

**American Institute of Aeronautics and Astronautics (AIAA)
Design Engineering Technical Committee (DETC)
AeroSpace Architecture Subcommittee (ASASC)**

Meeting Minutes

Submitted by Ted Hall

2007 July 9, 10:00-12:00 CDT
Wellington 2 Ballroom
Westin Hotel
909 North Michigan Avenue
Chicago, Illinois, USA

Participating members (4): Ted Hall (*ASASC Chair*), Scott Howe (*DETC Vice Chair for AeroSpace Architecture*), Shazad Khaligh, Brent Sherwood (*ASASC Vice Chair*)

Observers (1): Jim Lowe

We occupied a dinner table in “Wellington 2” – after the Speakers’ Breakfast and opening plenary session, and before the Young Engineers’ Luncheon.

1. Conferences and Liaisons

1.1 AIA

Brent Sherwood has joined the American Institute of Architects (AIA) as an associate member. We need to include AIA as a regular liaison agenda item.

2. Committee Organization

Action items:

- Scott Howe: Write SATC financial notes for TAC August meeting.
- Brent Sherwood: Write SATC subcommittee structure for TAC August meeting.

2.1 Split from DETC

The AIAA Technical Activities Committee (TAC) will vote on our technical committee status at their August meeting. We need to submit materials to support our viability and unique role. We should keep the submission simple. As soon as possible after the TAC decision, we need to elect a new vice-chair.

As the DETC vice-chair for aerospace architecture, Scott Howe is chair-elect of the new Space Architecture Technical Committee (SATC). The person we elect as SATC vice-chair will move into the chair position when Scott’s term ends.

Shazad Khaligh suggested that we could have two vice-chairs, one of whom would be dedicated to international coordination.

Brent Sherwood suggested that, since the particular duties of the vice-chair are not clearly specified (other than assisting and training to succeed the chair), only one vice-chair is necessary. We may assign international coordination as a special duty of the vice-chair.

We also need to select a treasurer who can manage a USA-based bank account.

2.2 Finances

Scott Howe noted that there might be some royalties for the SATC from AIAA book sales.

2.3 Subcommittee Restructuring

We looked again at Brent Sherwood's paper on "Organizing Ourselves" (AIAA 2006-7471) [<http://www.spacearchitect.org/pubs/AIAA-2006-7471.pdf>]. Brent noted that the AIAA-suggested subcommittees are heavy on bureaucracy (inward-looking "blue stuff") and light on the things that we really need or want to do (outward-looking "yellow stuff"). The main things we do are reviews, publications, conference sessions, membership management, and (hopefully) finances – everything else is optional.

Our external "must-haves" are reviews, publications, technical sessions, panels, and workshops. Scott Howe noted the linkages between these.

Our internal "must-haves" are membership and financial management.

Another thing we could work on is to post a gallery of space architecture design concepts on our web site. David Nixon tried to organize this several years ago.

[Note: According to my e-mail archive, as of 2004/02/07, David Nixon had collected 20 images, and by 2004/03/04 he had organized them into a PDF document for our internal review. However, the gallery never made it onto the web site. It stalled on unresolved questions about format, image credits, web technology and maintenance, and basic manpower to launch it and keep it flying.]

Ted Hall noted that he (Ted) started the "publications" page by posting just his own publications, and that provided the "me too" incentive for other people to contribute entries. We now have more than 400 bibliographic entries. We could apply a similar strategy for the web gallery, but we need someone to take charge of implementing and managing it.

Shazad Khaligh questioned whether we need subcommittees at all. Other TCs that she's familiar with have officers to take charge of various tasks, but not formal subcommittees. This avoids undesirable distinctions between committee members.

Brent noted that a subcommittee of one member would be a limiting case. Some tasks require a continuing commitment of several members. We would like to broaden the set of active members.

We need a charter for activities, and we need volunteers to assume leadership and take charge of those activities. To what degree does the committee chairman get to vet the volunteers?

2.4 SpaceArchitect.org as a Meta-Organization

We discussed the relationship between the ASASC (soon to be SATC) and the SpaceArchitect.org concept. Currently they're indistinguishable, but there was a broad consensus that we should work toward evolving SpaceArchitect.org into a meta-organization that gathers members from many of the groups that SATC hopes to liaise with. Ties to AIAA, ICES, ASCE, IAA, AIA, RIBA, etc., could all be coequal peers under the SpaceArchitect.org umbrella. We need to strengthen our ties with space architects beyond the bounds of AIAA.

3 Next Meeting

The DETC and its subcommittees – including ASASC – will meet at AIAA Space 2007:

2007 September 18-20
Long Beach Convention Center, California, USA

As of our July-in-Chicago meeting, the specifics of the September-in-Long-Beach meeting were not yet known. If need and opportunity arise, then we may try to schedule an ASASC teleconference before the Long Beach meeting.

[Note: In the DETC leadership teleconference of 2007/07/25, Clark Briggs reported that he has scheduled DETC meetings on Tuesday 09/18 evening (about 17:00) and Wednesday 09/19 morning. AIAA will provide dinner Tuesday for 10 and a continental breakfast Wednesday for 8. This was Clark's attempt to apply prior inputs on moving to evening meetings. This minimizes work-day-away impacts for those in the area.]

Aerospace Architecture Technical Session at the 37th International Conference on Environmental Systems (ICES)

Submitted by Ted Hall

2007 July 9, 13:30-17:45 CDT (Monday)

Michigan room

Westin Hotel

909 North Michigan Avenue

Chicago, Illinois, USA

Ted Hall organized and chaired the session, with lots of help from dedicated authors and reviewers. It was a full session with eight 30-minute presentations and one 15-minute break. All of the accepted papers were presented – there were no cancellations. Presenters adhered to their allotted times, and discussion filled most of the question-and-answer periods. There was very little “quiet time”. From Ted’s seated position at the front of the room, he counted a minimum attendance of 18 and a maximum of 32. The average was about 23.

After the technical session, some participants expressed regret that there wasn’t a follow-up workshop or other more extended opportunity for discussion and networking. Unfortunately, the Aerospace Architecture Panel session originally scheduled for Thursday morning at 08:00 failed to materialize and had to be cancelled. Four of the eight technical-session presenters had to leave before Thursday morning – though it’s possible that at least some of them could have rearranged their schedules if the panel session had not been cancelled. Specific planning for panel sessions (including design review and workshop sessions) must begin much earlier in the cycle than was managed this year.

The presentations:

- 13:30 Kriss Kennedy, “The Lunar Lander HabiTank Concept.”
- 14:00 Arturo Vittori, “MarsCruiserOne.”
- 14:30 James Lowe, “Floral Polyhedra as Models for Inflatable Envelopes Suitable for Moon or Mars Habitats.”
- 15:00 Naoko Hatanaka, “Lunar Concrete Radiation Shielding Production for Primary Lunar Base.”
- 15:30 *break*
- 15:45 Scott Howe, “Trigon Surface Operation Scenarios.”
- 16:15 Hugh Broughton, “A Mini Module for Remote Science Research in Cold Regions.”
- 16:45 Mark Luther, “Natural and Environmentally Responsive Building Envelopes.”
- 17:15 Serkan Anilir, “Infra-Free (IF) Design Framework – Initial Scenarios for the Future Development of (IF) Technology.”