Chapter 10
IATOPIA iCMS KnowledgeSeeker – An Integrated Content Management System and Digital Asset Management System (DAMS)

Abstract. IATOPIA iCMS KnowledgeSeeker is an integrated solution which has adopted the KnowledgeSeeker technology to develop various ontology based application, such as the IATOPIA Digital Asset management System. IATOPIA DAMS provides a centralized databank to categorize, manage, store and retrieve different types of digital asset, i.e. text articles, photos, videos and audio data. With IATOPIA patented Ontology System, users can define their own concept tree(s) to annotate (tagging) the attributes for all digital assets which can be used for different web channels, e-archive systems and search with IATOPIA patented ontology-based search engine.

10.1 IATOPIA iCMS KnowledgeSeeker

IATOPIA integrated Content Management System (iCMS) is an integrated and patented solution designed and implemented for IATOPIA.com limited. It provides solution for different content providers such as publishers, media, new agencies, libraries to organize, manage, search, data-mining, archive and retrieve their digital assets (e.g. news articles, photos/images, videos, audio clips) from IATOPIA patented centralized iCMS databank. With the integration of IATOPIA iCMS and the ontological KnowledgeSeeker system, all digital contents can be enhanced and organized by ontology based knowledge. The digital contents can be retrieved and disseminated through different channels such as IATOPIA Web Channels, IATOPIA e-publications, and mobile applications including iPhone and Windows Mobile.

10.1.1 System Features

IATOPIA iCMS KnowledgeSeeker is an ontological system that is used to manage and organize all digital content inside the iCMS by using ontology approach.
The IAOPITA iCMS KnowledgeSeeker consists of a content databank cluster, an ontology index databank, and an IATOPIA ontological search engine. iCMS KnowledgeSeeker search engines use ontology approach to analyze Chinese text content (such as news articles), and also use the concept of semantic web to organize information semantically. iCMS KnowledgeSeeker also uses the ontology approach to identify the article topics (a text classification process). It has been tested and experimented with high performance, and has shown that it is a practical approach for using ontology technology to develop the search engine model.

10.1.2 System Model and Architecture

The IATOIPA iCMS KnowledgeSeeker consists of three components (Figure 10.1), the process flow between those components is shown in Figure 10.2:

1. IATOPIA Ontology and Content Index – it stores all ontology information and all analyzed information about all iCMS contents, including the ontology based index.
2. IATOPIA Ontological Search Engine – it integrates the process of content analysis, content indexing, index searching, and responses to user with the search result.
3. IATOPIA iCMS Databank Cluster – it stores all the original sources of content files, including article, audio, video, images, e-publication data, etc.

![Fig. 10.1 The system architecture of iCMS KnowledgeSeeker](image-url)