

INCOSE TECHNICAL BOARD
LIAISON ADVISORY STATEMENTS
(INCOSE-TA-2003-007-01)

Approved by the INCOSE Technical Board on June 29, 2003

A. Name of Liaison Effort - INCOSE liaison to the GEIA (Government Electronic and Information Technology Association) Systems, Standards & Technology Council (SSTC) and the G-47 Systems Engineering Committee meetings.

B. INCOSE Liaison Representative – Rich Harwell

INCOSE point of contact and participants -

C.1 Address - Suite 401-#301, 10945 State Bridge Road, Alpharetta, GA 30022

C.2 Telephone - 770-740-0907

C.3 Email address - insight@sysview.com

D. Description of proposed standard or liaison activity

INCOSE has participated in a liaison role to the GEIA SSTC and G-47 SE Committee for several years. These GEIA organizations have extremely high visibility with, and the respect of, many of the key OSD (Office of the Secretary of Defense) and DoD (Department of Defense) organizational units affecting the application of systems engineering in the defense and aerospace community. Key representatives from DoD attend and participate in many of the GEIA meetings, identifying DoD's interests and pending changes in policy and acquisition initiatives affecting INOCSE members.

INCOSE has a Professional Working Agreement with G-47 SE Committee for the conduct of joint projects, ANSI/EIA-632 (Processes for Engineering a System) being a recent example. INCOSE currently is dependent upon GEIA as a formal standards issuing body for systems engineering related standards and guidebooks. The presence of an INCOSE Liaison is essential to ensuring INCOSE projects, issues, and concerns are known to GEIA members and, therefore, duplicative or conflicting efforts are prevented and joint efforts are encouraged that benefit both organizations. Unlike INCOSE, which is member based, GEIA is Agency- or Company-based membership.

E. INCOSE's level of participation

INCOSE's liaison will attend three SSTC and G-47 combined meetings a year as well as an annual Engineering & Technical Management Conference. The INCOSE liaison has been asked to present a "state of systems engineering" at each meeting. In addition, as appropriate, the liaison will contribute knowledge of systems engineering during the meetings to ensure INCOSE policies and positions are known, understood, and considered in the execution of projects and positions made by the SSTC or G-47.

F. Justification, including relevance to INCOSE and its members

Refer to both Sections D and E above.

G. Objectives satisfied or to be satisfied

- Performing as source of current activities affecting SE in the marketplace through INCOSE-identified reports to GEIA members
- Significant influence on the future quality of SE activities in the DoD-related defense and aerospace community
- INCOSE presence and recognition at the annual Engineering and Technical Management Conference sponsored by GEIA and NDIA
- Recognition of INCOSE as the preeminent source for SE expertise

H. Dependencies, risks, and issues

INCOSE currently is dependent upon GEIA as a formal standards issuing body for systems engineering related standards and guidebooks. Since INCOSE is not currently an authorized standards development body due to the expense and administrative support required, this relationship is an essential element of INCOSE standards participation objectives. This ability to produce standards in conjunction with GEIA would be hampered in the absence of a formal liaison relationship.

I. Anticipated schedule

<i>Meeting Dates</i>	<i>Purpose</i>
23-26 Jun 03, Charleston SC	SSTC & G-47 Meeting
8-12 Sep 03, Seattle WA	Engineering & Technical Mgt Conf
Jan 04, TBD	SSTC & G-47 Meeting
Apr 04, TBD	SSTC & G-47 Meeting

J. Relationship to existing/planned collaborations and other standards activities

- Conversion of NAVAIR's ANSI/EIA-632 Guidebook into a "generic 632" guidebook for use by government and non-government development programs
- Updates of ANSI/EIA 632 and EIA 731 standards (as required every five years)
- Position papers on the state of SE practice in the electronics and information technology industries
- Insight into OSD and DoD thinking with respect to systems engineering applications
- Incorporation of G-47's panel results concerning the "Next Generation SE Capabilities" into INCOSE's Technical Vision for the next decade

K. Relationship to INCOSE Technical Operating Plan, if any

- INCOSE participation in the analysis, review, and development of new and revised national and international standards affecting systems engineering
- Recognition of INCOSE as the preeminent source for SE expertise

L. Expected Duration of Effort

Continuing.

M. INCOSE privileges and other benefits (e.g. price discounts, name/logo on cover, etc.)

INCOSE currently is dependent upon GEIA as a formal standards issuing body for systems engineering related standards and guidebooks. On past efforts, such as the development of ANSI/EIA-632 (Processes for Engineering a System), INCOSE affiliation was noted for each INCOSE member of the development team. As noted in the Professional Working Agreement cited in N below, on joint projects INCOSE will have the right to the same member discounts as EIA members.

N. Draft Joint Working Agreement (or plan for developing), as required

N.1 Signatures

*Brian M. McKay,
Chair, Technical Board
International Council on
Systems Engineering*

*Dan C. Heinemeier,
Vice President
Government Division
Electronic Industries Association*

N.2 Date - April 1996

N.3 Location of Agreement – Attached

(Also on INCOSE Website – TB Key Documents – Collaborative Agreements)

O. Key Issues and INCOSE Advisories

O.1 Issue #1 – Depth of Involvement and Influence in the Development and Maintenance of Standards Affecting the Engineering of Systems or the Practice of Systems Engineering

O.1.1 Committee Position – GEIA's SSTC is a decision and policy body with emphasis on strategy pertaining to standards development, interface with principal government units responsible for aerospace practices; and promotion of GEIA as a leader in the systems engineering, configuration and data management arena. The GEIA G-47 SE Committee Charter is "G47 serves as a government/industry focal point for systems and software engineering by developing and maintaining standards, coalescing industry positions and promoting sharing of best practices on systems and software engineering." As opposed to INCOSE, GEIA has a significant interface with Government policy makers in the U.S. aerospace community, especially with respect to the creation and maintenance of standards, both GEIA and ANSI type. However, since it is a company-based organization, it must rely on its member companies (and from a systems engineering standpoint that means primarily INCOSE members of those companies) for the necessary personnel support in the creation of those standards. In the systems engineering arena, INCOSE provided a majority of the principal authors for recent

systems engineering and maturity/capability standards. In recognition of this fact, GEIA offered to have INCOSE perform as a Liaison Non-Voting Member of the SSTC and G-47 at no cost to INCOSE. Concurrently, INCOSE support in the creation and development of new standards affecting the SE arena would be welcomed and formally recognized. In practice, the INCOSE Liaison becomes a prime source of information to these Committees with respect to the practice and application of systems engineering with the result that INCOSE's position and recommendation is sought as a major factor in deliberations and discussions leading to formal voting. GEIA G-47 SE Committee is also interested in being a participant in the updating of IEEE and ISO standards. For example, G47 will start a project to cooperate with IEEE & INCOSE to review IEEE/EIA 12207. Dennis Ahern agreed to lead this G-47 working group, pending approval from Northrop Grumman, his sponsoring company.

O.1.2 INCOSE Advisory – INCOSE has been a proactive supporter of the liaison with GEIA for almost a decade. This interface is essential for INCOSE since it provides the primary outlet for INCOSE influenced standards pertaining to systems engineering in the U.S. This liaison has already produced ANSI/EIA-632 and EIA-731 standards for SE and Capability Assessments. Although GEIA G-47 is sponsoring the conversion of the NAVAIR Guidebook based on EIA-632 into a commercial industry guidebook, INCOSE (Processes & Improvement Tech Committee/Jerry Fisher) co-author the document & provide added manpower in support of NAVAIR during this conversion. Continuation of this relationship is essential to INCOSE's ability to be effective in the U.S. DoD environment.

O.2 Issue #2 – Systems Engineering Recognition and Certification

O.2.1 Committee Position – GEIA is creating a Technical Fellowship Program for G33 & G47. Its purpose is to create a program for GEIA that attracts members, recognizes excellence; stimulates retention. During the SSTC meeting, its new Chair Jim Sturgis of Lockheed Martin suggested this effort could be expanded and serve as an aid to U.S. aerospace companies in identifying qualified systems engineers. Although this program is not being created for that reason, SSTC (and G-47 response was positive, recognizing that additional effort will be needed to improve scoring in the work environment in addition to participation in GEIA events and activities. This may potentially conflict with INCOSE's formal Certification Program, but GEIA's real intent is to encourage active and continuous membership participation rather than certifying systems engineers. But this does emphasize INCOSE's need to "stay ahead of the game" if it is to be recognized as the premier source of systems engineering knowledge and application. By participating as a "supporting" members of related professional organizations, INCOSE is in a position to demonstrate its broad based knowledge in systems engineering from both an applications standpoint as well as being recognized as the single most informed source for the systems engineering community. Participation in GEIA's activities is a positive force in maintaining this recognition.

O.2.2 INCOSE Advisory – INCOSE's Strategic Planning recognizes the need for working with other systems engineering related professional organizations.

Notwithstanding its large membership and broad based interests, INCOSE as with other volunteer organizations is not in a position to be all things to all people. Joining forces with these other professional organizations enables INCOSE to expand its reach and authority in the systems engineering community. By continuing a formal liaison relationship with GEIA, INCOSE is further demonstrating its sense of cooperation and statesmanship as the authoritative leader in systems engineering.

O.3 Issue #3 – Substantial INCOSE Participation In and Support of GEIA’s Annual Engineering and Technical Management Conferences

O.3.1 Committee Position – Several years ago, GEIA expanded its annual Configuration and Data Management Conference to embrace the systems engineering community as well. The conference was renamed the Engineering and Technical Management Conference to reflect this broader scope. Since it is significantly more focused on DoD and U.S. aerospace companies interests, it attracts a large number of DoD and aerospace community leaders and participants; i.e., the presence of DoD and uniformed military personnel is very noticeable when compared to INCOSE events. GEIA, recognizing INCOSE systems engineering leadership, has actively pursued INCOSE to be a partner in the planning and execution of this conference. Although it is a major source of recognition for INCOSE, support to date has been sporadic and relatively invisible. INCOSE liaison’s have given tutorials or headed panels concerning systems engineering, but no overwhelming INCOSE presence has been provided (although the INCOSE Liaison is recognized at these conferences, there is no INCOSE presentation table operated by INCOSE leaders educating participants in INCOSE objectives and goals and highlighting the benefits of INCOSE membership. From GEIA’s perspective, INCOSE members attend and offer help from time to time, but there is no real INCOSE support as an organization.

O.3.2 INCOSE Advisory – Although INCOSE’s emphasis is on its own Symposium, Workshop, and regional conferences, its absence at systems engineering related conferences significantly weakens INCOSE’s claim to be leader in systems engineering affairs. For example, for 2003 the tutorial on ANSI/EIA-632 will be provided by Zig Rafalik from NAVAIR. In addition, although the INCOSE Liaison will provide advise and guidance in support of planning, INCOSE will not be providing active development of conference activities and support in the execution of the conference. As an organization, INCOSE needs to provide additional support with volunteers to assist in the planning and execution of the systems engineering portion of the Engineering and Technical Management Conference to demonstrate our leadership role and position. Our presence needs to be very visible and supportive.

Approved by the INCOSE Technical Board William F. Mackey, Chairman
Date: June 29, 2003

EIA/INCOSE Professional Working Agreement April 1996

Purpose:

To promote systems engineering and related professional areas that are of mutual interest and benefit to the Electronic Industries Association (EIA) Government Division and the International Council on Systems Engineering (INCOSE).

Scope:

The EIA Government Division Engineering and Operations Council (EOC) and the INCOSE Technical Board (TB).

Assignment:

1.0 Information exchange in areas of mutual interest.

The EOC and TB staff shall ensure that EOC and TB exchange:

- 1.1 Meeting minutes at the time of their regular distribution.
- 1.2 Priority tasks list, as published.
- 1.3 By mutual agreement, any other unpublished materials.

2.0 Initiation and implementation of joint projects.

2.1 Joint projects may be initiated by mutual agreement between Chairpersons, or staff from each of the EOC and TB.

2.1.1 In the event EOC or TB concurrence is required prior to paragraph 2.1 initiation, the respective chairpersons or staff shall obtain such concurrence by the most rapid means practicable.

2.2 The lead organization and project team members shall be determined by mutual agreement at the time of project initiation. The lead organization shall designate the project leader.

2.2.1 Team members may be added or changed by mutual agreement between the respective chairpersons and/or staff.

2.3 The project leader shall prepare and obtain project team and initiators' concurrence with the project's purpose, scope, objectives and key milestone schedule. These shall be provided to the EOC's and TB's staff, who shall maintain logs of all joint proposals.

2.4 When EOC/TB wishes to join an activity already under way, they shall accept the project purpose, scope, objectives and key milestones schedule "as is", unless otherwise negotiated. The project shall be logged as above.

- 2.5 Project implementation and statistics reporting shall be as agreed to by the project initiator's, or "as is" if already underway.
- 2.6 All project results shall be shared equally by EOC and TB.
- 2.7 Any disputes shall be referred to the EOC/TB chairpersons. The chairpersons shall attempt to resolve disputes in a win - win manner.
- 2.8 Joint projects may be terminated by either initiator at any time. The results of work prior to termination shall be shared equally.
- 3.0 Standards Development
- 3.1 The INCOSE will be invited to participate on the definition, development and publication of any systems engineering or related standard, including ANSI standards produced by the Government Division.
- 3.1.1 On joint projects, INCOSE will be co-author with the EIA.
- 3.1.2 EIA will retain all copyright and sales rights to published standards.
- 3.1.3 On joint projects, INCOSE will have the right to the same member discounts as EIA members.
- 4.0 Termination
- 4.1 This agreement may be terminated by either INCOSE or EIA at any time, on thirty (30) days' prior notice to the other party.

B.M. McKay

Brian M. McKay,
Chair, Technical Board
International Council on
Systems Engineering

D.C. Heinemeier

Dan C. Heinemeier,
Vice President
Government Division
Electronic Industries Association