IRMA: Integrated Resource Management Applications

Background

The National Park Service (NPS) - Natural Resource Stewardship and Science Directorate (NRSS) is transforming the way NPS manages and delivers resource information to parks, partners, and the public. Integrated Resource Management Applications, or IRMA, is the beginning of a web-based "one-stop" for park resource-related tools, data and information, including reports and other documents, data sets, species lists, visitor use statistics, and more.

IRMA allows users to easily search, view, download, and print information from multiple sources and systems, all from a consistent user interface. User identity is automated, eliminating the need for logins or passwords. IRMA is replacing many of the older, stand-alone NRSS information "silos" that were often difficult to use and duplicated effort and data. The goal is to streamline and simplify how park resource data are entered, managed, discovered and shared.
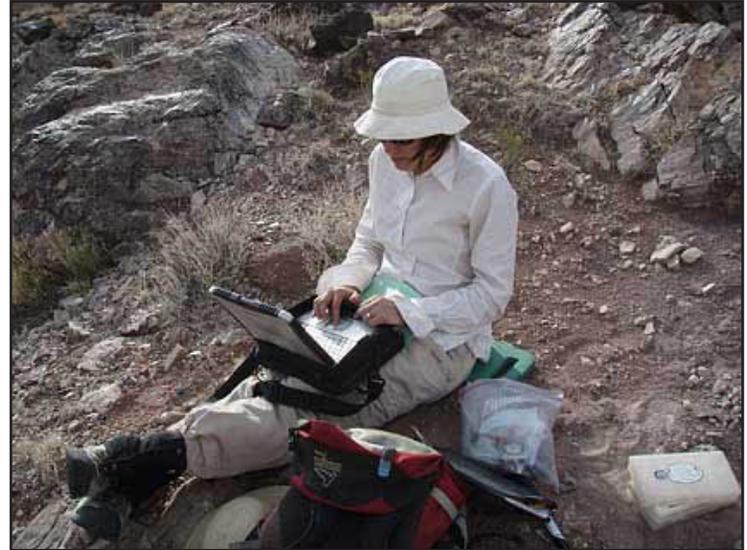
The architecture supporting IRMA simplifies data sharing with other systems, and IRMA is serving as a model for other Department of Interior bureaus. As an example, the U. S. Fish and Wildlife Service Inventory and Monitoring (I&M) Program is building a data discovery and retrieval system for the National Wildlife Refuge system that is based on the IRMA Data Store, and the two systems will be linked and mutually searchable.

The IRMA Portal is open to the public, with additional tools and resources available to NPS staff.

Framework

The development of IRMA involved taking complex, stand-alone data systems and reducing them to smaller, more concise and far more manageable services that can be easily shared and re-used. Park units are a good example: rather than each information system managing its own set of park codes and park names, IRMA makes this information available to many systems. Data are contained and managed in one place only, eliminating duplication and minimizing errors.

In addition, the underlying framework of IRMA allows data from the Data Store, NPSpecies, and other IRMA applications to be available via web services. This means data can be fetched and displayed in other applications using tools such as REST (representational state transfer). For instance, a species list can be pulled directly from NPSpecies and displayed on an end-user's website. This greatly expands the usability and versatility of data in IRMA: the Portal is simply one way to access the data within the systems.

Northern Colorado Plateau Network employee entering biological sampling data into a computer while in the field.

Status

The IRMA Portal continues to grow and improve, and to incorporate additional data systems and applications. In 2013 and 2014, Visitor Use Statistics and the Research Permit and Reporting System were added to the portal. An updated version of NPSpecies (which documents the occurrence and status of species in parks) has been released, and significant improvements to the Data Store are underway. Capabilities have also been developed that allow partners and cooperators access to certain features and tools in IRMA.

While initially focused on natural resource-related information, IRMA has broadened its scope to encompass all types of park resource data. The Data Store now contains thousands of documents related to park cultural resources and history.

More Information

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The Integrated Resource Management Applications Website (IRMA): http://irma.nps.gov.

Key features currently available on IRMA include:

- **Search for documents and data:** The IRMA Data Store gives you easy access to tens of thousands of documents, data sets, and other information resources related to national parks. Entering a search term and the park unit(s) will retrieve a list of titles and associated information, many with the full-text document or data file attached. Any NPS user can create a Data Store record and upload the associated digital files.

- **Get a species list for a park:** NPSpecies in IRMA gives you simple tools for viewing, printing, or downloading a park species list and associated status categories such as abundance or nativeness. You can also select a species and see a list of all the parks in which it is reported, view associated information such as T&E status, and see full taxonomic hierarchy information.

- View current and historic statistics on park visitors: via IRMA you can find use statistics for 377 park units, some dating back to 1904.

- Find information on air, climate, geology, water, cultural resources, and more: Clicking on IRMA topics will take you to multiple data sources and websites, including maps, webcams, inventories, and tools.

- New releases of IRMA occur every three or four months, with each release providing additional data and functionality. The goal of IRMA is to help users find, manage, and disseminate park resource information quickly, easily and reliably.

We appreciate your comments and suggestions, which are essential to the IRMA improvement process.

Contact us at: irma@nps.gov.