

1 PURPOSE

The purpose of the SSWG is to expand the body of knowledge of systems engineering as it is applied to space systems. Specifically, the purpose of the SSWG is to:

1. Promote the use of systems engineering principles, techniques, and practices in a wide range of activities in the government, academic and private industry organizations which are identified with space applications;
2. Share best practices in the international space arena;
3. Link systems engineering organizations across international boundaries;
4. Provide a specific node in the professional networking of INCOSE that is pertinent to professionals in the space systems community

2 GOAL

The goals for the Working Group are to increase the quality and diversity of technical and professional information available to its members and to enhance the interchange of the state-of-the-art between its members. Increasing the quality of communication among members is a key to this goal. Quality in this case includes timeliness, clear descriptions of problems and solutions, and relevance to the community.

Diversity of technical and professional information implies an interest in promoting the interchange of various sub-communities of practitioners. This includes those separated by area of application (e.g., manned or unmanned exploration, telecommunications, or defense), major agencies or institutions (e.g., civil space agencies, industrial firms, defense agencies, or academia), and subdomain of practice (e.g., ground support, launch, or in space) of the systems engineers working in the space sector.

3 SCOPE

This WG will address the application of systems engineering to space systems in government, industry, and academia. Lessons learned from other applications of systems engineering are welcomed, but are outside the scope of this working group.

4 SKILLS AND EXPERTISE REQUIRED

The only skill requirements for participation are a general familiarity with the discipline of systems engineering in the domain of space systems.

5 MEMBERS, ROLES AND RESPONSIBILITIES

The following offices are held within the Working Group:

- SSWG Chair : Bjorn Cole , Jet Propulsion Laboratory
 - o Responsibilities
 - Direct SSWG meetings
 - Coordinate logistics for such meetings

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- Ensure meeting minutes, agendas, and communications are prepared and distributed
- Establish the annual goals for the SSWG
- Prepare committee reports as required
- Interface with the INCOSE Technical Operations and other working groups
- Support coordination of the SSWG activities
- Appoint ad-hoc positions as required with consent of the membership
- SSWG Co-Chair: John Silvas, Booz Allen Hamilton
 - o Responsibilities
 - The responsibilities of the SSWG deputy chair are assigned by the chairperson.
 - At meetings where the Chair is absent, the Co-Chair shall assume meeting responsibilities above.

6 OUTCOMES (PRODUCTS/SERVICES)

The services to be provided by the WG are to support the dissemination of information between its members. To this end, the WG will host and call for contributions to a community on the INCOSE Connect site. The tempo and topics of contribution will be determined by the level of participation by the community and availability of contributed content.

The WG will also be available as a communications forum for discussing potential topics of presentation at the annual International Workshops (IW) and Symposia (IS).

7 APPROACH

The chief means by which the SSWG accomplishes its purpose is through development and sponsoring of activities within the INCOSE during its symposia, workshops, and via virtual collaboration forums such as INCOSE Connect. The virtual collaboration forum would present an opportunity for members to post information for use when desired. The IW and IS would present opportunities for members to discuss current issues with a group of their peers.

Four annual formal WG-wide working meetings are to take place: at the International Workshop, at the International Symposium, once between the IW and IS, and once between the IS and IW. These will be the focal points for initiating new activities and following up on the status of those in progress. The meeting between the IS and IW in particular will be allocated to developing or refining activities that can benefit most from the larger INCOSE community that would be present at the IW.

To facilitate the very busy and productive members of the Working Group, virtual collaboration will be the main mode of interaction outside these meetings.

Decisions on what activities to pursue shall be made by those willing to contribute to such activities. At the time activities are initiated, the volunteers shall choose their own decision-making model such as by consensus or majority vote. While consensus on major issues will be

sought, from a practical standpoint it is necessary to weight inputs given by individual community members by their levels of participation in WG activities.

Finally, the WG will engage in community outreach to other systems engineering groups within INCOSE and other professions in space systems, at minimum by attending the INCOSE IW and IS. A suggested area for this is to sponsor students in the space system fields to attend INCOSE symposia. Members are encouraged to suggest other areas of outreach according to personal interest or opportunity (e.g., those working with standards bodies on issues of interest to the space systems community).

8 MEASURES OF SUCCESS

A belief of the Working Group is that “you get out what you put in” and the measures of success should reflect this. Further, participation is linked to perceived value. Our measures of success based on these principles are:

- The number of views to our area of the INCOSE Connect site
- Impact of hosted materials – a composite score of views and citations
- Membership
- Attendance at the four annual meetings

9 RESOURCE REQUIREMENTS

This Working Group is essentially a forum at the present time. It is anticipated that minimal resources will be required. These include teleconference, LiveMeeting, and INCOSE Connect support and meeting facilities at the IW and IS.

Outreach efforts to students would require funding for hotels, meals, and registration at the INCOSE International Symposia.

10 DURATION

This Charter will remain in effect until the next election of SSWG Chair (tentatively IW 2013).

11 SIGNATURES

Enter the signature block of the submitter



Date 6/12/11

1st Level of Approval



Date

August 23, 2011

Technical Director, INCOSE

2nd Level of Approval (Note this will be added by the INCOSE Technical Director when deemed appropriate.)

Chairman, INCOSE Board of Directors

Date

Revision History

<u>Date</u>	<u>Revision</u>	<u>Description</u>	<u>Author</u>
3/14/11	1.0	Initial Draft.	B. Cole, S. Jenkins
3/31/11	1.1	Revised with input from SSWG mailing list.	B. Cole
6/12/11	1.15	Revised w.r.t. Jean-Claude Roussel comments	B. Cole