ECS PGRs

Finding information for your research

Fiona Nichols 2019
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 library.soton.ac.uk
Library Research Services

• Designed to support you at all stages of your research:
  – Managing your research data
  – Writing a Data Management Plan for your PhD
  – Writing your e-thesis (right from the start!)
  – Publishing journal articles and Open Access requirements

Online [http://library.soton.ac.uk/research](http://library.soton.ac.uk/research) and courses on Gradbook
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
Demonstration

• Log on to Sussed, select the Library tab and then LibGuides
• Use the 1st page of the worksheet and follow the steps being demonstrated
Before you start

• Define your research question

• What is it exactly you want to know?

• Are you investigating one small, tightly defined question or multiple broader questions to form a research story?

• Know what you are looking for and this will inform your search criteria
Before you start

- Define your research question
- Set up your search criteria

- Are you looking for peer-reviewed articles?
- Will you include grey literature? (working papers, opinion pieces, some conference papers, government and NAGO publications)
- Are you looking for monographs?
- What languages are you limiting yourself to?
- What types of methodology/analysis/population and so on
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/](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

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Received 26 Oct 2001; Accepted 5 Dec 2001; Available online at 13 Dec 2001, Vol. 5 (New Dec 2001 Issue)

Abstract

This paper presents an evaluation of the aspects that have made the World Wide Web the most popular distributed hypertext system. It describes and compares the Web with its significant alternatives. Furthermore, this paper presents a brief history of the hypertext as well as the architecture of the aforementioned systems and the factors that drive the Web to become a more successful information system than Hyper-G and Microcosm were also explored. Moreover, it proposes the recent development of the Web.

Keywords: The Web, Hyper-G, Microcosm, Open hypermedia systems.

Introduction

Important systems have been developed through multiple stages. Before Tim Berners-Lee invented the distributed hypertext system called the World Wide Web (WWW), there were two open hypertext systems, both known as Hyper-G and Microcosm. These two systems were not used as widely as the Web, which currently is the dominant hypertext system in history. In this regard, this discussion will be divided into four sections: the first section presents a brief history of hypertext development, then, the second section describes the architecture of the Web and the open hypertext systems. The third section provides a comparative overview between the Web and the two open hypertext systems, the fourth section describes the reasons behind the success of the World Wide Web. Finally, the last section analyzes the recent advances and explores the future of hypermedia systems.

A brief history of hypertext

The idea of hypertext was introduced in 1945, when the author of the hypertext system called "starry" was invented by Bush in his article entitled "As We May Think" in the Atlantic Monthly magazine. [1] This system comprised of the double that enable it to organize information. Twenty years later, the on-line System (OLS) was implemented by Doug Engelbart, in 1965. The OLS invented the word "hypertext" [6], prior to inventing a hypertext project called "Xanadu."

Xanadu was the first hypertext project, which was not implemented in 1965. Consequently, in 1987, the hypertext editing system became the first hypertext system implemented. [7]; then, the first hypertext system, the Ascent Moving Map System, developed by Andrew Upson which opened the door to the growth of the hypertext community and the development of various hypermedia systems such as hyperdoc, intermedia, Hyper-G, Microcosm, and the Web. [8]

Architecture of the web

The World Wide Web was invented in the mid-1990s by Tim Berners-Lee at the CERN laboratory in Switzerland. [9] It was originally developed for sharing information between scientists, in this regard, the architecture of the Web is based on a client-server model, which primarily consists of three principles; identification, interaction, and data formats. The first principle, identification, refers to the resources on the Web, which are identified by uniform resource identifiers (URIs) or uniform resource locators (URLs), the second principle is interaction, which refers to the relationship between the client and the server, and the third principle is data format, which refers to the communication between the client and server, using protocols, such as HTTP and FTP. The second one is data format, such as HTML, which enables the resources to be used by other clients [3].

Architecture of open hypermedia systems

Denis et al. [8] defined the Open Hypermedia Systems (OHS) as "a system in which it is easy to add new functionality to the system using a careful design of the system's structure". The Web was already in place, followed by the development of several browsers that were capable of handling certain HTML, easy to use and have simple user interfaces that make it an implementation format. [11] In 1999, Microsoft was developed by Netscapes and was followed by the development of Internet Explorer and Internet Explorer (1.0 and 2.0) to connect viewing documents in Hyper-G as simple as reading through hypertext [12].

Microcosm restricts the access to its data by making it accessible using proprietary software developed by Microcosm (Microcosm) [9]. This is done by clicking on the hyperdocuments through selecting the required data and choosing the path to the destination document or choosing to create a new document. Furthermore, this paper presents a brief history of the hypertext as well as the architecture of the aforementioned systems and the factors that drive the Web to become a more successful information system than Hyper-G and Microcosm were also explored. Moreover, it proposes the recent development of the Web.

Keywords: Hyper-G, Microcosm, Open hypermedia systems.

1. INTRODUCTION

Hyper-G, Open Hypermedia, and the World Wide Web are developed in parallel since 1987 [1, 3, 4, 12]. The development of the Web was associated with Tim Berners-Lee and other researchers who were working at CERN laboratory, where the first browser was invented. [8]. Hyper-G was implemented in the United States as a research environment for academic and research institutions [12]. However, despite the success of the World Wide Web, the success of Hyper-G and Microcosm was restricted by the fact that the access to its data is only accessible using proprietary software developed by Microcosm and is only accessible through selecting the required data and choosing the path to the destination document or choosing to create a new document. Furthermore, this paper presents a brief history of the hypertext as well as the architecture of the aforementioned systems and the factors that drive the Web to become a more successful information system than Hyper-G and Microcosm were also explored. Moreover, it proposes the recent development of the Web.

2. TECHNICAL PERSPECTIVE

2.1 Viewers

Open hypermedia allows the user to access the data stored in the system by navigating through the hypermedia system by clicking on hyperlinks to other parts of the system. The system is designed to be compatible with the majority of web browsers, which means that the user can access the system using any web browser that supports HTML and JavaScript. [12]. In addition, viewing documents in Hyper-G is only available through hypertext viewers [12].

Microcosm restricts the access to its data by making it accessible using proprietary software developed by Microcosm (Microcosm) [9]. This is done by clicking on the hyperdocuments through selecting the required data and choosing the path to the destination document or choosing to create a new document. Furthermore, this paper presents a brief history of the hypertext as well as the architecture of the aforementioned systems and the factors that drive the Web to become a more successful information system than Hyper-G and Microcosm were also explored. Moreover, it proposes the recent development of the Web.

Acknowledgements

This work was supported by the University of Basrah Research Committee. [9].

References

Research information needs to be:

- High quality – peer reviewed
- Up to date
- Relevant
- Discovered through a comprehensive literature review
Google Scholar?

• Google Scholar does not release its source list or index all publishers

• Have you been asked to pay?
A great resource!
LibGuides@Southampton
- library.soton.ac.uk

Your Subject Guide
- library.soton.ac.uk/ecs
- library.soton.ac.uk/subjects
Use **YOUR** subject LibGuide to find:

- Links to key online resources for information in
  - Journal articles
  - Websites
  - Databases
  - Books and topics

- Search the resources available here at
  [http://library.soton.ac.uk/subjects](http://library.soton.ac.uk/subjects)
Key Subject Resources

These are the key databases we recommend that you use, a more complete list is available from our ECS Finding Useful Articles & Databases page. All electronic resources can be accessed off-campus through the Southampton Virtual Environment (SVE).

Full text databases

- ACM Digital Library
  - Full text access to the Association of Computing Machinery's 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 active and archival (but not draft) IEEE standards.

- Lecture Notes in Computer Science (LNCS)
  - Reports new developments in computer science and information technology research and teaching.
  - Full text available from 1975 - present day. LNCS also includes the sub-series LNAI (in Artificial Intelligence) and LNBI (in Bio-informatics).

Other Databases for more focused and detailed searching

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

- Define your research question
- Set up your search criteria
- Find out what bibliographic databases exist for your subject

- Link to up to date information from peer reviewed publications or text corpus
- 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
- Give broader coverage as include journals we do not subscribe to
SCHOLARLY 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)
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

• Identify relevant databases

Then... put the search strategy into practice in different databases and compare the results (refine as required)
SEARCH Tools: refining your search

**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”
SEARCHING: refining your search

• Re-run your new search with the revised concepts and keywords

• Or narrow your 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


Database: Compendex
Document type: Conference article (CA)
Detailed Show preview ▼ Cited by in Scopus (24) Full text ▼ Search Univ. of Southampton Library Catalogue ▼ Full Text Finder

3. A new method to analyze graphical user interfaces of android applications

Le, Hong Anh (Hanoi University of Mining and Geology, 18 Pho Van, Ba Tu Lieu, 100, Viet Nam); Truong, Ninh Thu Phan; Dinh, Viet Anh Sources Lecture Notes in Computer Science, Software, Information Technologies and Telecommunications Engineering, LNTSE, v 193, p 111-120, 2017, Context-Aware Systems and Applications Conference, ICCA 2016, Proceedings

Database: Compendex
Document type: Conference article (CA)
Detailed Show preview ▼ Cited by in Scopus (1) Full text ▼ Search Univ. of Southampton Library Catalogue ▼ Full Text Finder

4. Graphical user interfaces for algorithmic debugging

Westman, Richard (Department of Computer and Information Sciences, Linköping University, Linköpings S-581 83, Sweden); Stäck, Peter; Sax Computer Science (including subarea Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), v 790 LNCS, p 273-286, 1993, Automated Debugging - 1st International Workshop, AADEBUG 1993, Proceedings

Database: Compendex
Document type: Conference article (CA)
Detailed Show preview ▼ Cited by in Scopus (1) Full text ▼ Search Univ. of Southampton Library Catalogue ▼ Full Text Finder

5. Model checking graphical user interfaces using abstractions

Dwyer, Matthew B. (Kansas State University, United States); Carr, Vicki; Hines, Laura Sources Lecture Notes in Computer Science (including subarea Software Engineering), v 1301, p 264-261, 1997, Software Engineering - ESEC/FSE 1997 - 6th European Software Engineering Conference, 1-3 September 1997, Dublin, Ireland

Database: Compendex
Document type: Conference article (CA)
Detailed Show preview ▼ Cited by in Scopus (1) Full text ▼ Search Univ. of Southampton Library Catalogue ▼ Full Text Finder
More SEARCH Tools

- Boolean
- Truncation
- Wildcards
- Phrase searching
- Proximity searching

- Allows you to say how far apart search terms can be within a record
- Differs between databases
  - ADJ (Medline)
  - Near (Inspec)
  - Onear (Inspec)
  - Same (Web of Science)
  - W(ithin) (Scopus)

Database help videos and tutorials can be found at http://library.soton.ac.uk/tutorials
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 and Inspec (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 AND your time!

MARK, EXPORT, RECORD

• Marked or Selected Records
  o print out or e-mail to yourself a list of these articles
  o export to bibliographic software like EndNote, Bibtex or Mendeley

• Search histories
  o record the databases searched and which keywords and concepts used/combined
Keeping track! Saved searches and alerts

• Saving Searches
  – Re-run at own convenience
  – Have to login to re-run

• Alerts
  – Sends emails when search criteria matched by new articles, or at regular intervals
  – Sent automatically, so no need to login to get results
Reference management software

- Search databases and export references
- Build a personal reference library
- Organise your PDFs
- Insert citations and build bibliography
- Keep research notes and copyright permissions on articles
- Can easily share your references with your group

- There are many different reference management solutions
  [http://library.soton.ac.uk/sash/referencing-software](http://library.soton.ac.uk/sash/referencing-software)
- The Library supports Endnote
Finding the full text

• On campus: if we have a subscription should be a full text link from the database
• Off campus: use SVE to access our subscriptions http://go.soton.ac.uk/sve

• Finding (legal) open access content
  – Unpaywall or Open Access Button: both Chrome extensions that search for publisher and repository versions of articles: http://unpaywall.org/ or https://openaccessbutton.org/
  – Kopernio finds open access copies but also finds subscription content via your institutional login: https://kopernio.com/
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

- Subject index/Controlled vocabulary/Classification codes
- Using cited references
- Citation searching

- Many databases have very structured classifications
- Terms added to a record by Indexers
- Taken from a fixed list (thesaurus)
- Using these can help
  - Making search results more relevant and specific
  - Suggest alternative terms to search
CITATION Searching

- Available on Web of Science Core Collection, Compendex and Scopus

- Citation searching looks to see which articles have referenced (cited) a particular earlier work
Cited Referencing Searching

• 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: Nair, AA; Bair, Aparna A.; Amrit, IS; Kirthikumar, S; Jayasraj, M; Patgiri, P; Patgiri, P.; T.; 

Abstract

This article presents an octagonal photonic crystal fiber (O-PCF) in which both cladding and core are microstructured. Three cases of microstructure: core doped with high refractive index materials like germanium dioxide (GeO2), carbon disulfide (CS2) and undoped O-PCF studied separately. Using the full vectorial finite element method (FEM) each optical characteristics have been investigated and compared with each case of the proposed PCF for the telecommunication window. By using a modest number of design parameters, the proposed design achieves two zero dispersion wavelengths (ZDWs) which can be utilized to adopt 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 doped O-PCF between 1200 nm and 1600 nm. Moreover, our design (low confinement loss of 0.06 dBm at 1550 nm and exhibits high nonlinearity of 4500 W−1 km−1 at 1600 nm. The proposed microstructured core PCF may have great potential applications in supercontinuum generation, dispersion compensation, sensing and so on.

Keywords

Photonic crystal fiber; Nonlinear coefficient; Dispersion; Birefringence; Confinement loss and supercontinuum

Use in Web of Science

Web of Science Usage Count

2

This record is from
Web of Science Core Collection

Suggest a correction

If you would like to improve the quality of the data in this record, please suggest a correction.
Demonstrating cited references

Using the Web of Science (Core Collection) Database

• Complete the Exploring cited references exercise on the worksheet
<table>
<thead>
<tr>
<th>Sort by: Date</th>
<th>Times Cited</th>
<th>Usage Count</th>
<th>Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>More</td>
</tr>
</tbody>
</table>

1. **Generic z-domain discrete-time transfer function estimation for ultra-wideband systems**
   
   By: Riaz, R. A.; Butt, M. F. U.; Chen, S. et al.
   
   ELECTRONICS LETTERS Volume: 44 Issue: 25 Pages: 1491-U165 Published: DEC 4 2008

   ![Full Text Finder](Link to Full Text)

   ![View Abstract](Link to View Abstract)

   ![Save to EndNote online](Link to Save to EndNote)

   ![Add to Marked List](Link to Add to Marked List)
Generic z-domain discrete-time transfer function estimation for ultra-wideband systems

By: Riz, R.A. [1]; Butt, M.F. [1]; Chou, S. [1]

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 signals transmitted and then equalizing the effects of the channel by the corresponding inverse system.

Cited References

Most recently cited by:


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 Compendex OR Inspec thesaurus (Engineering Village)

• 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 in Other UK Libraries and Catalogues

• Jisc Library Hub Discover - details of materials held in many UK national, academic and specialist libraries
• SCONUL
• The British Library
Library website: LibGuides

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

Access via SUSSED (Library then ‘LibGuides’)

...or Google ‘uni soton lib’
Library loans

- **Unlimited book loans** for Research Postgraduates
  - renew automatically
  - ‘Place Hold’ in WebCat for books on loan to someone else

- **eBooks**

- **Interlibrary loans** (for items not held by the Library)
  - 25 per academic year: login to WebCat, Requests & Document Supply
  - also try Unpaywall (more details later)
Reading a paper
Copyright considerations

• If a journal article is copyright, you may download one article per journal issue
• You may download up to one chapter or 10% of a book within copyright limits

• For open access articles, check the Creative Commons licence on the article

• For information about copyright and your thesis see http://library.soton.ac.uk/thesis/copyright
Referencing

- Select a referencing style with your supervisor.
- Style guides are at http://library.soton.ac.uk/sash/referencing
- The University Thesis Submission and completion guide states:

You must ensure that you use a consistent style of referencing, appropriate to your discipline, throughout your thesis. The University would suggest using the Vancouver or Harvard style, but you are advised to decide on a style in discussion with your supervisor. The Library website contains detailed information about citing and referencing, including a ‘Find your style’ 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
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
Research Methods Online Course

https://generic.wordpress.soton.ac.uk/researchmethods/

The course is designed to:-

• introduce early PGR students to essential information and skills required for doing their research
• content will be continuously added

The course features:-

• videos
• self-directed interactive online learning activities on
• ethics; managing data; project management and more
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