

**INTERNATIONAL TELECONFERENCE MEETING
OF THE AEROSPACE ARCHITECTURE SUBCOMMITTEE
OF THE
DESIGN ENGINEERING TECHNICAL COMMITTEE
OF THE
AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS**

**8 January 2003
Reno, Nevada**

Roll Call

Scott Howe, the new subcommittee chair, called roll. Participating and/or listening in by telephone was:

Marc Cohen, Constance Adams, Mireille Downard, Alice Eichold, Marilyn Dudley-Flores, Thomas Gangale, Andreas Vogler, Jun Okushi, David Fitts, and Ted Hall.

Nominations

Scott called for nominations for a vice chair of the subcommittee. A number of members' names were broached, but **David Nixon** was nominated *in absentia*.

Structure Stepping to a Full-Blown Technical Committee

Shortly thereafter it came up that the subcommittee needed a structure that would move us toward becoming a full-blown technical committee separate from the Design Engineering Technical Committee (DETC). After some discussion, the following preliminary framework of task categories emerged:

1. Activities
2. Research
3. Education
4. Public Relations

Among various **Activities** would involve helping organize symposia, ongoing conferences, and presentations.

Research would involve our ongoing projects we are engaged in as a group.

Education would involve our efforts to encourage aerospace architecture curricula and develop the discipline.

Public Relations would involve publicizing our activities, our research, and the discipline.

Scott encouraged it and we agreed that each member would choose at least one or two of these task categories to become active in.

Discussed were policies relating to this structure and which crosscut these task categories as follow:

1. As an AIAA group, we would interact with industry and academe and other appropriate sectors
2. We would establish standards for scholarly papers and guidelines for design
3. We would act as a neutral promoter of aerospace architectural efforts afoot in the world; for example, we would encourage any school that is interested in the discipline and not promote particular ones

Basically, the AeroSpace Architects would serve two main roles: 1) establish standards and 2) serve as a body of independent design advocates.

In this vein, it came up that **Constance Adams** and **Kurt Micheels** were working on an education workshop for ICES 2003. It was said that Kurt was outlining just what would go into this workshop. We concurred that thoughts/ideas should be forwarded to Constance and Kurt, perhaps **one to three issues from each member**, that have a bearing on the education of space architects. One such issue mentioned was how to create internships in the discipline. It was mentioned that the recently completed DETC survey report, "Recent Graduates Evaluate Their Undergraduate Preparation for Design Engineering", that had been commissioned by the AIAA, might be a useful input to our ideas about the education process of aerospace architects.

Alice Eichold suggested that we get the word out to schools that might have people interested in attending that workshop. It turned out that **Andreas Vogler** has been doing this in Europe and **David Nixon** has been doing that publicity in

the United States. **Constance Adams** mentioned that we should promote the attendance by professional people and downplay the attendance by students who might de-rail the workshop through their inexperience, however well-intentioned they might be.

In regards to public relations, **Marilyn Dudley-Flores** and **Alice Eichold** volunteered to be active in that task category. **David Nixon** and **Kurt Micheels** were further volunteered *in absentia* because of the obvious relationship between PR and Education task categories. We agreed we needed press releases and press kits. The press kit would have to be developed and then updated every year or two. It was brought up that there are already two or three professional publications interested in hearing from us on a regular basis. Sarah Hart of *Architectural Record* and Leonard David of *Space.com* were mentioned. **Scott Howe** said that the Public Relations Committee should generate proposals. Alice proposed that we send a press kit to *Smithsonian* magazine and similar publications.

Other subcommittee members were urged to participate in the PR committee. Alice called for members to send suggestions and information about everyone's representative projects to her at a.e@earthlink.com

In regards to activities, **Constance Adams** said that she was willing to chair our involvement in ICES (more on ICES and other meetings below). Constance has also mentioned an interest in signing up for the Research Committee and would occasionally support PR and Education committees.

Publications

It was discussed that **Scott Howe** was setting up our web site. **All comments about the web site should be routed to Scott.**

It was mentioned that we needed an automated way to manage the mailing list, preferably one that could be linked to our web site. **Mireille Downard** volunteered to deal with the mailing list.

Scott Howe and/or **Ted Hall** said they would enumerate on the web site the four areas of subcommittee endeavor (the task categories above); and they said they would mention on the web site the newly approved members: **Marilyn Dudley-Flores**, **Constance Adams**, **Andreas Vogler**, and **Paola Favata**.

The state of our publication list that is on our web site came up. **Ted Hall** said that we needed to keep that restricted to peer-reviewed items rather than non-peer-reviewed, popular items.

The ongoing canonical list of published work relating to the discipline would also be added to the web site. Our ongoing chore is to find gaps in our existing list for purposes of our education efforts and for self-education.

Jun Okushi asked what were the criteria to recommend an item to the canonical list? **Alice Eichold** replied that such items would be anything found in the list of traditional architectural literature that someone coming into the field would review. **Ted Hall** added that it would be the subset of publications that is absolutely necessary to have to bring people up to speed in the field.

A discussion ensued regarding **generating a list of keywords** from each item on the canonical list so that we can get a visual of where our gaps are. The list of keywords for evaluating canonical publications will initially be based on the list that **Ted, Andreas, Mireille, and Scott** presented in their Education for Space Architects paper at the Symposium past. We can adapt this list as we go along and it was broached that this could be an ongoing chore accomplished through our routine online discussions.

Pravit (surname?) will be contacting Scott and Ted about creating a link between the DETC and aerospace architecture web sites.

The “Usable Volume Standards” are nearing completion for addition to the next edition of the “Design Guide” (not the one being printed this spring). **Marc Cohen** is staying on top of that.

Marc Cohen addressed the book proposal we have in the works from the First Symposium at the World Space Congress this October past. He asked Alice Eichold, Marilyn Dudley-Flores, and Thomas Gangale to find Roger Williams during the Reno AIAA meeting, our parent organizational contact on this issue.

(**Alice Eichold** did indeed meet with Roger Williams after the teleconference and it happens that he has assigned a technical advisor from the AIAA Progress Series board of advisors (who are somewhat skeptical). It turns out that the board is concerned mostly about marketing, as well as technical merit. Alice told him that although our papers require technical expertise that our audience does not. Mr. Williams responded that we should resubmit our proposal if we are turned down, especially if we could generate more interest. He also said that

other publishing options could be explored. Alice asked Mr. Williams how optimistic we should feel on a scale of 1-10 and he replied, “6-7.”)

Marilyn Dudley-Flores and **Alice Eichold** will collaborate on a journal article for *Aerospace America* about the survey report “Recent Graduates Evaluate Their Undergraduate Preparation for Design Engineering.” (Marilyn has obtained from Steve Bauman that report’s “Strategic Highlights and Recommendations Report and Appendices” in preparation for that task.)

The “Compendium” was put on the table for discussion, something that **Andreas Vogler** is saliently involved in, but Andreas’ cell phone had died just prior and it was discovered that Andreas was no longer on the conference call.

ICES (Vancouver)

Constance had said she was willing to chair our involvement in ICES, and it had been mentioned that the education workshop was going to be held at that meeting. About ICES, **Marc Cohen** said that he had received about 30 abstracts for that meeting. He said that six to eight of them needed to go to other sessions like human factors. So far, 14-16 of the 30 abstracts had been accepted so far.

Space 2003 (Long Beach)

Alice Eichold will be co-chairing our involvement in that meeting along with **Scott Howe** and **Marc Cohen**. We are seeking to have all our presentations on a Wednesday for that meeting so that our session and other sessions of Space 2003 don’t interfere with one another. We need to connect up with **Jerry Stinovich** (spelling?) in relation to that issue.

It was mentioned that we had roughly a month till abstract deadline (7 February 2003) for session papers and an announcement to that effect would be forthcoming.

The IAF (Paris)

It was mentioned that there is a 15-18-month lead time to make the pitch to the IAF for a subcommittee symposium connected to their meeting. Marc,

Constance, and **Annalisa Dominoni** (who is especially fluent in French) can do the pitching it was decided.

Bremen, Germany

Andreas was asked about the status of our potential participation in the meeting there, but Andreas' phone was dead.

In Tokyo

Jun Okushi reported on two projects under way in Tokyo. One consisted of a grant from the Ministry of Economy to finance "Terrestrial Applications for Space Technology." This project dealt with using space technology to transform terrestrial architecture. The second one was to sponsor a lecture by **Constance Adams** at Tokyo University. Constance will also be lecturing in near future at the University of Hong Kong.

In this vein, Tom Garvey was wondered about. He is teaching at Carlton University in Ottawa, but is finishing his Ph.D from Tokyo University.

Russian AeroSpace Architects

Marc Cohen has sent a thorough set of papers to those in Russia interested in joining our subcommittee, but, it was speculated, we may not be able to meet them earlier than the Turin meetings in 2005 owing to the expense of international travel.

Chinese AeroSpace Architects

Despite Scott's, **Mireille Downard's**, and Ted's efforts no potential Chinese members have been found yet.

Research

Kurt Micheels is working on an adjacency matrix (the H.A.M.). **David Fitts** said that H.A.M. addressed what items should be near and far from one another in space settings; for example, the food preparation areas shouldn't be near the

bathroom facility. It was queried if H.A.M. was a review or a new approach? David said it was probably more than a review of what is in the MSIS and any new material from the H.A.M. would likely be included in the MSIS.

Alice Eichold reported to the DETC on *Astrocourier's* BEAMS exposure testing project. This deals with the behavior and evaluation of architectural construction materials in space to be flown on *Astrocourier* around 2005 or 2006. Two 0-g material tester contacts for **David Nixon** was suggested at NASA-Langley, Bill Kiner at Boeing, and Garret Phippen (of where?) Marc commented that it was a simple mission, but still the paperwork was enormous.

David Fitts (NASA-JSC) reported that the Man-System Integration Standards (MSIS – soon to be renamed something gender-neutral) has received three years of NASA seed money funding generated through Code U to develop/expand NASA technical standards. The topics of focus for 2003 are lighting and labeling. This effort will be coordinated through all NASA centers. This effort/funding is separate from the \$175,000 received not long ago by the recently-retired Cletus Booher and his group (NASA-JSC) to generally expand MSIS and related standards. David said that Cynthia Null of NASA-Ames was present at a meeting involving non-NASA involvement. In response to a query by Marilyn, David said that the non-NASA involvement is not being filtered by any agency like NSBRI that might overlook contributions from a wider net of sources. David encouraged us to view a document about this standards project on the web.

Jun Okushi and **David Fitts** discussed anthropometry briefly. Then, Jun brought up the subject of stressors and it was mentioned that Jun, Marc, Marilyn, and David might touch base on this subject.

Space/Space Applications News of Interest

The Chinese *Shenzhou* mission was returned without incident.

India plans to send a series of manned missions to the moon in the 2007-2008 timeframe.

Beijing has a mag lev train, courtesy of German technology, that's in active public transportation service and receiving good reviews.

Membership

In addition to a bunch of us getting officially approved as members, we discussed linking our web site to our membership form on the AIAA website.