TopBraid EVN

A Tour of Recent Enhancements

2014
TopBraid EVN 4.5
TopBraid Enterprise Vocabulary Net (EVN)

- Supports different perspectives and versions
- Enables creation of links between terminology elements that were un-connectable
- Enables incremental growth / evolution of a ‘Dynamic Web of Terminology’
Business Problems Solved

- TopBraid EVN manages disparate, varied taxonomies, ontologies and reference data

- To improve search, achieve clarity on enterprise terminology, align the meaning of data across data sources and ensure optimal content re-use, delivery and navigation.
TopBraid EVN
Key Features and Capabilities

- Intuitive graphical user interface for editing and search
- Flexible data model
- Built-in and user-defined rules
- Cross-enterprise collaboration
- Change tracking, full audit trails
- Sandboxed versions
- Controlled role-based access
- Import/Export and web services integration
- Support of all relevant W3C standards
- Easy extensibility of features
New capabilities: Why should you care?

- **Improved configurability**
  - Web editor for forms configuration
  - Custom trees – any relationship, configurable icons
  - Dynamic multi-window displays – users can open multiple (view) forms, tree and chart windows and resize them.
  - Ease of configuration for create-dialogs to implement URI policies and perform any housekeeping items on create actions

- **Collaborative workflow** both within the vocabulary development team and across the communities of interest
  - Publishing to EVN Explorer server for the community to view and comment
  - Comments from the community are sent to the editorial/ governance team
New capabilities: Why should you care?- 2

- **Additional workflow for promoting changes**
  - Promotion of selective changes from a working copy

- **Enhanced audit trails**
  - Capturing changes resulting from the import of files
  - Capturing comments made on save

- **Improved search form in EVN**
  - Enables search on cardinalities, regular expressions, aggregates in the search (counts)
  - Charting of results

- **Ability to manage labels as independent resources**
  - Supports use cases requiring metadata on labels (SKOS-XL)

- More ...
TopBraid EVN: Configurability
Form Builder

- Available for EVN Ontologies
- Create a custom form definition for a class
  - applies to all instances
  - EVN will detect the class of a resource, including schema types, and apply the definition
Form Builder UI

- Opens in a new window in browser
  - changes are applied immediately
  - ...can swap between the windows to see the results

Select Root Container

Select to create a new section

Shows SWP source code for the form
Creating Sections with Form Builder

- Sections can be used to group properties

Fill in to name a section

States whether the section is collapsible

Can drag and drop properties between sections
Adding Properties with Form Builder

- Select a section and use one of the two ‘create’ icons to include a property in the section.

Create a property widget or an inverse property widget.

Select a property from the drop down.

If desired, specify cardinality.

If desired, type ‘search’, ‘view’ or ‘edit’ to hide a property in the corresponding forms.

Optionally, specify a widget to use e.g., rich text, nested, etc.
Selecting Widgets with Form Builder

- Widgets can be selected for view, edit and search form modes
  - If none are selected, EVN will use the most appropriate widget for the range of values

Choose rich text widget

Insert hyperlink

Editing data using rich text widget
Customized Form Result

- Since this form was defined for the class Territory it is applicable to all members of the class such as Anguilla.
Display ‘Custom’ Trees

- Showing associative relationships in any ontology e.g., people with their children

With the class ‘Person’ selected, select ‘Show hierarchy’

Dropdown makes available all relevant relationships (object properties for Person)

Select the relationship to use. Schema.org example has no ‘children’ relationships, so use the inverse of ‘parent’

This feature is specific to ontologies, SKOS taxonomies use a pre-built skos:broader tree
Customizing Trees with Icons

- Custom icons can be defined & displayed for each class

from myPersonIcon.png, as defined in PersonStyle of my.css
Dynamically Opening a New Window

- Useful for comparing values, etc.

Window opens in a new panel, can be resized, closed
Defining Single-Valued Properties

- When defining a property, set the cardinality to 1

unit allows one value only
Plugin for Create Resource Dialog

- Specify any algorithm for generating a URI when creating a new resource in EVN
  - Can remove URI from the editable fields in the dialog.
  - If desired, can remove all information about the URI
- Perform any other activities on create
  - For example, generate a numeric ID
- Example found in:
  - evn.topbraidlive.org/evndoc.www/samples/evn-plugins.ui.ttlx.txt
  - to enable these examples, modify name to remove .txt and Refresh TopBraid System Registries
Example – Create Resource Dialog

- Create a RDF/SWP file (will be named .ui.ttlx)
  - import teamwork.topbraidlive.org/system/teamworkrules.ui.ttlx
  - create a subclass of swa:CreateResourceDialogPlugins

- swa:CreateResourceDialogPlugins example
  - subclass swa:CreateResourceDialogPlugins – see evn-plugins:UUIDCreateResourceDialogPlugin
  - swa:createResourceDialogPluginWeight defines when the plugin is applicable
    - in this case for EVN taxonomies when creating a datatype property
TopBraid EVN: Collaboration
A Use Case for Community Review

Once a vocabulary is published to the **EVN Vocabulary Explorer**, a broader community can comment on the published vocabularies:

- comments are received in TopBraid EVN by the governance/editorial team
- EVN editors can then act on or decline the comments
- When publishing a vocabulary, one must enable the commenting feature

This is in addition to the already existing capability for exchanging comments between the members of the editorial team (TopBraid EVN users)
Publishing to EVN Vocabulary Explorer is now supported for ontologies as well as SKOS taxonomies. The Vocabulary Explorer can be installed on a separate server. The publishing action will push the vocabulary being published to the server specified in the configuration parameters.
Sending Comments from the EVN Vocabulary Explorer

- Users of EVN Vocabulary Explorer use Send Comment
- Users of TopBraid EVN receive comments
Convenient listing of Comments from the Community of Interest

- Multiple Explorer servers can be set up for one TopBraid EVN server

Status of comments

<table>
<thead>
<tr>
<th>Comment</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>From user: scoth on Jul 21, 2014 4:23:22 PM about Brazil:</td>
<td>open</td>
</tr>
<tr>
<td>Official name is Federative Republic of Brazil.</td>
<td></td>
</tr>
<tr>
<td>From user: scoth on Jul 21, 2014 4:23:19 PM about Brazil:</td>
<td>declined</td>
</tr>
<tr>
<td>Should be</td>
<td></td>
</tr>
<tr>
<td>From administrator (via browser) on Jul 21, 2014 4:14:22 PM about Sudan:</td>
<td>open</td>
</tr>
<tr>
<td>Southern Sudan has ceded from Sudan</td>
<td></td>
</tr>
<tr>
<td>From user: scoth (via browser) on Jul 21, 2014 3:54:11 PM about Brasilia:</td>
<td>open</td>
</tr>
<tr>
<td>No preferred label is defined for Brasilia</td>
<td></td>
</tr>
</tbody>
</table>
TopBraid EVN: Managing Change and Evolution
A Use Case for Promoting Changes

- A single working copy of a vocabulary is used to capture all changes
  - Each change, as it gets approved and agreed on, *can be individually committed to the production version of a vocabulary*
  - Changes that are disapproved, can be either deleted/reverted from a working copy or kept for historical purposes in the working copy, marked with a status such as ‘declined’ and never promoted

- This is in addition to the already existing capabilities for committing to production an entire working copy and working with several working copies (of any vocabulary) in parallel
Selective commits of changes from working copies

- View Change History

Commit these changes only to production

- With this new capability, users can elect to continue working with the same working copy indefinitely, while committing select changes from it as they become ready to be promoted.
TopBraid EVN: Enhanced Audit Trails
Capturing in the Audit Trail Additions from the Imported Files

- Provenance data can be captured on import
  - by just checking a check box (see figure below)
  - audit trail will include the file name

![Import RDF File](image-url)

**Import RDF File**

Please select an RDF file that shall be added to the current Vocabulary.

Choose File: *langTagsAfrica.ttl*

- Turtle (.ttl) or N-Triple (.nt)
- RDF/XML Format (.rdf)

- Record each new triple in change history (warning: not recommended for large files)

Will add all triples to change history
Full Audit Trails

- Display history shows each creation step
  - including imports

<table>
<thead>
<tr>
<th>Labels and Definition</th>
<th>Preferred label:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa (en)</td>
<td>Added by Administrator on Jul 18, 2014 6:40:07 PM (Imported from RDF file Geo_SKOS_XL.ttl)</td>
</tr>
<tr>
<td>Africa (en)</td>
<td>Added by scoth on Jul 18, 2014 6:58:55 PM (Imported from RDF file geoLangTags.ttl)</td>
</tr>
<tr>
<td>Afrika (de)</td>
<td>Added by scoth on Jul 18, 2014 6:58:55 PM (Imported from RDF file geoLangTags.ttl)</td>
</tr>
<tr>
<td>Afrique (fr)</td>
<td>Added by scoth on Jul 18, 2014 6:58:55 PM (Imported from RDF file geoLangTags.ttl)</td>
</tr>
<tr>
<td>Afryka (pl)</td>
<td>Added by scoth on Jul 18, 2014 6:58:55 PM (Imported from RDF file geoLangTags.ttl)</td>
</tr>
<tr>
<td>África (es)</td>
<td>Added by scoth on Jul 18, 2014 6:58:55 PM (Imported from RDF file geoLangTags.ttl)</td>
</tr>
<tr>
<td>Африка (ru)</td>
<td>In production vocabulary</td>
</tr>
</tbody>
</table>
### Full Audit trails

<table>
<thead>
<tr>
<th>Creator</th>
<th>Date</th>
<th>Status</th>
<th>Working Copy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator</td>
<td>May 20, 2014 12:08:32 AM</td>
<td>committed</td>
<td>Imported from RDF file geoLangTags.ttl</td>
</tr>
<tr>
<td>Administrator</td>
<td>May 20, 2014 12:10:28 AM</td>
<td>committed</td>
<td>Create Concept with URI <a href="http://topquadra">http://topquadra</a></td>
</tr>
<tr>
<td>Administrator</td>
<td>May 20, 2014 12:11:25 AM</td>
<td>committed</td>
<td></td>
</tr>
<tr>
<td>Administrator</td>
<td>Jun 4, 2014 8:01:46 AM</td>
<td>committed</td>
<td></td>
</tr>
<tr>
<td>Administrator</td>
<td>Jun 4, 2014 8:11:38 AM</td>
<td>committed</td>
<td>Imported from RDF file langTagsAfrica.ttl</td>
</tr>
</tbody>
</table>

**T06-11-38.305ZAdministrator**

Imported from RDF file langTagsAfrica.ttl

**Creator:** Administrator  
**Date:** Jun 4, 2014 8:11:38 AM  
**Status:** Committed  
**Working Copy:**

<table>
<thead>
<tr>
<th>Added or Deleted</th>
<th>Subject</th>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>added</td>
<td>Africa</td>
<td>preferred label</td>
<td>Afrika</td>
</tr>
<tr>
<td>added</td>
<td>type</td>
<td>alternative label</td>
<td>type</td>
</tr>
<tr>
<td>added</td>
<td>Africa</td>
<td>preferred label</td>
<td>Afrique</td>
</tr>
<tr>
<td>added</td>
<td>Africa</td>
<td>preferred label</td>
<td>África</td>
</tr>
<tr>
<td>added</td>
<td>type</td>
<td>label</td>
<td>type</td>
</tr>
<tr>
<td>added</td>
<td>geographyDBpedia</td>
<td>versionInfo</td>
<td>Created with TopBraid Composer</td>
</tr>
<tr>
<td>added</td>
<td>Africa</td>
<td>preferred label</td>
<td>Afryka</td>
</tr>
</tbody>
</table>
Save ‘Notes’ in the Audit Trails

- Notes entered on Save now appear in Show History
Importing Data to Working Copies

- RDF files and spreadsheets can now be imported into a working copy as well as into a production copy
  - change information is included
TopBraid EVN: Search Form Enhancements
EVN Search Form Enhancements

- Three new options:
  - regular expressions
  - cardinality
  - counts

Finds all concepts with a preferred label starting with “al”, not case-sensitive.
EVN Search - Cardinality

- Searching based on the number of values

Min and Max number of values
Example:

- Click twice in search field to get ‘#’
  - result is a count of the number of properties for each matching resource

Result shows matching criteria and the number of matches for the properties with a ‘#’
EVN Search – Charting Search Results

- Pie chart of the Gender counts in a dataset

Select type of a chart (e.g., pie, bar, ...)

Modify query to be charted (if desired)

Run a search query

Select ‘Display chart of search results’ from the menu

Also available in TBI and as a generic charting component.
TopBraid EVN Taxonomy Editor: Labels as Resources (SKOS-XL support)
SKOS-XL Support - 1

- Provides support needed to manage labels as objects
  - i.e., as resources in their own right with their own associated information
  - useful for various purposes, e.g., to capture a source for a label, or to provide directions to text mining tools on how to use a label

- TopBraid EVN's support for SKOS-XL is limited to alternative, hidden and display labels
  - preferred labels can only be strings
    - ...i.e. uses skos:prefLabel, not skosxl:prefLabel
  - skos:prefLabel represents the concept, and therefore other information about the “concept” can be maintained without another layer of labels
    - label metadata can be placed directly on the concept
SKOS-XL Support - 2

- Activate by importing the SKOS-XL vocabulary into a taxonomy
  - includes skosxl:altLabel, skosxl:hiddenLabel

- Language tags allowed in skosxl:Label objects
  - i.e. multiple language tagged values of skosxl:literalForm
  - judiciously ignores SKOS-XL spec requiring one label property per Label instance
  - allows creation of separate instances of skosxl:Label, if desired
SKOS-XL: Label Objects

- Displaying label objects
Properties defining the Label class as their domain appear by default

- In this case: end date, original source, start date and verified date

Editing an existing label

Creating a new label
TopBraid EVN: Additional Enhancements
Symmetric Properties in EVN

- Properties defined as `owl:SymmetricProperty` type will create two triples
  - the triple specified by the user and its inverse
- Example `skos:related` is symmetric

Choose Morocco as `skos:related` to Algeria

Algeria `skos:related` Morocco is automatically created
EVN Role Management by LDAP Roles

- EVN Roles can be assigned by LDAP roles
  - all users with the LDAP role will have the assigned EVN Role

Role assignments for users that no longer exist are now automatically deleted when a vocabulary's manager logs into the vocabulary's main page.

Roles defined in LDAP (or tomcat-users.xml)

Assigned EVN Roles (manager, editor, viewer)
E VN Vocabulary Types

- Change in terminology – same functionality
  - Taxonomy (SKOS)
    - Used to say ‘Vocabulary’
  - Ontology (RDFS/OWL)
EVN Help Page

- Change of location for the link to the EVN Help page

Note EVN Help link (access to User Guides) has changed!
Class Views in EVN Taxonomy

- Terminology change: “Class Hierarchy” instead of “Concept Types Hierarchy”
- Defining root of Class Hierarchy
  1. Edit Project to set class tree root
  2. Option to start class view with owl:Thing
  3. See result in Class Hierarchy
Search in EVN Tagger

- Tagger makes it now easier to find concepts that have not been tagged yet
  - the search form on the left side (if the subjects graph is another EVN vocabulary) can be used to find concepts that have no value for, e.g. has exact match.

- Tagger can also be used to map two vocabularies
EVN Explorer Module
Published Vocabularies

- Published vocabularies appear in EVN Explorer (previously called EVN Viewer)
  - http://[host]:[port]/evn/tbl/evnhome

Post comments that will be sent to the editorial team.
Enabling Comments for a Published Vocabulary

- Publishing to an EVN Explorer
  - check “Allow sending comments...”

Publish creates an entry for a Published vocabulary on the EVN Explorer server

Note definition for Short id below
EVN Explorer Setup

- **TopBraid EVN Configuration Parameters**
  - set EVN Explorer server to the server EVN Explorer is installed on
  - this can be the same as TopBraid EVN server (but not recommended when EVN Explorer has a high volume)
TopBraid EVN

- Learn more about EVN: http://www.topquadrant.com/topbraid/evn
  - Full documentation
  - Demonstration videos
  - Request evaluation server

- Contact info@topquadrant.com for questions