Geospatial Line of Business (LoB)

Forest Service Metadata Automation Update and Inventory Application
Information Sheet
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The U.S. Forest Service (USFS) Metadata Automation Update and Inventory Application (MAUI) is a lightweight standalone metadata application that focuses on streamlining and simplifying the metadata entry process. The software generates Federal Geographic Data Committee (FGDC) Content Standard Digital Geospatial Metadata (CSDGM) compliant metadata and provides reporting capability to monitor the status of compliance.

How it Works

MAUI searches through folders and subfolders examining each dataset it encounters for the minimum metadata requirements based on its type (i.e.feature class, data table, geodatabase, etc.). It then provides a percent-complete score for each dataset. All results are stored within a database and can be loaded again at a later time, allowing the user to continue progress on an inventory run. Results can be displayed in a report and printed for documentation or exported to other common formats. A variety of automation tools are included to boost metadata entry productivity, including Search and Replace, Automate Standard Statements and Automated Contacts entry with the ability to store and manage saved contacts. It includes a simplified editor application that displays only the required metadata elements to meet requirements for compliance. These requirements along with descriptions and information to help the user are stored in a centralized database managed by metadata administrators. MAUI can also easily be deployed to users as a desktop application, with the centralized database being stored at a LAN network location.

Specifications and Capabilities

Supported standards	FGDC CSDGM
System requirements	• ArcGIS 9.3 or higher • Microsoft .NET Framework 3.5
Integrates with ESRI	Works outside of ArcGIS, but still requires ArcGIS license; also works from within ArcMap or ArcCatalog (versions 2.0)
Database type	Microsoft Access 2003 or 2007
Data export format	• .xml • .csv • .htm
Access	Downloadable
Open-source	Yes; source available for download on website
Editing, validation and compliance capabilities	• Allows the user to go through each data element individually and complete the minimum metadata requirements • Displays the number of errors and warnings to the user and includes the ability to insert Standard Statements • Provides reporting capability to monitor the status of compliance • Provides a quantitative report of the overall status of metadata for a given data folder, geodatabase or Spatial Database Engine Connection. Multiple data folders/connections can be selected for inventory • Searches through the folders and subfolders examining each dataset it encounters for the minimum metadata requirements based on its type (feature class, data table, geodatabase, etc.); provides a percent-complete score for each dataset
Help functions	• Help documentation included • Information regarding each element is provided within Editor
Ability to integrate in a variety of environments	Simple interface and is an easy application to adopt and configure for specific organization's metadata standards and needs

Other features	• Can automatically insert metadata for multiple datasets simultaneously • Offers an *undo* option to restore metadata back to the state prior to inventory run. Improved to restore metadata to specific time/data v2.0 • Displays results in a report users can print for documentation or export to other common formats • Includes a Viewer for displaying the metadata using common style sheets • Uses external database design to store the minimum metadata requirements, which allows administrators to make changes and/or additions to the requirements affecting all users • Offers Search and Replace function for metadata over multiple datasets v2.0 • Includes improved Automate functions for Contacts, Standard Statements. Contacts can be automated for Identification, Distribution, Metadata Reference and for individual Process Steps • Includes Contacts management capabilities
Latest version	Version 2.0 currently in development, expecting release in June 2010
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For more information	MAUI website: ftp://ftp2.fs.fed.us/incoming/r6/ro/drm/GeoTools/MAUI/MAUI%20Documentation.htm

Value to the Organization (Verified by the source organization)

- Cost-savings
  Reduced workload among geospatial metadata editors for updating and maintaining metadata. Improved efficiency during editing will decrease work time involved.
- Time-savings
  - Only the designated fields required to meet FGDC compliance are available in the editor. This streamlines the metadata entry process reducing the amount of time to search through which fields need to be populated. Not every possible field is available to edit.
  - Automation functions will greatly reduce the time involved for inserting repetitive information.
  - Pre-populated lookup tables for specific metadata fields will speed up entry process.
  - Contacts and Process Step descriptions can be stored and used repeatedly, increasing efficiency.
  - For data managers the inventory functionality will be helpful in managing reference datasets and reduce redundant datasets and to see at a glance what the data vintage is. It will facilitate easier location of data and reduce frustration for end users.
- Return on investment
  Unknown, difficult to quantify.
- Improvements in metadata quality or completeness
  - It will greatly improve the completeness of metadata using Automation and a streamlined editor that only focuses on meeting the minimum requirements. Metadata quality will be improved to meet FGDC compliance.
  - Users can directly see the amount of progress needed to bring individual datasets up to 100% compliance.
- Any additional information showing added value to organization
  - Utilizing Standard Statements and lookup tables helps standardize metadata for organization.
  - Reporting features give users ability to report progress on compliance and to publish a list of inventoried data with a basic description and currency date.
- Other considerations
  Currently MAUI is being developed for use in the Forest Service Citrix environment. The main database storing minimum required metadata fields, their descriptions and lookup tables is stored on a centralized network location. Only

metadata administrators have access to modify these requirements. Individual users' inventories, contacts and process step descriptions are stored within a user-specific folder making this an enterprise application. Roles and responsibilities must be determined for who will maintain what metadata in order to avoid multiple editors of the same data.

MAUI can be reconfigured to connect to a modified copy of the requirements database, thus allowing other organizations to implement and deploy this application using their own set of standards for requirements and lookup tables. Note that the current implementation of MAUI is being developed and configured for use in Region 6 of the USFS, and is not being sponsored with national scope. Other regions within the USFS may consider their own implementation of MAUI in the same way that other external organizations would be able to download and deploy MAUI.