

## **AIAA-DETC Aerospace Architecture Subcommittee meeting**

22 September 2003, Queen Mary Promenade Deck, Long Beach, California

23 September 2003, Long Beach Convention Center, Long Beach, California

Roll call:

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

Visitors / potential members: Donna Duerk, Cecilia Hertz, Martina Pinni

Minutes: Previous minutes not ready for approval at this time.

During the two days of meetings the following items were discussed:

### **Activities:**

Working group members: Jun, Marc, Matt, Paola

Future meetings and conferences:

1. DETC meeting in Reno in January: Discussed calendar dates and attendance.
2. Space2004 in San Diego in September: Discussed the need to decide on session chairs. Action item: Scott & David need to decide on session chairs.
3. IAC 2004 in Vancouver in October: David Nixon discussed abstract submittal deadlines. However, since the Space2004 conference is one month earlier, support or attendance to the IAC might be difficult for subcommittee members.
4. ICES 2004 in Colorado Springs in July: David Nixon discussed passing the session chairmanship to Kurt Micheels, assisted by Barbara Imhof, Susmita Mohanty, and Sue Fairburn.
5. ICES 2005 in Torino: Discussed chairmanship by Andreas Vogler and Annalisa Dominoni, assisted by other european members.
6. SAS2005 in Fukuoka in October, to be held in conjunction with IAF/IAC: Chair for the SAS will be Jun Okushi, assisted by Scott Howe, Kenji Nozaki, and Anilir Serkan. Scott Howe discussed a subcommittee retreat to be held in the Hida mountains of Japan, or Kyoto. Scott takes his students yearly to visit Ine-cho on the Japan Sea of Kyoto prefecture, where there is a unique building type called the "funaya" or boat house. A second alternative is to visit Shirakawa-go in the Hida mountains, where we can hold our meetings in ancient thatched-roof Japanese "minka" farm houses. Subcommittee members would arrive at Kansai airport, take train to Kyoto station, and use rental cars or trains to attend the retreat. After the retreat subcommittee members would return to Kyoto and take the bullet train to Fukuoka for the SAS2005 conference. Action item: Scott should put together detailed information for both scenarios to be presented to subcommittee members. Action item: Marc and Constance need to get us registered with the IAF.
7. Conference attendance: Discussed a proactive approach to get the Russians to attend either ICES in Torino or SAS2005 in Fukuoka. Action item: Marc and Marilyn to contact Russian colleagues.

8. Design guide award: The greater DETC has given the subcommittee an assignment to award the Design Guide (published by the TC) to the best paper presented in each future session. Action item: Session chairs should set up Design Guide award in each session.
9. New member presentation: Discussed DETC new member presentations. Action item: Silvano to do new member presentation at upcoming conference (perhaps Reno).
10. DETC webpage: Discussed updating DETC webpage with Pravit. Action item: Scott to look at DETC webpage and suggest updates.
11. AIAA 2004 planning meeting: Discussed attendance to the AIAA planning meeting on thursday 25th at 7:00am. Action item: Alice & Marc to attend AIAA 2004 planning meeting.
12. other DETC subcommittees: Discussed the importance of greater integration with the other DETC subcommittees, such as architects joining them and inviting engineers to join the ASA.
13. World Expo 2010 in Shanghai: Not discussed at this meeting.

### **Education:**

Working group members: Andreas, Ted, Scott, Constance

Education issues:

1. Education workshop / matrix: The education workshop held at ICES in Vancouver in July made a lot of progress but was not complete. The workshop produced a matrix showing skill sets and various educational backgrounds. Scott Howe confirmed that the survey software was now installed on his server, and is ready for an education survey. It was decided that a part 2 education workshop will be held in conjunction with ICES2004 in Colorado Springs next year. Action item: Ted & Andreas & Constance set up online survey for education matrix (ask Scott about survey logon and instruction manual).

### **Research / Design:**

Working group members: Constance, Scott, Ted, Marc

There are several current design projects, including Marc's Hobot (and related work by other subcommittee members). The following research issues were discussed:

1. BEAMS: David Nixon discussed the current status of BEAMS, and explained that the project requires a positive return-to-flight announcement from NASA and confirmation of future missions before it can move forward in a confident manner. Mission dates are presently in a continual state of flux and uncertainty. 2 to 3 prospective mission slots have been identified with the earliest unlikely before 2006. 6-12 month basing opportunities on both US and ISS segments have been identified. ESA/ESTEC is preparing price and technical data for a 12-month slot on the Columbus module exterior which is available. Because of likely pressure on ISS upmass due to the Shuttle

hiatus, BEAMS experiments may need to share the Astroplate carrier with several small merchandise consignments on the inaugural flight. This may affect the number of BEAMS experiments that can be flown, perhaps reducing their number to 8-12. Several experimenters are in line, including NASA-AMES Research Center, the University of Hong Kong and Astrocourier LLC, with emerging interest from Tokyo University and TU Delft. Jun Okushi is advising a PhD student at Tokyo University on a prospective experiment.

2. SATE: The Tokyo Space Architecture Consortium has succeeded in getting funding under the Intelligent Manufacturing Systems (IMS) international collaborative for their "SATE" project, which seeks to apply aerospace spinoff technology to earth-based architecture. Congratulations go to the team for putting their successful proposal together, and all subcommittee members are encouraged to help the group as much as possible.
3. Volume definition (for DETC Design Guide): Need to hurry and get crisp digital graphics ready for publication. Action item: Marc is supposed to find out what the status is with Paola's 'lost' drawings.
4. Architectural Ergonomics (for DETC Design Guide): This project is currently on hold until Jun is ready to move forward.

### **Public Relations:**

Working group members: Marilyn, Alice, David, Kurt

The subcommittee discussed the following items:

1. Contact with press / journals: David Nixon, Alice Eichold, and Marilyn Dudley-Rowley discussed creating a one-page compact intro for the press and other interested parties. The intro should be included on the webpage, with a printable PDF link. Action item: Marilyn and Alice need to create the intro material.
2. Webpage: Scott Howe discussed the current state of the webpage. Action item: Scott to update member page and activities page.
3. Mailing list: The mailing list is getting unwieldy and it is difficult to manage current addresses. Action item: Scott to set up online automated email list.
4. Web-based forum: We need to set up a forum to track discussions that is archivable. The forum should be linked to the spacearchitect.org webpage. Action item: Ted to set up online forum.
5. Newsletter: David Nixon suggested creating an easy-to-read newsletter based on the minutes of each meeting. Action item: Alice prepare newsletter for this meeting and ICES meeting.
6. Liason with other TCs: Discussed liason with Space Colonization Technical Committee. Action item: Silvano to attend SCTC meeting and report back. (follow up information: Silvano went to the meeting but no one showed up)

### **Membership:**

The subcommittee discussed current membership:

1. Current: There are 20 current (or soon to be) members. We need to follow up

on applications to make sure AIAA and nomination forms are submitted.  
Action item: Scott to find out from Kent Longenecker what the current official list is.

2. Potential members: The subcommittee discussed and identified 22 promising additional members who have all expressed interest in joining the DETC. Action item: David to assign members to follow up on contacting and encouraging these potentials to apply.

### Action item summary:

1. Scott & David: Decide on session chairs for Space2004.
2. Scott: Put together detailed information for SAS2005 retreat scenarios.
3. Marc & Constance: Get us registered with the IAF for SAS2005.
4. Marc & Marilyn: Contact Russian colleagues and encourage them to attend conferences.
5. All session chairs: Set up Design Guide award in each session.
6. Silvano: Upcoming new member presentation.
7. Scott: Work with Pravit on DETC webpage update.
8. Alice & Marc: Attend AIAA 2004 planning meeting.
9. Ted & Andreas & Constance: Set up online survey for education matrix.
10. Marc: find out and obtain Paola's 'lost' volume drawings.
11. Marilyn & Alice: Create the intro material for outsiders.
12. Scott: Update member page and activities page on spacearchitect.org webpage.
13. Scott: Set up online automated email list.
14. Ted: Set up online forum.
15. Alice: Prepare newsletter for this meeting and ICES meeting.
16. Silvano: Attend SCTC meeting as potential liason.
17. Scott: Find out from Kent Longenecker what the current official list is.
18. David: Assign members to follow up on potential members (use 22-person list).