



INCOSE Systems-Software Interface Working Group (SaSIWG) Charter

1 PURPOSE

To understand, clarify, and work to resolve issues with systems-software interfaces that challenge our ability to engineer today's and tomorrow's systems.

These interfaces include physical, logical, data, and human aspects.

This working group will help to close the gap between systems and software bodies of knowledge as systems evolve into using more software and software evolves into needing and using systems engineering.

2 GOALS

The Working Group (WG) was formed in response to the systems-software interface challenge identified as one of the top six needs of INCOSE's Corporate Advisory Board (CAB) members. A primary goal of the WG is to generate practical artifacts to be made available to INCOSE's Corporate Advisory Board (CAB) members.

Near term goals are

- A. By the end of IS2017 (plus 2 months for distribution): Determine a preliminary list of systems-software interface issues
- B. Establish by 1 October 2017 regular telecons to review ongoing WG work (probably biweekly or monthly)
- C. Write 1 paper or article for IS2018 (could come from A above)
- D. Develop a set of principles and/or guidance for identifying and reducing system-software interface risk, using the list in A. Disseminate this guidance to the CAB as it is developed, for comment and use.
- E. Become officially chartered by end of IW2018
- F. Get INCOSE WG website up and running, by 1 December 2017
- G. Hold working group meetings in IW 2018 and IS 2018

Longer term goals

- Will be determined from initial work at IW2018 and IS2018
- May include products such as a mapping SWEBOK to SEBOK or guidance to systems engineers and/or project managers for addressing the gaps noted in the issues (A above)

3 SCOPE

This WG will address, at a high level, the process-related interfaces and technical interfaces between systems and software. This WG will not initially include interfaces among communities (e.g. IEEE-INCOSE, standards bodies, etc).



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4 SKILLS AND EXPERTISE REQUIRED

- A. Intermediate to expert level systems engineering experience, in both process and technical roles
- B. Intermediate level software engineering expertise, in both process and technical roles
- C. Knowledge of INCOSE WG processes

GAPS: A) is easy. B) is somewhat managed: WG members will be on lookout for additional people who can help, whether or not they are currently INCOSE members. CAB will be considered as a source for people with additional needed skills, as they needs are made more specific.

5 MEMBERS, ROLES AND RESPONSIBILITIES

List the names of members and briefly describe their responsibilities.

- Chair:
 - o Responsibilities: Status reporting to Troy Peterson, or other applicable Assistant Director as determined by Technical Operations; calling working group telecon meetings. Set direction (with input from group and ensure progress is made. Required planning.
- Co-Chairs
 - o Responsibilities: act in the absence of the lead, call working group telecon meetings, ensure group is going in a good direction and making progress.
 - o Responsibilities: Telecons including collaboration tool and website
- CAB Sponsors/Champions:
 - o Responsibilities: Communicating CAB needs, Providing guidance, Briefing SaSIWG status to CAB, Providing additional skills if requested, status reporting to the INCOSE BOD and external stakeholders.)
- Members: Initial list is included in preliminary Technical Project Plan(s) (TPP) hosted on INCOSE WG website

6 OUTCOMES (PRODUCTS/SERVICES)

See goals. Technical Project Plans will be created as appropriate and hosted on WG website

7 APPROACH

Define the general approach that will guide this WG/Initiative including:

- Meet in person at IWs and ISs, and hold monthly-to-biweekly telecons
- Chair (or co-chair, in chair's stead) will make a decision based on input from group members. Group members are free to disagree and that will be discussed at next meeting or telecon.
- Norms or ground rules: General good meeting behavior. Every member should do some work toward WG goals.
- Accountability: Officially, none (this is a volunteer organization). Unofficially: Do what you say you are going to do.
- Challenges: Volunteers making time; keeping track of interfacing initiatives



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- Assumptions: Paper will be accepted to IW2018; we will find enough systems engineers and software engineers to have true dialog and create useful products.
- Plans will be developed for large deliverables, in phases.

8 MEASURES OF SUCCESS

Overall measures of success for the WG/Initiative.

Targeted size of working group: Target 5-20 workers, 50-100 “for information only” members

To what extent did WG meet goals established for the time period? (Can be assessed twice a year)

Any detailed measures of success for individual products/services produced will be contained in the applicable individual TPPs, for example.

9 RESOURCE REQUIREMENTS

Will need 12-20 telecons, 1-2 hours each, per year.

Need INCOSE WG website to be hosted by INCOSE. Would prefer to have services of website maintainer.

Human resources require approximately 10 people at 5 hrs/month. To be provided by CAB companies.

10 DURATION

This WG is planned for a 3-year period, to be renewed as many times as desired by WG chair and Assistant Director.

11 SIGNATURES

Date 12/13/2017

1st Level of Approval

Technical Director, INCOSE

Date