

CALL FOR PARTICIPATION

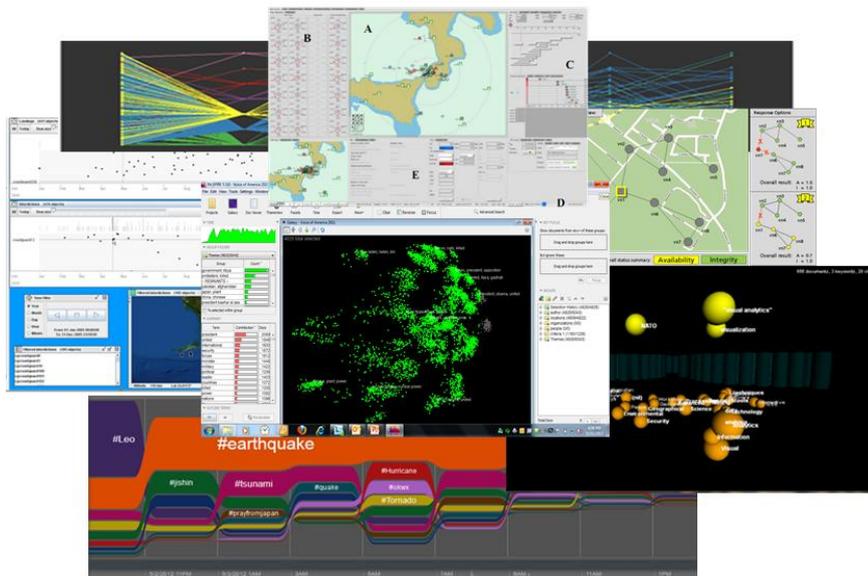
VISUALIZATION FOR ANALYSIS WORKSHOP

IST-117/RWS-017

to be held at

Defence Academy, Shrivenham, Swindon, Wiltshire, SN6 8LA, United Kingdom

30 – 31 OCTOBER 2013



DEADLINE FOR RECEIPT OF SHORT NOTES:

1 MAY 2013

**This Workshop follows-on immediately after the NATO Symposium (IST-116/RSY-028)
which will have been held on 28 - 29 October 2013**

**The Workshop is NATO UNCLASSIFIED
OPEN to Partnership for Peace (PfP/EAPC) Nations**

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The NATO Science and Technology Organization

Science & Technology (S&T) in the NATO context is defined as the selective and rigorous generation and application of state-of-the-art, validated knowledge for defence and security purposes. S&T activities embrace scientific research, technology development, transition, application and field-testing, experimentation and a range of related scientific activities that include systems engineering, operational research and analysis, synthesis, integration and validation of knowledge derived through the scientific method.

In NATO, S&T is addressed using different business models, namely a collaborative business model where NATO provides a forum where NATO Nations and partner Nations elect to use their national resources to define, conduct and promote cooperative research and information exchange, and secondly an in-house delivery business model where S&T activities are conducted in a NATO dedicated executive body, having its own personnel, capabilities and infrastructure.

The mission of the NATO Science & Technology Organization (STO) is to help position the Nations' and NATO's S&T investments as a strategic enabler of the knowledge and technology advantage for the defence and security posture of NATO Nations and partner Nations, by conducting and promoting S&T activities that augment and leverage the capabilities and programmes of the Alliance, of the NATO Nations and the partner Nations, in support of NATO's objectives, and contributing to NATO's ability to enable and influence security and defence related capability development and threat mitigation in NATO Nations and partner Nations, in accordance with NATO policies.

The total spectrum of this collaborative effort is addressed by six Technical Panels who manage a wide range of scientific research activities, a Group specialising in modelling and simulation, plus a Committee dedicated to supporting the information management needs of the organization.

- 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 Panels and Group are the power-house of the collaborative model and are made up of national representatives as well as recognised world-class scientists, engineers and information specialists. In addition to providing critical technical oversight, they also provide a communication link to military users and other NATO bodies.

The scientific and technological work is carried out by Technical Teams, created under one or more of these eight bodies, for specific research activities which have a defined duration. These research activities can take a variety of forms, including Task Groups, Workshops, Symposia, Specialists' Meetings, Lecture Series and Technical Courses

The Information Systems Technology (IST) Panel

The mission of the Information Systems Technology (IST) Panel is to implement, on behalf of the S&T Board, the STO Mission with respect to Information Systems Technology. The advancement and exchange of techniques and technologies to provide timely, affordable, dependable, secure and relevant information to war fighters, planners and strategists, as well as enabling technologies for modelling, simulation, and training are the focus of this Panel.

The **Information Systems Technology Panel (IST)** covers the fields of:

- (a) Information Warfare and Assurance,
- (b) Information and Knowledge Management,
- (c) Communications and Networks,
- (d) Architecture and Enabling Technologies

TECHNICAL PROGRAMME COMMITTEE

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BACKGROUND

NATO operations usually involve large amounts of complex disparate heterogeneous data which are difficult for decision-makers to assimilate and within which it is difficult to distinguish the essential from the irrelevant with respect to the decision-maker's task. The ever-increasing availability of sensors and powerful IT infrastructure mean that the quantity and variety of sources and data are projected to expand without limit, and irrelevant data tend to obscure critical information. This leads to an ever-increasing burden on the decision-maker, as it is their challenge to transform the data from the unstructured collection into salient elements suitable for reasoning. Visualization in the decision-maker's mind is a major route to creating the conditions for analysis leading to effective and timely decisions. There is an urgent need to develop and improve methods that can assist this process in the face of emerging challenges of global security.

WORKSHOP OBJECTIVES:

The workshop will consist of focused discussions to augment and refine understanding of themes derived from the work of the immediately preceding Symposium (IST-116/RSY28 28th to 29th October 2013, information of the symposium can be found on the CSO website (www.cso.nato.int) Ref.: IST-116). The workshop provides a platform for intellectual synergy that is intended to generate novel insights and new approaches to shape future research and development in the topic areas. Many participants will have attended the preceding Symposium (IST-116/RSY28), though the submission and enrolment processes for this workshop and the symposium are separate.

WORKSHOP TOPICS:

Example topics in visual analytics include but are not limited to:

- Analytical reasoning
- Cognitive processes
- Counter IED operations
- Cyber operations
- Networks
- Health safety and health services delivery
- Bio-terrorism
- All-source intelligence
- Humanitarian operations
- User-selectable complexity
- Information trails
- Information abstraction
- Display characteristics affecting visual analytics
- Experimental measures
- System safety and monitoring
- Evaluation and use cases
- Spatio-temporal techniques
- Mathematical foundations of data transformations
- Uncertainty

WORKSHOP FORMAT AND ORGANIZATION

We plan an interactive workshop, consisting mainly of working groups. Each working group discussions will provide an opportunity for generating and sharing ideas with all participants. There will be no prepared presentations; as such presentations will have been made at the preceding Symposium (IST-116/RSY28).

Interdisciplinary *working groups* will be formed. The working groups will be arenas for in-depth discussions of specific topics allowing more people to interact and more subjects to be covered. Each participant in the workshop will be a member of a group, and each group will have participants from the various communities. These discussion groups will be formed during the first day. Each group will generate a topic or topics of mutual interest; they will discuss future directions for the topic(s), write a summary report, and present it at the end of the workshop.

Attendance will be limited to 40 people. Preference will be given to attendees of the immediately preceding Symposium.

WHY ATTEND THE WORKSHOP?

This workshop will bring together both military and civilian users, practitioners, researchers and technologists, with big picture ideals blended with appropriate level of detail.

GENERAL INFORMATION

Classification

All material and discussion in this Workshop will be unclassified.

Participation

Attendance is conditional upon provision of a short note (a maximum of 500 words) of technical interests and/or problems for working group discussion. Please send an electronic copy of the short note together with the completed Questionnaire (Parts I and II) herewith attached at Annexe A to the IST Panel Assistant (aysegul.apaydin@cs0.nato.int) with a courtesy copy to the Technical Programme Committee Co-Chairmen (mjvarga@robots.ox.ac.uk) and (richard.may@pnnl.gov) to reach them by **1 MAY 2013**.

Attendance will be limited to 40 people. Preference will be given to attendees of the immediately preceding Symposium (IST-116/RSY-028).

Once you have received an acceptance notice by the Chairman of the Workshop, and in order to participate, it is mandatory to enrol separately for this Workshop on the CSO website (www.cs0.nato.int)

Time schedule

1 MAY 2013 Submission of a short note

1 JUNE 2013 Notification of participation at the workshop

Language

Presentations and discussions will be in English.

Workshop site, lodging and social programme

The workshop will be held at the Defence Academy, Shrivenham, United Kingdom.

There is no workshop registration fee.

Attendees and accompanying persons will be responsible for their own accommodation costs and expenses.

Once you have enrolled on the CSO website and your enrolment has been validated, you will automatically receive a General Information Package on the Defence Academy in Shrivenham

where the workshop will take place, giving you further details about the meeting site, the hotels and other general information.

Any questions on the technical aspects of the scientific programme or the participation process should be addressed to the Programme Committee Chairman or Co-Chairman.

Questions on the administrative aspects of this Workshop or requests for further information on STO activities should be addressed to the IST Panel Office:

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From Europe:

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From the USA or CANADA:

CSO-NATO

Attention: IST Panel

PSC 116

APO AE 09777

WHAT IS THE NATURE OF THE TOPIC(S) ?

(Please tick the boxes that apply):

BASIC RESEARCH

APPLIED RESEARCH

CONCEPT STUDIES & ANALYSIS

EXPERIMENTATION

SYSTEM DEVELOPMENT

APPLICATIONS / REQUIREMENTS

SYSTEM TRIALS

OTHER, PLEASE STATE

<input type="checkbox"/>

PART II: DETAILS OF PARTICIPANT

PARTICIPANT NAME

TITLE OF SHORT NOTE OR TECHNICAL INTERESTS FOR DISCUSSION:

CONCISE BUSINESS MAILING ADDRESS *(include title (Mr, Mrs, Dr, etc.) full name & zip code)*

Nationality:

Position in organisation:

Telephone: Country code: *Area/town code:* **Number:**

Fax No: Country code: *Area/town code:* **Number:**

E-mail: