Systems Engineering Division

Committee Meeting

23-Sep-2020

http://www.ndia.org/divisions/systems-engineering

Agenda

Time	Topic	Presenter(s)
1100	**1. Opening Remarks**	Joe Elm
1105	**2. Committee Reports** ***Brief overview of status and plans for 2020***	Committee Chairs
	2a ADAPT Committee	Ebersole / Johnson
	2b Architecture Committee	Scheurer / Moshinsky
	2c Automatic Test Committee	Griffin / Savage
	2d DT&E Committee	Manas
	2e Education & Training Committee	Raygan /Snoderly / Nidiffer
	2f Enterprise Health Management Committee	Reisig
	2g ESOH Committee	Schulte / Sheehan / Forbes
	2h Human Systems Integration Committee	Risser / Rohrer
	2i Modeling & Simulation Committee	Allsop / Schreiber
	2j Software Committee	Nidiffer
	2k System of Systems (w/ Interoperability) Committee	Poel / Dahmann / Horne/Daly
	2l SE Effectiveness Committee	Elm
	2m Systems Security Engineering	Dunlap / Ocker / Reed
1155	**3. Wrap-up / Adjourn**	Joe Elm

Introduction

We will continue to hold virtual SE Division Meetings until it is safe to resume F2F meetings.

We will hold Committee Review Meetings in the months between our normal SE Division meetings.

Committee Reports

2a	ADAPT Committee	Ebersole / Johnson
2b	Architecture Committee	Scheurer / Moshinsky
2c	Automatic Test Committee	Griffin / Savage
2d	DT&E Committee	Manas
2e	Education & Training Committee	Raygan /Snoderly / Nidiffer
2f	Enterprise Health Management Committee	Reisig
2g	ESOH Committee	Schulte / Sheehjan / Forbes
2h	Human Systems Integration Committee	Risser / Rohrer
2i	Modeling & Simulation Committee	Allsop / Schreiber
2j	Software Committee	Nidiffer
2k	System of Systems (w/ Interoperability) Committee	Poel / Dahmann / Horne/Daly
2l	SE Effectiveness Committee	Elm
2m	Systems Security Engineering	Dunlap / Ocker / Reed

Architecture Committee

Mission / Purpose

- Mission: Grow Relevance, Usefulness, and Awareness of System Architecting and Architectures
- Purpose: To Facilitate Successful Acumen and Outcomes from System Architecting and Architectures
- Leadership: Bob Scheurer, Boeing
  Ed Moshinsky, Lockheed Martin

Stakeholders / Sponsors / Collaborators

- Stakeholders: Defense Industrial Base Members, DoD, & Services
- Sponsor: Nadine Geier, OSD R&E
- Collaborators: INCOSE and AIA
- Membership: 67 (TBR) members from government, industry, and academia.
- Business Rhythm: Bi-weekly telecons; sub-committee/ working groups as required.

2020 Accomplishments to Date

- Released MOSA White Paper July 1, 2020
- Holding Bi-Weekly SE Architecture Committee Meetings
- Conducting Special Sub-Committee Meetings, as Needed (e.g., MOSA Metrics)
- Guest Presenters at Committee Meetings (Primers for technical work activities)
- Supporting 2020 Systems & Mission Engineering Conference Planning
- Participating in DoD's MOSA (MOSWG) and Digital Engineering (DEWG) Working Groups

2020 Plans / Events / Milestones

- Focus on MOSA Metrics / Metrics Sub-Committee
- 2020 Systems & Mission Engineering Conf. Track on System Architecture: Curr. 11 Briefings Planned
- MOSWG Support
- Digital Engineering Working Group Support
- Other Relevant Plans/Support Areas
  - Nadine Geier, OUSD(R&E) SE Director Engagements
  - Reference Architectures
  - Modularity & Openness Partitioning and Representations in Architecture Models
  - MOSA Implementation w/ IP & Data Rights
- Help Needed: Posting of Committee Artifacts on Outside-Facing NDIA-Hosted Web Site (Currently using INCOSE Site)

Automatic Test Committee Chair's Report

Patricia Griffin

23 September 2020

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407-462-7898
Pat.Griffin@ClearCom.com

Automatic Test Committee - 2020 Task Plan

Proposed 2020 Tasks:

- **Government/Industry Liaison Reports**
  - Investigated online NDIA options
- **John Slattery Award nominations**
  - Deferred till 2021
- **ATC projects:**
  - Awaiting next project
  - Cyber Security discussions

Deliverables / Products:

- **Semi-annual Reports posted on Web-site:**
  - US Army ATS Liaison Report
  - USAF ATS Liaison Report
  - US Navy/USMC-Air ATS Liaison Report
  - USMC-Ground ATS Liaison Report
  - DoD AMB Liaison Report
  - Commercial ATS Liaison Report
  - ATC Project Updates
- Navy-led Survey completed in June

Schedule / Resources

Status/Review at regular ATC meetings:

- Large turnout Aug 2019 - Completed
- VMeeting planned in next two weeks to seek key topics and direction
- Steering Committee to hold Vmtng after general meeting to firm new direction

Issues / Concerns:

Uncertain Budget/resources:

- CV-19 affecting all travel, budgets and introduced uncertainty
- Several committee member changes
- Re-engaging with industry and military base for a reset

Automatic Test Committee – 2020 Status

2020 Tasks Planned	Status	Accomplishments (deliverables, etc.) - Comments
ATS Future Needs Survey	Complete	-Navy Survey on ATS future needs and direction conducted in June
New tasks assigned	Awaiting new task	-Invited military speakers declining -LXI security white paper posted to website
Chair challenged the Steering Committee to identify tasks that would be beneficial	Awaiting input	-Chair will add as topic to next virtual meeting -Schedule V meeting in October
Reset meeting planned in October	Firming date with NDIA	-Whole committee to meet in October to assess way forward
John Slattery Nominations	Deferred	-No nominations being drafted in 2020

The Education and Training (E&T) Committee September 2020 Report

Backlog	Doing	Done
Collaboration on Program Management workshop		
Can SE be taught at the undergraduate level		Yes, 29 universities have undergrad ABET accredited programs. Only two PE paths.
Case Studies	DSMC considering approximately 400 hours faculty involvement.	
E&T Membership	NDIA database?	
E&T Projects	NDIA members / committee recommendations for SE, MOSA, DE, ME, MBSE, Agile non-software lessons learned / best practices	
Nov. Conference		6 papers recommended

Education & Training Committee
Dr. Robert Raygan, DAU / DSMC Chair
Dr. Don Gelosh, Worcester Polytechnic Institute
Dr. Ken Nidiffer, GMU
Dr. John Snoderly, DAU
Garry Roedler
Geoff Draper, L3 Harris

NDIA

23 September 2020

NDIA Systems Engineering Division Meeting

Environment, Safety, and Occupational Health (ESOH)

Committee Report

Industry Chairs: Mr. Tim Sheehan, Raytheon Corporation

Mr. David Schulte, SAIC

Government Liaison: Mr. Sherman Forbes, SAF/AQRE

As of: 23 Sept 2020

NDIA ESOH Committee Status Update

2020 Tasks	Status	Accomplishments (deliverables, etc.)
1. **Further demonstrations of the National Aerospace Industries (NAS) 411-1, "Hazardous Materials Target List (HTML)" SysML Digital Module for Model Based Systems Engineering (MBSE) tools**	Completed	• Successfully completed demonstrations with Boeing and Raytheon of the U.S. Air Force sponsored NAS411-1 SysML Digital Module • Incorporated the lessons learned from the demonstrations and finalized the module • Provided the finalized module to the Aerospace Industries Association (AIA), owners of NAS411-1, for their evaluation
2. **Obtain Aerospace Industries Association (AIA) approval to provide the SysML Digital Module for MBSE with the AIA National Aerospace Standard (NAS) 411-1, "Hazardous Material Target List (HTML)"**	Completed	• AIA reviewed and approved the SysML Digital Module • AIA set to publish updated version of NAS 411-1 (REV 2) on September 30, 2020. • Purchase of NAS411-1 will now include the SysML Digital Module for MBSE along with the hard copy and Excel spreadsheet versions

3. **Work with DoD Acquisition ESOH IPT on adding Systems Engineering and ESOH risk and requirements management to new DoD 5000 series policy documents**	In Progress	• DoD Acquisition ESOH IPT initiated effort to "Reimagine ESOH in the new DoD 5000 Adaptive Acquisition Framework (AAF)"
		  • Six different AAF acquisition pathways
		  • Individual programs may consist of multiple pathways
		  • Six pathways have no or inconsistent requirements to address ESOH design considerations
		  • Seek to define the minimum essential Systems Engineering ESOH considerations for each of the six pathways
		• More information to come on this, but it will be an opportunity for DoD's industry partners to help define what and how ESOH activities need to be addressed in each of the pathways

4. **Increase NDIA Industry involvement in the ESOH Committee**	In Progress	• Added second Industry co chair, Mr. Tim Sheehan of Raytheon • Reaching out to increase industry ESOH functionals participation through the NDIA SED industry participants • Considering adding additional industry co-chairs

As of23 Sept 2020

ESOH Committee Meeting 19 August 2020

Presentation by the F-35 Joint Program Office Winners of the 2020 DoD Major Acquisition Program Environmental Excellence award

Presentation by Prof. Nancy Leveson, Aeronautics and Astronautics, MIT on "How to Get Much Safer and Secure Systems" using "System-Theoretic Process Analysis" and the "Causal Analysis Based on System Theory" System

	AF	Navy	Army	USMC	OSD	DCMA	Industry
Number per Organization	13	6	4	1	3	0	7
% per Organization	38	18	12	3	9	0	20

As of: 23 Sept 2020

Presentation by Dr. Leveson, MIT

System-Theoretic Process Analysis (STPA) and Causal Analysis Based on System Theory (CAST)

- System complexity is reaching a new level (tipping point)
  - Old safety approaches becoming less effective
  - New causes of mishaps appearing - especially related to use of software and autonomy
- Traditional analysis approaches do not provide the information necessary to prevent losses in these systems
- Need a paradigm change to a "systems approach" with change in focus from trying to increase component reliability to prevent failures to enforcing safe behavior using constraints on how systems behave
  - Traditional accident causality models assume accidents caused by a chain of failure events
  - New approach treats mishaps/losses as a dynamic control problem (vs. a failure problem)
    - Control individual component failures
    - Control interactions among components (Hardware, Software, and Human)

NDIA

September 2020

NDIA Systems Engineering Division Meeting

HSI Committee Report

Matthew Risser, Ph.D
Randi Rohrer

HSI Status Update

2020 Tasks	Status	Accomplishments (deliverables, etc.)
Rebuild core HSI committee and re-establish OSD POCs	In progress	• Identifying core committee members • Met with Andy Monje and OSD HSI rep
Support annual conference planning	Completed	• Participate in planning calls • Identified presentations for HSI track
Collaborate with other NDIA HSI efforts (Divisions, workshops, tracks)	In progress	• Coordinated with NDIA HQ to identify other divisions with HSI themes/tracks • Held meeting with OSD and Human Systems Division
Support DoD Joint HSI Working Group Capability Gap initiatives	In progress	• Established OSD and Joint HSI Working Group POC to collaborate on NDIA outreach activities • Met with HSI Lead from SAF/AQRE • Participated in OSD-led meeting with industry HSI professional associations, NDIA SE, NDIA HSD, and SAE G-45 • Participated in JHSIWG meeting • **Supporting DAU, OSD, and NPS HSI BoK website development meetings** • **Provided support and input to NPS/JHSIWG HSI BoK survey**
Support use case development for new 5000.02T, AAF, and HSI policy	Initiated	• Held meeting with OSD HSI rep to outline NDIA HSI committee activities in support of new acquisition policy • **Provided HSI feedback on OSD SEP guidance**
Support development of industry standards and best practices	In progress	• Coordination and planning initiated with SAE G-45 HSI Committee

HSI Committee - 2020 Task Plan

2020 Tasks:

1. Rebuild core HSI committee and re-establish OSD POCs
2. Support annual conference planning
3. Collaborate with other NDIA HSI efforts
4. Support Joint HSI Working Group Capability Gap initiatives
5. Support use case development for new 5000.02T, AAF, and HSI policy
6. Support development of industry standards and best practices

Deliverables / Products:

1. SAE industry standards and best practices
2. Collaboration environment and SOPs for NDIA HSI activities
3. Inputs to and use cases aligned with AAF and new DoD HSI policy to support HSI BOK

Schedule / Resources:

1. DoD HFE TAG #74, 4-8 May (canceled)
    1. SAE G-45 coordination
    2. Joint HSI Working Group coordination
2. HSI Training Event Confirmed for DoD HFE TAG Conference (4 May 2020) on Detailed Overview of Human Systems Integration Standard Practice (canceled)
3. Planning Quarterly meetings with OSD and industry HSI professional associations
4. NDIA Annual SE meeting 19-22 Oct

Concerns:

1. Alignment and sponsorship within OSD org structure
2. Changes to new DoD 5000.02 and impact of AAF on HSI policy

NDIA System Security Engineering Committee

September 2020

Holly Dunlap
Raytheon
NDIA SSE Committee Chair
Holly.Dunlap@Raytheon.com

Cory Ocker
Raytheon
NDIA SSE Committee Co-Chair
Cory.Ocker@Raytheon.com

SSE Committee Feb – September Summary

Accomplishments:

- IEEE NDIA INCOSE System Security Symposium, 6-9 April 2020
  - Transitioned to Virtual On-Demand Symposium July 1 – July 31st.
- AF Weapon System Program Protection / System Security Engineering Guidebook V3.0
- INCOSE Fuse System Security Charter & Collaboration
- NAVAIR CYBERSAFE (FOUO) Brief
- Cyber Resiliency Weapon Systems Workshop #9
- Updates to Policy, Standards, and Guidance

IEEE NDIA INCOSE

System Security Symposium

~~April 6-9, 2020~~

Virtual On-Demand Presentations July 1 – August 1st.

SYSTEMS SECURITY symposium

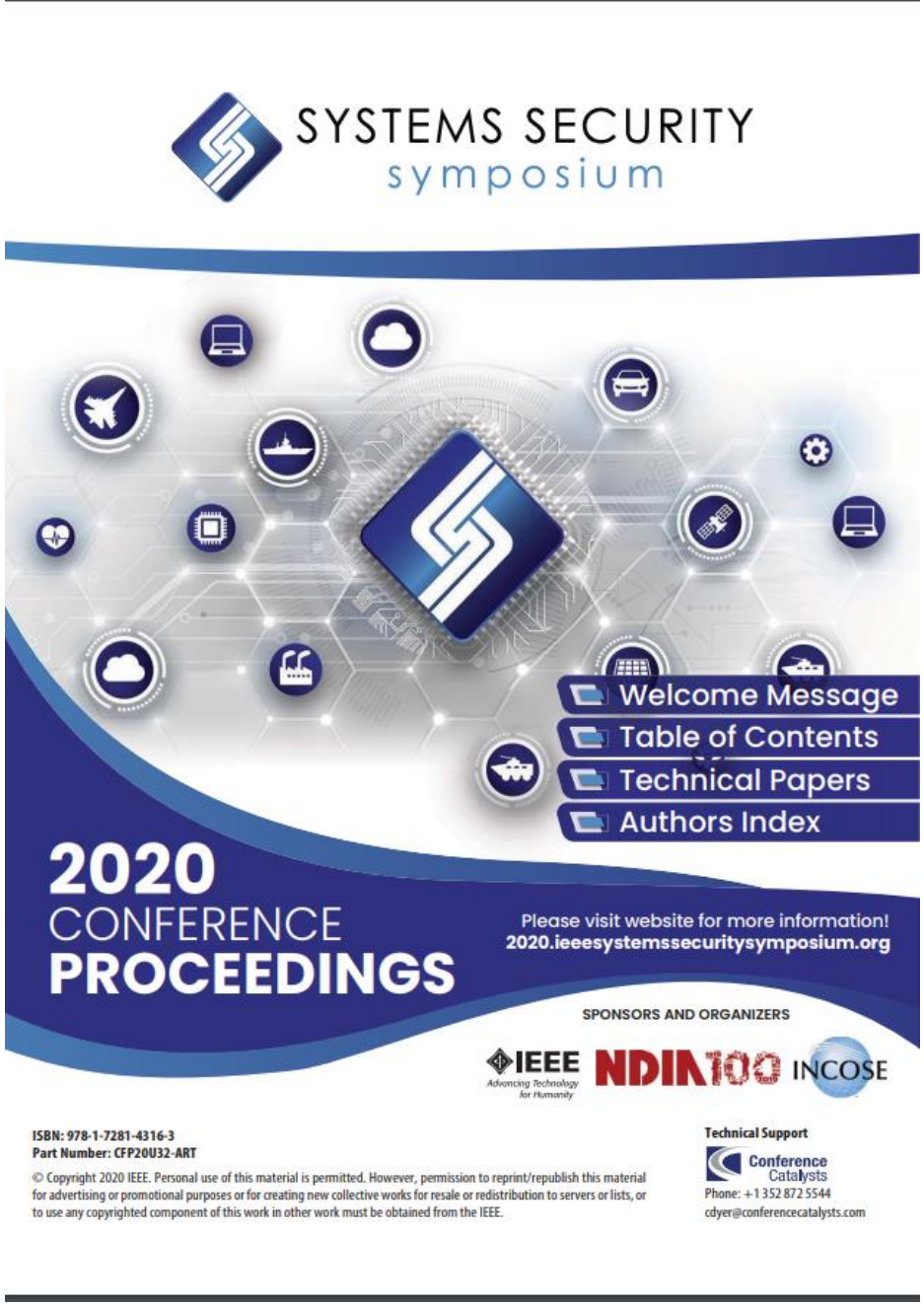
The IEEE-INCOSE-NDIA Systems Security Symposium seeks research papers and application studies that focus on the development of secure, safe, and resilient systems. This symposium attempts to address the convergence of cybersecurity, safety, and engineering with interest in the effective application of security principles, methods, and tools to complex systems such as cyber-physical systems, autonomous systems, transportation vehicles, medical devices, large IoT systems, and other systems of interest. Preference will be given to papers and case studies that bridge theory to practice.

Systems Security Symposium 2020
Topics

- Systems Security Work Focused on Advancements in Theory, Practice, and Education
- Engineering of Safe, Secure, and Resilient Systems
- Examples of Mission/Systems Assurance and Assurance Cases
- Model Based Engineering focused on Security, Safety, Trust, Resiliency
- Affordable and Scalable Approaches to Hardware, Software, Firmware Assurance
- Novel Architecture Design and Analysis Examples or Trade-Space Studies
- Trust of Complex Systems with Emphasis on Cyber-Physical Systems
- Security considerations for machine learning / artificial intelligence
- Large-Scale DevSecOps and Agile Approaches for System Development
- System Security Design Considerations for Cloud Environments
- Verification, Validation, and Evidences for Secure System Development
- Extensions of Formal Methods to System-Level Evaluation
- Cybersecurity in Manufacturing and Supply Chains
- Case studies to include automotive, transportation, space, and others
- Cyber-Physical System Event Detection, Investigation, Forensics, and Malware Analysis
- Tailored Risk Management Approaches for Large Complex Systems
- Attack/Defense Modeling, Simulation, and Characterization
- Techniques for Cyber Risk Buy Down in Legacy Systems, Infrastructure, and Enterprises
- Policy, Ethical, Legal, Privacy, Economic, and Social Issues

http://www.ieeesystemssecuritysymposium.org

IEEE/NDIA/INCOSE Systems Security Symposium 2020 will now be held as a virtual on-demand conference of recorded paper presentations to be held July 1 – August 1, 2020. Plenary session speakers and panels as well as track session panels will be rescheduled for 2021. We will be offering a virtual presentation option for all of our SSS 2020 authors. The papers of all approved authors will be sent to IEEE with intent to publish in the IEEE XPLORE Library, and the presentations of all who present virtually will be available on the conference website. All authors and attendees will receive a 50% discount on all conference registration fees.



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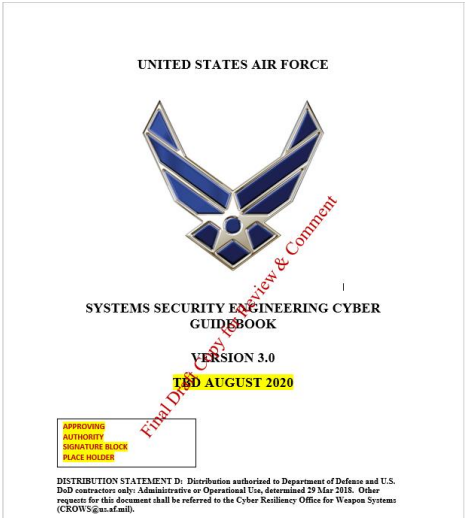
Summary:

- 135 Participants
- 58 Authors
- 25 IEEE Published Papers

https://ieeexplore.ieee.org/xpl/conhome/9171048/proceeding

AF Weapon System Program Protection / System Security Engineering Guidebook DRAFT Version 3.0

- Multi-year collaboration with the AF Cyber Resiliency Office of Weapon Systems
- Currently the most comprehensive SSE / PP Guidebook
- The guide includes:
  - USAF Weapon System PP / SSE Process
  - USAF Process Guide for Critical Program Information and Critical Component Identification
  - USAF SSE Acquisition Guidebook
  - Examples
  - Templates
  - Tools
- Highly recommend using this guide as the preferred reference and encourage the community to continue to improve and mature.
- The AF CROWS continues to be open to feedback.
- Version 3 – Incorporating Mission Based Risk Assessment Process for Cyber (MRAP-C) Guidebook


UNITED STATES AIR FORCE

SYSTEMS SECURITY ENGINEERING CYBER GUIDEBOOK

VERSION 3.0

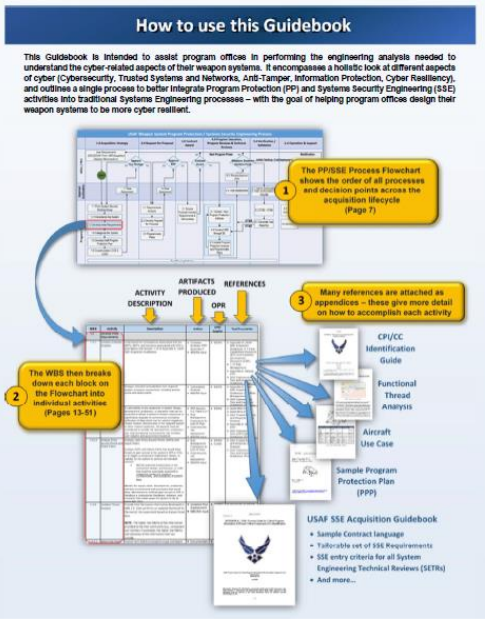
TBD AUGUST 2020

Final Draft Copy for Review & Comment

APPROVING AUTHORITY SIGNATURE BLOCK PLACE HOLDER

DISTRIBUTION STATEMENT D: Distribution authorized to Department of Defense and U.S. DoD contractors only: Administrative or Operational Use, determined 29 Mar 2018. Other requests for this document shall be referred to the Cyber Resiliency Office for Weapon Systems (CROWS@us.af.mil).

The USAF SSE Acquisition Guidebook was the primary focus for the SSE Committee


How to use this Guidebook

This Guidebook is intended to assist program offices in performing the engineering analysis needed to understand the cyber-related aspects of their weapon systems. It encompasses a holistic look at different aspects of cyber (Cybersecurity, Trusted Systems and Networks, Anti-Tamper, Information Protection, Cyber Resiliency), and outlines a single process to better integrate Program Protection (PP) and Systems Security Engineering (SSE) activities into traditional Systems Engineering processes – with the goal of helping program offices design their weapon systems to be more cyber resilient.

1 The PP/SSE Process Flowchart shows the order of all processes and decision points across the acquisition lifecycle (Page 7)

2 The WBS then breaks down each block on the Flowchart into individual activities (Pages 13-51)

3 Many references are attached as appendices – these give more detail on how to accomplish each activity

ACTIVITY DESCRIPTION | ARTIFACTS PRODUCED | REFERENCES | OPR

CPI/CC Identification Guide

Functional Thread Analysis

Aircraft Use Case

Sample Program Protection Plan (PPP)

USAF SSE Acquisition Guidebook

- Sample Contract language
- Tailorable set of SSE Requirements
- SSE entry criteria for all System Engineering Technical Reviews (SETRs)
- And more…


ENDORSEMENTS

This guidebook has been coordinated with and endorsed by the following organizations:

- United States Air Force Nuclear Weapons Center
- United States Air Force Space and Missile Systems Center
- United States Air Force Life Cycle Management Center
- Naval Air Systems Command (NAVAIR) Cyber Warfare Department
- National Defense Industrial Association (NDIA) Systems Security Engineering Committee

NDIA

The document is available within the anti-tamper (AT) homepage link: (The documents are located under “resources” tab under “policy” folder. Then click “Air Force” and our documents are located there).
https://at.dod.mil/

2021 FuSE System Security Charter v200904

Systems Security in the Future of Systems Engineering
(a FuSE initiative topic project)

Lead: Rick Dove . Team:
INCOSE: Keith Willett, Rick Dove
ISSS: Delia Pembrey MacNamara
NDIA: Corey Ocker, Holly Dunlap
SERC: Tom McDermott

What will good look like when we use FuSE to deliver systems?

1. Security capability is embedded in the Systems Engineering team.
2. Security is agile.
3. System and component behavior is monitored.
4. Modeling is used to predict variations and prepare contingent courses of action.
5. System components are self protective.
6. Security is embedded in systems.
7. All stakeholders share common security vision and respect.

What is stopping us from doing this now?

1. SE relates to SSE as an independent specialty practice.
2. Security is viewed as a non-functional cost and ROI value is difficult to verify.
3. Security standards compliance is considered sufficient.
4. Actionable research is in early stages.
5. Contracts and projects detail features and requirements up front rather than desired capabilities that allow innovative solutions.

What will good look like in 2023-2025?

1. Security responsibility and expertise is integrated in the SE-team.
2. Security is viewed as a functional requirement.
3. Agile security will have some effective working patterns in practice as an early base line.
4. Strategies for shared security vision and respect in early practice.

What will good look like by end of 2021?

1. Multi-organization collaboration is active.
2. Foundation concepts and variations are evolving.
3. All foundation concepts have publishable development.

Action Plan

1. Periodic virtual workshops.
2. All foundation concepts in publishable development.
3. Planning for foundation transition to practice
4. Ongoing: Recruit foundation developers.
5. Ongoing: Evolve Charter and foundation concepts.

Core team

INCOSE – Keith Willett, SSE working group cochair, FuSE Agile SE topic lead, Keith.Willett@incose.org
INCOSE – Rick Dove, SSE working group chair, FuSE Security topic lead, dove@parshift.com
NDIA – Cory Ocker, SSE Committee chair, Cory.L.Ocker@raytheon.com
NDIA – Holly Dunlap, SSE Committee chair, holly.dunlap@raytheon.com
ISSS – Delia Pembrey MacNamara, President of ISSS, deliamacnamara@gmail.com
SERC – Tom McDermott, Deputy Director and CTO, tmcdermo@stevens.edu

Cyber Resilient Weapon System (CRWS) Workshop 9

- **– September 2-3, 2020**
  - Topics
    - CRWS Ongoing Efforts
    - Engineering Body of Knowledge
    - Risk Based Approach to Cyber Vulnerability Assessment
    - Cyber-Assured Systems Engineering
    - An Engineering Analysis Approach for Cybersecurity-Informed Design
    - Engineering Design Patterns as Tools to Meet Cybersecurity-Related Requirements
    - Visualization and Concepts for Quantified Cybersecurity Risk to Mission
    - Patterns for Resilience Requirements
    - Engineering Design Principles

  – For more information, please contact Michael McEviley @ mcevilley@mitre.org

Updates to Policy, Standards, and Guidance

- DoDI 5000.83, Technology and Program Protection to Maintain Technological Advantage, 20 July 2020
- DoDD 5101.21E, DoD Executive Agent for Unified Platform and Joint Cyber Command and Control (JCC2)
- NISTIR 8272: Impact Analysis Tool for Independent Cyber Supply Chain Risks, August 2020
- Draft NIST SP 800-53B: Control Baselines for Information Systems and Organizations, comments due 11 Sept 2020
- Draft NIST SP 800-181: Workforce Framework for Cybersecurity (NICE Framework), comments due 28 August 2020
- Draft NISTIR 8286: Integrating Cybersecurity and Enterprise Risk Management (ERM)
- Draft NIST SP 800-172: Enhanced Security Requirements for Protecting CUI

Backup

2020 Plans / Events / Milestones

Primary Focus: IEEE NDIA INCOSE System Security Symposium, 6-9 April 2020

Collaboration/engagement with NNSA, JFAC, Services, OSD

Support OSD Standardization Efforts – Data Item Descriptions, Work Breakdown Structure, etc

Help establish a Software Assurance Committee in conjunction with JFAC

SCRM Community of Interest awareness and participation

Provide recommendations based on recent NDIA Survey on SCRM

Air Force policy review to minimize compliance activities

Advocate for a program perspective on CDI – implementation and impacts

Standards review, comment, and analyze as appropriate:

- NIST 800-53 Rev 5 Security and Privacy Controls for Federal Information Systems and Organizations
- SAE G32 Cyber Physical Systems
- Cybersecurity Maturity Model Certification
- NIST Special Publication 800-161 - Supply Chain Risk Management Practices for Federal Information Systems and Organizations
- NISTIR 8276 - Key Practices in Cyber Supply Chain Risk Management
- DoDI & DoDM 8140 Cyberspace Workforce Management

Review and consider SSE related impacts of 5000.02 update

System Security Engineering Committee

NDIA

Mission / Purpose	Stakeholders / Sponsors / Collaborators
To promote System Security Engineering integration into the Systems Engineering and Mission Assurance processes in the Department of Defense (DoD) acquisition of weapon systems. Chair: Holly Dunlap Co-Chair: Cory Ocker	Stakeholder: OSD (R&E) Government Liaison: Melinda Reed Collaborating organizations: AF CROWS, NAVAIR 4.0, JFAC, NNSA, SAE, INCOSE, IEEE

2019 Accomplishments

Accomplishments (see chart 4):

- Projects & Initiatives
- Information Exchange
- Committee Chair Representation

Events:

- 20+ SSE Track Briefings at NDIA Systems & Mission Engineering Annual Conference

Publications reviewed:

- 4 standards/guidebooks/policies reviewed and commented on

2020 Plans / Events / Milestones

Planned Activities

- Collaboration with OSD, Services, JFAC, NNSA
- SCRM Community of Interest
- AF Policy Review to minimize compliance activities

Planned Events

- IEEE, NDIA, INCOSE System Security Symposium April 2020

Planned Publications

- Standardization – DIDs, WBS
- 5000.02 Review
- OSD Org Chart with SSE Swim Lanes

Mission / Purpose

To promote System Security Engineering integration into the Systems Engineering and Mission Assurance processes in the Department of Defense (DoD) acquisition of weapon systems. To foster the development of System Security Engineering methods, tools, techniques, and processes required for the role of System Security Engineers. To provide a forum for the open exchange of ideas and concepts between government, industry, FFRDC and academia. To develop a new understanding of System Security Engineering and the critical role it plays to ensure system survivability in a cyber contested environment.

Goals

The System Security Engineering (SSE) Committee seeks to:

- ***Advance SSE technical and business practices within the aerospace and defense industry.***
- ***Focuses on improving delivered system security performance including survivability, resiliency, and affordability.***
- ***Promote and emphasize excellence in systems security engineering throughout the program life cycle and across engineering and non-engineering disciplines required for a holistic approach to system security and program protection.***

Objectives

- ***Lead projects in areas that challenge the role and responsibility unique to System Security Engineering.***
  - *Projects may include but are not limited to providing a system security engineering industry perspective on draft or current System Security Engineering relevant government policies, government instructions, industry standards, industry best practices, customer requirements, risk management, etc.*
- ***Support security specialty projects and initiatives by providing a system security engineering perspective that directly effects and interfaces with system security engineering.***
- ***Encourage and promote the advancement, education, and skill development of the role of system security engineering.***

How do we operate?

NDIA Systems Engineering Division (SED) Planning meeting in December.

Attended by OSD & Services Executive Leaders & NDIA SED Committee Chairs

OSD & Services communicate their plans and priority needs for the next year.

Committee Chairs work with their committee to draft a list of priority challenges & candidate projects.

1st meeting of the year, present both the Government SSE challenges and Industry SSE challenges.

The Committee then reviews and proposes projects to address the challenges / needs.

This process establishes the plan for the year. However as opportunities and needs are presented throughout the year, the committee has the opportunity to consider updating the plan.

The SSE Committee typically meets the afternoon of the NDIA Systems Engineering Divisional meetings which are posted on the NDIA Systems Engineering website. We also send out an e-mail to NDIA SSE Committee members so please let us know if you'd like to be added to the committee email list.

We welcome and encourage participation at all skill levels.

Welcome and highly encourage committee members to lead projects and foster collaboration with other security specialty committees and working groups.

***** The number of projects, workshops, collaborations etc. along with the depth, quality, and level of rigor is dependent on the committee members commitment.**

2019 Accomplishments

Activity	Title
Projects & Initiatives	• USAF Weapon System Program Protection and System Security Engineering Process Guidebook • NDIA Critical Program Information (CPI) Assessment and Identification Guide (CAIG) • DoD DRAFT Software Acquisition Pathway Policy Guidance • Cyber Secure & Resilient Approaches for Feature Based Variation Management • IEEE, NDIA, INCOSE System Security Symposium April 2020 • NDIA Systems & Mission Engineering Annual October Conference • NIST SP 800-160 Developing a Cyber Resilient Systems Vol 2: A Systems Security Engineering Approach
Information Exchange	• DASD(R&E) Sponsored SEI SwA Products, PM & Designer Guide • DoD Cyber Workforce Management • SAE G32 Cyber Physical Systems • ASD(R&E) Cybersecurity Challenges – Protecting DoD Unclassified Information • NAVAIR CyberSafe • AF CROWS Program Protection and System Security Engineering Tools • ASD(R&E) CRWS Workshop Series
Committee Chair Rep.	• SecNav Cybersecurity Advisory Panel Meeting • Collaboration on Quality in the Space & Defense Industries Forum, March 2019

2020 Meeting Dates

NDIA SE Division Meeting	Location
2020	
10, 12 & 13 Nov: SE Conference	Virtual
Wed. 09-Dec: SE Division Annual Planning Meeting	Virtual
2021	
Wed. 17-Feb: Bi-monthly SE Division Meeting	Virtual
Wed. 17-Mar: SE Division Committee Reports	Virtual
Wed. 21-Apr: Bi-monthly SE Division Meeting	Virtual
Wed. 19-May: SE Division Committee Reports	Virtual
Wed. 16-Jun: Bi-monthly SE Division Meeting	Virtual
Wed. 14-Jul: SE Division Committee Reports	Virtual

SE Division Bi-Monthly Meeting

WRAP-UP / ADJOURN