

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

Author: Ms. Sumara Thompson-King
National Aeronautics and Space Administration (NASA), United States

Mr. Scott Barber
National Aeronautics and Space Administration (NASA), United States

"NASA'S FACILITATION OF COMMERCIAL SPACEFLIGHT"

Abstract

This paper will discuss the National Aeronautics and Space Administration's (NASA) recent efforts to facilitate the development of a robust commercial spaceflight industry to provide transportation to low earth orbit to meet governmental and private sector needs. While the focus of NASA's space vehicle development is now on exploration beyond low-Earth orbit, United States law and policy support a framework under which low-Earth orbit transportation will be acquired from commercial providers.

The paper will explain how the 2005 NASA Authorization Act directed NASA to work closely with the private sector, including by encouraging the work of entrepreneurs seeking to develop new means to launch satellites or seeking to develop new capabilities for transporting crew and cargo to and from the International Space Station (ISS). In response, NASA initiated the Commercial Orbital Transportation System (COTS) which was intended to:

- Implement U.S. Space Exploration policy with an investment to stimulate commercial enterprises in space;
- Facilitate private industry demonstration of cargo and crew space transportation capabilities with the goal of achieving reliable, cost effective access to low-Earth orbit; and
- Create a market environment in which commercial space transportation services are available to government and private sector customers.

In NASA's 2008 Authorization Act, the U.S. Congress expressed its continued approval of NASA's progress in these areas by recognizing the ability of the commercial sector to provide on-orbit services and encouraging NASA to look for such service opportunities by making use of the commercial sector to provide such services to the maximum extent practicable.

The paper will explain how, as the end of the Space Shuttle Program neared, NASA identified backup capabilities to meet the cargo transportation needs of the ISS. Because NASA now was seeking such capabilities to meet a government need, NASA used a procurement contract to acquire cargo transportation services under Commercial Resupply Services contracts. More recently, NASA also has undertaken to identify capabilities to meet the crew transportation needs of the ISS. The objectives of NASA's Commercial Crew Program are to safely and reliably transport U.S. and International Partner astronauts to and from the ISS and to enable the development by private commercial spaceflight industry of other non-NASA commercial markets for human space transportation services.