Use of Web 2.0 Technologies for Public Outreach on a Simulated Mars Mission

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Summary
Recent advances in social media and internet communications have revolutionized the ways people interact and disseminate information. Astronauts are already taking advantage of these tools by blogging and tweeting from space, and almost all NASA missions now have presence on the major social networking sites. One priority for future human explorers on Mars will be communicating their experiences to the people back on Earth.

During July 2009, a 4-member crew of volunteers carried out a simulated Mars mission at the Flashline Mars Arctic Research Station (FMARS). The Mars Society built the mock Mars habitat in 2000-01 to help develop key knowledge and inspire the public for human Mars exploration. It is located on Devon Island about 1600 km from the North Pole within the Arctic Circle. The structure is situated on the site of Haughton Crater in an environment geologically and biologically analogous to Mars.

Living in a habitat, conducting EVAs wearing spacesuits, and observing commnunication delays with “Earth,” the crew explored restrictions similar to those that will be faced by future human Mars explorers. Throughout the expedition, crewmembers posted daily blog entries, reports, photos, videos, and updates to their website and social media outlets Twitter, Facebook, YouTube, and Picasa Web Albums. During the sixteen EVAs of their field science research campaign, FMARS crewmembers collected GPS track information and took geotagged photos using GPS-enabled cameras. They combined these traverse GPS tracks with photo location information into KML/NASL files that website visitors can view in Google Earth.

Live Webcasts
Although the crew observed a strict 10 minute communication delay with “Earth” to simulate a real Mars mission, they broke this rule to conduct four successful live webcasts with student groups to provide them a glimpse of life on “Mars.” These sessions included the SNL Talented & Gifted Program, NASA Kennedy Space Center Interns, NASA Digital Learning Network via Georgia Tech, and Gardendale Magnet Elementary School in Florida. The Omega Energy team also broadcast their lab experiments live from FMARS on Devon Island.

Selected Tweets
@FMARS2009Crew
- "Our trip is complete. We have returned to the US. Thanks to all who made this an incredible adventure. http://www.fmars2009.org"
- "We will be home late. Thank you to everyone that has supported us. Love & Peace. http://www.fmars2009.org"
- "The 25th anniversary of a private sector spaceflight. A big thank you to our sponsors & sponsors.
- "The crew is in the midst of their final project. A day of research & reflection before flying back to Earth.

http://www.fmars2009.org"