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The Web of Data: Next Generation Internet Services

Stephen Downes ~ June 22, 2008



National Research Council Canada Conseil national de recherches Canada



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Students have changed

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A lot more than you think...

allins

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Consider media.

Consider choice..

he New York Eimes

• It's a 600-channel TV universe.

NBC CNBC

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NBC

• It's a 10,000 station radio universe.

² flickr

• It's an 8,000,000,000 plus page Internet.





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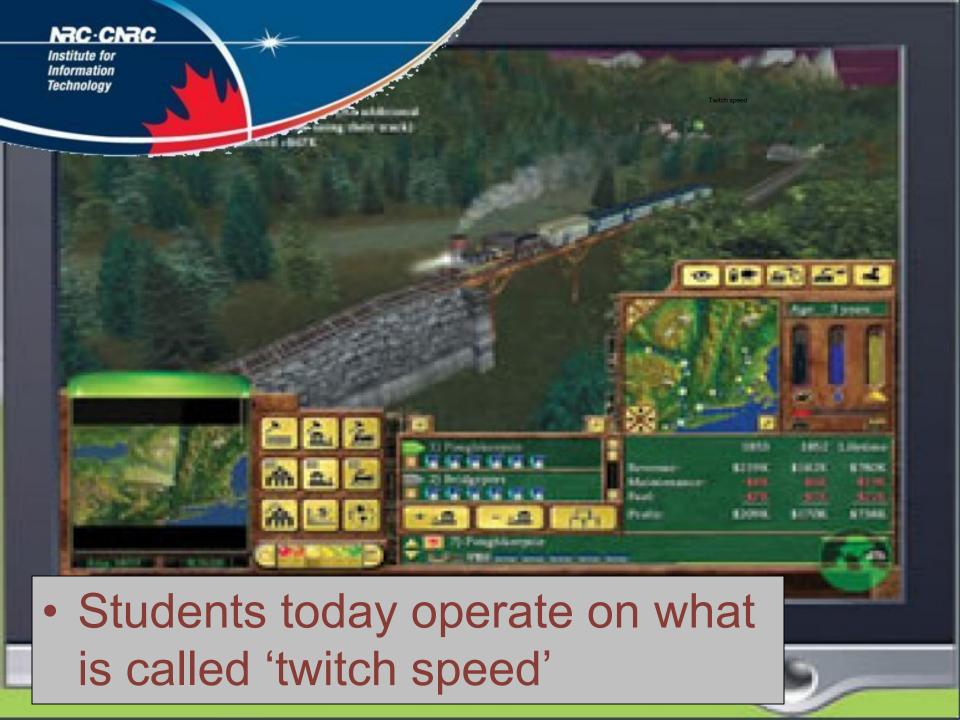
Media is ubiquitous...

Remember when we would 'go' to the the library, the reading room, the TV room, the school...?

PERSONAL PROPERTY.

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The pace has changed



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• They expect instantaneous access to information, day or night

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They expect to be able to communicate with anyone at any time



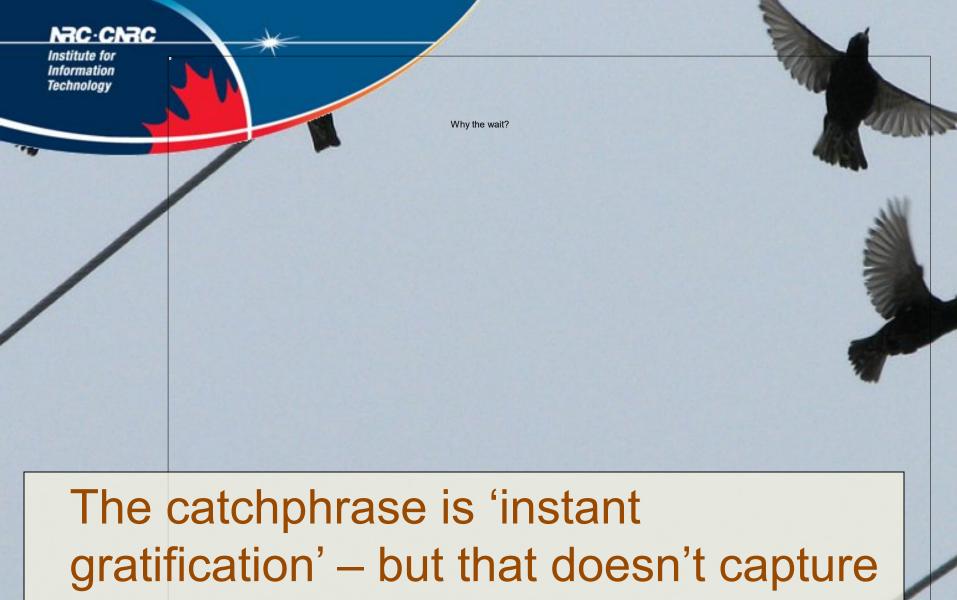
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> Students today expect, want and need tools that provide hyperlinks, instantaneous random access to everyone and everything



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They expect access to be a feature of their environment, through mobile phones and PDAs, wireless access, smart devices...



it - it's more like, 'why the wait?'

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A Matter of Influence

- Richard Saul Wurman, *Information Anxiety,* estimates that today's college grads have spent:
 - 10,000 hours playing video games, 20,000 hours watching TV, 20,000 hours talking on the phone
 - Countless hours listening to music, surfing the Web, using Instant Messenger, chat rooms and email
 - 5,000 hours reading, 11,000 hours attending school.

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Educators have changed

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Edupunk

100ms

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People helping each other learn

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EduCamp Colombia



the American International States of Logical

do nation



Institute for Information Technology

Kuala Lumpur, Malaysia

Institute for Information Technology

Taipei, Taiwan

ICDE Internat OpenCo 開放式課程

開放式課程與數位學習的未來 The challenge faced by the applicat

時間 Time	主題 Topic
08:30-09:00	報到 Registration
09:00-09:50	數位學習 2.0 的積勢和影響 Trends and impacts of e-Learning 2.

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Communities of Educators Online



Group Photo Pool (See all 459 photos)





From netbobz







http://www.flickr.com



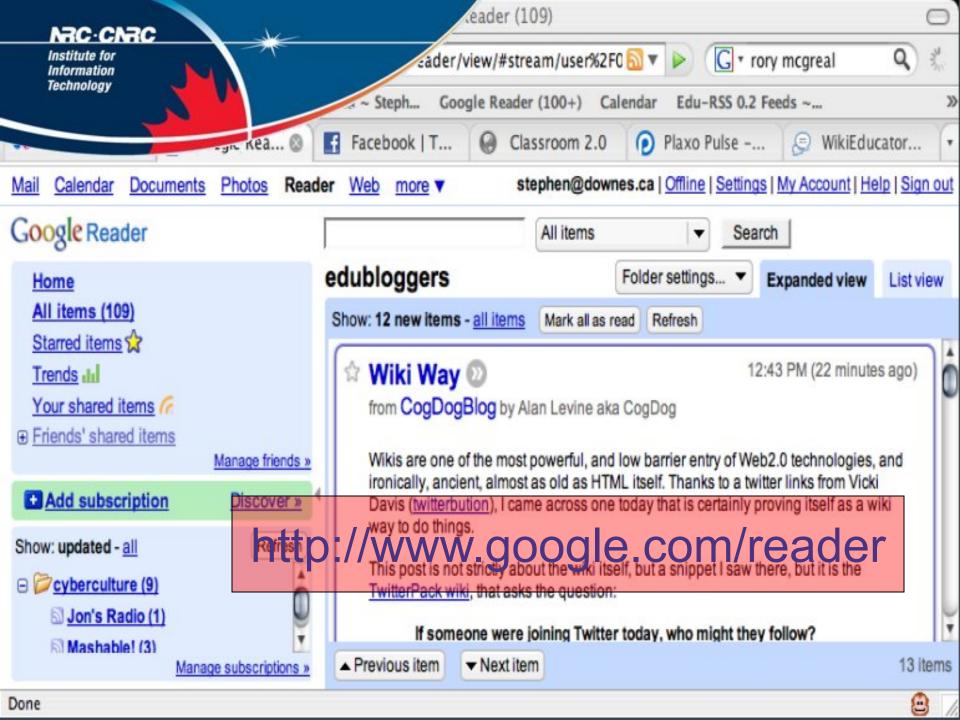


From netbobz



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v more		This group provides an avenue within Facebook for NMC members and friends to connect. We will use this space for early release of news,	sparking innovative learning & creativity		l
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		understanding and using emerging technologies. For more info on the NMC, see www.nmc.org	Share +		
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Communities of learners, where they need to learn

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IBM Worldwide

IBM Research Worldwide 3000 Researchers in eight labs around the world



http://www-05.ibm.com/cz/events/power6/pdf/Ton_Engbersen_Trends_in_microelectronics.pdf

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Learning Within a Digital Community

e physical classroom will be recreated in a virtual form utilizing 3D visualization and Web 2.0 technologies to create an accessible digital learning community

Learning 0.0: The Classroom



Peer to Peer Networking and community building Synchronous Time consuming and costly

Learning 1.0: e-learning W3 Learning W3 Le

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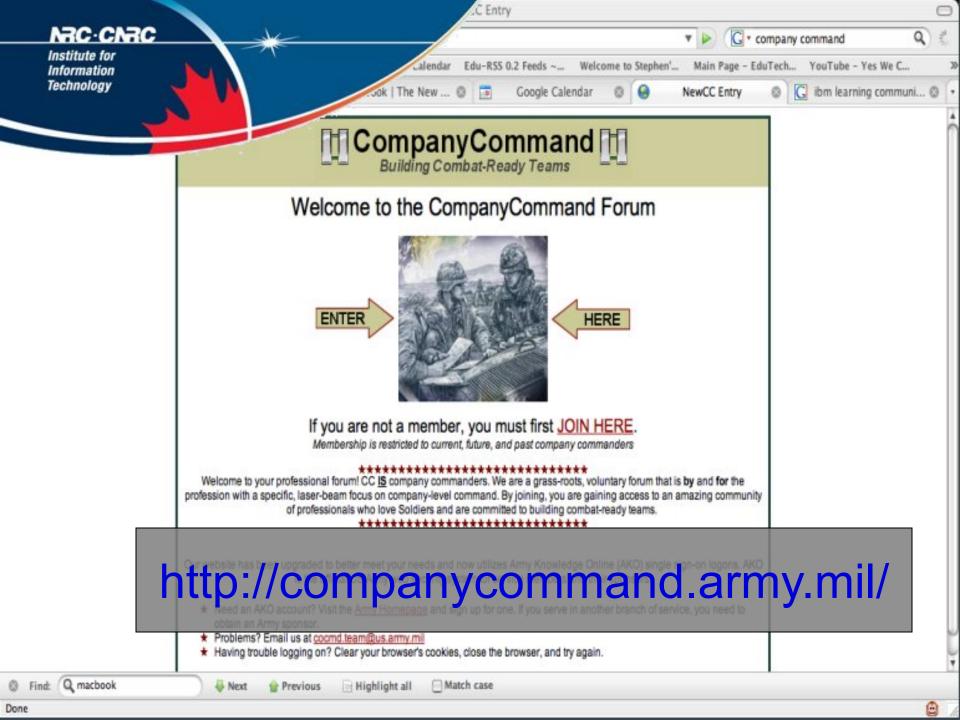
- Individualized learning
- Distributed teams
- Wealth of information
- Self-Paced Learning (SPL)
- Isolated from community

Learning 2.0: Virtual Classroom & CoP

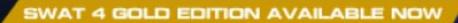


- Collaborative learning
- Distributed teams
- Peer to peer social repartee
- Engaging interface
- Wealth of information
- "Realistic" simulation of business situations

IBM Communities



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NEWS

EDITION

POLICE

6

ABOUT THE GAME

OLD



BUY OR DOWNLOAD OR

NEWS FEED: SWAT 4 EXPANSION WINS

COMMUNITY

SIGNUP

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> UCit Instructional & Research Computing Learning Community Office

Second Life Communities

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Edublog Awards

the edubling award

edubl' 5g awards

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The new technology - even games - supports learning by supporting community

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Learning Communities

Photo: Joyce Valenza and Dave Thomson. Photo by Ewan McIntosh

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Elements of Learning Communities (Circa 1997)

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CII

ommons

Sense of shared purpose

Pam Vesely, Lisa Bloom and John Sherlock Key Elements of Building Online Community: Comparing Faculty and Student Perceptions http://jolt.merlot.org/vol3no3/vesely.htm

Photo: Frederick Noronha http://www.flickr.com/photos/fn-goa/236214205/

astitute of Technology, Delhi

Red Hat India

present

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Photo: Loungerie http://www.flickr.com/photos/loungerie/827362903/

Establishment of boundaries defining who is a member and who is not



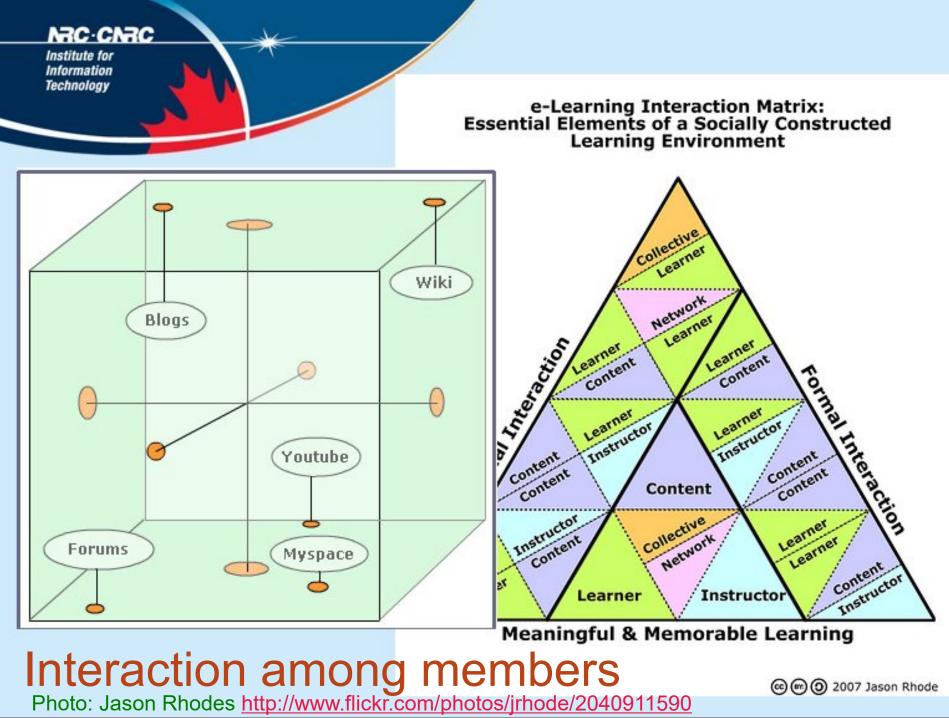
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> SPEED LINIT ENFORCED BY AIRCRAFT

Establishment and enforcement of

rules and policies

Photo: ClintJCL http://www.flickr.com/photos/clintjcl/375585107/



(c) (m) (O) 2007 Jason Rhode

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PUT MONEY IN MUG OR RING BOTTOM BELL

PERCENTAGES TO CHILDREN WITH LEUKAMIA" AND STE MUNEOES HOMELESS

Trust, respect and support

Photo: Nina Jean http://www.flickr.com/photos/nicasaurusrex/7

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Group identity

Misanchuk and Anderson http://www.mtsu.edu/~itconf/proceed01/19.html

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Since then, we've learned...

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> Online communities are not as Photo: Harold Jarche http://www.jarche.com/?p=1525

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We don't want our classrooms to be like classrooms...

Photo: Inx http://www.flickr.com/photos/Inx/6257130/



Far from it...

The challenge for educators across the nation has become how to design and develop a teacher corps and a school structure that allows for a school that operates in a completely different manner than the classrooms we experienced in our own education. - Sammon 2000, 2. http://www.stanford.edu/group/cubberley/node/2383 Photo: Georgie Sharp http://www.flickr.com/photos/georgiesharp/1180689591/

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Different levels of interaction:

- Communication individualism
- Cooperation mesh, or network
- Collaboration unity, or whole

Misanchuk and Anderson http://www.mtsu.edu/~itconf/proceed01/19.html

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Which level prevails in Web 2.0?

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Learning in a Mesh

Collaborative

Cooperative

Image: Noakes http://kolea.kcc.hawaii.edu/tcc/tcon99/papers/noakes.html

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Learning in a Mesh

Collaborative

Cooperative

One content

Many contents

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Interacting in the Network

Marc Canter http://blog.broadbandmechanics.com/2008/03/how-to-build-the-mesh-1-id-social-graphs-and-groups

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Interactive Content

Marc Canter http://blog.broadbandmechanics.com/2008/04/how-to-build-the-mesh-2-persistent-ubiquitous-content

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Learning Environments

Scott Wilson http://thand.files.wordpress.com/2007/05/futurevle.jpg

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Personal Learning Landscape

Dave Tosh <u>http://tesl-ej.org/ej34/m1.html</u>

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Functions in Social Media

Mohamed Amine Chatti http://mohamedaminechatti.blogspot.com/2007/06/my-plepkm.html

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PLE as applications

Marianne http://mlxperience.blogspot.com/2007/11/my-personal-learning-environment-model.html

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Essentials of Web 2.0

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User Generated

Content

Content as object, not subject

Photo: Kbaird http://www.flickr.com/photos/kevlar/1152595430/

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Syndication

Photo: Orin Optiglot http://www.flickr.com/photos/orinrobertjohn/170352038/

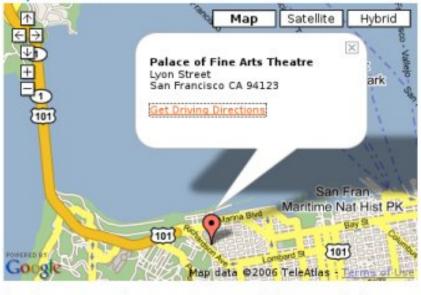
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Institute for Information Technology he Future of Web Apps - Firefox

Software as a Service

Continue on Hayes for three blocks and turn right onto Franklin street. Continue on Hayes for three blocks and turn right onto Franklin street. Follow Franklin for approximately two miles to Lombard street and turn left. Follow Lombard for approximately 1% miles until you see a green & "Palace of Fine Arts" highway sign on the right side of the road. Turn right at the sign - this is Lyon street. Go one block and turn left into the parking area.





If you have any special requirements, just email gill@carsonworkshops.com

A fantastic Summit containing lessons learned from industry leaders - Martin Graney

18 °C 8 4 Fri Sep 15, 08:51:10

An inspiring dayl Very impressed by all the speakers - Chris Korhonen, American Express

Good mix of speakers with some great ideas. Very motivational! - Simon R Jones, Studio 24

Brilliant, friendly and organised. Raising the bar for the industry - Ed Dowding, communitysafe.org

A well-run, comprehensive and professional event - Lee Harker, BBC

Last year's Summit was a sell-out success. Find out more <u>here</u>.

Contact

General enquiries Lisa Price

Registration queries Gill Carson

Advertising and sponsorship

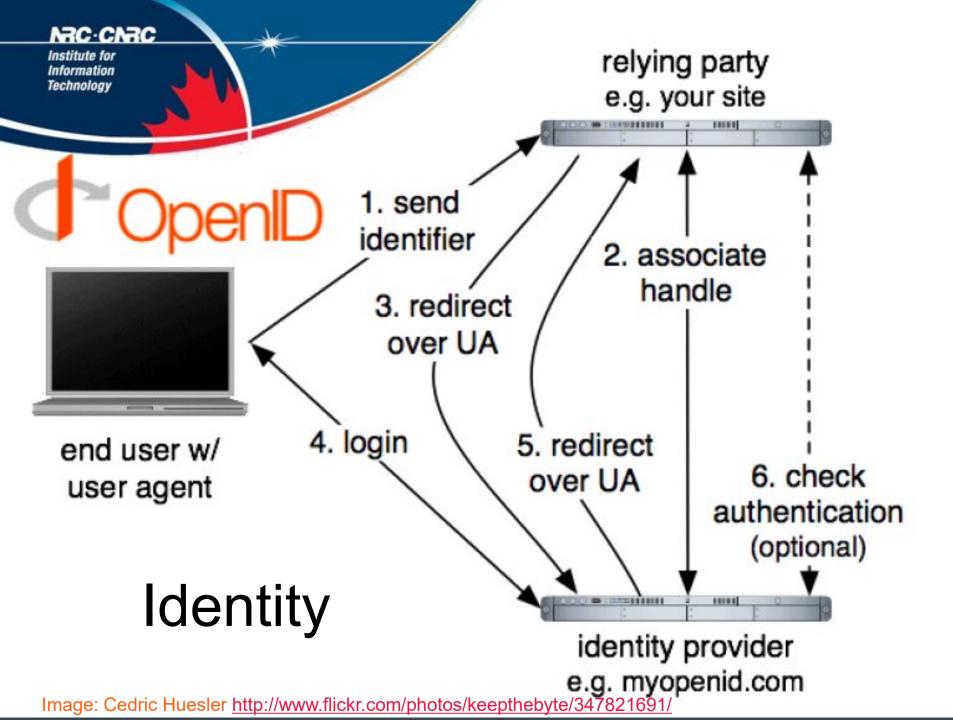
AJAX ~ REST ~ WSDL / SOAP etc etc

Photo: Peter Renshaw http://www.flickr.com/photos/bootload/243444537/

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Carson Workshops Summit - The Future of Web Apps - Firefox

Adblock



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Office 2.0

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http://www.downes.ca/post/43918

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Bookmarking - del-iciou.us

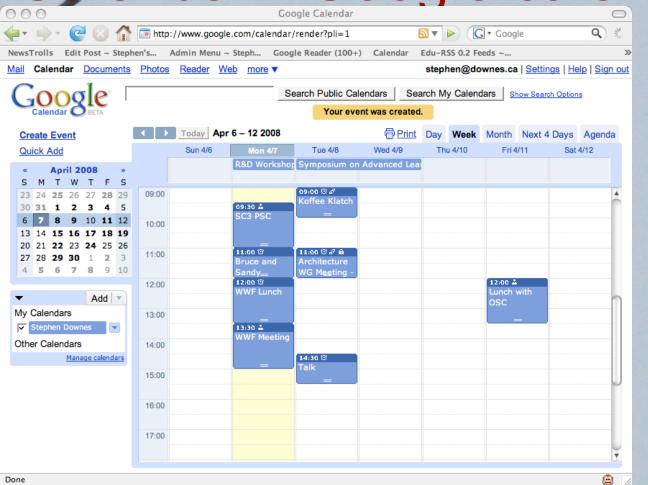
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Calendar - Google calendar



Done

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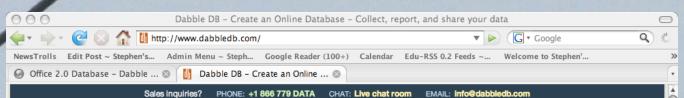
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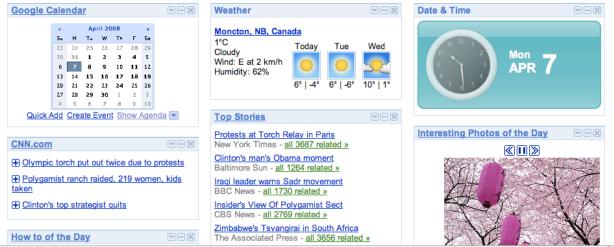
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A Google approach to email.

Gmail is a new kind of webmail, built on the idea that email can be more intuitive, efficient, and useful. And maybe even fun. After all, Gmail has:



Less spam Keep unwanted messages out of your inbox with Google's innovative technology



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News Departments

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Deadline : April 15th 2008 (abstracts) -Lemire 28/01/08 15:42

Don't worry about formatting the paper initially. See http://www.elsevier.com/wps/find/journaldescription.cws_home/621289/authorinstructions for instructions on how to do it. -Lemire 28/01/08 15:42

Diversity in open social networks

Authors' names widthheld we are asked to remain anonymous to allow blind peer review -Lemire 23/03/08 16:42

Abstract

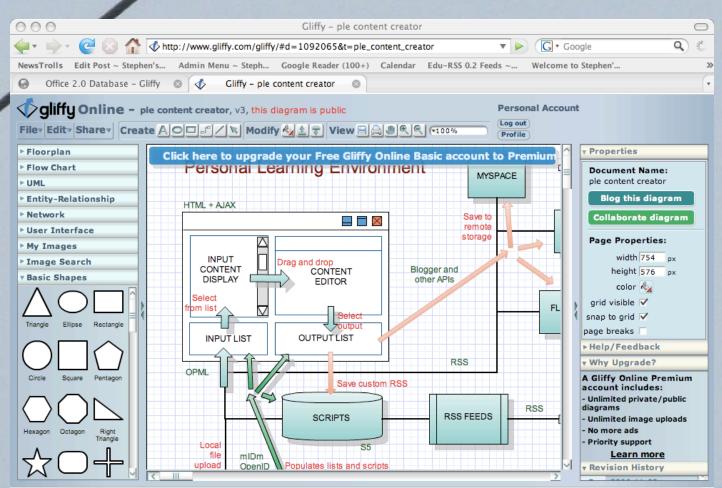
On-line communities have become become a crucial ingredient of e-business. Supporting open social networks of consumers helps build strong brands, and provides lasting value to the consumer. One function of the community is to recommend new products and services. Open social networks tend to be resilient, adaptive, and broad, but simplistic recommender systems can be 'gamed' by members seeking to promote certain products or services. We argue that the gaming is not the failure of the open social network, but rather of the aggregate function used by the recommender. To increase the quality and resilience of recommender systems, and provide the user with genuine and novel discoveries, we have to apply algorithms based on diversity, instead of closing the social networks. We define what we mean by 'diversity' and relate our analysis to existing success stories.

I don't know if you agree with my verdict Stephen, but I changed the spin on the abstract. I now think that we must say that social network are naturally resilient. It is what people do with them, how they aggregate them, that might be gamed. I think that social networks are hard to game. Balzac wrote a lot about this: how any power called for a counter-power (sometimes hiding quite well). Think about the USSR that had a massive problem with the Russian mafia. I am deeply convinced that given a large enough social network, if you try to control it, it will route itself against around you. Ultimately, if you want control, you need to destroy the network.

-Lemire 21/03/08 18:24

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Drawing - Gliffy



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Group Management - Ice Core

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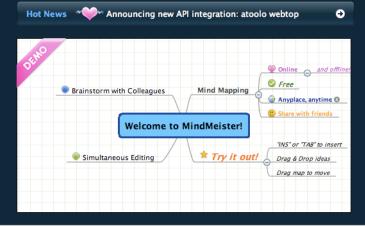
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Mind Mapping -MindMeister

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collaborative online mind mapping

MindMeister supports all the standard features of a classic mind mapping tool – only online, and with as many simultaneous users as you like! Curious? Try the **LIVE DEMO** below.



Already a Mindmeister?

your username your password

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Become a Mindmeister!



BASIC FREE → Create, share, import, export and collaborate on mind maps.

Sign in



PREMIUM \$4/MONTH → Unlimited mind maps and much more, for the creatively productive.



TEAM FROM \$2.80/MONTH → Get your whole team kitted out with collaborative mind mapping.

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Photo Editor - Picnik

- Zoom

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Photo manager - Flickr

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Hola Stephen Downes! Now you know how to greet people in Spanish!

- You have 75 new messages.
- Find your friends

Flickr News

31 Mar 08 - Flickr is more fun with friends, but it is a big busy place, and sometimes it can be hard to find the people you know. The new Find Your ... read more news

- » Flickr Blog Great photos & latest news, daily!
 - Do more with your photos! Posters! Books! DVDs!

Now there's even more you can do with your photos:

- HP Prints, Photocubes, Posters and Books NEW
- MOO Tiny, wonderful photo calling cards
- QOOP Calendars, Posters & Books
- Blurb Bookstore quality books, by you
- ImageKind Frame your Flickr photos

Make your photos happy -- do something with them!

- » Upload Photos (Or, look at our uploading tools ...)
- » Your Photos (NEW comments / Comments you've made)



» Photos from your Contacts



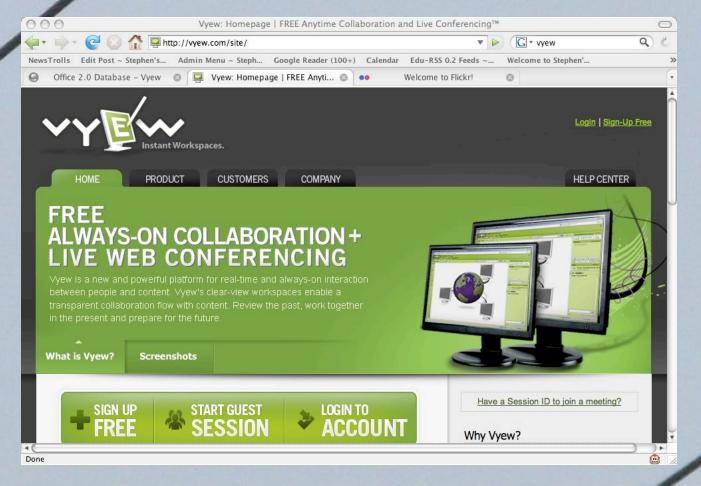
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Web Conferencing - Vyew



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Webcasting -Ustream.tv

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- Web 2.0 Applications Are Virtual Worlds -

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Multiple users, avatars, user generated content, persistent world...

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They belong to the user

Photo: occ4m http://www.flickr.com/photos/occam/33233905/

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They are shared

100ms

Photo: Carf http://www.flickr.com/photos/beija-flor/1571916042/

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> The key to community is not doing things for people, but enabling them to do things for themselves

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Cooperative Learning

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The basic elements critical to cooperative work

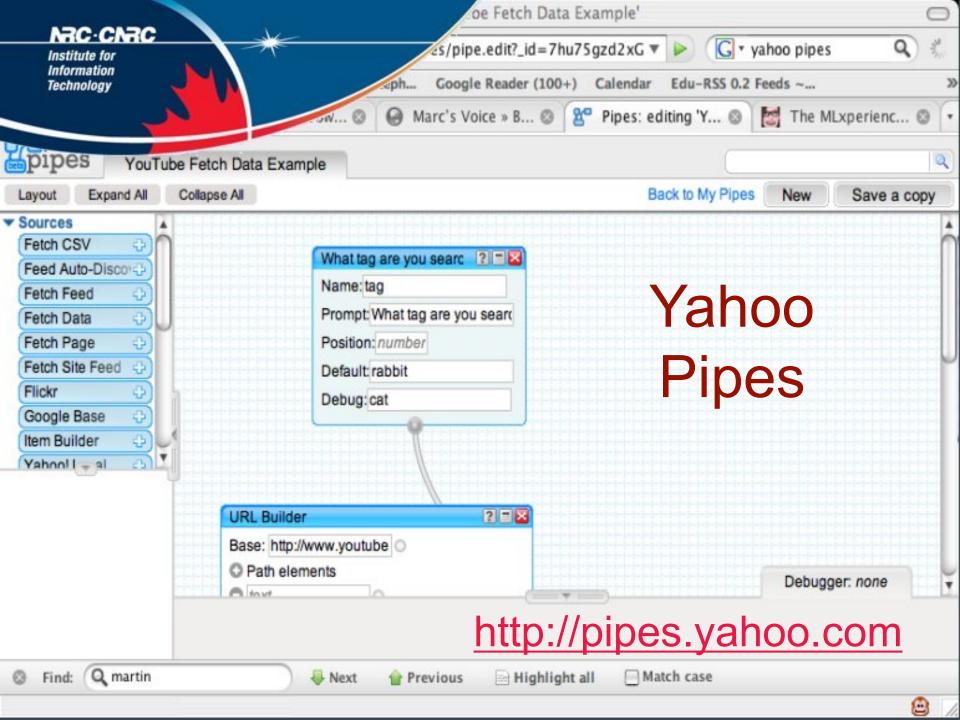
- positive interdependence
- individual accountability
- promotive interaction
- social skills
- collective processing

Johnson, Johnson and Smith http://www.maine.edu/pdf/CooperativeLearning.pdf

... are the basic elements of virtual worlds... and web 2.0

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Software architecture that supports cooperation



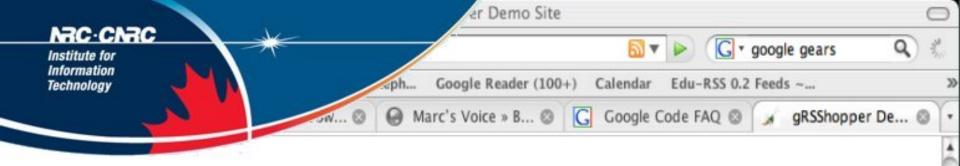
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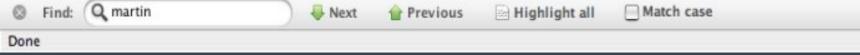
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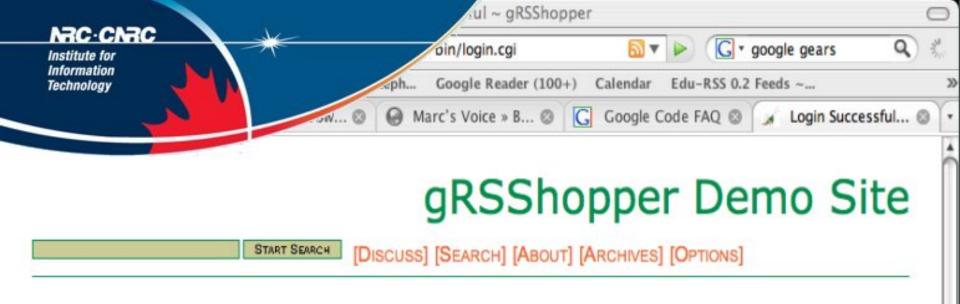








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Login Successful

- Site Administration
- Edit Your Personal Information and Options

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- Associate OpenID account with your gRSShopper account
- Go back to where you were
- Go to the site home page
- Log on as another user

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Half an Hour -> post

A mapping is a way to direct where you want harvested data to be stored. The mapping source is always a feed, while the mapping destination is always a database table.

Source

Either...

Specific Feed:	Half an Hour	•
C Feed Type		[Help]
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C Value Pair		[Help]

Match case

Destination

Select a destination table: post

link

Map Table Elements

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Changing Community

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Community as Connections

http://www.edsupport.cc/mguhlin/archives/2008/04/entry_6926.htm

Source: http://tinyurl.com/yq79pr

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Groups vs Networks

http://www.flickr.com/photos/stephen_downes/252157734/

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Diversity

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Autonomy

Autonomy it's your choice

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Commons Macedonia

METAMORPHOSIS

Openness

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Connectivity

Interactivity, Emergence...

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> Supporting Educational Communities

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The idea of providing services

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19 of the top 20 software applications used by educators are free

Jane Hart http://c4lpt.co.uk/recommended/top100.html

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The Moodle Experience

Photo: Pescosolido Library http://www.flicki.com/photos/peskylibrary/175701858/

NAC-CNAC

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Dougiamas...

- A clear, obvious web site design
- Demonstrations of the software
- Simple but extensive documentation
- Structured, easy-to-use forums
- A central source code library

http://dougiamas.com/writing/edmedia2003/

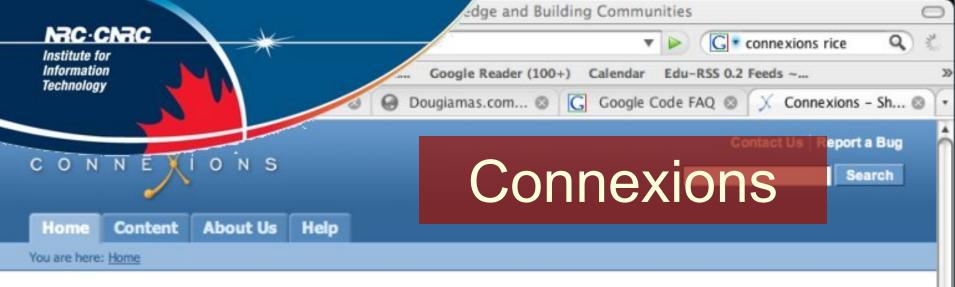
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This is what we could do

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There are certainly precedents...

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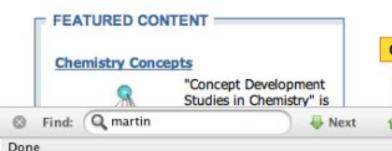
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Connexions is:

a place to view and share educational material made of small knowledge chunks called modules that can be organized as courses, books, reports, etc. Anyone may view or contribute:

- authors create and collaborate
- instructors rapidly build and share custom collections
- learners find and explore content

More about us



FIND CONTENT		
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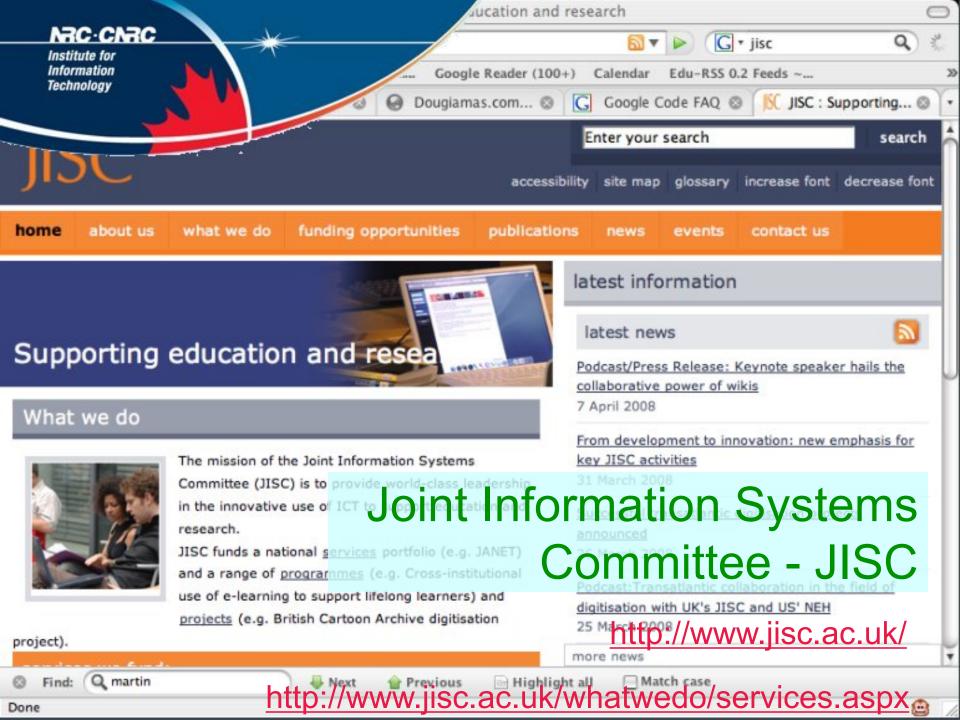
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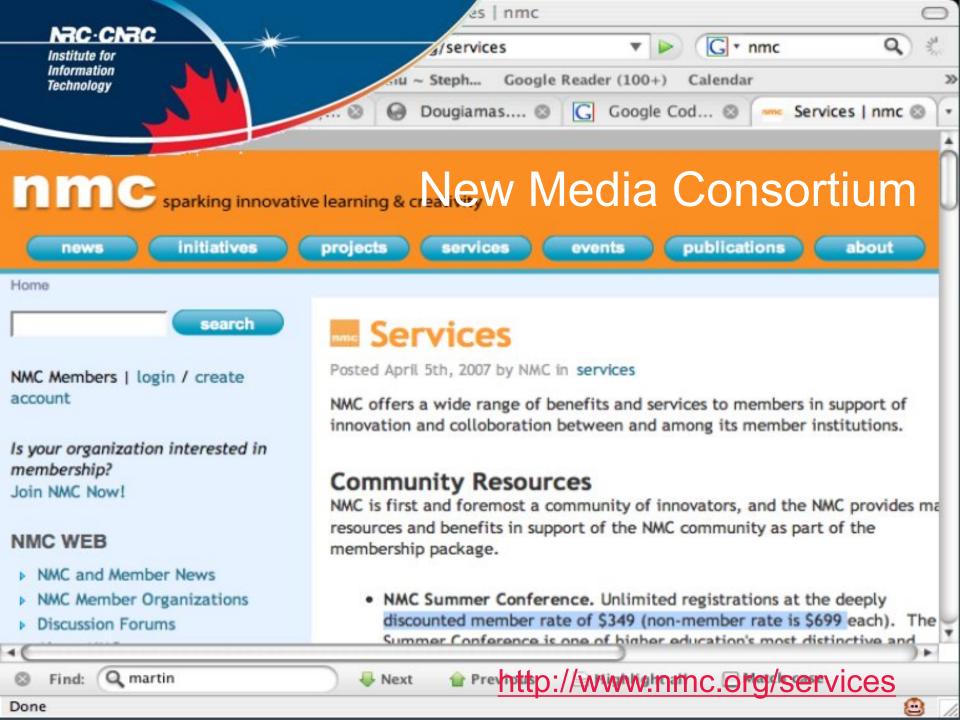
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Thank you

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