The Open Architecture Approach to Mission Operations: DMOC to MPOC - A Success Story

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When the Air Force Miniature Sensor Technology Integration Program (MSTI) was in the market for a flexible and responsive operations concept to accomplish all of the objectives slated for its third mission, MSTI-3, they selected the Naval Research Laboratory's mission control facility located in Alexandria, Virginia. This facility, most recently developed as the Clementine/DSPSE Mission Operations Center (DMOC), was used as the primary operations center for the highly successful Clementine mission. The open architecture approach employed during the DMOC design enabled the MSTI team to quickly and cheaply reconfigure the facility for use as the MSTI Payload Operations Center (MPOC). This facility's use of an open architecture approach, coupled with a layered configuration control approach and the use of commercial, off-the-shelf hardware and software as a design philosophy is a model for the new standard of satellite control facilities that must allow rapid cost effective development and reconfiguration to pace today's space paradigm of faster, better, and cheaper programs.