Information Diffusion across Interactive Online Media (IDIOM)

FIT-IT Semantic Systems Project

www.idiom.at

IDIOM is a two-year research project funded by FIT-IT Semantic Systems, a program of the Austrian Federal Ministry of Transport, Innovation and Technology in cooperation with the Austrian Research Promotion Agency. The project aims to:

- investigate new visual interfaces to create, access and analyze electronic content;
- reveal fundamental mechanisms of information diffusion across various types of interactive media.

Recent advances in collaborative Web technology are governed by strong network effects and the harnessing of collective intelligence. As a result, information spreads rapidly across Web sites, blogs, Wiki applications, and direct communication channels between members of online communities who utilize these services. IDIOM investigates electronic interactivity via a generic, service-oriented architecture. It provides tools to build and maintain contextualized information spaces, an ontology-based framework for analyzing content diffusion and interaction patterns within these spaces, and visual interfaces to seamlessly switch between semantic and geospatial topologies.

IDIOM introduces *Knowledge Planets* as a radically new interface metaphor that leverages the new generation of geo-browsing platforms such as NASA World Wind and Google Earth as a front-end for its portfolio of semantic services.
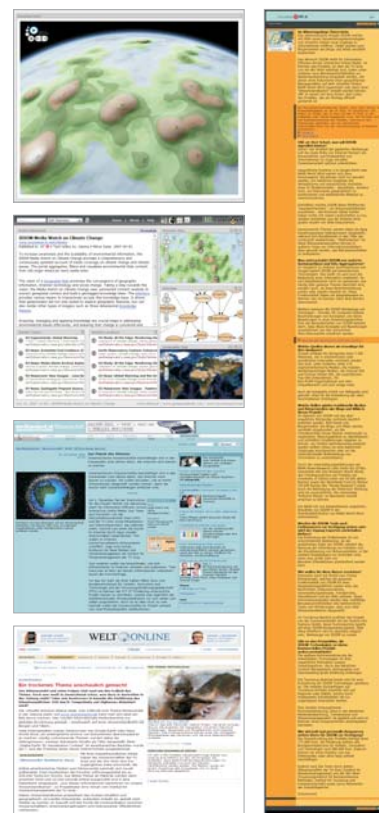
Linguists define "Idiom" as an expression whose meaning is different from the literal meanings of its component words. Similarly, the study of information diffusion promises insights that cannot be inferred from individual network elements. Despite rapidly growing research interest, the "Web 2.0" is still dominated by prototypes and mash-ups. At the same time, media monitoring and corporate knowledge management projects lack analytical frameworks, focus on one particular medium, or neglect the dual role of users as consumers and producers of information. IDIOM addresses these gaps to reveal fundamental mechanisms of information diffusion across media with distinct interactive characteristics, providing a set of generic services to analyze the production and consumption of electronic content simultaneously.

IDIOM is jointly pursued by MODUL University Vienna (Department of New Media Technology), the Vienna University of Economics and Business Administration (Research Institute for Computational Methods, Institute for Tourism and Leisure Studies), Graz University of Technology (Knowledge Management Institute) and three industry partners (Gentics, Prisma Solutions and the Austrian National Tourist Office).

Knowledge Representation (Ontology, Social Network, Spreading Activation Network)
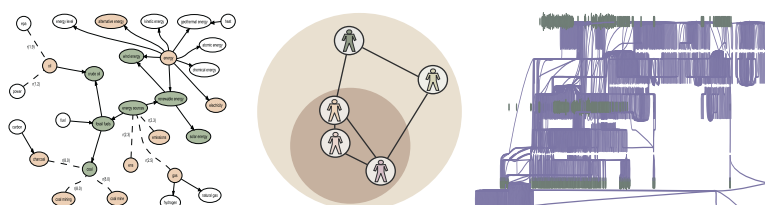
Screenshots and Media Coverage

IDIOM System Architecture