CASE STUDY: Optimizing Digital Content for Discovery and User Experience

Background

Our client, ASM International, is the world’s largest and most established materials information society, producing various journals, magazines, reference books and databases for the materials science community. Working with membership, management and other stakeholders, ASM developed a strategic content initiative in order to:

1. Increase the value of the content through updated functionality and user experience;
2. Drive discovery and usage to support increased sales; and
3. Enable new product offerings and content reuse options.

Scope designed an end-to-end service approach in collaboration with ASM’s stakeholders including their new hosting platform vendor. This enabled a seamless migration of the client’s legacy content into the platform, enriched with descriptive metadata generated by Scope for better discoverability.

Creation of a Thesaurus

Central to ASM’s vision was enabling users to search and navigate across all content types. To enable this, Scope’s team of subject matter experts (SMEs) and experienced taxonomists developed a faceted thesaurus of more than 6,300 descriptive terms—including synonyms and related terms—encompassing the client’s domain or subject areas.

The process involved:

- Deep analysis of the client’s corpus of content, using Scope’s AI-enabled technology along with a specialized team of SMEs in the client’s domain;
- Extraction of key terms and concepts, organized into the appropriate hierarchical structure;
- Application of Synaptica® KMS, a knowledge modelling environment for creating relationships and adding synonyms, and for enabling online review by Scope and client-side SMEs;
- A multi-phase review process with the client at various stages of thesaurus development;
- Final delivery of the thesaurus to the client’s hosting platform, along with content files enriched (tagged) with the thesaurus terms developed.
Converting Content to Custom Specifications

Migrating ASM’s legacy content to their new platform required conversion of files to accommodate new platform requirements and specific use cases. Scope leveraged a custom-built XML conversion tool for exporting the client’s SGML content directly into the custom BITS XML schema required.

Indexing for Maximizing Discovery and SEO

Enriching the new content files included the application of thesaurus terms. For this, Scope employed its proprietary InDEXr™ platform for tagging the content in a semi-automated, expert curated environment. This produced accurate and highly structured indexes essential for improving SEO and content discovery.

Abstracts and Keywords—Additional Descriptive Metadata

Abstracts and keywords function as additional descriptive metadata that can be leveraged in search engines, library holdings systems, and other important discovery environments. To produce these, Scope leveraged its semi-automated AI enabled platform ConSCIse™. Driven by the client’s new thesaurus along with unique knowledge repositories in multiple subjects/domains, ConSCIse leverages machine learning, natural language processing to identify key terms, concepts and sentences within book chapters and other long-form content. The resulting metadata helps drive discovery and improves the user’s experience with the content.

The Critical Role of SMEs

AI-based abstraction and indexing provides the necessary scalability to handle high volumes. However, the role of the SMEs is critical in ensuring the contextual relevance and technical accuracy of the output, especially in research and data-intensive domains such as Science, Engineering Technology and Medicine. This semantic tagging and descriptive metadata, if not properly curated, can produce inaccurate search results and content relationships that frustrate users and erode the credibility of content.

Enriched metadata improves the precision and the recall of search results, thereby increasing the likelihood of content being discovered, used and purchased—in the client’s primary website, Google, library discovery platforms and other third party search environments. Accurate, well structured metadata is the most important contributor to discovery and Search Engine Optimization.