## Open Journals Project

Dr. Gary Hill & Dr. Leslie Carr
Multimedia Research Group
University of Southampton
gjh@ecs.soton.ac.uk

The Open Journal Project (part of the UK's Electronic Libraries programme) uses hypertext techniques to address the issue of integrating the disparate information resources that may be provided by Electronic Libraries. In particular, it uses distributed link and document management services to add a layer of hypermedia facilities to journals, documents and databases distributed by the World-Wide Web, combining in a configurable fashion different sets of document and data resources with different databases of links.

The major technology within the project is the Distributed Link Service, which is used to augment the WWW's document delivery service. It takes the linking philosophy implemented in the Microcosm system and extends it for use in a large-scale hypertext environment.

There are two aspects to the implementation of the Distributed Link Service: the client side interface tool, and the server-side link database utilities. All communication between the client and server is provided using standard WWW protocols. The DLS client uses a standard WWW client to send linking requests encoded as URLs. These URLs allow the client to access a link server which operates via a WWW server.

The server facilities of the DLS are implemented as CGI scripts, and are accessed using a standard WWW server. The main scripts are those that allow the creation, following and editing of links which are stored in link databases. By choosing which sets of link databases are used for each hypertext operation, the author and reader can lay a configurable web of links over the published WWW resources.

The project is aimed to benefit readers (journal subscribers or library users) by increasing the amount of relevant information available to them via subject-specific content-based links. It also aims to benefit publishers by allowing them to easily reconfigure and republish their information assetts.

## PageJokey, an object-oriented hypermedia design environment

Sylvain Fraissé, Jocelyne Nanard, Marc Nanard
LIRMM
mnanard@lirmm.fr

PageJokey is the prototype of an integrated hypermedia design environment developed at LIRMM. It supports the design process for stepping from linear raw data, such as texts, to strongly structured hypermedia documents. The major feature is a generator which turns a non hypertext markup into a hypertext structure according to a generic specification. The originality is that the specification can be updated directly on the real and full-scale hypermedia document, thus leading to a very fast feedback loop. An object-oriented approache makes changes in the specifications possible at a very low cost and propagates them by taking advantages of inheritance. The demo focuses on:

- Exploring raw textual data: PageJokey allows to easily explore sets of unstructured textual documents. Texts are analyzed and automatically organized as a virtual hypertext structure in which dynamic links connect parts of documents which share significant words.
- Hypermedia Look Object-Oriented Description: Presentation rules are specified as object classes. The designer operates on hypermedia pages by working on their textual description (HTML like) as well as on their graphic representation. Object-orientation makes easy to freely specifying and updating classes of objects at any level (models of interactive objects as well as models of pages or of structures).
- Hypermedia Structure and Content Specification : the designer specifies which properties in the source data are responsible for the presence of structural elements in the final hypermedia, for instance which properties in the source cause a link, a new page or an item to be generated in the final document.

PageJokey also provides with several simple tools to handle sounds, images and videos.

## HANS - an open linking engine based on Microsoft OLE

Jesper Lilleso Jorgensen & Peter Bak Nielsen
Aalborg University
rasta@iesd.auc.dk

The current trend in hypermedia systems design is towards open, extensible and distributed multiuser systems. In the past few years, several open hypermedia systems (OHSs) have been presented in the literature, including Sun's Link Service, Proxhy, Microcosm, Multicard, DeVise Hypermedia (DHM), Hyperform, SP3, Chimera and HyperDisco. While each of these systems claim to be open to third party applications, they have each introduced their own link protocol (protocol for exchanging information with third-party applications). The HANS system does not introduce a new linking protocol, but builds on the most common interapplication communication protocol available today, the OLE protocol from Microsoft. The OLE protocol is the underlying technique that allows a spreadsheet to be presented inlined in a wordprocessor document, and allows it to be edited inlined as well. In simple terms, the HANS system works by providing an anchor document type, which allow anchors to be embedded in any applications that allow OLE embedding (most commercially available applications on the Microsoft Windows platform has this capability today). This approach have several benefits concerning integration and hypermedia: The system allows integration with many unmodified existing third party programs, thereby supplying the end user with facilities to use existing software. Also, the system allows linking to and from existing and new documents potentially allow the creation of a hypermedia structure linking all (or most) documents in eg. one or more projects. Finally, documents containing anchors (which are positional) can be edited on a computer without the HANS system without loss of information.