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Joseph Rothenberg

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Joseph Rothenberg, NASA's Associate Administrator for Space Flight

Mr. Rothenberg spoke about a wide range of NASA-related topics, including Congress' decision to increase NASA's budget for the first time in seven years and NASA's decision to halt the downsizing program of the last few years and embark upon a hiring program in an effort to rebuild the agency's technical capability. He explained how NASA is learning new ways to do business, especially with respect to the infusion of developing technology into agency programs. He said the space science program has a bright future, with several observatories being assembled that will permit detailed observation of Earth's ecosystems from space.

Mr. Rothenberg also noted that future space transportation systems and new rocket technologies are being aggressively developed by NASA. There is reason to be optimistic about the Space Station, he said, in spite of the bad PR it has received over the last few years. In the space communications area, he noted agency plans to procure and adapt more existing equipment and systems from commercial vendors rather than build new systems from the ground up. The launch vehicle business is in trouble because of prohibitively expensive development costs. He outlined some of the technical challenges that lie ahead for long-term human exploration of space.

With respect to ACTS, Mr. Rothenberg said:

"The other part of it was, of course, Congress. Many of you know the history of ACTS, how Congress kept putting it in the budget in spite of NASA. On the other hand, it's a resounding success because of the government-industry team that carried it out."

"I think you've heard enough today about the successes: spot beams, enabling on-board processing, enabling high-speed communications, distributed computing, and distance learning. Many technologies and applications were demonstrated on ACTS. It set the commercial industry out into the Ka-band. Nineteen US satellites are currently flying Ka-band technology at a value of over 90 billion dollars, and, in the next 20 years, we expect 100s of billions of dollars in Ka-band technology to be flying in space, attributed to the work of this team."

"I think you also know that ACTS has made a contribution to the future of space flight and communications as a part of the advanced A-TDRSS satellite. We use those as relay satellites from the space station, space shuttles and many of our scientific satellites. In the future, you may find that ACTS also played a role in providing Mars communications with deep space Ka-band communications. TDRSS is upgrading its technology to Ka-band frequencies."

You'll also find that, as we're looking at theatres like communications from Mars - communication as both scientific and human exploration on the planet Mars - a network is needed. It is also planned to be based on Ka-band technology. You not only have had an impact on the current communications technology, but the future of space exploration as well. Someday your grandchildren will look back and say "my grandfather or my grandmother had something to do with that technology and communications on Mars." I think you will be able to look back on that with great pride.

"If you look around and consider what you did with ACTS, you started out by saying that the central mission was new technology and new techniques. You built it from its inception and you succeeded. Not only with the technical goals but with the commercial success of it. That was part of the original intent: to get technology out there to industry, and try to develop technology that industry and NASA could use."

"High speed communications is going to become more and more critical...and ACTS provided an underpinning."