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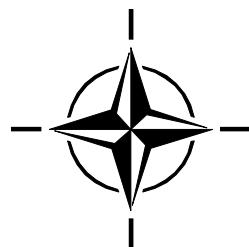
RTO TECHNICAL REPORT

TR-MSG-068

NATO Education and Training Network

(Réseau OTAN de formation et d'entraînement)

Final Report of Task Group MSG-068.



Published February 2012





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Final Report of Task Group MSG-068.

The Research and Technology Organisation (RTO) of NATO

RTO is the single focus in NATO for Defence Research and Technology activities. Its mission is to conduct and promote co-operative research and information exchange. The objective is to support the development and effective use of national defence research and technology and to meet the military needs of the Alliance, to maintain a technological lead, and to provide advice to NATO and national decision makers. The RTO performs its mission with the support of an extensive network of national experts. It also ensures effective co-ordination with other NATO bodies involved in R&T activities.

RTO reports both to the Military Committee of NATO and to the Conference of National Armament Directors. It comprises a Research and Technology Board (RTB) as the highest level of national representation and the Research and Technology Agency (RTA), a dedicated staff with its headquarters in Neuilly, near Paris, France. In order to facilitate contacts with the military users and other NATO activities, a small part of the RTA staff is located in NATO Headquarters in Brussels. The Brussels staff also co-ordinates RTO's co-operation with nations in Middle and Eastern Europe, to which RTO attaches particular importance especially as working together in the field of research is one of the more promising areas of co-operation.

The total spectrum of R&T activities is covered by the following 7 bodies:

- AVT Applied Vehicle Technology Panel
- HFM Human Factors and Medicine Panel
- IST Information Systems Technology Panel
- NMSG NATO Modelling and Simulation Group
- SAS System Analysis and Studies Panel
- SCI Systems Concepts and Integration Panel
- SET Sensors and Electronics Technology Panel

These bodies are made up of national representatives as well as generally recognised 'world class' scientists. They also provide a communication link to military users and other NATO bodies. RTO's scientific and technological work is carried out by Technical Teams, created for specific activities and with a specific duration. Such Technical Teams can organise workshops, symposia, field trials, lecture series and training courses. An important function of these Technical Teams is to ensure the continuity of the expert networks.

RTO builds upon earlier co-operation in defence research and technology as set-up under the Advisory Group for Aerospace Research and Development (AGARD) and the Defence Research Group (DRG). AGARD and the DRG share common roots in that they were both established at the initiative of Dr Theodore von Kármán, a leading aerospace scientist, who early on recognised the importance of scientific support for the Allied Armed Forces. RTO is capitalising on these common roots in order to provide the Alliance and the NATO nations with a strong scientific and technological basis that will guarantee a solid base for the future.

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List of Acronyms

AAR	After Action Review
ACT	Allied Command Transformation
Bi-SC	Bi-Strategic Command (ACO & ACT)
C2	Command and Control
CAX	Computer Assisted Exercise – A means of using computer simulations and models in support of exercises
CCB	Configuration Control Board
CeAG	Certification Advisory Group
CFBLNet	Combined Federated Battle Laboratories Network
CIS	Communications and Information Systems
CJTF	Combined Joint Task Force
CP	Capability Package
DJTF	Deployed Joint Task Force
DSEEP	Distributed Simulation Engineering and Execution Process
EXCON	Exercise Control
EXPLAN	Exercise Plan
EXSPEC	Exercise Specification
FAC	Forward Air Controller
FAD	Federation Agreements Document
FAFD	Federation Agreements and FOM reference Document
FEDEP	Federation Development and Execution Process
FOM	Federation Object Model (HLA)
HLA	High Level Architecture
ICC	Integrated Command and Control software for air operations
IP	Integrated Project
IPC	Initial Planning Conference
ISAF	International Security Assistance Force
JALLC	Joint Allied Lessons Learned Centre
JCATS	Joint Conflict and Tactical Simulation
JCOP	Joint Common Operational Picture
JEC	Joint Exercise Control
JEMM	Joint Exercise Management Module
JEST	Joint Exercise Scenario Tool
JFTC	Joint Forces Training Centre
JMRM	Joint Multi-Resolution Model
JTLS	Joint Theatre Level Simulation
JWC	Joint Warfare Centre
LVC	Live, Virtual and Constructive
MEL/MIL	Main Event List / Master Incident List
MRE	Mission Rehearsal Exercise

MS	Mission Secret
MS3	Modelling and Simulation Standards Subgroup
M&S	Modelling and Simulation
NC3A	NATO Consultancy Command Control Agency
NCSA	NATO CIS Support Agency
NETN	NATO Education and Training Network
NGCS	NATO General purpose segment Communications System
NLVC	NATO LVC
NMSG	NATO Modelling and Simulation Group
NRF	NATO Response Forces
NS	NATO Secret
NSRL	NATO Simulation Resource Library
NTF	NATO Training Federation
OCE	Officer Conducting the Exercise
ODE	Officer Directing the Exercise
OP	Operational Planning
OPP	Operational Planning Process
ORBAT	Order of Battle
OSE	Officer Specifying the Exercise
OT	Observer Trainer
POW	Program Of Work
RC	Response Cell
RTA	Research and Technology Agency
RTI	Runtime Infrastructure
RTO	Research and Technology Organisation
SACT	Supreme Allied Command for Transformation
SISO	Simulation Interoperability Standards Organization
STANAG	Standardization Agreement
SW	Software
TA	Training Audience
TOR	Terms Of Reference
UAV	Unmanned Aerial Vehicle
VV&A	Verification, Validation and Accreditation
WG	Working Group

MSG-068 Membership List

AUSTRALIA

Mr. Darren MCFARLANE
Australian Department of Defence
R1-3-B066 Russell Offices
Canberra, ACT 2600
Email: darren.mcfarlane@defence.gov.au

WgCdr. Miles PATTERSON
Australian Defence Simulation Office
R1-3-D009 Russell Offices
Canberra, ACT 2600
Email: miles.patterson@defence.gov.au

BULGARIA

LtCol. Orlin NIKOLOV
General Staff Bulgarian Armed Forces
Sector “Exercise and Simulations” Defence Staff
Totleben 34 Blvd.
Sofia 1606
Email: oplin@abv.bg

LtCol. Petar VRATEGOV
General Staff of Bulgarian Armed Forces
Joint Training Directorate
Totleben 34 Blvd.
Sofia 1606
Email: petarvrategov@abv.bg

FRANCE

Dr. Jean-Pierre FAYE
THALES (TRS)
1 Avenue Carnot
91883 Massy
Email: jean-pierre.faye@thalesraytheon-fr.com

Cdt. Laurent LESAGE
CSFEE / CID Ecole Militaire
1 place Joffre
BP 46
00445 Armées
Email: laurent.lesage@college.interarmees.defense.gouv.fr

ICT. José RUIZ
DGA/DSP/CAD
16, Bis Avenue Prieur de la Côte d’Or
94114 Arcueil
Email: jose.ruiz@dga.defense.gouv.fr

GERMANY

Dr. Rachid EL ABDOUNI KHAYARI
IABG
Einsteinstrasse 20
85521 Ottobrunn
Email: khayari@iabg.de

BR z.A. Oliver HENNE
BWB
Ferdinand-Sauerbruch-Str.1
56073 Koblenz
Email: OliverHenne@bwb.org

Mr. Konradin KELLER
IABG
Einsteinstrasse 20
85521 Ottobrunn
Email: keller@iabg.de

Dipl-Ing. Karl-Heinz NEUMANN
IABG
Einsteinstrasse 20
85521 Ottobrunn
Email: neumann@iabg.de

Mr. Jochen SIEBENEICHER
Bundesamt für Wehrtechnik und
Beschaffung (BWB) P1.2
Ferdinand-Sauerbruch Strasse 1
56073 Koblenz
Email: bwbp12intkoop@bwb.org

Mr. Dieter STEINKAMP
Industry IABG mbH
Ferdinand-Sauerbruch Strasse 26
56073 Koblenz
Email: steinkamp@iabg.de

HUNGARY

LTC. Istvan KIRALY
Ministry of Defence Operations and
Training Department
Balaton str. 7-11
H-155 Budapest
Email: hatkiralyok@t-online.hu

ITALY

Capt. Walter DAVID
COI-CIMSO
Via di Centocelle 301
00175 Roma
Email: walter.david@esercito.difesa.it

NETHERLANDS

Mr. Jan J. BOOMGAARDT
TNO-FEL
P.O. Box 96864
2509 JG The Hague
Email: jan_jelle.boomgaardt@tno.nl

Mr. Wim HUISKAMP
TNO Defence, Security and Safety
P.O. Box 96864
2509 JG The Hague
Email: wim.huiskamp@tno.nl

Mrs. Lesley JACOBS
TNO Defence, Security and Safety
Oude Waalsdorperweg 63
P.O. Box 96864
2509 JG The Hague
Email: lesley.jacobs@tno.nl

Mr. Jeroen VOOGD
TNO Defence, Security and Safety
P.O. Box 96864
2509 JG The Hague
Email: jeroen.voogd@tno.nl

ROMANIA

Col. Mihaita BALEANU
Simulation Training Center
Sos. Panduri 68-72
050662 Bucharest
Email: mbaleanu56@yahoo.com

Col. Eng. Mircea CERNAT
Military Equipment and Technologies
Research Agency
Aeroportului Street, No. 16
CP 19 OP Bragadiru
077025 Ilfov
Email: mcernat@acttm.ro

LtCol. Manuel DOGARU
Simulation Training Center
Sos. Panduri 68-72
050662 Bucharest
Email: dogy64@yahoo.com

Col. Dr. Florin LAPUSNEANU
Simulation Training Center
Sos. Panduri 68-72
050662 Bucharest
Email: flapusneanu@mapn.ro

LTC. Traian NICULA
General Staff – CAX Branch
Strada Izvor, nr.3-5
050561 Bucharest

SLOVENIA

Mr. Marko JORDAN
ZootFly d.o.o. Knezov stradon 94
1000 Ljubljana
Email: mjordan@guardiaris.com

Mr. Denis ROZAJ
ZootFly d.o.o. Knezov stradon 94
1000 Ljubljana
Email: denis@zootfly.com

Maj. Marko SEKETIN
PDRIU/CDR/ORIS, Ministry of Defence
Vojasnica barona Andreja Cehovina
Ljubljanska cesta 35
6230 Postojna
Email: marko.seketin@mors.si

SPAIN

Lt. Sabas GONZALEZ GODOY
Spanish Army CGE – JCISAT
Subdireccion CIS Seccion de
Simulacion C/ Prim, 6
28004 Madrid
Email: sabas@et.mde.es

Mr. Patricio JIMENEZ LOPEZ
ITM/DGAM/MDEF
Beatriz de Bobadilla 3
28040 Madrid
Email: pjimenez@isdefe.es

SWEDEN

LtCol. Lars LINDBERG
Swedish Defence Research Agency – FOI
10785 Stockholm
Email: lars.lindberg@foi.se

Mr. Bjorn LOFSTRAND
Pitch Technologies AB Repslagaregatan 25
58222 Linkping
Email: bjorn.lofstrand@pitch.se

Mr. Gunnar OHLUND
Defence Materiel Administration SMART-Lab
Defence Materiel Administration (FMV)
CE Systems Engineering
Banergatan 62
11588 Stockholm
Email: gunnar.ohlund@smart-lab.se

TURKEY

Maj. Birol GUVENC
Turkish Armed Forces AF
Harp Akademileri Lojmanlari 17A6
34334 Yenilevent/Istanbul
Email: birolguvenc@yahoo.com

Lt. Ahmet KANDAKOGLU
Government Turkish War Colleges W&SC
80620 Yenilevent/Istanbul
Email: kandak@harpak.tsk.mil.tr

LtCdr. Cem KUMSAL
War College Computer Assisted
Exercise Support Division
Ataturk War Gaming and Cultural Center
34334 Yenilevent/Istanbul
Email: ckumsal@harpak.tsk.mil.tr

UNITED KINGDOM

Mr. Peter Michael JACKSON
Thales UK Manor, Royal Crawley West
Sussex RH10 9HA
Email: peter.jackson@uk.thalesgroup.com

WgCdr. Kevin MARSH
MoD CAP TA, Main Building
Whitehall, London SW1S 2HB
Email: CAPTA-SO1Trg@mod.uk

Mr. Bharatkumar PATEL
Dstl PCS Dept., Grenville Building West Court
Portsmouth Hill Road
Fareham, Hampshire GU14 0LX
Email: bmpatel@dstl.gov.uk

Mr. Gareth Martyn PUGH
QinetiQ Malvern Technology Centre
Alan Turing Building, St Andrews Road
Malvern, Worcester WR14 3PS
Email: gmpugh@QinetiQ.com

Mr. Michael WATSON
QinetiQ, Portsdown Technical Park
Cosham Hants
Email: mjwatson@qinetiq.com

UNITED STATES

Mr. James L. BOULET
PLEXSYS Interface Products, Inc.
4900 NW Camas Meadows Drive
Camas, WA 98607
Email: jamie.boulet@plexsysipi.com

Col. (R) Bob KEAN
Academia US Joint Staff
J7 Joint and Coalition Warfighting Center
116 Lakeview Parkway
Suffolk, VA 23435
Email: robert.kean.ctr@hr.js.mil

Mr. Leigh YU
DoD M&SCO
1901 N. Beauregard Street
Suite 500
Alexandria, VA 22311-1705
Email: leigh.yu.ctr@osd.mil

ACT

Mr. Soeren LARSEN
NATO HQ SACT
7857 Blandy Road, Suite 100
Norfolk, VA 23551-2490
Email: soren.larsen@act.nato.int

Mr. Angel SAN JOSE MARTIN
ACT Sec Head M&S Coordination
NATO HQ SACT
7857 Blandy Road, Suite 100
Norfolk, VA 23551-2490
Email: Angel.SanJoseMartin@act.nato.int

Mr. Mark SHELFORD
NATO HQ SACT
7857 Blandy Road, Suite 100
Norfolk, VA 23551-2490
Email: shelford@act.nato.int

Dr. Gokay SURSAL
NATO HQ SACT
7857 Blandy Road, Suite 100
Norfolk, VA 23551-2490
Email: gokay.sursal@act.nato.int

Maj. Ionel VLASIE
NATO HQ SACT
7857 Blandy Road, Suite 100
Norfolk, VA 23551-2490
Email: ionel.vlasie@act.nato.int

JFTC

LTC. Georgios KYRIAKIDIS
NATO Joint Force Training Centre
ul. Szubinska 2
85-915 Bydgoszcz 15
POLAND
Email: georgios.kyriakidis@jftc.nato.int

Dr. Adalet ONER
NATO Joint Force Training Centre
ul. Szubinska 2
85-915 Bydgoszcz 15
POLAND
Email: adalet.oner@jftc.nato.int

Mr. Tomasz PANKAU
NATO Joint Force Training Centre
CAX Branch, Training Support Division
ul. Szubinska 2
85-915 Bydgoszcz 15
POLAND
Email: tomasz.pankau@jftc.nato.int

Mr. Robert PRZYBYLOWSKI
NATO Joint Force Training Centre
ul. Szubinska 2
85-915 Bydgoszcz 15
POLAND
Email: robert.przybylowski@jftc.nato.int

Mr. Nigel PUTTOCK
NATO Joint Force Training Centre
ul. Szubinska 2
85-915 Bydgoszcz 15
POLAND
Email: nigel.puttock@jftc.nato.int

Mr. Jacek SUMISLAWSKI
NATO Joint Force Training Centre
CAX Branch, Training Support Division
ul. Szubinska 2
85-915 Bydgoszcz 15
POLAND
Email: jacek.sumislawski@jftc.nato.int

Mr. Jacek WELZ
NATO Joint Force Training Centre
CAX Branch, Training Support Division
ul. Szubinska 2
85-915 Bydgoszcz 15
POLAND
Email: jacek.welz@jftc.nato.int

JWC

Mr. Ercan ATALAY
NATO Joint Warfare Center
CAX Support Branch
P.O. Box 8080 Eikesetveien
N-4068 Stavanger
NORWAY
Email: ercan.atalay@jwc.nato.int

Mr. Andrew BROWN
NATO Joint Warfare Center
P.O. Box 8080 Eikesetveien
N-4068 Stavanger
NORWAY
Email: andrew.brown@jwc.nato.int

Dr. Erdal CAYIRCI (Chair)
NATO Joint Warfare Center
P.O. Box 8080 Eikesetveien
N-4068 Stavanger
NORWAY
Email: erdal.cayirci@jwc.nato.int

Col. Mark EDGREN
NATO Joint Warfare Center
P.O. Box 8080 Eikesetveien
N-4068 Stavanger
NORWAY
Email: mark.edgren@jwc.nato.int

Mr. Ivan VIANELLO
NATO Joint Warfare Center
P.O. Box 8080 Eikesetveien
N-4068 Stavanger
NORWAY
Email: Ivan.Vianello@jwc.nato.int

NC3A

Mr. Steven BLACKSTONE
NATO C3 Agency CAT 3
Exercise and Training
P.O. Box 174
2509 CD The Hague
NETHERLANDS
Email: steven.blackstone@nc3a.nato.int

Mr. Edgar HARMSEN
NATO C3 Agency Communications and
Information Systems Division
Oude Waalsdorperweg 61
2597 AK The Hague
NETHERLANDS
Email: edgar.harmsen@nc3a.nato.int

Dr. Hans G.J. JENSE
NATO Consultation Command and
Control Agency – NC3A
Oude Waalsdorperweg 61
2597 AK The Hague
NETHERLANDS
Email: hans.jense@nc3a.nato.int

Mr. Valdimir MANDA
NATO C3 Agency CAT 3
Exercise and Training
P.O. Box 174
2501 CD The Hague
NETHERLANDS
Email: vladimir.manda@nc3a.nato.int

Mr. Robert PALADEAU
NC3A – CCSD/SDAB
NETHERLANDS
Email: robert.paladeau@nc3a.nato.int

Mr. Serge POTIER
NATO C3 Agency Communications and
Information Systems Division
Oude Waalsdorperweg 61
2597 AK The Hague
NETHERLANDS
Email: serge.potier@nc3a.nato.int

Mr. Jan VAN GEEST
NATO C3 Agency
P.O. Box 174
Oude Waalsdorperweg 61
2501 CD The Hague
NETHERLANDS
Email: jan.van.geest@nc3a.nato.int

Mr. Clive WOOD
NATO C3 Agency CAT 3
Exercise and Training
P.O. Box 174
2509 CD The Hague
NETHERLANDS
Email: clive.wood@nc3a.nato.int

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13. Keywords/Descriptors	CFBLNet Distributed simulation Distributed training and exercises High Level Architecture (HLA) Interoperability Modular Federation Object Model (FOM) NATO Education and Training Network Shared resources		
14. Abstract	<p>NETN was originated to integrate and enhance existing national capabilities and focus on the education and training of NATO Headquarters' staffs and NATO forces. A NETN consisting of a persistent infrastructure, distributed training and education tools, and standard operating procedures not only supports the training of NATO headquarters but also enables the Nations to collaborate with each other. NETN promises a cost and time efficient capability, and broader and deeper interoperability. It also introduces an opportunity to integrate the training of NATO headquarters with the tactical forces when needed for short notice mobile mission rehearsal training. To meet this demand, Allied Command Transformation requested that NATO Modelling and Simulation Group start a technical activity in 2006. Modelling and Simulation Group 068 (MSG-068 NETN) was formed for this purpose in 2007. The MSG-068 NETN Task Group recommends and demonstrates a way forward for interoperability, technical standards and architectures to link the NATO and national training and education centres to provide a persistent capability, and also identifies and recommends roles and responsibilities within the scope of NETN. MSG-068 NETN Task Group conducted a distributed standalone experiment between October 25 and November 5, 2010 and a distributed demonstration during I/ITSEC 2010.</p>		





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ALLEMAGNE

Streitkräfteamt / Abteilung III
Fachinformationszentrum der Bundeswehr (FIZBw)
Gorch-Fock-Straße 7, D-53229 Bonn

BELGIQUE

Royal High Institute for Defence – KHID/IRSD/RHID
Management of Scientific & Technological Research
for Defence, National RTO Coordinator
Royal Military Academy – Campus Renaissance
Renaissancelaan 30, 1000 Bruxelles

CANADA

DSIGRD2 – Bibliothécaire des ressources du savoir
R et D pour la défense Canada
Ministère de la Défense nationale
305, rue Rideau, 9^e étage
Ottawa, Ontario K1A 0K2

DANEMARK

Danish Acquisition and Logistics Organization
(DALO)
Lautrupbjerg 1-5, 2750 Ballerup

ESPAGNE

SDG TECIN / DGAM
C/ Arturo Soria 289
Madrid 28033

ESTONIE

Estonian Ministry of Defence
Estonian National Coordinator for NATO RTO
Sakala 1, Tallinn 15094

ETATS-UNIS

NASA Center for AeroSpace Information (CASI)
7115 Standard Drive
Hanover, MD 21076-1320

FRANCE

O.N.E.R.A. (ISP)
29, Avenue de la Division Leclerc
BP 72, 92322 Châtillon Cedex

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NASA Langley Research Center
Hampton, Virginia 23681-0001
ETATS-UNIS

GRECE (Correspondant)

Defence Industry & Research General
Directorate, Research Directorate
Fakinos Base Camp, S.T.G. 1020
Holargos, Athens

REPUBLIQUE TCHEQUE

LOM PRAHA s. p.
o. z. VTÚLaPVO
Mladoboleslavská 944
PO Box 18
197 21 Praha 9

HONGRIE

Hungarian Ministry of Defence
Development and Logistics Agency
P.O.B. 25, H-1885 Budapest

ITALIE

General Secretariat of Defence and
National Armaments Directorate
5th Department – Technological
Research
Via XX Settembre 123, 00187 Roma

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Norwegian Defence Research
Establishment, Attn: Biblioteket
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