

# Empowering Digital Libraries Users through Combining Taxonomies with Folksonomies

## Introduction

Given the increase in the number and heterogeneity of digital resources, it has become increasingly difficult for researchers to find relevant contents in their own areas, let alone related disciplines. As more users move into the more self-structured digital environment, a new paradigm for user experience will be required.

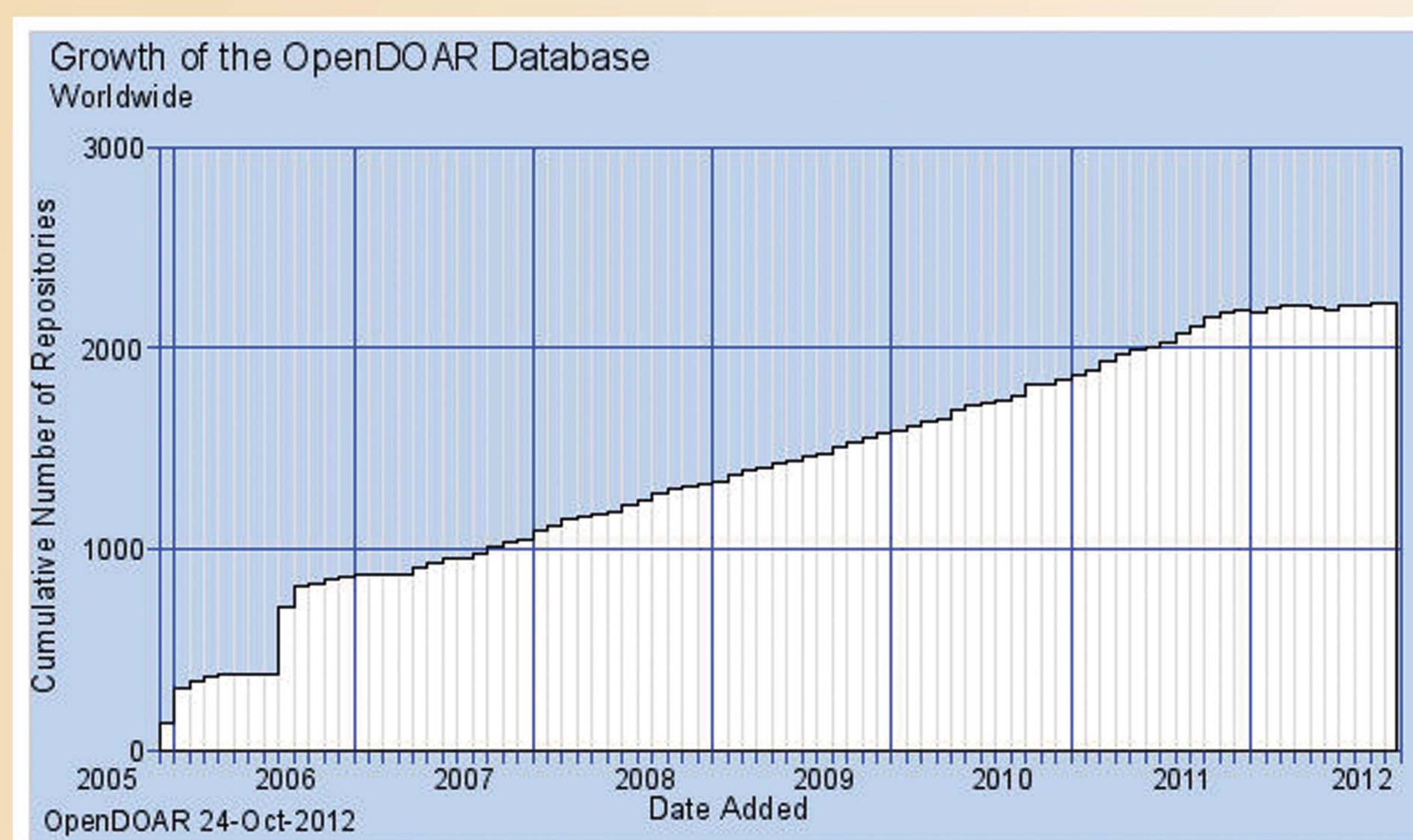


Figure 1. World wide growth of institutional repositories.  
Source: Open DOAR (October 2012)

## Trends

Various emerging trends are already taking shape, including:

- Huge multimedia digital libraries instead of documents
- Complex retrieval systems instead of matching queries and document representations
- Visualization of the information space instead of a ranked list of search results
- Human behavior information instead of information need
- Users as both creators and consumers of information
- Bottom-up/user-assisted indexing instead of a “top-down approach to indexing by trained professionals

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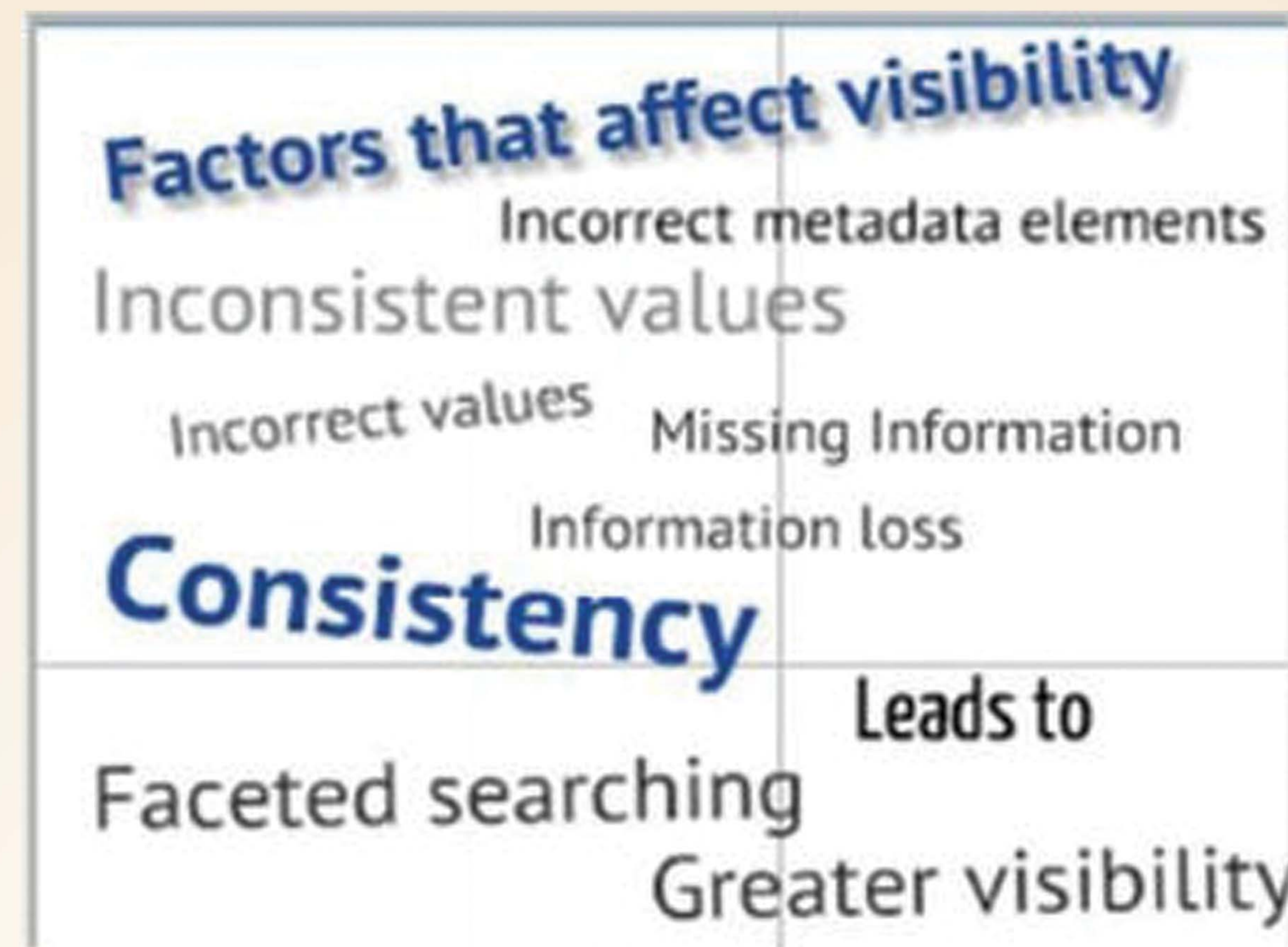


Figure 2. Metadata Quality Issues and Considerations

Considering the growing interdisciplinarity and constant changes and development of information and knowledge management; traditional approaches may not adequately address the users' diverse requirements and needs. Digital resources demand a more specialized treatment and characterization that can help to better capture the semantics and relations of the underlying concepts.

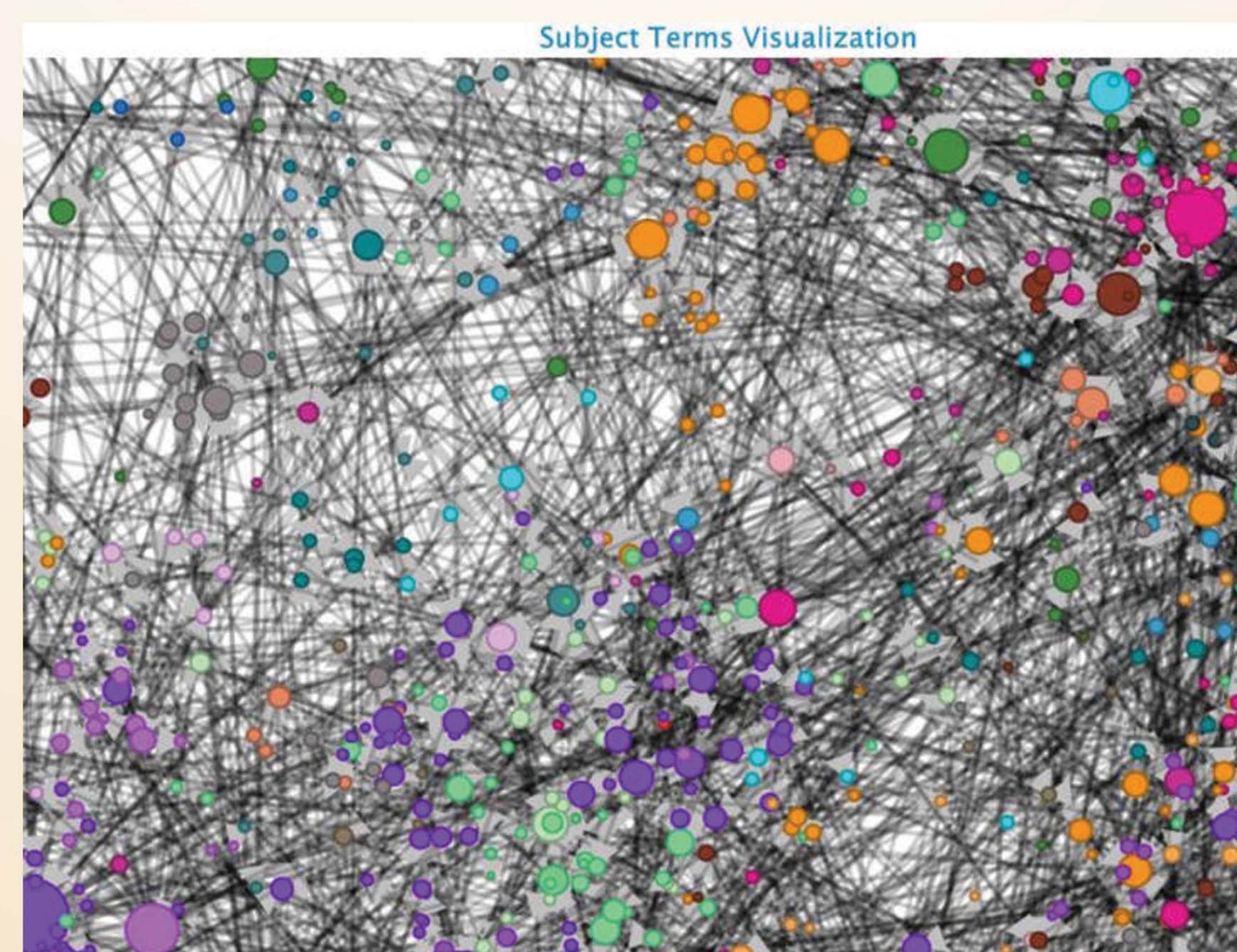


Figure 3. Subject Terms Visualization

## Taxonomies vs. Folksonomies

The generation of an accurate indexing term, i.e. a representation of an information-bearing object, is fundamental to the discovery, use, and reuse of digital resources. Indexing enhances the accessibility and value of a resource, provided that it is based on a thorough analysis of the resource. This raises the question of whether user-supplied tags complement traditional indexing by professionals in ways which significantly improve information retrieval. Although different metadata schemas are often mutually complementary, good subject or keyword terms help users find what they need, even when they are not aware of their needs.

## Summary

Access to digital resources relies on a seamless discovery process that offers all possible options to users. Different metadata schemas are often mutually complementary, but good subject or keyword terms help users find what they need, even when they are not aware of their needs. The greater consistency in metadata will lead to more faceted searching by sophisticated open source search engines. Considering the emerging applications, combining both traditional indexing systems with folksonomies is the solution for delivering a richer user experience of digital libraries as well as on the Web while leveraging the benefits of composite applications, mash-ups, and Service-Oriented Architectures. Such an aggregation will add values and enhance a digital library user's ability to find, access, use, and re-use available digital objects.