

# Concept Glossary Manager – Topic Maps Engine and Navigator

Jakub Strychowski

Rodan Systems S.A, Sopot, Poland

**Abstract.** The Office Objects Concept Glossary Manager (CGM), which has been designed by the author as a software component of the ICONS system, helps to create, edit and visualize topic maps. Interesting features of the CGM are distributed topic maps processing, user rights management, topic states and versions management, ontology driven generative user interfaces and Topic Maps Script Language (TMSL). This paper also overviews an example application of the component. In the final section some weaknesses of the CGM are identified and possible improvements are suggested.

## 1 Introduction

The ICONS project realized under the European Commission's Fifth Framework Program focused on bringing together into a coherent, web-based system architecture the advanced research results, technologies, and standards, in order to develop and further exploit the knowledge-based, multimedia content management platform [ICONS] [Staniszki]. One of the ICONS components is the Concept Glossary Manager (CGM), whose main functions include storing, processing and visualizing sets of concepts.

In order to be well understood, the word "concept" should be defined. From the perspective of the Concept Glossary Manager, a concept holds informations about a real or abstract subject. A subject can be described by names and definitions written in various languages, links to external resources and relations with other subjects. The Topic Maps ISO standard [Biezunski] [Park] was selected as a base solution for architectonic issues of the Concept Glossary Manager, because the structure of a concept is similar to the standardized structure of a topic.

In fact, the Concept Glossary Manager is a software module which helps to create, edit and visualize topic maps. The module consists of the following components:

- **Topic Maps Engine.** The engine manages topic maps stored in relational databases or on remote Topic Maps Servers, imports and exports XTM files, controls user permissions, provides searching and querying functions, and so on.
- **Topic Maps Navigator.** A Web application based on the Struts technology, which allows for a visualization and **modification** of topic maps. From a user's point of view, the navigator is a thin client application which works

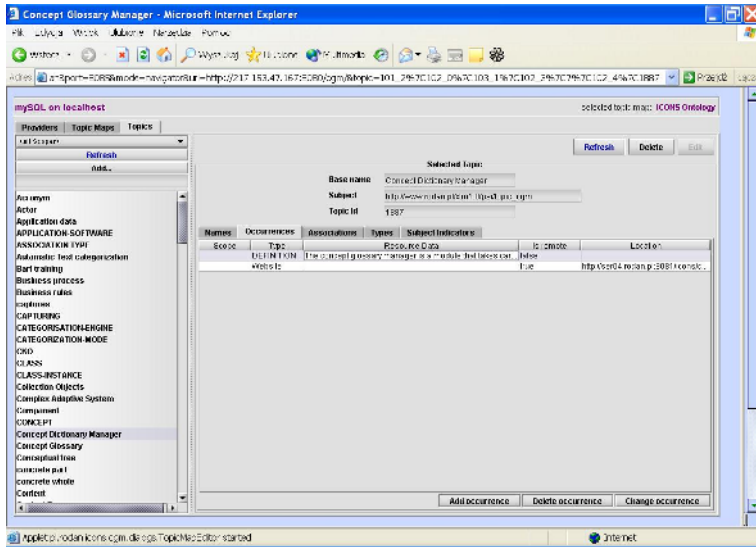


Fig. 1. The Topic Maps Editor in action

in a Web browser. The major advantage of the navigator is its rich flexibility ensured by generative, ontology-driven user interfaces.

- **Topic Maps Server.** A system service (a daemon) sharing topic maps between many processes, hosts and applets. The server uses a single instance of the engine to persist topic maps, and serves persisted topic maps to the

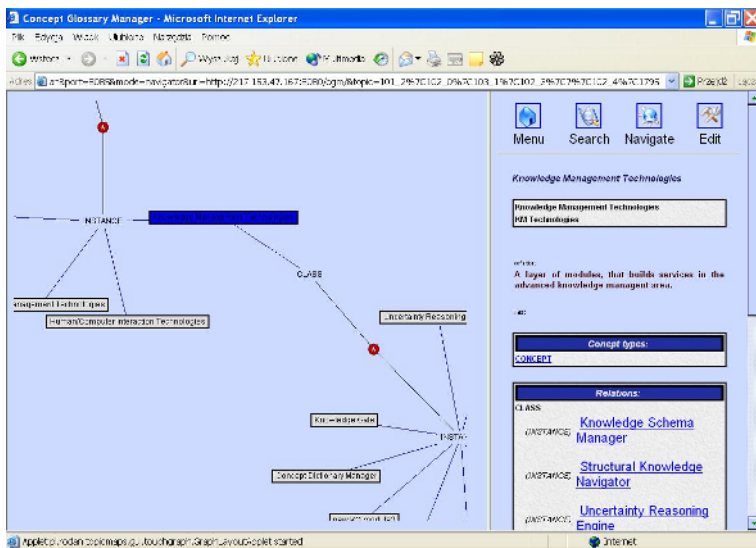


Fig. 2. The TouchGraph Applet in action