



**Simulation Interoperability
Standards Organization**

"Simulation Interoperability & Reuse through Standards"

SISO-TOR-017-2017

**Terms of Reference
for the
Exploration of Next Generation
Technology Application to
Modeling and Simulation
Standing Study Group**

Version 1.1

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EXCOM Approved: 09/08/2017

**SISO-TOR-017-2017, Terms of Reference for the Exploration of Next Generation
Technology Application to Modeling and Simulation Standing Study Group**

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Revision History

Version	Section	Date (MM/DD/YYYY)	Description
1.0		08/04/2017	Initial Draft
1.1		09/08/2017	Final Version

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Table of Contents

1	Proponent Name(s) and Contact Information.....	5
2	SISO Committee with Oversight.....	6
3	Rationale.....	6
4	Tasks	6
4.1	Administrative Tasks	6
4.2	Group-Specific Task.....	7
5	Products.....	7
6	Performance Period	8

**SISO-TOR-017-2017, Terms of Reference for the Exploration of Next Generation
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**Simulation Interoperability Standards Organization
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Exploration of Next Generation Technology Applications
to Modeling and Simulation
Standing Study Group**

1 Proponent Name(s) and Contact Information

This section identifies the key proponents and individuals who have agreed to participate as members of the Exploration of Next Generation Technology Application to Modeling and Simulation (ENGTAM) Standing Study Group.

Primary proponent(s):

#	Name	Organization	Email Address
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SISO-TOR-017-2017, Terms of Reference for the Exploration of Next Generation Technology Application to Modeling and Simulation Standing Study Group

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2 SISO Committee with Oversight

The SISO Committee with oversight of this group shall be:

- SISO Standards Activity Committee
- SISO Executive Committee
- SISO Conference Committee

3 Rationale

This SSG will explore the latest industry technology trends and available solutions, specifically focused on their applicability to the M&S domain. The SSG was inspired by the U.S. Army's Research and Development (R&D) goal of thinking forward with respect to Science and Technology (S&T). The rapid progress in commercial computing technology solutions, and new data transmittal and sharing paradigms, has led to the need for practitioners from the M&S domain to examine which paradigms becoming more ubiquitous in commercial solutions can be used in the next generation of M&S paradigms.

The ENGTAM SSG will continue the nearly two years of work by the predecessor Study Group. It will consider the latest industry technology trends and available solutions, specifically focused on their applicability to M&S. Furthermore, the SSG will focus on technology adoption not just the technologies themselves. The ENGTAM SSG will continue discussions for continuing the education and documentation of best practices for large organizations to examine, adopt, and utilize the newest technologies for M&S as the technologies present themselves.

The ENGTAM SSG will build on the work and discoveries of the ENGTAM Study Group. It will continue capture and decompose common M&S program goals such as "point of need", explore commercial technical solutions that could support the M&S program goals and identify areas where further technical analysis could be most beneficial. Candidate areas that have been explored include: wearable technology; advanced hardware; data sharing applications; database technologies; Internet of Things; Data Analysis; and, mixed reality. The SSG will expand this list as relevant technologies emerge.

Security continues to be a concern for any M&S environment. The ENGTAM SSG will explore and examine solutions employed by others to adapt to military applications of M&S. Security should be considered from the beginning of any technical design effort, so the ENGTAM SSG will account for security considerations for the application each technology explored. The SSG will also consider other quality and management requirements such as risk, cost, and long term sustainability, and others, as needed.

This SSG will assist practitioners from the M&S domain in staying informed of recent technology advancements and in understanding their impacts to our current and future implementations.

4 Tasks

4.1 Administrative Tasks

The group shall execute the following administrative tasks:

1. Operate in accordance with all applicable SISO administrative policy.

SISO-TOR-017-2017, Terms of Reference for the Exploration of Next Generation Technology Application to Modeling and Simulation Standing Study Group

2. A Group Lead shall be appointed by the SISO Committee establishing the Study Group. The Group Lead shall be a SISO member. If the Group Lead changes over the course of the study period, then group members shall identify a new Group Lead, make a recommendation to the SISO Committee with oversight to appoint the new Group Lead, and that SISO Committee shall appoint the new Group Lead.
3. Work directly with the SISO Committee providing oversight to ask questions, clarify process, coordinate products and supporting documentation, and to communicate.
4. Update and maintain information on the group webpage.
5. Maintain a group folder in SISO's Digital Library in which all historical files relevant to the group and relevant to the study-related products developed by the group are archived.
6. Whenever practical, conduct discussions and business utilizing the group Discussion Forum and teleconferencing.
7. Announce all formal meetings using the group Discussion Forum, document minutes of all formal meetings, and archive minutes, as well as all other materials presented at meetings, in the group folder in SISO's Digital Library. Formal meetings are meetings where official business is conducted (e.g., voting, decisions are made).
8. Announce all informal discussions using the group Discussion Forum. Following an informal discussion, summarize and post salient points using the group Discussion Forum.
9. Take advantage of alternate meeting opportunities at SISO affiliate- and sponsoring-organizations' venues in which group members also participate.
10. Become and remain cognizant of other organized efforts (both internal and external to SISO) that are addressing related/relevant standards and practices. Maintain liaison with those organizations for the purpose of expressing interest in their efforts and findings, potential collaborations, and in sharing the group's work.
11. Produce a Final Report and deliver to the SISO Standards Activity Committee (SAC).

4.2 Group-Specific Task

1. Explore the latest industry technology trends and available solutions, specifically focused on their applicability to the M&S domain. Examples include wearable technology, streaming, advanced hardware, cloud services, data sharing applications, database technologies, Internet of Things, data analysis and mixed reality.
2. Account for security requirements and what the application each technology will need to consider.
3. Consider other architecture quality requirements and management requirements such as risk, cost, and long term sustainability, among others.
4. Serve the need of the M&S community stay informed of recent technology advancements and understand their impacts to our current and future implementations.
5. Examine, document and recommend best practices / standards for discovering and adopting technology into organizations

5 Products

1. Formal meeting minutes and other meeting materials
2. Report (using the approved template).

SISO-TOR-017-2017, Terms of Reference for the Exploration of Next Generation Technology Application to Modeling and Simulation Standing Study Group

3. All documentation supporting the technical findings in the annual report.
4. When warranted, recommendations for product development in the form of a Product Nomination using the approved template.
5. Standing Study Group Annual Report using the approved template. (Due to the SISO Committee with oversight by October 1st of each year.)

6 Performance Period

The performance period shall commence with approval of the Terms of Reference.

The SSG will meet on the first Tuesday of each month by telecom.

The SSG will meet face-to-face at IITSEC, SIW, and other events or venues that may bring members of the community together.

Table 1. Schedule of Events and Deadlines

Event	Date
ENGTAM SG Wrap-up / SSG Kickoff Telecon	9/14/2017
Monthly Meeting First Tuesday of Each Month	(Monthly)
ENGTAM SSG Meeting Face to Face at I/ITSEC	11/27/2017
Draft Annual Report	09/01/2018
ENGTAM SSG Meeting Face to Face at SIW	09/13/2018
Submit Annual Report	10/01/2018
ENGTAM SSG Meeting Face to Face at I/ITSEC	11/26/2018

The group shall update this schedule periodically and report slippages to the SISO Committee with oversight. The SISO Committee with oversight will consider inability to meet scheduled milestones as a reason to dissolve the group.