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Space Settlement – A Strategy for Human Expansion in Space

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ABSTRACT

Space has been reinvented several times, but the Vision for Space Exploration, the Space Exploration Initiative and Project Constellation have all fallen by the wayside. One reason may have been the involvement of a number of separate goals, rather than an overall strategy that would combine the various activities. Yet there has been a proposal for a project that would reverse this approach; by offering a strategy for the settlement of space, many individual projects could be accomplished.

Over 40 years ago, plans were put forward for space colonies that could be constructed using the technology of the time and within the costs of project Apollo. Unfortunately the real launch capability of the shuttle fell far below what had been planned, which rendered the project unfeasible. Now, with the development of Skylon, plus the improvements in technology in over 4 decades, construction of these settlements in space could be far more effective if carried out now, and, as originally envisioned, can also solve major problems that face us on Earth. I am therefore leading a team at the British Interplanetary Society to re-examine and update the original studies.

As well as the space settlements themselves, such a project would also result in the establishment of an entire space infrastructure, including orbital transfer operations, mining on the Moon and/or asteroids, and space-based manufacturing facilities. This would catalyse a new era of space-based industrial and economic activity which would also provide enormous benefits to Earth. Such a situation would also enable all kinds of other proposals regarding space activities.

The establishment of a small-scale habitat would act as a proving ground for many of the capabilities required in the construction of larger units, and would also act as a logical follow-on to the ISS.

To carry out the construction of space settlements would result in a reinventing of space on a massive scale, allowing many other goals to be achieved.