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## **NATO Modelling and Simulation Group**

### **MSG-192 17<sup>th</sup> Workshop on Commercial Technologies and Games for Use in NATO and Nations**

**7 October 2021 (online event)**

**Hosted by the 2021 CA<sup>2</sup>X<sup>2</sup> Forum (former CAX Forum)**

#### **Introduction**

The commercial sector is developing several key technologies and applications that have the potential for cost-effective adaptation and use in modelling and simulation (M&S) applications for defence planning, training, operations and capabilities development. The exploitation of commercial technologies and appropriate use of open standards can provide efficiencies and increased benefits for defence applications. The NATO M&S community needs to identify those technologies having the greatest near-term potential and understand the trends and developments in those technologies that have potential to meet current and future defence requirements.

Through presentation, demonstration and debate, Workshop attendees will acquire knowledge and experience in the topic areas. Technical and application briefings and demonstrations on selected commercial technology will help the attendees better understand the issues so that they may aid in the development of the strategy for NATO and the Nations to exploit these technologies. It is intended that all participants will develop a shared understanding of the issues and opportunities. Meeting proceedings will be produced including recommendations for NATO and the Nations. The Workshop is open to: NATO nations, NATO Bodies, Science and Technology Organization Enhanced Opportunity Partners (STO EOP), Partnership for Peace countries (PfP) and Partners across the Globe (GP).

#### **Aim**

As with previous NATO Modelling and Simulation Group (NMSG) Workshops on this topic, this workshop is intended to share national experiences, explore commercial and games technologies, understand best practices, and to identify barriers to further exploitation and ways these might be overcome. This Workshop will also contribute to articulate a technology road map for possible future NMSG Task Group activities on commercial technologies and games.

#### **Topics**

The Workshop will focus on:

- Artificial Intelligence in simulation applications
- Augmented Reality and Mixed Reality (xR) developments (e.g. Microsoft HoloLens)

- Game Architectures (e.g. STE, SpatialOS) and Game Engines (e.g. Unity)
- M&S as a Service architectures and applications
- Cyber Awareness games and Cyber Effect simulations

Aspects to be discussed include:

- The background and affordability of simulations and digital games;
- Specific challenges using these tools for education and training or operational support (e.g. interoperability standards), as well as strategies for overcoming these challenges in order to achieve successful applications;
- The practical impact of these technologies in preparing and supporting warfighters;
- The practical impact of these technologies in educating support trades such as medical, supply, transportation, and police; and
- The future of these technologies and their impact on learning, teaching and decision making.

### **Preliminary Structure of the Online Workshop**

14:00 – 18:30 CEST (UTC+2)

14:00 – 15:00: Session 1

Kick-off with a Keynote on AI for Decision Support applications

15:10 – 16:10: Session 2

Game Architectures and Game Engines, AI tools and Engines

16:20 – 17:20: Session 3

xR Utilisation in Military Operations (Training and Planning)

17:30 – 18:30: Session 4

Cyber Awareness and Cyber Effect simulations

18:30 Wrap-Up

The Workshop is organized by the NATO Modelling and Simulation Group and embedded in the NATO Computer Aided Analysis, Exercise, and Experimentation (CA<sup>2</sup>X<sup>2</sup>) Forum organized by the NATO Modelling and Simulation Centre of Excellence (NATO M&S COE, Rome, Italy).

### **Call for Presentations**

Authors are invited to submit short abstracts for this Workshop on the topics listed above or on national initiatives or activities. Abstracts and presentations will be accepted in English only. The Workshop Committee will select presenters, based on submitted abstracts that are considered suitable for presentation. A maximum of 8 Presentations will be selected for the Workshop.

The time allowed for each speaker is normally 20 minutes, plus 10 minutes for discussion. Title and Abstract should be sent to the Workshop Committee (see email addresses below). It is the responsibility of the author to ensure that his/her abstract and presentation receives any necessary clearance before it is forwarded, and sufficient time should be allowed for this.

The submitted presentations will be published on the NATO STO Science Connect website and on the CA<sup>2</sup>X<sup>2</sup> website.

Opportunities to demonstrate systems or applications during the breaks or proposals for more in-depth webinars or hands-on sessions in the follow-on CA<sup>2</sup>X<sup>2</sup> Sprint week (11-15 October) may be available. Please contact the MSG-192 Workshop Committee to discuss details.

### **Call for Participation**

The Workshop is open to participants from government, industry and academia working in the field of modelling and simulation. The event is open to NATO nations, NATO Bodies, Science and Technology Organization Enhanced Opportunity Partners (STO EOP), Partnership for Peace countries (PfP) and Partners across the Globe (GP).

### **Registration**

To participate in the MSG-192 Workshop, please visit the [STO Events Website](#) for registration details.

Registration will close on **30 September 2021**. Please enrol early to avoid disappointment.

### **Cost**

There is no cost to attend the MSG-192 Workshop.

Participation in the NATO CA<sup>2</sup>X<sup>2</sup> Forum sessions requires separate registration (<https://www.mscoe.org/event/nato-ca2x2-forum-2021/> ) and includes a nominal fee.

### **Location**

The event will be conducted online due to the pandemic situation. Information regarding software to be used for participation will be announced in due time.

### **Schedule (tentative)**

Abstracts are due by: 25 June 2021

Author notification by: 9 July 2021

Submit (draft) Presentation by: 10 September 2021

MSG-192 COTS Workshop 7 October 2021, conducted online.

### **Information**

Any questions on the technical aspects of the Programme or the contents of Presentations should be addressed to the Workshop Committee:

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Information on the NATO CA<sup>2</sup>X<sup>2</sup> Forum may be found at: <https://www.mscoe.org/event/nato-ca2x2-forum-2021/>

Questions on the administrative aspects of this Workshop or requests for further information on STO activities can be asked by contacting the Modelling and Simulation Coordination Office (MSCO):

**NATO STO CSO Modelling and Simulation Coordination Office**

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