Development of the ISS EMU Dashboard Software

Craig Bernard – Terry R. Hill
craig.bernard-1@nasa.gov - terry.hill-1@nasa.gov
NASA's Lyndon B. Johnson Space Center
2101 NASA Parkway
Houston, Texas 77058

Abstract
The EMU (Extra-Vehicular Mobility Unit) Dashboard was developed at NASA's Johnson Space Center to aid in real-time mission support for the ISS (International Space Station) and Shuttle EMU space suit by time synchronizing down-linked video, space suit data and audio from the mission control audio loops. Once the input streams are synchronized and recorded, the data can be replayed almost instantly and has proven invaluable in understanding in-flight hardware anomalies and playing back information conveyed by the crew to missions control and the back room support. This paper will walk through the development from an engineer's idea brought to life by an intern to real time mission support and how this tool is evolving today and its challenges to support EVAs (Extra-Vehicular Activities) and human exploration in the 21st century.