
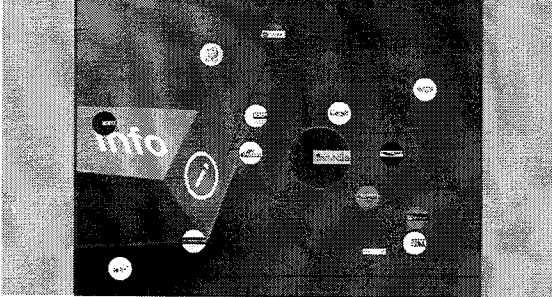


**Oops, Did You Mean to Share that?  
Opensource, Opencourseware, and the  
Learning Objects of Tomorrow**

**Curtis J. Bonk, Professor, Indiana University**  
President, SurveyShare  
cjbonk@indiana.edu  
<http://php.indiana.edu/~cjbonk>



<http://ella.slis.indiana.edu/~aenkim/iconping.html>



**Phases of Technology in Education**


1. Technology to enhance learning/knowledge
2. Technology to extend learning/knowledge
3. Technology to transform learning/knowledge
4. Technology to share learning/knowledge

**Knowledge Sharing**  
(Fuji Xerox, p. 9)


**"Knowledge sharing is the way (social) and means (technical) by which an individual, team, organization and/or community connects and communicates, to continually create, innovate, learn and act."**

**Poll #1: Should e-learning courses and material be shared?**

- Yes
- No
- Not sure



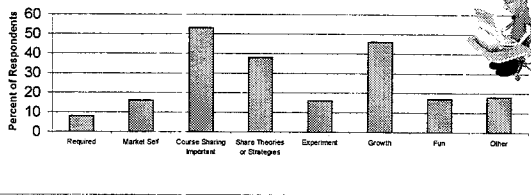
**Most are Scared to Share!!!**



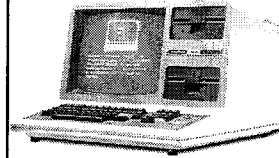
## Why Share?

Bonk, C. J. (2002, January). *Executive Summary of "Online teaching in an online world."* United States Distance Learning Association (USDLA). [http://www.usdla.org/html/journal/JAN02\\_issue/article02.html](http://www.usdla.org/html/journal/JAN02_issue/article02.html).

Figure 11. Reasons Why Respondents Posted to the WLH or MERLOT\*



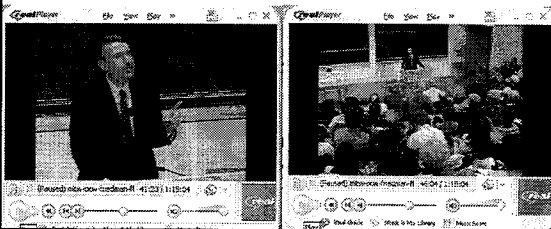
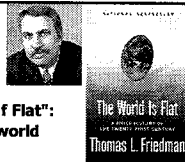
## Technology for Sharing in 1980



### Radio Shack TRS-80 Model III

Introduced: July 1980  
 Price: US \$890 base model  
 US \$2495 w/ 32K, dual drives.  
 CPU: Zilog Z-80, 2.03 MHz  
 RAM: 4K, 48K max.  
 Ports: Cassette tape, expansion, serial  
 Display: 12-inch EMV monitor 64 X 16 text  
 Storage: 0, 1, or 2 internal 178K floppy drives  
 External cassette @ 500 / 1500 baud  
 OS: BASIC in ROM, TRS-DOS on disk

- Thomas Friedman, author of "The World is Flat":
- Tools for collaboration are changing the world
- <http://mitworld.mit.edu/video/266/>

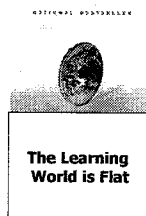


## The Ten Forces that Flattened the World

1. 11/9/89: Berlin Wall came down
2. 8/9/95: Netscape went public
3. Work Flow Software (e.g., PayPal and eBay)
4. Open-Sourcing (Self organizing collaborative communities; Mosaic, Apache, Wikipedia, Linux, Mozilla/Firefox, )
5. Outsourcing (Y2K)
6. Offshoring (e.g., China, Mexico, Thailand)
7. Supply-Chaining (e.g., Walmart)
8. Insourcing (UPS fixing Toshiba laptops)
9. In-forming (e.g., Google, Yahoo!, MSN Web Search)
10. The Steroids: Digital, Mobile, Personal, and Virtual (e.g., wireless, file sharing, VoIP, video camera in phone)



## The Learning World has become Flat!



## The Ten Forces that Flattened the Learning World

1. Tools for Searching and Finding Information (e.g., Google, Yahoo!)
2. Rise in Demand for Online Learning
3. Open-Sourcing Learning: Sakai, Moodle, eduCommons
4. Collaboration (e.g., SharePoint, Groove, Word, Interwise, Breeze, Google Talk, Skype)
5. Learning Portability (Podcasting, Mobile technology)
6. Learner Empowerment and Individualization of Learning (Blogs, Wikis, etc.)
7. Online Portals of Information
8. Online Learning Object Repositories (MERLOT, Connexions, Careo, Jorum)
9. Open CourseWare (MIT OCW, Utah State, Johns Hopkins, Japan, CORE, OOPS)
10. Knowledge Brokers and Collectors



## The Ten Forces that Flattened the World

The Learning World is Flat

### 1. Tools for Searching and Finding Information: (e.g., Google, Yahoo!)

## Google and Other Search Engines (Sergey Brin, Co-Founder)

## Google Print Project

Search the full text of books (and discover new ones).

About Google Print - Information for Publishers - Google Home

## The Ten Forces that Flattened the World

The Learning World is Flat

### 2. Rise in Demand for Online Learning

### Peak Consulting, an educational consulting group, estimates:

- 1 million American high school students are currently taking Internet courses in 2004-05
- 571,000 in 2003
- 378,000 in 2002

◆ More students log on to learn, Boston.com, Peter Schworm, September 16, 2004.

### Kelley Direct Online Programs

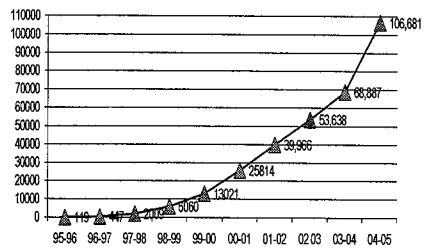
Indiana University Kelley School of Business

#### Growth in Student Enrollments at KD

Year	Certificate Programs	MS	Public MBA	Corporate MBA
2002-3	~500	~100	~100	~100
2003-4	~650	~150	~150	~150
2004-5	~800	~200	~200	~200

Kelley Direct Online Programs  
KD.IU.EDU  
Indiana University Kelley School of Business

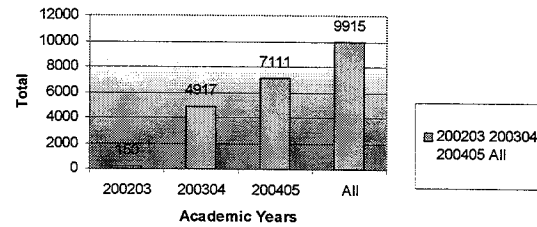
## SUNY Learning Network (SLN) Online course enrollments



<http://sln.suny.edu/>

## Dublin Institute of Technology

Staff and Students using WebCT



## Even Shaq is taking courses online

### 2005 NBA Playoffs

Updated: June 20, 2005, 6:12 PM ET

### Shaq joins University of Phoenix grad

Associated Press

JINGLEWOOD, Calif. -- Shaquille O'Neal returned to the Forum on Saturday, not for an NBA game, but to pick up his MBA.

The man who once called himself the Big Aristotle was the tallest and most famous of the 2,200 University of Phoenix graduates at the arena. But O'Neal said he was simply getting ready for the real world.

"It's just something to have on my resume [and] when I go back into reality," he tweeted Monday.

**Shaquille O'Neal**  
Center  
6'10 1/2 in.  
245 lbs.



## The Ten Forces that Flattened the World

### 3. Open-Sourcing Learning: Sakai, Moodle, eduCommons



## Free and Open Source Software

## Steven Weber, Professor of Political Science at UC Berkeley, The Success of Open Source (published by Harvard University Press).

"Weber started out asking why a large number of programmers would be motivated to volunteer their time to a goal that does not have a direct individual financial benefit, but found that more pertinent questions should be asked."



**The Success of Open Source:  
A Subject for UC Berkeley Researcher**  
By Paula Murphy, TLTc Assoc. Director, Dec 2004  
<http://www.uclt.c.org/news/2004/12/weber.php>

"If you are going to try to scale production systems to non-friendly, non-kinship groups, you have to have some sort of governance," explains Weber. "For example, I would not put my lecture notes on the web because I feel strangely about people I don't know benefiting from my work without them giving anything in return."

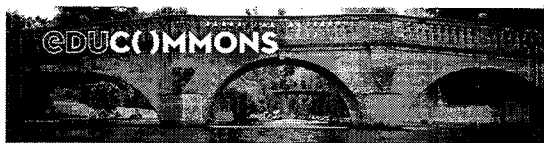


**Steven Weber, Professor of Political Science at UC Berkeley and author of The Success of Open Source (published by Harvard University Press).**

"The trick for the open source projects is to find a way to create that reverse flow such that if I donate a piece of intellectual product to something that other people are going to use and modify, I want to somehow benefit from what they're learning -- that's the key exchange. The trick, and what people are experimenting with, are different ways to structure that exchange so it works."



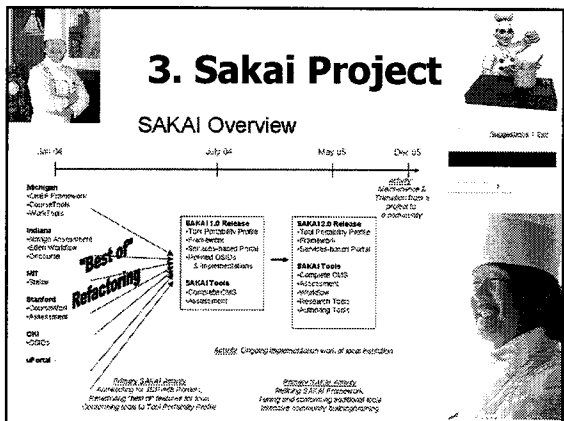
### 1. eduCommons



eduCommons is an OpenCourseWare Management System designed specifically to support OpenCourseWare projects like MIT OCW and UC Berkeley's edX Commons. eduCommons provides the functionality necessary to sustainably develop and manage an open access collection, including a workflow process that helps users through uploading materials and a repository. Unlike copyright law, the assembly of materials into courses, a quality assurance process, and final publication of the materials. While the front end of eduCommons is designed to closely align with other OCW, the back end architecture is totally closer to something like Commons, all resources are stored as individual learning objects in order to facilitate easy reuse elsewhere. eduCommons is open source software available from SourceForge.

eduCommons is generously funded by The William and Flora Hewlett Foundation and the National Science Foundation.

### 3. Sakai Project



### 4. Nicenet (http://nicenet.org/)

# The Ten Forces that Flattened the World

4. Collaboration (e.g., SharePoint, Groove, Word, Interwise, Breeze)

The Learning World is Flat

## Money

Generation Y: They've arrived at work with a new attitude

By Stephanie Aronson, USA TODAY

They're young, smart, brash. They may wear flip-flops to the office or listen to iPods at their desks. They want to work, but they don't want work to be their life.

By Glenn Kessler, USA TODAY

Think it's Generation Y, a force of as many as 70 million, and the first wave is just now embarking on their careers — taking their place in an increasingly multigenerational workplace.

Get ready, because this generation — whose members have not yet hit 30 — is different from any that have come before. According to researchers and authors such as Bruce Vintner, a founder of Silver Spring, Conn.-based TheNextGeneration, which studies the lives of young people.

There is no consensus over the exact date of the generation's birth.

### Generation Y

Generation Y, also known as the Millennials, is the first generation to be born in the 21st century. They are characterized by their use of technology, their desire for work-life balance, and their focus on personal growth and development.

## Sharing in Virtual Teams (e.g., Groove, SharePoint)

Ray Ozzie  
Founder, Groove Networks

## Online Groups...

Google Groups BETA

Web Images Groups Sites Groups Local Scholar More

Learn more about Google Groups

Members: Sign in • Quickly access your favorite groups • Start new discussions

New users: Sign up • Follow your bookmarked (G+) topics • Check new groups

Categories: Arts and Entertainment, Business and Finance, Computers, Health, Home, News, Recreation, Science and Technology, Society and Humanities, Travel, and more.

## Skype

Call with... words\_chen

Calling John Sawyer (Skype)

## Google Talk

Talk and IM with your friends for free

They say talk is cheap. Google thinks it should be free. Google Talk enables you to talk or send instant messages to your friends for free—anytime, anywhere in the world. Google Talk offers you:

- **Click-to-Talk:** Get in touch over email, IM or a call
- **Quality:** Talk through your computer but hear your friends as if they were in the same room
- **Convenience:** Your Gmail contacts are pre-loaded into Google Talk so finding or adding to your friends is just a click away

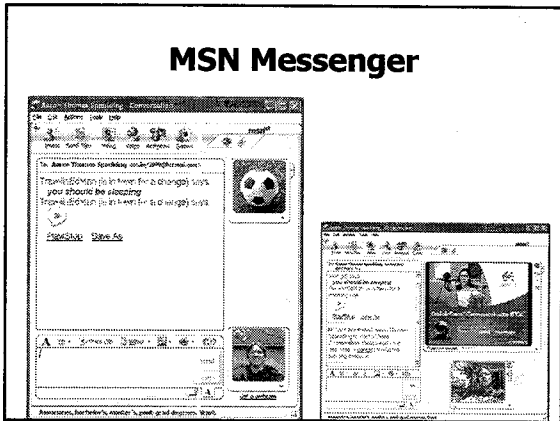
Google Talk is in beta and requires a Gmail account and password. Don't have Gmail? Sign up for free today. (Gmail only)

By downloading, you agree to see Terms of Service and Privacy Policy

Download Google Talk

Get the latest version of Google Talk for Windows, Mac OS X, and Linux users can connect to Google Talk using the Google Talk for Linux package.

Google Talk is not a telephony service and cannot be used for emergency calling.



## The Ten Forces that Flattened the World

### 5. Learning Portability (Podcasting, Mobile technology)

**Audacity**  
The Free, Cross-Platform Sound Editor

Download Audacity 1.3.7 for Windows 32-bit

The Learning World is Flat

## Wireless Technology

### MOST (UN)WIRED SCHOOLS?

CNET and U.S. News and World Report got the top 50 universities' tech specs and asked them which computers they recommend to students and faculty.

[CLICK HERE TO VIEW](#)

*Creating the Best-Timed Enterprise*

## Mobile Technology

msn Tech & Gadgets

- Home
- Products Reviews
- Download & Files
- News
- News & Events
- Mobile
- What's Security
- Scrap
- Download & IT
- Diapers

### Next hot trend for cell phones: Reading?

Mobile technology meets the novel in Japan

Next hot trend for cell phones: Reading? Mobile technology meets the novel in Japan. A novel that is readable across screen while reading is to be kept in change in Japanese. The novel is...

The Associated Press  
Updated: 5/13 at 4:41 AM EDT

TOYO - Your eyes probably hurt just thinking about it: Tens of thousands of Japanese cell-phone owners are staring over full-length novels on their tiny screens.

## Podcasting

<http://itunes.stanford.edu/>

The image shows a screenshot of the 'Stanford on iTunes' website. It features a header with the Stanford University logo and a list of various podcast feeds, including 'Stanford on iTunes', 'Stanford Daily', and 'Stanford Sports'. Each feed includes a small icon and the name of the podcast.

## Sharing Music: Pod Casting Broadcasts

(Adam Curry; [www.dailysourcecode.com](http://www.dailysourcecode.com))

**BusinessWeek online**

MARCH 7, 2005

NEWS ANALYSIS TECH  
By Heather Green

### Internet Radio 101

Want to podcast your own "station" or listen to the new medium's playlists? Here's a guide to the Internet's exploding choices. Tired of listening to the same old playlist on your iPod? Want background music at work that's more in tune with your tastes than the local radio station? Wanting to listen to talk shows on your own time? If the answer to any of these questions is "yes," then it's time to try radio, internet-style.

Internet radio comes in all different types and flavors (see ENR 5/14/05, "The New Radio Revue"). The most popular is "podcasting," the audio technology that lets anyone become a deejay or a radio show.

Adam Curry

## Vodcasting

The Hawthorne Media Newsletter  
November 2005

**IN THIS ISSUE**

**What's all the Hype About the New Video iPod?**  
Why Hawthorne Media Experts are the New Producers in Media, Marketing and Training

If you're like most adults, you've seen ads for iPods, and you don't think they're aimed at your generation...or relevant for business. With the recent introduction of the new Video iPod, you may be wrong. This new media player, launched in early October, is revolutionary. Not just for its total entertainment but for marketing, advertising and training. Why? Well simply, the Video iPod is going to change the way people think to connect.

The new Video iPod is the most versatile personal media player yet. Showing users in three areas: video, audio, photo.

## In the Midst of Budget Cutbacks, there are Technology Giveaways

**Giveaway M275 tablet PC, Winona State University, Mayville State University**  
The school will provide the tablet computers to full-time students who do not have laptops from previous programs.

**BlackBerry 7510 PDA, University of Maryland**  
The school has begun handing out the wireless personal digital assistants to faculty and more than 100 full-time graduate students in the School Subject of Business.

## The Ten Forces that Flattened the World

### 6. Learner Empowerment and Individualization of Learning (Blogs, Wikis, etc.)

The Learning World is Flat

## Sharing Encyclopedias (Wikipedia; Jimmy Wales, Founder)

WIKIPEDIA

English: The Free Encyclopedia (2,700,000 articles)

Deutsch: Die freie Enzyklopädie (200,000 Artikel)

Portuguese: A enciclopédia livre (27,000 artigos)

Español: La enciclopedia libre (41,000 artículos)

Polish: Wolna Encyklopedia (11,000 artykułów)

Italiano: L'enciclopedia libera (30,000 articoli)

Nederlands: De vrije encyclopedie (87,000 artikelen)

Svenska: Den fria uppslagsboken (20,000 artiklar)

Fransais: L'encyclopédie libre (10,000 articles)

日本語: フリー百科事典 (100,000記事)

## Wikibooks

The Free High School Science Texts  
A Textbook for High School Students Studying Physics.

physics

## MindMapping Software



## Scholars who Blog, Chronicle of Higher Ed, (Glenn Reynolds, instapundit.com; Stephen's Web, www.dnwnec.ca)

edublogs.org  
The Blog for Educational Technology

Featured bloggers: Computer Drive, Mr. Burns & Jesse Valdez's  
Networking School

Put yourself on the edublogs map!  
Join to map the location of edubloggers around the world. go and  
post! Please do check for the region's time session though. Use our  
address to see a public directory of profiles.

## Sharing Ideas (e.g., Blogging)

Quarter	Blog Population
Q1 2000	29,500
Q2 2000	86,500
Q3 2000	115,000
Q4 2000	197,000
Q1 2001	352,000
Q2 2001	628,000
Q3 2001	951,000
Q4 2001	1,268,000
Q1 2002	1,570,000
Q2 2002	2,140,000
Q3 2002	2,570,000
Q4 2002	3,070,000
Q1 2003	3,730,000
Q2 2003	4,560,000
Q3 2003	5,790,000
Q4 2003	7,300,000
C1 2004	9,620,000
Q2 2004	12,600,000
Q3 2004	16,200,000
Q4 2004	21,000,000
C1 2005	31,500,000
Q2 2005	37,800,000
Q3 2005	45,200,000
Q4 2005	53,400,000

Hosted Blog Growth

Millions of Accounts

Mar'01 Mar'02 Mar'03 Mar'04 Mar'05 Mar'06

Growth Rate
606%
126%
131%
105%

## Book Blogging!!!

Blogbinders

Turn your weblog into a book!  
Blogbinders.com helps you turn your blog into a bound book -  
print as a gift, an archive, or even to sell to your readers!  
It is quick, easy, and affordable to turn your blog into a printed  
book - it takes a few easy steps

It's that simple to order a book, your book will arrive.

Get Started Now!

Blog types supported:

- MySpace
- Blogger
- WordPress
- WixPress
- Feed
- BlogSpot
- WordPress.com

## Learning is On Demand

Delivering Engaging Presentations for  
Workplace Learning and Performance

GoToMeeting

Delivering Engaging Presentations for  
Workplace Learning and Performance

## The Ten Forces that Flattened the World

### 7. Online Portals of Information

The Learning World is Flat

## Sharing Syllabi (e.g., The World Lecture Hall)

World Lecture Hall

Accounting and Law  
UNIVERSITY OF ALABAMA

Accounting

Accounting and Law  
UNIVERSITY OF ALABAMA



## Digital Libraries (LibraryShare)

The screenshot shows the LibraryShare website with a search bar at the top and various navigation links. A central image features a group of people, and there are several text boxes and buttons for exploring digital resources.

## The Ten Forces that Flattened the World

### 8. Online Learning Object Repositories (MERLOT, Connexions, CAREO, Jorum) and ADL's SCORM Project

The screenshot shows the CAREO website with a header, navigation menu, and a main content area with text and images. A logo for 'The Learning World is Flat' is visible in the top right corner.

## Reusable Content Objects

- Learning Objects are small or large resources that can be used to provide a learning experience. These assets can be lessons, video clips, images, or even people. The Learning Objects can represent tiny "chunks" of knowledge, or they can be whole courses.

*Claude Ostyn, Click2Learn*

## Principles of Learning Objects

(Robert Wisler, ADL)

- Accessible:** access instructional components from one location and deliver them to many other locations
- Interoperable:** use instructional components developed in one location with a different platform in another location
- Reusable:** incorporate instructional components into multiple applications
- Durable:** operate instructional components when base technology changes, without redesign or recode
- Affordable:** increase learning effectiveness significantly while reducing time and costs

## 1. MERLOT

The screenshot shows the MERLOT website homepage with a navigation bar, a search bar, and several sections including 'New to MERLOT?', 'Search MERLOT', 'Browse Materials', and 'Recent News & Events'. A small cartoon character is visible on the right side.

## 1. MERLOT.org

The screenshot shows the MERLOT.org website homepage with a navigation bar, a search bar, and several sections including 'Highlights', 'Browse the Collection by Subject', and 'Services'. A small cartoon character is visible on the right side.

### Visualization and Testing Tools

Visualizations include text-based data from 'JRR Talks on Oxford', a virtual tour of Oxford with images and text, a speaker with an overlaid audio waveform, and a diagram comparing two sets of data.

### Basic Acoustics of Musical Instruments

#### 2005 MERLOT Classics Award

**Soprano challenge**

If you are a soprano and you think you'd like to see whether our observations reflect physical limitations on all sopranos, we put us at your disposal. Perhaps you would like to try repeating the soprano recorded in the second file above. All you need is a microphone and a computer or tape recorder. (It would help if you had some singing ability such as the 'C'est si bon' file indicates, but this is not necessary.) First, use the scale below, assess vibrato, as your professional singing voice, with projection. Depending on your comfortable range, you might want to make it C major, B major, or Bb major.

1a 1a 1a 1a 1a 1a 1a 1a 1a 1a 1a 1a 1a 1a

"1a", "1a", "1a", and "1a" This refers to the first notes in each of each scale. (If you have a pitch pipe, the notes or half notes) of each sample and put them together to make the four pitch file.)

The last note of each scale. They go above the notes in the first sample and below the notes in the last. Then you should really like to hear from your that would be the base of a very

4 reports of the applications to soprano singing are published respectively in

Wohl, J. and Wolfe, J. (2004) *Thesis of vocal tract acoustics for soprano?* *Journal of Acoustical Society of America* 117, 1131-1138

Detailed report on *Vocal tract acoustics for soprano singing*, J. Wohl, J. Wolfe, J. Acoust. Soc. Am. 117, 1131-1138 (2004).

### MERLOT People Metrics

(Gerald Hanley, October, 2005)

MEMBERS	Birthyear 2001	Last Year 2004	This Year 2005
Students	706	3,652	5,010
Faculty	2,864	11,563	14,754
Staff	736	2,522	3,122
Administrators	-	280	746
Librarians	-	146	280
Other	421	1,867	2,341
<b>TOTAL # of Members</b>	<b>4,727</b>	<b>20,030</b> 453 per month	<b>26,253</b> 712 per month

### MERLOT Collection Metrics

(Gerald Hanley, October, 2005)

Materials-Related Metrics	CSU 1999	Birthyear 2001	Last Year 2004	This Year 2005
# of Materials (# deleted per year)	2,732*	5,421	9,806 (266)	12,274 (226)
"Persistence" of Materials	N/A	N/A	97.3%	98.2%
# of People who contributed materials	N/A	408* (7.5%)	1,423 (7.1%)	1,831 (7.0%)
Average # of materials added per contributor	N/A	9.3*	6.9	6.6

\* = estimates

### MERLOT Collection Metrics

(Gerald Hanley, October, 2005)

Teaching Annotations	Birthyear 2001	Last Year 2004	This Year 2005
# of Peer Reviews Posted (% of collection)	179	1,445	1,763 (14%)
# of Materials Triaged (% of collection)	N/A	N/A	8,829 (73%)
# of Materials w/ Member Comments	1,034	2,044	2,099
# of Members w/ Personal Collections	-	924	1,901
# of Materials with Assignments	187	408	652

### MERLOT Newsletter, Awards, and Conference

Issue #3  
June/July 2005

CONTENTS OF THIS NEWSLETTER

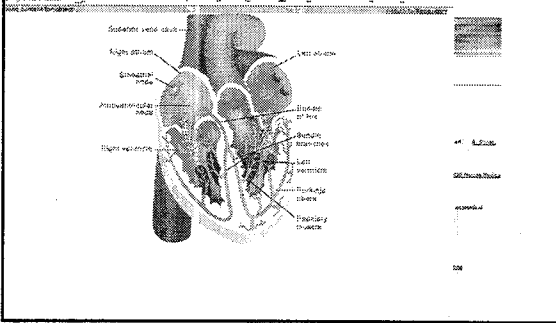
NEWS

- MERLOT 10th Anniversary: Celebrating 10 Years - July 2005 - Dr. Halpern, J.H.
- MERLOT 10th Anniversary: Celebrating 10 Years - June 2005
- SPECIAL: Educational Technology in Higher Education - July 2005
- MERLOT 10th Anniversary: Celebrating 10 Years - July 2005
- MERLOT 10th Anniversary: Celebrating 10 Years - July 2005
- MERLOT 10th Anniversary: Celebrating 10 Years - July 2005

FEATURES

- MERLOT 10th Anniversary: Celebrating 10 Years - July 2005
- MERLOT 10th Anniversary: Celebrating 10 Years - July 2005
- MERLOT 10th Anniversary: Celebrating 10 Years - July 2005
- MERLOT 10th Anniversary: Celebrating 10 Years - July 2005

## 2. CAREO (Alberta, Canada) (<http://www.careo.org/>)



Terry Anderson, Athabasca University  
(October, 2005)

"I am afraid that CAREO is on life support, not being developed or really very active. Problem is that no single institution will support a tool for the commons and no champion larger organization has arisen to take it on. Since all the development work was done at U. of Calgary, they also some proprietary interest in the product that somewhat slows down external interest. I had hoped the Alberta government would pick it up but nothing yet."



## 3. Connexions (Rice University) <http://cnx.rice.edu/>

**Connections**  
Connections is a freely available collection of the openly authored and licensed content of our authors. It is a powerful tool for learning and teaching.

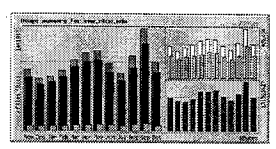
**Get started**

- Learn more about Connexions
- Take a tour
- Explore the content and people in the Connexions community - we need to log in
- Contribute a module or build a course - we need to log in

**Connections to growing**

Connections is a community of authors, developers, and students engaged in the creation of a wide variety of content. It is a powerful tool for learning and teaching. It is a powerful tool for learning and teaching. It is a powerful tool for learning and teaching.

<http://cnx.rice.edu:8080/stats>  
Sept 2005 had "14.4 million hits representing about 1 million page views by about 430,000 folks from 157 countries," growing at a rate of about 1 million hits per month.



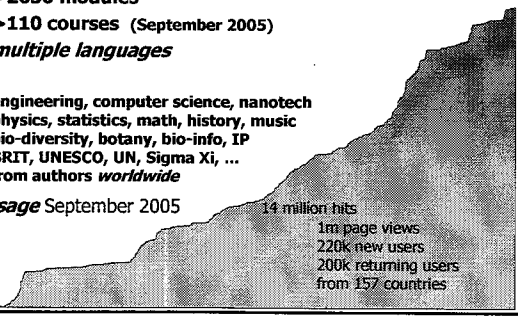
Country	Hits	Page Views
USA	10,000,000	1,000,000
Canada	2,000,000	200,000
UK	1,500,000	150,000
France	1,000,000	100,000
Germany	800,000	80,000
Spain	600,000	60,000
Italy	500,000	50,000
Japan	400,000	40,000
China	300,000	30,000
India	200,000	20,000
South Korea	150,000	15,000
Australia	100,000	10,000
Other	1,000,000	100,000

## Content Commons

>2650 modules  
>110 courses (September 2005)  
multiple languages

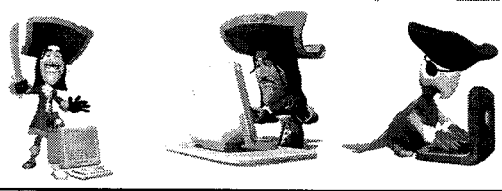
engineering, computer science, nanotech  
physics, statistics, math, history, music  
bio-diversity, botany, bio-info, IP  
BRIT, UNESCO, UN, Sigma XI, ...  
from authors worldwide

Usage September 2005



## The Ten Forces that Flattened the World

9. Open CourseWare (MIT, OCW, Utah State, Japan, CORE, OOPS)



**MIT OpenCourseWare (OCW) Initiative**  
 (<http://ocw.mit.edu/index.html>)

The screenshot shows the MIT OpenCourseWare website interface. At the top, there is a search bar and navigation links. Below that, a sidebar contains a search box and a list of course categories. The main content area displays 'Lecture Notes' for a course, with a list of topics including: 1. Perfect Crystals, 2. Experimental Stress-Strain, Ultimate Stress-Strain, Yield Strength and Strain Hardening (ECC), 3. Deformation Slip Systems, Uniaxial Stress-Strain, Yield Strength and Strain Hardening (ECC), 4. Crystal Defects, 5. Dislocations and Interactions (ECC), 6. Dislocations, 7. Dislocation Sources, 8. Edge Dislocations and C. Self Energy (ECC), 9. Dislocation Sources, 10. Dislocation Sources, 11. Dislocation Sources, 12. Dislocation Sources, 13. Dislocation Sources, 14. Dislocation Sources, 15. Dislocation Sources, 16. Dislocation Sources, 17. Dislocation Sources, 18. Dislocation Sources, 19. Dislocation Sources, 20. Dislocation Sources.

Per David Wiley, Utah State University  
 (October 2005)

**"The first thing you should know is that there are many more schools than just MIT doing OCW now, including Johns Hopkins ([ocw.jhspk.edu](http://ocw.jhspk.edu)), Tufts ([ocw.tufts.edu](http://ocw.tufts.edu)), Utah State University ([ocw.usu.edu](http://ocw.usu.edu)), and Foothill-DeAnza in California ([sophia.fhda.edu](http://sophia.fhda.edu)).**

Per David Wiley, Utah State University  
 (October 2005)

**"When you consider the schools participating in consortia in South America, China, Japan, France, Utah, and other regions, the number of universities involved with opencourseware in some manner reaches well into the hundreds. As of today there are currently 45 publicly accessible OCWs in the world in a number of languages."**

Per David Wiley, Utah State University  
 (October 2005)

**"This is a message that should probably get out, also - not only is this movement worldwide and gaining momentum every day, it is also becoming a key part of international strategy to achieve equitable access to education for people everywhere."**

**OCW Projects Around the World**

The institutions below have publicly committed to the open publication of their materials in OpenCourseWare initiatives, and are devoting resources to support these projects.

**United States**

- MIT OpenCourseWare
- Carnegie Mellon's Open Learning Initiative
- Tufts University
- Utah State University

**Japan**

Visit the portal page for the following Japanese university OCW projects

- Keio University
- Kyoto University
- Tokyo Institute of Technology
- Osaka University
- University of Tokyo
- Waseda University

**Johns Hopkins OpenCourseWare Project**

The screenshot shows the Johns Hopkins OpenCourseWare website. It features a search bar, a navigation menu, and a featured course titled 'Family Planning Policies and Programs'. The course page includes a photo of a woman and child, and text describing the course content and originality. The originality is listed as 'Spring 2005'. There is also a feedback section with the text 'Send feedback about OCW on this course.'

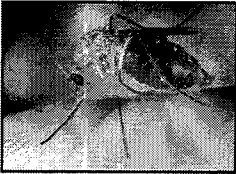
## Tufts OpenCourseWare Project

### TuftsOpenCourseWare

SEARCH

12/27/2005

**IDP200 Pathophysiology of Infectious Diseases, Fall 2004/2005**



Course Faculty:

- Susan Haddley
- Michael Barza
- Emmanuel Garavito
- Lorena Ho
- Laura Fogelstein
- Debra D. Pospisilova
- John Rose
- David Sordman
- Charlotte Thrapp
- Miguel Valero
- Christian Van der Pluijm
- 17 Hours
- Free
- 2nd Year

## Carnegie Mellon Open Learning Initiative

[HELP] [TRY ANOTHER COURSE]

Logged in as Guest User

### Summer II 2005 - Modern Biology

Term: Summer II 2005

Before you begin, Test and Download your system for use with this course.

**UNIT 1: INTRODUCTION TO MOLECULAR BIOLOGY**

**UNIT 2: INTRODUCTION TO BIOLOGICAL CHEMISTRY**

Module 1: Atoms, Functional Groups, and Water

Module 2: Introduction of Electrostatics and Equilibrium

Module 3: Introduction to Macromolecules

Module 4: Introduction to Protein Ligand Binding

**UNIT 3: INTRODUCTION TO CELL BIOLOGY**

Module 5: Introduction to Cell Membranes

**UNIT 3: GLOSSARY**

[Go to another course!](#)  
[Download a syllabus!](#)

For a full version of this course, click on "More Info", below.

## Japan OCW Alliance

WORLDWIDE COURSEWARE

JAPAN


WASIDA OCW

### Organ Transplant

1/15/05 - Faculty: Shuzo Kawanishi

**INSTRUCTOR**

Shuzo Kawanishi  
Osaka University  
Japan



**HIGHLIGHTS of this Course**

Organ transplants become clinically available in 1950s along with development of open flow dialysis and immunosuppressants, which had been experimental therapies. In 1960s, however, the global liver liver transplant program in 1962 and the number of transplantation increased over 2000 cases in 2004, which means the organ and liver organ is the world. We have also developed liver donor organ donor transplant and lung donor transplant with transplant. A lot of useful information which has been shared in our live experience is covered in this course. Here we present our experience to share it with all over the world to share our best knowledge and experience with others.

## Vietnam Fulbright Economics OCW

Chương trình Giảng dạy Kinh tế Fulbright

[FULBRIGHT]

2005-2006

Fulbright giảng dạy về NETP



Tran Van Thanh  
Giảng dạy về Kinh tế



Phan Van Khanh  
Giảng dạy về Kinh tế



Nguyen Thi Thanh  
Giảng dạy về Kinh tế



Tran Van Khanh  
Giảng dạy về Kinh tế



Tran Van Khanh  
Giảng dạy về Kinh tế



Phan Van Khanh  
Giảng dạy về Kinh tế



Nguyen Thi Thanh  
Giảng dạy về Kinh tế



Tran Van Khanh  
Giảng dạy về Kinh tế

## The Rai Foundation Colleges in India

Rai Foundation

### RAI COURSEWARE

RAI COURSEWARE

Connect to Part Candidates - MCA (C/CA)

**LECTURE NOTES**

- Cell and Tissue Culture
- Cellular Biochemistry
- Cellular Growth and Differentiation
- Cellular Metabolism and Energy
- Cell Signaling and Communication
- Cell and Tissue Differentiation
- Cellular Biochemistry
- Cellular Growth and Differentiation
- Cellular Metabolism and Energy
- Cell Signaling and Communication
- Cell and Tissue Differentiation
- Cellular Biochemistry
- Cellular Growth and Differentiation
- Cellular Metabolism and Energy
- Cell Signaling and Communication
- Cell and Tissue Differentiation
- Cellular Biochemistry
- Cellular Growth and Differentiation
- Cellular Metabolism and Energy
- Cell Signaling and Communication

## JORUM (from UK)

Home | Contact Us | Site Map


[JORUM]

Jorum is a free online repository for teaching and research staff in UK Higher and Higher Education Institutions, helping to build a community for the sharing, reuse and reworking of teaching and learning materials.

**What is JORUM?**

JORUM is a free online repository for teaching and research staff in UK Higher and Higher Education Institutions, helping to build a community for the sharing, reuse and reworking of teaching and learning materials.

**Featured Resource**



**Out of Darkness**  
2005-2006  
A film and audio-based learning object created by G-Stone Ltd (UK) Phase 2 project using eLearning Partners.

**EDINA & MIMAS**  
The Joint Information Systems Committee

## JORUM Overview

- "JORUM is a JISC -funded collaborative venture in UK Higher and Further Education to collect and share learning and teaching materials, allowing their reuse and repurposing, and standing as a national statement of the importance of creating interoperable, sustainable materials."

## Service in Development

- **JORUM Contributor** – allows colleges and universities to share learning and teaching materials with one another.

This will launch before JORUM User to build up content and will begin as soon as possible

- **JORUM User** – provides access to the materials themselves.

Other areas of work: R&D - A new research and development strand will run in parallel with the JORUM service

## Jurom Workflow

Details of the JORUM Workflow 0.3 workflow

Stages in workflow

Stage Name	Contribute	Catalogue	Review
Stage Description	Upload a learning object for subject	Enter descriptive metadata	Check for errors & report metadata
Processes	<ul style="list-style-type: none"> <li>APL: Add</li> <li>PL: Plan</li> <li>DL: Delete</li> <li>EM: Edit Metadata</li> <li>AM: Add</li> <li>RM: Remove</li> <li>SM: Submit</li> <li>CM: Catalogue</li> </ul>	<ul style="list-style-type: none"> <li>AP: Add</li> <li>UP: Update</li> <li>EP: Edit</li> <li>RP: Remove</li> <li>SM: Submit</li> <li>CM: Catalogue</li> </ul>	<ul style="list-style-type: none"> <li>AP: Add</li> <li>UP: Update</li> <li>EP: Edit</li> <li>RP: Remove</li> <li>SM: Submit</li> <li>CM: Catalogue</li> </ul>

Published after contribute stage

## Jurom Workflow in use

Retrieved Objects

Resources at different stages

- 1. Add: Add new learning objects to the system.
- 2. Edit: Edit metadata for learning objects.
- 3. Review: Review learning objects for quality and relevance.
- 4. Catalogue: Catalogue learning objects for discovery.

## Jurom Metadata for discovery

Metadata editor – manual entries

Automatic entries

## USU OpenCourseWare Project

Utah State University

Home » courses » biological and irrigation engineering » sprinkle & trickle irrigation

Sprinkle & Trickle Irrigation

Faculty: [Name]

Course Description: [Text]

Prerequisites: [List]

Corequisites: [List]



**John Dehlin**  
Utah State University

**"If you think about the tangible, practical, human value some of these courses could have in the world, particularly the 3rd world....it can get quite exciting (to me at least)."**

**Shelley Henson, Center for Open and Sustainable Learning (COSL), Utah State University**

**CORE (China Open Resources for Education), OCW Mirror Site, China**

Beijing Jiaotong University  
Office of International Cooperation & Exchange

北京交通大学

Core is used

MIT OpenCourseWare is a not-for-profit endeavor. It is a project of the Massachusetts Institute of Technology (MIT) and is supported by the MIT Board of Trustees. MIT OpenCourseWare is a project of the Massachusetts Institute of Technology (MIT) and is supported by the MIT Board of Trustees. MIT OpenCourseWare is a project of the Massachusetts Institute of Technology (MIT) and is supported by the MIT Board of Trustees.

**OpenSource OpenCourseware Prototype System (OOPS) funded by, the Foundation of Fantasy, Lucifer Chu, Chairman and Janitor of OOS, Taipei)**

歡迎參與開發工程師的！開放式課程計劃  
Welcome to MIT's OpenCourseWare:  
這是一個獨特、自由的學習資源。歡迎世界各地的人們來此學習。歡迎世界各地的人們來此學習。歡迎世界各地的人們來此學習。

**OOPS**  
OpenSource OpenCourseware Prototype System  
開放式課程計劃

**電子工程與資訊科學(Electrical Engineering and Computer Science)**

電子工程原係麻省理工學院物理系的科目，在兩元1882年時變成獨立學位課程。電子工程原係於西元1902年設於於柯皮蘭大樓 (Copley Building)。當時麻省理工學院在波士頓的柯皮蘭大樓 (Copley Square) 設校。在兩元1973年，麻省理工學院將物理系與電機工程合併，將物理系與電機工程合併，將物理系與電機工程合併。

本系所主要的任務是教導學生，我們的三座大學的課程吸引了麻省理工學院百分之三十五的未來學生，而碩士以上學位的比例也名列前茅。本系在建設合作上擁有豐富經驗，自從1972年成功執行MIT-AI實驗室。 (你註：這些麻省理工學院電子工程與資訊科學系所開辦的課程，學生必須花費五個學期在該系所學習，同時必須完成相關論文，詳情請見http://www.eecs.mit.edu/ia/) 本系最近也開辦了一個五年的工程碩士課程，只要在麻省理工學院完成五年的學業，學生就可以同時獲得工程學士與碩士學位。

在本系過去的歷史中，許多教職員和學生都曾經在各自的領域中做出重大的研究貢獻，有些甚至開拓了全新的研究領域。

Electrical engineering, originally taught at MIT in the Physics Department, became an independent degree program in 1882. The Department of Electrical Engineering and Computer Science was established in 1902.

**What's their Beliefs?**  
(Chu, October 26, 2005)

- Collective Minds is better than a single genius translator.
- Perfect Translation doesn't exist.
- 857 Volunteer translators
- 1,033 courses adopted
- 320 courses near completion
- 60 courses already finished

**OOPS**  
OpenSource OpenCourseware Prototype System  
開放式課程計劃

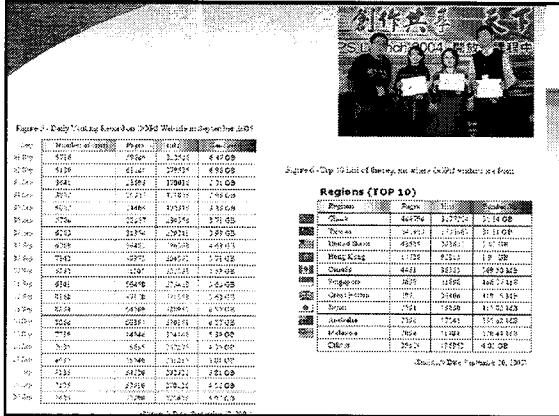


Figure 4: Top 10 List of Countries, by Market Capitalization

Regions (TOP 10)

Region	Pages	Volume
USA	44,774	3,277.22
UK	10,112	1,117.00
Other Europe	6,874	1,117.00
Hong Kong	1,117	1,117.00
Canada	4,411	1,117.00
Other Asia	1,117	1,117.00
Other Africa	1,117	1,117.00
Other Australia	1,117	1,117.00
Other Middle East	1,117	1,117.00
Other Oceania	1,117	1,117.00
Other South America	1,117	1,117.00



Lucifer Chu, Chairman and Janitor of OOPS, Taiwan



## The Ten Forces that Flattened the World

### 10. Knowledge Brokers

The Learning World is Flat

## Consortia, Networks, and Brokers of Knowledge (and Collections, David Wiley)

**WORK PACKAGES:**

- Repository Content Development
- Metadata Development
- Discovery and Search
- Access and Authentication
- Integration and Interoperability
- Performance and Scalability
- Security and Privacy
- Legal and Policy
- Business Models

**PRIMARY PARTNERS:**

- University of Wisconsin-Madison
- University of Michigan
- University of California, Berkeley
- University of Texas at Austin
- University of Washington
- University of Illinois at Urbana-Champaign
- University of Minnesota
- University of Wisconsin-Milwaukee
- University of Wisconsin-Stevens Point
- University of Wisconsin-La Crosse

Dept of Rights Management

## What can you do in a flat learning world?

- Consider Copyright Options
- Publish in Open Source Journals
- Attend Open Source Conferences

## Creative Commons

© Creative Commons Attribution-NonCommercial-ShareAlike license

Creative Commons is a nonprofit organization that offers a flexible copyright for creative works.

**Find** Your photos, and more

**Publish** Your work, legally and safely

**Learn more...**

Recent Features: Creative Commons announces its 1st annual Fall Fundraising Campaign

## Sherpa--UK

**SHERPA**

SHERPA is investigating issues in the future of scholarly communication and publishing in particular, it is developing open access repositories for a number of research disciplines. These open access repositories will provide a means for the publication and distribution of research outputs.

The project is investigating issues surrounding the development and use of such repositories:

- Make research outputs available to a wider audience, providing a space for self-archiving
- Ensure long-term access to research outputs and digital resources for the benefit of the community and industry
- The open access server, access to other resources, progression working in the field, and related software development
- Project objectives are used for each of the partners and for reporting organisations

SHERPA is funded by JISC and CURL. It is hosted by the University of Edinburgh.

## Terry Anderson, Athabasca University (October 2005)

**"Our Creative Commons licensed book Theory and Practice of Online Learning has been downloaded over 55,000 times (full text) and more by individual chapters. Parts have been translated into 6 languages and we are nearly sold out the 500 copies we printed at \$50 a pop. So it is quite a success story."**

Anderson, Terry & Fathi Elloumi (Eds). (2004). Theory and practice of online learning. Canada: Athabasca University. [http://cde.athabascau.ca/online\\_book/](http://cde.athabascau.ca/online_book/)

## Open Source Journal

**Open Source Journal**

The International Journal of Open Source in Education

**INTERNATIONAL JOURNAL OF OPEN SOURCE IN EDUCATION**

This International Journal of Open Source in Education (IOSJE) is an e-journal with free and open access that focuses on research and practice in the use of open source software, interoperability standards, and free content.

IOSJE provides an open, distributed space for new ideas of thought and writing dedicated to research explore how open source, open standards and open content to be integrated into or even contrasted against the future of education. It is an international journal for practitioners and student-makers who have a deep interest in the advancement, in-depth debates or insights about the "openness" in education.

The insightful and innovative scholarly publications published in the journal are freely accessible to worldwide audience. Nevertheless, it does not only require critical local academic research, but it is also committed to knowledge about and distribution from various related sources. Depending on the nature for each issue, among the publications may include the following:

- research reports, case studies or articles
- books, articles, abstracts and reviews (including CD software and courseware) reviews or commentaries
- research progress or ongoing project descriptions
- working papers, drafts

## Conference at Utah State, Sept 2005 Summit in Arizona, December, 2004

**Open Source Summit**

The Open Source Summit, hosted by the Utah State University, is a two-day event for practitioners and student-makers who have a deep interest in the advancement, in-depth debates or insights about the "openness" in education.

**CONFERENCE DATES: SEP 13-15, 2005**

Utah State University, Logan, Utah

## UNESCO's International Institute for Educational Planning hosted a forum on open content

**INTERNATIONAL DISCUSSION FORUM  
OPEN EDUCATIONAL RESOURCES OPEN CONTENT FOR HIGHER EDUCATION**

24 October - 2 (10:00-16:00 UTC)

**SESSION 1: 24 OCTOBER 2005  
OPEN EDUCATIONAL RESOURCES AND OPEN CONTENT**

Background Note

BALLY JOHNSON (NYE), BALEGBO, COCORAPO, USA

*Open Educational Resources promotes the sharing of knowledge worldwide to increase financial sustainability. UNESCO can encourage the development of OER in education, culture and religion to enhance mutual understanding for international peace.*

## Comparison of Sharing Sites: MERLOT, Connexions, CAREO, OCW, CORE, OOPS Grace Lin, Univ of Houston, 2005

- **Goals:** Link people, share knowledge, access resources, searchable database
- **Funding:** fully, partial, none
- **Audience:** higher education, students, teachers
- **Content contributors:** faculty, volunteers

### Comparison of Sharing Sites:

MERLOT, Connexions, CAREO, OCW, CORE, OOPS  
Grace Lin, Univ of Houston, 2005

- Role in knowledge sharing: producers, consumers
- Distinguishing features: creativity, structure, faculty community, rigorous review process
- (Different Affiliations, accomplishments, license, language(s), mission, etc.)

### Sharing Questions (today)

- For what purpose will people share?
- Who will continue to maintain or update such sites?
- Will these "share" sites bridge the digital divide?
- How will copyright issues be addressed?
- What happens when one did not mean to share his or her course contents or ideas, or, at least, not as widely?

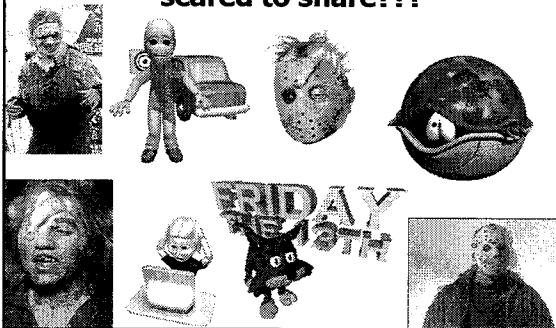
### Sharing Questions (future)

- How will such learning objects of today be viewed in 100 or 200 years?
- What new technologies will emerge and be used for knowledge sharing?
- Will online sharing become expected of all faculty members around the planet?
- If so, how will that change the face of higher education?

### What about the corporate world?

- How can content objects be shared between corporate and universities
- How can resources like OOPS, MERLOT, etc. better support on demand learning?
- What collaborations are possible between corporate world and OOPS, OCW, MERLOT, etc.?
- Are there better funding models?

### Poll #2: So who is still too scared to share???



### Ok...it is the end of part III!

