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www.sla.org

#SLA2019  #SLArocks  #AlwaysSLA
“Taxonomy Tools and Tool Evaluation”

SLA Taxonomy Division
Agenda and Presenters

Overview of Taxonomy Tools
• Presented by Heather Hedden
  Senior Vocabulary Editor, Gale, A Cengage Company
  *Author of The Accidental Taxonomist* (Information Today, 2016)

Evaluating Taxonomy Tools
• Presented by Marti Heyman
  Executive Director, Metadata Strategy and Operations, OCLC
Overview of Taxonomy Tools

Heather Hedden
Senior Vocabulary Editor, Gale, A Cengage Company
heather.hedden@cengage.com
What are “taxonomy tools”?  

- No authoritative industry list of taxonomy software  
- “Taxonomy software” can mean different things  
  - Thesaurus/ontology management software  
  - Auto-categorization/auto-classification software  
  - Mindmapping or concept modeling tools  
  - Other software with a key taxonomy component  
- Web lists are miscellaneous taxonomy tools or out-of-date  
  - [www.taxobank.org/content/thesauri-and-vocabulary-control-thesaurus-software](http://www.taxobank.org/content/thesauri-and-vocabulary-control-thesaurus-software)  
  - [www.taxotips.com/resources/tools](http://www.taxotips.com/resources/tools)  
  - [www.searchtools.com/info/classifiers-tools.html](http://www.searchtools.com/info/classifiers-tools.html)  
- Market is too small and specialized to be followed by industry analysts
Background

• Taxonomy, thesaurus, or ontologies - The distinctions are blurred. Most software enables the creation of a combination: taxonomy/thesaurus, thesaurus/ontology, taxonomy/thesaurus/ontology

• Excel suffices for flat term lists (such as for facets), and small hierarchical taxonomies, but not for the complexities of large taxonomies, thesauri, ontologies, or multilingual vocabularies.

• Software tools enforce/support standards, but not all the same standards: thesaurus or records management (ANSI/NISO or ISO), SKOS/RDF, OWL

• Software tools support integration with auto-classification, content management systems, SharePoint, etc.
### Summary of Controlled Vocabulary Types

<table>
<thead>
<tr>
<th>Term List</th>
<th>Synonym Ring</th>
<th>Authority File</th>
<th>Taxonomy</th>
<th>Thesaurus</th>
<th>Ontology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiguity control</td>
<td>Synonym control</td>
<td>Ambiguity control (Synonym control)</td>
<td>Ambiguity control (Synonym control) Hierarchical relationships</td>
<td>Ambiguity control Synonym control Hierarchical relationship Associative relationships</td>
<td>Ambiguity control (Synonym control) Semantic relationships Classes (Linked Data)</td>
</tr>
</tbody>
</table>

**Less Controlled Vocabularies - Complexity**

- Term List
- Synonym Ring
- Authority File

**More Controlled Vocabularies - Complexity**

- Taxonomy
- Thesaurus
- Ontology
Types of software for vocabulary management

• Spreadsheet software (Excel)
• Dedicated thesaurus/ontology management software
• Taxonomy creation & editing module of a content management, document management, digital asset management, collaborative software (SharePoint)
• Taxonomy creation & editing module of auto-classification (automated indexing) software
• Vertical market software for creating classification structures
• Proprietary programs developed in-house in organizations with large or core taxonomy management needs
### Types of software used by taxonomists

<table>
<thead>
<tr>
<th>Type of Software</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>An internally developed taxonomy/thesaurus management system</td>
<td>25.5%</td>
<td>36</td>
</tr>
<tr>
<td>Commercial dedicated thesaurus/taxonomy/ontology management software</td>
<td>22.7%</td>
<td>32</td>
</tr>
<tr>
<td>Commercial software, of which taxonomy management is a feature, module or component</td>
<td>12.1%</td>
<td>17</td>
</tr>
<tr>
<td>Open-source ontology/taxonomy management software</td>
<td>9.2%</td>
<td>13</td>
</tr>
<tr>
<td>Other commercial software that is not intended for taxonomies (such as a word processor, spreadsheet, or database management)</td>
<td>30.5%</td>
<td>43</td>
</tr>
</tbody>
</table>

Results of author survey for *The Accidental Taxonomist*, 2nd ed., conducted May 2015
Thesaurus/ontology software basic features

• Maintain terms/concepts and their relationships
  – As reciprocals
  – When renaming, merging, subsuming, or deleting terms
• Support controlled variants/NPTs/synonyms/alternative labels
• Support notes/definitions and other attributes for terms
• Manage categories or classes for terms/concepts
• Manage candidate and approved terms; term creation and update dates
• Generate reports in various display formats
• Export data in format for importing into a content indexing/search/retrieval system: CSV, Excel, HTML, XML (ZThes, RDF, SKOS, and OWL)
Software feature of enforcing thesaurus standards

Thesaurus standards: ANSI/NISO Z39.19-2005 (R2010) or ISO 25964

- Preferred terms (preferred labels) must be unique; no duplicates
- A nonpreferred term (alternative label) can point to only one preferred term (concept)
- A pair of terms (concepts) can be either hierarchically (broader/narrower) or associatively (related) linked to each other, but not both.
- Hierarchical relationship logic extends:
  - A is narrower to B, and
  - B is narrower to C,
  - C cannot be narrower to Term A.
Thesaurus software points of comparison

- interface design (default view) and ease of use
- multiple taxonomy display options
- term searching
- spell-checking
- speed (limited mouse clicks) for repeated term and relationship additions
- single-step new term & relationship creation
- single-step branch (term and narrower terms) moving
- drag & drop relationship adding
- user-defined (customizable) relationships
- user-defined term notes and term attributes
- bilingual or multilingual taxonomy support
- importing and exporting formats
- connectors to content SharePoint and enterprise search systems
- auto-categorization add-on module
- support for linked data
Commercial dedicated thesaurus/ontology management software

Includes:

• MultiTes Pro
• Synaptica KMS, Synaptica Graphite
• Data Harmony Thesaurus Master
• Semaphore
• Mondeca Intelligent Topic Manager (ITM)
• PoolParty
• TopBraid Enterprise Data Governance (EDG) Vocabulary Management
MultiTes Pro

Multisystems (Miami, FL)

[www.multites.com](http://www.multites.com)

- Single product independent vendor since 1983.
- Windows single user $295 (multi-user and enterprise packages also available)
- Web/cloud-based option: $4950/year per thesaurus for 20 accounts
- Thesaurus model ANSI/NISO Z39.19 based
- Supports user-defined relationships, classes, and notes; multilingual thesauri
- Imports delimited text. Outputs text, HTML, XML, SKOS/RDF, and CSV
- Add-on products: web development kit, enterprise development kit
- Free 1-month downloadable trial and online video tutorials
Synaptica

Synaptica Software LLC (Franktown, CO)

www.synaptica.com

Synaptica KMS (Knowledge Management System) – thesaurus model (since 1995)

Synaptica Graphite – SKOS ontology model on a linked data graph database (since 2018)

• Web browser-access, inside the firewall or hosted.
• Supports user-defined relationships, classes, and notes; multilingual vocabularies
• Features drag-and-drop editing, automatic term mapping
• Imports: CSV, Excel, XML (Zthes, RDF SKOS, RDF OWL). Exports also HTML, Word.
• Related add-on products: Indexing Management System (IMS), Text Analytics Platform (TAP), Image Annotation & Indexing, Linked Data Manager, SharePoint connector
• Online video tutorial for editing terms in Synaptica KMS
Synaptica KMS visualization
Synaptica Graphite
Data Harmony Thesaurus Master

Access Innovations (Albuquerque, NM)
www.dataharmony.com

• Commercial software (originally used for indexing in-house) offered since 1998

• Multi-platform java-based (used on Windows, Mac, Solaris, Linux). Client software allows remote access. Also a web-hosted version.

• Thesaurus model ANSI/NISO Z39.19 based

• Separately or combined with M.A.I. (Machine Aided Indexer) as MAIstro.

• Related products: XIS (XML Intranet System), Inline Tagging, Search Harmony

• API connectors for SharePoint, MarkLogic, OpenText, Oracle, SAP

• Access Innovations also offers taxonomy creation services.
Data Harmony
Thesaurus Master
taxonomy visualization
Semaphore

Smartlogic Semaphore Ltd. (London, UK)

www.smartlogic.com

• Introduced in 2006.

• Supports SKOS, RDF ontology standard, and ISO 25964 thesaurus standard

• Imports/export CSV, XML (RDF SKOS, Turtle, N Triple), SQL databases, and MultiTes files

• Related products: Classification Server for automated classification; Ontology Service for a navigation system

• Download free 30-day trial: https://trial.smartlogic.com/S4Trials/ (Sign in with LinkedIn.)
e-Commerce

Concept Class
No user class defined

Preferred Labels
Create a preferred label
e-Commerce en

Alternative Labels
Create an alternative label
alternative label > Electronic Commerce en

Metadata

Broader Concepts
Business practice and regulation

Narrower Concepts
Internet shopping

Smartlogic Semaphore
Semaphore ontology visualization

Term:

Apollo 15

Class:

Missions

Synonyms:


Term information:

Search Results:

No results found
Mondeca Intelligent Topic Manager (ITM)

Mondeca S.A. (Paris, France)

https://mondeca.com/itm

- Introduced in 2008
- Supports SKOS vocabularies and OWL-standard ontologies
- Linked data feature
- SharePoint term store connector
- Visualization of hierarchies and relationships
- Exports to Excel, XML, RDF, SKOS, and Topic Maps
<table>
<thead>
<tr>
<th>Countries and country groupings</th>
<th>Communication research and pol.</th>
<th>Information and communication</th>
<th>Information management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture</td>
<td>Documentary information proc.</td>
<td>Information industry</td>
<td>Information management</td>
</tr>
<tr>
<td>Education</td>
<td>Documentary information syst.</td>
<td>Information management</td>
<td>Information management</td>
</tr>
<tr>
<td>Information and communication</td>
<td>Information management</td>
<td>Information management</td>
<td>Information management</td>
</tr>
<tr>
<td>Politics, law and economics</td>
<td>Information sciences</td>
<td>Information sources</td>
<td>Information technology (hardware)</td>
</tr>
<tr>
<td>Science</td>
<td>Information technology (software)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATTRIBUTES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Name | es información/biblioteca, gestión  
fr information/bibliothèque, gestion  
en information/library management |
| URI | http://skos.um.es/unescothes/C02010 |
| in group | ▸ UNESCO Thesaurus  
▸ Information management  
▸ Information and communication |
| used for | fr gestion de la bibliothèque  
en library management  
es gestión de las bibliotecas |
PoolParty

Semantic Web Company (Vienna, Austria)
www.poolparty.biz

• Introduced in 2009.
• Built on W3C Semantic Web standards: SKOS, RDF, OWL, SPARQL
• Installed server or web-hosted options
• Can link domain-specific thesauri to Linked Open Data
• Import/export formats: Excel, N3, N-Quads, Trix, Binary-RDF, MultiTes, RDF/XML, Turtle, N-Triples, RDF/JSON, Trig, JSON-LD, and Zthes
• Add on modules: Concept Tagging, Linked Data Management, Semantic Search, Text Mining & Entity Extraction, Classification, Data Analytics & Visualization
• Connectors for SharePoint, Drupal, WordPress, Confluence, Alfresco, FontoXML
• Download free 30-day trial: http://www.poolparty.biz/test-demo/thesaurus-server-entity-extractor
Pool Party
TopBraid Enterprise Data Governance (EDG) Vocabulary Management

TopQuadrant Inc. (Raleigh, NC)

www.topquadrant.com/products/topbraid-edg-vocabulary-management/

Originally as Enterprise Vocabulary Net (2010), stand-alone vocabulary management tool (replacing Enterprise Vocabulary Net) or module of TopBraid Enterprise Data Governance, introduced in 2016

• Web-based access to a Linux server installation, with browser access
• Based on a graph database
• Taxonomies in SKOS or SKOS-XL; ontologies based on SHACL or OWL
• Import/export formats Excel/CSV, XML, RDF/OWL
• Automatic creation of crosswalks between two vocabularies
• Video demos at: www.topquadrant.com/knowledge-assets/videos
TopBraid EDG Vocabulary Management
TopBraid EDG
Vocabulary Management visualization
Free and Open Source Software

- **Protégé** – Developed by the Center for Biomedical Informatics Research at Stanford University School of Medicine. [https://protege.stanford.edu](https://protege.stanford.edu)
  - Dedicated ontology software; not so suitable for taxonomies/thesauri

- **VocBench** – Developed by the Artificial Intelligence Research group at University of Tor Vergata, Rome [http://vocbench.uniroma2.it](http://vocbench.uniroma2.it)
  - For OWL ontologies, SKOS/(XL) thesauri
  - Introduced in 2010 for UN Food & Agriculture Organization’s AGROVOC thesaurus.
  - Now funded by the EU European Commission's ISA² program. Current version 3.
  - Can be installed on a web server or on a single desktop

- **TemaTres** – *Originally* developed by the Library and Information Science program of the University of Buenos Aires [https://www.vocabularyserver.com](https://www.vocabularyserver.com)
  - Available On-Premise on a web server; Software as a Service (SaaS), or On-Demand
  - Version 3.0, November 2017
  - Uses SKOS model and supports ISO thesaurus standards
Thesaurus/Ontology Management Software - Other

• a.k.a. by Synercon – information management software with taxonomy/thesaurus/ontology component; Australian company
• Coreon – taxonomy/thesaurus + terminology management; German company
• Lucidia’s STAR/Thesaurus – part of the CuadraSTAR (2008 acquisition) suite, software marketed at libraries, archives, and museums
• Soutron Global – library management system with thesaurus component
• Unilexicon – web hosted open source, but all vocabularies are open, too.
• Wordmap – offered by a consulting company (Earley Information Science), not their main focus
Software for indexing/tagging content with controlled vocabulary terms

Different methods:
• Manual indexing
• Automated indexing/auto-categorization
• Machine-aided indexing

Different types:
• Dedicated software, if automated (but not for manual)
• Add-on module to the taxonomy management software (usually for automated)
• Component of a content management system, if manual (not for automated)
• Custom-built
Auto-Classification Software

Example dedicated tools for auto-classification/automated indexing

Taxonomy management components, if any, are limited.

(Create the taxonomy in an external management tool.)

• Attivio
• BA Insight
• Concept Searching
• Coveo
• Expert System
• Lexalytics
• Lucidworks
• OpenText
• SAS Text Miner
• Sinequa
Evaluating Taxonomy Tools

Marti Heyman
Executive Director, Metadata Strategy and Operations
OCLC
heymanm@oclc.org
Setting the Context

• My assumptions:
  • You have an enterprise-wide taxonomy program underway
  • You have sufficient corporate support to fund at least yourself
  • You have sufficient business support that you have subject matter experts assisting you
  • You’ve reached the point where you sense a taxonomy management package is needed
Setting the Context

• My case for the Spec & Select effort:
  • You’ve invested significant time and money in developing the enterprise-wide controlled vocabularies you have
  • You’ve invested significant time and effort gaining the confidence of management in your judgment
  • You’ve invested significant time and effort establishing your credibility

So, why risk all that for the sake of saving a small amount of time?
## Possible Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over kill</td>
<td>• Bought more than you needed</td>
</tr>
<tr>
<td>Under kill</td>
<td>• Didn’t buy as much as you needed</td>
</tr>
<tr>
<td>Road kill</td>
<td>• Conflicts with IT infrastructure and other systems</td>
</tr>
<tr>
<td>Living the Good Life</td>
<td>• Bought just what you needed for now with a little room to grow!</td>
</tr>
</tbody>
</table>
The Process Blueprint

Phase 0: Define your team
Phase 1: Business Requirements
Phase 2: Functional Requirements
Phase 3: Features Scorecard
Phase 4: Vendor short list
Phase 5: Live demonstrations
Phase 6: Analyze scores
Phase 7: Vendor due diligence
Phase 8: Purchase
Phase 9: Implement
The Process Blueprint

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Spec. & Select
The Process Blueprint

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Spec. & Select
Sample business requirements

• Make the enterprise vocabulary accessible and available to a geographically dispersed set of taxonomy managers
• Make the enterprise vocabulary accessible to all applications that depend on it
• Ensure scalability of the enterprise vocabulary
• Low operating costs
• Unix environment compliant
Identifying functional requirements

• This can be trickier
• Be sure you have the use case(s) and technical constraints clearly in mind
• Challenge what is a true “requirement” (i.e. necessity)
Step 1: Map the Process

1. Identified Business Need
2. Create Taxonomy
3. Implement and Manage Taxonomy
4. Enterprise Taxonomy
Step 2: Drill Down

1.1 Generate list of candidate terms

1.2 Define relationships between terms and create scope notes.

1.3 Enter attributes for all terms

1.4 Review terms for accuracy, completeness and relevancy

- Are there typographical errors?
- Are there terms missing from the list?
- Are there irrelevant terms?
- Are there missing relationships?
- Have all term attributes been entered?

Make additions, deletions and modifications as needed.

Is the scope note comprehensive?

- YES
- NO

Change Term state from Candidate to Approved
Capture the full context

• Design Considerations
  • Supports multiple languages including foreign characters.
  • Compliant with ANSI/NISO Z39.19.

• Business Rules
  • A single term may exist in multiple categories.
  • Duplicate terms can not be entered.
  • New terms exist in the “Candidate” state. All terms must be reviewed by a second person before being moved to the “Approved” state.
## Sample functional requirements

### 1.0 General

<table>
<thead>
<tr>
<th>1.1</th>
<th>Supports multiple categories.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
<td>Supports multiple languages, including foreign characters</td>
</tr>
<tr>
<td>1.3</td>
<td>Compliant with ANSI/NISO Z39.19</td>
</tr>
</tbody>
</table>

### 2.0 Term Creation/Editing

| 2.1 | General editing - multi term select using ctrl and shift |
| 2.2 | General editing - right mouse menu for **undo**, cut, copy, paste, select all |
| 2.4 | General editing - inbuilt spell check software for global spell-check (automatically runs on “save record” action) |
| 2.5 | Prevents duplicate term entry (any level). System should warn that the term already exists. |

### 4.0 Relationship Creation/Management

| 4.1 | Automatic reciprocal relationship management. |
| 4.2 | Ability to create and delete relationship types without developer assistance. BT/NT, RT, Use/Use for…… |
| 4.3 | Poly-hierarchies (i.e. ability for a single term to be in more than one category). |
The Process Blueprint

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Spec. & Select
## Sample Score Card

### Taxonomy Features Review Sheet

<table>
<thead>
<tr>
<th>Relevant User Group</th>
<th>Feature</th>
<th>Priority</th>
<th>Vendor 1</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>All (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>General - Supports multiple Languages</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>General - ANSI/NISO Z39.18 compliant</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>General - Windows operating system compliant</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Editing - Ability to select multiple terms</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Editing - Built-in Spell checker</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Editing - Prevent duplicate term entry within a category. Warn when duplicate is entered</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Administration - terms should not be deleted by taxonomy managers, just changed to an inactive status</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System</td>
<td>Relationship Mgmt - Poly-hierarchies (i.e. Ability for a single term to be in more than one category)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Workflow - There should be an audit trail showing changes</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Workflow - roles should be used when defining taxonomy managers responsible for each workflow step. Ability to change the roles without developer assistance</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>Display - Ability to see full record of a term on the screen (relationships, attributes, comments, etc.)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>Reporting - Ability to export reports in a common format (CSV, XML, etc.)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Import/Export - Import/Export terms, categories, taxonomies in a standard format (CSV, XML, etc.)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Search - Search across all terms and all categories (taxonomies) and attributes</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Security - Ability to set security at a category (taxonomy) level</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>Help - On line help, quick reference guide</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Sample Completed Score Card

<table>
<thead>
<tr>
<th>Relevant User Group</th>
<th>Feature</th>
<th>Priority</th>
<th>Priority Value</th>
<th>Vendor 1</th>
<th>Comments</th>
<th>Vendor 2</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>General - Supports multiple Languages</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>A1 (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>General - ANSI/NISO Z39.13 compliant</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>A1 (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>General - Windows operating system compliant</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Editing - Ability to select multiple terms.</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Editing - Built-in Spelling checker.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Editing - Prevent duplicate term entry within a category. Warn when duplicate is entered.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Administration - terms should not be deleted by taxonomy managers, just changed to an inactive status.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>System</td>
<td>Relationship Mgmt - Poly-hierarchies (i.e. Ability for a single term to be in more than one category).</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Workflow - There should be an audit trail showing changes.</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Workflow - roles should be used when defining taxonomy managers responsible for each workflow step. Ability to change the roles without developer assistance.</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>A1 (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>Display - Ability to see full record of a term on the screen (relationships, attributes, comments, etc.)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>A1 (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>Reporting - Ability to export reports in a common format (CSV, XML, etc.)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Import/Export - Import/Export terms, categories, taxonomies in a standard format (CSV, XML, etc.)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Search - Search across all terms and all categories (taxonomies) and attributes.</td>
<td>1</td>
<td>0.5</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Taxonomy Managers</td>
<td>Security - Ability to set security at a category (taxonomy) level.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>A1 (Content Mgrs, Taxonomy Mgrs, End Users)</td>
<td>Help - On-line help, quick reference guide</td>
<td>1</td>
<td>0.5</td>
<td>1</td>
<td></td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**Total:** 15.1
The Process Blueprint

Phase 0: Define your team
Phase 1: Business Requirements
Phase 2: Functional Requirements
Phase 3: Features Scorecard
Phase 4: Vendor short list
Phase 5: Live demonstrations
Phase 6: Analyze scores
Phase 7: Vendor due diligence
Phase 8: Purchase
Phase 9: Implement

Spec. & Select
Key Points

• **Requirements**: to purchase the software that meets your needs and expectations, you need a strong, clear, unambiguous definition!

• **Process Blueprint**: follow a tried and true path to success and ensure you have the data to explain your decisions

• Ensure **stewardship** of corporate funds

• Avoid being road kill, spend the **time** to do the “front-end analysis” work
The Process Blueprint

Phase 0: Define your team
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Phase 8: Purchase
Phase 9: Implement
Taxonomy Tools and Tool Evaluation

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Marti Heyman (heymanm@oclc.org)