

HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Commercial Human Spaceflight Programs (2)

Author: Prof. Eva Yi-Wei Chang
University of Science & Technology, Taiwan, China, eva77tw@cc.hc.cust.edu.tw

Prof. Rock Jeng-Shing Chern
Ryerson University, Canada, editor-in-chief@iaaemail.org

ANALYSIS OF THE SIMILARITIES AND DIFFERENCES BETWEEN AVIATION TOURISM AND
SUBORBITAL TOURISM DEVELOPMENT HISTORIES**Abstract**

The developments of aviation tourism and suborbital space tourism (SST) were started in 1927 and 2004, respectively. The purposes of this paper are to study the similarities and differences between the development histories of SST and aviation tourism, and then to investigate and discuss the future prospects of SST from the current status. Charles Lindberg's unprecedented historical non-stop trans-Atlantic flight in 1927 was stimulated by the Orteig prize founded in 1919, while the Virgin Galactic's successful suborbital space flights in 2004 was motivated by the Ansari X Prize established in 1996. Both occurrences were 8 years from the initial announcements of the prizes. Both successes were privately founded. There is a third prize announced in 2007, the Google Lunar XPRIZE (GLXP), which is still waiting for the winner. Original deadline of the GLXP was in 2015, also 8 years after the announcement, but has been conditionally postponed to 2017. Before Lindbergh, there were tens of adventurers with 27 sacrificed including 6 famous aviators in pursuing the Orteig Prize. After achieving the flight, people surrounding Lindbergh started to promote aviation industry deliberately, induced enormous general public to take part air travel seriously although they were still strongly doubtful on it. After Lindbergh's flight to the end of 1927, the number of flight license application grew by 3 times and the number of licensed airplane increased to 4 times. Between 1926 and 1929, the annual passengers of airlines increased drastically from 5,782 to 173,405, a growth of 30 times. Elinor Smith Sullivan, winner of the 1930 Best Woman Aviator of the Year Award, said that before Lindbergh's flight, "People seemed to think we (aviators) were from outer space or something. But after Charles Lindbergh's flight, we could do no wrong. It's hard to describe the impact Lindbergh had on people. Even the first walk on the moon doesn't come close. And it changed aviation forever because all of a sudden the Wall Streeters were banging on doors looking for airplanes to invest in. We'd been standing on our heads trying to get them to notice us but after Lindbergh, suddenly everyone wanted to fly, and there weren't enough planes to carry them." Although the first SpaceShipTwo (SS2) crashed in December 2014 during test flight, both the second SS2 and XCOR's Lynx Mark I are close to test flight phase. Prosperous prospects of SST could be expected within few years.