

SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)  
Advanced Systems (3)

Author: Mr. Norbert Frischauf  
SpaceTec Capital Partners GmbH, Austria, frischauf@spacetecpartners.eu

Dr. Manfred Wittig  
European Space Agency (ESA) retired, The Netherlands, manfred.wittig@wxs.nl  
Prof. Otto Koudelka  
Graz University of Technology (TU Graz), Austria, koudelka@tugraz.at

## GLOBAL IN-FLIGHT INTERNET SERVICE - A PROPOSAL FOR A SATELLITE MISSION

**Abstract**

Can commercial airlines ignore the growing market penetration of smart-phones and tablets for the next twenty years? Earlier attempts to provide Internet access during flight were not a commercial success. The most prominent example was Connection by Boeing which went bankrupt leaving some airlines with satellite terminal installations without service.

Looking at the reasons why this could have happened we assessed requirements and constraints for a Global In-flight Internet Service (GIIS) that could satisfying the airline user needs of the next two decades. In aiming to satisfy these needs in a global fashion, we present a possible satellite system design, which would allow achieving an attractive business case.

To turn this system into a success story, the cooperation between the GIIS service provider, aircraft manufacturers and airlines is of utmost importance. Consider that about 15,000 commercial aircrafts are in operation today and about 31,000 in 2030. Out of the 15,000 operating aircrafts 10,500 need to be replaced in the envisaged time frame. This provides the opportunity to factory equip a large number of new aircrafts with satellite terminals, ultimately helping to make the proposed business case realistic and attractive.

Obviously GIIS is a huge market, however a secondary market identified is Global Internet Service (GIS) for cruise ships. This market may not be as big as for long haul flights but it is not neglect able and would be served by the proposed GIIS system as well.