

## Into the research literature

- Encyclopedias
- Handbooks
- Reference lists
- Full text databases
- Reference databases
- Citation databases

## Veien til faglitteraturen

- Leksika
- Håndbøker
- Litteraturlister
- Fulltekstdatabaser
- Referansedatabaser
- Siteringsdatabaser

## Starting point– 1 special encyclopedias

- *Encyclopedia of computer science*
- *Encyclopedia of computers and computer history*
- *Encyclopedia of cryptography and security*
- *Encyclopedia of data warehousing and mining*
- *Encyclopedia of developing regional communities with information and communication technology*
- *Encyclopedia of human computer interaction*
- .....

## Hvor starter man - 1 Referanseverk: spesialleksika

- *Encyclopedia of computer science*
- *Encyclopedia of computers and computer history*
- *Encyclopedia of cryptography and security*
- *Encyclopedia of data warehousing and mining*
- *Encyclopedia of developing regional communities with information and communication technology*
- *Encyclopedia of human computer interaction*
- .....

## Online encyclopedias

- [Encyclopedia of algorithms](#)
- [Encyclopedia of biometrics](#)
- Encyclopedia of cryptography and security
- Encyclopedia of multimedia
- Encyclopedia of machine learning
- Encyclopedia of database systems
- Encyclopedia of GIS
- Encyclopedia of parallel computing
- The concise encyclopedia of statistics
- Encyclopedia of optimization
- Encyclopedia of nanotechnology
- Encyclopedia of remote sensing

## Leksika på nett

- [Encyclopedia of algorithms](#)
- [Encyclopedia of biometrics](#)
- Encyclopedia of cryptography and security
- Encyclopedia of multimedia
- Encyclopedia of machine learning
- Encyclopedia of database systems
- Encyclopedia of GIS
- Encyclopedia of parallel computing
- The concise encyclopedia of statistics
- Encyclopedia of optimization
- Encyclopedia of nanotechnology
- Encyclopedia of remote sensing

## Starting point- 2 handbooks

- *Handbook of modal logic*
- *Handbook of optimization in telecommunications*
- *Embedded systems handbook*
- *Handbook of human factors in Web design*
- *Handbook of face recognition*
- *Handbook of graph theory*
- ...

## Hvor starter man - 2 Referanseverk: håndbøker

- Handbook of modal logic
- Handbook of optimization in telecommunications
- Embedded systems handbook
- Handbook of human factors in Web design
- Handbook of face recognition
- Handbook of graph theory
- ...

## Online handbooks

E books

Springer Link

- Handbook of Combinatorial Optimization
- Handbook of Document Image Processing and Recognition
- The Complete Handbook of the Internet
- Handbook of Intelligent Vehicles
- Machine Vision Handbook
- Springer Handbook of Nanotechnology
- Handbook of Natural Computing
- Springer Handbook of Robotics
- Handbook of Semantic Web Technologies
- Springer Handbook of Speech Processing

## Håndbøker på nett

handbook

- Handbook of Combinatorial Optimization
- Handbook of Document Image Processing and Recognition
- The Complete Handbook of the Internet
- Handbook of Intelligent Vehicles
- Machine Vision Handbook
- Springer Handbook of Nanotechnology
- Handbook of Natural Computing
- Springer Handbook of Robotics
- Handbook of Semantic Web Technologies
- Springer Handbook of Speech Processing

## Further on: text archives, reference and citation databases, the library collection

Informatics and Mathematics

Informatics resources

Shortcuts

- Curriculum literature - check availability
- Extend your loans
- Master students tips
- Subject search
- BIBSYS Ask
- Old literature (pre 1995)

What's this?

<https://www.ub.uio.no/informatics>

<https://tinyurl.com/ifibib>

Databases and other sources

References

- ACM Digital Library (subscription with fulltext)
- IEEE Xplore (subscription with fulltext)
- Inspec (subscription, covers age electronics and physics)
- MathSciNet (subscription, mathematics from ...)

E-books

- Springer e-books (science and more)
- Lecture Notes in Computer Science (many conferences)
- Safari books (technical handbooks)

Miscellaneous

Introduction and BibLaTeX: PDF, PPT, EndNote

Ask us

This page contains information on library search, writing theses, research support and more.

## Fortsettelsen: tekstarkiver, referanse- og siteringsdatabaser, bibliotekets samling

Informatikk og matematikk

Informatikk - fagressurser

Svarveiler

- Pensumlitteratur - sjekk utlånstatus
- Forny lån selv
- Tips til masterstudenter
- Finansutvalg

<http://www.ub.uio.no/informatikk>

<http://tinyurl.com/ifibib>

Tilgang utenfra, hjemmefra og på reise

Lysarkivene fra forelesninger 16 januar 2015

- Introduksjon og BibLaTeX: PDF, PPT
- EndNote ppt

Kurs for MMI-studenter

Sper oss!

Oversett over universitetsbibliotekets veldedings tjenester. Litteratursøk, oppgaveskriving, forklarings og andre spørsmål.

Fagdatabaser og andre kilder

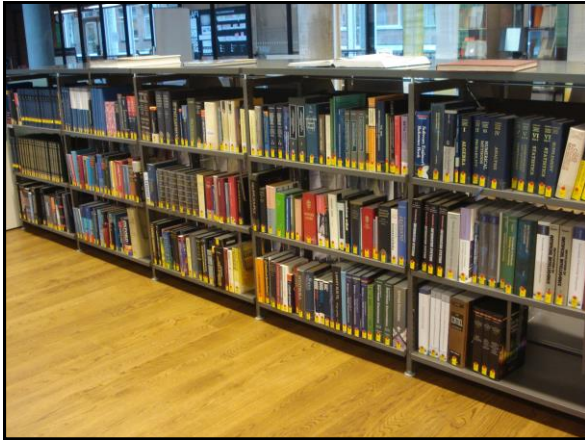
Artikkelreferanser

- ACM Digital Library (abonnement med fulltekst)
- IEEE Xplore (abonnement med fulltekst)
- Inspec (abonnement, også elektronikk og fysikk)
- MathSciNet (abonnement, matematikk fra ...)

E-bøker

- Springer e-bøker (saffaglig m.m.)
- Lecture Notes in Computer Science (mange konferanser)
- Safari books (tekniske håndbøker)

Annnet



## "User interface" in "Encyclopedia of computer science"

- Design of a user interface
- Levels of design
- User interface management systems
- Syntactic level design: interaction styles
  - Command language
  - Menu
  - Form fill-in
  - Natural language
  - Graphical user interfaces
  - Virtual reality
  - Other issues
- Lexical level design: interaction tasks, devices, and techniques
- Input devices
- Output devices

### Bibliography

- 1983. Shneiderman, B. "Direct Manipulation: A Step Beyond Programming Languages," *IEEE Computer*, 16, 8, 57-69.
- 1986. Hutchins, E. L., Hollan, J. D., and Norman, D. A. "Direct Manipulation Interfaces," in *User Centered System Design: New Perspectives on Human-Computer Interaction* (eds D. A. Norman and S. W. Draper), 87-124. Hillsdale, NJ: Lawrence Erlbaum.
- 1986. Jacob, R. J. K. "A Specification Language for Direct Manipulation User Interfaces," *ACM Transactions on Graphics*, 5, 4, 283-311. <http://www.eecs.yale.edu/~jacob/papers/toq.csl> (ASCII); <http://www.eecs.yale.edu/~jacob/papers/toq.ps/> (PostScript).
- 1987. Foley, J. D. "Interfaces for Advanced Computing," *Scientific American*, 257, 4, 127-135.
- 1989. Harrison, H. R., and Ha, D. "Human-Computer Interface Development: Concepts and Systems for its Management," *Computing Surveys*, 21, 1, 5-92.
- 1989. Johnson, J. et al. "The Xerox Star: A Retrospective," *IEEE Computer*, 22, 9, 11-29.
- 1990. Foley, J. D., van Dam, A., Feiner, S. K., and Hughes, J. F. *Computer Graphics: Principles and Practice*. Reading, MA: Addison-Wesley.
- 1992. Olsen, D. R. *User Interface Management Systems: Models and Algorithms*. San Francisco: Morgan Kaufmann.
- 1992. Shneiderman, B. *Designing the User Interface: Strategies for Effective Human-Computer Interaction*, 2nd Ed. Reading, MA: Addison-Wesley.
- 1995. Myers, B. A. "User Interface Software Tools," *ACM Transactions on Computer-Human Interaction*, 2, 1, 64-103.
- 1999. Stephenson, N. *In the Beginning Was the Command Line*. New York: Avon Books.

Robert J. K. Jacob

The most frequent references you will meet:

- journal articles
- books (monography)
- chapter in a book (anthology)
- conference papers
- technical reports

## Referansene du oftest kommer borti:

- tidsskriftartikler
- bøker (monografier)
- kapitler i bøker (antologi)
- foredrag på konferanser
- tekniske rapporter



## How to find the document

1983. Shneiderman, B. "Direct Manipulation: A Step Beyond Programming Languages," *IEEE Computer*, 16, 8, 57–69.

• author:	Shneiderman, B	
• article title:	Direct Manipulation: a Step Beyond ...	
• journal title:	IEEE Computer	
• volume:	16	
• no:	8	Variants:
• pages:	57-69	- vol. 16, no. 8, pp.57-69
• year:	1983	- 16(1983), no.8, pp. 57-69
		- vol.16, 57-69

A journal article: look for the journal

To find the journal:

- e-version via library home page
- or directly to the source (IEEE)
- using BIBSYS to find the paper version

## Hvordan finner du?

1983. Shneiderman, B. "Direct Manipulation: A Step Beyond Programming Languages," *IEEE Computer*, 16, 8, 57–69.

• forfatter:	Shneiderman, B	
• artikkelittittel:	Direct Manipulation: a Step Beyond ...	
• tidsskrifttittel:	IEEE Computer	
• volum/årgang:	16	
• nr:	8	Varianter:
• sider:	57-69	- vol. 16, no.8, pp.57-69
• år:	1983	- 16(1983), no.8, pp. 57-69
		- vol.16, 57-69

En tidsskriftartikkel: se etter tidsskriftet!

Det er tre måter å finne fram til tidsskriftet:

- elektronisk versjon via bibliotekets hjemmeside
- gå direkte til kilden (i dette tilfellet IEEE)
- bruke BIBSYS til å finne papirversjon

## Find via library home page

The screenshot shows a library search interface with a search bar containing 'Computer'. The results display the following information:

- Source:** Computer [0018-9162]
- Full text:** Full text available via IEEE Xplore Journals (IEL)
- Available from 1970 volume: 3 issue: 5**
- Other services:** Get help or report error in Feedback form
- Holdings information:** Find print copy in BIBSYS
- Document delivery:** Order loan/copy in BIBSYS, Order loan/copy in BIBSYS-ORIA (test)

## Finn via bibliotekets fagside

The screenshot shows a library search interface. A red box highlights the search results for 'UBO'. The results include:

- Kilde:** Computer [0018-9162]
- Fulltekst:** Fulltekst tilgjengelig fra IEEE Xplore Journals (IEL)
- Tilgang f.o.m.:** 1970 volum: 3 hefte:5
- Kontakt:** Hjelp og melding | Feedback form
- Beholdning:** Finn trykt eksemplar i BIBSYS
- Bestill:** Bestill dokument i BIBSYS, Bestill dokument i BIBSYS-ORIA (test)

## Find/Finn via IEEE Xplore

### Selected databases relevant for computer science

- ACM Digital Library (Full text)**  
Articles published by the Association for Computing Machinery (ACM) Journals and conferences from 1958-. (BibTeX, EndNote).
- IEEE Xplore (Full text)**  
Publications from The Institute of Electrical and Electronics Engineers (IEEE) and The Institution of Engineering and Technology (IET). The database contains more than 2.8 million documents. The subscription is limited to 10 simultaneous users. (BibTeX, EndNote).
- Lecture Notes in Computer Science (Full text)**  
LNCS covers both monographs and conference proceedings. Covers most volumes from 1(1973)-. (BibTeX, EndNote).
- Springer e-books (Full text)**  
15000 e-books published by Springer 2005-2009. And subscription to 3000 new publications 2010-2012. (BibTeX, EndNote).
- Inspec**  
A reference database from IET. Covers Physics, Electronics, Telecommunications, Computing, Control Technology and Information Technology. (EndNote).
- ISI Web of Knowledge (Web of Science)**  
Web of Science gir tilgang til: Science citation index expanded, Social science citation index, Arts and humanities citation index, and Conference proceedings citation index. (BibTeX, EndNote).
- MathSciNet (Many in full text)**  
MathSciNet is a comprehensive database covering the world's mathematical literature of the past 61 years. It provides Web

1983. Shneiderman, B. "Direct Manipulation: A Step Beyond Programming Languages," *IEEE Computer*, 16, 8, 57-69.

IEEE Xplore®

Access is provided by  
UNIVERSITY OF OSLO

## Computer

Popular	Early Access	Current Issue	Past Issues	About Journal	Submit Your
1970	1971	1972	1973	1974	1975
1980	1981	1982	1983	1984	1985
1990	1991	1992	1993	1994	1995
2000	2001	2002	2003	2004	2005
		2010	2011	2012	2013
				2014	2015
Vol. 16 Issue: 1		Vol. 16 Issue: 2		Vol. 16 Issue: 3	
Vol. 16 Issue: 5		Vol. 16 Issue: 6		Vol. 16 Issue: 7	
Vol. 16 Issue: 9		Vol. 16 Issue: 10		Vol. 16 Issue: 11	
				Vol. 16 Issue: 12	

1983. Shneiderman, B. "Direct Manipulation: A Step Beyond Programming Languages," *IEEE Computer*, 16, 8, 57-69.

shneiderman direct manipulation 1983

The screenshot shows the search results for 'shneiderman direct manipulation 1983'. The results display 1 of 1 result for 'shneiderman direct manipulation 1983'. The result is:

- Direct Manipulation: A Step Beyond Programming Languages**
- Shneiderman, B.
- Computer
- Year: 1983, Volume: 16, Issue: 8
- Pages: 57-69, DOI: 10.1109/MC.1983.1654471
- Cited by: Papers (154) | Patents (1)
- IEEE Journals & Magazines

1983. Shneiderman, B. "Direct Manipulation: A Step Beyond Programming Languages," *IEEE Computer*, 16, 8, 57-69.

## ... and these two ?

1986. Jacob, R. J. K. "A Specification Language for Direct Manipulation User Interfaces," *ACM Transactions on Graphics*, 5, 4, 283—31.  
1987. Foley, J. D. "Interfaces for Advanced Computing," *Scientific American*, 257, 4, 127—135.

### Journal articles: look for the journals

#### Selected databases relevant for computer science

[ACM Digital Library](#) (Full text)  
Articles published by The Association for Computing Machinery (ACM) Journals and conferences from 1958- (BibTeX, EndNote)

[IEEE Xplore](#) (Full text)  
Publications from The Institute of Electrical and Electronics Engineers (IEEE) and The Institution of Engineering and Technology (IET). The database contains more than 2.8 million documents. The subscription is limited to 10 simultaneous users. (EndNote)

[Lecture Notes in Computer Science](#) (Full text)  
LNCS covers both monographs and conference proceedings. Covers most volumes from 1(1973)- (BibTeX, EndNote)

[Springer e-books](#) (Full text)  
15000 e-books published by Springer 2005-2009. And subscription to 3000 new publications 2010-2012. (BibTeX, EndNote)

[Inspec](#)  
A reference database from IET. Covers Physics, Electronics, Telecommunications, Computing, Control Technology and ...

## ... og disse to?

1986. Jacob, R. J. K. "A Specification Language for Direct Manipulation User Interfaces," *ACM Transactions on Graphics*, 5, 4, 283—31.  
1987. Foley, J. D. "Interfaces for Advanced Computing," *Scientific American*, 257, 4, 127—135.

### Tidsskriftartikler. Se etter tidsskriftene

#### Selected databases relevant for computer science

[ACM Digital Library](#) (Full text)  
Articles published by The Association for Computing Machinery (ACM) Journals and conferences from 1958- (BibTeX, EndNote)

[IEEE Xplore](#) (Full text)  
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[Inspec](#)  
A reference database from IET. Covers Physics, Electronics, Telecommunications, Computing, Control Technology and ...

RESEARCH CONTRIBUTIONS

# A Specification Language for Direct-Manipulation User Interfaces

ROBERT J. K. JACOB  
Naval Research Laboratory

A direct-manipulation user interface presents a set of visual representations on a display and a repertoire of manipulations that can be performed on any of them. Such representations might include screen buttons, scroll bars, spreadsheet cells, or flowchart boxes. Interaction techniques of this kind were first seen in interactive graphics systems; they are now proving effective in user interfaces for applications that are not inherently graphical. Although they are often easy to learn and use, these interfaces are also typically difficult to specify and program clearly.

Examination of direct-manipulation interfaces reveals that they have a coroutine-like structure and, despite their surface appearance, a peculiar, highly moded dialogue. This paper introduces a specification technique for direct-manipulation interfaces based on these observations. In it, each locus of dialogue is described as a separate object with a single-thread state diagram, which can be

Informatics research

Find e-Journal Find e-Book English

Title Category Locate CitationLinker

ABCDEFGHIJKLMNOPQRSTUVWXYZ Others

Title: scientific american Starts with Contains Go

What's this?

Total number of results: 11

UBO Språk / Language: Norsk

Source: Scientific American [0036-87]

Full text

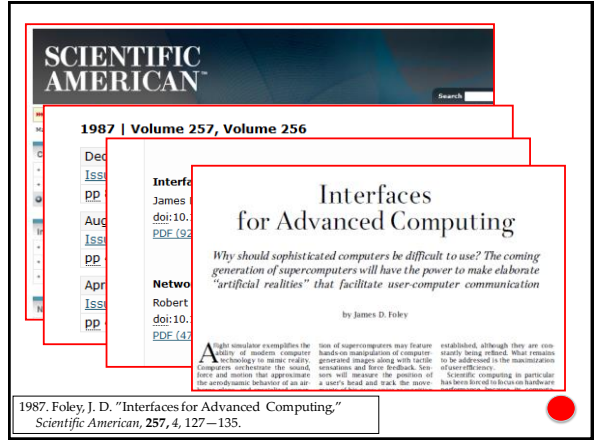
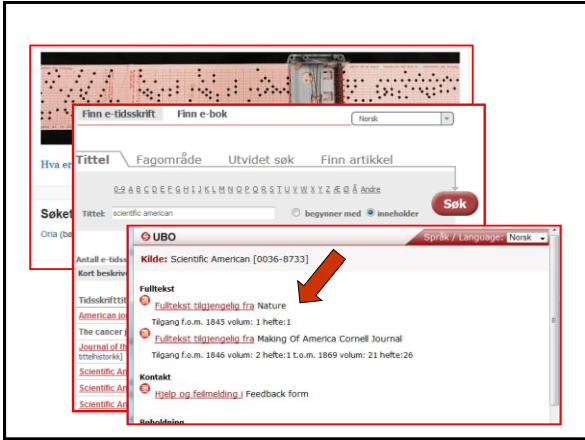
- Full text available via Nature Available from 1845 volume: 1 issue:1
- Full text available via Making Of America Cornell Journal Available from 1846 volume: 2 issue:1 until 1869 volume: 21 issue:26

Other services

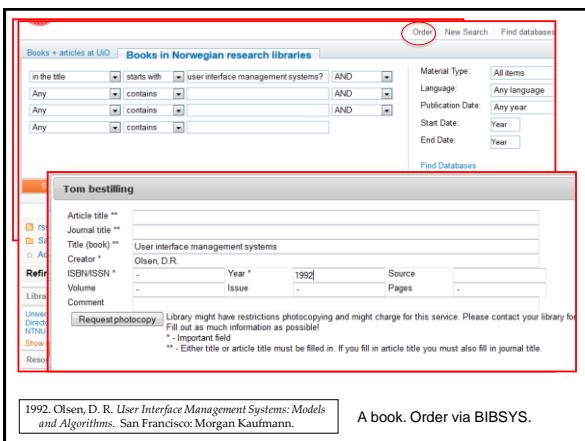
- Get help or report error in Feedback form

Actions

- 436 (1) (2) (3) (4) (5)
- 442 (1) (2) (3) (4) (5)
- 553 (1) (2) (3) (4) (5)
- 723 (1) (2) (3) (4) (5)
- 262 (1) (2) (3) (4) (5)
- 390 (1) (2) (3) (4) (5)

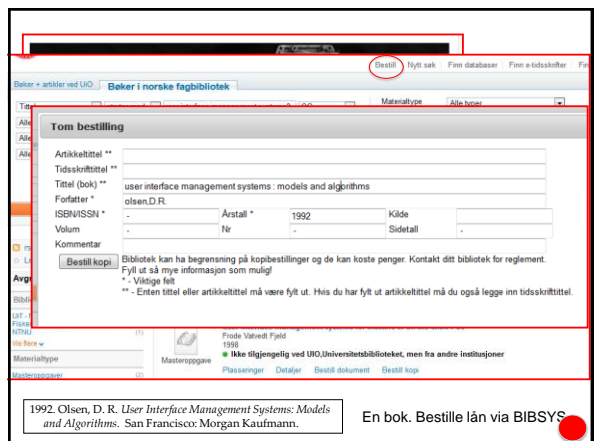


1987. Foley, J. D. "Interfaces for Advanced Computing." *Scientific American*, 257, 4, 127–135.



1992. Olsen, D. R. *User Interface Management Systems: Models and Algorithms*. San Francisco: Morgan Kaufmann.

A book. Order via BIBSYS.



1992. Olsen, D. R. *User Interface Management Systems: Models and Algorithms*. San Francisco: Morgan Kaufmann.

En bok. Bestille lån via BIBSYS.



## How do you get this?

The screenshot shows a search interface for "Books in Norwegian research libraries". The search criteria are: "starts with" "user centered system design" AND "contains" "1986". The search results show one item: "User centered system design : new perspectives on human-computer interaction" by Hutchins, E. L., Hollan, J. D., and Norman, D. A. (1986). The item is marked as "Available at UIO, Universitetsbiblioteket". There are buttons for "Request" and "Order photocopy". A comment field and an "Order" button are also visible.

## Hvordan får du tak i dette?

The screenshot shows a search interface for "Bøker i norske fagbibliotek". The search criteria are: "starter med" "user centered system design" OG "inneholder" "1986". The search results show one item: "User centered system design : new perspectives on human-computer interaction" by Hutchins, E. L., Hollan, J. D., and Norman, D. A. (1986). The item is marked as "Tilgjengelig fra UIO, Universitetsbiblioteket". There are buttons for "Bestill dokument" and "Bestill kopi". A comment field and a "Bestill dokument" button are also visible.

1989. Hartson, H. R., and Hix, D. "Human-Computer Interface Development: Concepts and Systems for its Management," *Computing Surveys*, **21**, 1, 5–92.

- A. Journal article
- B. Book
- C. Chapter in a book
- D. Conference paper
- E. Technical report

1989. Hartson, H. R., and Hix, D. "Human-Computer Interface Development: Concepts and Systems for its Management," *Computing Surveys*, **21**, 1, 5–92.

- A. Tidsskriftartikkel
- B. Bok
- C. Kapittel i bok
- D. Foredrag
- E. Teknisk rapport

1989. Johnson, J. et al. "The Xerox Star: A Retrospective,"  
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Bolt, R.A. (1982). Eyes at the interface. *Proceedings of Human Factors in Computing Systems*. New York, ACM, 360-362.

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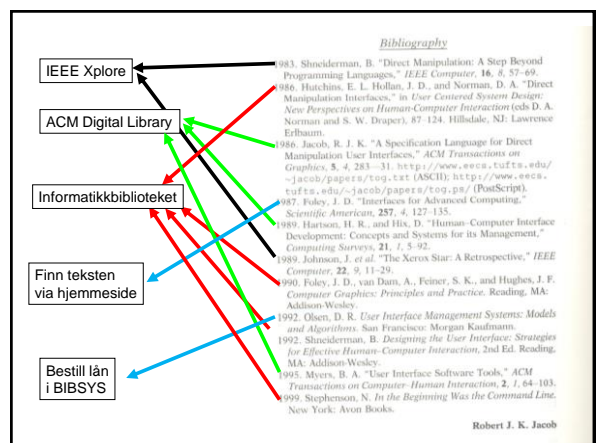
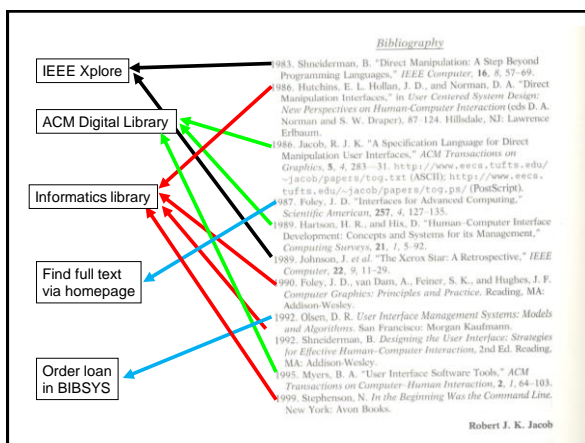
- A. Tidsskriftartikkel
- B. Bok
- C. Kapittel i bok
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Fisher, A.L. *Implementation issues for algorithmic VLSI processor arrays*. Dep. Comput. Sci., Carnegie-Mellon University, Pittsburgh, PA. Rep. CMU-CS-79-115, 1979.

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- B. Book
- C. Chapter in a book
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Fisher, A.L. *Implementation issues for algorithmic VLSI processor arrays*. Dep. Comput. Sci., Carnegie-Mellon University, Pittsburgh, PA. Rep. CMU-CS-79-115, 1979.

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- B. Bok
- C. Kapittel i bok
- D. Foredrag
- E. Teknisk rapport



Kva er forskjellen på ei god  
og ei dårlig oppgåve

What's the difference between  
a good and a bad paper?