

GSFC's High End Computer Network (HECN) Team Demonstrates "Live" High-Definition (HD) Video-Conferencing (VC) With A Roll-About HD VC Station Connected via GSFC's Wireless Guest Network

- GSFC's High End Computer Network (HECN) Team uniquely participated in the Science and Exploration Directorate's June 2, 2010 Science Jamboree by demonstrating "live" high-definition (HD) video-conferencing (VC) between a HECN Team-assembled roll-about VC station at the Jamboree on the mall in front of GSFC's building 8 and three other remote VC stations, two in building 28 connected to GSFC's Science and Engineering Network and one totally external to GSFC.
- A technological "first" for GSFC was provided as the roll-about station transmitted and received its high-quality HD VC via GSFC's wireless Guest Network, sharing that wireless network's very limited bandwidth with a number of other Jamboree participants and attendees.
- The "first" was enabled by the HECN Team's use of Lifesize's remote-user-controlled-ptz HD video-camera integrated with Lifesize's codec that digitized the images, greatly compressed them using H.261 standards, and transmitted them as regular Internet traffic.

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HECN Team-assembled roll-about HD VC station conferencing with Jeff Martz in building 28.



4-way HD videoconferencing: (clockwise) Mike S in 28/W271, Paul Lang in 28/W277, Pat Gary at Jamboree (taking picture) & Bill Fink at home.

GSFC High End Computer Network (HECN) Team



From left: Pat Gary, Bill Fink, Paul Lang, Aruna Muppalla, Jeff Martz, Mike Stefanelli

Science and Engineering Network (SEN)

Typically enabling 1-10 gigabit per second (Gbps) user connections, the SEN is a non-mission-dedicated high-end computer network at GSFC serving GSFC projects/users who have computer network performance requirements greater than those baselined for GSFC's general-use campus-wide Center Network Environment (CNE)

<http://science.gsfc.nasa.gov/606.1/SENuser.html>

20, 40 & 100 Gbps Network Testbed Plans & Accomplishments to Date

[_http://science.gsfc.nasa.gov/606.1/docs/HECN_10G_Testbeds_041610.pdf](http://science.gsfc.nasa.gov/606.1/docs/HECN_10G_Testbeds_041610.pdf)