INCOSE Systems of Systems Working Group (SOSWG)
Charter

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The purpose of the working group is to advance and promote the application of Systems Engineering to Systems of Systems (SOS), often referred to as SOS Engineering (SOSE).

BKCASE [1] describes SOS Engineering as "*an opportunity for the systems engineering community to define the complex systems of the 21st Century. While systems engineering is a fairly established field, SOSE represents a challenge for the present systems engineers at the global level. In general, SOSE requires considerations beyond those usually associated with engineering to include socio-technical and sometimes socio-economic phenomena.*"

SOS and SOSE are topics that interest a significant number of INCOSE members globally, both individuals and organizations. Therefore we believe that a WG forum to share understanding of SOS and SOSE issues, good practice and background, and contribute to maturing BKCASE will provide a service to the wider INCOSE community.

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To expand and promote the body of knowledge of SOS and SOSE its benefits within the Systems Engineering community.

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This WG addresses the application of Systems Engineering to all types of Systems of Systems (SOS) in all domains. We see diversity as particularly important in this knowledge area, as do the WG members.

Activities will generally cover the following:
- Understand and share what we mean by SOS in our various contexts
- Develop guidance and advice
- Inform and up-skill practitioners
- Exert influence on BKCASE, Standards, SE Vision 2025 etc.
- Develop the practice of SE for SOS.
- Work in partnership with other groups addressing aspects of SOS (e.g. INCOSE WGs, IEEE, NDIA).
- Understanding and applying insights from relevant research

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[1] The Body of Knowledge and Curriculum to Advance Systems Engineering, http://www.bkcase.org/

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Representation from the following:
- SOSE practitioners and educators
- A diverse range of domains and nations
- A diversity of experience levels, disciplines, organizations, and enterprises

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Co-Leads:
- o Alan Harding, BAE Systems
- o Judith Dahmann, The MITRE Corporation
- o Responsibilities
  - The co-leads shall be responsible for status reporting to the Assistant Director for Process.
  - The co-leads shall be responsible for establishing and managing a work programme for the WG in-line with member interests, and the stated purpose/goal of the WG.

Task leads
- o Kelly Greindling, Georgia Tech – SOS Bibliography
- o Judith Dahmann, The MITRE Corporation – SOS Pain Points Survey
- o Alan Harding, BAE Systems – related Organisations
- o Eric Honour, Honourcode – Webinars
- o Mike Henshaw, Loughborough University – BKCASE SOS chapter and inputs
- o Responsibilities
  - Task leads shall be responsible for leading the planning individual tasks, and reporting as agreed to co-chairs
  - Task leads shall be responsible for reporting on their tasks at WG meetings at IW and IS events, attendance in-person is preferred but virtual attendance is acceptable.

Membership of the WG is open to all INCOSE members

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The intended deliverables planned by the SOSWG are as follows:

1. BKCASE: Contribute to development and support of SOS Section, providing inputs to review of BKCASE v 0.75 and v1.0
2. SOS Bibliography: Develop and share a SOS Bibliography as a key source of knowledge to practitioners, and to inform BKCASE.
3. SOS 'Pain Points' Report: a report identifying key SOS challenges informed by a survey of WG members
4. Related organizations: Identify and catalogue relevant related organizations, and develop relationships in a prioritized manner (inside and outside INCOSE)

5. Webinars: Deliver a programme of webinars, open to all INCOSE members, as a forum to share information on SOS. (desirably monthly).

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The WG is intended to be a forum for discussion and learning about SOS, richly linked to other forums outside INCOSE and to relevant WG within INCOSE. This forum will contribute to knowledge on SOS matters and will enable WG members to develop their own knowledge and competence in the area.

The working group will:
- Meet physically at International Workshops and International Symposia (with virtual access provided)
- Meet virtually for interim sessions as required
- Maintain a WG plan:
  o Recruit task leads
  o Carry out assignments outside of meetings
  o Use virtual means to share draft work products for review and agreement
- Promote SOSWG membership collaboration with other INCOSE working groups and external organizations with related interests in SOS
- Communicate to RWG members and interested INCOSE members via
  o RWG Connect website
  o RWG Connect threaded discussions
  o RWG and INCOSE webinars

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- Membership: individual members, organizations represented, nations represented
- Attendance at IW/IS meetings (physical and virtual counted separately)
- Number of products delivered
- Number of webinars delivered
- Number of webinar participants
- Symposium contributions (paper, panel or tutorial submission, session chairs)

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- Support to meetings: meeting room during IW and IS with wifi, digital projector, conference phone, LiveMeeting webinar support
- IT infrastructure: INCOSE Connect hosting and IT admin support

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No end date; this Charter will remain in effect until rescinded by the signatory.

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Enter the signature block of the submitter   Date

1st Level of Approval

Technical Director, INCOSE   Date   29 June 2012

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

Date	Revision	Description	Author
26th Jun 2012	0.1	Initial Draft.	