

Using the World-Wide Web as a research support tool for materials engineering research

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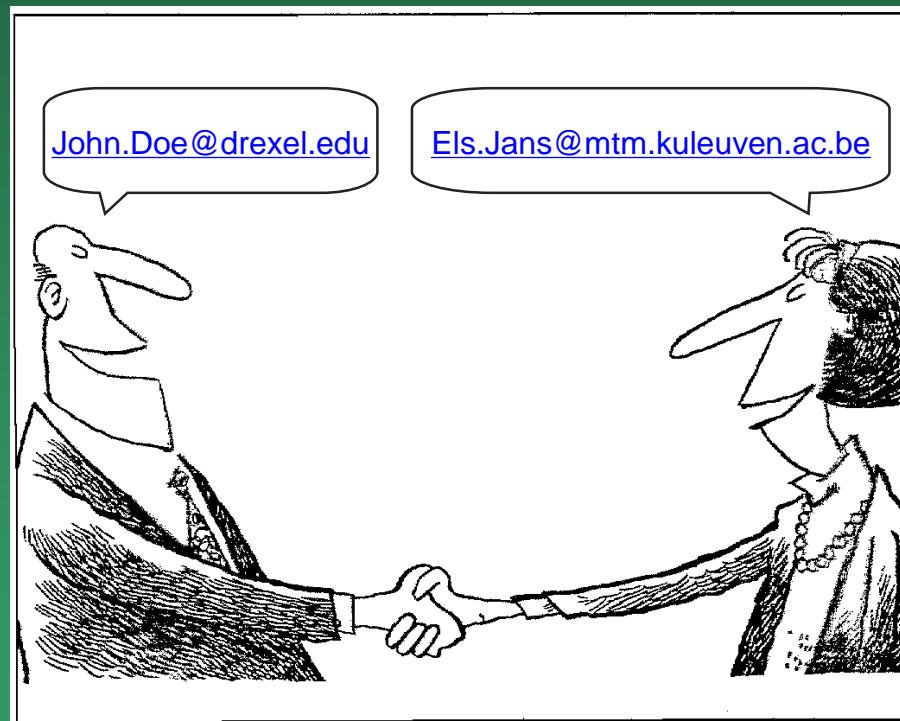
The Web as a research support tool

- n The Internet
- n The Internet as a research support tool
 - staying in touch
 - finding information
- n The World-Wide Web as an Internet interface
 - what is the World-Wide Web?
 - using a Web browser as a research support tool
 - ü staying in touch
 - ü finding information
- n The future of the Web as a research support tool



The Internet promise

- n the Information Superhighway / the I-way / the Infobahn
- n more than 30 million users, more than 30% research
- n becoming an indispensable research support tool



The Internet reality

n the Internet

- a global network of interconnected networks
- more than 40,000 networks / 4,000,000 computers

n widely used by:

- academic and government institutions
- professional communities (R&D)
- businesses and companies
- the general public

n providing useful services:

- e-mail, news, file transfer, remote login, web “surfing”



Internet services

n e-mail

- exchanging text and data with another researcher

n news (Usenet)

- posting messages to newsgroups on a specific subject

n file transfer (FTP)

- transferring files to and from another computer

n remote login (telnet)

- accessing the functionalities of another computer

n Web browsing (“surfing”)

- navigating through a universe of on-line documents



The Internet as a research support tool

n Staying in touch

- sharing ideas
- sharing resources
- sharing documents
- . . .

e-mail, news
news, FTP
Web, Gopher

n Finding information

- finding documents
- finding software
- finding people
- . . .

Web, Veronica
Web, Archie
Web, NetFind



Staying in touch

n E-mail

- stay in touch with research partners
- join mailing lists (e.g. *materials list*)

n News

- follow international newsgroups
 - ü e.g. *sci.engr.metallurgy*, *sci.materials*
- follow national newsgroups
 - ü e.g. *be.science*

n Web

- read newsletters (e.g. *Metals Watch!*, *Corrosioneering*)
- journals (e.g. *Journal of Corrosion Science and Engineering*)



Finding information

n Web

- large collection of search tools available
- search tools for documents, software, people, . . .
- user-friendly query interface in familiar Web browser

n Archie

- indexing and search service for FTP archives
- special client program, not frequently used anymore

n Veronica

- indexing and search service for Gopher documents
- special client program, not frequently used anymore

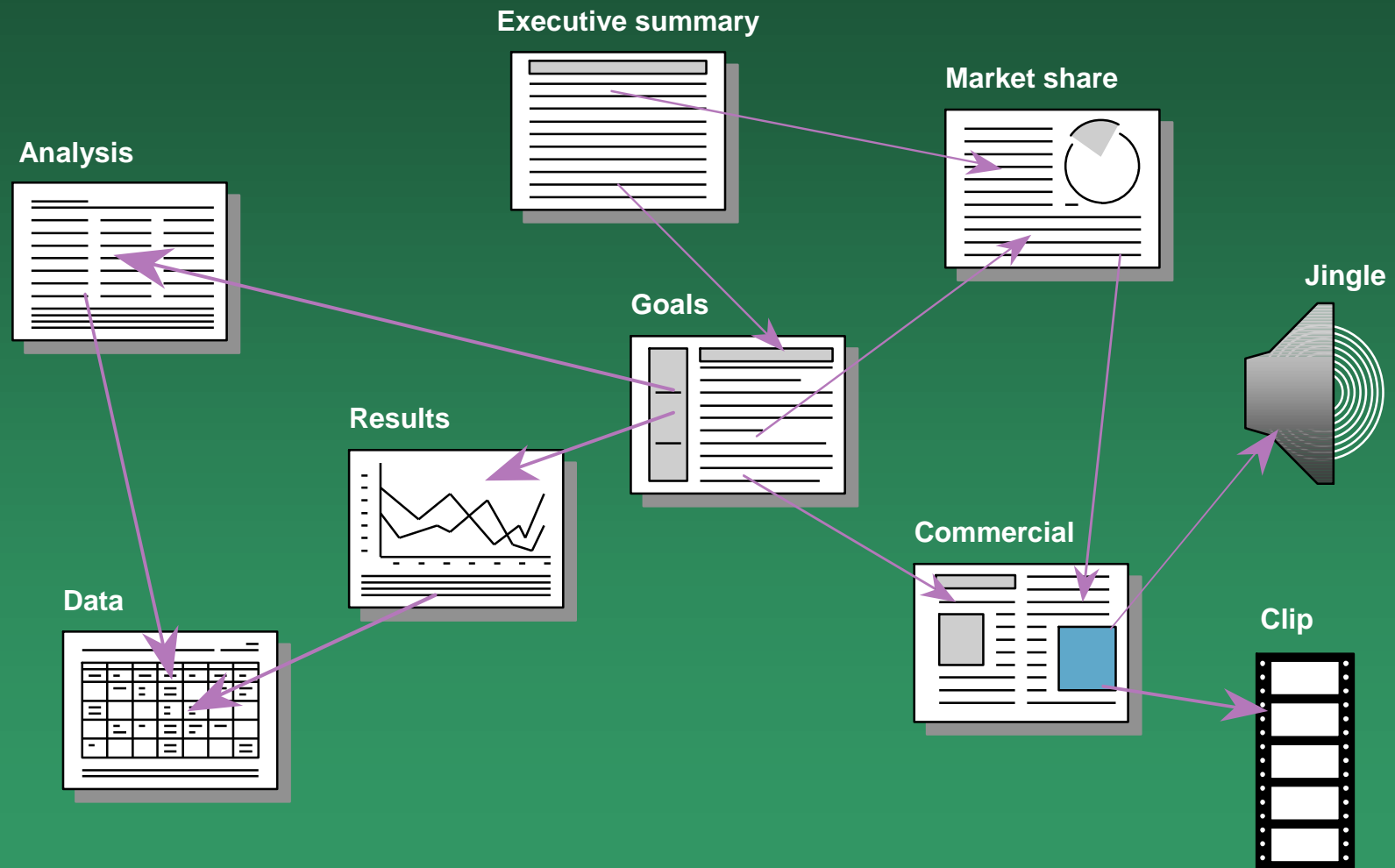


The World-Wide Web

- n the killer application
 - uniform interface
 - seamless access
 - *hypertext* navigation
- n a distributed hypermedia system
 - *distributed* = client-server architecture
 - *hypermedia* = hypertext + multimedia
- n a document universe on top of the Internet
 - more than 15 million documents
 - still doubling in size every 6 months

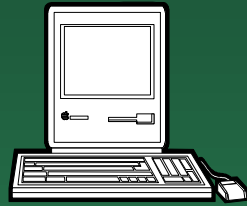


Hypermedia: hypertext + multimedia



The World-Wide Web

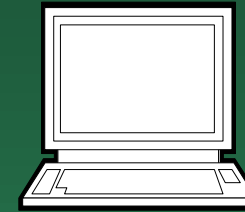
BROWSERS



Macintosh



PC



Workstation



HTTP server

Gopher server

FTP server

NNTP server

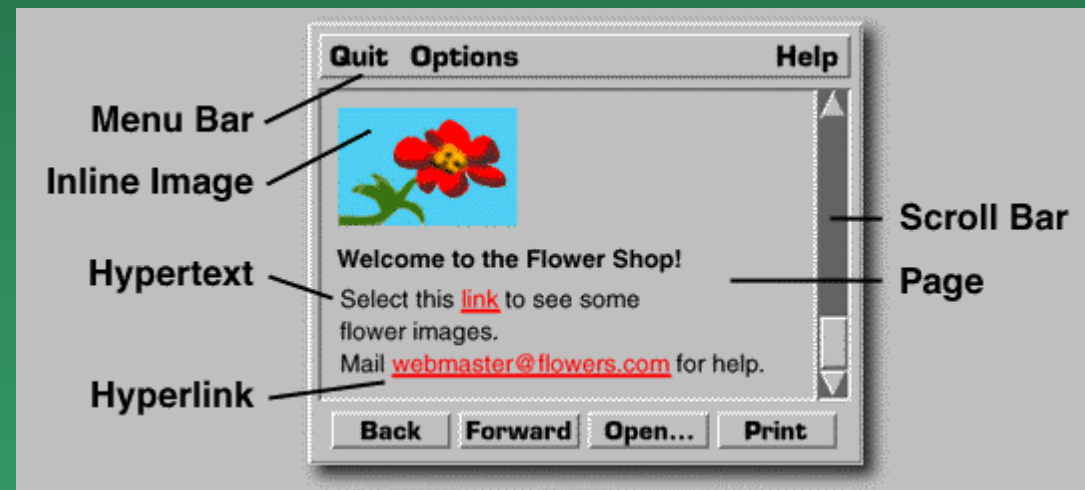
gateway



SERVERS

A Web browser

- n single, easy to use graphical interface
- n rich contents: text, graphics, audio, video, . . .
- n easy access: FTP, Gopher, e-mail, newsgroups, . . .
- n a document interface to different information sources



Using a Web browser

n what you need:

- a MS-Windows TCP/IP stack
- a direct connection to the Internet
- the Netscape Navigator 2.0 browser

n what you get:

- news reader
- Web browser
- e-mail package
- access to FTP, Gopher, . . .

under one single, easy to use graphical interface



The future of the Internet / the Web

n a tool for **research**

- now: exchanging research notes and scientific documents
- future: co-operation of researchers, networking of experts

n a tool for **education**

- now: reading scientific reports, consulting document archives
- future: a truly “open” university with on-line multimedia courses

n a tool for **employment**

- now: getting to know companies, exploring career opportunities
- future: “virtual” companies set up by university and industry

n . . . so start exploring the Web yourself!

- use your e-mail account
- install a Web browser

