What do Libraries provide today in the way of “collections”

- **Electronic books**
  - eBrary, Safari

- **Electronic journals**
  - Print and online
  - 2/3 of all engineering journals are electronic only
  - Scholarly Journals, Trade publications

- **Databases**
  - Citation, Full-text Articles, Standards

- **Freely available:**
  - Patents
  - Government documents
  - Technical Reports

- **Google Scholar**
Strategic Approach to the Research Literature

Background Sources

• Books, Encyclopedias, Dictionaries, Textbooks, Dissertations

Primary Sources

• Journals, Standards, Patents, Conference papers
Background Resources

**ebooks**
- Safari Technical Books
- Ebrary Academic Complete
- Kernel Patterns for Key Analysis
- Bayesian Approach to Image Interpretation

**Databases**
- Academic Search Premier

**Encyclopedias**
- Encyclopedia of Computer Science
- Encyclopedia of Cognitive Science
Background and Primary Resources

**Magazines**
- Popular Science
- PC Magazine

**Trade Publications**
- Dr. Dobbs
- Scientific Computing

**Scholarly Articles**
- Artificial Intelligence
- Journal of the ACM
What is meant by SCHOLARLY?

- **Author’s Credentials** — education, university affiliations, etc.
- **Parenthetical references** — i.e. (Jones, 1993), and/or footnotes
- **Bibliography or Works cited** at the end of the article
- **Basic sections of a paper** (abstract, method, discussion, etc.)
- **Tables, charts, or graphs** — Results of a study or methods used
- **Length** — Short one or two page articles are not often scholarly.

Aiken Gregg-Graniteville Library, University of South Carolina, Aiken
http://library.usca.edu/index.php/Instruction/EvaluatingFull-textArticles
What are Scholarly / Peer-reviewed / Refereed Journals?

A publication, usually scholarly, in which articles are reviewed by a panel or two external reviewers, experts in the same field as the writer, before being accepted for publication.

The Referee process judges whether the paper makes a contribution to the advancement of knowledge.

“Peer review does not guarantee that an article is correct, but it helps to ensure that data and methodology have met a high standard.”¹

Journals’ Acceptance Rates

- Some journals use all manuscripts received as a base for computing this rate.

- Many editors do not maintain accurate records on this data and provide only a rough estimate.

- The number of people associated with a particular area of specialization influences the acceptance rate. If only a few people can write papers in an area, it tends to increase the journals' acceptance rate.

What's this all about?
Discipline-Based Corrections to the Literature

Newspapers
Correction notices (last page?)

Law
Legal research, case histories, statutes
Overruled
Superseded
Criticized
Distinguished
Repealed (for a statute)

Science & Technology

Correction:
Corrects a mistake by substituting correct information or by asking the reader to disregard.

Retraction:
Article contains faked data or has been plagiarized.

Expression of Concern:
The editor is concerned that an article contains faked data or has been plagiarized.

Research Misconduct, Retraction, and Cleansing the Medical Literature: Lessons from the Poehlman Case
Citing Problematic Research

MEDLINE (1966 - August 1997): **235 articles that had been retracted**
- error was acknowledged in 91 articles
- results could not be replicated in 38
- misconduct was evident in 86

The 235 retracted articles were **cited 2,034 times** after the retraction notice.
- Examination of 299 of those citations reveals that in only 19 instances was the retraction noted

- **The remaining 280 citations treated the retracted article** either explicitly or implicitly as though it **were valid research.**

Conclusion:

Retracted articles continue to be cited as valid work after publication of the retraction

John M. Budd; MaryEllen Sievert; Tom R. Schultz
**Phenomena of Retraction: Reasons for Retraction and Citations to the Publications**
JAMA 1998 280: 296-297
Library Services: What do the Libraries do for you?

- MERLIN/ MOBIUS
- My Accounts
- ILL@MU
- Workshops
MERLIN/MOBIUS

All the libraries in Missouri are at your fingertips: MST, SLU, WU

Request a book: 2-3 days and it’s in your hands

Reserve Desk
MERLIN: My Accounts

Reading History

My Lists

My Alerts
Interlibrary Loan (ILL@MU)

- Also borrow books from across the country
- Article version of the e-greeting card
- $30 average cost - FREE to you
- 2-3 days and it’s in your e-mail inbox

ILL @MU - Also borrow books from across the country
LibX
Firefox Plug-in

Context Search

Toolbar

Amazon.com
LibX: Taking it out for a Test Drive

- Install LibX
- Adjust Context Settings
- Search CiteSeer Database
Dissecting a Database

Teaching Yourself How to Search
What is in the database?

Scope:

**Subject areas?**
- Computer Science, Engineering
- Science & Technology
- STEM (Science, Technology, Engineering, Math and Medicine)
- All Disciplines

**Years covered?**
- 2000-2011
- 1980-2011
What is in the database?

Scope:

Type of Materials

- Journals
- Books, Chapters
- Dissertations, Theses
- Proceedings
- Patents
- Technical Reports
What is in the database?

How to select a database?
BTW - All of these Resources Cost a Lot of $$$$ 

Databases
- Scopus (over $150,000 a year for 4 campuses)
- ACM Digital Library ($15,828 for 4 campuses)

Journals
- Theoretical Computer Science ($7,089 a year)
- Artificial Intelligence ($2,868 a year)

E-books
- ebrary (about $6,000 a year for 5,000 books)

The Libraries spend about $6,000,000 per year on books, journals, and databases
What is in the database?

How are these materials represented?

- Citation Databases
  - MERLIN
  - Compendex

- Full-Text Databases
  - eBrary
  - IEEE Xplore

- Combination of Both
  - Academic Search Premier
  - ACM Digital Library
Citation vs Full-Text Databases

Citation:
- keyword
- subject
- author
- title of article
- title of the journal

Full Text:
- all words in the document

What does it search?
Looking for Books: What does the database search?

Citation
- Summon
- MERLIN

Full-text
- Safari
- Ebrary
- Summon
Looking for Articles: What does the database search?

Citation
- Summon
- MERLIN
- Academic Search Premier
- Compendex

Full-text
- Summon
- Academic Search Premier
- ACM Digital Library
How does it search?
Phrase versus Word searching

Are multiple words...

a single phrase?

a combination of words connected by AND (all of the words)?

a combination of words connected by OR (any of the words)?
Natural Animation and Simulation
How does it search?

Phrase versus Word Search

Are multiple words ... a single phrase?
“Natural Language and Simulation”

Search Results
0 records found in Compendex for: ("Natural Animation and Simulation") WN All fields, 1969-2011
How does it search?

Phrase versus Word searching

Are multiple words ... An intersection?

A combination of words connected by **AND** -- all of the words must appear in the document.
natural animation AND simulation

Search Results
1060 records in Compendex for 1969-2011
+((Natural Animation and Simulation) WN All fields)
How does it search?

Words combined with OR search

Are multiple words ... .. A union?

A combination of words connected by OR -- at least one of the phrases must appear in the document.
SELECT DATABASE

- All
- Compendex
- GEOBASE
- GeoRef

SEARCH FOR

natural animation

AND

simulation

SEARCH IN

All fields

1060 records in Compendex for 1969-2011

Search Results

Save Search - Create Alert - RSS
How does it search? Recap

What is the default search?

- Phrase Search?
- AND?
- OR?
- Natural Language Algorithm?

Are other options available?
How does it search?

Controlled vocabulary terms / thesaurus searching

Controlled vocabulary terms?

- Authorized terms describe topics in the database
- Are frequently collected in a thesaurus

Why use these terms?

- Ensure that items retrieved are specifically on the topic of interest
How does it search?

Controlled vocabulary terms / thesaurus searching

Bridge (disambiguation)
http://en.wikipedia.org/wiki/Bridge_(disambiguation)
How does it search?

EI Compendex: Controlled vocabulary terms / Codes

Controlled Vocabulary
- Bridge Circuits
- Computer Graphics

Classification Codes
- 713: Electronic Circuits
- 401.1: Bridges (structures)
- 723.2: Data Processing and Image Processing
How does it search?

Truncation

The most common truncation sign is *

For example, comp* will retrieve items:

- Composition
- Compelling
- Compost
- Comprehensive
- Computer

You get the idea.
Hands-on Time

Search for scholarly articles on

- ACM Digital Library
- Google Scholar
- Compendex
- Summon?
- Scopus?
What do I do if I get too many results?

Dates:
Last 2 years
2005-2011

Language:
English, Spanish, Chinese...

Field:
Title, Subject Headings

Document Type:
Articles, Book chapters, Reviews, Patents...

Limit by....
Limit by Field

SEARCH FOR
image segmentation
AND unified graphics
AND model

SEARCH IN
Subject/Title/Abstract
All fields
All fields

LIMIT BY
All document types
All treatment types
All Languages

SORT
Subject/Title/Abstract
Abstract
Author
Author affiliation
Title
Ei Classification code
CODEN
• Use **OR** searches to **broaden** your search.

• Use **AND** searches to **narrow** your search.
**TOPIC:** *Simulation of realistic animals in computer graphics*

Separate search into concepts; note any synonyms and truncation

<table>
<thead>
<tr>
<th>Concept 1 / Synonyms</th>
<th>Concept 2 / Synonyms</th>
<th>Concept 3 / Synonyms</th>
</tr>
</thead>
<tbody>
<tr>
<td>simulation*</td>
<td>animation</td>
<td>animal*</td>
</tr>
<tr>
<td>model*</td>
<td>computer graphics</td>
<td>human*</td>
</tr>
<tr>
<td>virtual</td>
<td></td>
<td>life forms</td>
</tr>
</tbody>
</table>
TOPIC: *Simulation of realistic animals in computer graphics*

Search Strategy

<table>
<thead>
<tr>
<th></th>
<th>Search Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Animal* or human* or “life forms”</td>
</tr>
<tr>
<td>2</td>
<td>Simulat* or model* or virtual</td>
</tr>
<tr>
<td>3</td>
<td>“Computer graphics” or animation</td>
</tr>
</tbody>
</table>
Engeneering Village - Compendex

SELECT DATABASE

- All
- Compendex
- GEOBASE
- GeoRef

SEARCH FOR

- simulat* or model* or virtual*
- AND human* or "life form"
- AND "computer graphic"

SEARCH IN

- Subject/Title/Abstract
- All fields

LIMIT BY

- Journal article
- All treatment types
- English

SORT BY

- Relevance
- Publication year
- Autostemming off

Search
Reset
What do I do if I get too few results?

**Eliminate concepts**

- The more concepts you combine in a search, the fewer results you are likely to retrieve.

<table>
<thead>
<tr>
<th>Concept 1 / (Synonyms)</th>
<th>Concept 2 / (Synonyms)</th>
<th>Concept 3 / (Synonyms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Segmentation</td>
<td>Unified graphical model</td>
<td>Conditional Random Field</td>
</tr>
</tbody>
</table>

- If you get little or no results from your search, try eliminating some of your concepts, limits, or modifiers.
What do I do if I get too few results?

Examine records for additional keywords to expand your search.

- Computed tomography →
- CT scan, CAT scan, Computerized axial tomography

Look for “Related Articles” feature to expand your search.

- Found only one or two articles?
- Click on a Related Articles link to retrieve more articles similar to the one with which you started.
What do I do if I get too few results?

Check references at the end of the article

- They will be older than the article in (your) hand.

Cited reference search in Scopus, Google Scholar

- They will be more up-to-date than your article.
- They cite the original article.
How do I locate the full text of the articles?

- Click on the Findit@MU button to determine which articles are available on the web or print at MU.

- will also give you the location (call number) for the print version in the library.
How do I print, e-mail or download my results? Read this if you are clueless.

• Print, email or download your results.
• Select items of interest:
  – click in the check box next to the citation.
  – click on the print, e-mail, or download option and follow the on-screen directions
• Customize the results to display abstracts and/or subject terms.
• Download into bibliographic management software, such as EndNote or Zotero: check to see your options and format your results appropriately.

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