



NATO/ RTO

MODELLING & SIMULATION GROUP

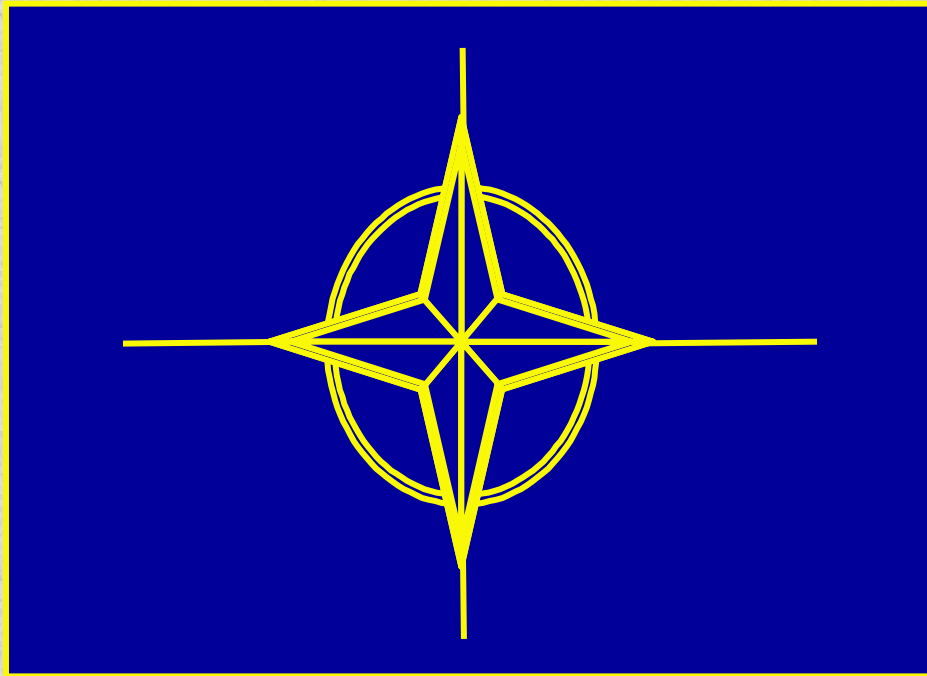
NATO's New Organisation and its Impact on Modelling and Simulation Activities

ITEC 2004 Conference
London, 20 to 22 April 2004

by

G J Burrows

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“NATO must change radically if it is to be effective. . . It must modernise or be marginalised.”

Secretary General
Lord Robertson

NATO SCs Organisation

MC: Military Committee

ACO: Allied Command Operations

ACT: Allied Command Transformation

JFC: Joint Forces Command

CJTF: Combined Joint Task Force

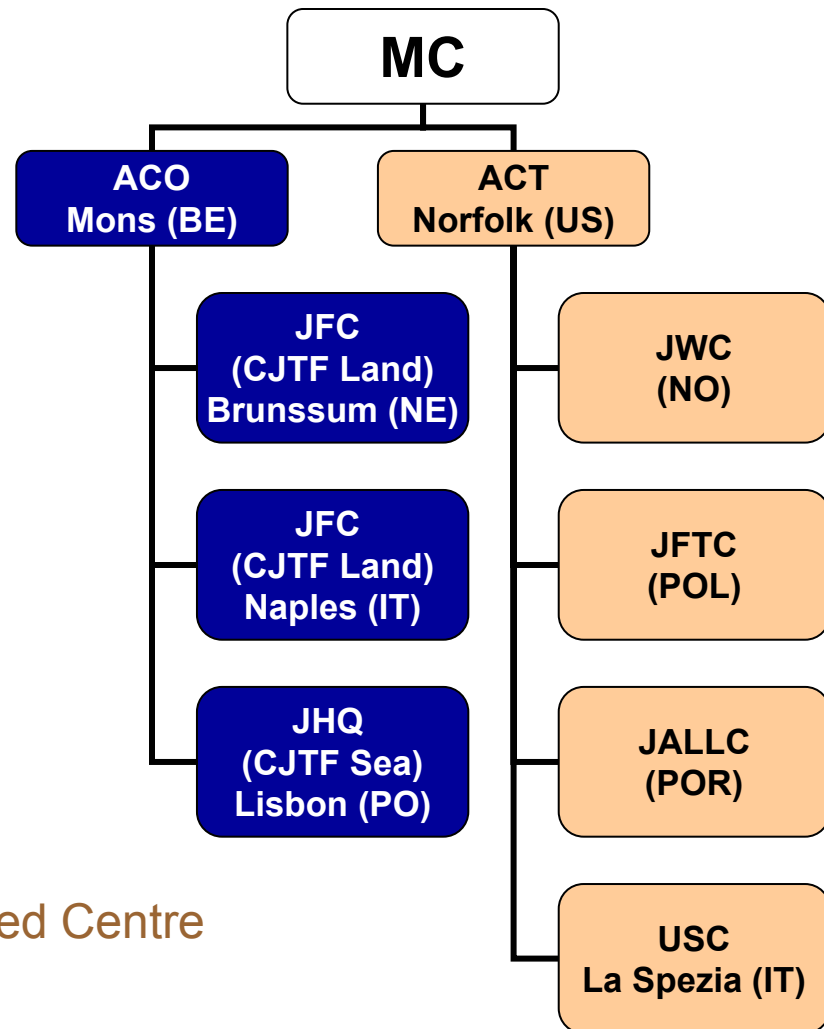
JHQ: Joint Headquarters

JWC: Joint Warfighter Center

JFTC: Joint Force Training Centre

JALLC: Joint Analysis and Lessons learned Centre

USC: Undersea Research Centre



Allied Command Operations

Responsible for all Alliance operations.

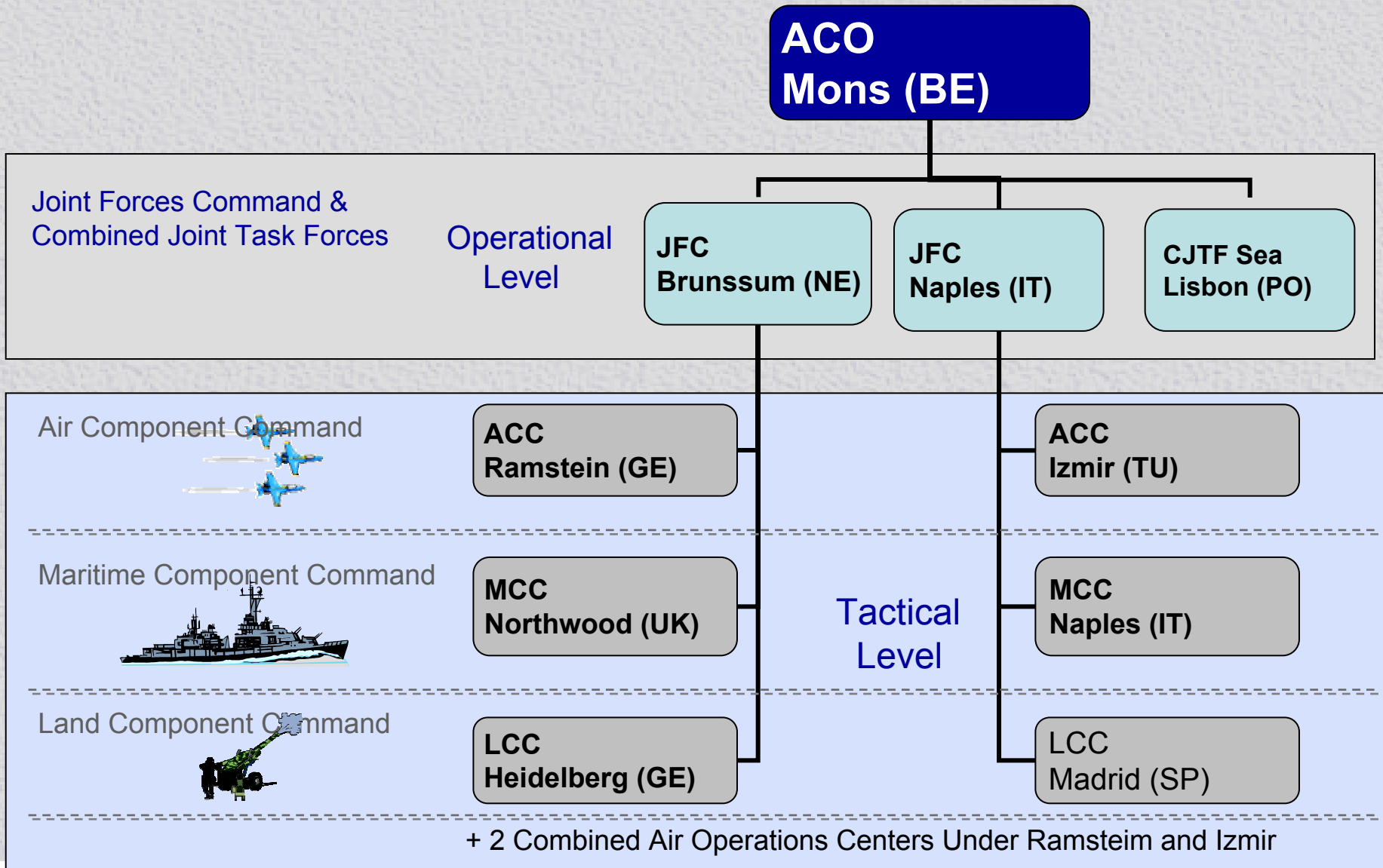
Operational Level

Two Standing Joint Force Commands (JFCs) - which can conduct operations from their static locations or provide a land-based Combined Joint Task Force (CJTF) headquarters. *(There will also be a robust but more limited Standing Joint Headquarters (JHQ), in Lisbon, Portugal, from which a deployable sea-based CJTF HQ capability can be drawn.)*

Tactical Level

Six Joint Force Component Commands (JFCCs), which will provide service-specific -- Land, Maritime, or Air -- expertise to the operational level.

Allied Command Operations Organisation

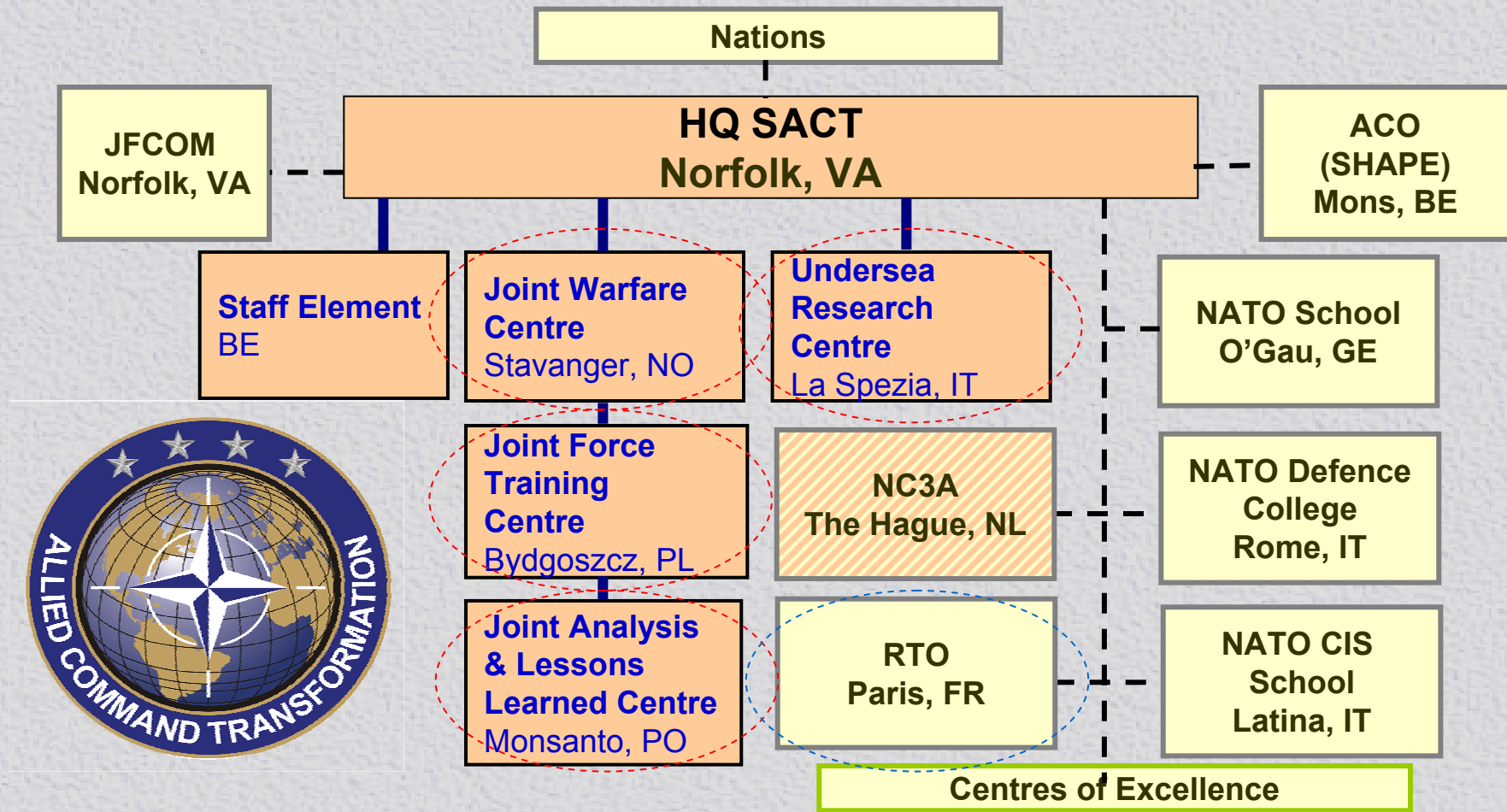


Allied Command Transformation (ACT)

The Allied Command Transformation (ACT), situated in Norfolk, USA, replaces the Allied Command Atlantic (ACLANT).

ACT will promote the transformation of Military Aspects of the Alliance and improve their ability to inter-operate, whilst enhancing the transatlantic link.

ACT Relationships/Links

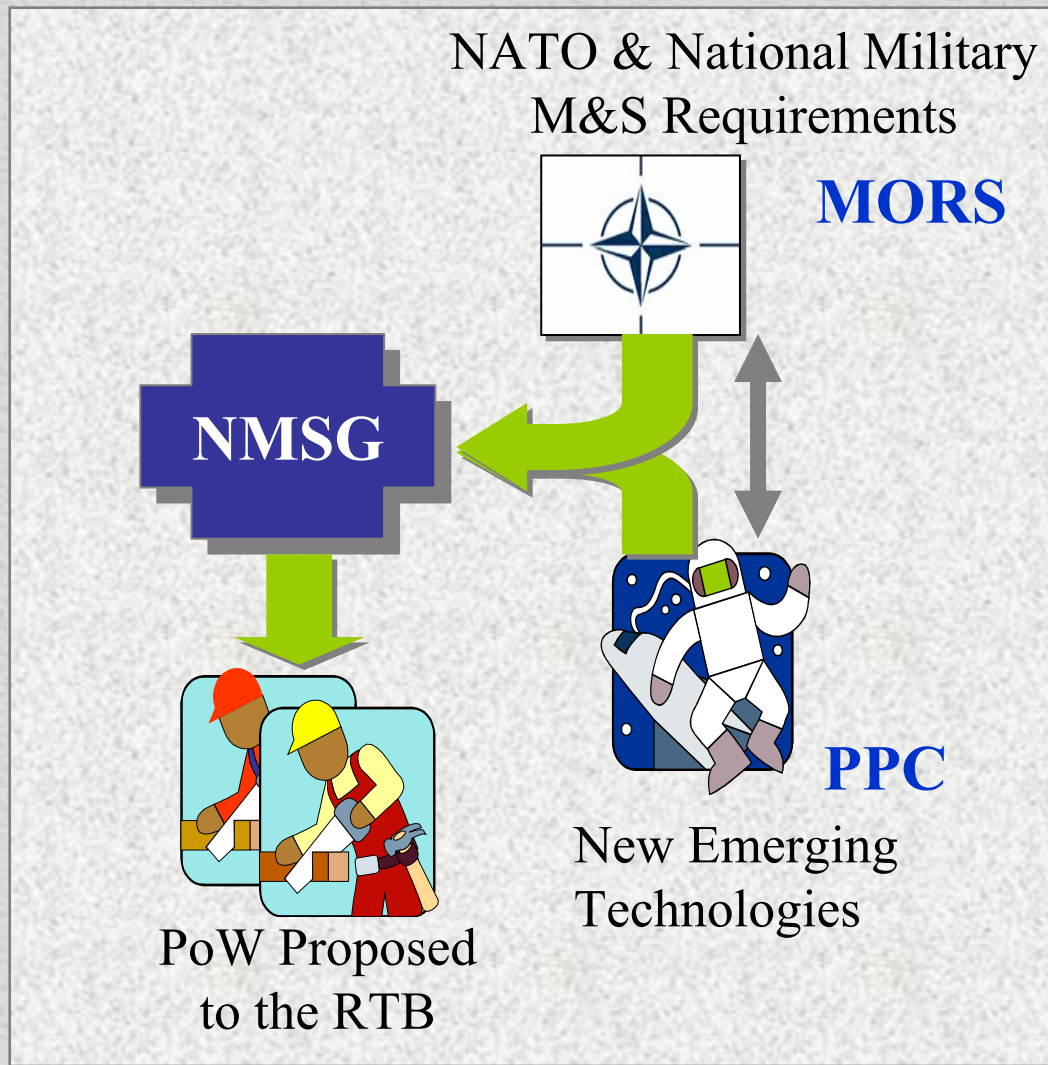


NMSG Mission

- The **Mission** of the NATO Modelling and Simulation (M&S) Group (NMSG) is to **promote co-operation** among Alliance bodies, NATO Member Nations and PfP Nations to maximise the **effective utilisation of M&S**.
- Primary mission areas include M&S **standardisation, education, and associated science and technology**. The Group will provide M&S expertise in support of the tasks and projects within the RTO and from other NATO organisations.
- The activities of the Group are governed by **Action and Strategy/Business Plans**.



NMSG WORKING STRUCTURE



**MODELLING &
SIMULATION
COORDINATION
OFFICE**

- Technical Personnel**
- supporting the NMSG, and
 - executing Part of its PoW



M&S Related NATO Short/Long Term Priorities

- **Implement and Support NATO Response Force and other deployable capabilities.**
- **Defence Against Terrorism.**
- **Peace Support Operations.**
- **Network Centric Warfare/Network Enabled Capabilities and Integration of NATO Systems.**



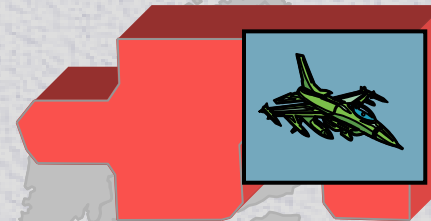


NMSG Response to Supporting the NATO Response Force

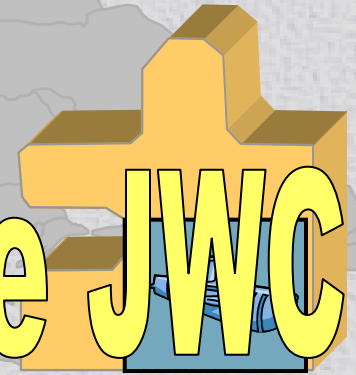


- NRF Key Priorities
 - Exercising & Training
 - Technologies that support rapid mobility/deployment
 - Interoperability
 - Multi-national coordination

PATHFINDER VISION



Supporting NRF and the JWC



High Level Architecture (HLA)



NMSG Technical Activity

North Atlantic Treaty Organisation

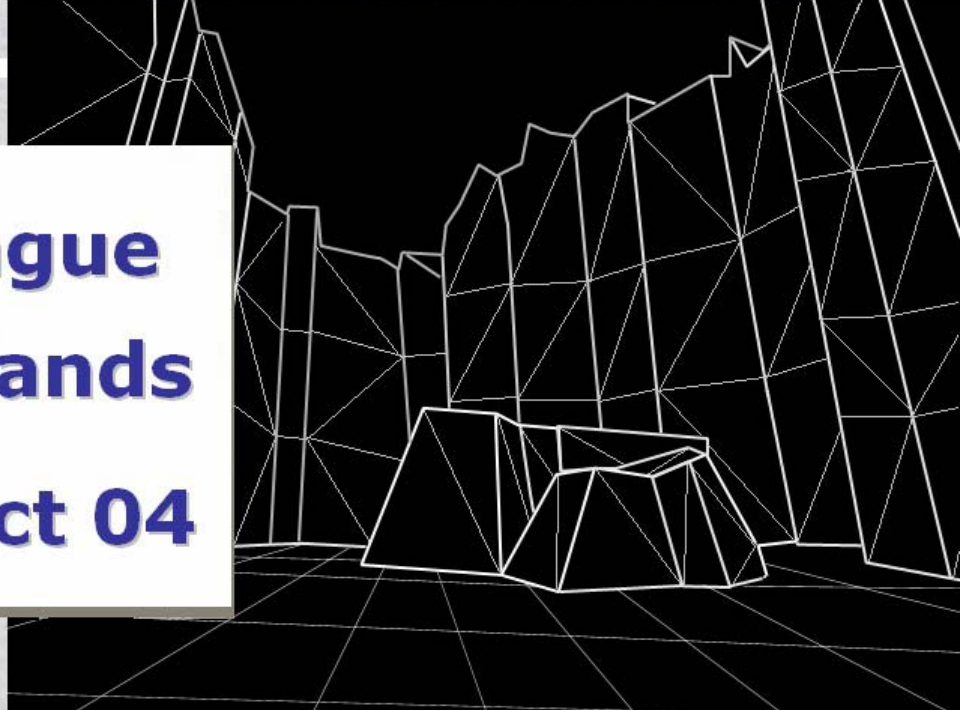


MSG-037

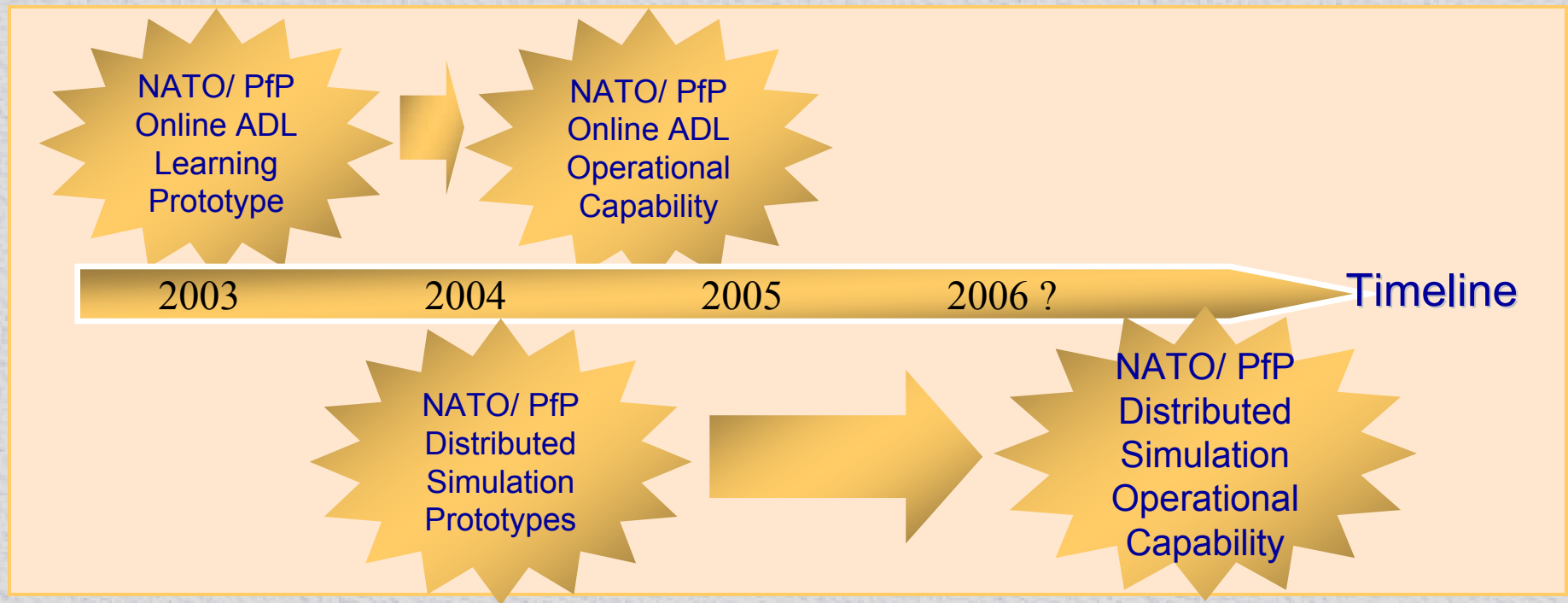
POC: Mr. A. Fawkes
afawkes.dgrt@gtnet.gov.uk

**Exploiting
Commercial
Games for
Military Use
Workshop**

**The Hague
Netherlands
20-21 Oct 04**



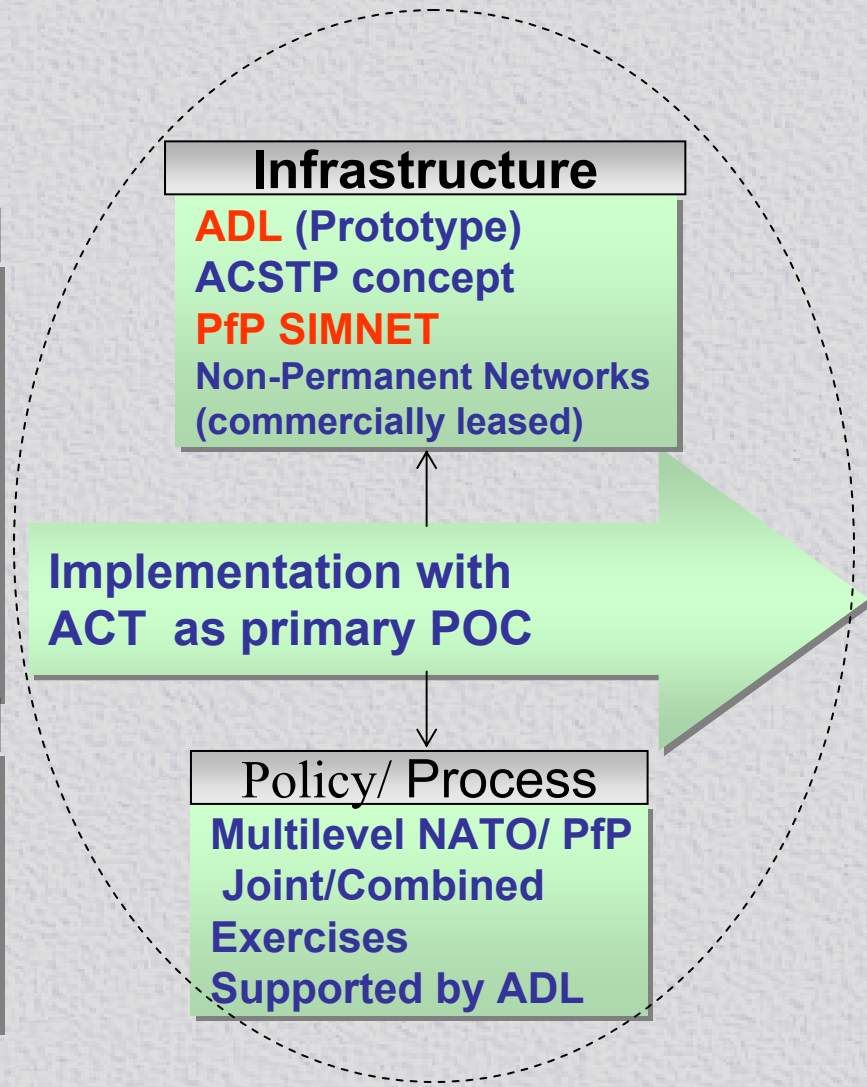
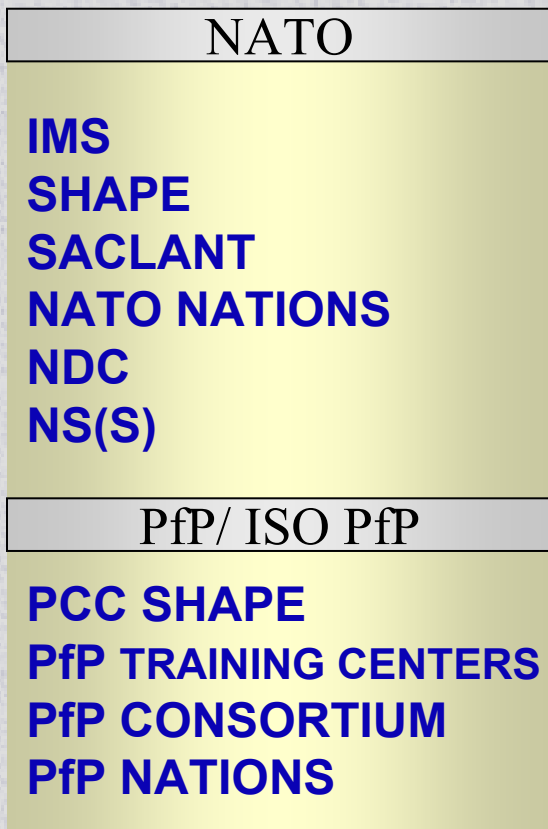
NATO/ PfP ADL and SIMULATION



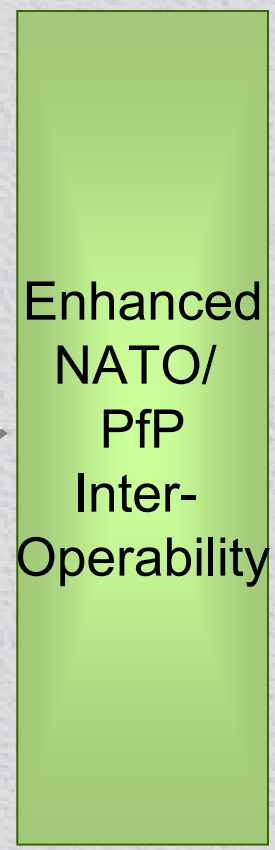


NATO/ PfP Modelling and Simulation Way Forward (Transformation Enabler)

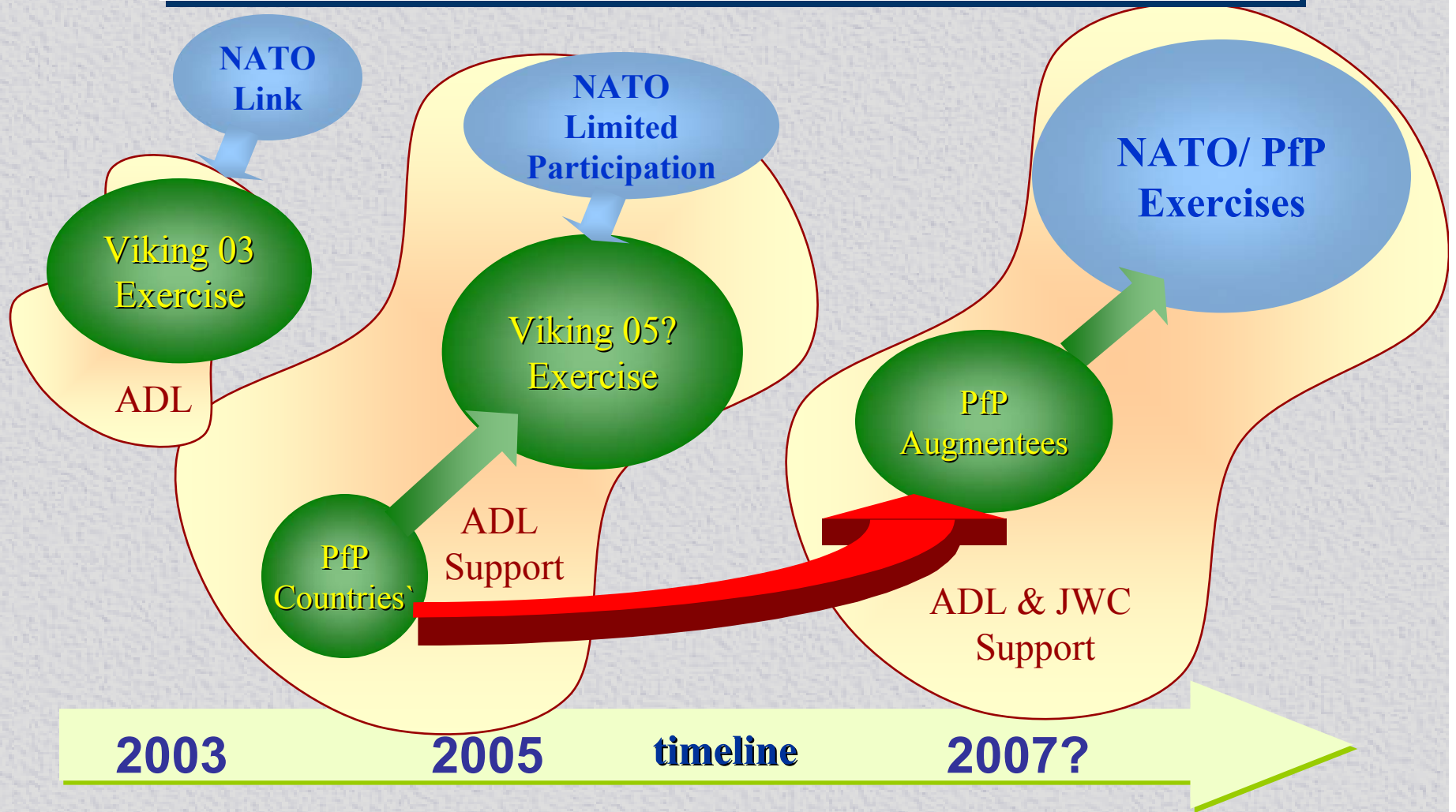
Training, Coop & Education Players



End State

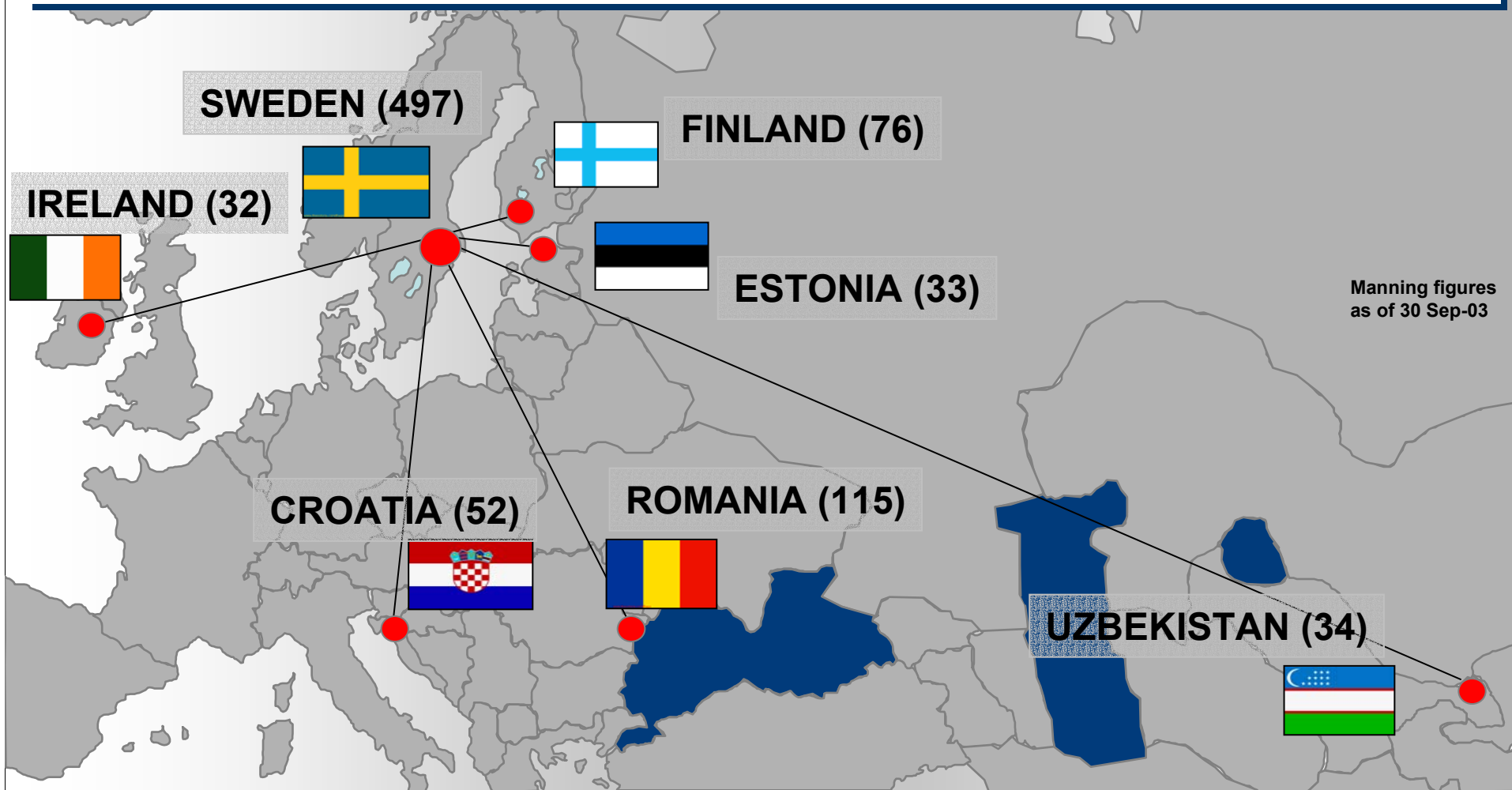


NATO/ PfP Distributed Simulation – First Step VIKING EXERCISE/S



DISTRIBUTED TRAINING - REMOTE SITES

839



Manning figures
as of 30 Sep-03



In the Spirit of Partnership For Peace



M ISSION **T** RAINING

through

D ISTRIBUTED **S** IMULATION **MTDS**

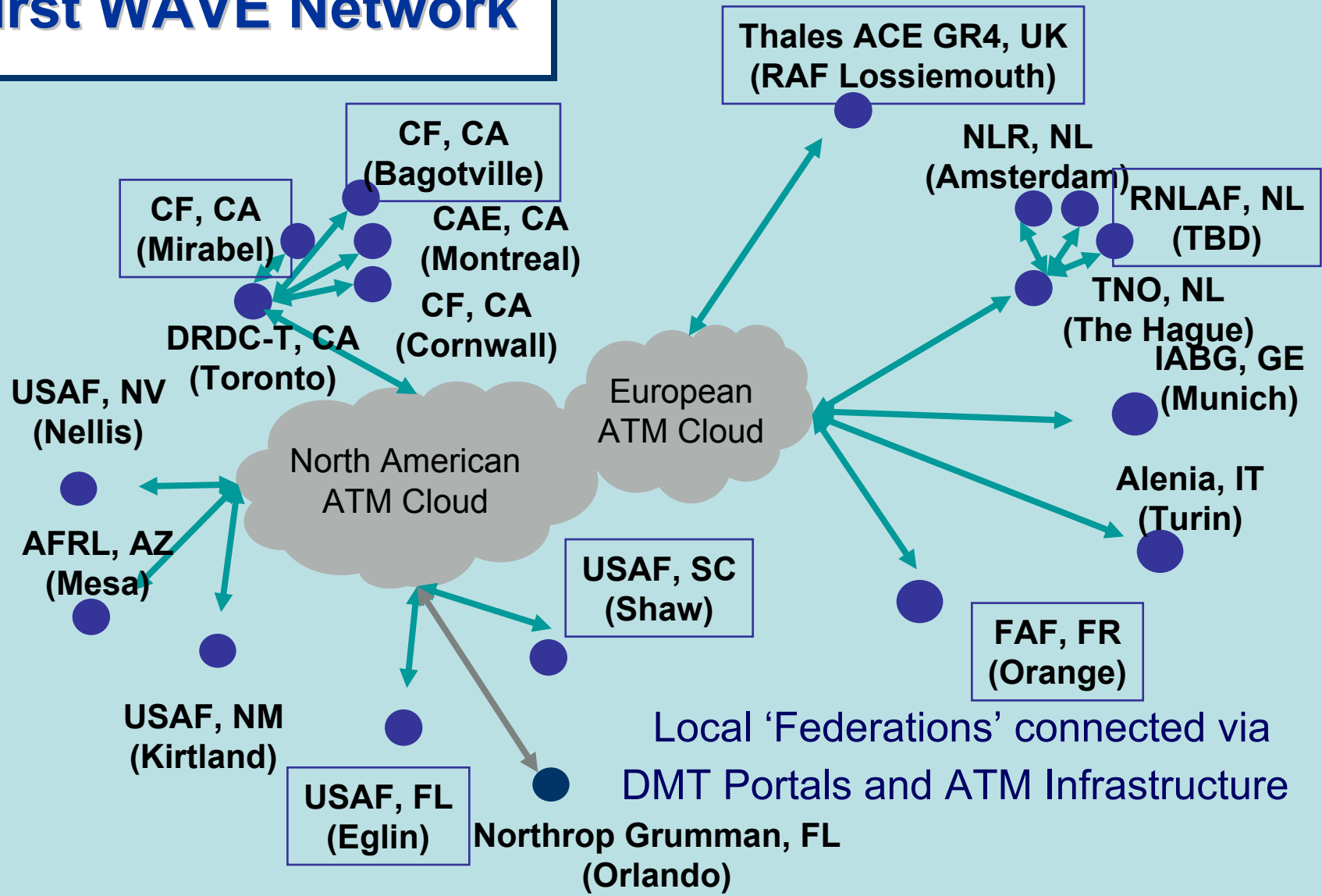
Distributed
Simulation to
support aircrew
mission training
amongst NATO
armed forces
community

Sep 2004

MSG-001 & SAS-034 MTDS



First WAVE Network



Peace Support Operations

M&S Support to Non Article 5 Operations



M&S Support to Non Article 5 Operations

Goal:

To undertake a study to determine M&S applications to support military Commanders and their staffs in Non Article 5 Operations:

Dialogue between military- and simulation- experts:

- 1. - Determine/Structure/Prioritize Application Areas**
- Evaluate potential
- Identify requirements
(operational,technical,organizational...)
- 2. - Assess state of the art in NATO and the nations**
- Identify capability gaps
- 3. Develop Solution-Alternatives**
- 4. Determine way ahead/implementation**

M&S Support to Non Article 5 Operations

Status

MSG-024 is an approved RTB TAP with five NATO nations (BE, CZ, GE, UK, US) and one PfP nation (BLR) participating, supported by NC3A and NIAG.

Programme is up and running

RTO Defence Against Terrorism Activities

- Defence Against Terrorism (DAT) continues to be a very important focus area for the RTA.

23 priority Topics addressed by 29 On-Going Activities - Plus Exploratory Teams



NMSG Technical Activity
North Atlantic Treaty Organisation

M&S Tools for Early Warning Identification of Terrorist Activities



MSG-026 POC:
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M&S in Support of Network Centric Warfare

- **An NMSG Exploratory Team on Network Centric Warfare is Currently being established.**
- **This will lead to a workshop or a Task group.**
- **POC Bharat Patel - bpatel@dstl.gov.uk.**

SUMMARY

- NATO is changing – Transformation is underway,
- The importance of M&S to achieve this Transformation has been recognised in NATO,
- The NMSG has initiated Key Programmes of Work in response to and in support of NATO Transformation.



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Current Activities 1/2

Establish a Common Tech. Framework to foster Interoperability and Reuse

OBJECTIVE 1

- NATO agreement on the use of HLA for M&S development,
- Establishment of a Simulation Resource Library (MSG-012),
- Establishment of a M&S Help Desk at the RTA.

Provide Common Services to increase Cost-Effectiveness in NATO M&S

OBJECTIVE 2

- Educational Efforts (Develp. of M&S Courses and Conferences),
- Specification of a NATO/ PfP ADL Capability (MSG-007)
- Specification of future NATO/ PfP Simulation capability (MSG-007) ,
- Rapid Generation of Scenarios (MSG-018).



Current Activities 2/2

Develop and Employ Simulations

OBJECTIVES 3 & 4

- To develop and demonstrate the benefits of simulated combined air operations (MSG-001 combined with SAS-034),
- Creating multinational Federations of Wargaming Models and the infra-structure to employ them (Pathfinder MSG-027),
- Study on Urban Combat Advanced Training Technology (MSG-033),
- Simulation Support to non-Article 5 Operations and Course of Action Tools (MSG-024).

Incorporate Technological Advances

OB.5

- Development of M&S standards (STANAGS for HLA & SEDRIS)



Proposed Activities for 2005 1/2

Establish a Common Tech. Framework to Foster Interoperability and Reuse

OBJECTIVE 1

- Implementation of FEDEP Tools for NATO (MSG-038),
- Distributed simulation infrastructure to Support Extended Air Defense C2 Interoperability (MSG-039),
- Support to ACT in the definition of the future ADL and Distributed Simulation Capability Packages (MSG-040),
- Definition of a Framework for Simulation Resources Reusability (MSG-042).



Proposed Activities for 2005 2/2

Provide Common Services to increase Cost-Effectiveness in NATO M&S

OBJECTIVE 2

- Assessment of emerging technologies such as the Extensible M&S Framework or the extension of the XML standard,
- Continue with Education Efforts (Courses and Conferences).

Incorporate Technological Advances

OBJ. 5

- Exploration of M&S in Support of Network Centric Warfare,