NGA - DDMS Metadata Creation User Guide V.2

ESRI Database Services

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Last Modification Date: *7/15/2011*

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Change History		
Date	**Description**	**Person Responsible**
5/10/2011	*Created user guide for entering DDMS data into the MDC form.*	Jason Storey
5/17/2011	*Added step by step for an example transform using Web Geographic Translator*	Jason Storey

7/15/2011	*Update for Geoportal 1.1.1*	Jason Storey

1.0 Metadata

1.1 DDMS (Department of Defense Discovery Metadata Specification)

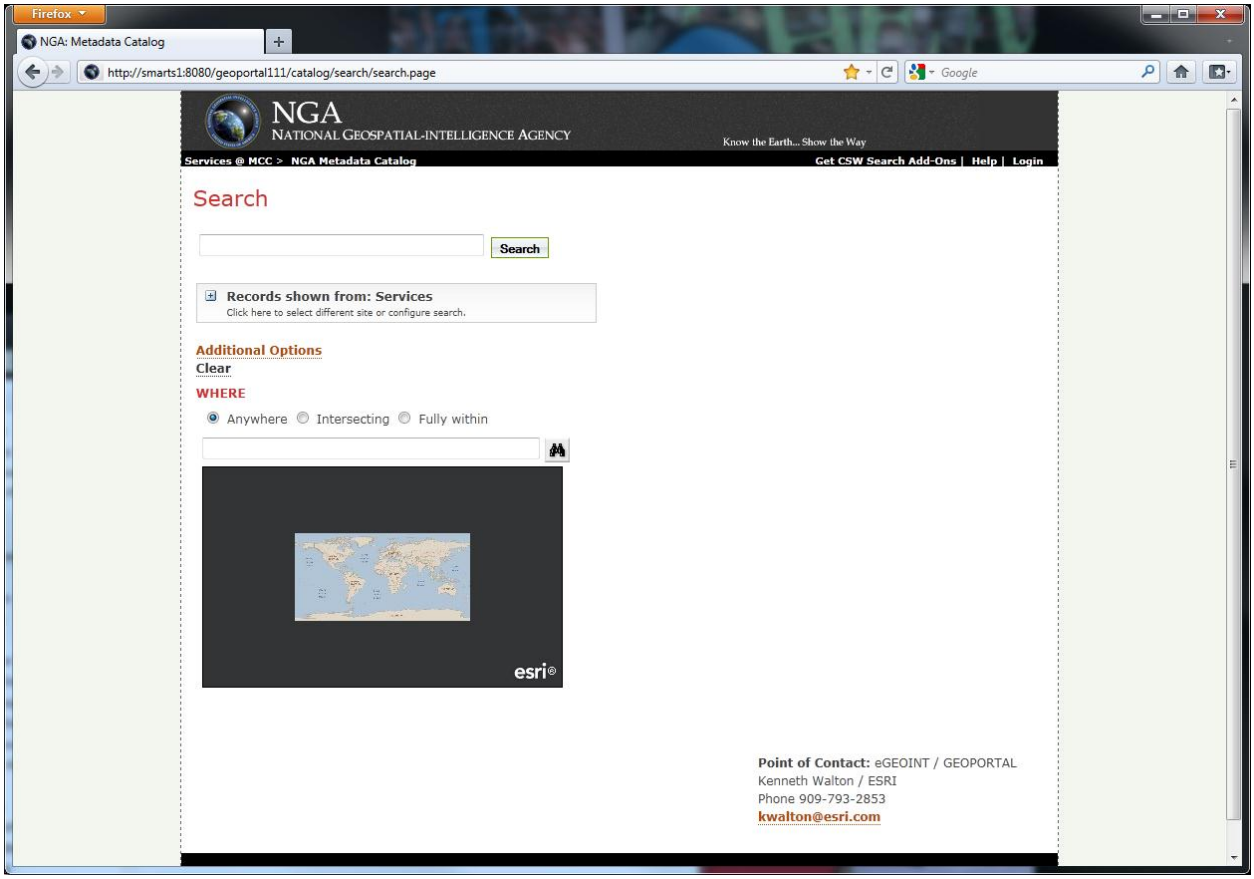
The DoD Discovery Metadata Specification (DDMS) defines discovery metadata elements for resources posted to community and organizational shared spaces.

"Discovery" is the ability to locate data assets through a consistent and flexible search. Visibility, accessibility, and understandability are the high priority goals of the DoD Net-Centric Data Strategy. Of these goals, visibility and discovery are intimately linked. Visibility of a resource is, in a practical sense, useless, if the resource is not easily discoverable. With the express purpose of supporting the visibility goal of the DoD Net-Centric Data Strategy, the DDMS specifies a set of information fields that are to be used to describe any data or service asset, i.e., resource, that is to be made discoverable to the Enterprise, and it serves as a reference for developers, architects, and engineers by laying a foundation for Discovery Services. The DDMS will be employed consistently across the Department's disciplines, domains and data formats. This document describes the DDMS elements and their logical groupings. It does not provide an interchange specification or substantive implementation guidance. The DDMS elements as specified in this document, however, should provide a basis for organizations to begin planning, transitioning, and implementing metadata tagging initiatives that support the Department's goal of increased data visibility and Enterprise Discovery.

http://metadata.dod.mil/mdr/irs/DDMS/

1.2 NGA Metadata Catalog Overview

The NGA Metadata Catalog is built on the Esri Open Source Geoportal extension. It allows quick searching of cataloged geospatial data web services.

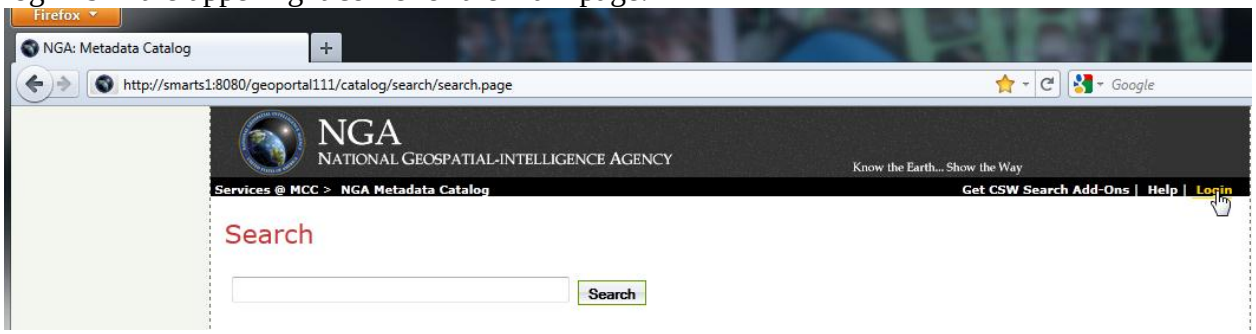


2.0 Metadata Creation with MDC (Metadata Creation form)

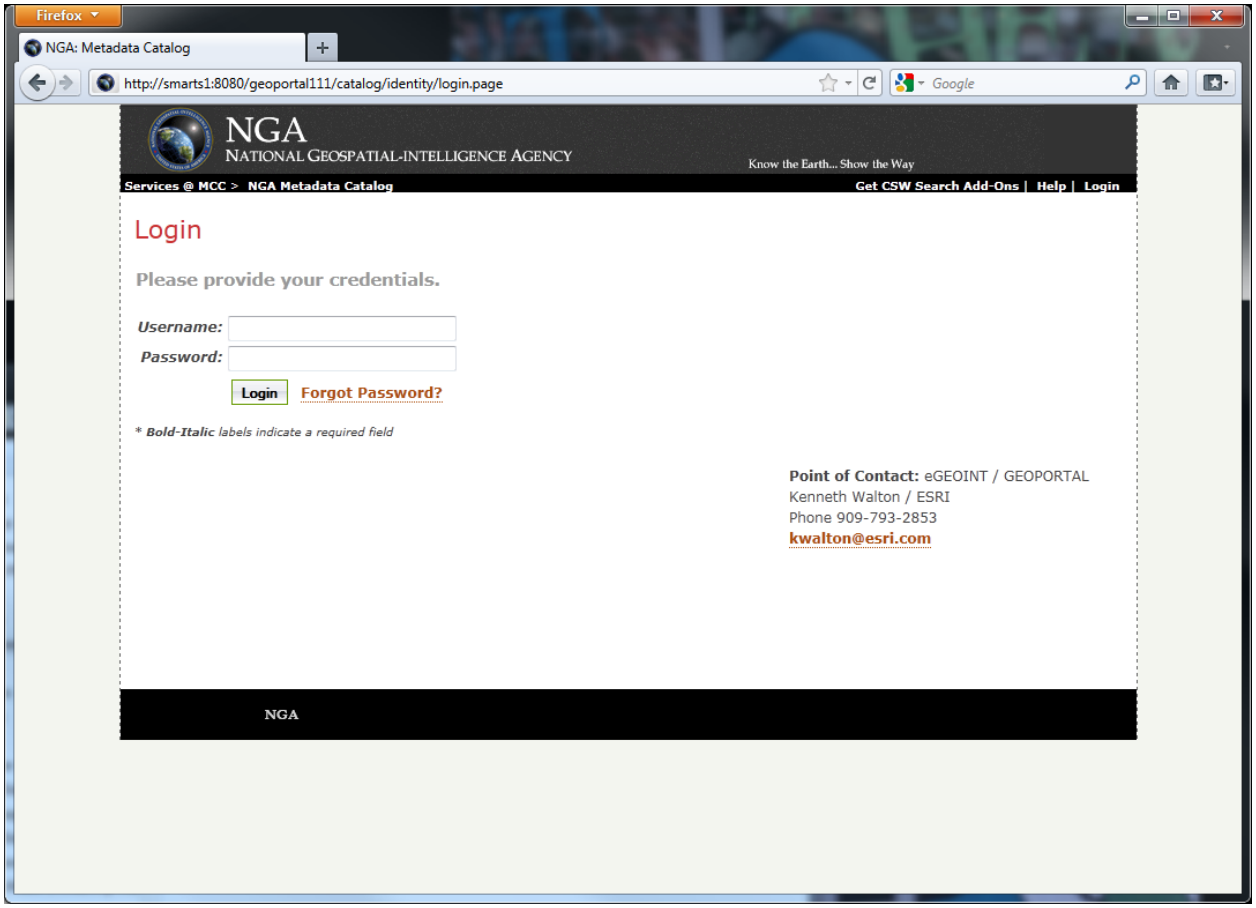
Metadata for NGA Geoportal sites utilize the DDMS 2.0 standard. The following sections breakdown the data that is possible to be captured.

2.1 Login

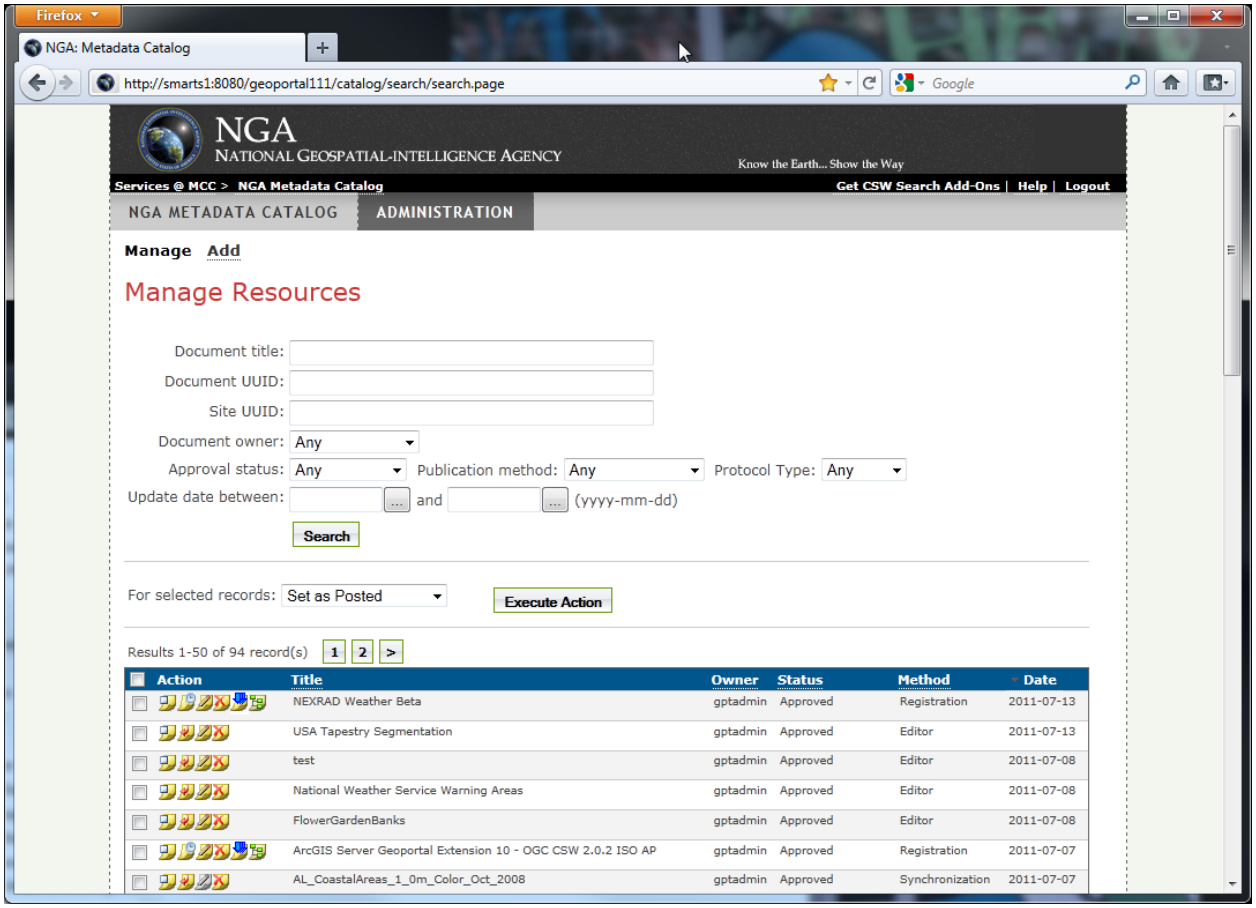
In order to enter records into the Geoportal services catalog you must first login. The login is in the upper right corner of the main page.



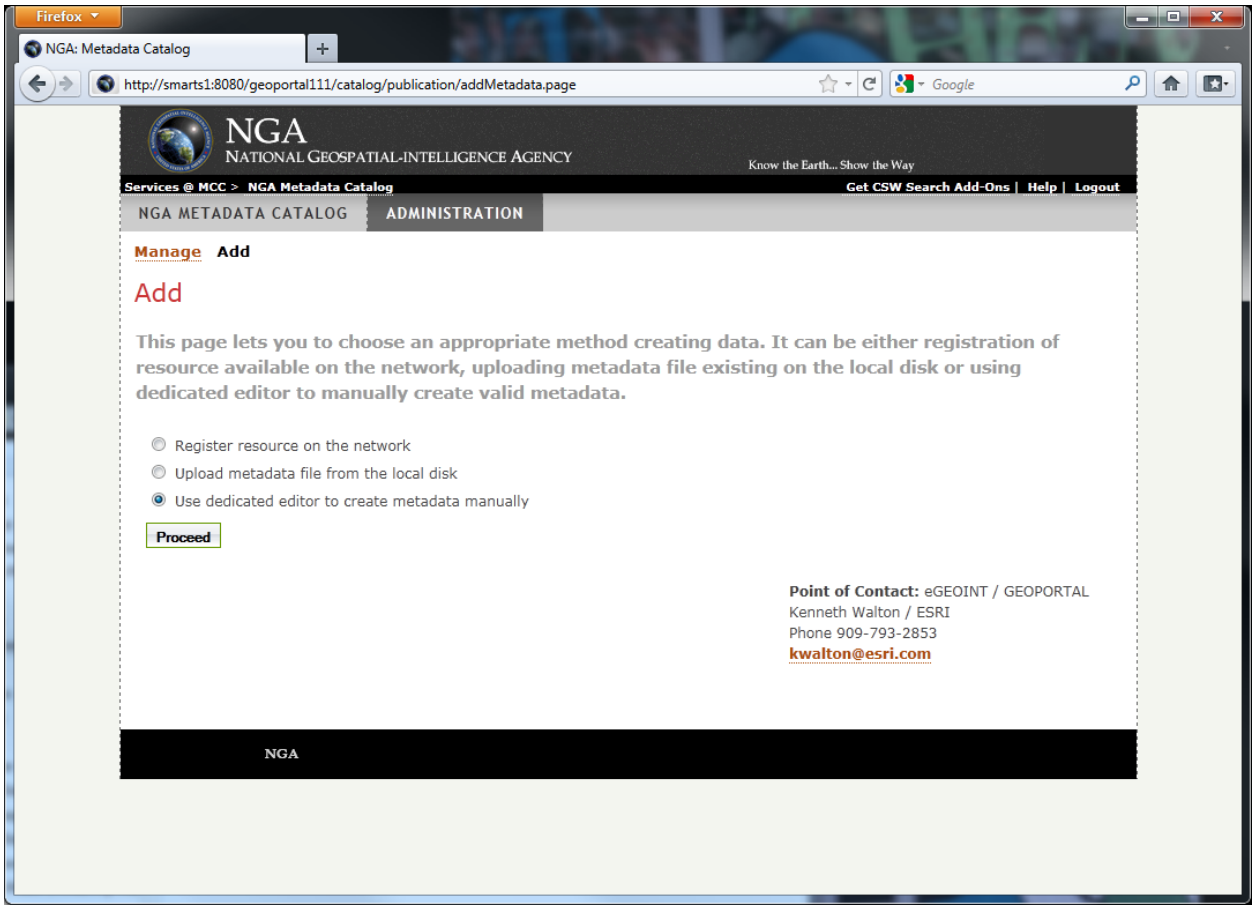
Enter in your username and password and press Login.



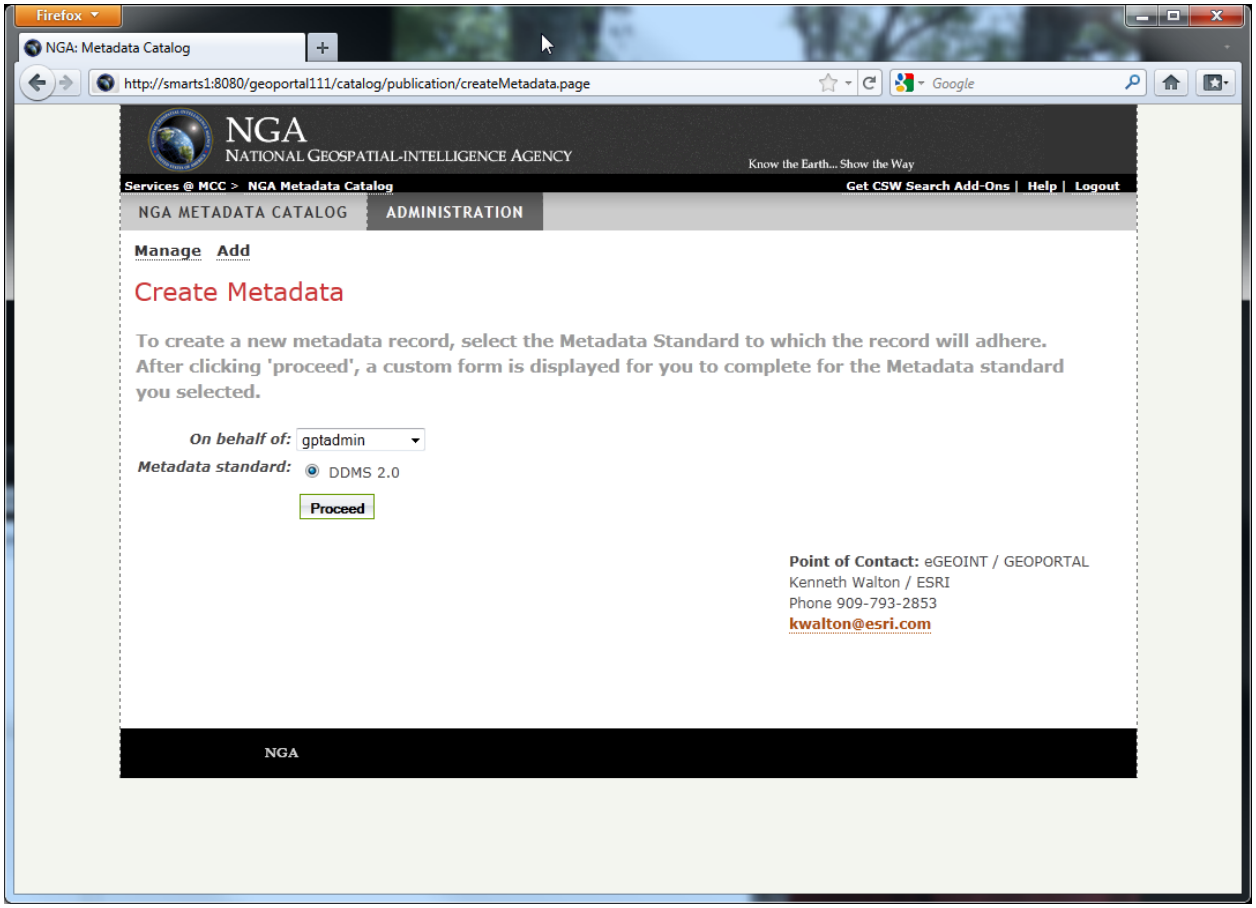
Once logged in there is an administration tab. Here is where you can manage the current cataloged service entries and add new services.



To add a resource, click Add in the upper left of the Administration page. Once on the Add page, select the "Use dedicated editor to create the metadata manually" and click Proceed.



The last step before metadata creations is choosing what user will the owner in the catalog, as well as, which metadata standard will be used. Currently, only DDMS 2.0 is supported. Once selected click Proceed.



2.2 Identification

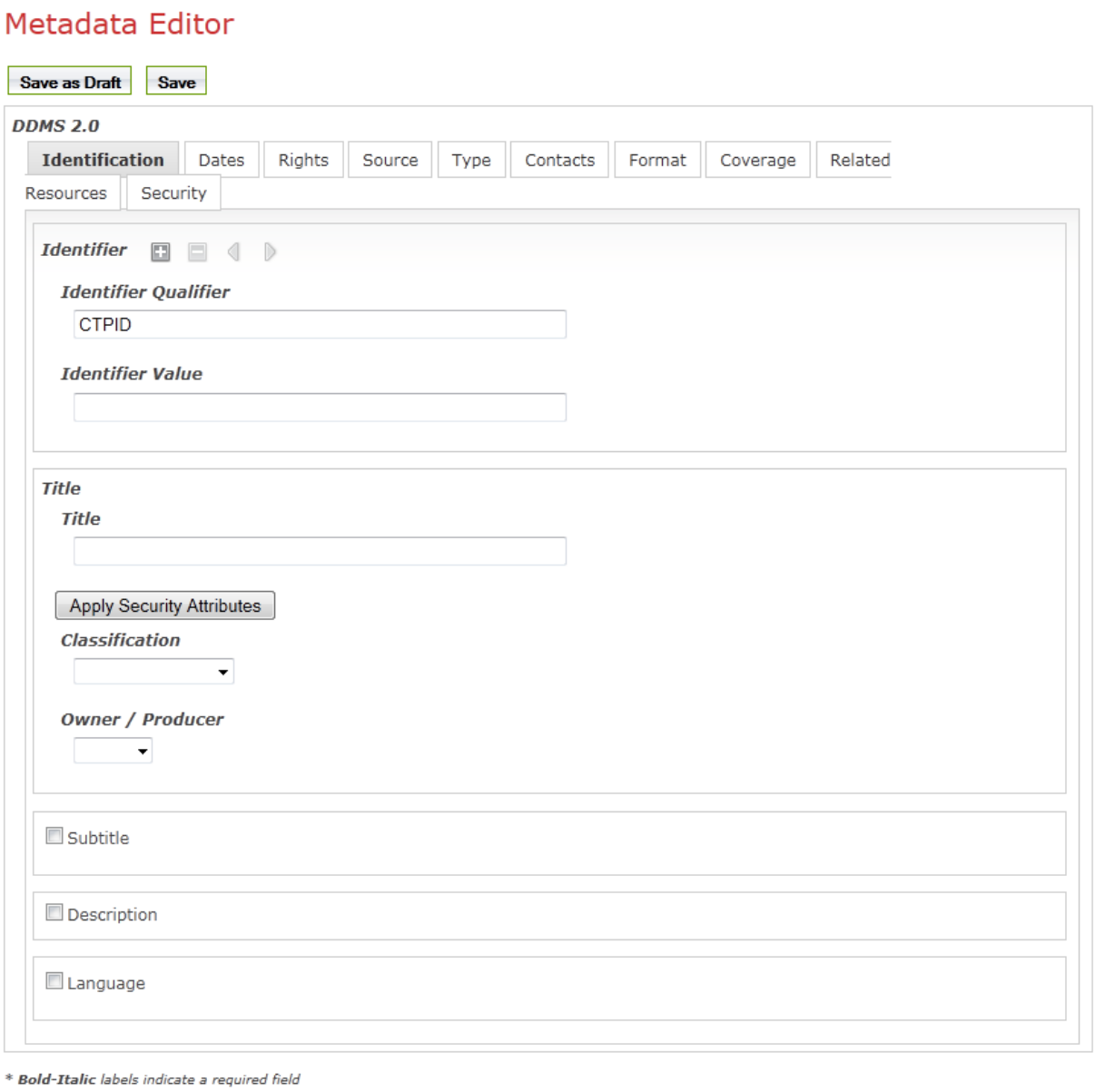
The identification section has three mandatory fields, Identifier (CTPID), Title and Description. The CTPID must be unique and is currently a free form and can be used to conform to any standard entry being utilized.

http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#Title

http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#Identifier

http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#Description

http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#language



2.3 Dates

The Date Posted field auto populates with the current date from the server. The following are the supported formats:

YYYY
YYYY-MM
YYYY-MM-DD
YYYY-MM-DDThh:mmTZD
YYYY-MM-DDThh:mm.ssTZD

YYYY-MM-DDThh:mm:ss.sTZD

Where:

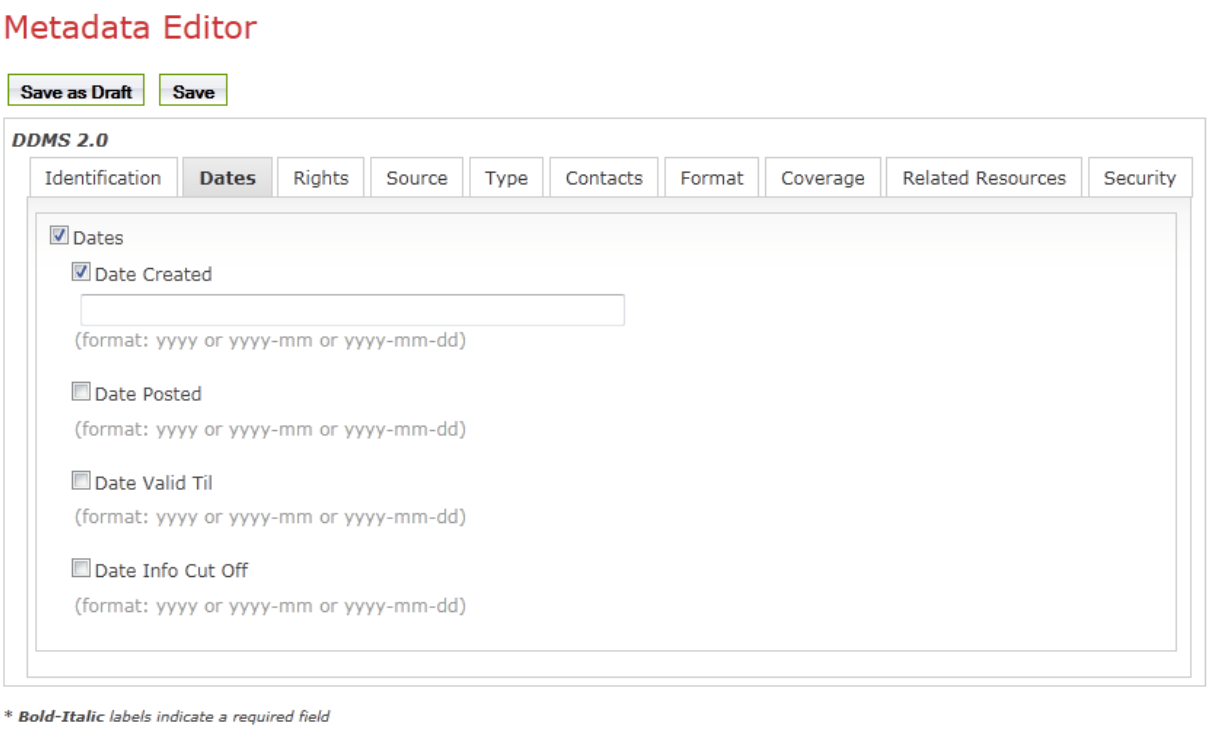
YYYY	0000 through current year
MM	01 through 12 (month)
DD	01 through 31 (day)
hh	00 through 24 (hour)
mm	00 through 59 (minute)
ss	00 through 60 (second)
.s	.0 through 999... (fractional second)

The DDMS profile suggests two ways of handling time zone offsets:

1. Times are expressed in UTC (Coordinated Universal Time), with a special UTC designator ("Z").

2. Times are expressed in local time, together with a time zone offset in hours and minutes. A time zone offset of "+hh:mm" indicates that the date/time uses a local time zone which is "hh" hours and "mm" minutes ahead of UTC. A time zone offset of "-hh:mm" indicates that the date/time uses a local time zone which is "hh" hours and "mm" minutes behind UTC.

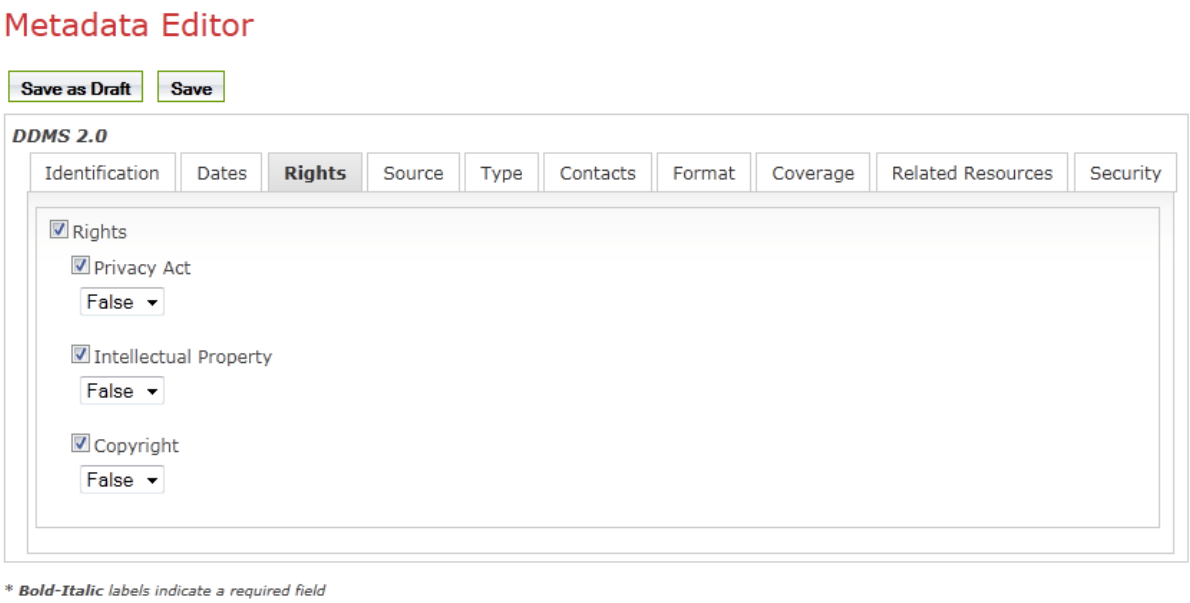
The values "Unknown" and "Not Applicable" are also supported for the dates element. http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#dates



2.4 Rights

While copyright is considered a type of intellectual property right, in this instance copyright will stand alone, and intellectual property right will be used to indicate all other intellectual rights other than copyrights.

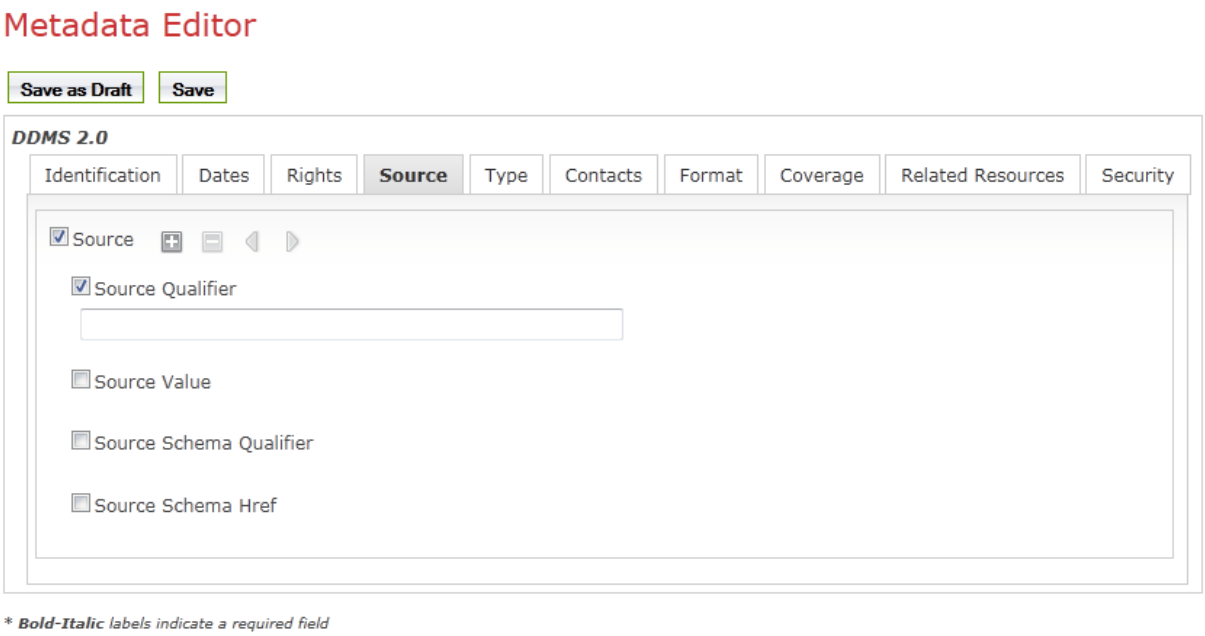
http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#rights



2.5 Source

The source element can be repeated as needed, with no upper bound. Sources may be derived partially or wholly, and it is recommended that an identifier (such as a string or number from a formal identification system) be used as a reference. Source may be marked according to CAPCO guidelines, the IC ISM Data Dictionary and the IC ISM Schema Guide. The Business Logic for applying security markings is found in the IC ISM Schema Guide.

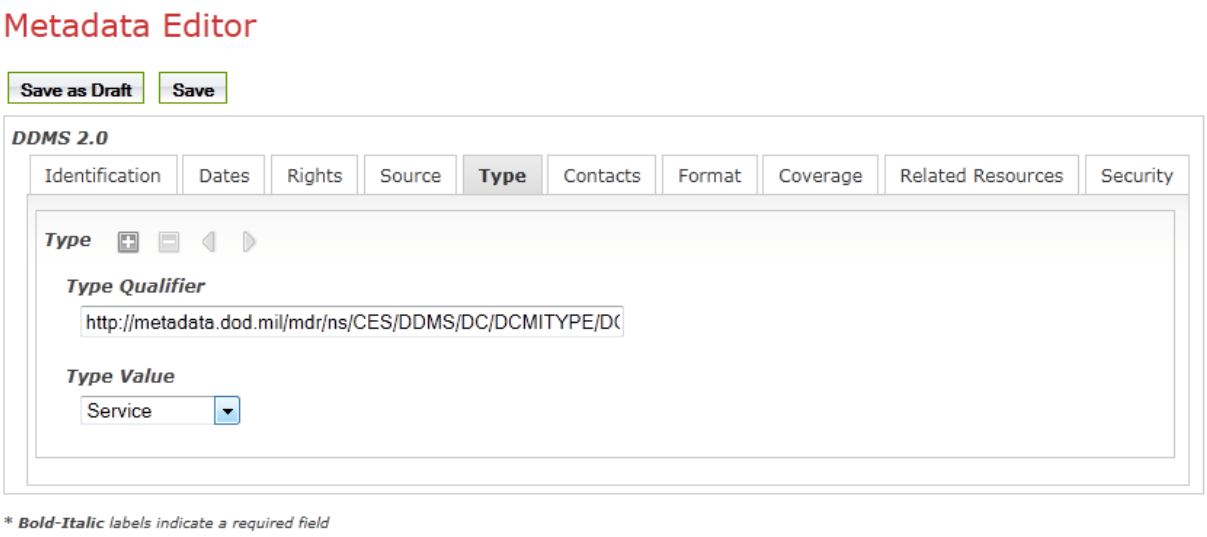
http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#source

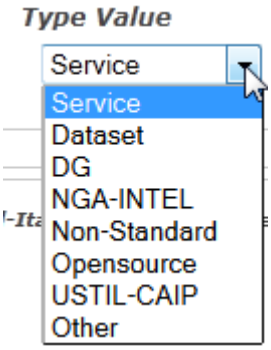


2.6 Type

References assets or resources from which the tagged data asset is derived. For example, if the data asset is an XML document that conforms to an XML Schema document then this element would contain the value "XSD." Other possible values may include RNG, WSDL, SQL, etc.

http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#type

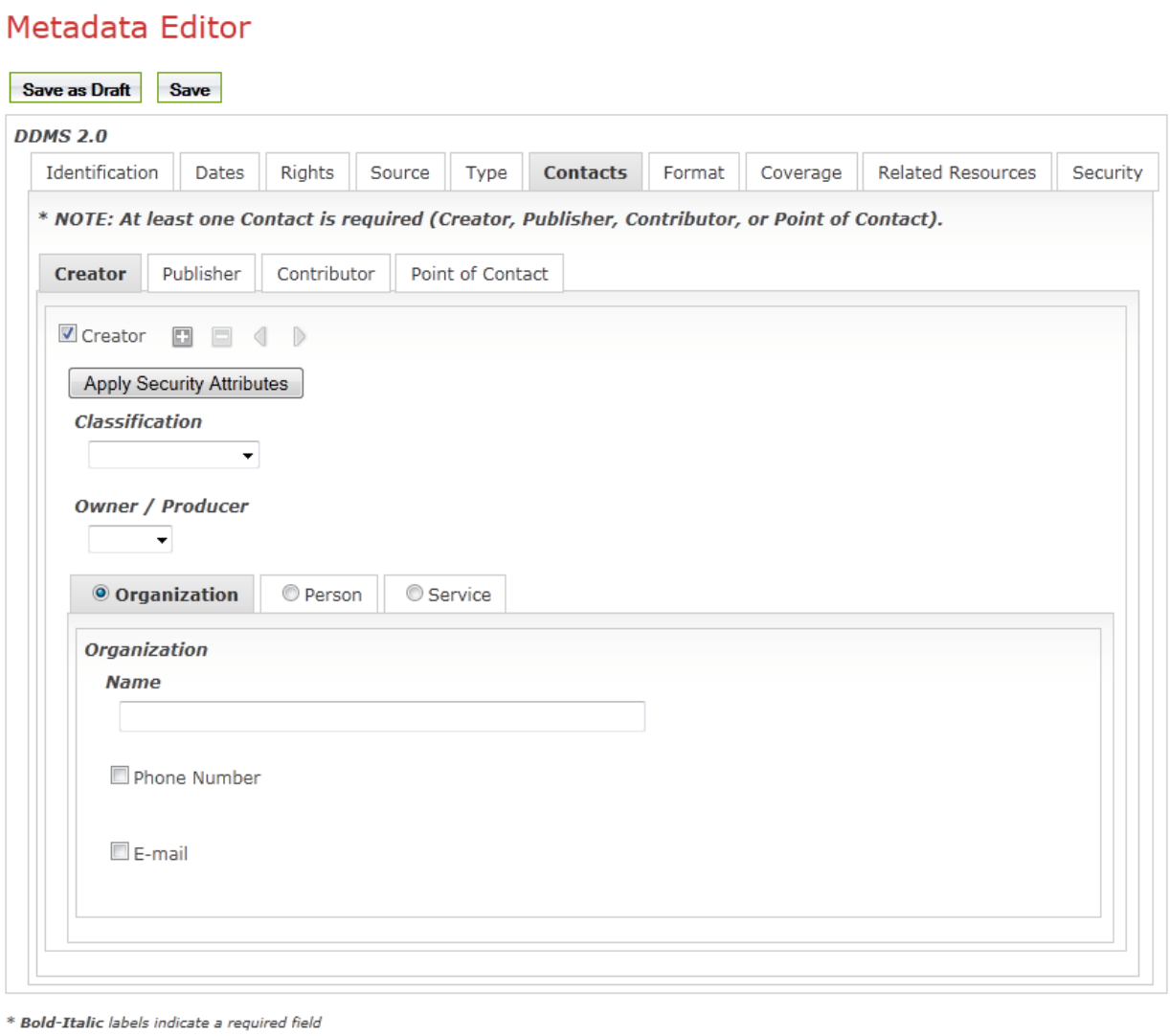




2.7 Creator

Enter information about the entity responsible for generating the resource. It is mandatory to have at least one creator, publisher, contributor, or point of contact.

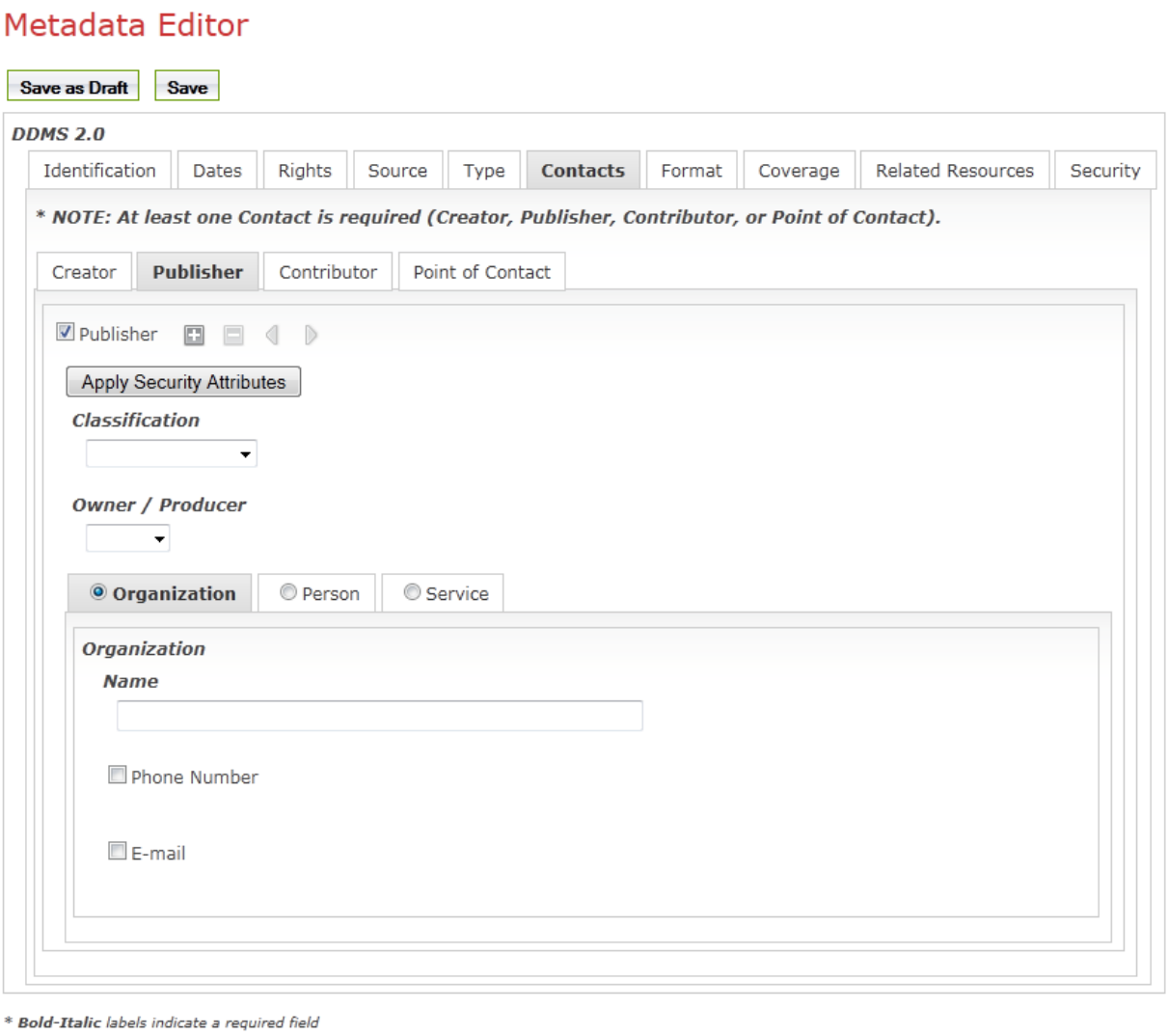
http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#Creator



2.8 Publisher

This category is used to tag the identification of the entity responsible for releasing the data asset---the entity primarily responsible for the intellectual content of the product. It is intended that this category apply whenever applicable to an organization, as opposed to a person. It is mandatory to have at least one creator, publisher, contributor, or point of contact.

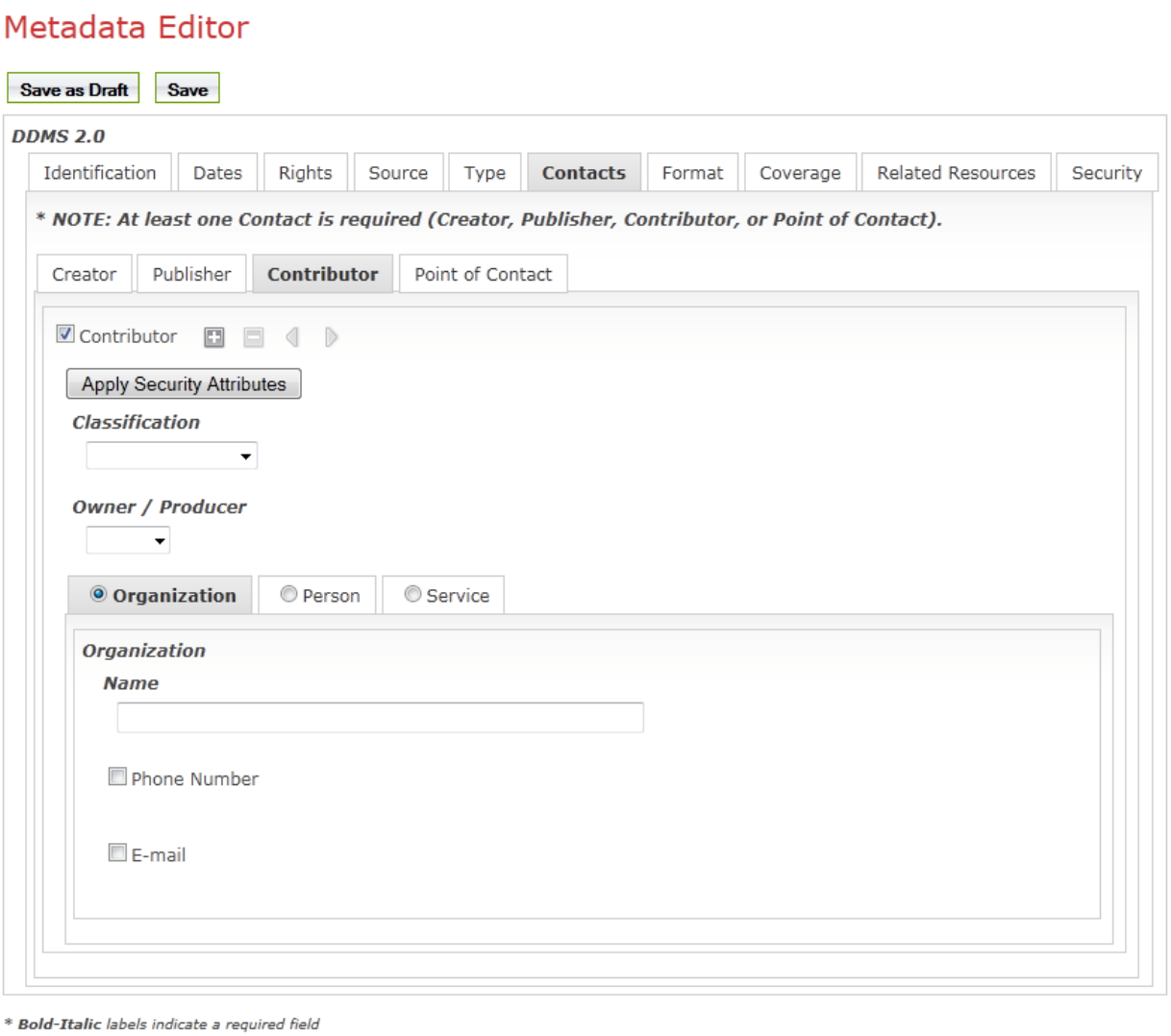
http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#Publisher



2.9 Contributor

Information about an organization, person or entity that contributed intellectual content to a resource, other than the publishing organization. It is mandatory to have at least one creator, publisher, contributor, or point of contact.

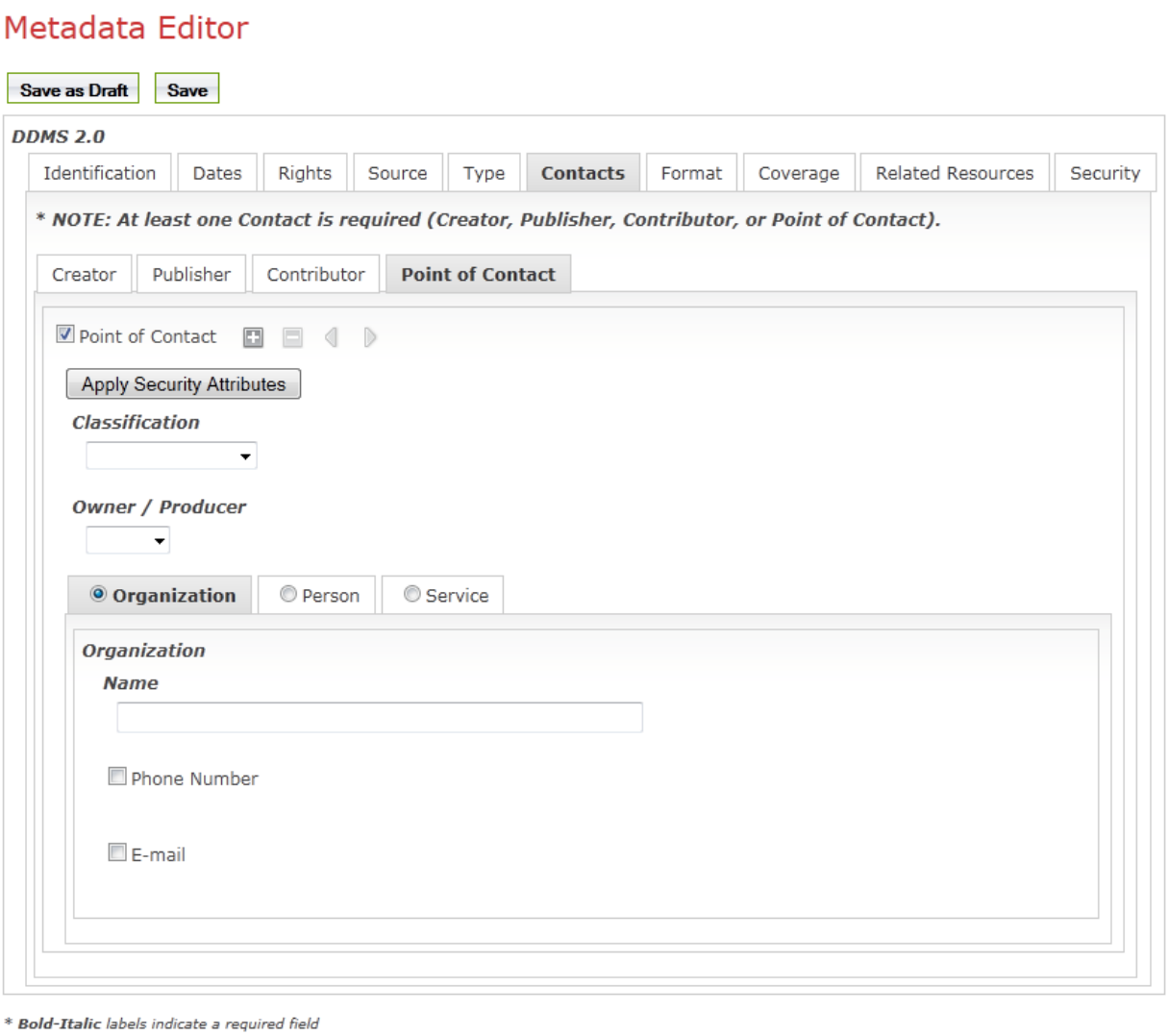
http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#Contributor



2.10 Point of Contact

Enter information about an organization, person or entity, which contributed intellectual content to a resource, other than the publishing organization. It is mandatory to have at least one creator, publisher, contributor, or point of contact.

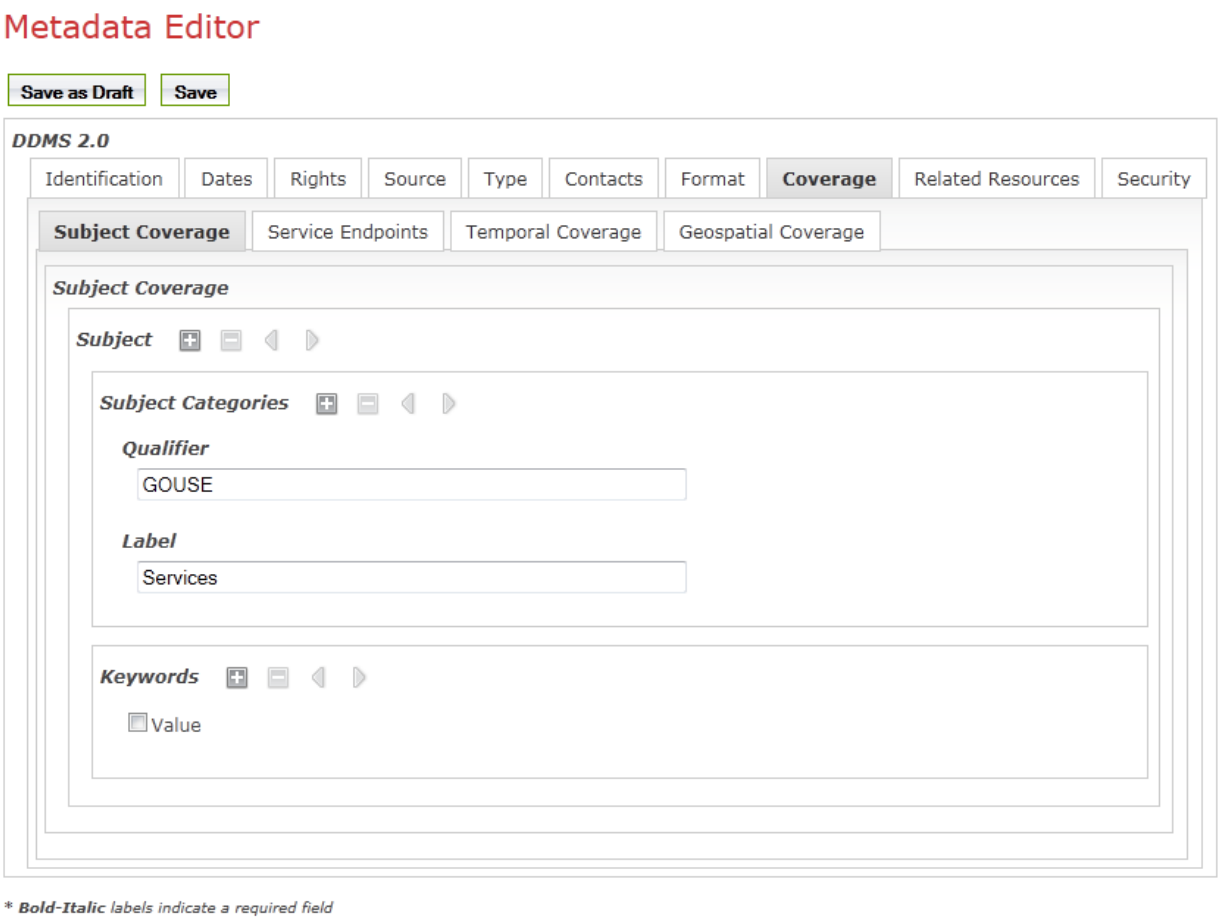
http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#PointOfContact



2.11 Subject Categories

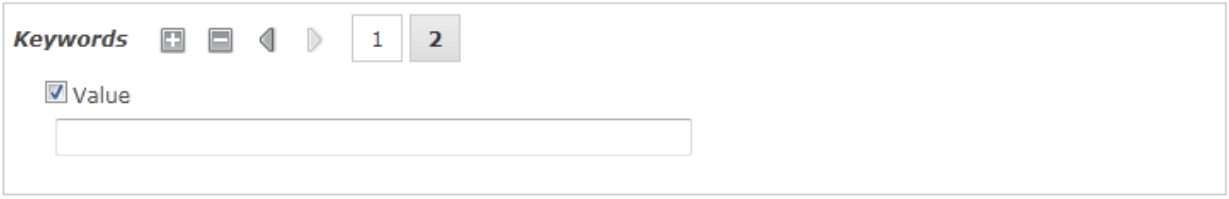
At least one subject category is mandatory. The format for entry is the qualifier (ex. GOUSE) and Label (ex. Services). Valid entries are Aeronautical, Collaborative, Hydrographic, Imagery, Intelligence, Geodesy, Human and Political, Targeting Information, Topographical, Terrain, Services, Software.

http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#Subject



2.12 Keywords

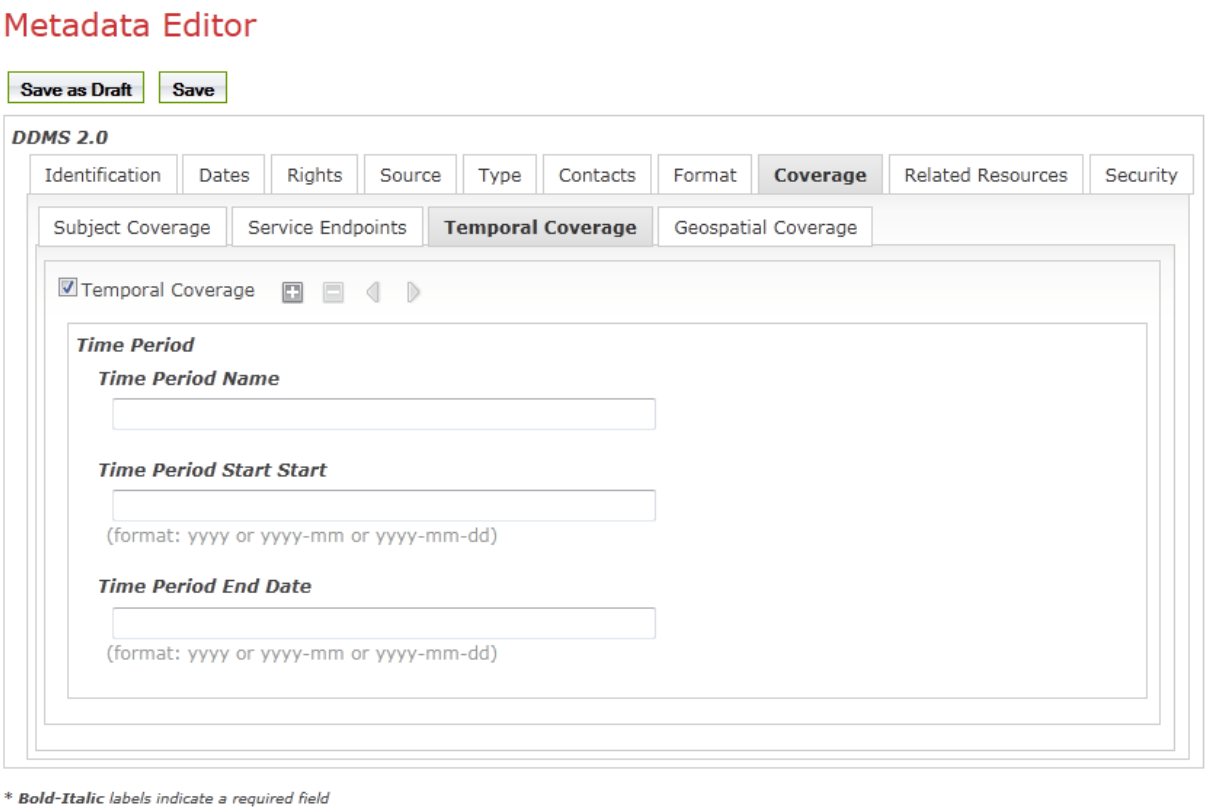
Enter subject keyword(s) that characterize the subject matter of a resource. While this is optional, entry is highly recommended in order to make best use of the resource. Entry of multiple keywords require separate entry per. This is accomplished by clicking the plus sign.



2.13 Temporal Coverage

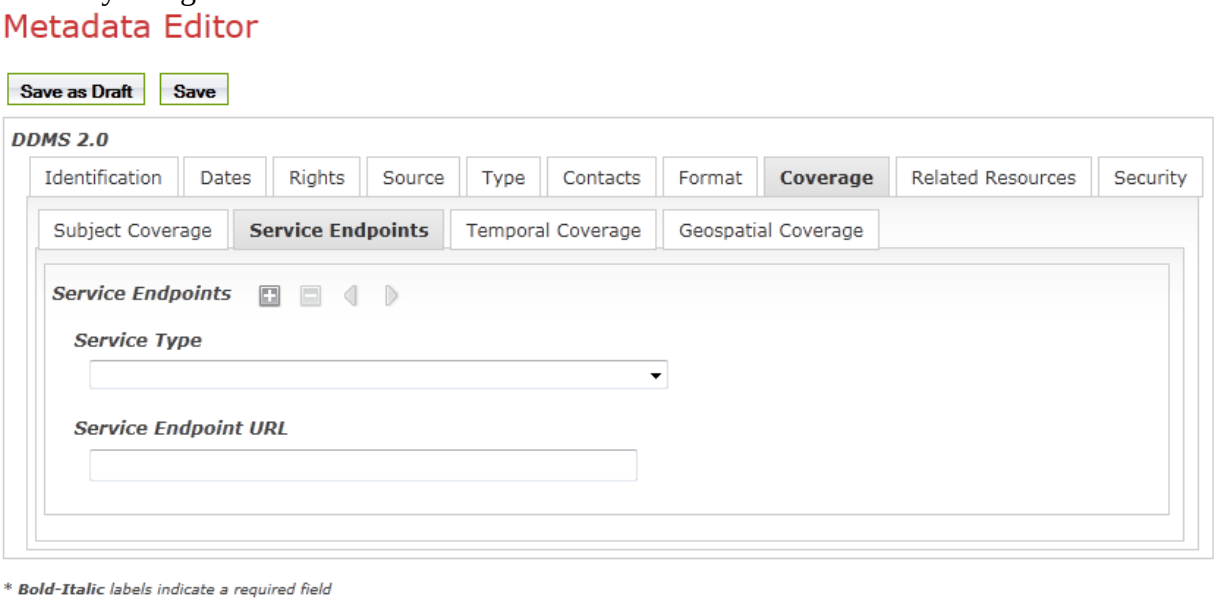
Entry of time coverage is optional. Coverage expressed in terms of one or more periods of time.

http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#TemporalCoverage

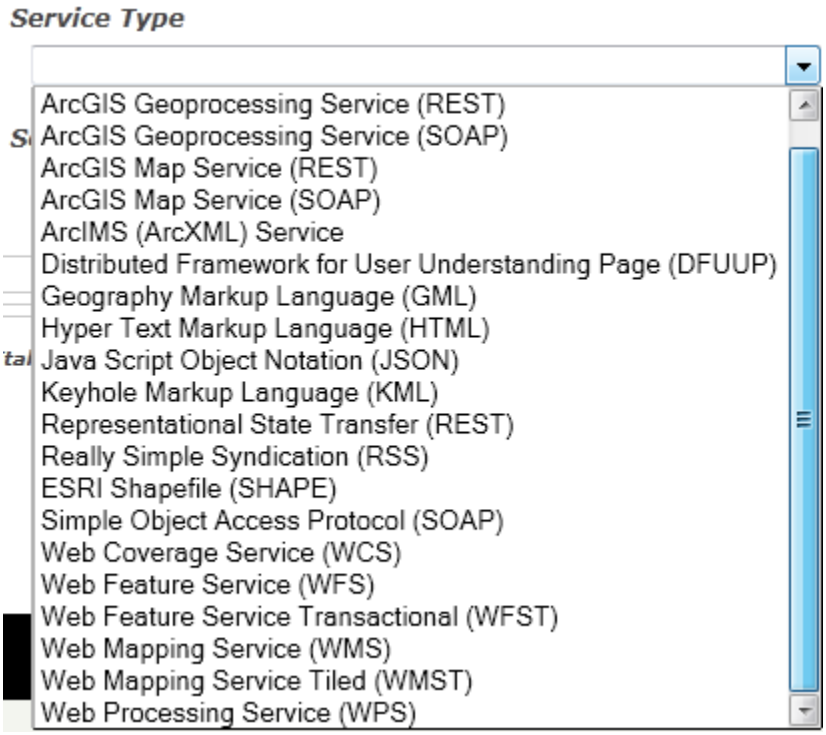


2.14 Service Endpoints

Enter as many types of endpoints the resource supports. This is a mandatory field with one entry being the minimum.



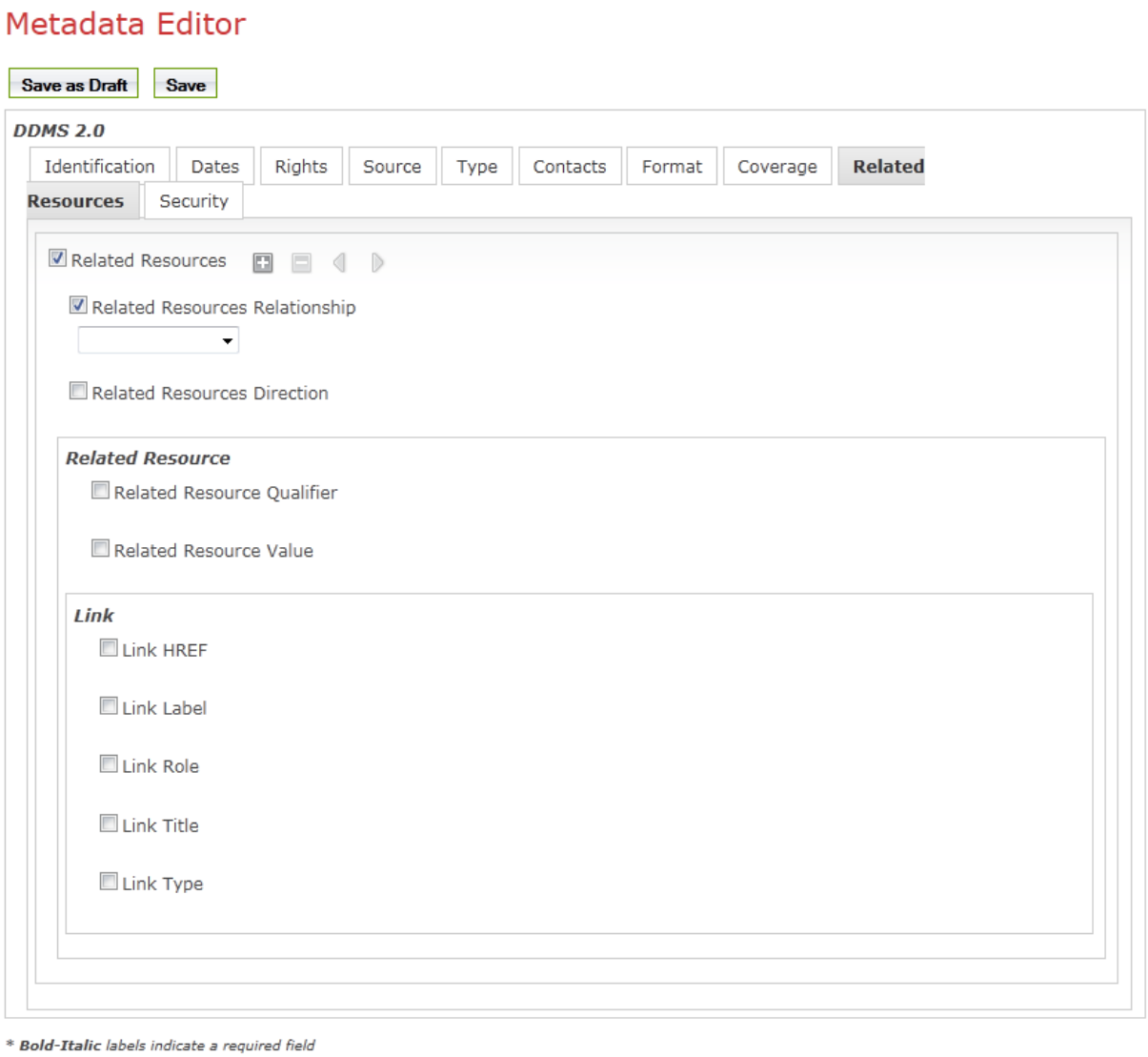
List of accepted service endpoints:

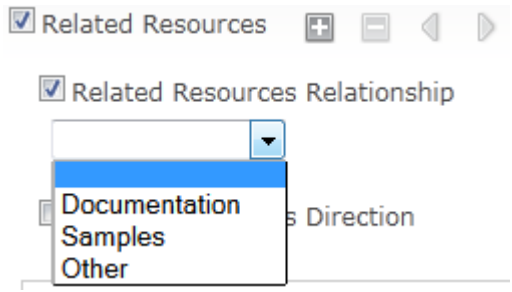


2.15 Related Resources

The Related Resource entry allows documentation of any resources, such as documents, related by a specified relationship and direction to the resource being described. This is optional.

http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#RelatedResources

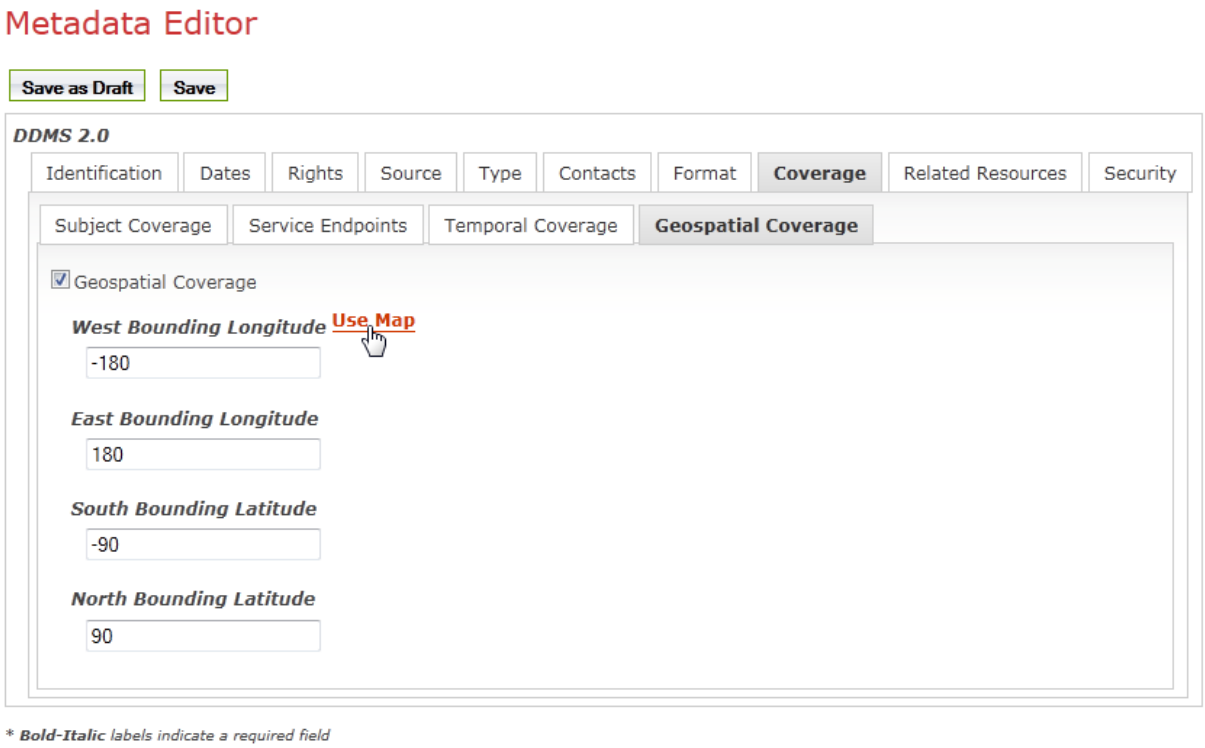


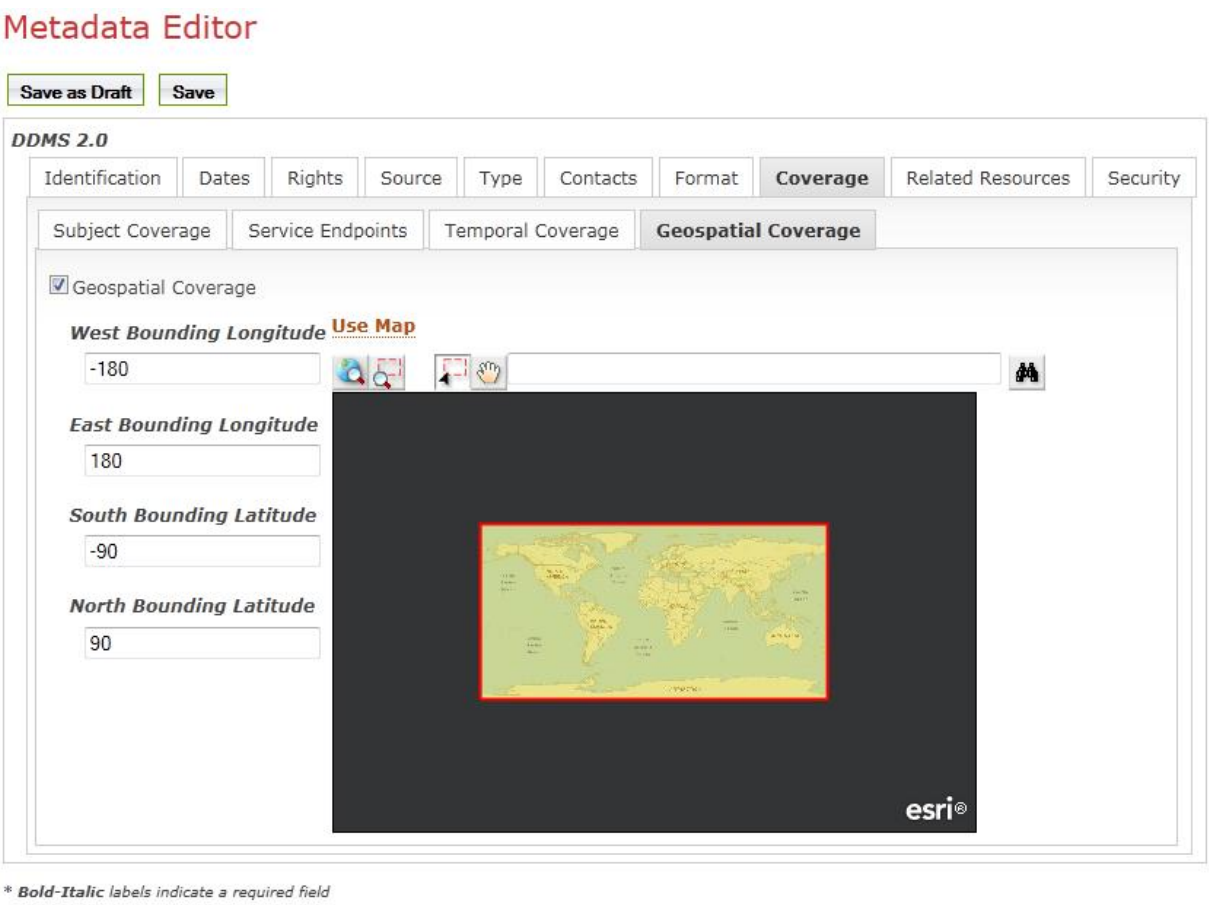


2.16 Geospatial Coverage

This section is mandatory unless not applicable. It defines the area of interest. The entry form is expecting geodetic coordinates in decimal degrees.
http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#GeospatialCoverage

To utilize a map, click Use Map.

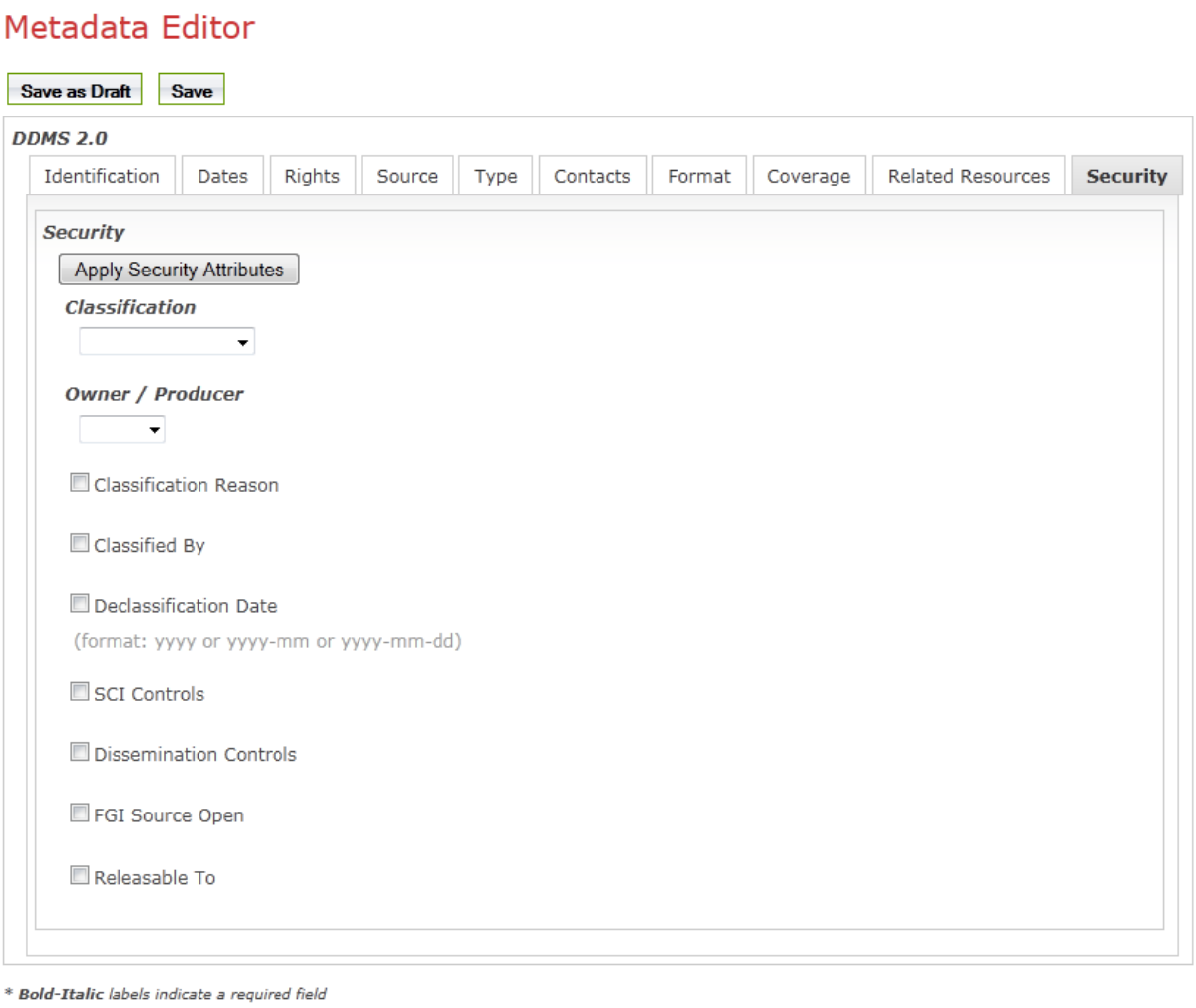




2.17 Security

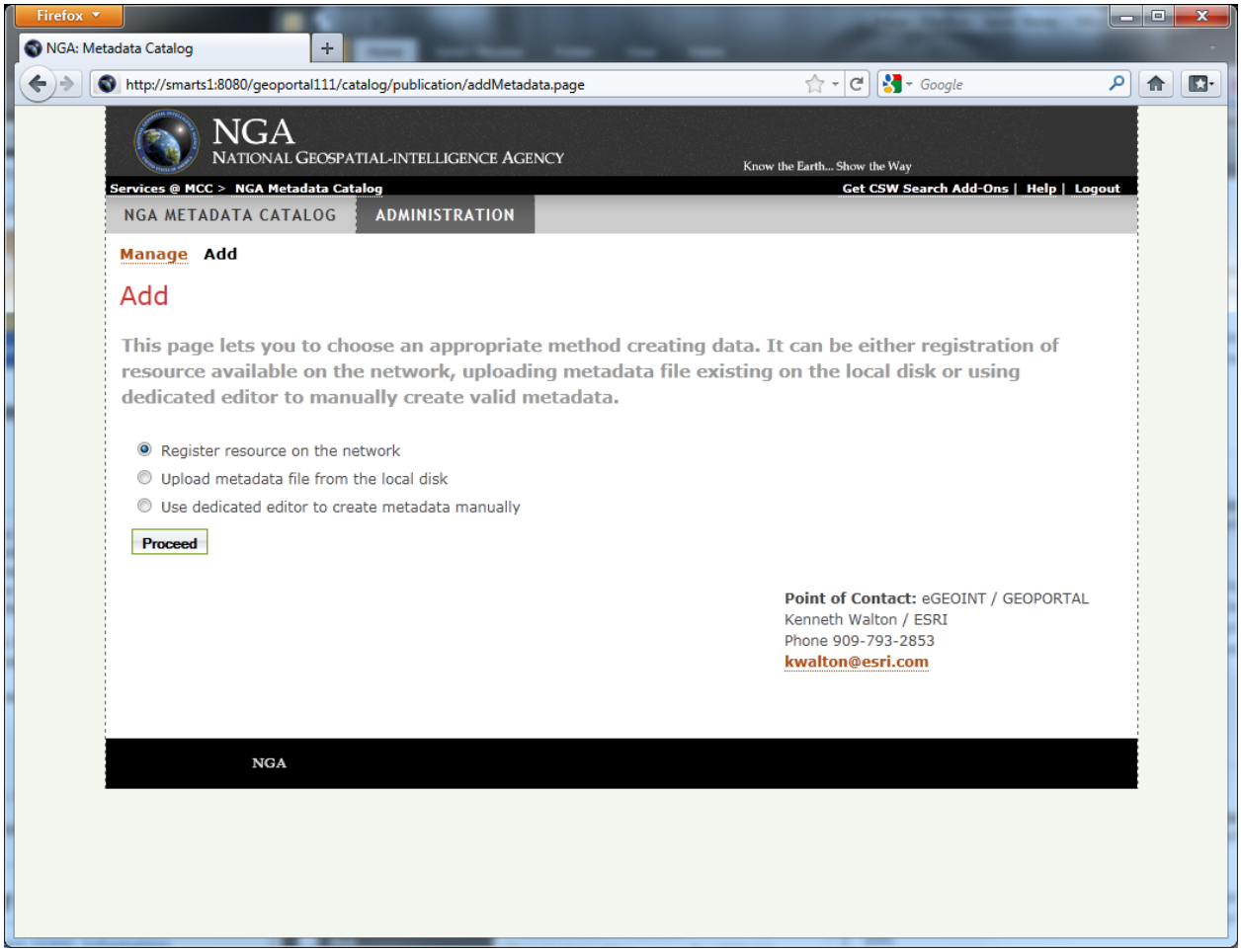
Under the security section there are two mandatory fields: Classification and Owner/Producer. The remaining fields are coded as optional but if they apply, they must be specified.

http://metadata.dod.mil/mdr/irs/DDMS/ddms_categories.htm#Security

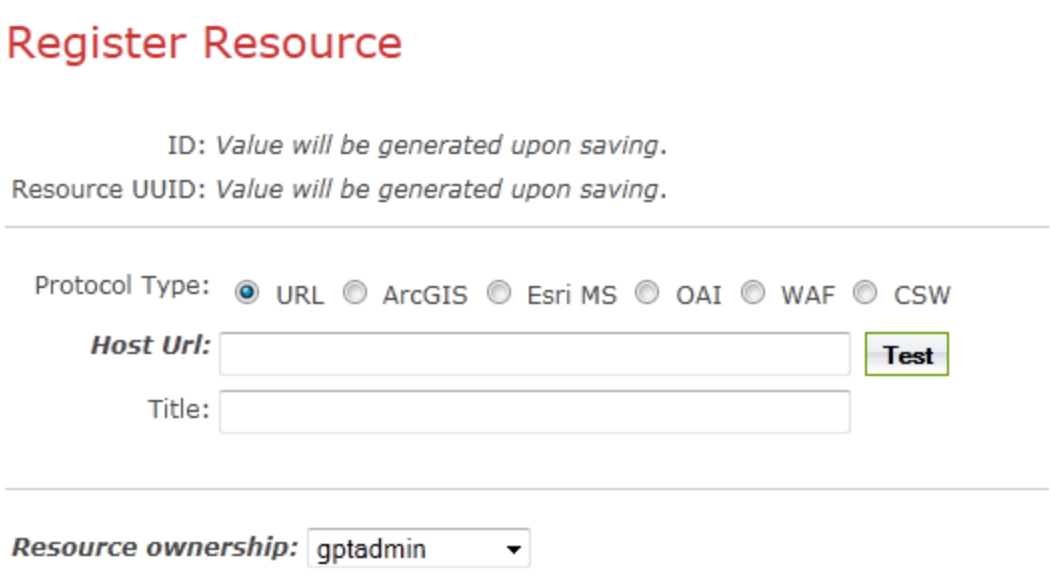


3.0 Metadata Creation with Harvesting

To add a resource click Add in the upper left corner of the Administration page. Once on the Add page, select “Register resource on the network” and click Proceed.



There are serveral options for entering metadata from a network resource. These are listed as the protocol type. For detailed descriptions of all the types and options for the resource registeration, click the Help link in the upper right corner of the page. This help page is local to your Geoportal Server and does not require internet access.


Register Resource
ID: Value will be generated upon saving.
Resource UUID: Value will be generated upon saving.
Protocol Type: URL ArcGIS Esri MS OAI WAF CSW
Host Url:
Test
Title:
Resource ownership: gptadmin

Purpose of the registration:

- [x] Allow this resource to be found when searching for metadata
- [ ] Include this endpoint on the federated search list
- [ ] User must supply credentials in order to federate search to this endpoint
- [x] Allow this resource to be synchronized at an interval

Choose actions to be performed during synchronization:

- [x] Update this resource description
- [x] Copy the entire contents of this remote catalog into the local catalog
  - [x] Automatically approve newly acquired resources

How often do you want this resource so be revisited:

- ( ) Once every month
- ( ) Twice every month
- ( ) Once every week
- ( ) Once a day
- ( ) Once an hour
- ( ) Once only
- (•) Manual synchronization only

Do you want to receive e-mail notifications of synchronization results?

- ( ) YES, Notify Me!
- (•) NO thanks

Save

Synchronization is meant to update your records based on the information retrieved from the registered resource.

Current synchronization status is: none

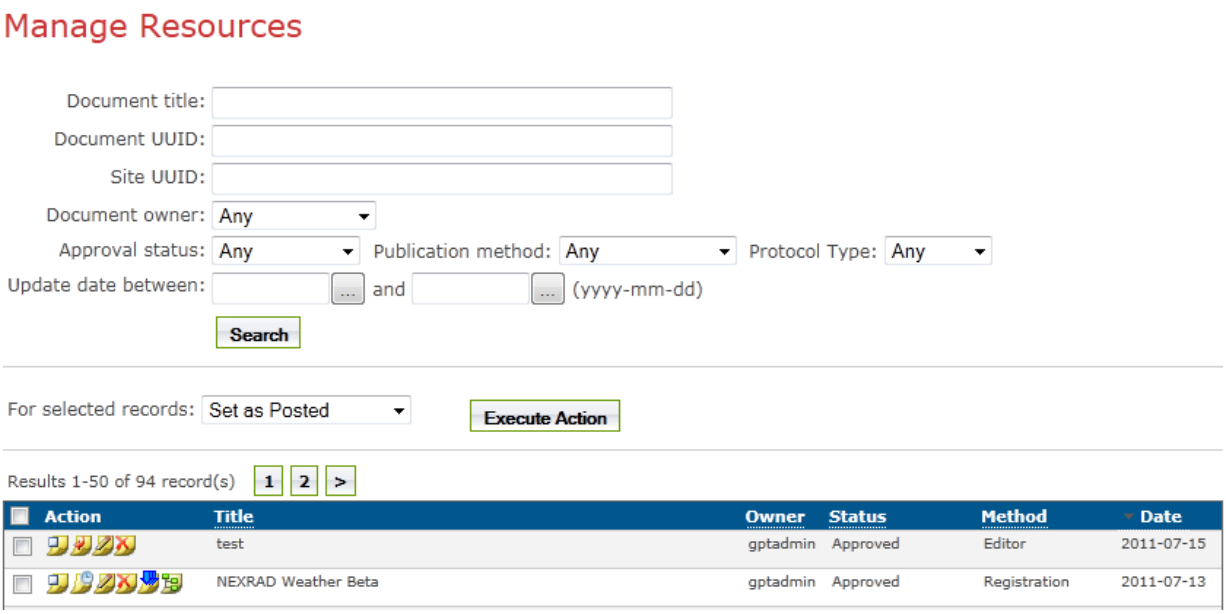
Incremental Synchronization **Full Synchronization** **Cancel**

* ***Bold-Italic*** *labels indicate a required field*

4.0 Manage Catalog Resources

The Manage Resources under Administration, allows for a publisher or administrator to manage their published resources. Tasks such as updating existing records with new information, setting the access level of a resource, reviewing and approving records (if you are an administrator), and maintaining updated registration information for registered

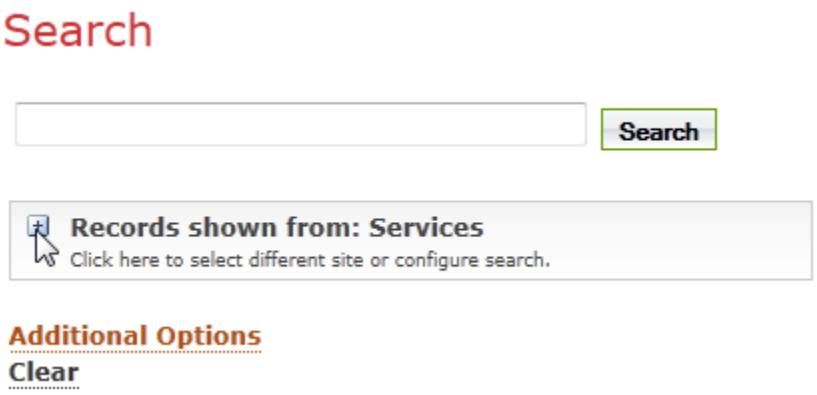
resources on the network are important maintenance tasks for resources within the Geoportal.



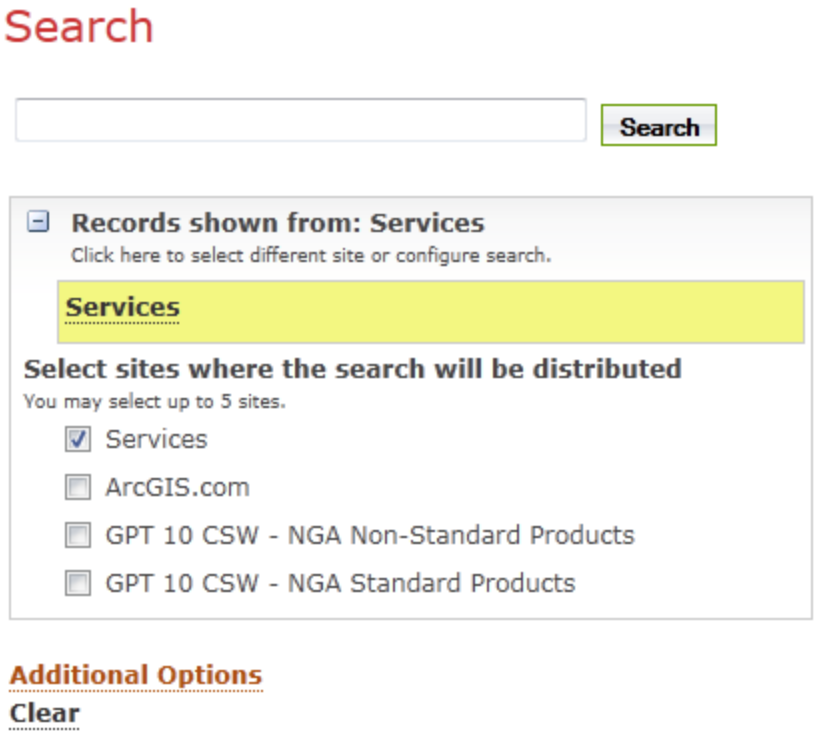
For detailed descriptions of all the options for the resource management, click the Help link in the upper right corner of the page. This help page is local to your Geoportal Server and does not require internet access.

5.0 Catalog Search

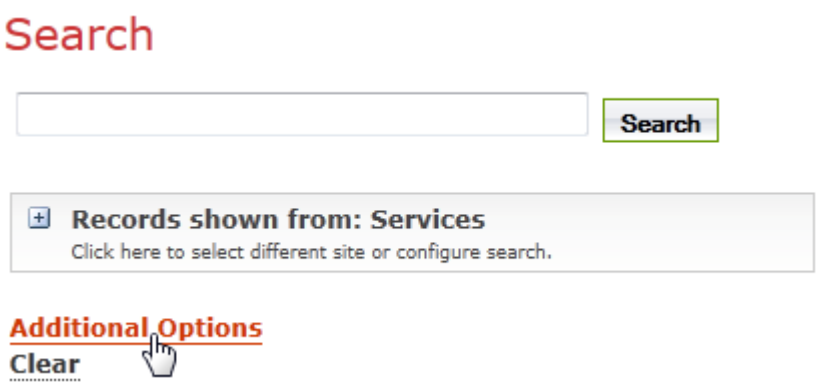
The search page of the NGA Metadata Catalog allows for the easy exploration of services cataloged. The results returned will depend on what the "Select sites where the search will be distributed" is set to.



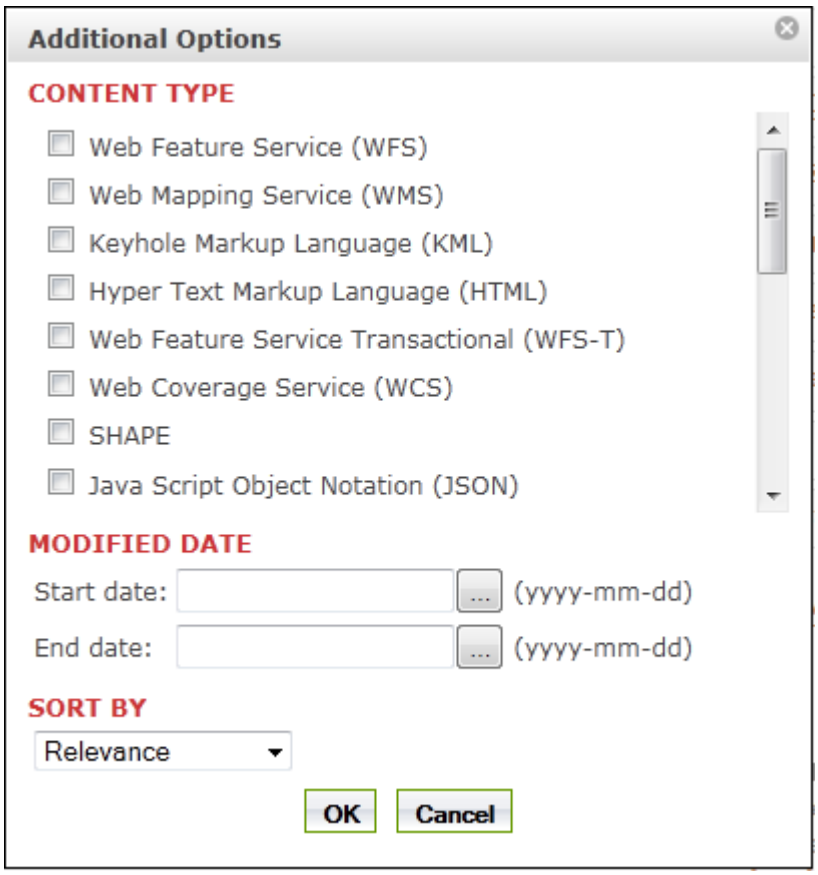
The search page defaults to searching services within the catalog. However, clicking on the plus icon next to "Records shown from: Services" will display additional search areas. These additional options are Services (in this catalog), GPT 10 CSW - NGA Non-Standard Products, GPT 10 CSW - NGA Standard Products and ArcGIS.com. The dialog is pictured below.

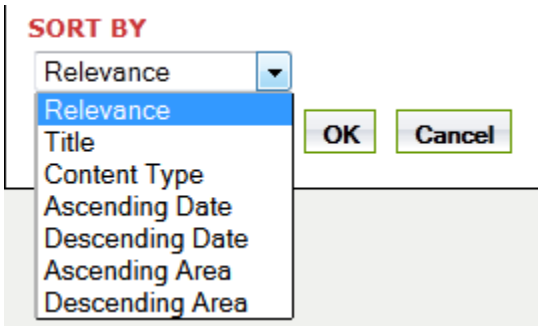


The search can be narrowed further by utilizing the "Additional Options".



The additional options are Content Type, Modified Date and sort order. These options are pictured below.





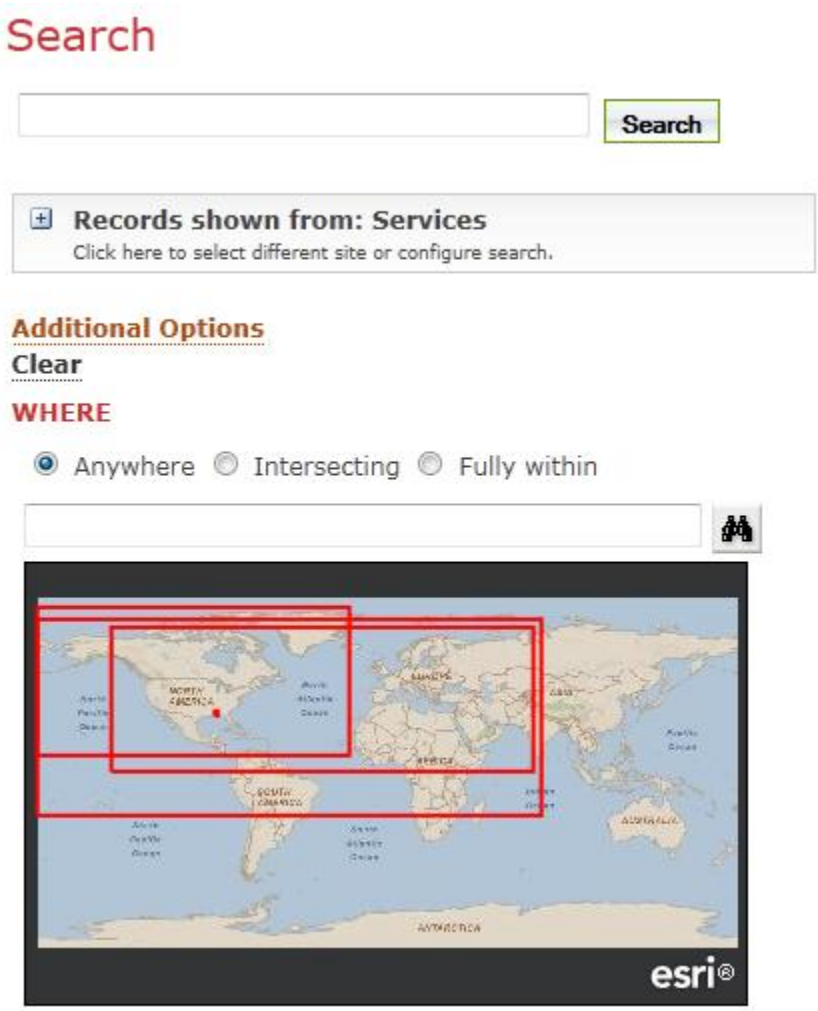
Additionally, there is a “WHERE” filter that adds a spatial functionality search. “WHERE” is used to filter the search based on the bounding box specified within the metadata, based on the current extent of the interactive map beneath it.

- Anywhere = The current extent of the interactive map has no effect on the search.

- Intersecting = Search for records whose bounding box intersects with the current extent of the interactive map (some part of its bounding box is within the current extent of the interactive map).

- Fully within = Search only for records whose bounding box is fully within the current extent of the interactive map.

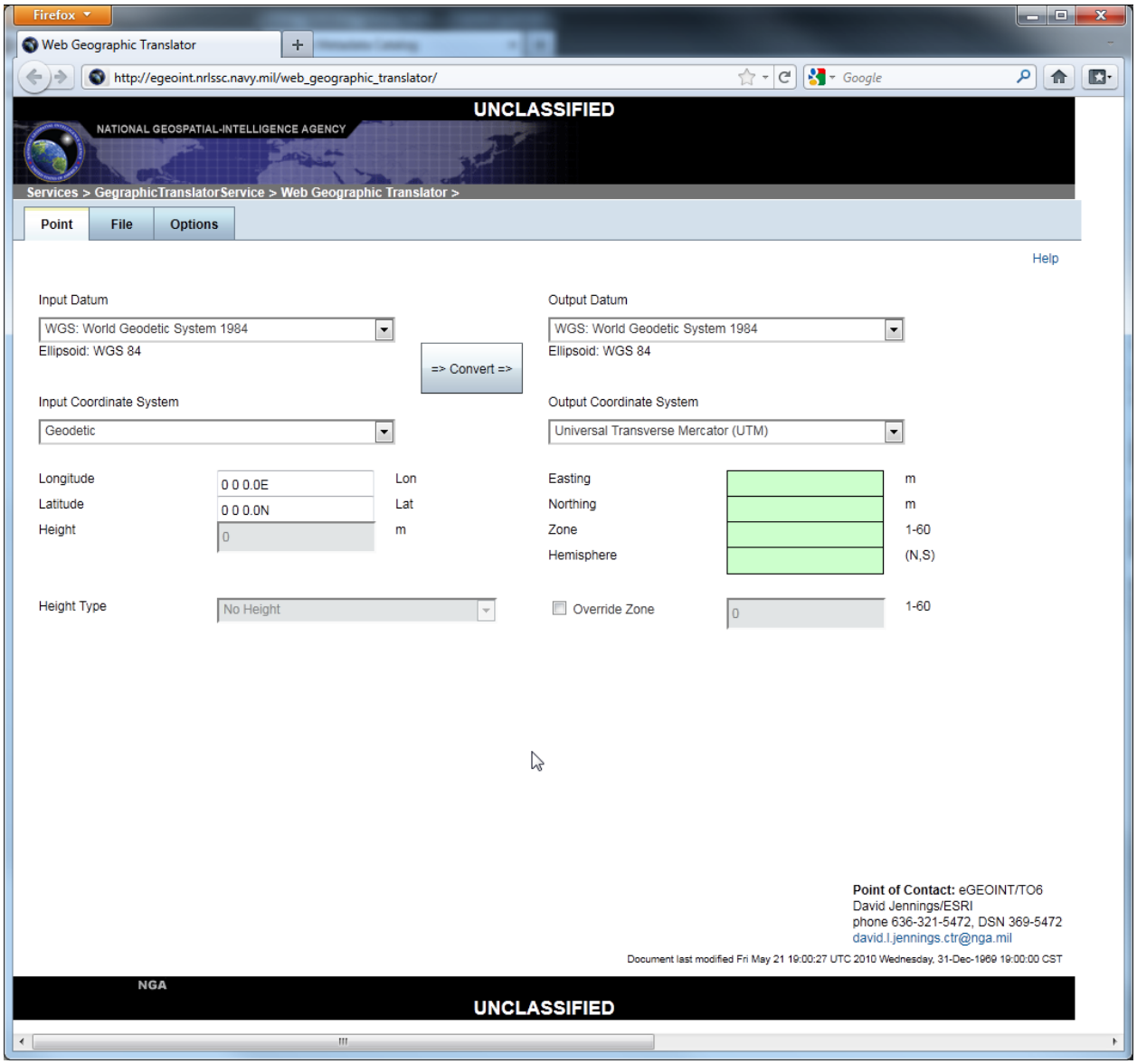
- The text box directly above the interactive map is connected to a Geocode Server which allows you to enter the name of a location where you want the map’s view to be centered over. For example, you can enter “Redlands” into the text box, click on the binoculars icon, and then click on “Redlands, CA” in the list that pops up. This will center the map over that location.


Search
Search
Records shown from: Services
Click here to select different site or configure search.
Additional Options
Clear
WHERE
Anywhere
Intersecting
Fully within
esri®

Appendix A - Tools

Web Geographic Translator

http://egeoint.nrlssc.navy.mil/web_geographic_translator/faces/tabbed_transform.jsp

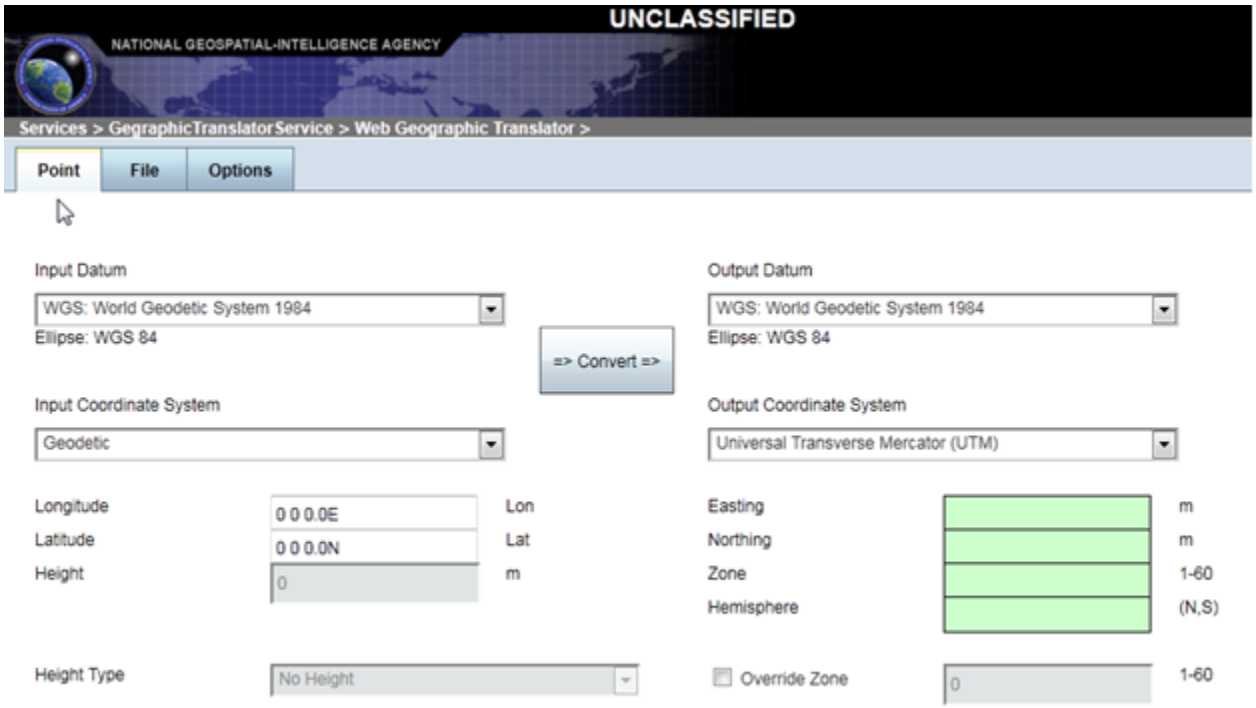


http://egeoint.nrlssc.navy.mil/web_geographic_translator/faces/help.jsp

Web Geographic Translator Help
Web Geographic Translator is a Java Web Application that provides a simple web interface for performing Geographical Transformations. Web Geographic Translator calls the GEOTRANS web service to perform these transformations.

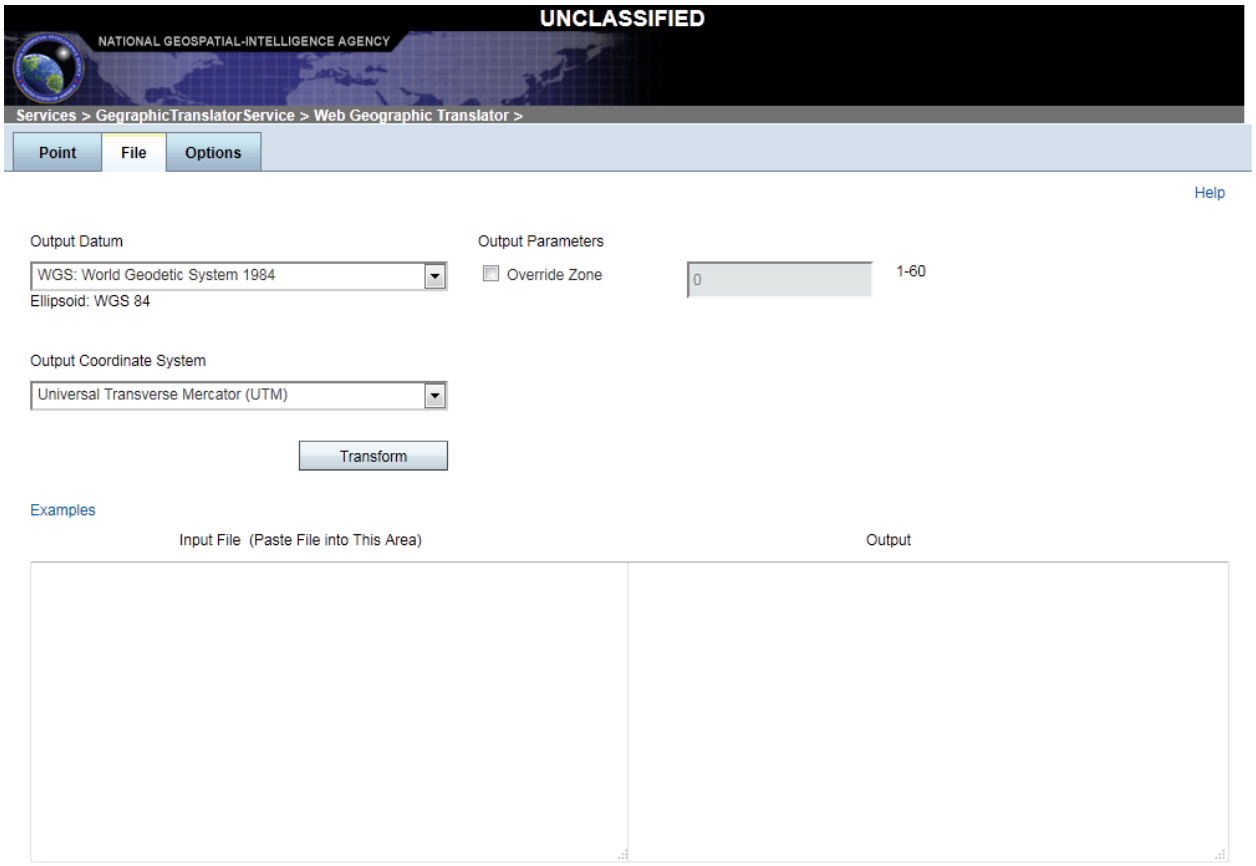
Web Geographic Translator was developed using NetBeans 5.5 with the Visual Web Pack. The Visual Web Pack allowed me to create the user interface using a graphical integrated development environment (IDE). NetBeans 5.5 allowed me to easily call the SOAP web service. I provided NetBeans the URL to the WSDL for the Geotrans Web Service and the IDE automatically generated classes I needed to call the web service. No detailed knowledge of XML, WSDL, or Schemas is required.

Point
The Point tab allows the conversion of a single point from one coordinate system to another.



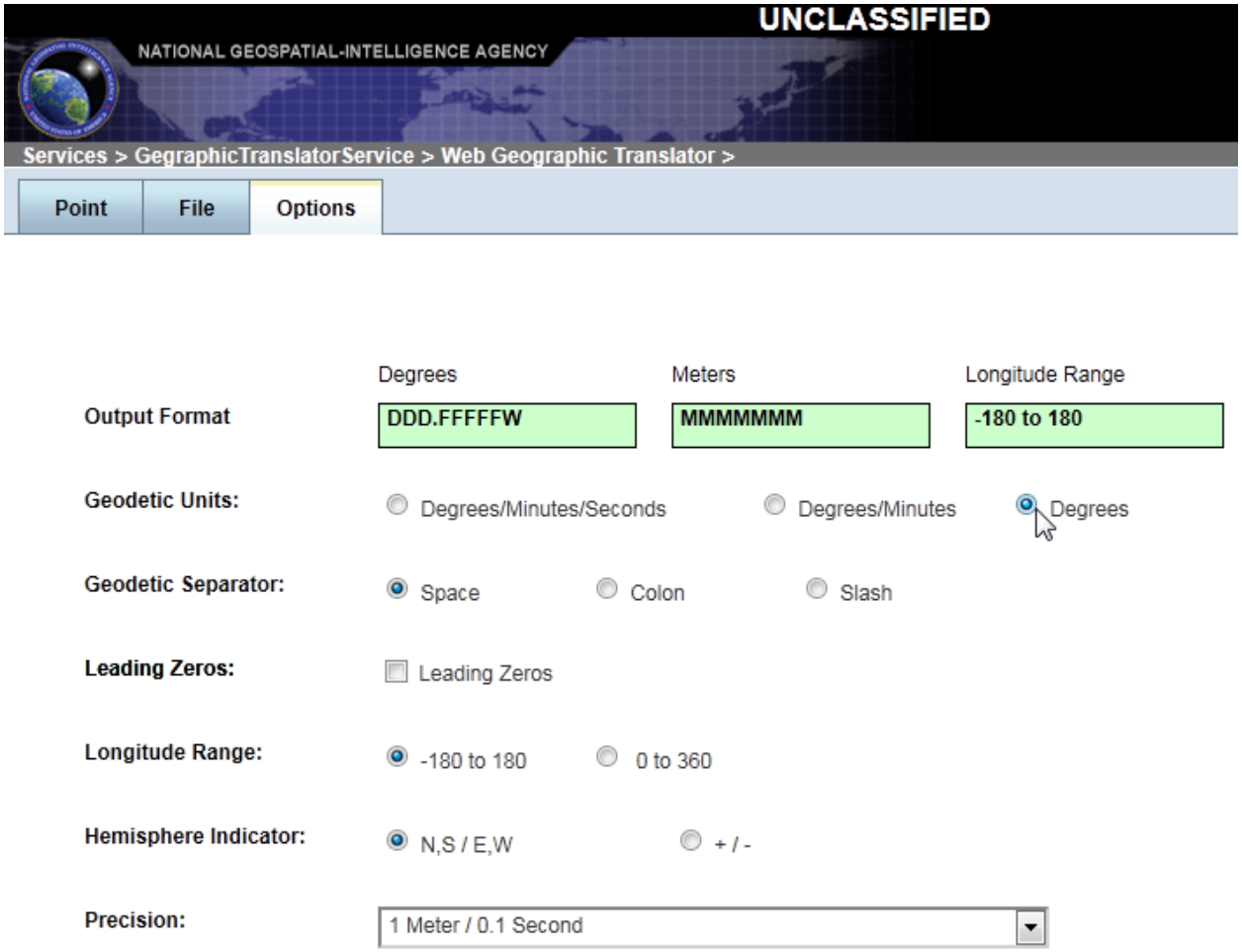
File
The File tab allows the conversion of a group of coordinates from one coordinate system to another. The input "file" must be formatted according to the specification defined by the GEOTRANS engine developers. Simply paste the entire file into the Input File text area. Specify the output parameters and press transform. The output can be copied to a file if needed. Note: To select the entire contents of the Output Text Area. Click in the

text Area and press Control-A or click and drag over the text you want to copy. You can then use cut and paste.



Options

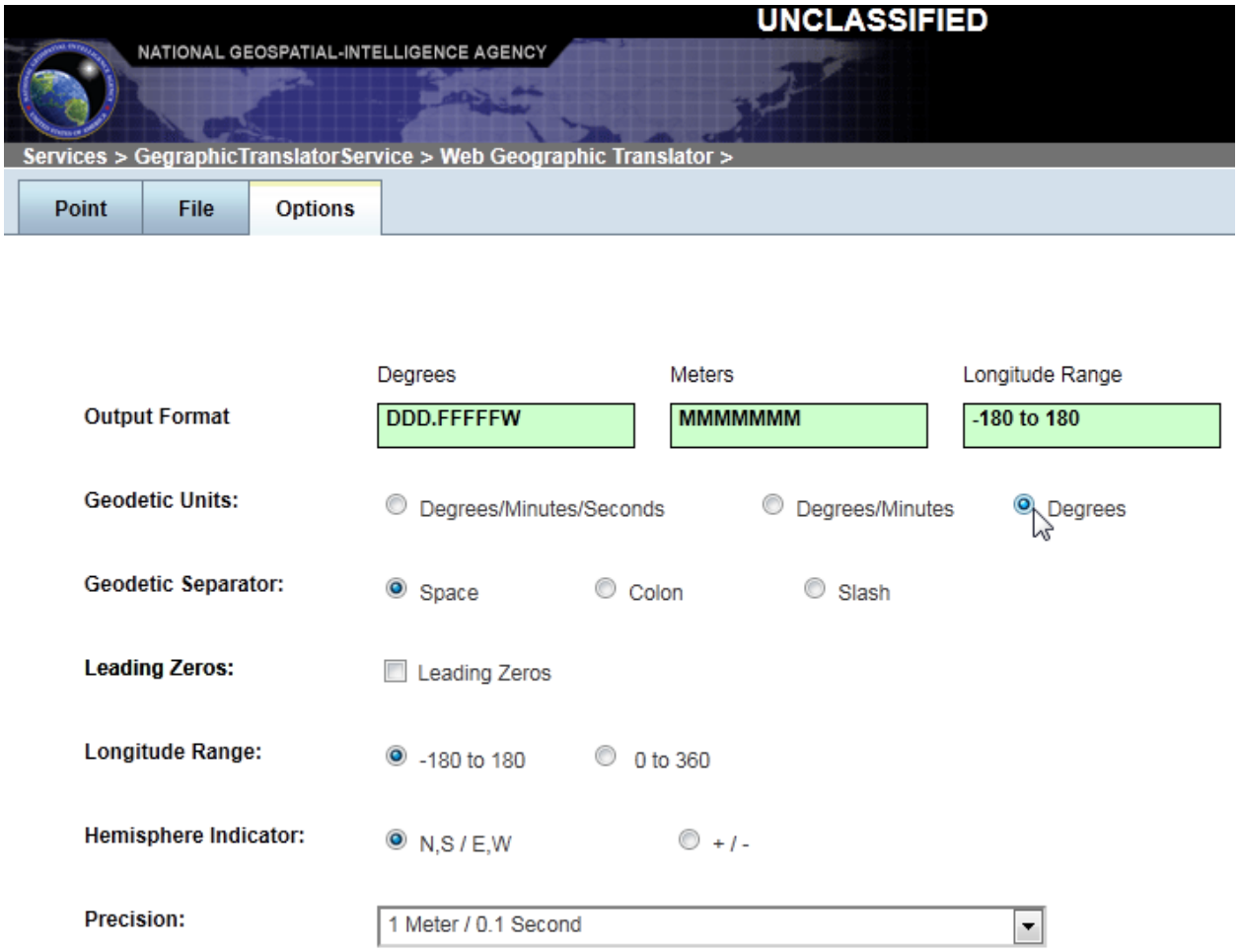
The Options tab is used to set the desired format of the coordinates created. Sample outputs for degrees and meters are provided in this tab.



Example Transform

Steps to transform a point from Mercator to Geodetic.

Step 1: Go to Options and select Degrees as the Geodetic unit.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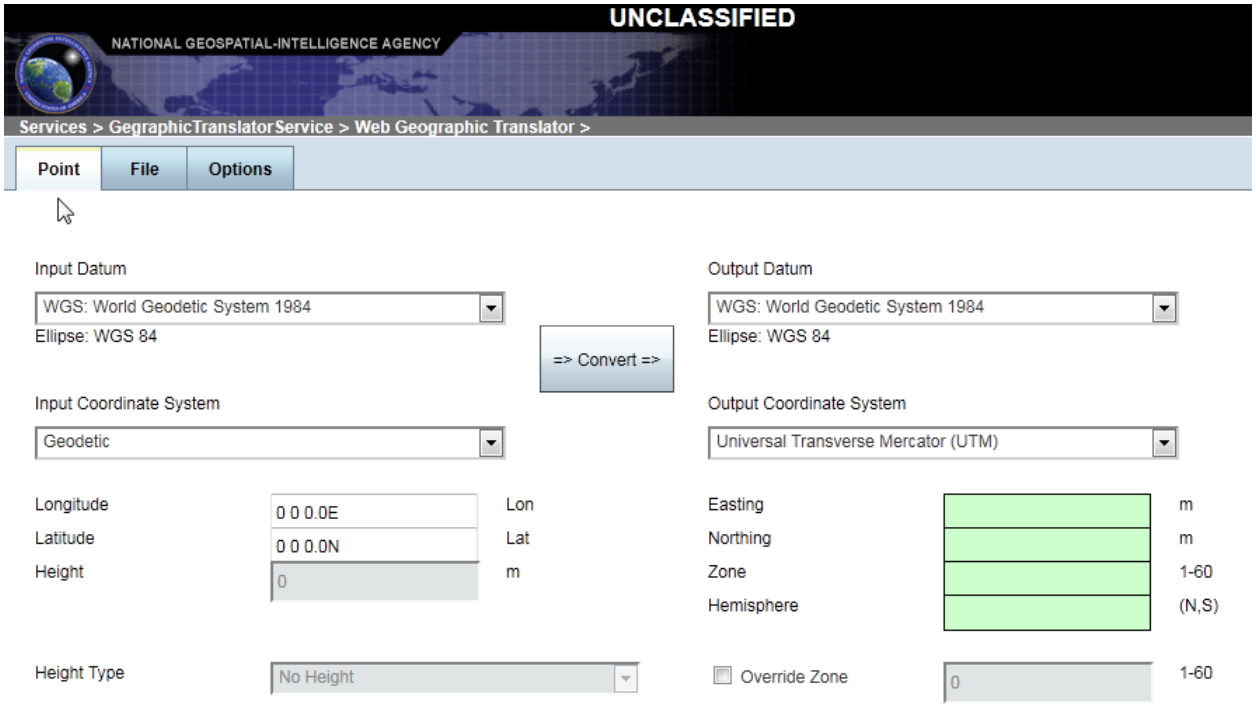
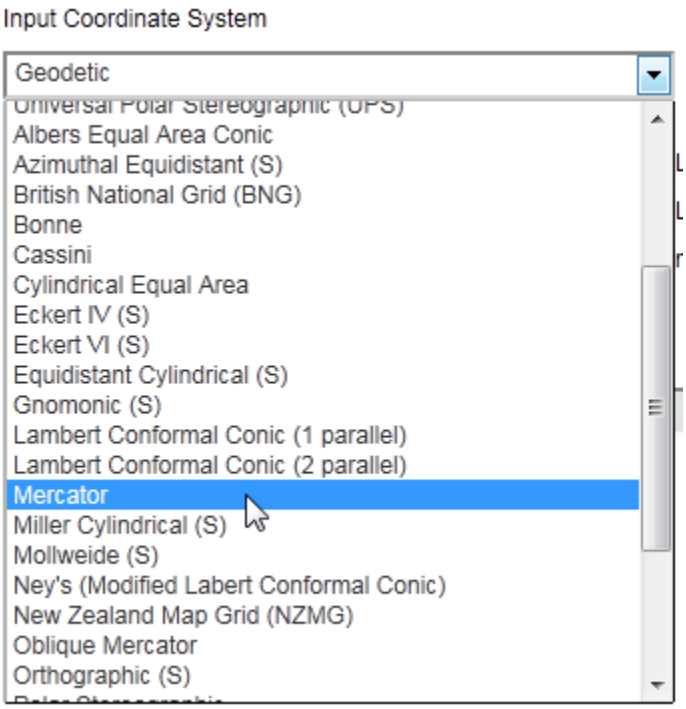
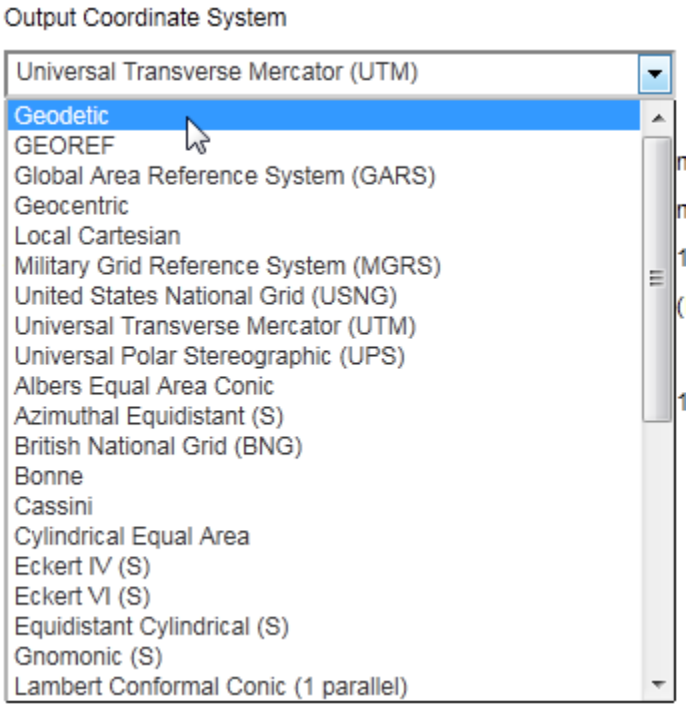
NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
Services > GegraphicTranslatorService > Web Geographic Translator >
Point
File
Options
Degrees
Meters
Longitude Range
Output Format
DDD.FFFFFW
MMMMMMM
-180 to 180
Geodetic Units:
Degrees/Minutes/Seconds
Degrees/Minutes
Degrees
Geodetic Separator:
Space
Colon
Slash
Leading Zeros:
Leading Zeros
Longitude Range:
-180 to 180
0 to 360
Hemisphere Indicator:
N,S / E,W
+ / -
Precision:
1 Meter / 0.1 Second

Step 2: Click on the Point tab to return to it. Select Mercator as the input coordinate system





Step 3: Select Geodetic as the output coordinate system.



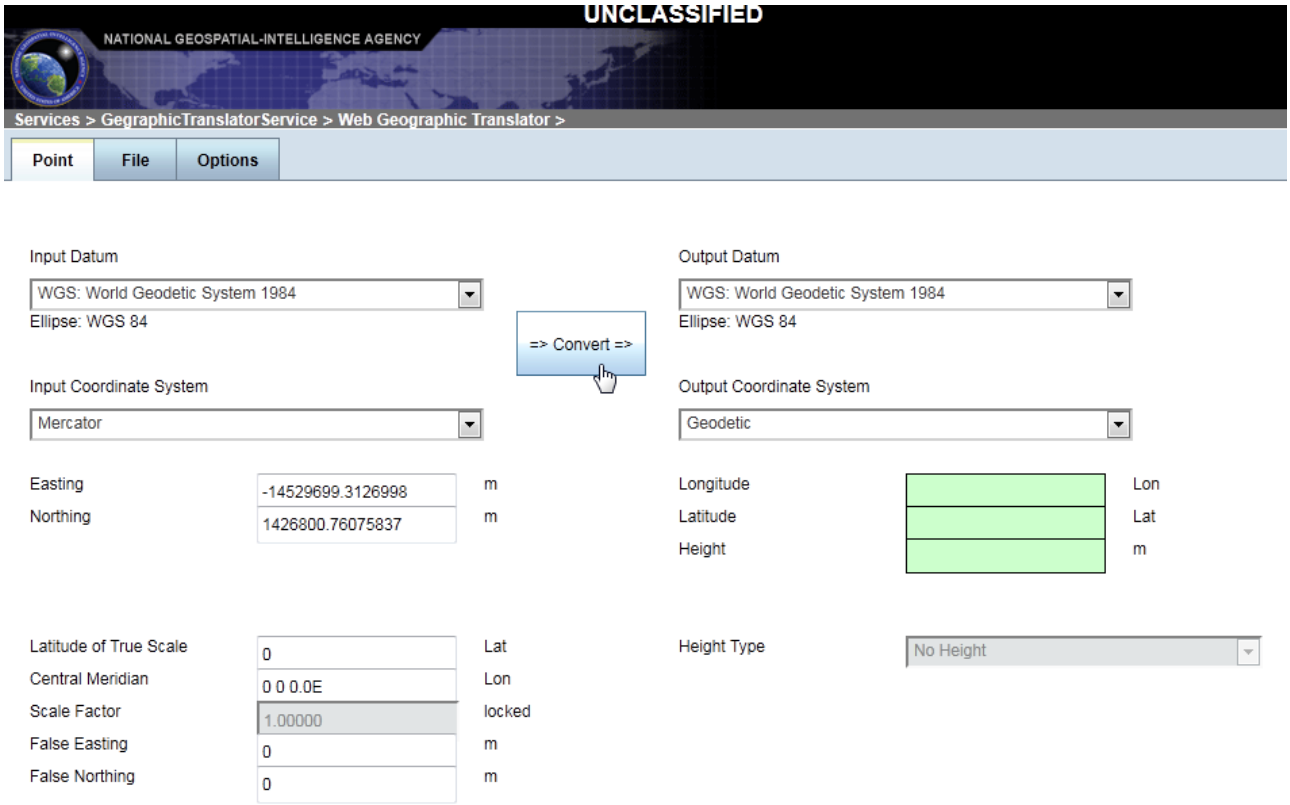
Step 4: Input the Easting and Northing for transformation from the Initial Extent list in the REST endpoint.

Example:

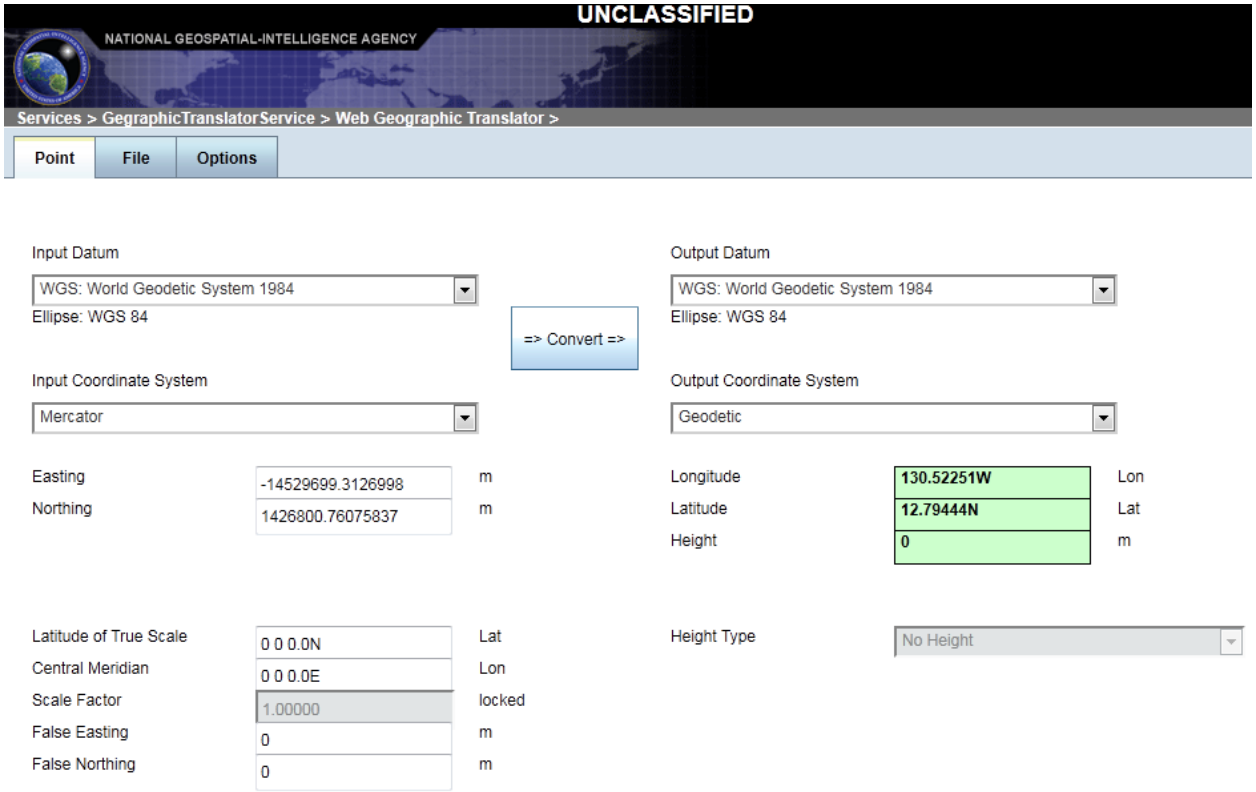
Initial Extent:

XMin: -14529699.3126998
YMin: 1426800.76075837
XMax: -6808356.25820017
YMax: 7733363.56614163

Step 5: Click Convert.



Step 6: Results (highlighted in green).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NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
Services > GegraphicTranslatorService > Web Geographic Translator >
Point
File
Options
Input Datum
WGS: World Geodetic System 1984
Ellipse: WGS 84
=> Convert =>
Output Datum
WGS: World Geodetic System 1984
Ellipse: WGS 84
Input Coordinate System
Mercator
Output Coordinate System
Geodetic
Easting
-14529699.3126998
m
Northing
1426800.76075837
m
Longitude
130.52251W
Lon
Latitude
12.79444N
Lat
Height
0
m
Latitude of True Scale
0 0 0.0N
Lat
Central Meridian
0 0 0.0E
Lon
Scale Factor
1.00000
locked
False Easting
0
m
False Northing
0
m
Height Type
No Height