



2019

Annual **INCOSE**
international workshop

Torrance, CA, USA

January 26 - 29, 2019

Digital Engineering Information Exchange WG

www.incose.org/iw2019

Digital Engineering Information Exchange WG



2019
Annual **INCOSE**
international workshop
Torrance, CA, USA
January 26 - 29, 2019

CHAIR

John Coleman (john.h.coleman@saic.com)

MEMBERS

27

CO-CHAIRS

Frank Salvatore (Frank.J.Salvatore@saic.com)

Chris Schreiber (chris.schreiber@lmco.com)

INCOSE CONNECT ADDRESS



<https://connect.incose.org/WorkingGroups/DigitalArtifacts/SitePages/DEIXWG%20Home%20Page.aspx>

INCOSE WEB PAGE



<https://www.incose.org/incose-member-resources/working-groups/transformational/digital-engineering-information-exchange>

Charter Summary



2019
Annual **INCOSE**
international workshop
Torrance, CA, USA
January 26 - 29, 2019

WG PURPOSE/MISSION

DEIX WG aspires to ensure Digital Artifacts are transferable in ways that are useful to all stakeholders. The WG will leverage digital capabilities to identify standard ways to define, request, offer and exchange model-based engineering (MBE) information across disciplines and systems" life cycle. The successful fulfillment of this purpose allows the free flow of digital artifacts between buyers and suppliers throughout a global supply chain.

WG GOAL(S)

The DEIX WG primary goal is to establish a common set of digital viewpoints and consensus-based guidance for the exchange of digital artifacts within a Model-Based Engineering (MBE) digital ecosystem. The DEIX addresses the exchange of both graphical and non-graphical information found in model-centric digital artifacts. The intent is that these common viewpoints and consensus-based guidance on rules, formats, and protocols will allow acquiring organizations and their global supply chains to seamlessly request and exchange MBE digital artifacts created by diverse engineering disciplines.

WG SCOPE

The scope of DEIX includes **"The what?"** It will provide a functional characterization of the content, processes, protocols, and relationships involved in the exchange of MBE digital artifacts between stakeholders. DEIX does not include **"The technological means?"** or the mechanisms for exchanging digital artifacts.

IW Outcomes



2019
Annual **INCOSE**
international workshop
Torrance, CA, USA
January 26 - 29, 2019

IW Outcomes

The Digital Engineering Information Exchange (DEIX) Working Group has accomplished the following:

- Found general consensus on the topical encyclopedia entries for digital artifact, digital engineering ecosystem, authoritative source of truth, and digital engineering information exchange model. This forms the narrative to describe DEIX model.
- Developed the first draft of the Digital Information Exchange Model with concept for the creation of the Digital Viewpoint Model, and the construct for the DEIX Model.
- Identified standards and began the evaluation of standards and the cross pollination of other INCOSE working groups that are considering standards.
- Further enlisted help in the definition of common use cases to be supported by Digital Engineering information exchange.
- Began development of several use cases of model exchange between stakeholders as a mechanism to capture the standard and unique data required for effective exchange.

Planned Work past IW



2019
Annual **INCOSE**
international workshop
Torrance, CA, USA
January 26 - 29, 2019

PLANNED ACTIVITIES

- Begin writing the DEIX Primer based on the input to the DEIXPedia and develop the outline by March 1, 2019
- Complete the DVM Creation Concept model by March 1, 2019
- Create the Instances of DVM for 5 types of ISO 15288 Reviews by April 1, 2019
- Develop the Digital Viewpoint Model Catalog of DVM"s created by members of the DEIX Community
- Integrate Digital Viewpoint Model and DEIX Logical Architecture Model (creating integrated DEIX Model)
- Update the NDIA SE Division"s Model and Simulation subcommittee in Feb 7, 2019
- Inclusion of DEIX Encyclopedia topics or cross referencing in the SEBoK
- Stand up collaborative modeling environment for DEIWG modeling

PLANNED WORK PRODUCTS

- Digital Engineering Information Exchange (DEIX) Primer
- Digital Viewpoint Model Guidance
- Digital Viewpoint Model Catalog
- Digital Engineering Ecosystem Reference Model
- Digital Engineering Information Exchange Standards Framework