SharePoint Managed Metadata – a Great Option

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Target Audience: Businesses and organizations that currently utilize Microsoft SharePoint, or are in the planning stage for a new SharePoint deployment

Besides our core capabilities of assisting our business customers with their mobile and web application needs, Performix Business Services also specializes in developing semantic and cognitive computing functionalities for our customers. These are typified by applications incorporating features such as:

1. Semantic Web (<https://en.wikipedia.org/wiki/Semantic_Web>) enabling of existing web sites;
2. Web of Data (<https://en.wikipedia.org/wiki/Data_Web>) and Linked Data (<https://en.wikipedia.org/wiki/Linked_data>) based applications;
3. Enhancing existing applications (e.g., SharePoint, blogs or other content management/search applications) with controlled vocabularies, taxonomies or ontologies;
4. Advanced cognitive computing applications using natural language processing and machine learning;
5. Data-science and big-data analysis applications that leverage semantic information sources as well as numeric data.

Such applications might leverage various new technologies such as IBM Watson Explorer (<https://www.ibm.com/products/watson-explorer> <https://developer.ibm.com/watson/blog/2016/06/23/announcing-the-launch-of-ibm-watson-explorer-v11-0-1>) and other IBM Watson services (<https://www.ibm.com/watson/products-services> <https://www.ibm.com/watson/developer>), Wikipedia data ([https://www.wikidata.org/wiki/Wikidata:Main\_Page](https://www.wikidata.org/wiki/Wikidata%3AMain_Page)) and Semantic Wikis (<https://en.wikipedia.org/wiki/Semantic_MediaWiki>), Google’s Knowledge Graph (<https://en.wikipedia.org/wiki/Knowledge_Graph>), or Bing’s Knowledge and Action Graph (<https://www.bing.com/partners/knowledgegraph>).

A particularly interesting example, under category (3) above, is the possibility of upgrading existing deployments of Microsoft’s SharePoint to properly take advantage of SharePoint’s so-called *Term Store* capabilities – which can greatly enhance the end-user’s SharePoint experience by making it much easier to search and navigate through SharePoint documents. The basic idea is to take advantage of a new term-store feature that was introduced in SharePoint 2010 and enhanced in SharePoint 2013, and which facilitates the introduction of standardized *controlled vocabularies* that can be used for searching and navigation.

Such vocabularies need to be carefully defined and organized to suit the customer’s particular domain. The vocabulary might be arranged into a hierarchy (i.e., a terminology tree arranged from more general to more specific), which is referred to as a *taxonomy*. Or, it might be based on a more complex terminology graph structure that is so advanced that it is referred to in the literature as an *ontology* (a word that the artificial-intelligence computer scientists borrowed from the philosophers). This general capability is called *Managed Metadata* in SharePoint 2013 (see “Introduction to managed metadata” at <https://support.office.com/en-us/article/introduction-to-managed-metadata-a180fa28-6405-4679-9ec3-81d2028c4efc> and “Overview of managed metadata in SharePoint Server 2013” at <https://technet.microsoft.com/en-us/library/ee424402.aspx>).

There is a night-and-day difference between the typical SharePoint implementation and a SharePoint that has been metadata-enabled by means of the managed-metadata feature set along with a suitable ontology or taxonomy loaded into its term store. Without managed metadata, SharePoint navigation and search can work well, but only if the SharePoint management team has done a superb job of structuring the documents loaded into SharePoint, or customizing the deployment to suit the organization’s needs. Quite often, however, documents end up being stored in a more-or-less randomly grown document hierarchy that makes it difficult for the user to find the correct document – even if they know it’s in there somewhere. But by properly implementing a domain taxonomy via the SharePoint managed-metadata feature, even an inherently disorganized SharePoint can become easily searchable and easily navigable – via a well-known terminology organized into a hierarchical taxonomy.

Our professional opinion is that properly leveraging the SharePoint managed-metadata feature along with a well-designed taxonomy can change SharePoint from today’s OK application into tomorrow’s “killer app.” However, it is crucial that the taxonomy loaded into SharePoint’s term store be designed properly to suit the domain. The enhancements to search and navigation will only be as good as the taxonomy, and require planning (see “Plan terms and term sets in SharePoint Server 2013” at <https://technet.microsoft.com/en-us/library/ee519604.aspx>) in addition to careful taxonomy development. Care must also be given to which terms should be so-called “enterprise keywords” versus “managed terms.”

Performix has the capability to guide our customers through the process of developing a suitable domain taxonomy that can be loaded into SharePoint’s managed metadata. We have technology partners who specialize in developing domain taxonomies for a broad range of business domains including government, commerce, banking, financial, etc. In many cases it would be smart to start out with one of these pre-developed base taxonomies; and then it is quite likely that this base taxonomy should be further customized to suit the customer’s needs. Some of these base taxonomies are available in a format that is trivially loadable into SharePoint. During customization a suitable tool suite would be used, but the final edited result would similarly be exported in a format ready to load into SharePoint. In other cases it may be necessary to build a taxonomy from scratch (albeit leveraging available resources such as WordNet, Wiktionary, OpenCyc). In all cases, Performix would work with a customer team of domain experts to collaboratively develop a suitable taxonomy (or ontology, if warranted).

Microsoft notes these general advantages of utilizing the managed-metadata feature of SharePoint:

* Better search results – since searching for a managed term or an enterprise keyword is likely to retrieve more relevant results;
* More consistent use of terminology – since enabling managed metadata encourages SharePoint document creators to utilize managed terms – and not (unmanaged) synonyms (see “Best practices for organizing content for search in SharePoint Server 2013” at <https://technet.microsoft.com/en-us/library/jj683124.aspx>);
* Dynamic behavior – since choices need not be hard-coded, and terms (and product names, if part of the terminology) can be dynamically updated later on as terminology/product-names change.

In addition, a crucial new *Managed Navigation* feature was added in SharePoint 2013. This is an alternative to SharePoint’s traditional structured navigation, and it allows you to base your website navigation structure on your taxonomy, thus making navigation easier to use. This also keeps the navigation hierarchy dynamically adaptable to inevitable changes (via straightforward taxonomy changes, rather than the more complex changes otherwise needed). Using this feature means that the user can navigate through SharePoint documents in a logical and semantic manner – essentially navigating via the taxonomy that was deployed into SharePoint’s managed metadata. We believe that the managed navigation feature should be preferred in almost all SharePoint deployments – with rare exceptions for those cases in which the original structured navigation deployment was implemented so well that it perfectly suits users’ needs, and with very little structural chaos added over time so that there is little need for dynamic adjustment to the navigation tree.

Therefore, our professional opinion is that most customers would benefit from switching to managed navigation (or starting out with managed navigation for a new SharePoint installation) – of course, along with deployment of a suitable taxonomy. For more analysis of this new feature, see “Manage Data with the SharePoint Term Store” at <http://www.cmswire.com/cms/information-management/manage-data-with-the-sharepoint-term-store-019864.php>, and “Using the SharePoint 2013 Term Store to Drive Navigation” at <http://microsoftstrategy.com/using-the-sharepoint-2013-term-store-to-drive-navigation>.

In summary, we encourage our SharePoint customers to consider developing a suitable domain taxonomy (or ontology if more semantic structure is appropriate), and deploying it into the Managed Metadata feature, along with enabling the Managed Navigation feature. Performix will gladly be your guide in navigating (no pun intended) this relatively new semantic-enabling feature of the SharePoint technology stack.