MEETING MINUTES

AIAA DETC
Aerospace Architecture Subcommittee
30 Aug 2005
Space2005 Conference, Long Beach, California

Conducting: A. Scott Howe, chair

Attendees:
Scott Howe, Silvano Colombano, Marc Cohen, David Nixon, Marilyn Dudley-Rowley, Alice Eichold, Thomas Gangale, Donna Duerk

Visitors / New Members:
Harold Kwon, Jim Pass, Shahzad Khaligh

1.0 GENERAL BUSINESS

1.1 Rewrite of ASASC Charter approved (see Appendix A), and member qualifications defined (see Appendix B). Full qualifications in respective field required, or has reached 35th birthday.

1.2 New ASASC officer candidates nominated:

- Chair position candidates: Ted Hall, Marilyn Dudley-Rowley
- Vice-chair position candidates: Donna Duerk, Brent Sherwood
- International vice-chair: Andreas Vogler, Barbara Imhof

Each of the candidates will be contacted and verified whether they accept the nomination.

The potential new position of "international vice-chair" may be subject to further discussion – the position was suggested in order to provide a rallying point around which international members, especially those in the EU, can look into contacting other organizations such as the UIA, etc.

1.3 Sponsorship discussion:

- Need to work toward sponsorship for the third SAS
- Ideally, leadership attendance should be fully or partially sponsored if possible
- Sponsorship should always be a discussion item

1.4 Special presentation: Jim Pass, PhD, expert on astrosociology from Long Beach City College. Discussed the scientific study of social patterns in space, and patterns tied to space that exist on earth. Astrosociology.com

2.0 ACTIVITIES

2.1 ICES2006: Scott will contact Vernon Strength to reduce the number of proposed technical sessions (so more effort can be put into second SAS held in conjunction with Space2006 conference). Need new leadership to run the ICES2006 conference.

2.2 Space2006 / 2nd SAS: Plans are quite advanced to set up the second SAS in conjunction with Space2006, along with a workshop at NASA Ames. Theme for the conference proposed to be "what is the purpose of space development?" Possibility of setting up a new "astrosociology" session at the conference.

2.3 Liaisons:
Life Sciences TC, Space Colonization TC, etc

Need for greater liaison efforts was discussed.

3.0 EDUCATION

3.1 Create NAAB-style addendum to list of skills – need to know, need to understand, need to be able to do. Need to consider creating a textbook based on Donna Duerk's curriculum studies, using a "canonical" list of papers or contributed chapters.

4.0 RESEARCH & DESIGN

No research & design issues discussed

Attachments:

- Appendix A revised charter
- Appendix B membership qualifications

5.0 PUBLIC RELATIONS

5.1 Progress in Astronautics volume: contacted Rodger Williams with AIAA – new editor Frank Lu will be looking over the manuscript.

6.0 MEMBERSHIP

6.1 Associate members should be approved for becoming a member. Associate members should also have the requirement to attend at least once a year?

Appendix A: AIAA-DETC-ASASC revised charter

The following charter amendments and member qualifications were approved (changed portions in red):

This Subcommittee provides a technical forum for interactions among qualified professionals in AeroSpace Architecture. This charter defines AeroSpace Architecture broadly to encompass architectural design of living and working environments in AeroSpace-related facilities, habitats, and vehicles. These environments include, but are not limited to: science platform aircraft and aircraft-deployable systems; space vehicles, stations, habitats and lunar and planetary bases; and earth-based control, experiment, launch, logistics, payload, simulation and test facilities. Earth analogs to space applications may include Antarctic, desert, high altitude, underground, undersea environments and closed ecological systems.

Designing these forms of architecture presents a particular challenge: to ensure and support safety, habitability, human reliability, and crew productivity in the context of extreme and unforgiving environments. For this reason, the Subcommittee supports professional qualification for space architects and engineers, and seeks to define the nature of that qualification as it applies to these new environments: the standard is to protect the health and safety of the public. In air or space, the need to protect crew health and safety is even more immediate and critical.

The scope of AeroSpace Architecture embraces a multidisciplinary approach to design. In this sense, architects have the experience and training to offer unique approaches to system integration for a variety of design disciplines. The intent of this initiative is not to add new responsibilities to the existing members of the TC, but to attract new members. New members of the DETC will carry out the work based upon their design disciplines.

- Architecture
- Environmental Psychology
- Ergonomics
- Habitability
- Human Factors
- Industrial Design
- Information Technology
- Life Science (Countermeasures)
- Life Support
- Structures

The goal of this Committee is to work toward establishing an AIAA Technical Committee for AeroSpace Architecture. In this integration approach, the Subcommittee hopes to foster a focus upon the design product of the human environment in space. The Subcommittee adopts these objectives:

- Establish standards for design parameters not covered by NASA or other agencies such as measurement of habitable areas and volumes.
- Support professional education, preparation, qualification, and licensure.
- Promote communications among design professionals working in this field.
- Sponsor conference sessions and scholarly publications with a specific emphasis upon significant design problems.
- Advance research in Architectural design methods, processes, and technologies and promote their application to AeroSpace Architecture.
- Bring new members into AIAA to serve on this Subcommittee, leading to a new Technical Committee for AeroSpace Architecture.

Appendix B: AIAA-DETC-ASASC membership qualifications

In connection with the above new charter, it is proposed that definitions of AIAA-DETC-ASASC ranks be defined as follows:

1) Regular Member: A US resident who is qualified to practice in their particular field (architecture, engineering, industrial design, ergonomics, human factors, psychology, life science, etc) as defined by adequate work experience or professional licensure, and has published in a peer reviewed ASASC-organized venue (or equivalent). A regular member can vote on ASASC issues, function as session or conference chair, and act as a peer reviewer for papers that fall within their professional qualification. Regular Members must attend ASASC meetings twice a year to remain active.

2) International Member: A foreign resident whose qualifications and privileges are identical to Regular Members. International Members must attend ASASC meetings once a year to remain active.

3) Associate Member: A person who is interested in the field of aerospace architecture, but has not yet received qualification in their respective field. An associate member cannot vote on ASASC issues, and does not qualify to act as peer reviewer, whether or not they have already published with the ASASC. An associate member is under no obligation to have regular attendance at ASASC meetings.

These rankings are based on the AIAA ranking system.