

Crew frontiers

NASA's new focus on commercial spaceflight provides opportunities for Boeing's highly skilled work force

by Ed Memi

Much as Boeing helped launch commercial aviation decades ago, it is now moving toward development of a space transportation system that will use commercial services to ferry astronauts to and from low Earth orbit.

NASA recently awarded \$18 million to Boeing to design a commercial crew capsule. In addition to Boeing, NASA selected four other companies for the Commercial Crew Development contest. The space agency later will follow with a more comprehensive competition, but the timing remains undefined.

"NASA will accelerate and enhance its support for the commercial spaceflight industry to make travel to low Earth orbit and beyond more accessible and more affordable," NASA Administrator Charles Bolden said, in announcing

the five companies awarded contracts.

Don McCorvey, space shuttle flight controls subsystem manager and Commercial Crew Vehicle avionics lead, is heading Boeing's effort to design most of the avionics for the new spacecraft. "Building a commercial vehicle like this really hasn't been done before," he said. "It's a great opportunity to design a brand-new vehicle—a lower-cost vehicle that doesn't sacrifice safety—that can be sold to NASA and other customers."

Keith Reiley, Commercial Crew Development program manager for Boeing, said the company is in a strong position to compete for a follow-on contract. The 2011 NASA budget includes about \$6 billion for commercial crew programs over the next five years and follows a decision by the Obama administration to cancel the Constellation program to return to the moon and

instead rely on commercial operators to fly astronauts to the International Space Station. The United States now intends to support the station through at least 2020.

As envisioned, the Boeing-designed system will fit on various rockets, including the Delta IV, Atlas V and Falcon 9. The system will likely be larger than the Apollo-era space capsule and able to transport as many as seven astronauts.

NASA's announcement comes at a key time for Boeing Space Exploration. With the Space Shuttle program ending later this year, the company is looking for opportunities to leverage its 50 years of experience designing and developing spacecraft and launch vehicles. The Commercial Crew Development program offers the highly skilled Space Exploration work force a new path.

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— Don McCovey, Boeing’s space shuttle flight controls subsystem manager and Commercial Crew Vehicle avionics lead

Boeing will research and further develop system concepts and key technologies for a capsule-based crew transport system. The company also will define its vision for the overall system and perform demonstration testing of life support, avionics and landing systems, and critical subsystems. Boeing is teaming with Las Vegas-based Bigelow Aerospace to define its concept.

“Boeing has been in this game for a long time,” said Brewster Shaw, vice president and general manager for Boeing Space Exploration. “And we intend to be in this game for a long time into the future.” ■

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GRAPHIC: Boeing’s Commercial Crew Development capsule is shown docking at the International Space Station in this artist’s concept. JOHN RANKIN/BOEING

