Faculty of Engineering & Physical Sciences PGRs

Finding information for your research

Fiona Nichols & Marcia Ostrowski
2018/19
Learning Outcomes

By the end of this session you should be able to...

• Explain and apply elements of a good search strategy e.g. use of a thesaurus (controlled index)
• Identify routes for accessing full text articles and reports
• Describe key principles of managing your information through
  – evaluating and managing information
  – keeping up to date
• Identify subject resources and key Library services available on LibGuides@Southampton
Exploring LibGuides@Southampton
GradBook courses

• E-theses
• Bibliometrics: measuring research impact
• Research Data Management
• Endnote
• Open access & Institutional Repository
• Systematic Reviews
Your ORCID iD is a free unique researcher identifier, required by some publishers and funders
- Register via Pure
- You control what information your ORCID iD contains
- Find out more: http://library.soton.ac.uk/orcid

Benefits to you?
- Improves discoverability
- Connects your work
- Eliminates name ambiguity
- Stays with you throughout your career
Research information needs to be..

• High quality – peer reviewed
• Up to date
• Relevant
• Discovered through a comprehensive literature review
Look for good quality, academic sources

• Evaluate the information you find. Consider
  – Who wrote it
  – When was it written?
  – Who published it?
  – Is it free from bias?
Beware! Predatory publishers and journals

- Watch this lecture in your own time https://wasetwatch.wordpress.com/

- Some articles are not published by reputable publishers

- Look out for journal titles with ‘inter-disciplinary’ or ‘multi-disciplinary’ in title (a bit of a generalisation! See examples below)
An Evaluation of the World Wide Web Compared to Other Hypermedia systems: Hyper-G and Microcosm

Fahad Suleman Almasri

Abstract

This paper presents an evaluation of the aspects that have made the World Wide Web the most popular distributed hypermedia system. It describes and compares the web with its predecessors, hyper-G and Microcosm. Furthermore, this paper presents a brief history of the HyperG, as well as the architecture of the allmultisensory systems and the factors that drive the web to become a more advanced hypermedia system than Hyper-G and Microcosm were also explained. Moreover, this paper proposes the recent development of the Web.

Keywords: The Web, Hyper-G, Microcosm, Open Hypermedia

Introduction

Hypermedia systems have been evolved through multiple stages: before Tim Berners-Lee invented the distributed hypertext system, called the World Wide Web (WWW), there were two open hypermedia systems, which are known as hyper-G and Microcosm. These two systems are not used as widely compared to the web, currently the most used hypertext systems in history. In this regard, the discussion of this report will be divided into the sessions: the first section presents a brief history of hypermedia development, the second section describes the architecture of the web and the open hypermedia systems. The third section provides a comparative evaluation between the web and the other two open hypermedia systems, which will elucidate the reasons behind the success of the web. Finally, the last section analyzes the new web technologies and explores the future of hypermedia systems.

A brief history of hypertext

The idea of hypertext was introduced in 1945, when a theoretical proto-hypertext system called "Memex" was introduced by Vannevar Bush in his article entitled "As we may think" in the Atlantic Monthly magazine [7]. This system comprised of a device that enables its users to organize their information. Twenty years later, the Olive System (OLS) was implemented by Doug Engelbart, and in 1963, Ted Nelson invented the word "hypertext" [9], prior to inventing a hypertext project called "Manuscript." In 1967, Larry Tesler created a prototype hypertext editor named "Manuscript," the web was the first hypertext project, which sadly was never implemented [1]. Consequently, in 1997, the hypertext talking system became the first hypertext system implemented [14]. Then, the first hypermedia system, the HyperCard stack system, was developed by Apple Computer, which opened the door to the growth of the hypertext community and the development of various hypertext systems such as HyperG, Microcosm, and the web [14].

Architecture of the web

The World Wide Web was invented in the mid-1980s by Tim Berners-Lee at CERN’s laboratory in Switzerland [2]. It was originally developed for sharing information between scientists over the internet. In this regard, the architecture of the web is based on a client-server model, which primarily consists of three principles: identification, communication, and data format. The first principle, identification, refers to where the resources on the web are identified by Uniform Resource Identifiers (URIs). The second principle is communication, which refers to the communication between the client and server using protocols, such as HTTP and FTP. The last one is data format, which refers to the various formats of data, which enables the resources to be used by other clients [5].

Architecture of open hypermedia systems

Dennis et al. (1968) defined the Open Hypermedia Systems (OHS) as "a system in which it is easy to add new functionality." [p. 2] In this regard, these systems are responsible for connecting the links from resources which

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2. Introduction

Hyper-G, Microcosm, and the World Wide Web were developed as parallel concepts [1], and both systems were used as a tool to building user interfaces on the web at the same time. Hyper-G and Microcosm were the first hypermedia systems to develop full features of the internet, as well as being able to embed images from the internet. In this regard, the discussion of this report will be divided into the sessions: the first session presents a brief history of hypermedia development, the second session describes the architecture of the web and the open hypermedia systems. The third session provides a comparative evaluation between the web and the other two open hypermedia systems, which will elucidate the reasons behind the success of the web. Finally, the last session analyzes the new web technologies and explores the future of hypermedia systems.

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5. Summary

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6. Conclusion

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7. References

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8. Further reading

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9. Acknowledgments

Hyper-G, Microcosm, and the World Wide Web were developed as parallel concepts [1], and both systems were used as a tool to building user interfaces on the web at the same time. Hyper-G and Microcosm were the first hypermedia systems to develop full features of the internet, as well as being able to embed images from the internet. In this regard, the discussion of this report will be divided into the sessions: the first session presents a brief history of hypermedia development, the second session describes the architecture of the web and the open hypermedia systems. The third session provides a comparative evaluation between the web and the other two open hypermedia systems, which will elucidate the reasons behind the success of the web. Finally, the last session analyzes the new web technologies and explores the future of hypermedia systems.
Access to resources
Anatomy of a literature search

1. Create a search strategy
2. Identify relevant databases
3. Conduct a search
4. Check results for relevance
5. Refine or change search strategy as required
6. Obtain the items from library resources
Why databases?

Because they...

• link to up to date information from peer reviewed publications
• are usually well indexed enabling you to search in detail
• contain abstracts summarising the articles retrieved
• often link directly to the full text if it is available electronically
Searching effectively:
Devise a search strategy

• Look at your own project topic or ‘search statement’ and devise a search strategy by selecting relevant keywords or concepts
• Break down topic into components
• Identify keywords, synonyms, alternative spellings & related terms
• List relevant headings

Go to Planning your literature search for detailed help

Then… put the search strategy into practice in the different databases and compare the results
Searching techniques:

- **Boolean logic** - add or combine terms
  - AND, OR, NOT

- **Truncation and wildcards**
  - Symbols vary e.g. electron*

- **Phrase searching**
  - Enclose in quotes “black body radiation”
Refining and shape your results

• New search strategy with revised concepts and keywords

OR

• Narrow your initial search using the ‘Refine’ options on the search screen
  – the controlled vocabulary terms are trusted terms giving precise search results
  – open access options

plus many more
2. **Focusing graphical user interfaces in model-driven software development**


**Abstract**

...
Subject Databases

Lists of databases relevant to the subjects taught in your school such as:

• Compendex (Engineering Village)
• Inspec
• Web of Science Core Collection
• Scopus
• SPIE Digital Library

can be found on YOUR subject pages

http://library.soton.ac.uk/home/subjects

- Compendex
  A large and interdisciplinary engineering information database with coverage from 1969.

- INSPEC
  A leading database in the fields of physics, electronics and electrical engineering, computers and control, and information technology. It contains abstracts of articles from over 3000 journals, as well as conference proceedings, books, technical reports and dissertations. Coverage: 1966 to date.

- Web of Science Core Collection
  Provides references, and in many cases abstracts, for peer-reviewed scholarly journal articles in the sciences, social sciences, arts and humanities. Includes the Science Citation Index Expanded (1970-present), Social Sciences Citation Index (1970-present) and Arts & Humanities Citation Index (1975-present). Also provides citation data and references to books and conference papers. Click on the Full Text Finder links to check for full-text.

- ACM Digital Library
  Full text access to the Association of Computing Machineries journals and conferences - this includes all current content and in many cases a full backfile (to the 1950s in some cases)

- IEEE Xplore
  Full text access to all IET and IEEE journals and conferences since 1988 and all current IEEE standards

- Lecture Notes In Computer Science (LNCS)
The drop down box lists the databases available on the Web of Science Platform. In more settings, select one or more databases to search at any one time.
Searching databases demonstration & hands-on

Make sure you are logged on to SUSSED, select the Library tab and then LibGuides

- Use the **Searching Databases** section of the worksheet
- Complete searches given on the worksheet using the Compendex (not Geobase) database:
  - Section 1 will be demonstrated - please follow the instructor
  - Complete sections 2 and 3

**Top Tip!** Always carry out the same search in more than 1 database to compare results
Managing the material

• Using search histories – combine terms, print and/or edit searches
• Save searches and setting up alerts – create an account for each database
• Export and download records to bibliographic software (ensuring you comply with copyright)
• Reference consistently using the system recommended by your School
Saved searches, alerts, search histories

- Register with each provider to take advantage of these tools
Finding the documents

• Full text links from databases (may not have a subscription)
• Full Text Finder
• Library Search
• Inter Library Loan (ILL)
Finding Open Access articles

- If you hit a paywall try these tools to find legal open access copies from publisher websites and institutional & subject repositories:
  - Open Access Button [https://openaccessbutton.org/](https://openaccessbutton.org/)
  - Kopernio [https://kopernio.com/](https://kopernio.com/) (also finds subscription content via your institutional login)
Exceptions

- Items not individually catalogued
  - Patents
  - BSI/IEC standards
  - IET/IEEE conferences and standards (IEEEXplore)
  - Freely available material e.g NASA Technical Reports
  - Use links to the technical databases given on subject pages or go to the Technical Information pages on LibGuides
Advanced searching techniques

- Using cited references
- Controlled Index (thesaurus)
Citation Searching

- Earlier articles
- More recent articles

Key paper

Articles referenced in key paper

Articles referencing key paper
• Starting with a known item e.g. article – finds other articles that are related to it via the citation
  – e.g. Cited References in Web of Science
• i.e. it connects articles to each other rather than subject terms
  – e.g. View Related Records
Numerical investigation of co-doped microstructured fiber with two zero dispersion wavelengths

By: Valt, AA (Mait, Aparna A.)1; Amrit, IS (Amrit, I.S.)1,2; Boopathi, CS (Boopathi, C.S.)3,1; Karthik Kumar, S (Karthikumar, S.)3,1; Jayaratne, M (Jayaratne, M.)1,4

Abstract

This article presents an octagonal photonic crystal fiber (OPCF) in which both cladding and core are micro-structured. Three cases of microstructured core doped with high refractive index materials like germanium dioxide (GeO2), carbon (multihole (CS2)) and undoped O-PCF studied separately, using the finite vectorial finite element method (FEM) each of the optical characteristics have been investigated and compared with each case of the proposed POF for the telecommunication window. By using a modest number of design parameters, the proposed design achieved two zero dispersion wavelengths (ZDWs) which can be utilized to adapt the characteristics of supercontinuum generation. Numerical results show an ultra-flattened dispersion by GeO2 doped O-PCF and negative dispersion of -1400 ps/nm/km by CS2 filled O-PCF between 1200 nm and 1600 nm. Moreover, our design low confinement loss of 0.16 dB/km at 1550 nm and exhibits high nonlinearity of 400 W−1 km−1 at 1550 nm. The proposed microstructured core POF may have great potential applications in supercontinuum generation, dispersion compensation, sensing and so on.

Keywords

Author Keywords: Photonic crystal fiber; nonlinear coefficient; dispersion; confinement loss; supercontinuum

KeyWORDS: PHOTONIC CRYSTAL FIBER; SUPERCONTINUUM GENERATION; LARGE BIREFRINGENCE; SENSOR; INDEX; PROPOSAL; DESIGN; RANGE; POWER; GE02

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4 JAMSTEC, Tokyo Tech., Dept. Elect. & Electron., Chiba, Tamba Rd., India
5 IUAV, Via Cell Engg. & Technol., DISPT, Mulino, India
Exploring cited references

Using the Web of Science (Core Collection and Inspec) Database

• Complete the Exploring cited references exercise on the worksheet
Generic z-domain discrete-time transfer function estimation for ultra-wideband systems

By: Riaz, R. A.; Butt, M. F. U.; Chen, S.; et al.

Generic z-domain discrete-time transfer function estimation for ultra-wideband systems

By: Riaz, R.A.; Butt, M.F.; Chua, S.; Hannon, L.

Abstract

Generic z-domain discrete-time transfer function estimation is proposed for ultra-wideband channels, which requires no channel sounding sequence transmission and hence constitutes a blind technique. This is achieved by estimating the channel impulse response with the aid of the information signalling pulses and then equalising the effects of the channel by the corresponding inverse system.

Citation Network

In Web of Science Core Collection

Times Cited:

Create Citation Alert

All Times Cited Counts

4 In All Databases

See more counts

4 Cited References

View Detailed Records

Most recently cited by:

Riaz, R.A.; Mauder, R.G.; Butt, M.F.; et al.
IEEE Transactions on Vehicular Technology (2009)

Riaz, R.A.; Butt, M.F.; Ng, S.; et al.
Near-Capacity UAV Impulse Radio Using EXIT Chart Aided Self-Correlated Codes.
IEEE 10th Vehicular Technology Conference Fall, Vols. 1-4 (2009)

Use in Web of Science

Web of Science Usage Count

1 3
These articles cite the ‘parent’ article.
Controlled (Thesaurus) terms

• Terms added to a record taken from a fixed list (thesaurus)
• Searching these makes results more relevant by
  – more precise - avoids concepts mentioned in passing
  – retrieving material containing alternative terms
  – more manageable numbers
Demonstration

• Using the INSPEC thesaurus

• Controlled terms: Key concepts in a given article that are assigned to records at a most specific level

• Uncontrolled terms: assigned to give additional descriptive terms for a record

• See worksheet
Working off campus?

Use the SVE (Southampton Virtual Environment) when working away from campus. Access ..

• all your files
• popular pieces of software
• Library databases and resources

..by installing VMware Horizon Clients software
Catalogues

Finding books, articles, databases and more in the UofS Library

• Library Search – provides a one-search interface across all our library online and print content

Other UK Libraries and Catalogues

• COPAC - the combined catalogue of major UK university libraries
• SCONUL
• The British Library
Library Search

1. Enter search terms/words

2. Limit your search by choosing an option from the drop down menu, such as Everything, Books and More, Articles and Databases, Course Collections, or to specific formats of information

3. Choose to either search All Fields or limit your search to author, title, subject, keyword or ISBN

4. Click Search to carry out your search. The results screen gives you the option to view either Books & More or Articles & Databases

Books & More covers books, e-books, audio, course collection, statistics and more

Articles & Databases covers journal articles, e-books, databases, conference papers and more

Or you can try an Advanced Search (see our Library Search Advanced Guide)
Get Help…

- Email us: libenqs@soton.ac.uk
- Go to your subject pages: library.soton.ac.uk/ecs
- Ask at library help desks
- Ask a Librarian: live chat

Chat with us

The library chat service is staffed 10am - 5pm UK
time Monday to Friday

You will be asked to log in using your university password. If you don't have one, you can send your question to libenqs@soton.ac.uk
http://library.soton.ac.uk/research

Library Deskside Training: Home

Who is eligible to use this service?

The deskside training service is available to staff (University, NHS and NERC) and research postgraduates only.

If you are an undergraduate or taught postgraduate student, please contact your Academic Liaison Librarian directly if you need help with library resources (contact details available on your LibGuides@Southampton subject page).

Make an appointment

Apply for your deskside training sessions online:

- To make a request for training, complete our booking form - you should receive a reply within two working days

Enquiries and getting help:

- email library.deskside@southampton.ac.uk

What do we cover?

We aim to provide training on a wide range of information resources useful to researchers, such as:

- Literature searching using specialist databases:
  - Web of Science
  - British Humanities Index
  - Medline
  - Aquatic Commons
  - EMBASE
  - Computers and Information Technology (CompLit)

Feedback from previous users of the service

- "All of my questions were answered allowing me to completely use EndNote for writing my thesis. Knowledge of trainer and delivery was very good. Thanks!"
- "Really helpful. I think the main thing to say is that one comes away with a much higher level of confidence." 
- "The session [...] was very helpful, I wish that I had approached her beforehand as she was able to answer all my questions [and] guide me towards a better way of searching. Many thanks."
- "I learned a great deal which I can use in my teaching and research activities and pass onto students. Thanks."
- "I found it very relaxing being able to have a training session in my own working environment and on a one to one basis. I could ask questions relevant to my work and would not have any problems contacting you for assistance in future."
Academic Skills Hub

The Academic skills Hub offers:

• One-to-one support ‘drop in’ service
• A wide range of workshops
• Writing skills & support

http://library.soton.ac.uk/sash
Are you able to…

• Explain and apply elements of a good search strategy
  – use of a thesaurus (controlled index)
• Identify routes for accessing full text articles and reports
• Describe key principles of managing your information through
  – evaluating and managing information
  – keeping up to date
• Identify subject resources and key Library services available on LibGuides@Southampton
YOUR QUESTIONS
One Minute Survey (feedback)

http://library.soton.ac.uk/orc/tutorials

Bottom of the page: One Minute Feedback Form