARDEC UCD



ALERT TDP



ALS Simulation



SIHS TDP



AEC & SEBA UAVS



AVTB



AEC Battle Lab

la défense Canada

Science R&D Canada



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 countries 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)



TARDEC Phase I Objectives



- 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

R&D Canadian Phase I Objectives

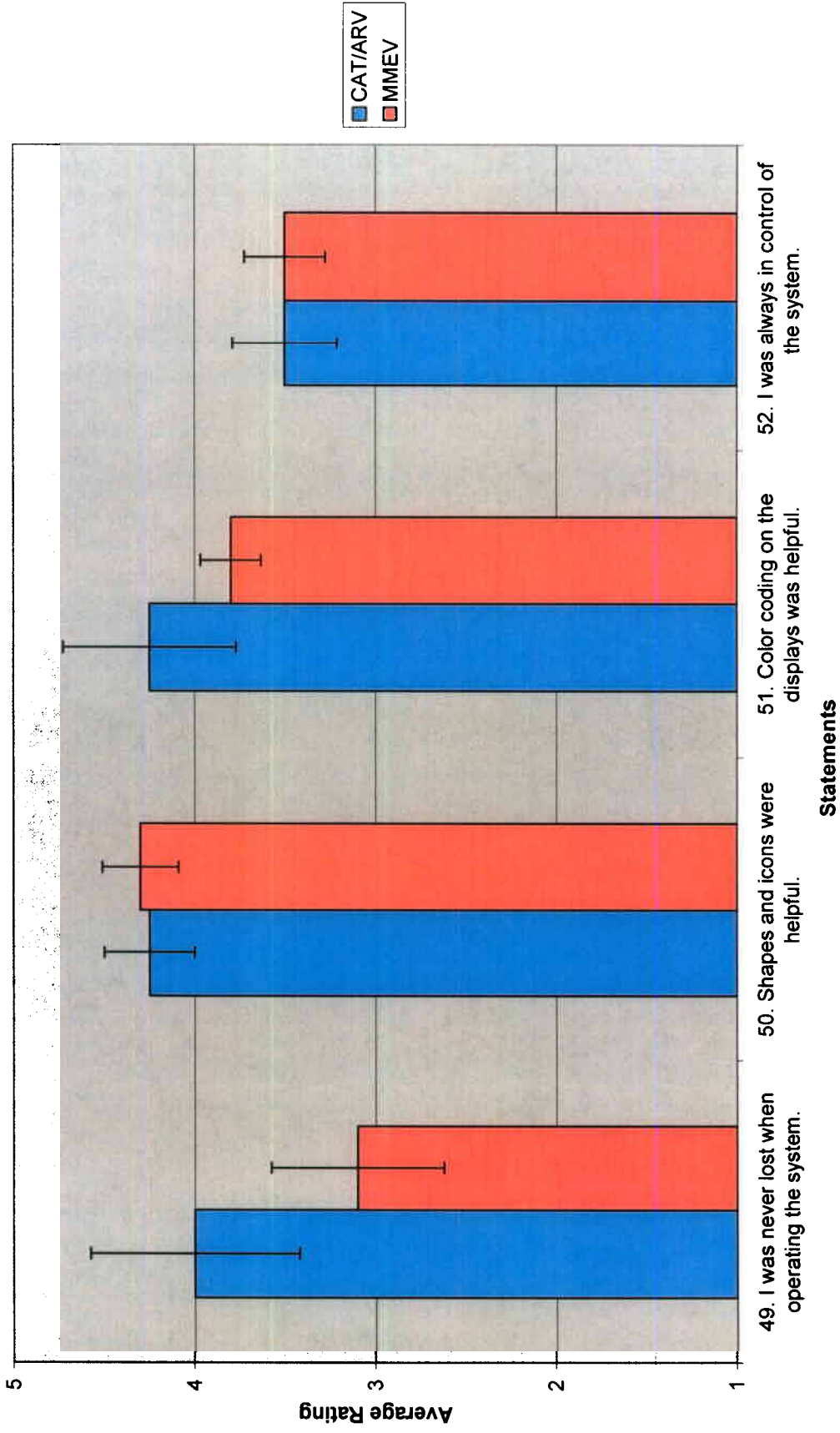
- Evaluate MMEV ability to receive direct and indirect fire targets from US forward observers and then engage those targets.
- Evaluate integration and interoperation of a Canadian unit working along side an US unit with forward placed ARVs.
 - Ability to navigate and place the unmanned systems
 - Battlefield 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





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