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In writing his landmark work *Space, Time and Architecture*, Siegfried Giedion probably never considered the possibility of "Space Architects" emerging from his profession, skilled not only in the complex discipline of Architecture but also knowledgeable of matters ranging from the chemistry of lunar soil to post-rocketry propulsion systems and their impacts on the design of the built environment.

Yet this group exists and, in hardy representation for their small numbers, recently paid a tribute to Giedion's other renowned creation, the CIAM. [Congres Internationaux d'Architecture Moderne]. Gathered in Houston in mid-October for the World Space Congress 2002, 47 Architects and designers who are expert in design for aviation and human spaceflight spent a long day in deliberations to produce the final version of the Space Architects' manifesto, "The Millennium Charter". This brief document is the culmination of many months of intense debate and deliberate wordsmithing among this population of overwhelmingly non native speakers of English. Calling itself "Team 11" after the "Team X" of the CIAM's last meeting, we sought to reinvigorate the CIAM as the only truly international precedent for Architects working as an organized, political body to craft a sense of relevance and understanding between our profession and the world at large. And in the spirit of the CIAM's founders, who insisted on inviting their mentors Peter Behrens and Otto Wagner to their first meeting, the Team 11's proceedings were further enriched by the participation of one of Team X's framers--the Architect Waltraude Woods--who had also mentored two of the Workshop's prime organizers at different times in the past (one while teaching at Columbia, and the other here at Yale).

Is all Architecture "Space Architecture"? - Getting Off the Ground

Despite the fact that the debate over AeroSpace Architecture as a profession continues on topics ranging from its proper title and domain ["Space Architecture" and "AeroSpace Design" represent two of several camps] to its proper time-scope and degree of influence over future commercial and political efforts, the Team 11 Workshop successfully produced a concise set of statements to enunciate the identity of this emerging field.

Space Architecture Mission Statement

Space Architecture is the theory and practice of designing and building inhabited environments in outer space.

Motivation

We are responding to the deep human drive to explore and inhabit new places.

Contributions of Architecture

Architecture organizes and interprets the creation and enrichment of built environments.

Knowledge

Designing for space requires specialized knowledge of orbital mechanics, propulsion, weightlessness, hard vacuum, psychology of the hermetic environments, and other topics.

These ideas were unanimously accepted as fundamental, along with the notion that collaborative action-whether between engineering disciplines, Architecture, design and human factors, or between agencies and nations-constitutes an essential aspect of the practice of Space Architecture.

Once the issue of defining a taxonomy of archetypes appropriate to Space Architecture arose, it brought to the forefront the question of scales and spheres of influence. In the face of the tremendous complexity of even the simplest such structure, Architecture Professor Ted Hall said, "All architecture is Space Architecture; Earth architecture is just the subset with whose constraints we are most familiar."

Shock value aside, this is an idea which holds the potential to be enormously liberating for the profession of Architecture in general. It is the fundamental concept behind the new group's journal, *MotherShip*, which aims to improve the communication between advocates and practitioners of sustainable architecture, advanced support systems and materials specialists, sociologists, Architects and Space Architects - in the context of design issues appropriate to the human environment, from spacecraft to the terrestrial mothership.

In keeping with a certain view toward the history of architecture, Team 11 settled on eleven "Points" or "Categories for Action". These range from the Space Architect's need to place the user unwaveringly at the center of design - "Because user needs and well being are critical components of mission and vehicle design, user contributions are indispensable in the practice of space architecture" - to the intriguing category of "Humility" in which it was agreed that "Architecture involves forging harmony around the human system, balancing culture, biology, planetary knowledge and technology in counterpoint to the unknowable." Finally, the Millennium Charter sets forth a brief philosophical platform for Architects of the future: "We seek to improve the human life experience by providing environments conducive to intellectual, spiritual and social enhancement; Our work is to be accomplished in an environment of cooperation... in which no single idea or concept is considered greater than the whole, and the focus is always on the needs and desires of the user. We seek to understand the implications of our presence in a space and what kind of footprint we want to leave."

Ironically, the downfall of the 20th-century CIAM was a kind of crisis among the first generation over the demands of their successors that Architecture also address qualities in life; the Team X organizers tried very hard to bring the focus of the larger body onto the idea of hope. Perhaps in this sense, the Team 11 Workshop truly is the legitimate inheritor of the CIAM's debate. The Millennium Charter enunciates very simply the benefits which Space Architecture brings to the general profession: "Knowledge and Technics derived from the practice of space architecture can improve the sustained quality of life on our human mothership, the Earth."

AeroSpace Architecture is no longer a safe harbor for sloppy fantasy; it is a real, disciplined profession of enormous complexity and difficulty; and the methods its practitioners are developing for integrating the Architect's skills and training into the culture and processes of advanced Engineering have a great deal to offer to designers and specialists in other fields. If the projects on which we are working are to be built, they will require that nations work together, that private wealth and public assets collaborate in extending humanity's fields of knowledge. It will be necessary for the trend of cultural interchange already underway in the International Space Station program to continue, and to expand; and most importantly, it will be necessary for approaches to be developed and applied which will sustain the long term future of our planet and our kind.

This, Team X, is your architecture of hope. It was a long time coming. And with a little luck and some hard work, it will be with us for a long time to come.

(The full text of "The Millennium Charter" can be viewed [here](#).)

Mid-workshop group conclusions and/or topics of significant debate included:

- Mission Statement
- Evolution of Synthesis
- Generalization - new language
- Project Management
- Commercialization - Diversification
- Extreme Design

- "Philosophy" drives all other points
- New Economic paradigm - ownership model
- Will drive/constrain options for action
- Multigenerational perspective
- Relationship to AIA Architecture
- Cultural Differences
- Space and comfort

- Refining Categories
 - education
 - integrate related MD/Humanities areas
- Typology
- Concern about reference to Military work
- Inclusiveness - keep door open/ broader scope
- Positive Definition
- Profession
 - need space architecture professional Association with associated fields
- Education
 - space architecture should be an independent discipline
- Stable Dynamic Process
 - Design Philosophy
- Categories
 - methodology
 - interdisciplinary - influences
- Role in Social Organisation
 - architecture influence on culture and society "social planning"
- Maybe this is like a new profession
- A new language created