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Hardware Deflation

- Walmart 850MHz Duron PC
128MB/10GB/CD/Eth/56k/Lindows
\$299 plus monitor
- HP Jornada Pocket PC
64MB Color
\$649.99
- IA-54, Infiniband, HyperTransport,
SANs: Storage Area Networks
Grid, Autonomous Computing

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Telecom Glut

- NextWave, Teligent, 360Networks, Covad, Excite@Home ...
- \$55B JDS Uniphase, \$20B Nortel
- Jack's House

Cable Modem	3.2/1	\$40/mo
Consumer DSL	1.5/.25	\$40/mo
Commcl DSL	1.1/1.1	\$200/mo
	5.8/2.35	\$280/mo
- ~4 T-1 lines, <\$300/mo

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Streaming Media Acceptance

- 35% of adult Americans are streamies
- 83 million have tried it
- 38 million streamed in the past month
- 28% of home users have broadband

Arbitron/Edison Media Research

- Peer-to-peer file sharing
102 million Morpheus apps

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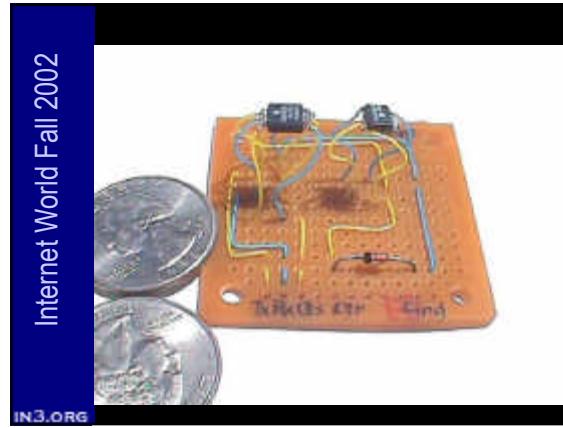


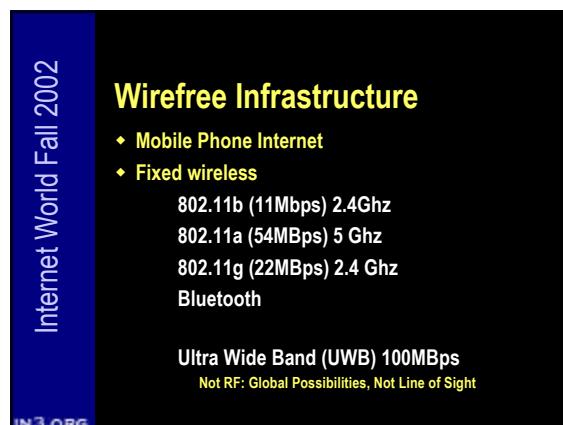
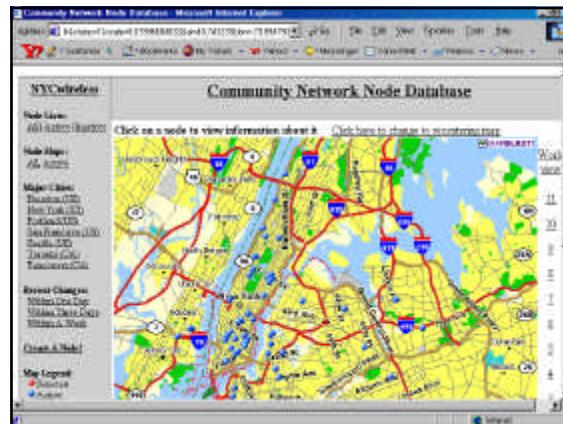
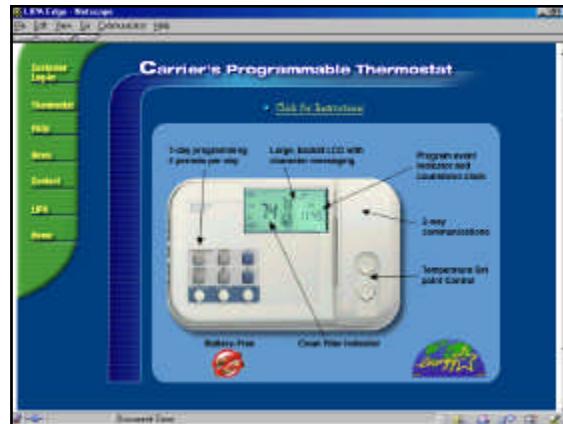
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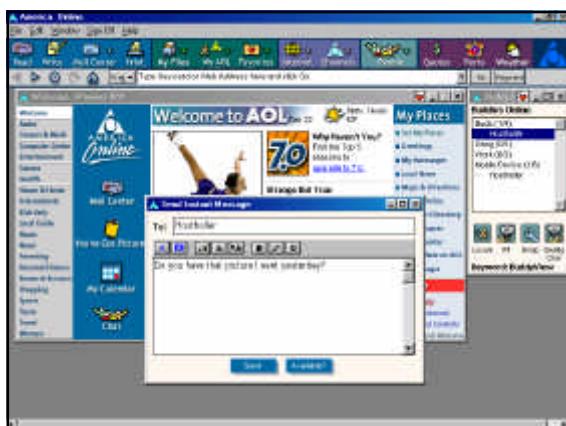
Internet Everywhere

- Immersive IP
- The Internet Home
 - Broadband, residential gateways
 - Powerline, phoneline, wireless
 - Entertainment, collaboration
- Embedded IP

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Pervasive Video
The Future of TV Everywhere
Jack Powers, director
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Flat, Light & Cheap Displays

- CRT: Cathode Ray Tube
- LCD: Liquid Crystal Display
- Plasma Display

CRT: Cathode Ray Tube
LCD: Liquid Crystal Display
Plasma Display

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Consumer Access & Control

- DVD Players
 - Component
 - Standalone
- PVR: Personal Video Recorders
 - TiVo, Replay, SnapStream
 - Easy recording
 - Control live shows:
pause, slo-mo, instant replay
 - Network and save programs

DVD Players
Component
Standalone
PVR: Personal Video Recorders
TiVo, Replay, SnapStream
Easy recording
Control live shows:
pause, slo-mo, instant replay
Network and save programs

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Portable & Ubiquitous Devices

- PDAs, mobile phones, cars

PDAs, mobile phones, cars

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Portable & Ubiquitous Devices

- Watches, pens, eyeglasses

Watches, pens, eyeglasses

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Flat, Light & Cheap Displays

- OLED: Organic Light Emitting Diode

OLED: Organic Light Emitting Diode

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Projection Displays

- From wall size to super size



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Virtual Signs

- Video signs in stores, ATMs, malls



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TV Unplugged

- Wireless LAN and WAN networking
WiFi, Bluetooth, UWB
- Pocket-sized TVs
- Pocket-sized cameras
- TV anywhere



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Software Ascendant

- Hardware budgets slashed
CTO as IT decision maker
- Hardware margins shrinking
- IT Dissatisfaction

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Real Time Enterprise

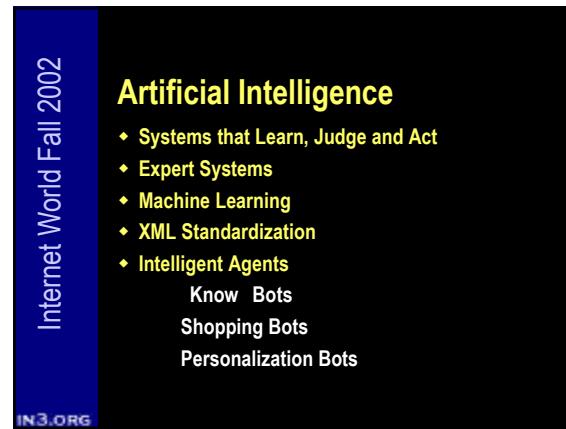
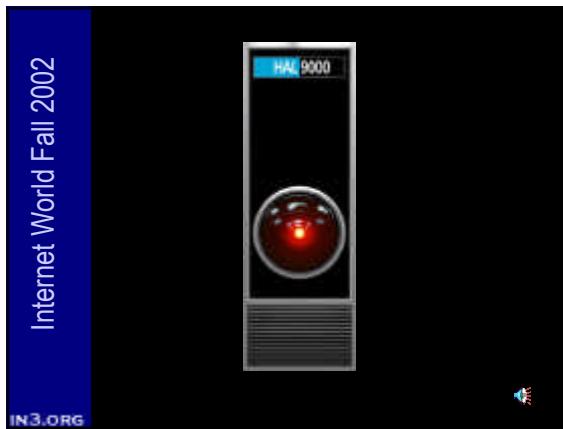
- ERP, EAI, SCM, CRM, BAM, EI EI O
- Apply technology to run faster and smarter ...
 - Real Time Finance
 - Real Time Customer Service
 - Real Time Retailing
 - Real Time Logistics

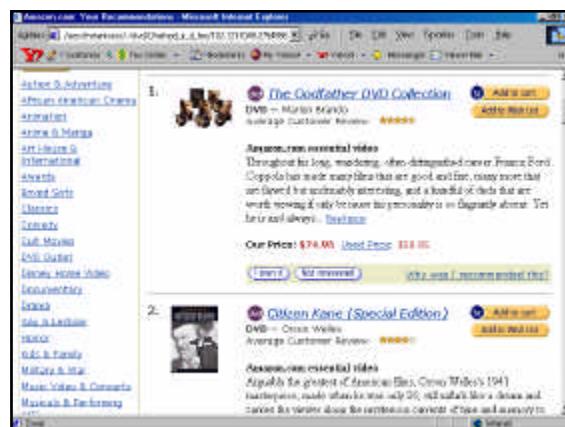
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Web Application Services

- IBM Websphere
- Sun ONE
- Microsoft .NET
- Lots of vendor push
- Not much user pull





Content AI

- Tagging program data in XML
- Pictron, TV-Anytime
- manually or semiautomatically



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Content AI

- Intelligent program guides
- LEARNING about user preferences overtly or covertly
- JUDGING which programs are the best match
- ACTING as an entertainment agent to retrieve, record, search or someday create video content

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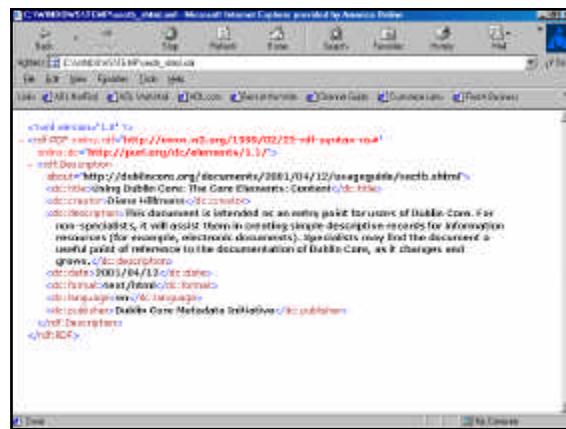
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Content AI

- Machine Vision



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Waves

- ◆ Human Capital
- ◆ Hardware and Telecom in Stasis
- ◆ Software Ascendant
- ◆ Real Time Enterprises
- ◆ Internet Everywhere
- ◆ Artificial Intelligence
- ◆ Ripples

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Ripples

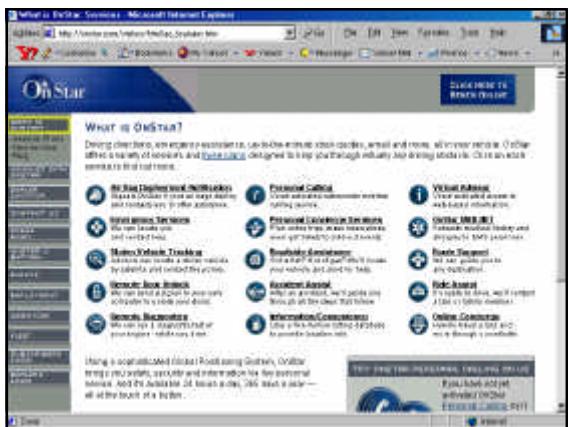
- ◆ Internet Voice
- ◆ Telematics
- ◆ Browser wars
- ◆ Copyright, licensing and Open Source
- ◆ Privacy and trust issues

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Internet Voice

- ◆ Voice Response
VoiceXML
- ◆ Voice Control
Conversa
- ◆ Voice Access
TellMe, Etrieve, BeVocal

A screenshot of a web browser window. The left side shows the 'TellMe' homepage with a search bar and various service links. The right side shows a promotional page for 'BeVocal'. The BeVocal page features a large purple header with the question 'What is BeVocal?'. Below it are three small images: a person holding a telephone receiver, a person standing next to a car, and a person holding a briefcase. To the right of these images is the phone number '1-800-4-BEVOCAL'. At the bottom of the BeVocal section is a link to 'Member Benefits'. The browser's address bar shows the URL 'http://www.tellme.com'. The overall layout is a standard web page with a mix of purple, white, and black text.



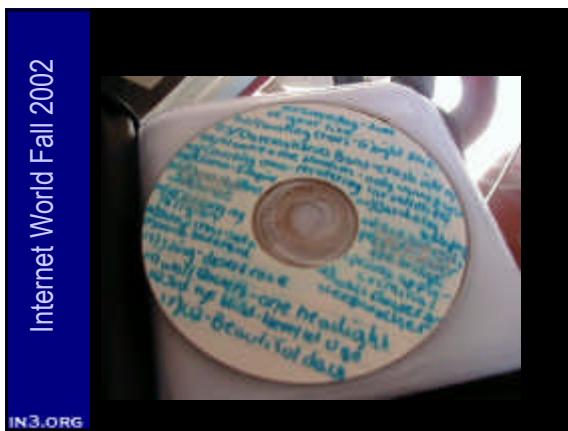
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Browser Wars

- Internet Explorer vs Netscape vs Opera
- Wireless Access Protocol
- Palm VII Web clipping
- Avantgo
- Limited appliances
- Voice

The image shows a Palm VII PDA with a screen displaying a web page, illustrating the topic of mobile web clipping.



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Real Time Society

The illustration depicts three individuals in a room, each working on a computer, connected by glowing yellow lines that represent data flow or communication in a real-time society.