



ISO/IEC JTC 1/SC 24

Computer graphics, image processing and environmental data representation

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**Simulation Interoperability
Standards Organization**

"Simulation Interoperability & Reuse through Standards"

**SISO Overview and Relationship to
ISO/IEC JTC 1 / SC 24**

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SISO Outreach Subcommittee Chair*

Topics

- 🟢 **Who is SISO?**
- 🟢 **What are our Products and Interests?**
- 🟢 **How Do We Develop and Forge Standards?**
- 🟢 **What Do We Do in our Liaison Role with ISO/IEC?**



Who is SISO?

Who is SISO?

- ◆ **Mission**
- ◆ **Vision**
- ◆ **Operating Principles**

Who is SISO?



Mission



Vision



Operating Principles

- To foster development and maintenance of Modeling & Simulation standards
- To promote and support their use in the M&S community
- To improve technical quality of M&S
- To improve effectiveness, timeliness cost efficiency of M&S implementations world-wide

Who is SISO?

● **Mission**

➔ **Vision**

● **Operating Principles**

- To serve the global community of M&S professionals
- To provide an open forum for the exchange of ideas
- To advance M&S-related technologies and practices,
- To develop standards and other products that enable greater M&S capability, interoperability, credibility, reuse, and cost-effectiveness

Who is SISO?

💧 **Mission**

💧 **Vision**

➡ **Operating Principles**

- Communication
- Responsiveness and Responsibility
- Quality
- Discipline
- Fairness
- Openness
- Consensus

Who is SISO?

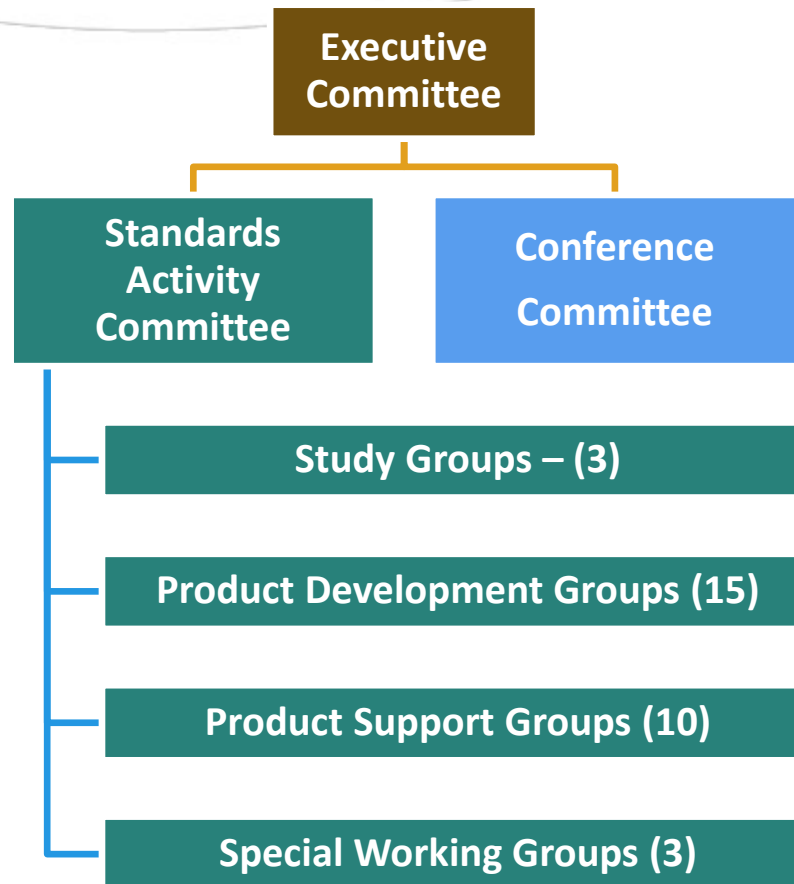


C-BML
DSEEP
CMSD
FEAT
MSDL
DIS
BOM
LINK 16
HLA
GM-VV

**NOT
FOR
PROFIT**



Who is SISO?



What are our Products and Interests?

Areas of Interest

- ◆ Architectures
- ◆ Acquisition
- ◆ Communities of Practice
- ◆ Composability
- ◆ Conceptual Modeling
- ◆ Cultural Adjustment
& Buy-In
- ◆ Cyber
- ◆ Data / Databases
- ◆ Interfaces
- ◆ Frameworks
- ◆ Metadata
- ◆ Networks
- ◆ Ontologies
- ◆ Processes
- ◆ Semantic Interoperability
- ◆ M&S as a Service
- ◆ Substantive
Interoperability
- ◆ Synthetic Environments
- ◆ Taxonomies
- ◆ Tools
- ◆ Training

SISO Products

◆ **Balloted Products**

- ◆ Standards
- ◆ Guidance

◆ **Non-balloted Products**

- ◆ Reference
- ◆ Administrative

- *Open Process*
- *Consensus*
- *International*

Standards developed and published by SISO



SISO Standards

- | | |
|---------------------|---|
| SISO-STD-001 | Real-time Platform Reference Federation Object Model (RPR-FOM) |
| SISO-STD-002 | Link 16 Simulation |
| SISO-STD-003 | Base Object Model (BOM) Template |
| SISO-STD-004 | Dynamic Link Compatible HLA Application Programming Interface |
| SISO-STD-006 | Commercial Off-the-Shelf (COTS) Simulation Package Interoperability (CSPI) |
| SISO-STD-007 | Military Scenario Definition Language (MSDL) |
| SISO-STD-008 | Core Manufacturing Simulation Data (CMSD) – UML Model |
| SISO-STD-011 | Coalition Battle Management Language (C-BML) |
| SISO-STD-012 | Federation Execution Agreement Template |
| SISO-STD-013 | Common Image Generator Interface (CIGI), Version 4.0 |
| SISO-REF-039 | Generic Methodology for Verification and Validation (GM-VV) to support Acceptance of Models, Simulations, & Data |
| SISO-REF-010 | Enumerations for Simulation Interoperability |



Standards developed and/or maintained by SISO



IEEE Standards

- ◆ **Distributed Simulation Engineering and Execution Process (DSEEP)** **IEEE 1730 Series**
- ◆ **High Level Architecture (HLA)** **IEEE 1516 Series**
- ◆ **Distributed Interactive Simulation (DIS)** **IEEE 1278 Series**

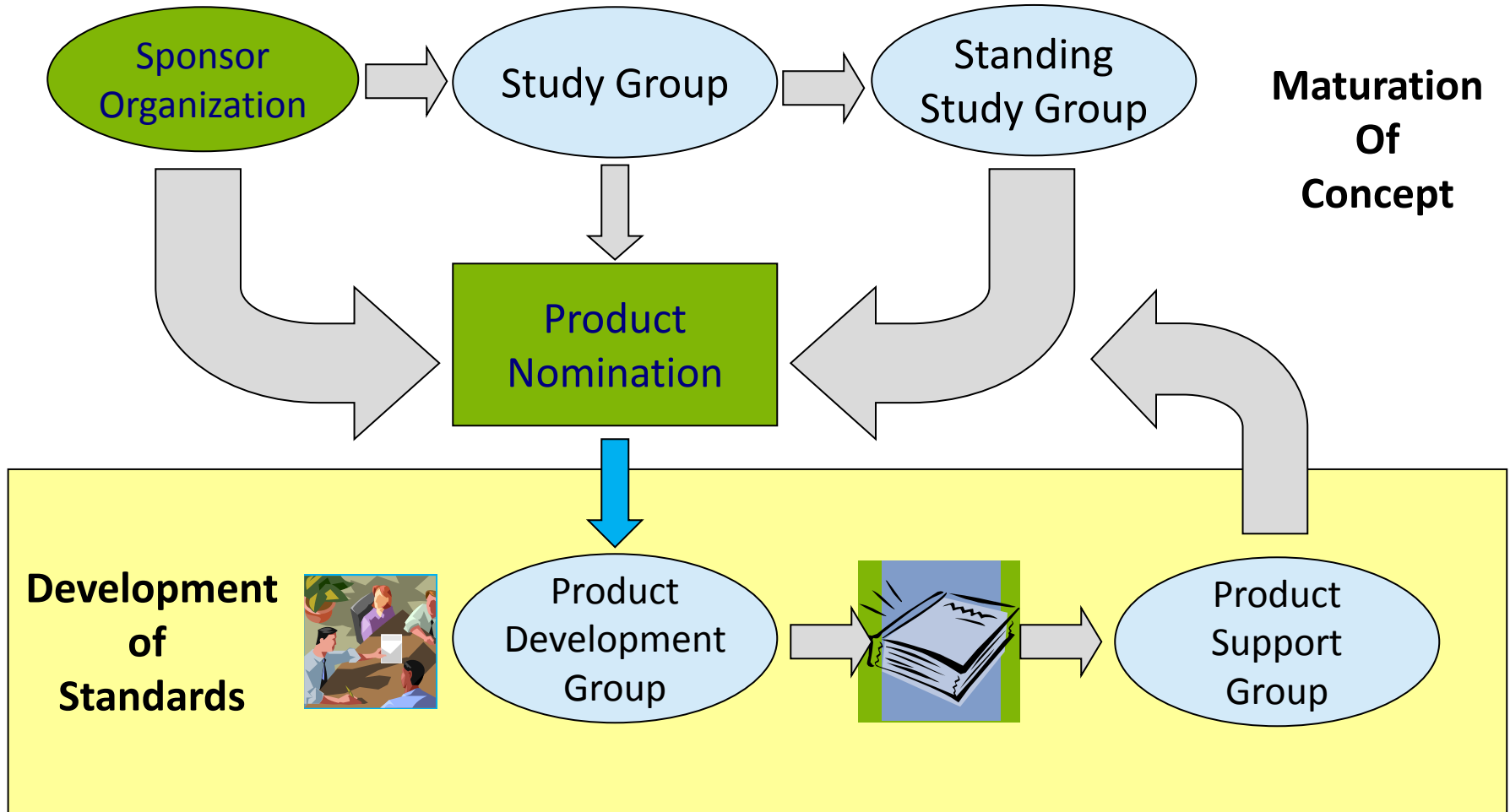


ISO Standards

- ◆ **Synthetic Environment Data Representation & Interchange Specification (SEDRIS)**

How Do We Develop and Forge Standards?

The SISO Working Model



Product Development Groups (1/2)

- ◆ **Acquisition M&S PDG – A Standards Profile for the M&S Activities in Support of Acquisition Activities**
- ◆ **Command & Control Systems – Simulation Systems Interoperation (C2SIM)**
- ◆ **Distributed Debrief Control Architecture (DDCA)**
- ◆ **Distributed Interactive Simulation (DIS)**
- ◆ **Enhanced Position Location Reporting System including Situation Awareness Data Link (EPLRS-SADL)**
- ◆ **Gateway Description and Configuration Languages (GDACL)**
- ◆ **Guideline on Scenario Development (GSD)**

Product Development Groups (2/2)

- ◆ **Link 11 A/B Simulation**
- ◆ **Real Time Platform Reference Federation Object Model (RPR FOM)**
- ◆ **Reuse and Interoperation of Environmental Data and Processes (RIEDP)**
- ◆ **Simulation and Conceptual Modeling (SCM)**
- ◆ **Space Reference FOM (SRFOM)**
- ◆ **Simulation Reference Markup Language (SRML)**
- ◆ **Urban Combat Advanced Training Technologies (UCATT)**
- ◆ **Web Live, Virtual, Constructive (WebLVC)**

Product Supports Groups (1/2)

- ◆ **Base Object Model (BOM)**
- ◆ **Common Image Generator Interface (CIGI)**
- ◆ **Core Manufacturing Simulation Data (CMSD)**
- ◆ **Commercial Off-the-Shelf Simulation Package Interoperability (CSPI)**
- ◆ **Command & Control Systems – Simulation Systems Interoperation (C2SIM)**
- ◆ **Distributed Interactive Simulation (DIS)**
- ◆ **Distributed Simulation Engineering and Execution Process (DSEEP) /
DSEEP Multi-Architecture Overlay (DMAO)**

Product Supports Groups (2/2)

- ◆ **Environmental Data Representation Standards (EDRS)**
- ◆ **Federation Engineering Agreements Template (FEAT)**
- ◆ **HLA-Evolved**
- ◆ **Tactical Digital Information Link-Technical Advice and Lexicon for Enabling Simulation (TADIL TALES)**
- ◆ **Verification, Validation and Accreditation /Acceptance Products (VV&A)**

What Does SISO Do in our Liaison Role with ISO/IEC JTC 1 / SC 24?

SISO's Role as an ISO/IEC JTC 1 / SC 24 Liaison

- ◆ **SISO Environmental Data Representation Standards (EDRS) Product Support Group (PSG) maintains liaison with the ISO/IEC JTC 1/SC 24 WG 8**
 - ◆ Supports the development, extension, refinement, and maintenance of standards for the environmental data community, which include the ISO/IEC SEDRIS family of standards
 - ◆ Provides support for the development and implementation of tools to support the use of SISO products
 - ◆ Provides a forum for community education on the application and use of standards for environmental data.

SISO's Plan as an ISO/IEC JTC 1 / SC 24 Liaison

- ◆ **Develop procedures for implementing SISO's roles and responsibilities as an SC 24 Liaison**
- ◆ **Align to Section 3 of *Guidance for ISO liaison organizations; Engaging stakeholders and building consensus***
- ◆ **Post details of the approved ISO projects to SISO's Latest News**
- ◆ **Maintain a SISO web page for ISO projects comment and input by SISO members**

SISO membership

- Register as a member on the SISO web site
- annual fee : 95 US \$
- Participate in a SISO workshop (SIW)
- a paying event!



The screenshot shows the SISO website homepage. At the top, there is a navigation bar with links for 'Home', 'Discussion Board', 'Digital Library', 'Forum Templates', and 'SEARCH'. The main header features the SISO logo and the text 'Simulation Interoperability Standards Organization' with the tagline 'Simulation interoperability & more through Standards'. Below the header is a menu with categories: 'About SISO', 'Products & Publications', 'Standards Activities', 'Workshops', 'News & Media', 'Sponsorship', and 'Membership'. The main content area includes a large image of a satellite in space, a 'Space' label, and a 'LATEST NEWS' section. The news section contains two articles: '2012 Elections-Results posted' and '2012 Spring M&S Journal'. To the right, there is an 'Upcoming Events' section listing '2012 Spring SIW&S Awarded Papers' and '2012 Fall SIW - Orlando, Florida'. Below the news, there is a 'LINKS & RESOURCES' section with four links: 'Become a Member', 'Read about our Partners', 'Become a Sponsor', and 'Browse Our Standards'. At the bottom right, there is a 'WHO WE ARE...' section and a 'DID YOU KNOW...' section. The website footer contains the URL 'www.sisostds.org'.

Attend 2015 Fall SIW



30 Aug - 4 September 2015
Florida Hotel - Orlando, Florida

Early Registration Deadline: 17 Aug 2015

On-Demand M&S – The Next Wave of Interoperability

Tracks:

- Acquisition Lifecycle and Technology Transfer
- Services, Processes, Tools, and Data
- M&S Specialty Topics: Cyber, Space, Future Training

SISO Sponsors



Questions?



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