

AIAA COMMERCIAL SPACE GROUP OVERVIEW DESCRIPTION

GROUP PURPOSE

The purpose of the AIAA Commercial Space Group (CSG) is to provide communication of relevant and timely information regarding the emerging commercial space sector to target audiences, specifically:

- **To the public**, communicate information about the emerging commercial space sector for educational purposes.
- **To AIAA members and all aerospace professionals**, provide them with timely and relevant information about the different aspects, sectors, and people of commercial space and provide volunteer opportunities in this new and dynamic aerospace sector.
- **To the emerging commercial space sector**, provide the wherewithal to obtain information about, and access to, all of AIAA's available resources and demonstrate the benefits of AIAA Commercial Space Group membership and support.

COMMERCIAL SPACE SECTORS

Sectors of commercial space include the following markets:

- Launch Vehicles
- Infrastructure
- Telecommunications
- Remote Sensing
- Ground Stations
- Position, Navigation, and Timing (PNT, aka GPS)
- Other niche markets (e.g. small satellites, etc.)
- Commercial human spaceflight

ORGANIZATION

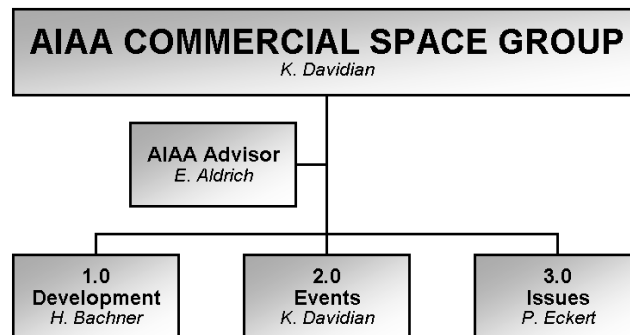
The organization of the AIAA CSG is shown in Figure 1.

The AIAA CSG organizational chart shows three major activity areas of the group:

- Development
- Events
- Issues

Each of these activity areas will be described below.

Figure 1. Organizational Structure of the AIAA Commercial Space Group



Activity 1.0: Development

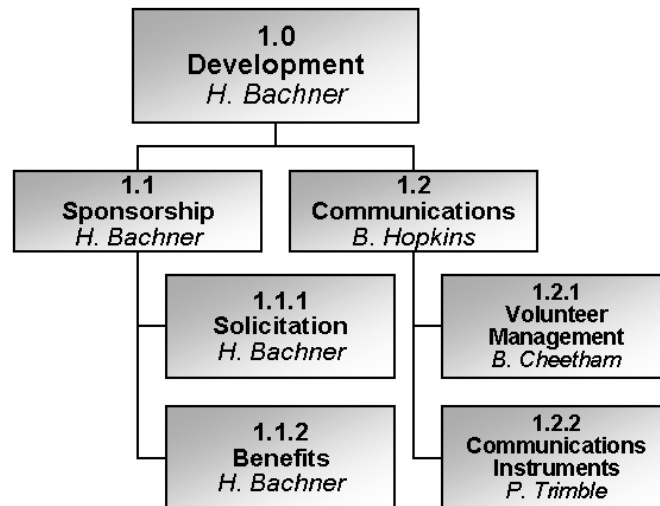
The Development area is organized into two major groups: Sponsorship and Communications as shown in Figure 2. Each of these areas is described in greater detail below.

Purpose

The purpose of the development effort within the AIAA Commercial Space Group is to:

- Provide wherewithal for members of the emerging commercial space sector to obtain information about, and access to, all of AIAA's available resources and show the benefits of AIAA Commercial Space Group membership and support. (1.1.1 Solicitation and 1.1.2 Benefits)
- Provide AIAA members, aerospace professionals, and those within the business and investment sectors, with timely and relevant information about the different aspects, sectors, and people of commercial space and provide opportunities for volunteering in this new and dynamic aerospace sector. (1.1.2 Benefits, 1.2.1 Volunteer Management)
- Provide communication of relevant and timely information regarding the emerging commercial space sector to target audiences. Communicate with the general public, through the use of a Commercial Space Web site, information about the emerging commercial space sector for business and educational purposes. (1.2.2 Communication Instruments)

Figure 2. Structure of the Development activity area.



Description

The Development activity area comprises two types of activities, i.e. Sponsorship and Communications.

Sponsorship comprises two activities including solicitation and benefits. The purpose of solicitations is to obtain resources to benefit both the benefactor and the receiver. For example, this may include contributions from companies/agencies to support AIAA student chapters that wish to attend technical meetings and conferences or companies/agencies that wish to bring a nationally recognized speaker to an AIAA conference. Additional funds that are received will be used to develop communications

with AIAA members and NewSpace companies and to develop the AIAA Commercial Space Web site.

Communications comprises three activities including volunteer management, communications instruments, and commercial space web pages.

- Volunteer management will be responsible for supporting and organizing volunteers that participate in AIAA Commercial Space Group activities. The leader of this group will support opportunities for individuals that wish to lead and/or support volunteer efforts at various AIAA Commercial Space Group meetings.
- Communications instruments that facilitate communications between the Space Group, AIAA members and new commercial space developers is of great importance in meeting the objectives of the Space Group. This has begun with the development of the Purpose statement and will continue with this Overview description, and the development of communications media that support the Space Group. The leader of the Communications instruments activity may also maintain a speakers list and a listing of federal, state and corporate commercial space web sites. A Commercial Space Web page that will be developed to enhance communications and information exchange. This area will also provide information about blogs that provide current information about commercial space activities.

Personnel

The following are the lead individuals for the major divisions of the Development activity area:

- Sponsorship activities (including both Solicitation and Benefits subcategory of activities) are led by Herb Bachner.
- The overall category of Communications activities are led by TBD.
- Volunteer Management subcategory of activities are led by Brad Cheetham.
- Communications Instruments subcategory of activities are led by Paula Trimble.

Actions

There are no current actions for the Development team at this time.

Products

- A tri-fold descriptive flier of the AIAA Space Group has been developed, printed, and is available upon request for promotional and publicity purposes.

Activity 2.0: Events

Organization of the Events area is broken into three groups, Conference Sessions, General Meetings, and Industry Visits and Briefings, as shown in Figure 3. Each of these groups is described in greater detail below.

Purpose

The purpose of the Events activity area is to provide opportunities to disseminate information to the target audiences.

Description

The Events activity area comprises three major types of activities that are predominantly, but not always, associated with AIAA Conferences. These are:

- Conference Paper and Panel Sessions
- General CSG Meetings (conducted at Conferences)
- Commercial Space Tours (sometimes conducted in association with Conferences)

A description of each of these types of activities and details of each that have been conducted in the past are given in the Actions section below.

Personnel

The following are the lead individuals for the major divisions of the Events activity area:

- Conference Session activities are led by Ken Davidian.
- General Meeting activities are led by Ken Davidian.
- Tour activities are headed up by Cliff Willey.

Actions

Past activities that have been conducted by the AIAA CSG include the following:

CONFERENCE PAPER AND PANEL SESSIONS

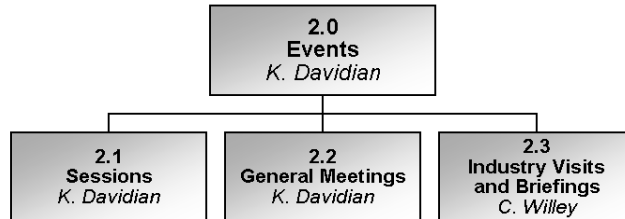
The following is a list of past and planned future AIAA CSG conference paper and/or panel sessions.

- 2009 Space: 6 Paper/Panel Sessions
- 2010 JPC: NewSpace Propulsion Session

GENERAL CSG MEETINGS

The following is a list of past and planned future AIAA CSG general meetings.

Figure 3. Structure of the Events activity area.



- 2008 Feb: FAA Commercial Space Conference in Washington, DC.
- 2008 July: AIAA Joint Propulsion Conference in Hartford, CT.
- 2008 Sept 09: AIAA Space Conference in San Diego, CA.
- 2008 Sept 30-Oct 2: IAF Congress in Glasgow, Scotland.
- 2009 Jan 7: AIAA Aerospace Sciences Meeting in Orland, FL.
- 2009 Aug 2-5: AIAA Joint Propulsion Conference in Denver, CO.

COMMERCIAL SPACE TOURS

The following is a list of past and planned future commercial space tour events.

- 2008 Nov 17 – “NewSpace” Tour #1 to Mojave Air and Space Port, Mojave, CA.
- 2009 Jan 8 - Commercial Cape Canaveral Tour #1 (Supported by Space Florida, NASA, and the Air Force)
- 2009 Sept 18 - “NewSpace” Tour #2 to Mojave Air and Space Port, Mojave, CA.
- 2009 Oct – Tour of White Sands Test payload integration facilities, done in conjunction with the 2009 International Symposium on Personal and Commercial Spaceflight, Las Cruces, NM.

Products

The output products from the Events activity area are presentations given at each event. Any of these presentations are available on the Commercial Space Wiki at commercialspace.pbwiki.com.

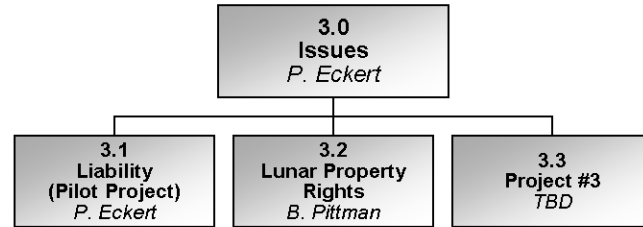
Activity 3.0: Issues

The Issues area consists of working groups pursuing projects and preparing written documents concerning various topical areas of interest and relevance to AIAA members.

Purpose

The purpose of the issues section of the Issues activity area is to help clarify and identify options for addressing important commercial space subjects of major relevance through formation of expert working groups that produce written documents and oral presentations that showcase their work.

Figure 4. Structure of the Issues activity area.



Description

The number of working groups depends on the number of issues deemed to be sufficiently focused and significant to merit creation of a project. Given the CSG's high standard of relevance and quality, the number of working group projects is not expected to be large, and will at least initially be limited to no more than three.

In the inaugural phase of the Issues activity area, a project on liability will serve as a pilot and pathfinder for additional future projects. In addition to consideration of widely discussed issues of indemnification and informed consent, the liability working group will address a less evident but equally important consideration: "pass-through" of liability from small companies to their larger and better established industrial partners. The important of this issue lies in its capacity to prevent otherwise attractive cooperative relationships between established and startup companies, thereby restraining the growth of the aerospace industry and limiting the contribution of this sector to overall economic expansion.

The liability pilot project will bring together important stakeholder and expert discipline representatives. These individuals will represent a matrix of viewpoints and competencies that will produce a useful identification of key liability concerns and options for liability limitation through law, regulations, contracts, and any other potential remedies. The project will generate a paper to be presented at the AIAA Space 2009 conference in September, as well as other possible written products for use in other organizational contexts, media, and the like. In order to ensure achievement of this goal, the group's size will be kept small; its scope will be circumscribed to address only high-priority issues; and its written product(s) will be kept concise.

In the working group's focus on highly significant subjects, its small but capable membership, and its pragmatically focused output, the group will help pave the way for additional issue working groups to be created as the Issues activity area evolves during

2009. Examples of issues that might be considered as subjects of new working groups include legal/regulatory challenges (e.g., clarifying an important aspect of space property rights), economic factors (e.g., promoting access to investment capital for a particular kind of entrepreneurial activity), and policy considerations (e.g., public/private partnership approaches to developing new space infrastructure).

Personnel

The lead individual for the Issues activity area is Paul Eckert, who is also directing the liability project as described earlier. Leads and working group membership for other projects will be constituted as appropriate project proposals are considered.

Actions

The activity area lead is in the process of forming the liability project membership and plan. Actions in 2009 will consist of further pursuit of this project and establishment of additional projects and working groups to the extent that appropriate proposals are received. General CSG communications efforts will also be supported, so that this group can effectively address these issues.

Products

Products may be papers and graphic presentation at conferences, articles for publication, white papers, topical reports, or other formats for verbal expression in written form, as deemed appropriate.

AIAA CSG Leadership Contact Information

Ken Davidian



FAA
**Office of Commercial
Space Transportation**

Ken Davidian
Encourage, Facilitate,
and Promote
Program Lead

**Space Systems Development
Division (AST-100)**
800 Independence Ave., S.W. #331
Washington, DC 20591
Tel: 202-267-7214
Cell: 202-834-0872
Email: ken.davidian@faa.gov
Twitter: kdavidian

Eleanor Aldrich

AIAA
The World's Forum for Aerospace Leadership

Eleanor Aldrich
Business Development

1801 Alexander Bell Drive, Suite 500
Reston, VA 20191-4344

703.264.7522
703.264.7551 (fax)
eleanora@aiaa.org

www.aiaa.org

Herb Bachner

HERBBACH@AOL.COM

HERB BACHNER
Aerospace Consulting
9016 Parliament Dr. Burke, VA 22015
phone (703) 965-6702 e-mail herbbach@aol.com

Paul Eckert

Paul A. Eckert, Ph.D.
International & Commercial Strategist
Business Development
Space Exploration Systems

The Boeing Company
1215 S Clark St, Ste 1500
MC 793C-G031
Arlington, VA 22202-4398

Telephone 703-414-6392
Fax 703-414-6011
paul.a.eckert@boeing.com

Cliff Willey

ISO 9001
REGISTERED

CLIFF E. WILLEY
PROGRAM MANAGER, SPACE INFLATABLES
Cell: (302) 222-7828
willey@ilcdover.com

ILC DOVER

One Moonwalker Road · Frederica, DE 19946-2080
Tel: (302) 335-3911 ext 252 Fax: (302) 335-0762
www.ilcdover.com

Designer and Manufacturer of Apollo, Skylab and Shuttle Space Suits

Bob Hopkins

**Phillips
& Company**

Robert P. Hopkins
Senior Vice President and
Managing Director

Office: 800-864-1231 ext.111
Mobile: 301-254-8135
rphopkins@phillipscompany.com
7910 Woodmont Avenue, Suite 1405
Bethesda, MD 20814

Helping Companies Grow™ **www.phillipscompany.com**

Paula Trimble



Office of the Secretary of Defense
Defense Research and Engineering
Rapid Reaction Technology Office

Paula Trimble
Emerging Capabilities Division

1401 Wilson Blvd, Suite 820 Office: 703-696-5761
Arlington, VA 22209 Mobile: 703-474-6157
Email: paula.trimble.ctr@osd.mil
Paula.trimble@osd.smil.mil

Brad Cheetham