CONVERGENCE OF U.S. POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SATELLITE SYSTEMS

I. Introduction

For the past three decades, the United States has operated separate civil and military polar-orbiting environmental satellite systems which collect, process and distribute remotely-sensed meteorological, oceanographic, and space environmental data. The U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) is responsible for the Polar-Orbiting Operational Environmental Satellite (POES) program. Key aspects of the POES mission include collecting atmospheric data for weather forecasting, global climate research and emergency search and rescue purposes.

The U.S. Department of Defense is responsible for the Defense Meteorological Satellite Program (DMSP). The mission of DMSP is to collect and distribute global visible and infrared cloud data and other specialized meteorological, oceanographic and solar geophysical data to provide a survivable capability in support of military operations.

The National Aeronautics and Space Administration (NASA), through its Earth Observing System (EOS) development efforts, provides new remote sensing and spacecraft technologies that could potentially improve satellite operational capabilities.

The National Performance Review, led by Vice President Gore, called for converging the two operational satellite programs as well as incorporating appropriate aspects of NASA's EOS in order to reduce duplication of effort and generate cost savings. On May 5, 1994, President Clinton approved the convergence of the civil and military polar-orbiting satellite systems into a single operational program. Details of the convergence plan are provided below.

II. Goals and Principles

The goal of the converged program is to reduce the cost of acquiring and operating polar orbiting operational environmental satellites, while continuing to satisfy U.S. operational civil and national security requirements. As part of this goal, the operational program will incorporate appropriate aspects of NASA's Earth Observing System.
The converged system on-orbit architecture will consist of three low earth orbiting satellites. This is a reduction from the current four satellites (two civilian and two military). The orbits of the three satellites will evenly space throughout the day to provide sufficient data refresh. The nominal equatorial crossing times of the satellites will be 5:30, 9:30 and 1:30. This converged system can accommodate international cooperation, including the open distribution of environmental data.

The converged program will be conducted in accordance with the following principles:

(1) operational environmental data from polar-orbiting satellites are important to the achievement of U.S. economic, national security, scientific, and foreign policy goals;

(2) assured access to operational environmental data will be provided to meet civil and national security requirements and international obligations;

(3) the United States will ensure its ability to selectively deny critical environmental data to an adversary during crisis or war yet ensure the use of such data by U.S. and Allied military forces. Such data will be made available to other users when it no longer has military utility; and

(4) the implementing actions will be accommodated within the overall resource policy guidance of the President.

III. Implementing Actions

The Departments of Commerce and Defense and NASA will create an Integrated Program Office (IPO) for the converged polar-orbiting operational satellite system by October 1, 1994. The IPO will be responsible for the management, acquisition, and operation of the converged system. The IPO will be under the direction of a System Program Director who will report to a triagency Executive Committee via the Department of Commerce's Under Secretary for Oceans and Atmosphere.

The Under Secretary-level Executive Committee will ensure that both civil and national security requirements are satisfied. The Executive Committee will also coordinate program plans, budgets, and policies and will ensure agency funding commitments are equitable and sustained.

The three agencies are developing a process for identifying, validating, and documenting requirements for the converged system. Those requirements will define the system baseline used to develop agency budgets
The Department of Commerce, through NOAA, will have lead agency responsibility to the Executive Committee for the converged system. NOAA will have lead agency responsibility to support the IPO for satellite operations. NOAA will also have the lead for interfacing with national and international civil user communities, consistent with national security and foreign policy requirements.

The Department of Defense will have lead agency responsibility to support the IPO in major systems acquisitions. NASA will have lead agency responsibility to support the IPO in facilitating the development and insertion of new cost-effective technologies to meet operational requirements.

The United States will seek to implement the converged system in a manner that encourages cooperation with foreign governments and international organizations consistent with U.S. requirements. The United States' European partners have been invited to explore incorporating the European METOP (meteorological operational mission) polar satellite series into the converged system. This effort underscores the importance that the United States places on environmental satellite cooperation with our European partners. The METOP is a joint undertaking of the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), the European Space Agency (ESA), and their member states.

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