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Summary of the Virtual Classroom System

The Virtual Classroom System was conceived, designed and developed with mentors and students and demonstrated the ability to provide outreach capability with rockets and balloon flights far beyond other programs by being able to work with student located geographically independent of the remote launch and flight areas. Stanford worked with San Jose State University (SJSU) and industry mentors to develop a prototype system to remotely capture and transmit real-time voice, video and data over the internet. This capability was intended to allow a classroom of students to operate in a control room type of environment for launches conducted at remote locations throughout the world. (See file: Virtual Classroom_Remote Launch Site.pdf)

The system was tested in the Nevada desert twice to work out operational issues. The planned demonstration at the Mojave desert during the GSC P12A launch did not occur due to vendor equipment problems. The problems were resolved and the system was demonstrated at the beginning of Nov08 at the all-partners meeting.

The demonstration of the virtual classroom system shows tremendous potential in providing exciting outreach to many more students. The ability to provide real-time audio, video and data from a launch site back to a classroom over the internet has the potential to significantly increase the amount of students engaged in any kind of launch program, anywhere in the world. This type of system could also be utilized for any learning applications that could benefit from real-time remote communications.

Additionally, the demonstration conducted under this project showed that a VC system like this can be developed for 1/5 – 1/10 the cost of a commercial system. The plans and replication of this VC Systems can now be done for less cost.



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