### Headlights on Dark Roads



#### Tell them what you're going to do.

- The failure of libraries
- Recent reports
  - The CIBER Report
  - Great Expectations
  - OCLC Study of College Student Perceptions in 2006
- Marc Prensky on the Digital World
- A-literacy and the move from a text based to an image based society
- The Brave New World of the information rich
- And the consequence was....



"The picture's pretty bleak, gentlemen. ... The world's climates are changing, the mammals are taking over, and we all have a brain about the size of a walnut."

## The End of Libraries

"The Librarians and Libraries that do not accept the change will inevitably be victims of the evolution. For the dinosaurs it will indeed be the end.

James Thompson

"We are already very close to the day in which a great science Library could exist in a space Less than 10 feet square "Although these emerging, digital-age library services may be important, even critical, in the present era, there is no consensus on their significance to the future academic library—or even on whether they should remain as library functions carried out by librarians. "In addition, at this point, the discussion of the future of the academic library has been limited to librarians and has not widened, as it should, to involve the larger academic community.

"Consequently, neither academic librarians nor others in the academy have a crisp notion of where exactly academic libraries fit in the emerging twenty-first-century information panoply... "Because of the fundamental role that academic libraries have played in the past century, it is tremendously difficult to imagine a college or university without a library. "Considering the extraordinary pace with which knowledge is moving to the Web, it is equally difficult to imagine what an academic library will be and do in another decade.

"But that is precisely what every college and university should undertake to determine. Given the implications of the outcome, this is not an agenda that librarians can, or should, accomplish alone".

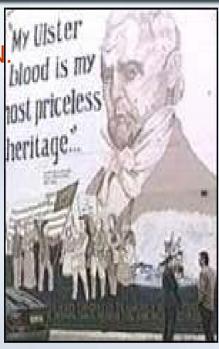
Campbell, J. EDUCAUSE Review, vol. 41, no. 1 (January/February 2006): 16-31

#### The failure of Librarians

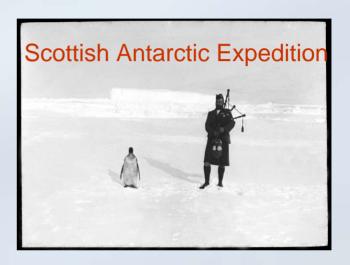
- 1. Making the technology work too well
- 2. Lack of underpinning philosophy
- 3. Rise of the managerial technocrat
- 4. Complacency
- 5. Failure to engage with e-resources
  - a) Obsessed with licences
  - b) Digitising oddities

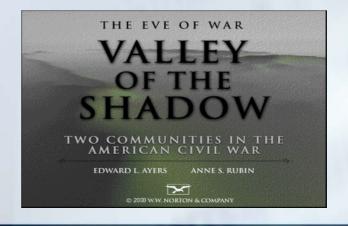
#### Cabinets of curiosities

C.A.I.N









# OCLC Study of College Student Perceptions in 2006

- 89% use search engines to begin a search
- 2% use a library web site
- 93% are satisfied or very satisfied with this
- 84% if librarian assisted
- Search engines fit the student life style
- Library use is diminishing
- "books" are the library brand



### Second Life Library eBooks



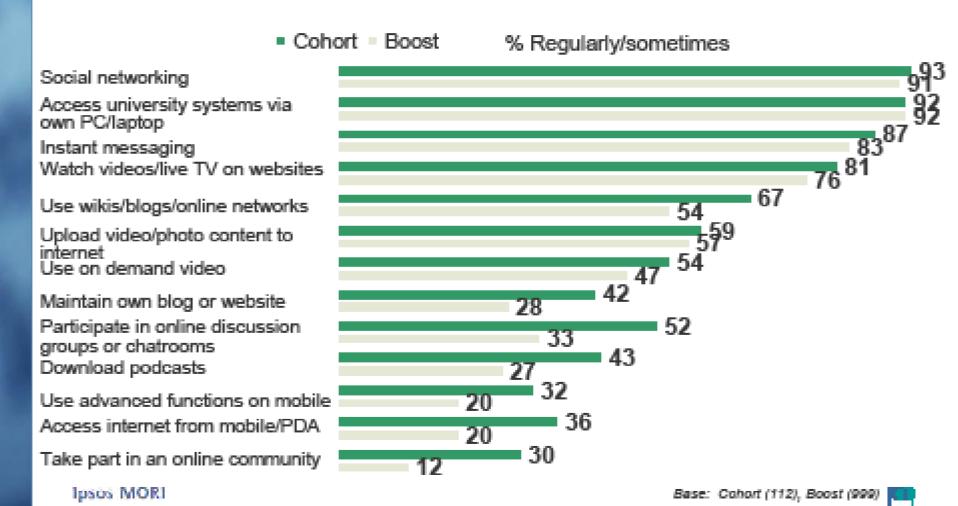
#### From authority to consensus

 57% of teenagers create content for the Internet

- 62% of content created by users under age 21 is generated by someone they know
- 73% of students use the internet more than the library

#### Great expectations: final report

Q2 How often, if at all, do you do the following?



#### ChildWise Annual Survey 2008

- 40% of 9year olds have internet in their room
- They have six hours of screen time a day, with 1.7 hours online
- "2008 has seen a major boost in intensity"
- Reading for pleasure has declined from 84% to 74% in two years
- They are fluent communicators who don't read and rely on spellcheckers
- They multitask
- They are abandoning print and paper and communicate in a completely different way



information behaviour of the researcher of the future



- The latest CIBER research suggests that e-books will be the next publishing success story
- E-Content and collections

### The Dempsey Paradox

The Internet has reversed information seeking from:

- Time rich/ information poor
- Information rich/time poor

- The latest CIBER research suggests that ebooks will be the next publishing success story
- E-Content and collections
- Mobility, mobility, mobility



- The latest CIBER research suggests that ebooks will be the next publishing success story
- E-Content and collections
- Mobility, mobility, mobility
- Trust metrics



- The latest CIBER research suggests that ebooks will be the next publishing success story
- E-Content and collections
- Mobility, mobility, mobility
- Trust metrics
- New learning styles (trial and error)
  - Nintendo over logic

- The latest CIBER research suggests that ebooks will be the next publishing success story
- E-Content and collections
- Mobility, mobility, mobility
- Trust metrics
- New learning styles (trial and error)
- Information is ephemeral

## Library/Information service challenges

- Information is ephemeral
  - > 44% of websites disappear within a year
  - > Wikipedia not Britannica will be the norm
  - > User not expert created
  - > Democratic not authoritative
- We need to manage information and access to it NOT store it
- EXCEPT, we need to digitise, curate and make available
  - Corporately owned or created content
- Information literacy is a critical skill
  - > Cf ECDL

### Digital Natives (1)

- Expect research to be easy and feel they can be independent in the process.
- They do not seek help from librarians and only occasionally from professors or peers.
- When they can't find what they need, they give up and assume that the information cannot be found. Students often stop after their initial searches thinking they have completed the research process and fail to choose a particular focus.

### Digital Natives (2)

- Access to full text articles seems to have changed students' cognitive behaviour. Instead of having to read through material at the library, they can now download material at their desks. They do not have to take notes or read through them to develop themes and ideas, an activity central to a focused research project. [BECAUSE]
- Electronic articles enable cutting and pasting, almost certainly leading to increased plagiarism – although I suspect that this is done through ignorance more often than malice
- > The model is browsing and grazing:
  - > Four minutes for an e-article
  - > Eight minutes for an e-book

#### Aliteracy roolz ok?

- Txt msgs r gr8
- Kidz cant spel
- Wot z hpng 2 gramr?
- & they nevr read bks!!!

- But itz stil cmunicashun
- Snot dumming down

# Action Man: Available from All Good Bookshops.....

Leonardo da Vinci was the original Renaissance man. He was a master of painting, science, language and the inspiration for Leonardo Di Caprio's name



### What if...

Users have materially changed?
A-literacy is acceptable?
Images replace words?
New cultural reference points











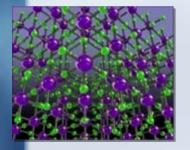
































#### History: legacy or chains

- Without words, without writing and without books there would be no history, there could be no concept of humanity.
  - Hermann Hesse Swiss (German-born) author (1877 - 1962)

# This is not an incremental change but a discontinuity

"Today's students - K through college - represent the first generations to grow up with this new technology. They have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age. Today's average college grads have spent less than 5,000 hours of their lives reading, but over 10,000 hours playing video games (not to mention 20,000 hours watching TV). Computer games, email, the Internet, cell phones and instant messaging are integral parts of their lives."

Prensky 2001

#### Digital Content

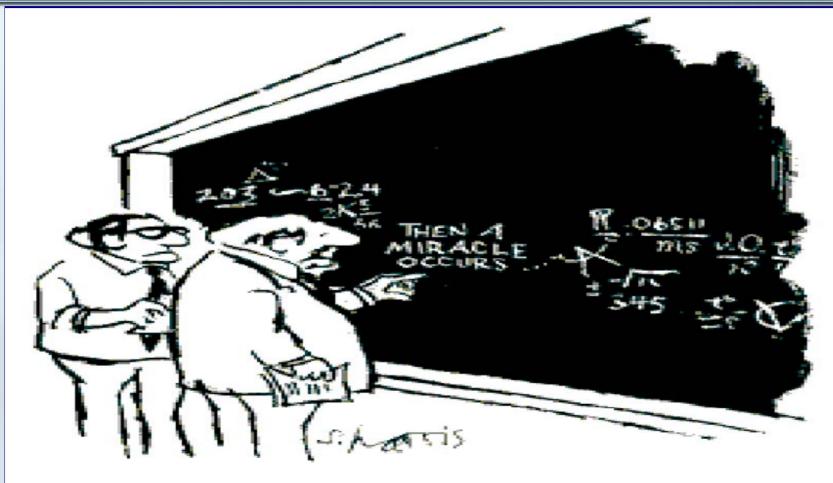
"It seems to me that after the digital "singularity" there are now two kinds of content: "Legacy" content (to borrow the computer term for old systems) and "Future" content. "Legacy" content includes reading, writing, arithmetic, logical thinking, understanding the writings and ideas of the past, etc - all of our "traditional" curriculum. It is of course still important, but it is from a different era.

Some of it (such as logical thinking) will continue to be important, but some (perhaps like Euclidean geometry) will become less so, as did Latin and Greek.

"Future" content is to a large extent, not surprisingly, digital and technological. But while it includes software, hardware, robotics, nanotechnology, genomics, etc. *it also includes the ethics, politics, sociology, languages and other things that go with them."* 

(Prensky, 2001)

#### Digital Overlap Strategy

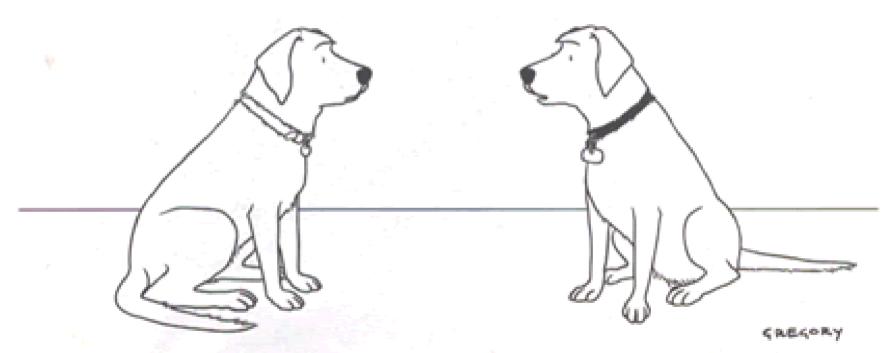


"I think you should be more explicit here in step two."

Traditional Library Activity	Web 2.0 World
Cataloguing	Automated metadata, del.icio.us
Classification	Folksonomies and the semantic web
Acquisitions	e-bay, Paypal, Amazon and Abebooks
Reference	Yahoo Answers and Wikipedia
Preservation	Digital Archives and repositories
User Instruction	Chatrooms
Working space	Bedroom and Starbucks with a laptop
Collections	Youtube, Flickr, Institutional Repositories, Open Access
Professional judgement	The wisdom of crowds

Traditional Library	Web 2.0 World	Library 2.0 World
Cataloguing	Automated metadata, del.icio.us	Metadata
Classification	Folksonomies and the semantic web	Locally provided and relevant folksonomy
Acquisitions	e-bay, Paypal, Amazon and Abebooks	E-archives, e-data trust metrics and quality assurance
Reference	Yahoo Answers and Wikipedia	Branded links to trusted resources
Preservation	Digital Archives and repositories	Institutional repository
User Instruction	Chatrooms	Moderate chatroom
Working space	Bedroom and Starbucks with a laptop	Wired campus and 24- hour workspace
Collections	Youtube, Flickr, Institutional Repositories, Open Access	Aggregation of unique content with other libraries
Professional judgement	The wisdom of crowds	Teaching retrieval skills

# Web 2.0: A Research Agenda



"I had my own blog for a while, but I decided to go back to just pointless, incessant barking."

### Collaborative research

- Blue Obelisk
- Open Wetware
- nanoHUB
- High resolution remote artefacts
- Pooled research
- Sermo
- Open Communities
  - Innocentive
- Nature Precedings



#### navigation

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discussion



BioSysBio 2007 Conference

Share techniques & more



Video Highlight Crisanti Lab



Lab Highlight Christophides Lab

#### Media Spotlight



See video of Chris Surridge from PLoS ONE 🗗

give OpenWetWare's Seminar Series on Open Science.

Browse Archive

#### What's New

3/9: Wiki Chat

You can now chat on the wikil

 2/7: OpenWetWare data dumps Download full backup of OpenWetWare.

 1/18: Steering committee meeting Call in or add items to the agenda.

 12/22: OpenWetWare welcomes its 2000th Contributor

 12/17: OpenWetWare mailing lists Join one or send email.

Browse Archive

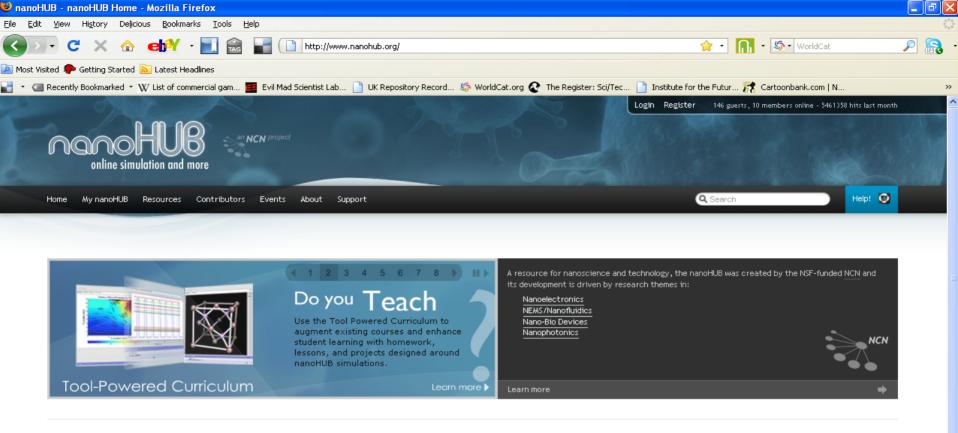


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II - II MediaWiki About





#### Nanoelectronics

Tools for nanoelectronics

MEMS/Nanofluidics
Tools for NEMS and Nanofluidics

Nano-Bio Devices Tools for nano-bio devices

Browse all available tools

#### Research

Seminars / Workshops Cutting edge research

Collaborate

Work with your colleagues

Web Meetings

Right in your browser

User Groups

Share with your colleagues

#### Teach & Learn

Tool Powered Curricula
Tools and Assignments for Classes

Nano 101 / Nano 501

Introductory tutorials

Nanocurriculum

Curriculum on Nanotechnology

More Teaching Materials Graduate, Undergrad

#### Contribute

Contribute Content

Upload your own materials

Give us Feedback Success story? Suggestions?

Take a Poll

What would you like to be able to purchase with your points in the new nanoHUB store?

Donations

Contribute your financial support

#### Events September

**Announcements** 

No Annoucements

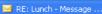
RTD Tool (in Tools, September 05, 2008)

What's New on nanoHUB 🔊













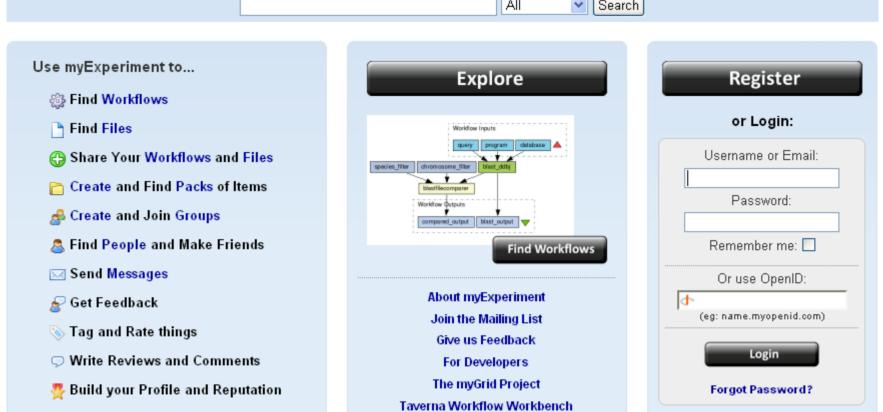












💌 C head n should... 💌 Tella-IRs and LO.... ownloads





**Z**0



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2008

Issue 20: October Issue 19: September Teerro 10: Arramet

11/05/2008

#### Primary Dissociated Midbrain Dopamine Cell Cultures from Rodent Neonates

Lauren E. Frank, Angela D. Caldera-Siu, Emmanuel N. Pothos

Department of Pharmacology and Experimental Therapeutics, Tufts University School of Medicine



Primary dissociated midbrain dopamine cell cultures allow for the study of presynaptic characteristics of dopamine neurons. They can be used to monitor real-time dopamine release kinetics and protein/mRNA levels of regulators of dopamine exocytosis. Here, we show you how to generate these cultures from rodent neonates.

View Protocol >>

11/03/2008

#### Single Molecule Methods for Monitoring Changes in Bilayer Elastic **Properties**

Helgi Ingolfson, Ruchi Kapoor, Shemille A. Collingwood, Olaf Sparre Andersen

Department of Physiology and Biophysics, Weill Cornell Medical College

Membrane protein function is regulated by the cell membrane lipid composition. This video-article details kannta fama a matak majuru kilanan matak alastuada a a a

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#### Resource Videos



04/09/2008

Resource Article: The RosetteSep® Kit from STEMCELL



09/17/2008

Technologies

Sigma公司的以酬蛋白为 底物泛蛋白酶活性检测方

#### Editor's Picks

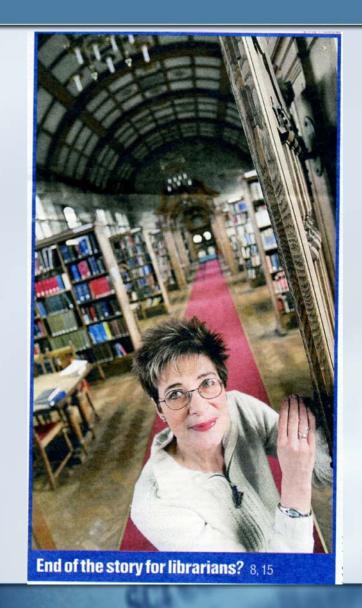


06/27/2008 Isolation of Early Hematopoietic Stem Cells from Murine Yolk

# Outsourcing libraries?

Why do we need librarians when it's all on the web?

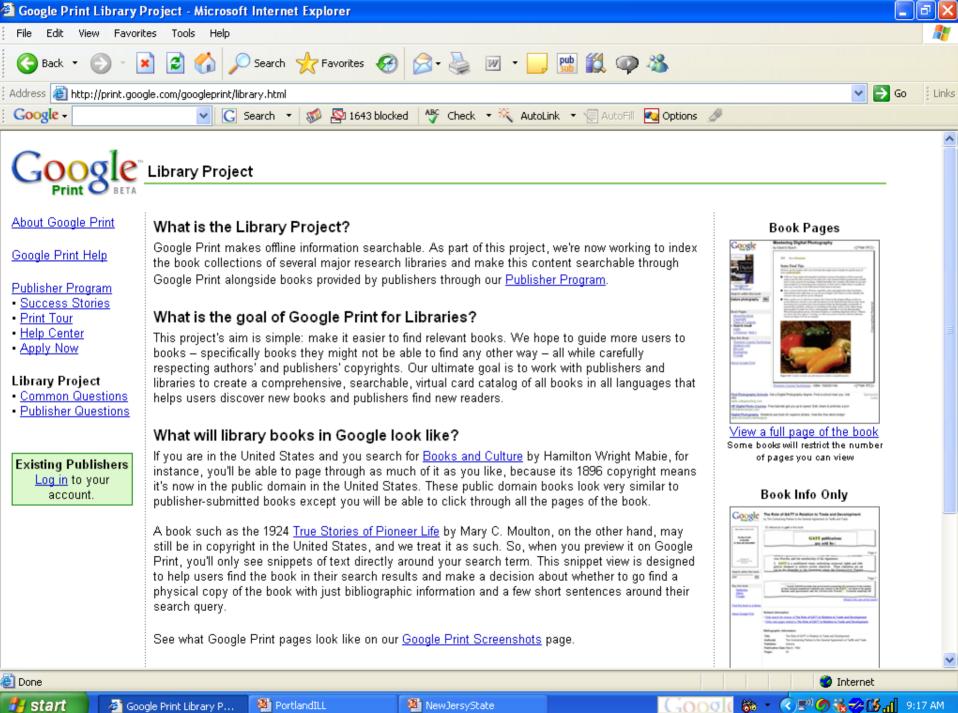
What are our USPs?







You can find 35,000,000 books through the Google 6 and the Open Content Alliance?



### **BetaNews**

#### **FileForum**

Login:

Password:

Sign In

Search

Lost Password?



Become a Member

Search:

All Articles

\*

Advanced Search ■ St

**Submit Hews** 

**₩** Help

Preferences



## GETS YOU FROM PORT A TO PORT B.

Ads by Google

Bahamas Publishers

Book Publishers

Fiction Publishers

College Publishers

Print this article | F-mail this article | Comment on this article

#### Google Exploring Online Book Rentals

By Ed Oswald, BetaNews November 14, 2005, 12:30 PM

Search giant Google is reportedly investigating methods where its users could rent online copies of books for one week, indicating that the company is continuing to flesh out ways to make its Google <a href="Print service">Print service</a> more attractive to publishers.

According to the Wall Street Journal, a publisher contacted by Google has said users would not be able to download or print the books, although those features may be added later. Google has proposed that the fee be ten percent of the book's list price, although the publisher indicated that pricing was too low.

#### Ads by Gooocoogle

#### Get Your Books In Google

Book publishers can promote their books for free with Google Print. print.google.com/publisher

Google's online book service has been the target of much criticism from both authors and publishers. In September, the Authors Guild took the company to court over what it called "massive copyright

#### Headlines

Nov 17 - 10:37 AM ET AOL Revamps Photo Service with AJAX

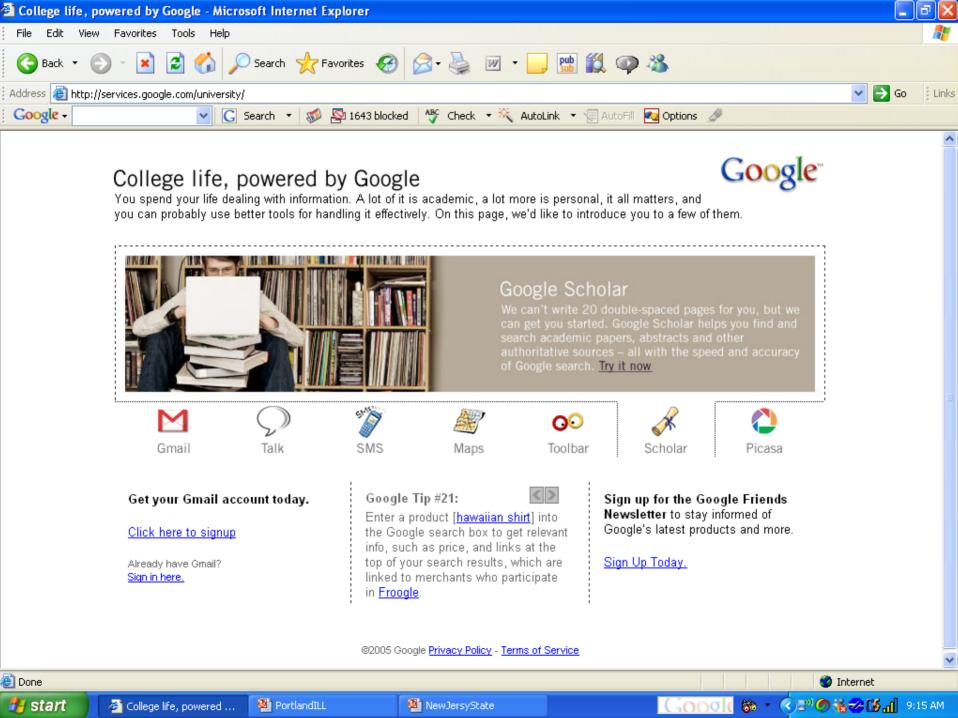
Nov 17 - 8:59 AM ET IBM Nabs Former HP Itanium Customer

Nov 16 - 9:28 PM ET Office 12 Beta 1 Released to Testers

Nov 16 - 4:48 PM ET Opera Beta Takes AJAX Mobile

Nov 16 - 4:18 PM ET US to Keep Control of Internet from UN

Nov 16 - 3:33 PM ET iPod, iTunes Beat Sony in



## Microsoft's View

# The Scholarly Communication Life Cycle Se 1 Data Collection, Research & Analysis Creative Commons Add-in for Office 2007 (v1)

 Research Information Center (beta)

> Collaboration & Discoverability

> > Publication & Dissemination

Article Authoring

Add-in Word 2007 (v1)

eJournal Publishing Service (alpha)

Storage, Archiving & Preservation

 Research Output Repository Platform (alpha)

Phase 4

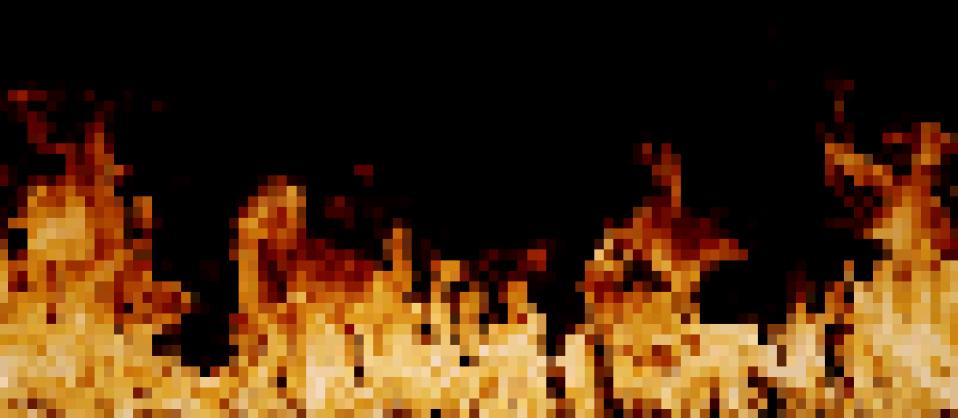
Phase 1

Phase 3

Phase:

# Great Expectations of the control of

The future is already here, it's just not evenly distributed yet.



# Headlights on Dark Roads

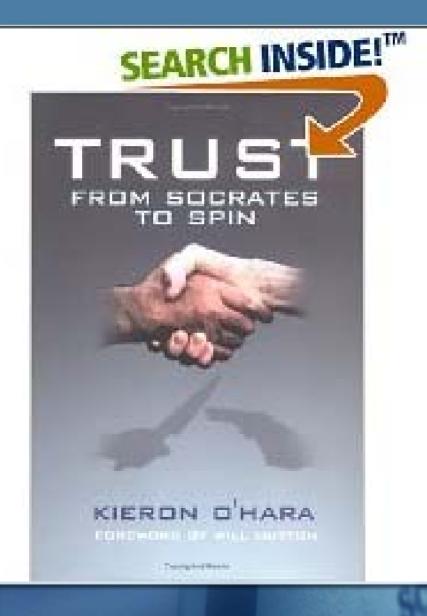
"For once I want to be the car crash
Not always just the traffic jam
Hit me hard enough to wake me
And lead me wild to your dark roads"

Snow Patrol: Eyes Open



"Never, ever, think outside the box."

## **Trust Metrics**



### **David Mattison**

"I think a wiki is highly appropriate for scholarly communication if all the scholars trust one another and are collaborating on a text ..., and security and rollback mechanisms are in place."

>>>



### Marshall McLuhan

# "Hot media are ... low in participation,

Cool media are high in participation or completion by the audience."

Understanding Media: The Extensions of Man.

(New York: McGraw-Hill, 1964), 23.



# Lifelong Learning

## Law's Second Law

User Friendly Systems Aren't



# The philosophy

of Liberty

Is based on the principle of

Self-Ownership



## Reasons to Care -The Digital Data Paradigm Shift

2010 New Digital Data (1/4 Created, 3/4 Replicated)

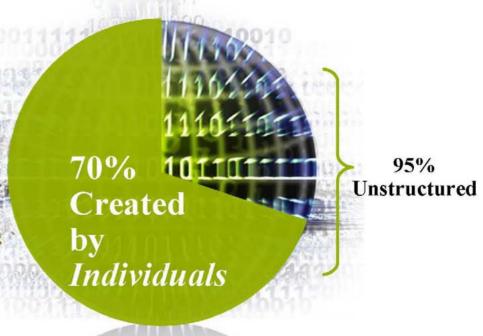
2006 New Digital Data (Created, Captured, Replicated)



**6X Growth** 

Emerging Economies growing 30-40% faster than mature Economies

161 Exabytes

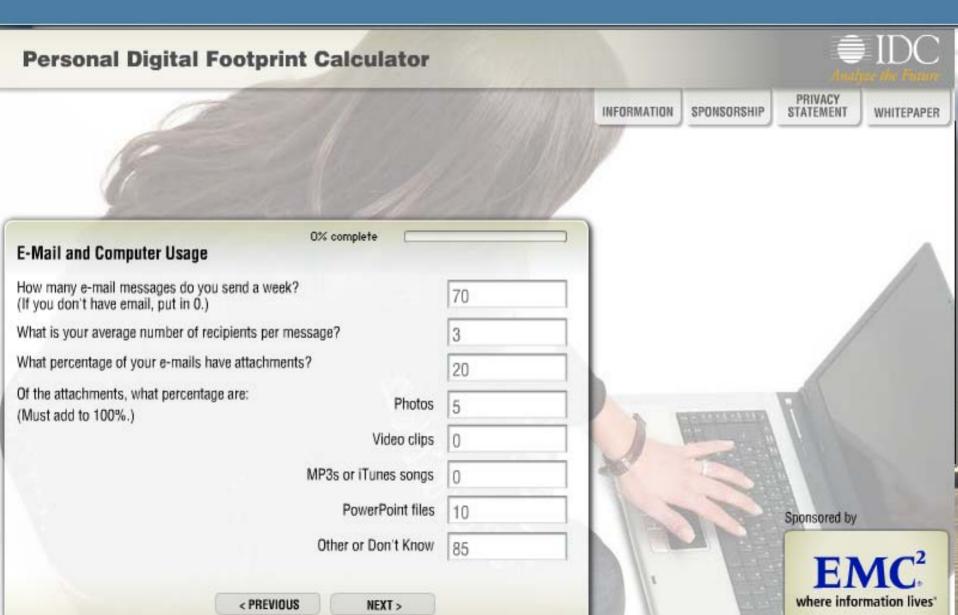


988 Exabytes

Enterprises responsible for 85% of this new data (Security, privacy, reliability, compliance)

Source: IDC, The Expanding Digital Universe, 2007

# Digital footprint



## Forms of e-content

- Research papers
- Conference presentations
- Theses
- Wikis
- Blogs
- Websites
- Podcasts
- Reusable Learning Objects
- Research data
- E-Lab books

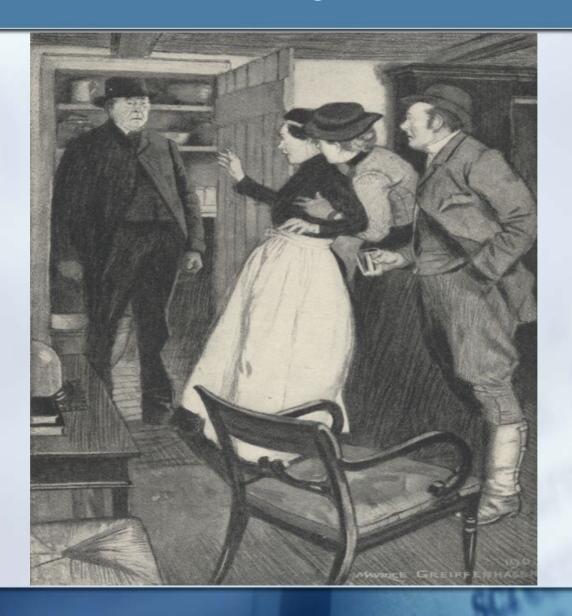
- Streamed lectures
- Images
- Audio files
- Digitised collections
- E-Archives
- E-mail
- HR Records
- Student/Staff records
- Corporate publications
- National heritage artefacts



# Trusted repositories: the five Maori tests

- Receive the information with accuracy
- Store the information with integrity beyond doubt
- Retrieve the information without amendment
- Apply appropriate judgement in the use of the information
- Pass the information on appropriately

# The Good Old Days.....



# Issues in content management

- Total cost of ownership
  - Buildings don't count?
- Growing difficulty of identifying content
- Open Access
- COUNTER and metrics
- Digital Asset Management by us
- Federated Searching
- The long tail
  - Aggregating resources

## Options for libraries

- Building e-Research collections and contributing to a virtual research environment of born digital material
- Importance of kite marking, quality assurance, trust metrics and relevance ranking
- Managing institutional born digital assets and making content available
- Value added content
- Training [Law's Second Law]
- And always be prepared to read the signs on dark roads.....

# Expect the Unexpected

