Geospatial Line of Business (LoB)

Environmental Protection Agency Metadata Editor
Information Sheet
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The Environmental Protection Agency (EPA) Metadata Editor (EME) allows users to easily create and edit Federal Geographic Data Committee (FGDC) Content Standard Digital Geospatial Metadata (CSDGM) compliant geospatial metadata. The simple user interface and flexible design assist users across numerous organizations in creating high-quality, accurate and consistent metadata.

How it Works

The EME provides a standardized enterprise-wide, one-stop approach to developing metadata. It integrates with the ESRI environment. It simplifies the user interface within ArcCatalog using three tabs instead of seven and contains EPA-specific defaults and drop-down menus. The EME provides appropriate guidelines and instructions for entering necessary information in various data fields. The editor uses technology that supports future integration with a web-based front end. The application uses color-coding, defaults and dropdowns to streamline the metadata editing process. Users can automate entry of metadata by clicking on individual 'set default' buttons or by using dropdowns. Users can also use global functions to set defaults for an entire section of the metadata record and to perform a global find and replace operation across an entire record. The application also comes with an EPA synchronizer, which allows users to customize which elements in the metadata record are synchronized with the underlying data set. By allowing users to customize their synchronizers, the EME ensures that output information is FGDC-compliant if users fill out all required fields. It does not insert elements into the metadata record that are not compliant with the FGDC CSDGM, and it ensures that requirements for contributing to Geospatial One-Stop (GOS) are met simultaneously.

Specifications and Capabilities

Supported standards	FGDC CSDGM
System requirements	• ArcGIS 9.2 minimum (also works in ArcGIS 9.3) • A Service Pack (minimum of Service Pack 2 is required) • .NET Framework 2.0 • .NET Feature for ArcGIS (this is not the same as NET SDK; but is free from ESRI source CD)
Integrates with ESRI	Yes; it is an ArcGIS extension to ArcCatalog and integrates with the ESRI environment
Database type	Microsoft Access 2000 and higher
Data export format	• .xml (and other formats as supported by ArcCatalog)
Access	Downloadable
Open-source	Yes; the source code can be reused by other developers
Editing, validation and compliance capabilities	• Validates results and produces validation errors, as necessary. Validation results can be viewed in a consolidated report, the user interface (UI), or both • Offers a custom EPA Synchronizer and Batch Validation tools • Provides default buttons and other UI features that streamline data entry and consistency • Uses technology that supports future integration with a web-based front end • Provides consistent language for certain metadata elements and requires the use of some elements that are not considered mandatory for minimum FGDC validation • Metadata published according to the EPA implementation will be publishable to National Spatial Data Infrastructure (NSDI) clearinghouses and can be used for internal search and discovery applications • Incorporates the use of a spell-checker and an EPA-validation service

Help functions	Provides color-coding, appropriate guidelines and instructions for entering necessary information in various data fields. Each UI element is linked directly to the help
Ability to integrate in a variety of environments	Any ESRI environment
Other features	• Can remove ESRI (non-FGDC) tags • Global Search and Replace functions for faster editing • Local and global default buttons • Custom Synchronizer allows individuals to choose which fields in the metadata record to synchronize with the dataset (where applicable) • Configurable database for providing defaults • Color-coding and links to help provide user with an easy means for understanding requirements and best practices
Latest version	The EME version 3.0 is the current version of the EME. It was released on October 31, 2008
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For more information	EPA's EME website: http://www.epa.gov/geospatial/eme.html ESRI article about EME: http://www.esri.com/news/arcuser/0807/metadata_editor.html

Value to the Organization (Verified by the source organization)

- Cost-savings
  EPA estimates that the EME will save the agency approximately $200,000 a year by reducing staff time needed for metadata management.
- Improvements in metadata quality and completeness
  EME's features allow EPA staff to create consistent, simplified, high-quality geospatial metadata. High-quality geospatial metadata increases adherence to federal requirements for geospatial metadata, as well as enhances adherence to and understanding of EPA standards for geospatial metadata, and improves search and discovery within EPA's geospatial metadata portal. This leads to better data reuse within the agency and improved submissions to intergovernmental data sharing initiatives including the NSDI and GOS.
- Other considerations
  EME is a key part of EPA's Metadata Framework, which has received significant recognition in the past few years, including:
  - Winner of Government Computer News Award for Agency IT Achievement, 2008
  - Winner of EPA Mason Hewitt Award for Technical Excellence in GIS, 2008
  - Winner of ESRI Best Embedded GIS Application, 2007