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Resources Automated Management System

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Background

The Resources Automated Management System (RAMS) was developed for the Naval Air Warfare Center Aircraft Division (NAWC AD) to support the informational needs of resource managers and National Environmental Policy Act (NEPA) specialists. RAMS is a set of automated tools that has at its core a geographical information system (GIS). The GIS software provides the capability for geographically linking different types of data to a particular feature or map location.

The development of RAMS began in October 1992 with the objective of managing the resources data for all NAWC AD sites and mission activities. RAMS currently maintains over 50 data layers for the Patuxent River Naval Air Station in Maryland, the Chesapeake Bay region, and the Special Use Airspace where NAWC AD activities conduct their missions on the East Coast. RAMS currently supports users with responsibility for environmental protection, natural and cultural resources preservation, security, emergency response, disaster preparedness, range and aviation safety, and facilities management.

Resource Management using GIS

GIS software provides the capability for geographically linking many different types of data to a particular map location. Basic data such as topography and building location can be supplemented by data in the form of images such as scanned photographs, databases containing details about the facility, CAD drawings such as floor plans, and text. RAMS also uses GIS as an integration tool that provides resources managers with access to data currently maintained in several disparate systems. Data on a facility such as its general characteristics, a list of its occupants, equipment inventory, and planned renovations come from several databases but share one common element, a location. This link yields an unsurpassed visual representation with which managers can make timely and informed decisions.

Environmental Protection using GIS

The National Environmental Policy Act (NEPA) specialist at NAWC AD needs a variety of data to properly evaluate the potential environmental impact of a mission activity. This data includes information pertaining to controlled airspace, low altitude flight routes, noise envelopes, potential encroachment issues, and protected species and their habitats. To evaluate cumulative impacts, historical mission activity data is required, therefore, it is tracked in RAMS.

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Approved for public release
Distribution Unlimited

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TO WHOM IT MAY CONCERN:

Here is a copy of Professional Papers written by various people here at the Naval Air Warfare Center Aircraft Division. It was requested that a copy of each of the professional papers be sent to DTIC for retention.

If you have any questions, please contact Dorothy Reppel, 326-1709 or (301) 826-1709.

P.S. All the enclosed papers have been cleared for public release.

RAMS Configuration

RAMS uses commercial-off-the-shelf GIS software, ARC/Info, with an interface to Oracle, a relational database manager for integrating the data for RAMS. Another commercial software package, ARC/View, is used as a tool for end users since it is available on PCs and UNIX workstations. A MacIntosh version is also soon to be released. ARC/View provides an easy-to-use interface for the display and query of RAMS data and allows users to generate maps to meet their individual needs. Utilization of commercial software provides NAWC AD with readily available technical support and industry leading GIS software improvements.

RAMS Future

The RAMS Office, managed by Jill Galloway, is serving as the Navy's Tri-Service Spatial Data Standards (TSSDS) test site. Ms. Galloway will also be serving as a Navy representative to the Tri-Service GIS Task Group and as a Tri-Service representative to the Federal Geographic Data Committee (FGDC) wetland and bathymetry subcommittees. The RAMS Office has coordinated with several Federal, State, and local governments so as to avoid duplication of efforts, to exchange "lessons learned," and to share data.

The RAMS Office anticipates supporting the Tri-Services with establishing GIS interoperability to ultimately execute efficient and environmentally sound mission planning. RAMS is being developed to support on-line data for NEPA analysis, range safety management, base realignment and closure planning, human resources management, real estate management, facility assets management, facility master planning, maintenance planning, natural and cultural resources management, physical security management, aviation safety, and the full gambit of environmental compliance management.

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