

Technology Horizon

Digital Impact on the Newspaper Industry

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Chief Philosopher

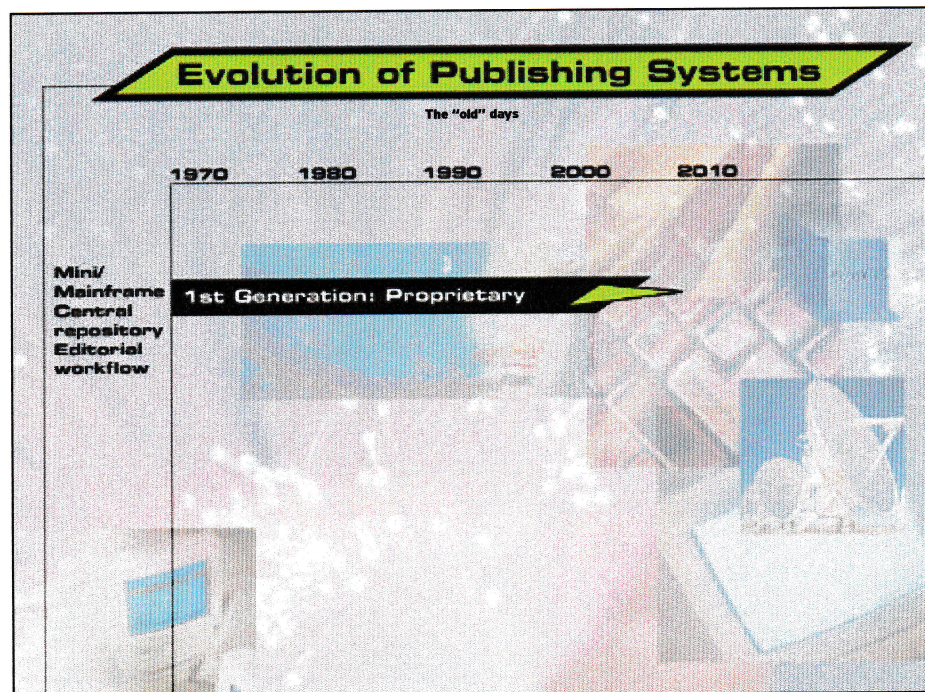
Central Newspapers, Inc.

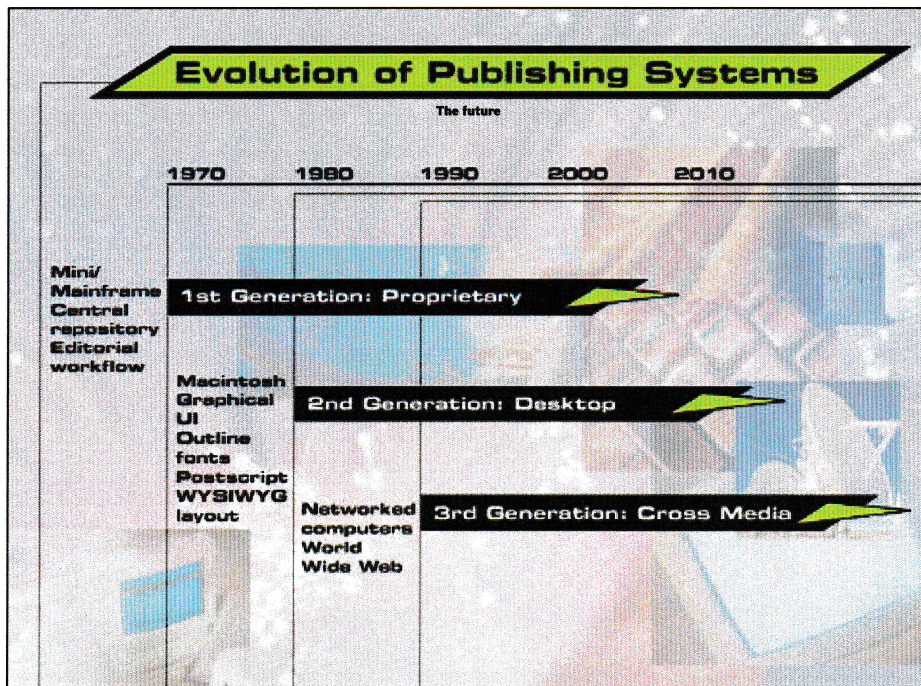
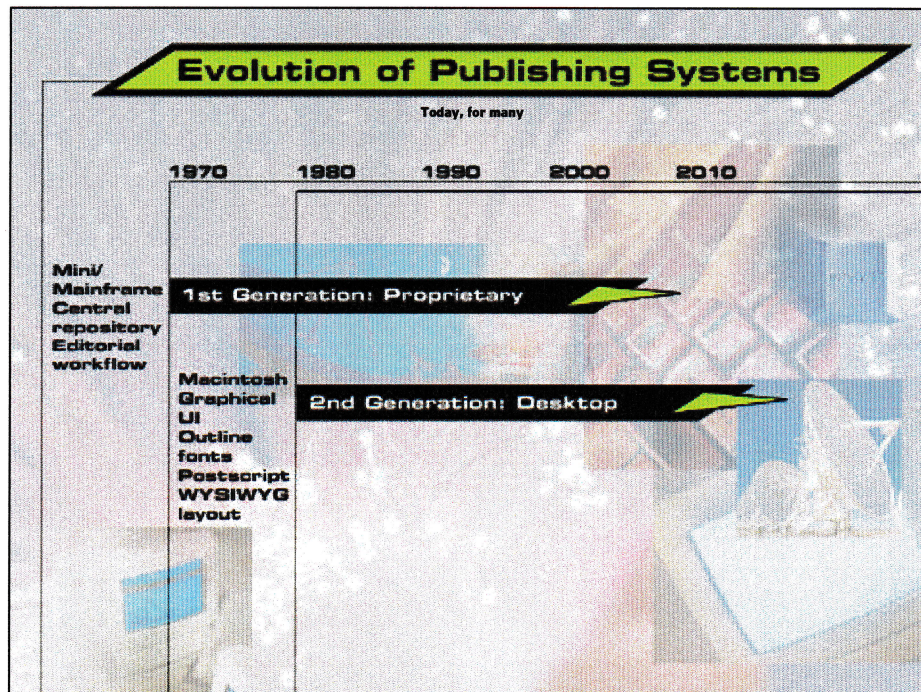
Deep impact

Change and challenges felt

- Internal
 - ✓How we do business
- External
 - ✓What is our business

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Internal impact

Everything is going digital

- More responsibility on the individual
- More responsibility on the company

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Internal impact

Our challenge

- How do we keep feet on the street?
 - ✓ Reporters, photographers, sales staff ...
- How do we make the most effective use of resources?

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Tools for the 21st century

Hitachi's digital "camera"

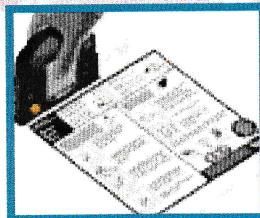
- Still, video, audio capture device
- ✓ First to the scene

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Tools for the 21st century

HP CapShare

- Info gathering devices
for reporters, sales persons
- ✓ Capture records that can not be moved
from source

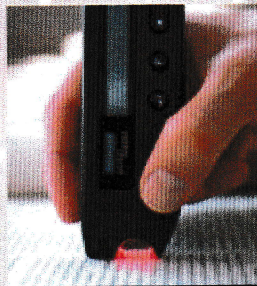


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Tools for the 21st century

Siemens PocketReader

- Info gathering device
- Captures and converts text to digital
 - ✓ OCR in the palm of your hand



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One person, many skills . . .

It is very hard to shift the
organizational culture

- Can we use technology
to be more effective?

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The technology is a **tool**

Technology is not a solution by itself

- Technology cost and management
- Organization and culture changes
- Redefining our publishing cycle[s]

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External impact

More important than internal changes

- Our industry is at an “*inflection point*”
- Disruptive technologies are everywhere

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Disruptive technology

*With disruptive technologies, a company needs to throw off its existing culture and methods of doing business. While current customers are important, a disruptive technology demands that a company make sure these customers **do not** drive the company's **future direction**. In other words, it means making sure old relationships – and their current economic value – do not drive business decisions needed for the **future**.*

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What are those technologies?

The Internet

➤ But there are others

Display technologies

Information appliances

Beyond text: Audio

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Display technology

How information is displayed
is important

- High quality display is a **danger**
to newspapers
 - ✓ Removes key barrier
for reading text on screen

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Display technology

The world
is flat

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Display technology

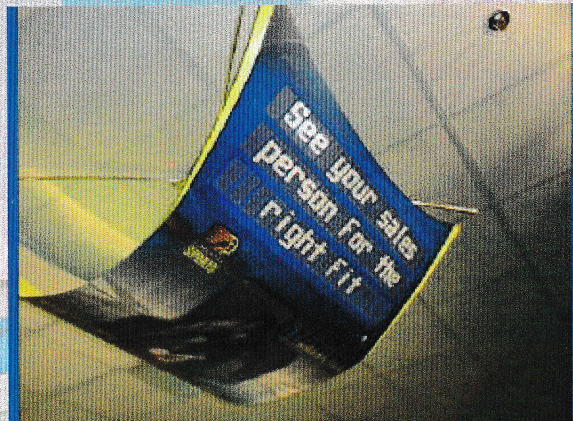
This is not about television
or monitors

- Instant advertising

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Disruptive display

E-Ink's instant advertising message



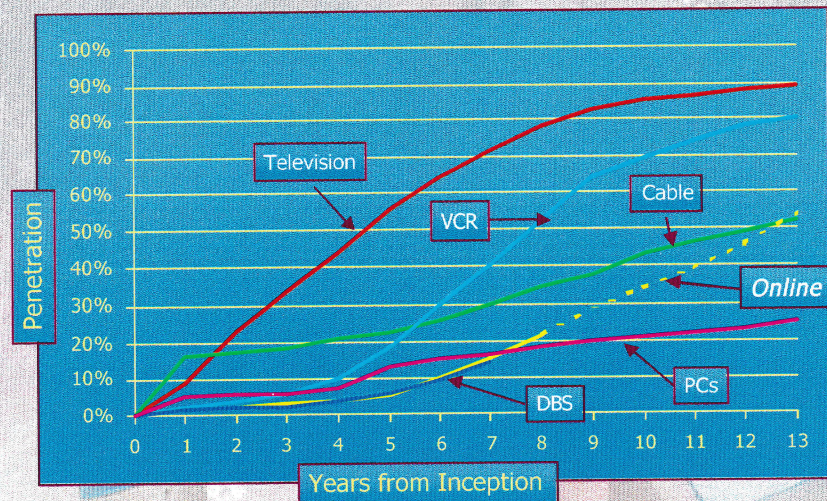
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Information appliance

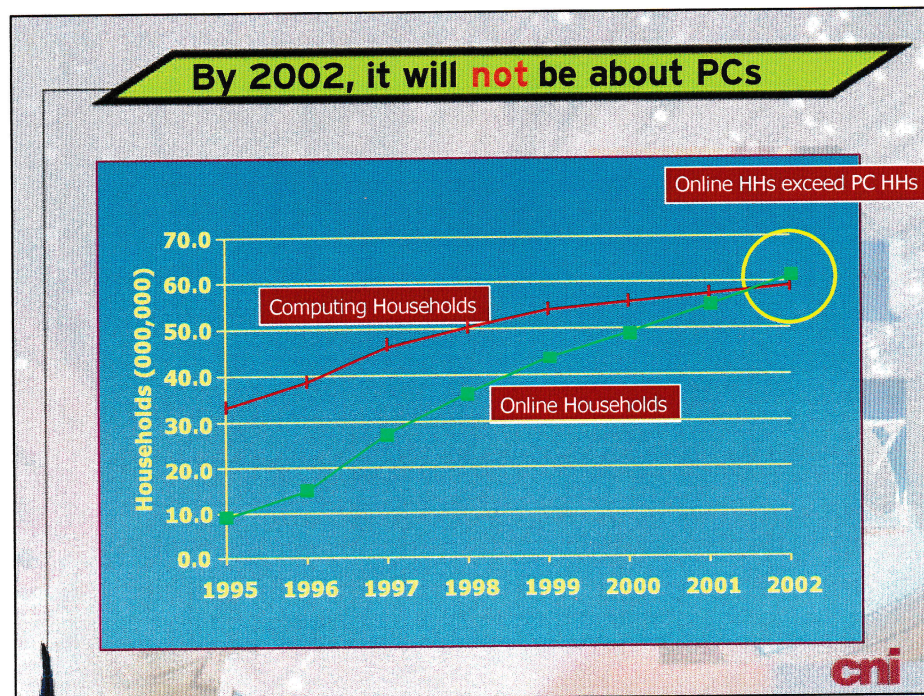
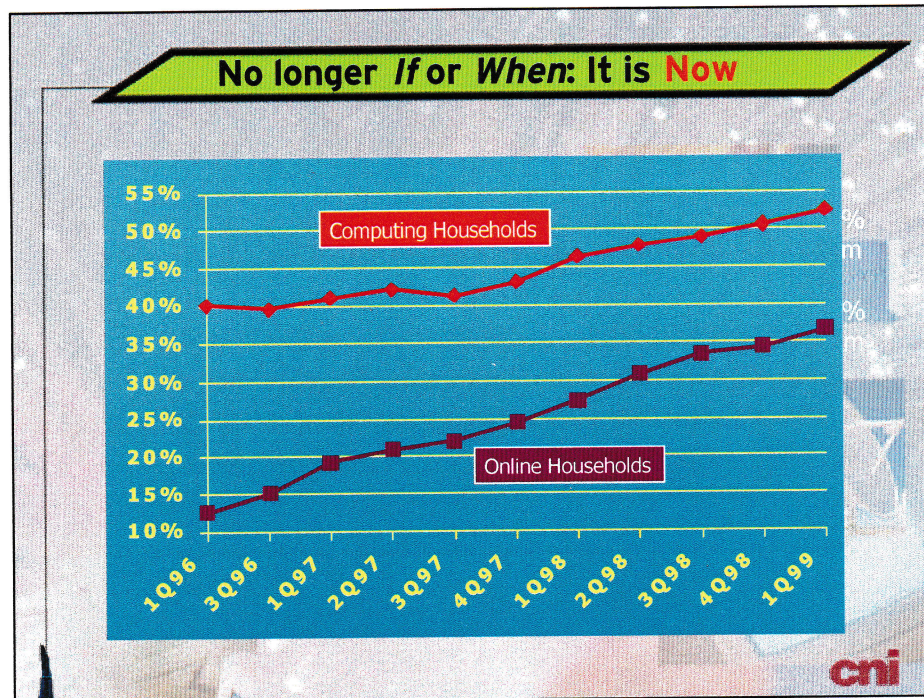
Even more disruption

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Faster than a speeding bullet



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Potential non-PC device market

Content	TV	Cell phone	PDA	Pager
Discount/promo notification	62.2%	60.6%	37.9%	37.0%
Stock quotes	45.6%	42.3%	31.7%	29.6%
Flight timetables	52.2%	49.0%	34.2%	30.1%
Yellow pages	67.9%	90.6%	47.3%	45.6%
Auction updates	68.6%	41.9%	48.2%	29.8%
Task				
Purchasing a physical product	63.2%	55.6%	40.6%	28.5%
Purchasing downloadable software	54.7%	37.2%	36.2%	22.2%
Trading stocks	40.0%	34.6%	29.5%	20.3%
Placing/modifying auction bids	41.6%	33.8%	29.3%	21.5%
Booking airline flights	53.2%	54.1%	37.4%	26.0%

Based on 6,500 interviews with consumers who own alternative devices
Jupiter Communications

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Information appliance

What are they?

Call them “Digital Toasters”

- An IP address for your refrigerator

Tightly focused device

- You have seen two
- More are coming

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Info appliance: Softbook

The Softbook

Delivery of text and images

✓ Not just for books

- Magazines
- Newsletters
- "Newspapers"



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Info appliance: Palm Pilot VII

Just like the current Palm Pilot

But connected

- Wireless access via radio signal network
 - ✓ Stock info
 - ✓ Instant messages
 - ✓ E-mail
 - ✓ News and other information

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Info appliance: Palm Pilot VII

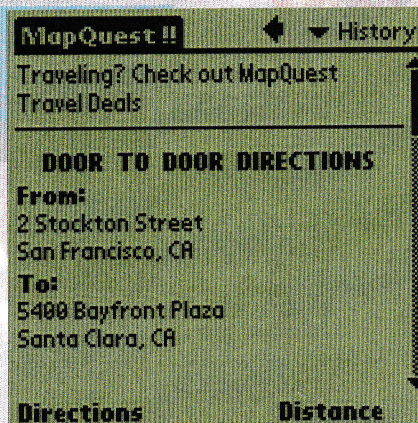
Here's what it looks like



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Info appliance: Palm Pilot VII

Here's what it looks like



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Info appliance: Palm Pilot VII

Threat or Opportunity?

- New platform for receiving information from our databases
 - ✓ It isn't print
 - ✓ It isn't online

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Info appliances: Audio version

MP3 and the road to Rio

- First target is the music industry
- Newspapers can not be complacent

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Info appliance: Audible player

Text into audio

- For the multi-tasking world
- ✓ Just another delivery device



Info appliance: Webphones

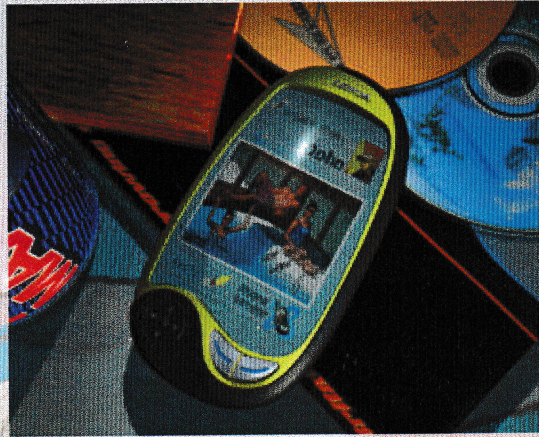
Nokia's next generation "phone"

- Just one more network device
- ✓ Web browsing and IP phone calls



Info appliance: Webphone

Beyond text: video



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Disruptive combinations

Portable
Readable
Wireless



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Disruptive combination

IBM's e-newspaper mockup



This is a glimpse over the horizon

There are more pieces out there

Our challenge is simple

- How to thrive in a period of rapid change

Thriving during change

Invest in ourselves

- Research and development
- Try, fail and learn and try again

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Thank you

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