

GREEN PAPER

A FRAMEWORK FOR MAINTAINING MEMBERSHIP OF THE AIAA SPACE ARCHITECTURE TECHNICAL COMMITTEE

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(REVISED AFTER MEMBER REVIEW AND COMMENT)

ABSTRACT

The Aerospace Architecture Subcommittee (ASASC) of the Design Engineering Technical Committee (DETC) of the American Institute of Aeronautics and Astronautics (AIAA) is due to become an independent AIAA Technical Committee (TC) in 2008. The new TC will be called the Space Architecture Technical Committee (SATC). This event will be an important milestone in the evolution of space architecture and its recognition as an emerging discipline within the aerospace community. The process of forming a new AIAA TC involves a number of steps, of which assuring sustained TC membership is one of the most critical. One of the ASASC's challenges since its formation has been maintaining membership attendance at regular scheduled AIAA meetings of the DETC. Low meeting attendance has occurred for a variety of reasons and it is clear that other acceptable means of maintaining membership in the new SATC must be found if it is to function properly. These means must be devised and crafted to ensure that the SATC can maintain satisfactory levels of membership in the years ahead.

The purpose of this Green Paper is to propose a framework for SATC membership that solves the meeting attendance problem with a 'menu' of activities that offers various alternatives to physical attendance at a major meeting, while ensuring that all members contribute in some way to the SATC for its collective benefit, including participation in local meetings or teleconferences. The 'menu' approach also recognizes and reflects an increasing trend in the architectural profession towards continuing education and career development. Borrowing an idea from professional architectural institutions, it introduces a block of time in hours that members spend and record each year on a choice of SATC activities to maintain their membership status.

The essence of this Green Paper is to define the range and choice of activities that will qualify for SATC membership and how much time is allocated to each activity based on its value to the SATC and its members. The range of qualifying activities and the times allocated to each are described in Sections 6 and 7.

I INTRODUCTION

1.1 In the several years since its formation, the architectural arm of the Design Engineering Technical Committee (DETC) of the American Institute of Aeronautics and Astronautics (AIAA) has evolved from a handful of mostly US or US-based architects to a broad international group of about 30 members – architects, designers, engineers and others - working in a wide variety of disciplines from Earth to orbit and beyond but with a common and shared interest in designing for spaceflight and space exploration. The group became known as the Aerospace Architecture Subcommittee (ASASC). The ASASC membership grew to exceed that of the design engineers on the DETC. The ASASC became one of the fastest growing AIAA internal groups and the most international in character. It has now reached the critical mass necessary – about 30 members – for it to spin-off from the DETC and form its own Technical Committee – a move that has the encouragement of the AIAA. This will happen in 2008 and in the next few months, the ASASC will lay the groundwork for the application process. The new committee will be known as the Space Architecture Technical Committee (SATC). Part of the groundwork will be a definition of membership duties of the SATC: what members on the committee actually do, how they themselves and the AIAA benefit in the long run and how they maintain their annual committee membership.

1.2 It has become clear over the last few years that the traditional basis for AIAA TC membership – showing up at a scheduled meeting once or twice a year – will not work in the SATC case for reasons discussed below. A different and fresh approach is needed and must be agreed by the ASASC membership as a whole. This should coincide with the replacement of the ASASC by the SATC in early 2008. The process begins with this Green Paper which proposes a new formula designed to suit the future SATC membership better. It replaces the standing membership requirement for physical attendance at one or two meetings a year with a framework of options that, nevertheless, is aimed at ensuring that all SATC members participate in some type of committee activity, even at a distance, and – and this is a new initiative – undertake some form of career professional development which has now become a mandatory requirement of the architectural profession. It should be noted that this Green Paper is devoted only to the issue of continuing membership of the SATC and not initial admission to the SATC which is dealt with elsewhere.

1.3 This Green Paper was circulated to all ASASC members for review and comment in August 2008. Member comments have been received and incorporated in this revised Green Paper. Additional comments were made during the recent ASASC meeting at SPACE 2007 in Long Beach and are also incorporated. **The attention of members is drawn to the new Section 6.4 below which introduces a ‘12/12 rule’ to encourage a balanced range of activities throughout the year and also to the final comment in Section 7.3.** The review and comment period has now ended and the next step is to vote on acceptance or rejection of the Green Paper in its present form with the aim of adopting it as a White Paper at the first SATC meeting to be held at the AIAA Aerospace Sciences conference at Reno in January 2008. All ASASC members will be asked to vote on this Green Paper by e-mail in December, prior to the first SATC meeting in Reno.

2 BACKGROUND TO THE MEMBERSHIP STATUS ISSUE

2.1 The AIAA has traditionally required that members who sit on Technical Committees attend two scheduled meetings a year that usually coincide with AIAA conferences. Since the birth of the ASASC several years ago, its subcommittee members have attended DETC meetings, beginning with a small group of architects who were more or less observers, continuing with a growing presence that led to the formation of the ASASC and culminating with the election in 2005 of an architect, Marc Cohen, as Chair of the DETC and a majority ASASC membership presence at many meetings. However, ASASC attendance over the years has been inconsistent and has fluctuated. While major events where the ASASC has held meetings, such as the 1st Space Architecture Symposium at the 2002 World Space Congress and the 2nd Space Architecture Symposium at the AIAA Space 2006 Conference, have been well attended and successful, others such as some of the DETC meetings at the AIAA Aerospace Sciences Meeting at Reno each January, have not, with sometimes just one or two members showing up. This imbalance became apparent some years ago and, in a bid to improve the situation, the annual ASASC meeting requirement for overseas members was reduced from two to one. The reason for this, and the main cause of the low ASASC attendance at some DETC meetings, needs explanation.

2.2 AIAA membership consists mostly of aerospace, mechanical and other engineers who work in aerospace, ranging from government agencies and laboratories, such as NASA or JPL, to large aerospace corporations, such as Boeing and Lockheed-Martin. The AIAA is a large and influential professional institution that commands respect in the aerospace field in the US and worldwide. In recognition of this, aerospace employers allow and encourage their employees to attend AIAA conferences to give technical papers and attend committee meetings. US employers usually underwrite the cost of employee attendance at one or two AIAA events a year if they are held in the US, though less often elsewhere. As most AIAA events occur in the US, AIAA conferences with scheduled Technical Committee meetings are usually well attended by US engineers. Two examples are the annual AIAA Aerospace Sciences Meeting held at Reno and the AIAA Structures, Structural Dynamics and Materials Conference which has a different location each year. Over the years, ASASC members have encountered two major handicaps compared to their engineer counterparts in attending conferences where ASASC meetings are held: first, many ASASC members live overseas in Europe or around the Pacific Rim and suffer much expense in coming to the US to attend a meeting and a conference; second, this expense is rarely if ever covered by an employer in the architectural sector (this also applies to architect members based in the US). This double disadvantage has acted as a deterrent to ASASC member attendance at meetings and has had a persistent dampening effect on ASASC activities.

2.3 The beneficial effect put in place by the ASASC of reducing the attendance requirement from two to one meeting a year for overseas ASASC members has resulted in little or no improvement to meeting attendance. Overseas members have continued to ignore the meeting requirement. Moreover, many US-based ASASC members have begun to ignore the requirement too, resulting in a low turn-out at some recent meetings, such as the DETC/ASASC meeting at Reno in January 2007.

Additionally, though partly for other reasons, space architecture paper and panel sessions at some conferences have begun to suffer: the space architecture paper session at ICES 2006 was exceptionally badly attended and the panel session planned for ICES 2007 in Chicago was canceled due to lack of interest and difficulty in finding panelists. Despite these setbacks, through electronic communication it is evident that members remain interested and active and members around the world seem to be participating in space architecture related activities on a local level. Clearly, something must be done to tackle the meeting inattendance challenge when the ASASC becomes the SATC in 2008. If physical attendance at one or two committee meetings a year does not work for many members, it must be replaced with something that does – a new framework for membership that is feasible, acceptable and tolerant but a framework, nevertheless, that continues to fulfill the AIAA requirement that each Technical Committee member contributes something for the Institute's greater good as well as his or her own advancement.

3 HOW THE ARCHITECTURAL PROFESSION DOES IT

3.1 In recent decades, the architectural profession has introduced a requirement for its members to conform to a program of career learning and development. This has become a condition of continuing membership and aims to ensure that architects stay up-to-date with new developments in areas such as the health, safety and welfare of the occupants of the buildings they design (as well as their own office staff). Part of this is increasing legislation covering health, safety and welfare in building design and part is staying abreast of the growing sophistication of building technology coupled with the now urgent quest for sustainability and 'green' design. Architects, like doctors and lawyers, provide society at large with a unique professional service based on the trust and confidence of the receiver in the provider. Society at large is entitled to expect the best possible service and architects must provide it. The ASASC membership is significantly, though not wholly, composed of architects to whom these requirements apply. As the ASASC seeks a new framework for membership of its SATC successor, it is instructive to look at how professional architectural institutes provide career learning programs and how elements of these can benefit the SATC which has a parallel aim of ensuring some form of annual membership activity. Two comprehensive and well developed programs that deserve a look, and which can offer useful lessons, are those of the American Institute of Architects (AIA) and the Royal Institute of British Architects (RIBA). These two institutions are leaders in their field worldwide.

3.2 In the US, the AIA system is called the Continuing Education System (CES). It is intended in the words of the AIA to "emphasize learning and record participation in professional activities . . . enable architects to keep current and master new knowledge and skills, plan for the future, and responsibly meet the role society entrusts to a professional." It applies to all AIA members, whether in the US or overseas. The AIA system is set against a background of increasing emphasis on architects' career learning by individual states as a means of maintaining state licensure. Over 30 states across the US now have this requirement with the number increasing. The state-based program is called Mandatory Continuous Education (MCE). State programs accept AIA programs and vice versa. The AIA system utilizes Learning Units (LUs) based on one hour as the unit of record. All AIA members are required to earn 18 LUs or spend 18 hours on professional development each year

to maintain membership. Of this amount, 8 LUs must be spent on studies related to Health, Safety and Welfare (HSW), usually by attending one or two one-day seminars or courses a year. These are given by providers recognized by the AIA. HSW scope is considerable and covers most technical subjects associated with architecture such as structures, mechanical & electrical systems, materials, construction documents, planning, sustainable design and safety. The other 10 hours can be spent on voluntary activities such as research, teaching, attending conferences, studying for an exam or writing an article. The AIA maintains a website where all members enter their earned LU details on-line to maintain annual membership. Members must sign documents each year when they renew membership to certify attendance at HSW courses and the AIA checks up on these afterwards.

3.3 In Britain, the RIBA system is called Continuing Professional Development (CPD) and has many similar aims but differs in two major respects: it calls for more time each year to be spent on professional development and it places greater trust in its members to pursue it. The RIBA wants its members to “maintain competence to practice.” Members must follow a professional development program with compulsory study of a core curriculum and a choice of optional activities. The RIBA annual time requirement is greater than that of the AIA with 19.5 hours to be spent on the core curriculum and 15.5 hours on other subjects. Records are kept and maintained on-line via the RIBA website but members do not need to produce evidence of certification – the RIBA assumes that, as responsible individuals, they will comply through personal diligence. The RIBA carries out a random check of members’ records on the website. The RIBA core curriculum leans somewhat more towards professional topics of practice management and administration than that of the AIA. There are three main study areas: professional context, practice management and management of projects. The three areas cover subjects such as codes of conduct, design for accessibility, business administration, sustainable design, marketing and selling, quality and risk management, staff and time management, costs and contracts. At least 2 hours a year must be spent on health and safety issues which cover construction safety, building regulations and workplace health.

3.4 It should be noted that the AIAA does not have a mandatory policy for continuing education for its members. The AIAA offers an array of short courses in technical subjects and publishes a broad range of related text books but there is no compulsory study requirement. Therefore, whatever framework the SATC adopts for its membership, it should not, in an AIAA context, be based on compulsory study; it should encourage rather than mandate. It should be optional and vocational, yet of sufficient substance to ensure that it is commensurate with professional standards and expectations. It should also reflect the fact that most ASASC and SATC members are architects who must fulfill a continuing education program annually. These are not divergent aims, but neither are they convergent. They are complementary and can be combined to produce a framework that has a dual overriding mission: to generate and administer the means by which SATC members fulfill a basic annual requirement for committee membership and thus abide by AIAA guidelines; and to ensure that these means are commensurate and compatible with continuing personal development and conform to professional architectural standards laid down by institutions such as the AIA and the RIBA.

4 DEFINING THE RANGE OF MEMBERSHIP ACTIVITIES

4.1 In carrying out its dual mission outlined above, the new framework for SATC participation needs to embrace four basic functions: it should describe the range and content of activities that qualify for membership of the SATC; it should indicate the amount of time to be spent on these activities annually; it should utilize a simple point system to recognize completion of members' activities each year; and it should advise how to keep a record or log of activities and time. The following discussion offers an approach to grading and managing these functions.

4.2 The list of qualifying activities for SATC membership obviously begins with the running of the future SATC itself. This will involve at least three people: a Chair, a Vice-Chair and a Treasurer. ASASC experience shows that this is often not enough – that more help will be needed to run the SATC efficiently. A second Vice-Chair or Vice-Chair-elect is desirable to spread the workload and maintain continuity of the Vice-Chair role as the senior Vice-Chair succeeds the Chair when his or her time is up. ASASC experience also shows that running the SATC takes a great deal of time which is volunteered by those involved. In recent years, the ASASC attempted to introduce a series of focus groups to deal with specific subcommittee activities such as education, public relations and fundraising to spread responsibilities and broaden activities. This has so far been a failure and presently there are no focus groups within the ASASC that can be called operational. As the SATC begins to gather momentum, however, these will be reintroduced, focusing on those areas most likely to succeed. Running or contributing to these groups should rank as a qualifying activity.

4.3 As ASASC members know, the activity that involves most of them is the writing and reviewing of technical papers for conferences. All those who write papers know that the effort needed is time-consuming, usually involving a three step process with the preparation of an abstract, a draft and a final manuscript in that order. ASASC standards for acceptable papers are exacting and authors must abide by a proper set of paper preparation guidelines. This was a deliberate policy designed to help to dispel the notion in some parts of the aerospace community that space architects have little to offer to the aerospace field. It has succeeded well and the high standard will continue to be applied. As part of this process, ASASC members have participated in reviewing their colleagues' papers on an anonymous basis. An effective peer review procedure for this has been put in place by the ASASC and is working well. Reviewing papers is a three step process that follows that of the authors. Clearly, both writing and reviewing papers for technical sessions should rank as qualifying activities for membership of the SATC.

4.4 As explained in paragraphs 3.2 and 3.3, practicing architects working in the building design and construction field in the US and UK must fulfill annual requirements for continuing education. The ASASC has, and the SATC will have several members who must comply with these requirements and their number is likely to grow as the SATC reaches out to more architects in practice. This mandatory professional requirement that will apply to some SATC members but not to others should be recognized as a qualifying activity, particularly where attendance at courses or seminars is concerned. However, activities related to architectural

licensing should qualify up to a point only, and not be treated as a substitute equivalent in rank to space architecture activities that benefit the SATC as a whole. Likewise, this rule should apply to a course or seminar in the aerospace field that would benefit the person attending, but not necessarily the SATC.

4.5 Returning to the question of SATC meetings, attending a meeting in person should remain the cornerstone of SATC membership for it is this activity that remains at the heart of the AIAA Technical Committee ethos. People sit on committees and the process involves gathering together around a table for a discussion for a day or so, at least once a year. There is no proper substitute, however tempting it may be to engineer some kind of 'virtual' presence. This is a vital issue for the ASASC to tackle before it becomes the SATC in 2008. A solution must be devised that is acceptable to the future SATC membership and to the AIAA which will oversee the performance of the SATC. The following formula is proposed for the framework, based on a graduated approach of three 'tiers' that takes into consideration the problem of long distance travel and accommodation that many international members have in attending US-based meetings. The 'upper tier' as far as qualification is concerned, would involve showing up in person at a conference or symposium organized by the AIAA or other aerospace organizing body such as the Society of Automotive Engineers (SAE) or the International Astronautical Congress (IAC) where a formal SATC meeting has been scheduled. This is the ideal scenario which the ASASC has attempted to follow in the past. Recognizing that not all SATC members would be able to attend this major meeting at a distant location, as demonstrated by ASASC experience, a new 'intermediate tier' of meetings is proposed. This introduces regional or continental SATC meetings for those unable to travel long distances to a major SATC meeting. Also introduced as a variation to a regional SATC meeting is a meeting held at an International Astronautical Congress (IAC) symposium as several SATC members are actively promoting space architecture activities within the IAC. Regional meetings would involve groups of members in locations where the prospects of enough people coming together are good, such as Western Europe or the Asian Pacific Rim. The minimum standard for these meetings would be a quorum (four people) for them to be viable and acceptable to the SATC. Members living in a particular geographical region would choose the venue for the meeting based on collective convenience. One local member would be appointed as meeting organizer and author of meeting notes to be circulated to all SATC members afterwards, as is the present custom with the ASASC. For those who, for one reason or another, are unable to attend any SATC meetings anywhere, a 'lower tier' of qualification is included, utilizing teleconferences. All three tiers would be required to follow discussion agendas established by the SATC as whole with local topics added as appropriate. In fact all SATC members, regardless of whether or not they attend meetings, should make an effort to participate in teleconferences. In the past and at the present time, these have been kindly arranged by those ASASC members working for NASA, but this may not always be possible and it is to be hoped that internet-based communications services such as Skype will evolve to the point that SATC can use them to hold teleconferences. The timing of teleconferences is an issue that affects the ability of members to participate – it is difficult to choose a time that is convenient to members who live in widely different time zones around the world. Teleconferences can also become unproductive when large numbers of people wish to make comments and discussion and decision-making can lose clarity. As a way around this,

continental or regional teleconferences between at least four members could be a possibility with a person attending that teleconference reporting its outcome to a centralized SATC teleconference. The point is that every SATC member must be prepared to attend a meeting or participate in a teleconference twice a year to maintain his or her position on the committee. It is the task of the framework to ensure that enough choices are available to members to do this and that obstacles to attendance or participation are eliminated as far as possible.

4.6 Finally, there are some other types of activity that should be allowed to qualify under the framework for SATC membership. SATC members should be recognized for pursuing a program of study or research in the space architecture field, much like their licensed architect counterparts, who are obliged by their professional institutions to do so. This extends beyond writing conference technical papers to include, for example, research and development associated with a specific space mission or project on which a member is working. An informal program of reading technically informative books, such as those published by the AIAA in its Education series should also count, providing the book is relevant. Writing a book on space architecture or an aspect of it, either for a technical or general readership, should qualify, as should writing articles for publication in general architectural magazines or other magazines beyond the space world, providing they relate to space architecture. The same applies to organizing or taking part in exhibitions with space architecture themes. Those members who teach architecture at a recognized university or college on either a full-time or occasional basis should be able to use taught studios or seminars in space architecture topics as a qualifying activity. Those members who carry out terrestrial architectural commissions or projects under contract that have some connection with the space architecture field should be able to use these as qualifying activities providing they permit the projects to be used by the SATC for future publication or exhibition purposes.

5 ALLOCATING TIME TO MEMBERSHIP ACTIVITIES

5.1 Comparing the time that licensed architects spend annually on continuing professional development to the time that most ASASC members spend on attending meetings and giving papers, it is evident that ASASC activities are far more time-consuming. As explained earlier, the American Institute of Architects requires 18 hours and the Royal Institute of British Architects requires 35 hours of recorded activities annually. Compare these figures to the time spent by many ASASC members on typical activities each year. A standard one-and-a-half day ASASC/DETC meeting lasts about 12 hours while a typical conference paper session on a single day takes about 8 hours, resulting in 20 hours total. Add to this the time that many members spend in writing their own papers as well as peer reviewing the papers of others – activities to be measured in days rather than hours that far exceed AIA or RIBA requirements – and it is evident that reaching a minimum annual time requirement for membership would be easy for most SATC members. However, there are some ASASC members who do not attend meetings and do not write or give papers on a regular basis. For them, therefore, an annual time check would be an important way of confirming that they are spending adequate time on other recognized activities. All SATC members would be asked to record their time spent on qualifying activities and compare it to an annual target figure that would apply to all SATC members.

5.2 Using RIBA and AIA figures as upper and lower guidelines respectively, it is proposed that 24 hours – equivalent to three working days, or one-and-a-half weekends, or two one-and-a-half day SATC meetings – is adopted by the SATC as its annual minimum target figure for continuing qualification of all its members.

6 AWARDING CREDITS TO MEMBERSHIP ACTIVITIES

6.1 As discussed in Section 4, the list of qualifying activities for SATC continuing membership should encompass the following:

- SATC administrative and organizational leadership duties
- SATC conference session organization and management
- Attending SATC meetings and participating in SATC teleconferences
- Writing, reviewing and giving papers and attending space conferences
- Taking courses or seminars on architectural or aerospace topics
- Carrying out a space-related building project
- Carrying out a space architecture (in space) project
- Writing space-related books or articles or taking part in exhibitions
- Pursuing a program of personal study in the space architecture field
- Teaching space architecture studios at a recognized architecture school
- Mentoring students carrying out space architecture projects
- Chairing a workshop or participating in a jury in space architecture

This is a provisional list and is not necessarily complete. It is, however, based on the breadth and depth of activities typically followed by the ASASC membership over the past several years and therefore provides a reliable frame of reference.

6.2 Using a point or credit system to record annual activities of SATC members to validate their continued SATC membership has both advantages and disadvantages. On the one hand, it can provide a simple and convenient method of recording the activities of members to ensure that they achieve their membership quota each year: on the other hand, it can become too formalized and heavy-handed if it is complicated and user unfriendly. Gaining annual activity points or credits to maintain SATC membership should be more like gaining frequent flyer miles from travel with an airline and less like fulfilling study modules as part of an examination. It is therefore proposed that a simple system using one hour as one qualifying unit of credit is used and members accumulate and record the number of hours spent on activities to reach the target figure of 24 hours each year.

6.3 With a list of qualifying activities identified and an annual hourly figure determined, it now remains to allocate hours to each qualifying activity. It is proposed that qualifying hours should be allocated on a sliding scale with activities that benefit the SATC and the AIAA generally given prominence over activities that tend to benefit individual members. Allocation of hours should also reflect the time and effort needed to accomplish a particular activity but should ensure that members try to cover a variety of activities each year – one of the objectives of the AIA and RIBA programs – and avoid meeting the target figure with just one activity. However, there are exceptions where a single activity is acceptable because it is particularly important and time-consuming, such as the roles of SATC Chair and

Vice-Chair. These roles should automatically qualify the members concerned with the full annual target figure in recognition of the valuable and indispensable functions they fulfill and the considerable amount of time needed to carry them out. For all other SATC members, upper hourly limits are proposed for many activities which are obviously time-consuming, such as writing a technical paper, pursuing post-graduate research or carrying out an architectural project. All of these are valid activities if they are space-related, but contribute less to the SATC as a whole than activities such as running the SATC or attending its regular meetings. The importance of encouraging members to attend SATC meetings in person – an aim that is central to the purpose of AIAA Technical Committees – should be recognized and reflected with the actual hours spent attending one day or one-and-a-half day meetings used for member qualification of these important activities. This also applies to regional or continental SATC meetings which are assumed to be shorter at a half day to one day in length. For those members who attend no meetings whatsoever during the year, there should be a mandatory requirement for participation in a minimum of two teleconferences with the typical short durations for these events recorded accordingly. The intent here is not to place non-attending members at a disadvantage but to reflect their involvement accurately in a manner that is fair to the SATC membership as a whole while ensuring that those concerned can maintain their membership status.

6.4 (new) To ensure that members achieve a balanced range of activities during each year and avoid devoting the whole 24 hours to one specific area, a ‘12/12 rule’ will be employed. The ‘12/12 rule’ will encourage each member to spend at least 12 hours a year on an activity associated with the SATC and a further 12 hours a year on personal or professional development. The activities that qualify for membership will be organized into two groups – one named Technical Committee Activities and the other Personal Development Activities, as described in Section 7.

7 A FRAMEWORK FOR MAINTAINING SATC MEMBERSHIP

7.1 To summarize the above discussions and produce an initial framework for consideration by all present ASASC members, the following provisional structure for annual qualification activities and time allocations is proposed:-

TECHNICAL COMMITTEE ACTIVITIES	TIME
SATC Administration and Organization	
• Acting as an SATC Chair or Vice-Chair (including meeting attendance)	12
• Acting as an SATC Treasurer (including meeting attendance)	12
• Running a SATC focus group (including meeting attendance)	12
Meetings and Teleconferences	
• Attending a scheduled one-and-a-half day formal SATC meeting	12
• Attending an IAC or regional/continental SATC meeting (one day)	8
• Attending an IAC or regional/continental SATC meeting (half day)	4
• Participating in two SATC teleconferences (mandatory if no meetings)	4
• Participating in one SATC teleconference	2

Journals, Conferences and Symposia

- Organizing paper and panel sessions at a conference or symposium 12
- Organizing, editing or publishing a journal, book or set of proceedings 12
- Writing one technical paper to present at a conference or symposium 12
(time credit shared between co-authors, if applicable)
- Acting as a Session Chair at a space conference or symposium 12
- Writing one article for a journal or set of proceedings 12
(time credit shared between co-authors, if applicable)
- Charing a workshop or participating in a jury in space architecture 8
- Giving a paper at a space conference or symposium 8
- Peer reviewing of one technical paper 4
- Attending a space conference or symposium (no paper) 4

PERSONAL DEVELOPMENT ACTIVITIES

TIME

Professional Education

- Taking a one day professional architectural course or seminar 8
- Taking a one day aerospace-related course or seminar 8

Research and Teaching

- Pursuing a research degree such as a PhD 12
- Teaching space architecture studios at a recognized architecture school 8
- Mentoring students carrying out space architecture projects 4
- Pursuing an informal program of relevant personal study or research 4

Architectural Design and Construction

- Carrying out a space-related building project 8
- Carrying out a space architecture (in space) project 8

Books, Articles and Exhibitions

- Writing or editing a book on a space architecture related subject 12
- Organizing an exhibition with a space-related theme 12
- Exhibiting in an exhibition with a space architecture related theme 12
- Writing an article on a space architecture related subject 8

7.2 All SATC members would be required to keep a simple record or log of qualifying activities and hours spent on them. This will be especially important in the first two years as the responses will provide valuable early data that will help to fine-tune the process. A record could, for example, consist of entries in a normal diary. Once a year, members would be asked to produce an activity and time summary, preferably on a single page, and forward it electronically to a member of the SATC tasked with the annual membership review process. That member would carry out a review of the summarized records and report the results to the SATC Chair. The SATC Chair would then take appropriate follow-up action such as contacting any member who failed to reach the 24 hour target figure. No certification or proof of members' activities would be necessary as it would be assumed that all members would respond accurately and with diligence to the information request. Those members who failed to achieve the 24 hour target figure in any year would be asked

by the Chair to make the record good the following year. Failure to reach the figure two years in a row would result in a member being removed from the SATC.

7.3 It should be emphasized that the above list of activities and their times is provisional at the moment and will be open to alteration and suggestion by the SATC membership. The aim is to have a working framework that is ready to put in place in 2008 at the beginning of the SATC's existence, see how it works when put into practice and then fine-tune it later on.