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Game changers in the space economy (3)

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THE CURRENT STATE AND THE FUTURE OF SPACE INTERNET - THE SPACE GENERATION  
PERSPECTIVE

**Abstract**

In the last decade, the internet has become an integral part of daily life in the developed world. Current estimates suggest that as many as four billion people worldwide are left without access to the internet, and without the ability to enjoy its benefits.

During the Space Generation Congress 2015, held in Jerusalem, Israel, students and young professionals representing 14 countries participated in the Space Communication - Space Internet working group. The group investigated the possibilities, risks, and opportunities of using satellites, drones, and high altitude balloons to provide widespread access to the internet. The group focused on one of the barriers for worldwide connectivity - the lack of economic viability of providing internet access using land infrastructure, and the possible solutions that will address this problem. As a result of these findings, the working group participants proposed several recommendations.

These recommendations take into account the numerous challenges that come with developing air-based internet access whether it be via balloons, drones, or satellites. Such recommendations also include the possibilities that such technologies will be utilized in conjunction. These challenges range from regulatory to technical and practical limitations, such as the potential for damage to property, and issues related to orbital debris. Due to our group's consensus that worldwide internet availability would ultimately be beneficial, given both humanitarian and economic concerns for poor and wealthy nations alike, we propose four "game changing" ideas that have the potential to positively impact the space economy. We first suggest that market studies be conducted to illustrate demand for the service. With sufficient demand, a phased approach to the solution should then be instituted. We further propose that national governments serve as anchor tenants and expedite regulatory processes. Finally, to ensure commercial sustainability, Internet Service Providers (ISP's) should be provided connectivity to the system.

Our paper deals with the current status and the future of the space-based internet services and details our recommendations.