

An Introduction to This Special Issue of *AI Magazine*

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In AAAI-96 I gave an invited talk exhorting AI researchers to deploy their prototype systems on the World Wide Web. Deploying AI systems on the Web provides tangible evidence of the power and utility of AI techniques. Next time you encounter AI bashing, wouldn't it be satisfying to counter with a handful of well-chosen URLs? Well, see the sidebar.

At the conference, Jude Shavlik asked me to edit a special issue of *AI Magazine* describing AI systems that have the Web as their domain. I suggested that the authors make their prototype systems accessible on the

Web. Indeed, the authors of each article included in this special issue have promised to create and maintain a URL pointing to a working prototype. Now, almost a year later, we have the fruit of this labor. A series of high quality articles describing a wide range of AI systems that are accessible on the Web right now (or so I hope).

The articles describe a broad and diverse set of systems. The AI technologies used span the gamut from machine learning to natural language processing, from case-based reasoning to knowledge representation, and

more. Applications include Web page filtering, a grant finder, a FAQ finder, a home page finder, a shopping assistant, and more.

Is the challenge of deploying systems on the Web a distraction from our long-term goal of understanding intelligence? I believe that the field benefits from a mixture of long-term and short-term goals and from both empirical and theoretical work. Work toward the goal of deploying systems on the Web is a valuable addition to the current mix for two reasons. Internally, the Web suggests novel research challenges and new constraints on existing techniques. Externally, intelligent Web "apps" will help to enhance the reputation of AI and to counter the popular misconception that "if it works, it ain't AI."

Database and operating system research has spawned software industries with annual revenues in the billions. I look forward to the day when we have a comparable AI industry. Hopefully, Intelligence on the Web will be a step in that direction.

Intelligence on the Web

This special issue contains descriptions of the following systems which have been deployed on the web:

System name and description

AHOY! The Homepage Finder specializes in locating people's homepages on the web with very high accuracy.

FAQ FINDER locates answers to frequently asked questions from a wide range of FAQ files available on the Web.

LIFESTYLE FINDER recommends documents matching your interests based on your answers to a set of questions.

METACRAWLER provides a single unified interface for searching several of the Web's most popular search engines.

NETBOT JANGO is a personal shopping assistant able to search hundreds of on-line stores for product availability and price information.

REFERRAL WEB locates experts on specific topics based on information found on the Web.

SAVVYSEARCH is a meta-search engine that learns the most appropriate specialized search engines for a wide range of queries.

SYSKILL & WEBERT learns your taste in Web pages based on your feedback. Two other agents are also available here: "The DO I Care Agent" notifies its user of "significant" changes to web sites; "GRANT LEARNER" finds grant opportunities.

Here are some additional AI systems deployed on the Web but not included in this special issue. Each supports some form of collaborative and content based filtering of web pages:

System name and description

FAB

FIREFLY

WISEWIRE

URL

<http://ahoy.cs.washington.edu:6060/>

<http://faqfinder.cs.uchicago.edu/>

<http://lifestyle.cstar.ac.com/lifestyle/>

<http://www.metacrawler.com/>

<http://www.jango.com/>

<http://research.att.com/~kautz/referralweb/>

<http://guaraldi.cs.colostate.edu:2000/>

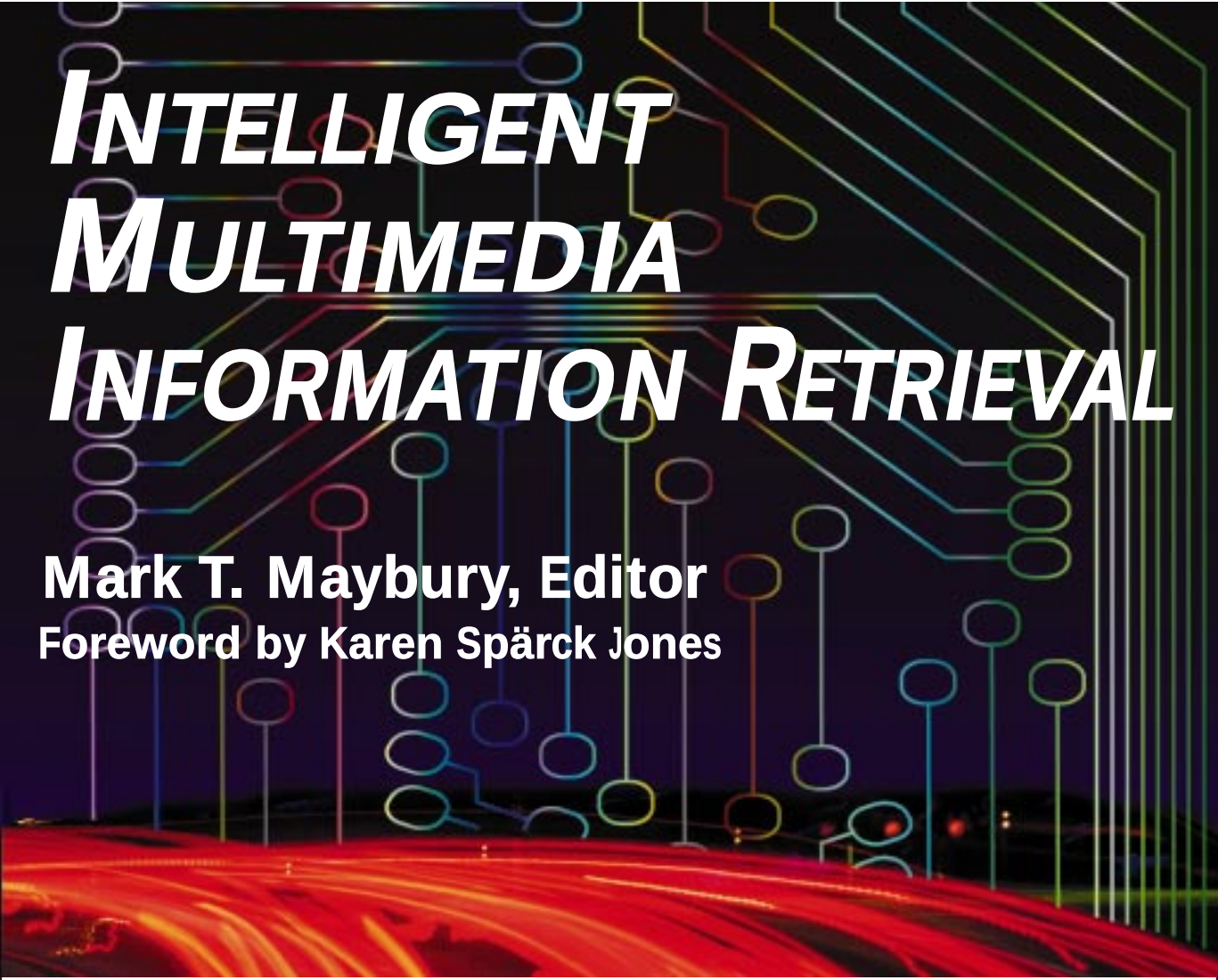
<http://nubian.ics.uci.edu:9001/swb/>

URL

<http://fab.stanford.edu>

<http://www.firefly.com/>

<http://www.wisewire.com/>



INTELLIGENT MULTIMEDIA INFORMATION RETRIEVAL

Mark T. Maybury, Editor
Foreword by Karen Spärck Jones

Intelligent multimedia information retrieval lies at the intersection of artificial intelligence, information retrieval, human-computer interaction, and multimedia computing. Its systems enable users to create, process, summarize, present, interact with, and organize information within and across different media such as text, speech, graphics, imagery, and video. These systems go beyond traditional hypermedia and hypertext environments to analyze and generate media, and support intelligent interaction with or via multiple media.

The chapters in this volume span a broad range of topics. The book is organized into seven sections: Content-Based Retrieval of Imagery, Content-Based Retrieval of Graphics and Audio, Content-Based Retrieval of Video, Speech and Language Processing for Video Retrieval, Architectures and Tools, Intelligent Hypermedia Retrieval, and Empirical Evaluations.

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