# Systems of Systems Committee – 2015 Status

| 2015 Tasks Planned | Status | Accomplishments (deliverables, etc.) - Comments |
|---|---|---|
| Regular committee exchanges with practitioners | Ongoing | Committee meetings are devoted to in-depth exchanges with practitioners on topics of interest, this year focus was on SoSE and mission analysis, welcoming the mission analysis committee to SoS.<br>• February   Role of Mission Analysis in SoSE<br>• April        Joint Staff - Mission Based Analysis<br>• June         Mission Analysis in Update 15288<br>The December meeting focused on survey results. |
| SoS Webinar Series: SoS Engineering Collaborators Information Exchange (SoSECIE) | Ongoing | SoS Webinar Series: SoS Engineering Collaborators Information Exchange (SoSECIE).  Eighteen webinars were hosted in 2015.  Based on requests plan is to recond 2016 webinars courtesy of Lockhheed. |
| "Return to Sleepless Nights' Survey - Survey of members on key issues in DoD SoSE | Survey conducted Sept/Oct; Results shared on 1 Dec | Key areas identified:<br>• Technical Challenges With Application of SE to SoS<br>• Programmatic Considerations for SoS<br>⭐ **Workforce Development for SoS**<br>• SoS Methods Processes and Tools<br><br>Proposed focus for 2016 is **SoS Workforce Development** |

# Systems of Systems Committee - 2016 Task Plan

## Proposed 2016 Tasks

- Regular committee exchanges with practitioners
- SoS Webinar Series: SoS Engineering Collaborators Information Exchange (SoSECIE)
- Coordination with INCOSE SoS Committee
- Task Team: SoS Workforce Development

## Deliverables / Products

- Presentations on SoS SE Committee Area on NDIA Website
- SoS Presentation for SoSECIE on DASD SE Website; with recordings
- SoS Workforce Development Task Plan and Products (TBD)

## Schedule / Resources

- Bi-Monthly Meetings featuring new practitioner experiences
- Bi-weekly SoS Webinars
- Regular Updates: SoS SE Committee Area on NDIA SE division Website

## Issues/Concerns

- Request feedback in interest in the **SoS Workforce Development** task area

*April 14, 2015* - **Critical Integration Links Identification for System of Systems** Mr. Subash Kafle and Dr. Jason McZara, The MITRE Corporation

*April 28, 2015* - **Synthesizing and Specifying Architectures for System of Systems** Dr. C. Robert Kenley, Purdue University

*May 5, 2015* - **SoS Considerations in the Engineering of Systems** Dr. Judith Dahmann, The MITRE Corporation

*May 19, 2015* - **Lifecycle Modeling Language and SoS** Dr. Steven Dam, SPEC Innovations

*June 9, 2015* - **Lifecycle Verification of a System of Systems** Mr. Brian Hatchell, Mr. Fredrick Mauss, and Mr. Kurt Silvers

Pacific Northwest National Laboratory

*July 28, 2015* - **Maintaining Emergence in Systems of Systems Integration: A Contractual Approach using SysML**

Dr. Jeremy Bryans, Dr. John Fitzgerald, and Dr. Richard Payne, Newcastle University, UK  Mr. Klaus Kristensen, Bang & Olufsen

*August 11, 2015* - **Systems Integration: He Who Hesitates Is Lost** Mr. James R. Armstrong, Stevens Institute of Technology

*August 25, 2015 - A Practitioner's Approach Using Model Based Systems Engineering (MBSE) in Systems of Systems* Mr. Richard Deakins and Mr. Doug Parsons  U.S. Army Aviation and Missile Research, Development and Engineering Center

*September 1, 2015* - **Approach to Capability-Based System-of-Systems Framework in Support of Naval Ship Design** Dr. Santiago Balestrini-Robinson and Dr. Simon Briceño, Georgia Institute of Technology Cdr Jacques P. Olivier, Department of National Defence, Canada

*September 8, 2015* - **Incremental Commitment Spiral Model as Applied to SoS** Dr. Rich Turner, Stevens Institute of Technology Dr. Jo Ann Lane, University of Southern California

*September 15, 2015* - **Traceable Engineering of Fault-Tolerant System of Systems** Dr. Zoe Andrews, Dr. Claire Ingram, Dr. Richard Payne, and Prof. Alexander Romanovsky Newcastle University, UK  Prof. Jon Holt and Mr. Simon Perry, Scarecrow Consultants Limited, UK

*September 29, 2015* - **Set-Based Design in Requirements Development** Dr. Norbert Doerry, Naval Sea Systems Command

*October 6, 2015* - **The Human Systems Integration Framework (HSIF): Defining a New Role to Enhance Cross-Domain Collaboration** Dr. Matthew R. Risser and Mr. Frank C. Lacson, Pacific Science & Engineering Group

*October 13, 2015* - **Preferential System Connectivity and its Impact on Performance** Dr. David Flanigan and Mr. Jeffery Dixon, The Johns Hopkins University Applied Physics Laboratory

*October 20, 2015* - **Model-based Product Line Engineering - Variations on a Theme** Mr. Matthew C. Hause, PTC

*November 10, 2015* - **Towards a New Paradigm for Management of Complex Engineering Projects: A System-of-Systems Framework** Ms. Jin Zhu and Dr. Ali Mostafavi, Florida International University

*December 1, 2015* - **Modelling Patterns for Systems of Systems Architectures** Dr. Claire Ingram and Dr. Richard Payne, Newcastle University, UK

*December 15, 2015* - **Towards Technical Reference Frameworks to Support Open System Architecture Initiatives** Dr. Douglas C Schmidt, Software Engineering Institute