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Send materials to Craig Byl, AIAA, 1801

Alexander Bell Drive, Suite 500, Reston, VA

20191-4344. Changes of address should be

sent to Customer Service at the same address,

by e-mail at custserv@aiaa.org, or by fax at

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Send Letters to the Editor to Elaine Camhi

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July-August 2010, Vol. 48, No. 7



Editorial

The human factor

As has been noted before, in February 2010, President Obama released his NASA budget proposal calling for the cancellation of the Constellation program, which was developing a series of launch vehicles and crew modules to replace the space shuttle. Instead, he called on private industry to provide the next generation of rockets and crew vehicles that would enable the continued human exploration of space.

Now, several months later, the battle over this proposal is still being waged in the Congress. Some of the fight is no doubt political, driven as much by the determination to save local jobs as by a passion for space exploration. Some congressmen, and other interested parties, have registered their belief that NASA is the only appropriate venue for developing the tools by which the U.S. will be able to maintain its leadership position in manned space exploration.

But even as the debate roils, some commercial enterprises are continuing their development of systems meant to provide paying customers, perhaps including the U.S. government, transport to the space station and elsewhere. Other ventures are at a crossroads, unsure that a sound business case can be made for moving beyond hauling cargo. No doubt economic and technical questions will both weigh heavily in determining whether their efforts should extend to providing human transport.

Regardless of the outcome of the congressional skirmishes, and whichever companies determine that they should proceed, it is the human factor that will dominate the design decisions for the next generation of rockets. Whether built for or by NASA or private enterprise, no matter how sound the launch vehicle is, it must be taken the extra mile to be human rated.

On May 24, AIAA held a roundtable to discuss what human rating the next-generation space transportation system will entail, along with a look back at what lessons can be gleaned from the space shuttle and the Russian Soyuz. That discussion, which has been captured within these pages, is just the beginning of the dialogue. NASA's request for information, which may have rolled out as you read this, will set some fundamental requirements for human rating, but will invite all interested parties to offer comments, questions, rebuttals, and alternatives as the industry tries to move forward.

In this roundtable you will find a deeply thought out discussion about how the criteria for human rating are established, what the requirements should be, and who the players are who will make the final decisions. One point that quickly emerges is the importance of the partnership between the public and private sectors in establishing the various paths to achieving human rating.

In this conversation, all of the interested parties—NASA; the FAA, which must license any commercial launch; private industry—have made it clear that safety must be their number one priority. The twin space shuttle tragedies are never far from the thoughts of everyone involved. However, it becomes equally clear that safety issues cannot be allowed to overwhelm the process. Overregulation can easily lead to stasis. The safest launch vehicle may indeed be the one that never leaves the ground, but it also serves no one's interests.

Elaine Camhi

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