

SPACE OPERATIONS SYMPOSIUM (B6)  
Training Relevant for Operations, in particular Human Spaceflight (3)

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AN AVATAR APPROACH TO DISTRIBUTED TEAM TRAINING FOR MISSION OPERATIONS

**Abstract**

Effective team training is essential for successful mission execution. High fidelity simulators provide a realistic environment for student learning. Two drawbacks with this traditional approach are the single instance and therefore oversubscription of a simulator and the requirement for all team members to be colocated for the training exercise. United Space Alliance, LLC (USA) has addressed the first drawback by creating a distributed simulation of a high fidelity simulator used at the NASA Johnson Space Center for International Space Station flight controller training. The system is used for part-task training alone or in teams. To address the restriction of needing all team members present at the same time and location, USA is investigating the use of avatars to enhance the training environment. Avatars integrated into the distributed simulation expand training capabilities in two ways. First, avatars enable a remote team member to participate in the simulation. Second, students can select avatars to play team member roles, alleviating the requirement for another human presence. To start this investigation, we created a virtual training environment and solicited feedback from USA training and flight control personnel. We report on the suggestions received for enhancing training and mission operations tasks using virtual environments.