

News and Announcement

[SATC]: [Changes to SATC leadership and subcommittees structure](#) is now effective.

[SATC]: [Minutes of the latest SATC Telecon](#) is now available.

[SATC]: **15 Jun:** [SATC Logo Design Competition](#) - submission deadline [extended](#).

[AIAA SPACE]: **15 Jun:** Submission deadline for [SATC stage media presentation](#) at [SPACE 2014](#).

[AIAA SPACE]: **14 Jul:** Manuscript submission deadline for [SPACE 2014](#).

[AIAA SPACE]: **4-7 Aug:** [SPACE 2014](#) at [Manchester Grand Hyatt](#), San Diego, California, USA.

[IAC]: **10 Sep:** Manuscript submission deadline for the [65th IAC](#).

[IAC]: **29 Sep -3 Oct:** the [65th IAC](#) at [Metro Toronto Convention Centre](#), Toronto, Ontario, Canada.

Mailing List Highlights:

NAS: [Health Standards for Long Duration and Exploration Spaceflight](#).

[Thoughts on "Elon Musk's row", US-Russia political tensions, and their implications to the space programs](#).

[NASA's current plan to put human on Mars ... and musing on the pros and cons of international cooperation](#).

If you would like to discuss or comment on any news items, you can start a discussion thread [here](#).

The Orbit's Predictions to Space Architecture in 2064

What would Space Architecture be like in 50 years time?

While trying to predict a distant future may be considered by some as a fool's errand, that did not deter the many brilliant minds of the past (such as the like of [Isaac Asimov](#) and H.G. Wells) and [present](#) from making their own predictions of the world decades or even centuries onwards. After all, the real value of future prediction is that it offers a chance to put the present in perspective with the past and future, and thus enables us to identify and focus on issues at hand today that truly matter from a holistic point of view.

So, it is in this spirit that the editors of the Orbit have mused on the future and make the following predictions for Space Architecture by the year 2064:



Astronaut Karen Nyberg tweeted this photo of the sun setting over Earth, taken from the International Space Station. Tweet released June 2, 2013.

Form

Hybrid Structures consist of inflatable and modular components will become the mainstream form. The size and shape of the components will remain constrained by the capability and form of the space launch vehicles of the time.

Technologies

Autonomous robotics, In-Situ Resources Utilisation (ISRU) and industrial-scale 3D printing technologies will be the key and most visible drivers that define space architecture construction process - just as reinforced concrete, structural steel and panel glass defined architectural development in the 20th century. Breakthroughs in artificial intelligence, biology, nanotechnologies and power generation will finally make it possible to create and maintain a closed loop habitat system of a limited scale in extraterrestrial settings.

So what would be your own predictions for the future of Space Architecture in 50 years time? Please share your thoughts and comments [here](#).

Scope

Human will have set foot on Mars and returned to the Moon, but any extraterrestrial settlements will be limited to the scale of small outposts only. Purpose-built orbital space stations owned and operated by commercial entities will become the norm, expanding its scope from exploratory and scientific tasks to those that are experience and entertainment orientated. Earth-orbital and lunar access will be possible for the affluent, but remain inaccessible to the majority of the population worldwide.

Profession

Space Architecture as a discipline will be widely recognised and will be integrated as part of the architecture curricula in most universities. Postgraduate research will focus on space systems efficiency and sustainability in the context of space architecture, as well as dual-use applications of space technologies and design for terrestrial settings.

Poll of the Orbit

2014/1st Poll Results

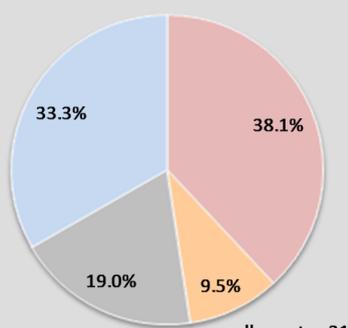
The poll results indicated a clearly divided opinion among the members of SATC, on which goal the group should be directed towards for the immediate future. There is no consensus on whether SATC should put emphasis on trying to do more, or to focus on specific projects, or to simply maintain the status quo.

Many survey participants have commented on specific issues related to the subject and had elaborated on potential solutions. A full transcript of the comments could be found [here](#).

If you would like to discuss or comment further on this topic, you can start an email discussion thread [here](#).

Poll: What general emphasis would you like to see in the next term of SATC?

- Do More, Try More
- Maintain Status Quo
- Other
- More Focused



poll counts =21

2014/2nd Question:

The International Space Station is the most significant piece of Space Architecture ever realized and has been in operation for over a decade. However the station's future is far from certain when it reaches the end of its scheduled mission by 2020.

Considering purely from the standpoint of Space Architecture, which of the following outcomes for the International Space Station as an architectural hardware would you prefer to see beyond 2020?

- **Demolition:** controlled de-orbit to follow the fate of the Mir Station.

- **Conservation:** Carry out necessary repairs and replacements to extend its operational life. Maintain the station's primary programme as a platform for scientific research and experiments.

- **Retrofit:** Significant interior but limited structural design changes. New modules may be added to the current configuration in order to create a more versatile platform that could better support new uses such as commercial, educational or experiential purposes.

- **Complete Conversion:** Substantial design changes to both interior and structural elements. Existing modules would be disassembled and reconfigured as parts to support new modules that are tailored to serve new dedicated roles.

- **Other**

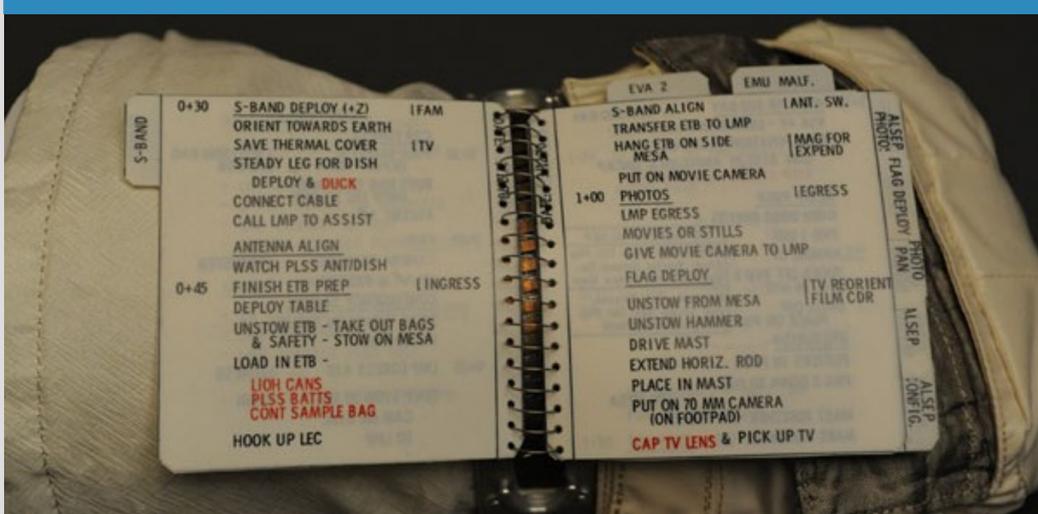


ISS - image: NASA

Please answer the poll question here.

You can also start a discussion thread on this topic [here](#).

Theme of the Orbit: Method



Apollo 13 astronaut Jim Lovell's cuff checklist on EVA gloves. Picture: Apollo Lunar Surface Journal.

6 articles can be found within the [spacearchitect.org](#) publication archive by searching under the keyword: "method*".

Bond, Robert L. (1976 May). [Skylab Experience Bulletin No. 26: The Methods and Importance of Man-Machine Engineering Evaluations in Zero-G](#) (NASA JSC-09560).

Herman, Matthew (2002 October). [Architectural Design Method for the Configuration of a Manned Inflatable Spacecraft](#) (AIAA 2002-6104).

Raygoza, Jesus B. (2004 July). [Designing the Mex-Lunarhab \(Mlh\): Application of Correct Methodology](#) (SAE 2004-01-2401).

Villeneuve, Frédéric (2007 August). [A Method for Concept and Technology Exploration of Aerospace Architectures](#). Doctoral dissertation (Ph.D.), Atlanta, Georgia, USA: Georgia Institute of Technology.

Weisbin, Chuck; Lincoln, William; Papanastassiou, Dimitri; Coleman, Max (2013 September). [Mars Biosignature-Detection Capabilities: A Method for Objective Comparison of In Situ Measurements and Sample Return](#) (AIAA 2013-5366).

Zheng, Xinhua; Wang, Haining; Guo, Yafei (2013 September). [Development and Application of Chinese Aerospace Systems Engineering Method](#) (IAC-13-E5.3.2).