U. S. Air Force Satellite Control Network Evolution

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ABSTRACT

This paper traces the evolution of the Air Force Satellite Control Network (AFSCN) from its inception twenty-seven years ago to the present, and provides a view of its continuing evolution in the future. This evolution has come about in response to expanding requirements on satellite control, reflecting the nation’s increasing reliance on Department of Defense (DoD) Space Systems.

Network improvements planned years ago are becoming realities: the Consolidated Space Operations Center is beginning operations; the Data System Modernization program, bringing modern data processing equipment and software to the network, is undergoing operational testing; and the modernization of the remote tracking stations through the Automated Remote Tracking Station development is proceeding on schedule.

The recently completed Satellite Control Architecture Study initiated by the Air Staff provides a roadmap for meeting anticipated future requirements for the next thirty years. Cornerstones of this study are the introduction of EHF and SHF communications for space control functions, and satellite crosslink communications; the planning for these has been merged in the Enhanced Telemetry, Tracking and Commanding (ETT&C) system concept. This and other evolutionary developments have the objectives of providing reliable, secure communications and control, with reduced reliance on overseas assets, while developing new operational capabilities. Through these efforts, the AFSCN will provide assured control of DoD space systems commensurate with the Air Force policy of assured access to space.