

USAF Scientific Advisory Board Study
Extended Uses of Air Force Space Command Sensors

Study Abstract

The United States Air Force (USAF) makes significant investments in the development, fielding, and operations of sophisticated sensor systems. Despite being optimized to provide exquisite data in support of their primary missions, these sensors have significant latent capability that can be unlocked to affordably mitigate critical mission gaps, enhance the resiliency of current mission systems, or to add entirely new capabilities. In many cases, these alternative uses can be supported on a non-interference basis with the primary mission. This Study performed an in-depth look at what additional extended uses are possible and how the efficient implementation of extended uses can become a standard way of doing business.

The Study found that there are many potential extended uses of Air Force Space Command sensors of which only a few have been operationalized. Several potential extended uses were explored in detail, including improvements to missile tracking and space situational awareness. While these offer significant improvements in operational capabilities, the USAF information architecture consists of many independent systems that are each individually optimized for a particular mission making it difficult to access the information for cross-mission use. Furthermore, there are several technical and cultural impediments to operationalizing extended uses including security classification, data ownership, and sensor control issues.

Several recommendations are presented to both further advance specific extended use ideas and to institutionalize the USAF capability to rapidly and routinely deploy extended uses into the operational environment.