




Univ. Edinburgh, School of Informatics  
Computational Thinking Seminar, 25th April 2007

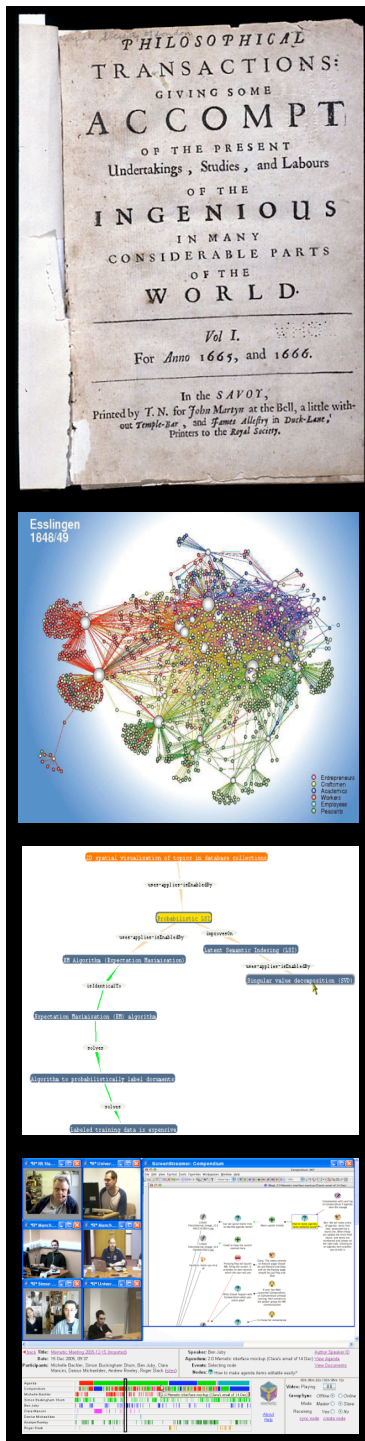
# Digital Research Discourse?

Simon Buckingham Shum

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[sbs@acm.org](mailto:sbs@acm.org)

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# Computation shaping Discourse?



- How are **digital tools changing current practices?**
  - dissemination, peer review, literature analysis, meetings and teamwork
- How can we **conceive 'digitally-native' practices?**
  - dissemination, peer review, literature analysis, meetings and teamwork
- **Research challenges**

An overview, plus some in-depth examples from my own work



# What is scholarly communication?

6 services (Van der Sompel, 2000)

1. **Registration**: claiming ownership of work
2. **Certification**: an indication of quality
3. **Awareness**: alerting the world to the work's existence
4. **Accessibility**: making the work available
5. **Archiving**: preserving the record
6. **Rewards**: encouraging scholars to maintain the system





**Will research results still be published solely/primarily as prose?...**

**In 2020...**

**...or can we imagine a complementary infrastructure?**

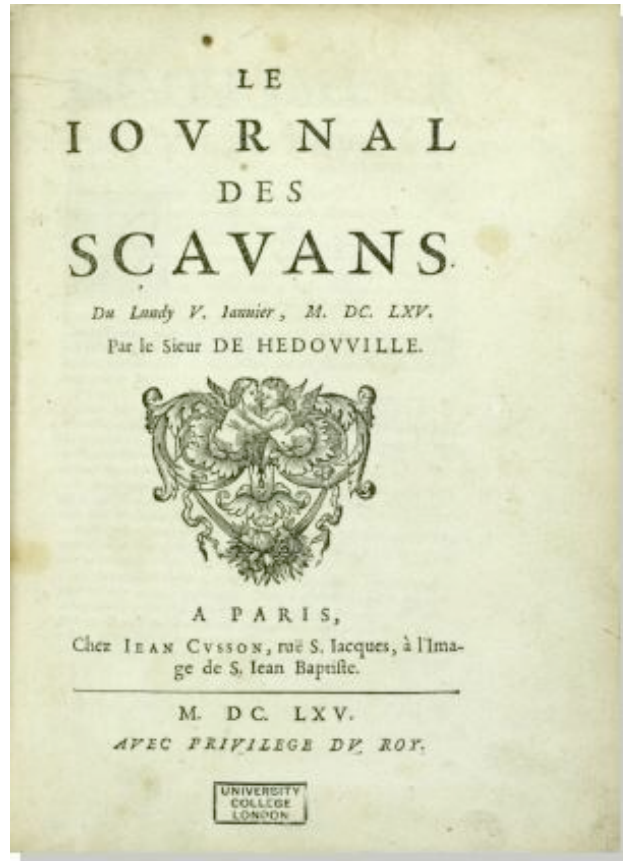
**...‘native’ to the internet, enabling more effective dissemination and analysis of ideas?**

# In Gutenberg's shadow

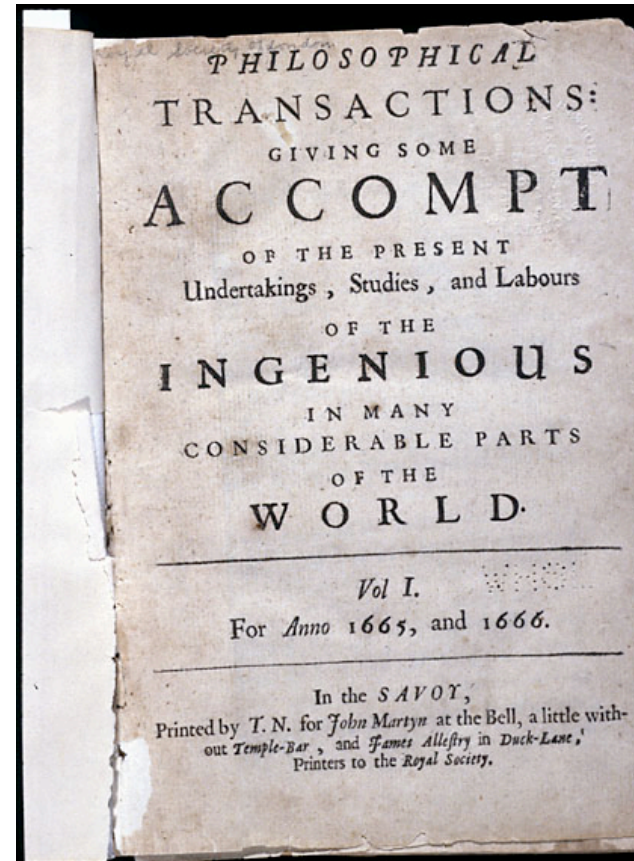
(or standing on his shoulders)



*Newspapers + Invisible Colleges = Scholarly Journals*



*Le Journal des Sçavans*  
January 1665



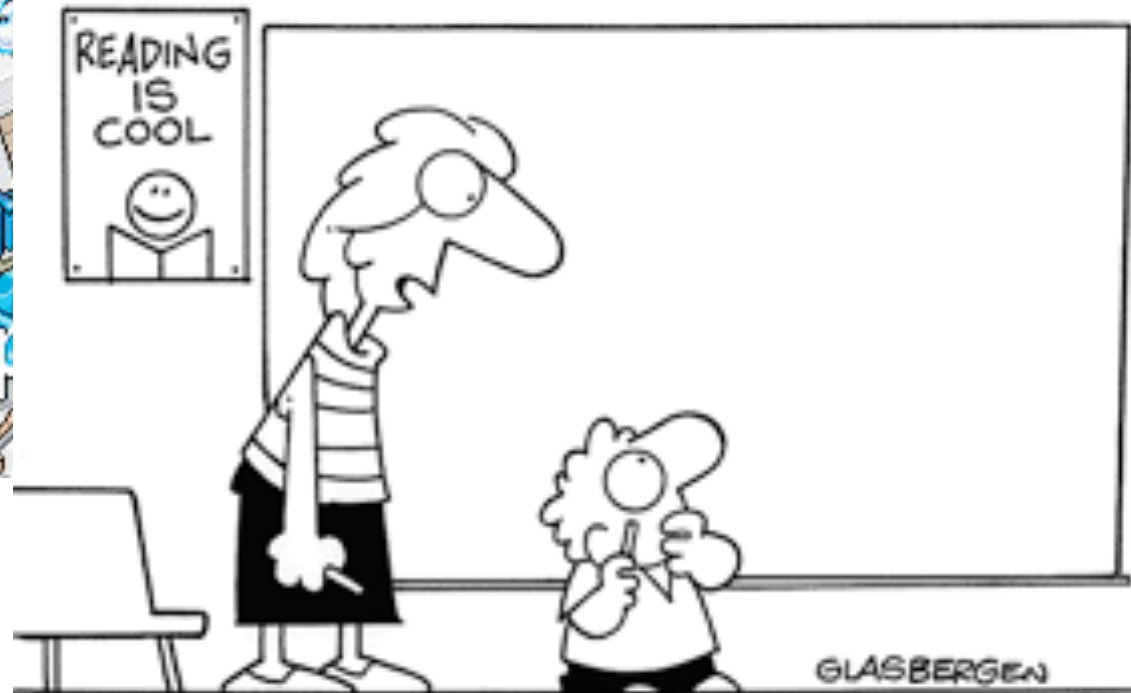
*Philosophical Transactions of the Royal Society of London*  
March 1665

# Brave new world...



Copyright 1996 Randy Glasbergen. www.glasbergen.com

<http://blog.webbreakstuff.com/wp-content/eboy.jpg>



**“There aren’t any icons to click. It’s a chalk board.”**

# Computation shaping Discourse?



- How are **digital tools changing current practices?**
  - dissemination, peer review, literature analysis, meetings and teamwork
- How can we conceive ‘digitally-native’ practices?
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- Research challenges



“If it’s not on Google, it doesn’t exist”



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**Stand on the shoulders of giants**

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# Open access to publications (and some data)



Petition for Public Access to Publicly Funded Research in the United States

http://www.publicaccesstoresearch.org/index.html

Search: open access publishing

---

## Petition for Public Access to Publicly Funded Research in the United States

---

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Use these bookmarking tools to help spread the word:

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*This petition builds on the [24,000+ signatures collected from around the world](#) in support of free and open access to European research and for the recommendations proposed in the EU's 'Study on the Economic and Technical Evolution of the Scientific Publication Markets of Europe' as well as the [132 higher education leaders](#) who have written of their explicit support for public access to publicly funded research.*

Sign this [petition](#) to register your support for free and open access to research funded by the U.S. Federal government. For more information on current policies and legislation for taxpayer access to federally funded research – including the [Federal Research Public Access Act](#) – visit the [Alliance for Taxpayer Access Web site](#).

**2600 Signatures since March 13th, 2007**

We, the undersigned, believe that broad dissemination of research results is fundamental to the advancement of knowledge. For America's taxpayers to obtain an optimal return on their investment in science, publicly funded research must be shared as broadly as possible. Yet too often, research results are not available to researchers, scientists, or the members of the public. Today, the Internet and digital technologies give us a powerful means of addressing this problem by removing access barriers and enabling new, expanded, and accelerated uses of research findings.

- Now turning in to a major political movement in conflict with commercial scholarly/scientific publishers

# eJournals: Levels 1-6

Lancaster, F. W. (1985). The Paperless Society Revisited. *American Libraries*, 16, (8), 553-555



1. computers used for print production
2. journal distributed in both print and electronic formats
3. publication design is rooted in print, but articles are developed solely for electronic distribution
4. interaction between authors and readers is possible; publications can evolve as a result of such interactions
5. the inclusion of multimedia content
6. both interactive participation and multimedia capabilities are supported



# Computational analysis of discourse: meetings

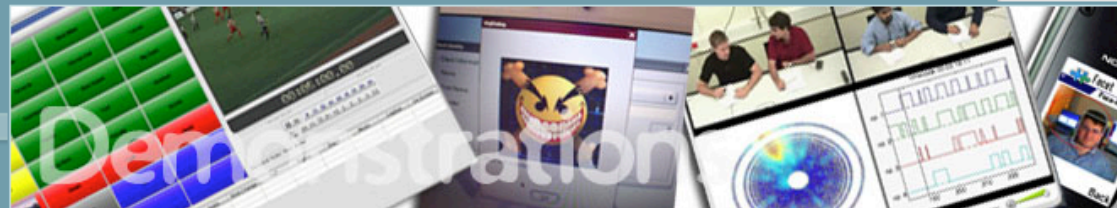


[Business Portal](#) | [AMI Scientific Portal](#) | [AMIDA Scientific Portal](#) | **Showcase** | [Training Program](#)

Intranet   

## Showcase

- Integrated Systems
- Multimodal Analyses
  - Meeting Dialog**
  - Compressed Meeting Player
  - Participant Influence
- Audio/speech Processing
- Still and Moving Image Processing
- Standards and Toolkits
- Online CD order
- DVD Taster online order



[home](#) → [showcase](#) → [multimodal analyses](#) → [meeting dialog](#)

## Meeting Dialog

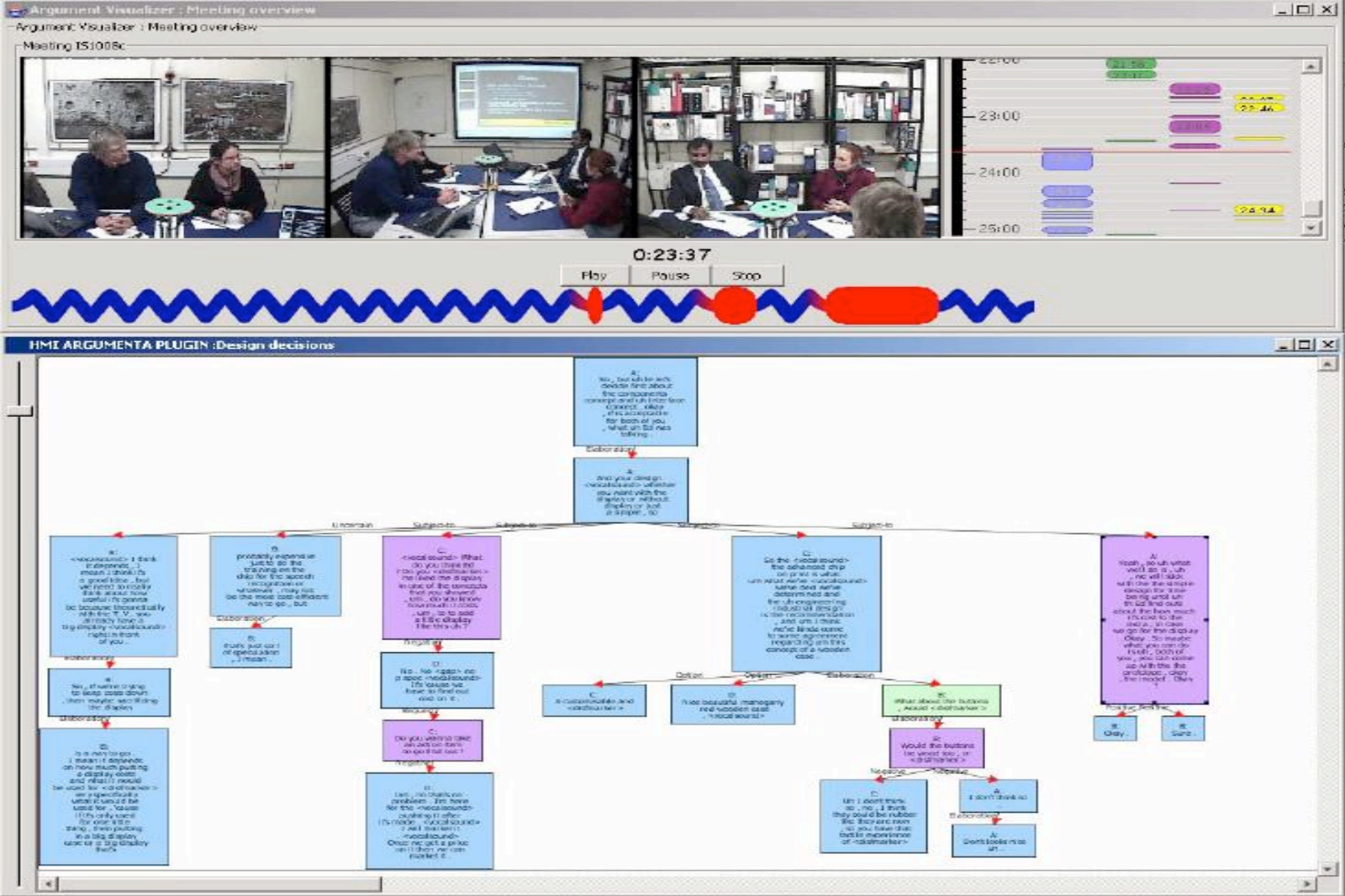
### Meeting Dialog and Argumentation Tracking

One of the most important and difficult-to-understand parts of a meeting is the discussion. People want to remember, indeed they frequently need to understand agreement, disagreement and the arguments given by different constituents, but this is not available today using existing technologies or the notes of individual meeting participants. At University of Twente, a method to capture and represent the discussion content in an intuitive and crisp manner has been developed. From the AMI meeting corpus, we can see how the argumentation representation is available in a typical recording of a future meeting. The lines in the tree depict relations between various notes (positive, negative, request for more information) and permit the user to follow a discussion thread in a new and meaningful manner. This movie also shows how the technology has been adapted for use in the JFerret meeting browser.

[[movie](#), [more information about HMI](#), [more information on argumentation](#), [article describes foundation of argumentation research work](#)]

[www.amiproject.org](http://www.amiproject.org)

# Computational analysis of discourse: meetings





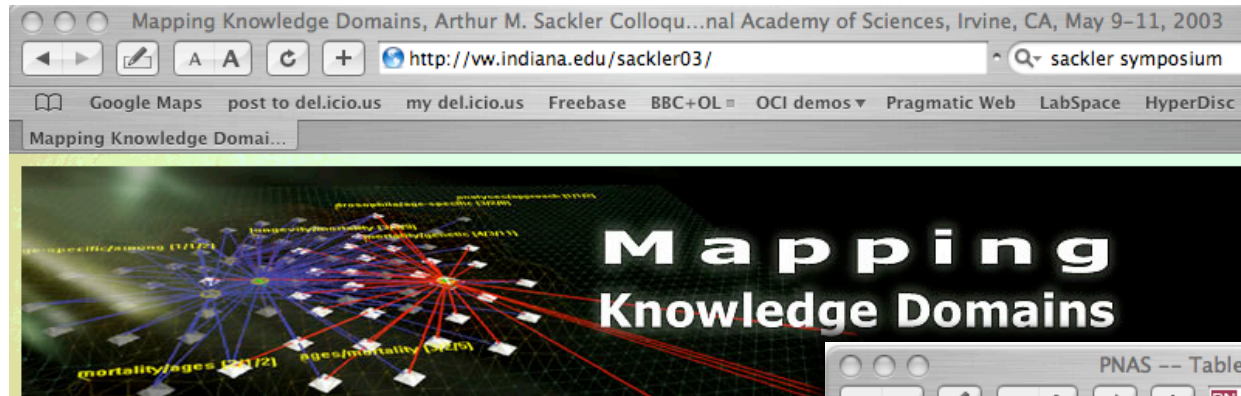
# Computational analysis of discourse: texts

- **Simone Teufel & Marc Moens (Edin):  
Argumentative Zoning in scientific papers**
  - after training, automatic classification of citations,  
eg. as background, or contrasting
- **Similar work but different approach by Agnes  
Sandor (Xerox)**

# Computational analysis of discourse: literatures



*Knowledge Domain  
Mapping  
gaining visibility—but  
still in the labs*



[Arthur M. Sackler Colloquium on "Mapping Knowledge Domains"](#)

The colloquium was sponsored by the National Academy of Sciences, Irvine, CA, May 9-11, 2003 in the Beckman Center of the National Academy of Sciences, Irvine, CA.

[Organizer](#) | [Motivation & Description](#) | [Database](#) | [Papers](#) | [Press Coverage](#)

[Colloquium Map by Ron Milo](#)

Complexity Digest Entries on the Colloquium  
<http://www.comdig.org/ComDig03/ComDig03.html>  
<http://www.comdig2.de/Conf/NASSC03.html>

Essays / Papers on "Mapping the World of Science" presented at the colloquium and his colleagues  
[Best-Domain-Visualizations](#) slide show compiled by

PNAS -- Table of Contents (Apr 6 2004, 101 (Suppl. 1))

[KEYSTONE SYMPOSIA](#) Connecting the Scientific Community

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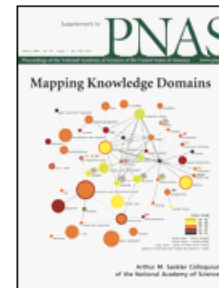
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## Table of Contents

April 6, 2004; 101 (Suppl. 1) [Index By Author](#) [Cover Photo](#)

## Mapping Knowledge Domains

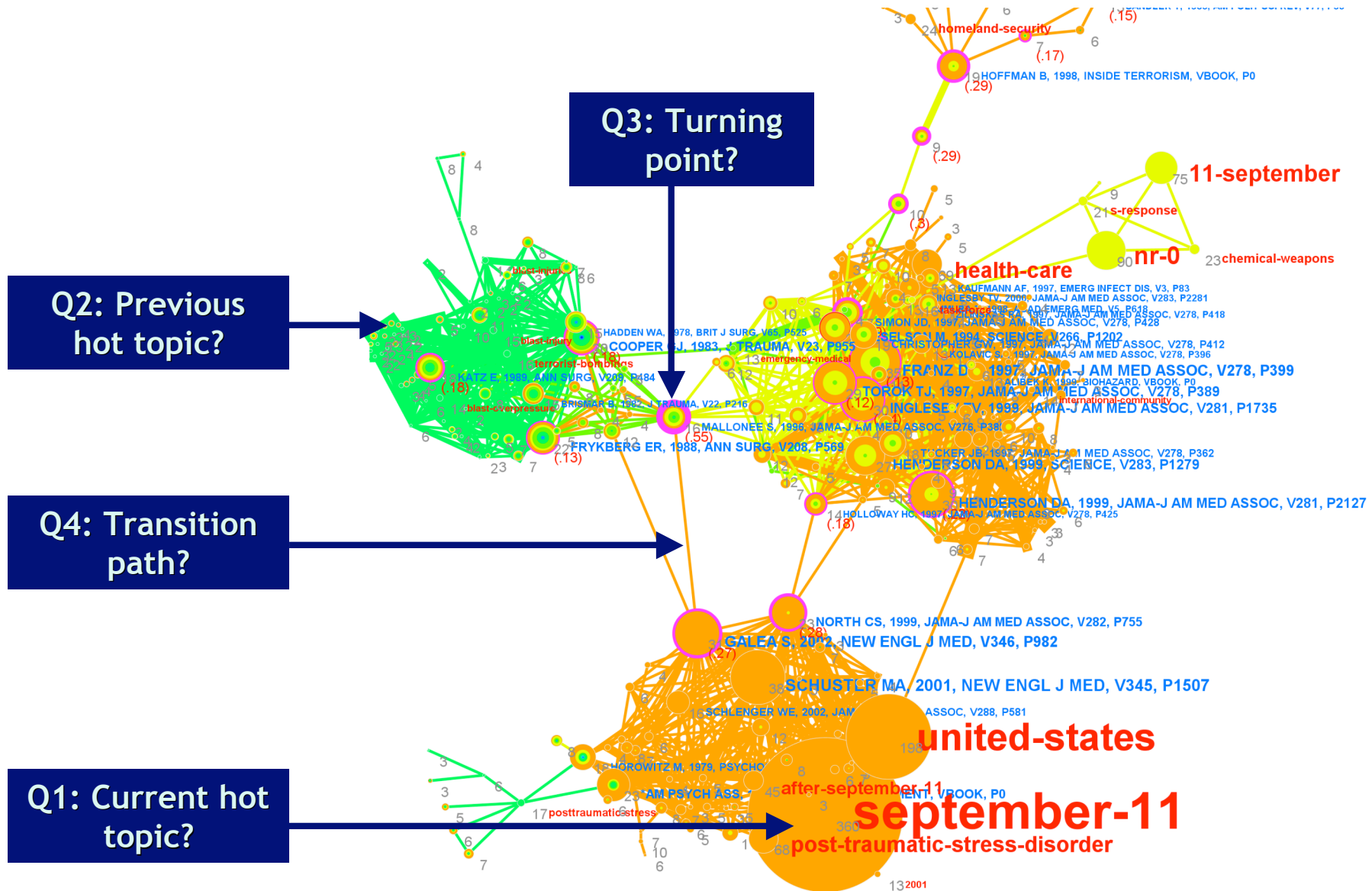


# Computational analysis of discourse: literatures and intellectual phenomena

- Chaomei Chen (Drexel)
- “Can we help answer questions such as...
  1. What is the hottest topic at time  $T_0$ ?
  2. What have been the hot topics between time  $T_a$  and  $T_b$ ? (A Timeline - Temporal)
  3. What are the major turning points between time  $T_a$  and  $T_b$ ? (Turning points - Structural)
  4. How did knowledge associated with these turning points spread? (Diffusion - Spatial)”



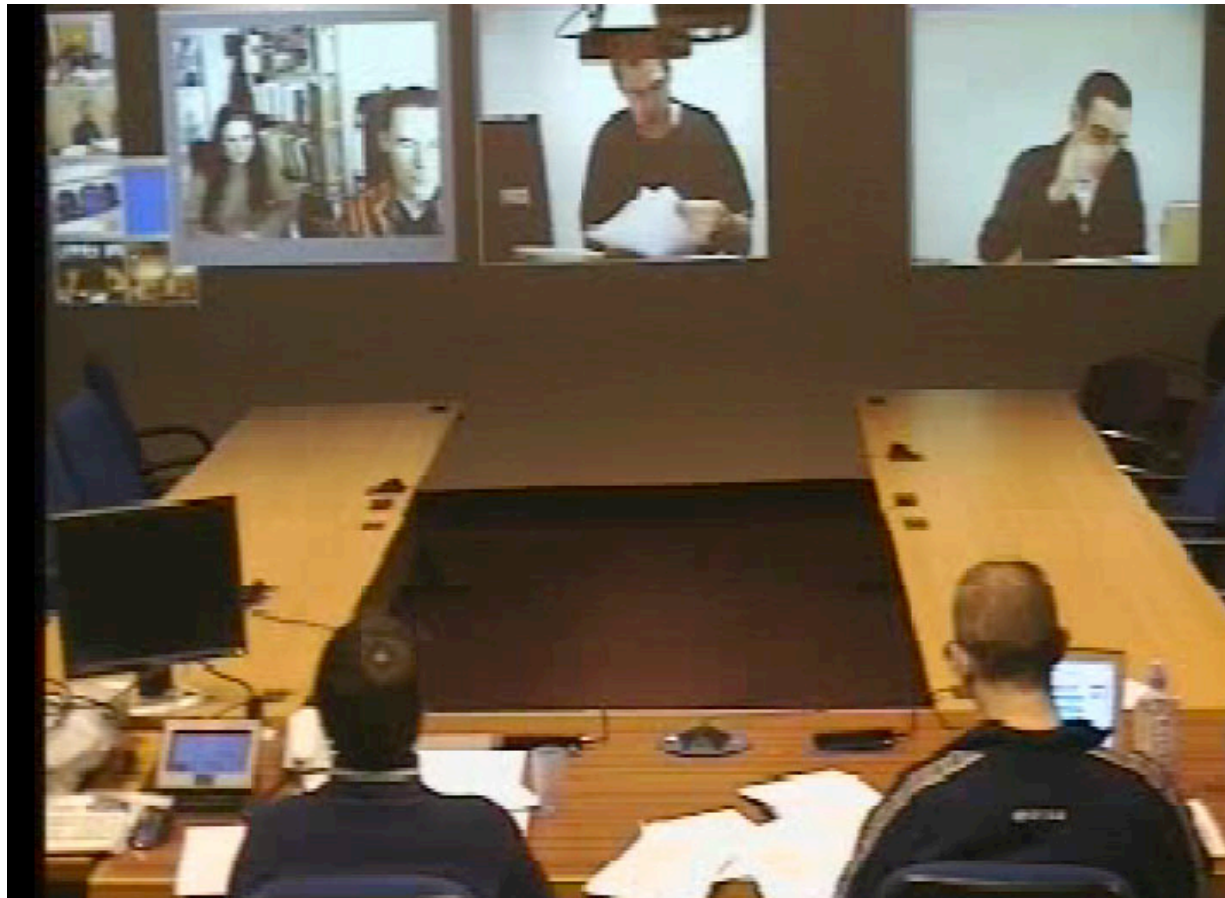
# Chaomei Chen: visualization of trends in a literature (terrorism)





# Access Grid: high quality internet video conferencing

[www.accessgrid.org](http://www.accessgrid.org)



“The Access Grid® is an ensemble of resources including multimedia large-format displays, presentation and interactive environments, and interfaces to Grid middleware and to visualization environments.

... the Access Grid (AG) is used for large-scale distributed meetings, collaborative work sessions, seminars, lectures, tutorials, and training. The Access Grid thus differs from desktop-to-desktop tools that focus on individual communication.”



# Desktop client interface

(you don't need a dedicated room!)



The screenshot displays a Windows desktop environment with several open windows:

- Video Conference:** A large window titled "KMI, Open University, UK (Video)" shows a video call in progress. The interface includes a "Metropolitan" window with a list of participants and their video thumbnails. The taskbar at the bottom shows the "Venue Client" and "Metropolitan" applications.
- Compendium: Ecosensus:** A window titled "Compendium: Ecosensus" displays a map interface. The map shows a network of nodes, with a central node highlighted in yellow. The text on the screen reads: "This is an ISSUE. It could be driven by a methodology, or captured as it arises in a discussion." Other nodes are labeled with icons and numbers, such as "This is an OPTION which responds to an Issue. The asterisk shows there is detail text inside the node" and "Make an OPTION into a DECISION node to show commitment".
- Taskbar:** The Windows taskbar at the bottom shows the "start" button, several application icons, and the system tray with the time "10:45".

# Computation shaping Discourse?



- How are digital tools changing current practices?
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  - dissemination, peer review, literature analysis, meetings and teamwork
- Research challenges

# Mapping workshop discussions



This site: [www.aktors.org/coakting/eSci-Vis2003](http://www.aktors.org/coakting/eSci-Vis2003)

## National eScience Centre Workshop: Visualization for eScience (23-24 Jan 2003)

**Background note:** As part of the workshop, Compendium and ScholOnto were presented by Simon Buckingham Shum ([slides](#)). Compendium was then used to capture the discussions in Working Group 4 (Human Issues), and in the closing plenary session (Short, Medium and Long Term Priorities for the eScience Visualization community).

### Compendium Maps

#### Human Issues working group

- [Visual Maps](#) (Interactive VML) - requires Microsoft Internet Explorer browser
- [Linearised Outline](#) (HTML)
- [XML](#) ([Compendium DTD](#)-compliant)

#### Closing session: Working Group priorities (Short, Medium and Long term)

- [Visual Maps](#) (Interactive VML) - requires Microsoft Internet Explorer browser
- [Linearised Outline](#) (HTML)
- [XML](#) ([Compendium DTD](#)-compliant)

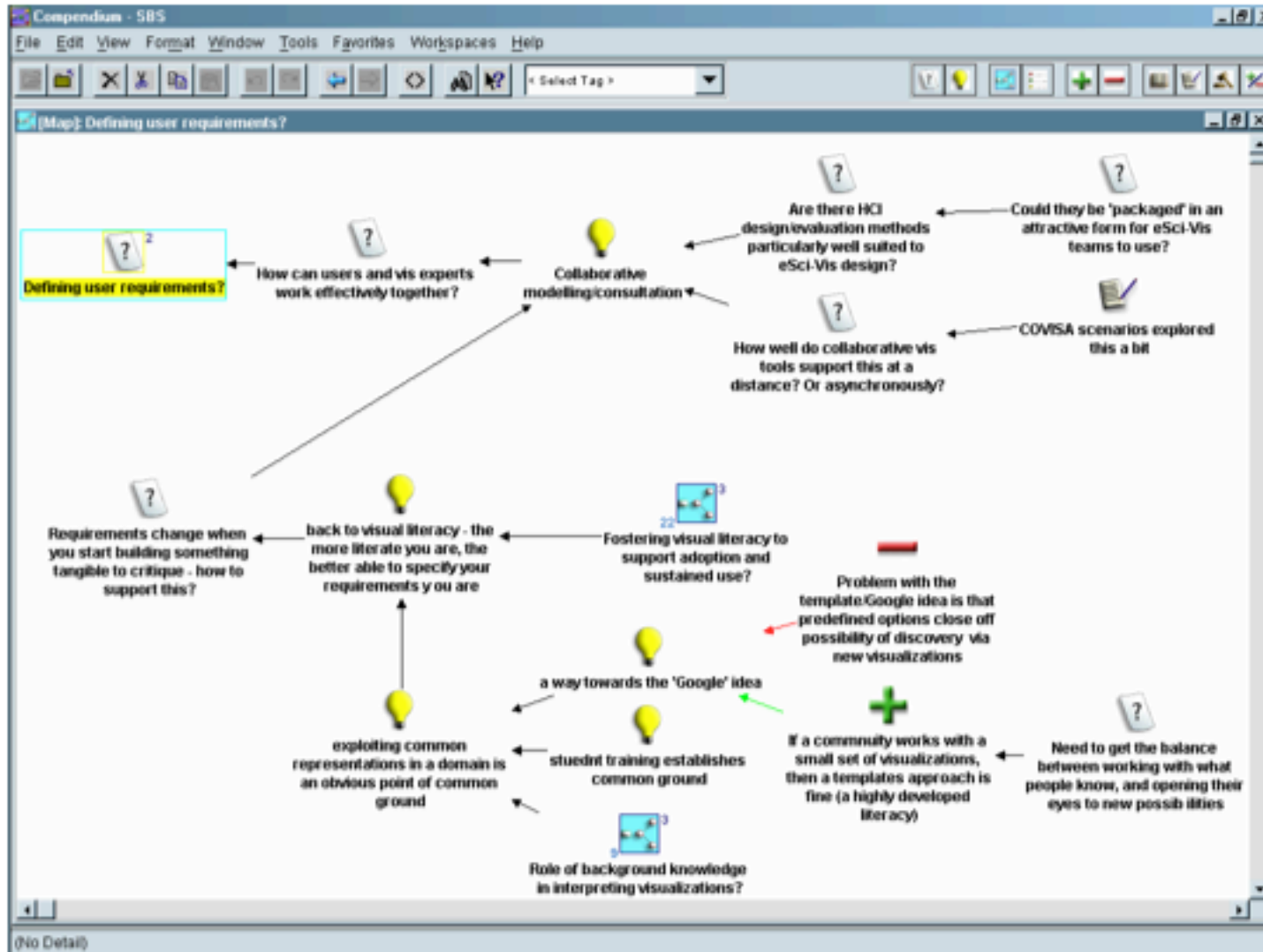
#### Print version

[All maps + outlines to print](#) (PDF)

# Mapping workshop discussions











## Defining user requirements?



# Mapping workshop discussions



-  Defining user requirements?
-  How can users and vis experts work effectively together?
-  Collaborative modelling/consultation
-  Are there HCI design/evaluation methods particularly well suited to eSci-Vis design?
-  Could they be 'packaged' in an attractive form for eSci-Vis teams to use?
-  How well do collaborative vis tools support this at a distance? Or asynchronously?
-  COVISA scenarios explored this a bit
-  Requirements change when you start building something tangible to critique - how to support this?

# Memetic: AG Meeting Replay

Access Grid meetings automatically indexed by slides, and Compendium nodes (agenda items, issues, decisions, arguments)



**Compendium: AKT**

File Edit View Format Tools Favorites Workspaces Window Help

[Map]: 2.0 Memetic interface mockup (Clara's email of 14 Dec)

Complexities with syncing to Compendium if agenda item IDs change

Ben: We will make entry of agenda items free text, separated by a blank line. When these are added the entry field clears, and items are numbered and shown on the right side. Clicking on an agenda item enables you to edit it.

How to make agenda items editable easily?

More usable initially

Can we parse blank lines to identify agenda items?

Good to have the record controls here

Clara: The video controls on Record page should be just Record and Stop, and on the Replay page should be just Play and Stop

Pressing Play will launch MR, filling the screen. It provides its own controls which the user will use

If user has Web Launched Compendium, or Compendium already running, then connect to the Jabber group for MR communication

What should happen with Compendium when you press play?

In Comp for convenience

memetic-mock-up-v4.ppt

Files(External\_Image\_113 4641355814.jpg)

Files(External\_Image\_113 4640815923.jpg)

back Title: [Memetic Meeting 2005-12-15 \(Imported\)](#)  
 Date: 15 Dec 2005, 09:37  
 Participants: Michelle Bachler, Simon Buckingham Shum, Ben Juby, Clara Mancini, Danius Michaelides, Andrew Rowley, Roger Slack ([sites](#))  
 Speaker: Ben Juby  
 Author Speaker ID  
 Agendum: 2.0 Memetic interface mockup (Clara's email of 14 Dec) [View Agenda](#)  
 Events: Selecting node [View Documents](#)  
 Nodes: ? How to make agenda items editable easily?

Agenda	Timeline
Compendium	[Timeline bar]
Michelle Bachler	[Timeline bar]
Simon Buckingham Shum	[Timeline bar]
Ben Juby	[Timeline bar]
Clara Mancini	[Timeline bar]
Danius Michaelides	[Timeline bar]
Andrew Rowley	[Timeline bar]
Roger Slack	[Timeline bar]

00h 36m 22s / 02h 06m 12s

Video:  Playing  Paused

GroupSync:  Offline  Online

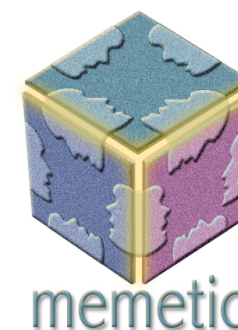
Mode:  Master  Slave

Receiving:  Yes  No

[sync node](#) [create node](#)

memetic [About](#) [Help](#)

JISC  
Virtual Research  
Environments  
Programme



www.memetic-vre.net





# Improving research discourse (4)

## Mapping PhD Supervision

Compendium: Derby \ Localhost \ Default \ FAQ

[Map]: Agenda for supervision meeting, 1/27/2006

How to validate the research?

Based on sample of well-accomplished practitioners

We can use this to predict the types of things we see in beginners vs more experienced users

Looking at practice outside Compendium

Put together a resource that I release on the web in order to elicit reaction from community of practice

Would validate the scheme and possibly confirming/adding to base

Would be nice to add to the resource of training, etc.

Would be a form of validation

How validate?

Web form

Tractabili

Skype - sbskml

File View Contacts Tools Call Help

Add Contact Search Conference Chat

Simon BUC... No new events

Contacts Dial

History Al Selvin

Call Duration 30:34

Selvin, A. and Buckingham Shum, S. (2005). **Hypermedia as a Productivity Tool for Doctoral Research**. *New Review of Hypermedia and Multimedia* (Special Issue on Scholarly Hypermedia), June'06

# KMi-NASA e-science collaboration tools



[www.kmi.open.ac.uk/projects/coacting/nasa](http://www.kmi.open.ac.uk/projects/coacting/nasa)

Collaborative  
ADVANCED KNOWLEDGE TECHNOLOGIES  
**CoACTing**  
in the Grid

## NASA Mobile Agents testbed: Evaluating CoACTing's e-Science Collaboration Tools

[www.kmi.open.ac.uk/projects/coacting/nasa](http://www.kmi.open.ac.uk/projects/coacting/nasa)

This website demonstrates the results of a 6 month collaboration between the EPSRC/e-Science-funded CoACTing project and the NASA Mobile Agents Project, culminating in a 2 week field trial in the Utah desert ("Mars").

Contact: Simon Buckingham Shum

A widescreen is recommended for best viewing, or alternately, this contents column can be narrowed by dragging the frame border, or open each link in a fresh browser window/tab.

### The Scenario

**e-Science scenario:** The NASA Mobile Agents Project is developing a sophisticated multi-agent infrastructure for human/robot planetary exploration. Part of the project was to investigate how this could support collaborative investigation between scientists distributed between planets, as well as around Earth. In a future multi-month, manned mission to Mars, there is no question that the few scientists in the Mars crew will need to work with their



NASA Mobile Agents Project



The Open University



University of Southampton





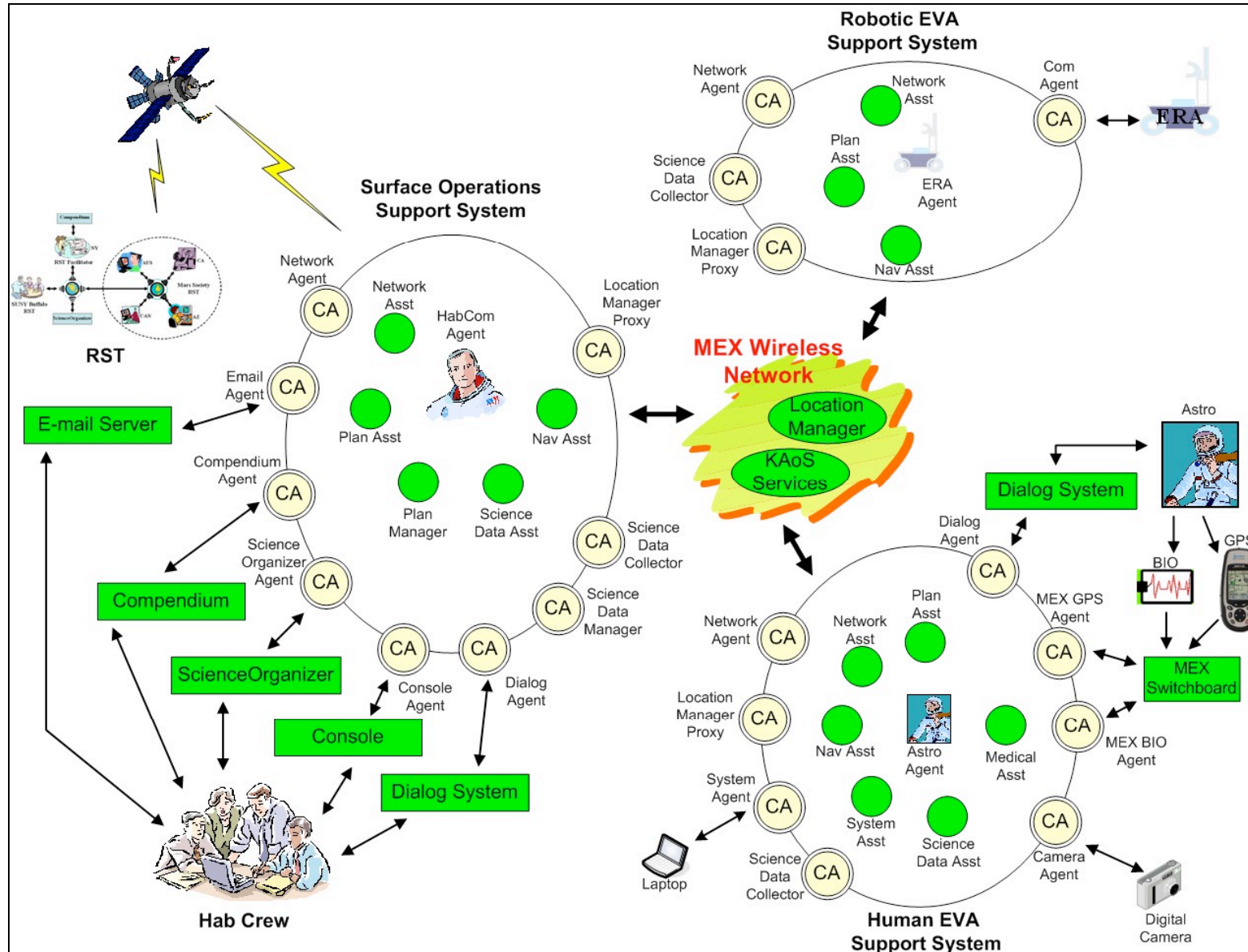
Image Credits--- Mars: NASA/JPL/MSSS; Earth: NASA/JSC; Composite: MSSS

# NASA e-science field trials (2004 and 2005)



**Distributed Mars-Earth planning and data analysis tools for Mars Habitat field trial in Utah desert, supported from US+UK**

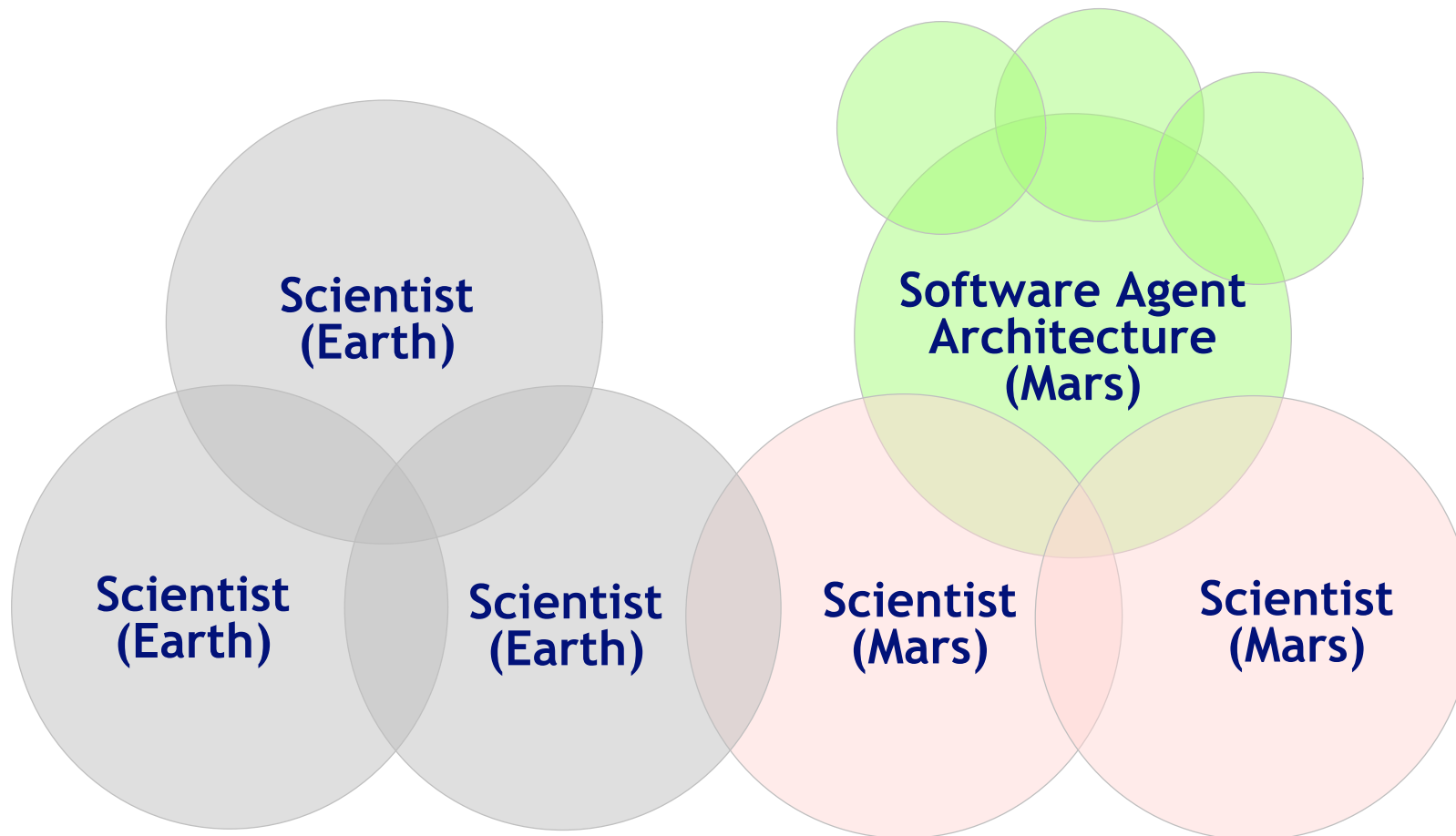
# NASA Mobile Agents Architecture



# Human-Agent research discourse



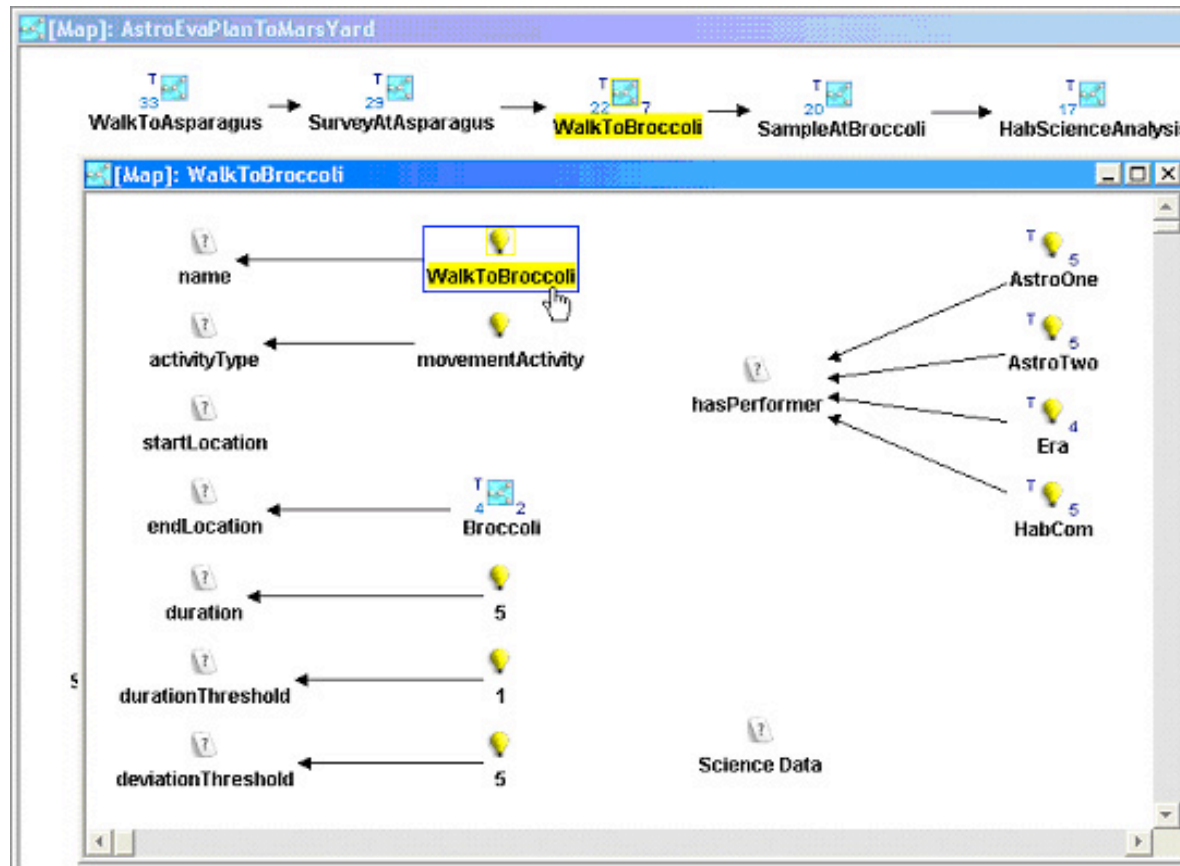
Compendium used as a collaboration medium at all intersections: *humans+agents, reading+writing maps*





# NASA testbed:

Compendium activity plans for surface exploration, constructed by *scientists on 'Earth'*, interpreted by *software agents on 'Mars'*



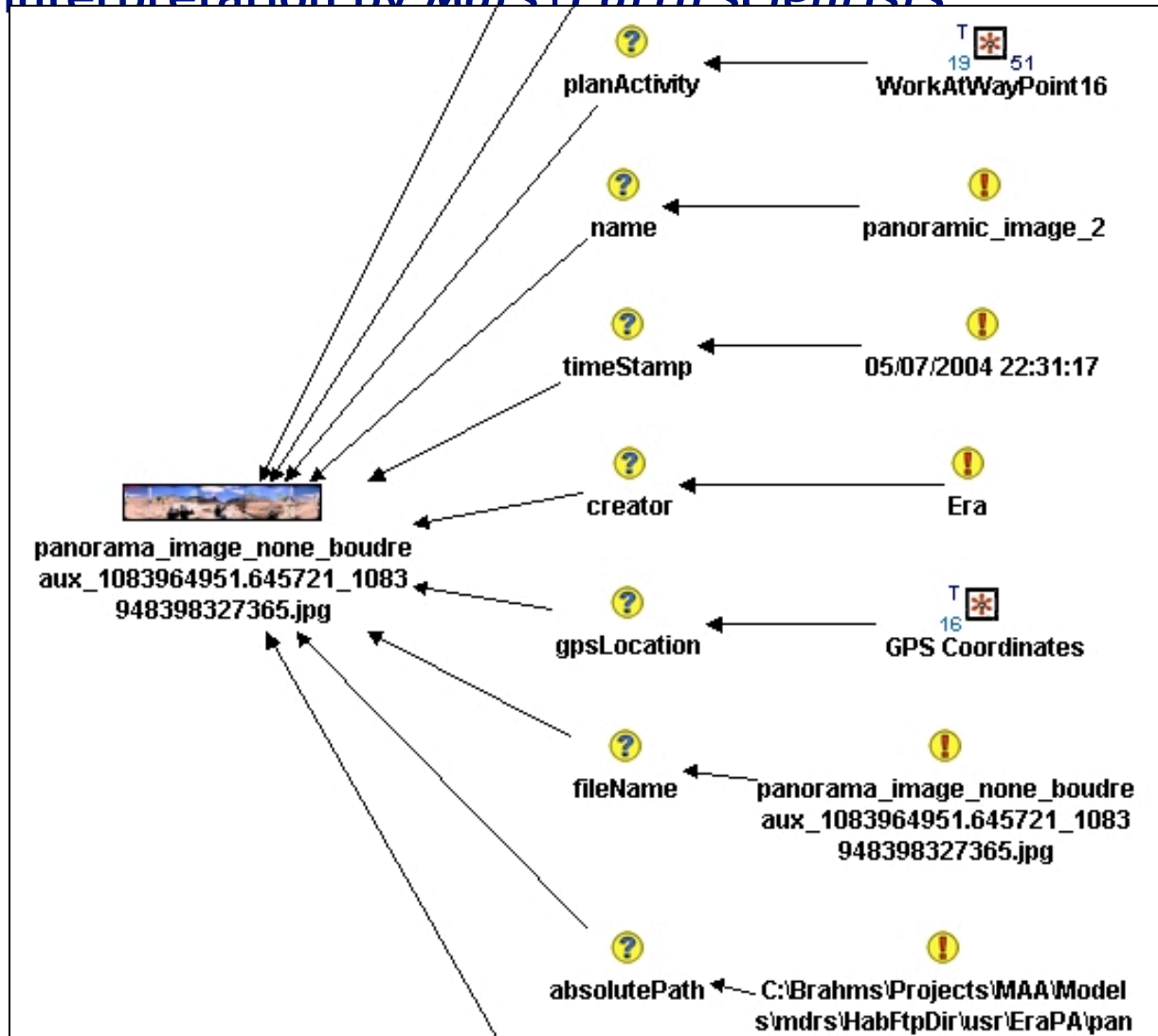
Copyright, 2004,  
RIACS/NASA Ames,  
Open University,  
Southampton  
University  
Not to be used  
without permission

The Compendium nodes and relationships in this plan were interpreted by Brahms software agents for monitoring and coordinating astronaut and robot activity during surface explorations.



# CoAKTinG NASA testbed:

Compendium science data map, generated by *software agents*, for interpretation by *Mars+Earth scientists*



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Open University,  
Southampton  
University  
Not to be used  
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The Compendium maps were autonomously created and populated with science data by Brahms software agents that use models of the mission plan, work process, data flow and science data relationships to create the maps.



# CoAKTinG NASA testbed: Compendium-based photo analysis by *geologists* on 'Mars'



**Compendium - NASA MDRS Crew29 FINAL**

File Edit Map Format Tools Favorites Workspaces Window Help

75% 1:1

**[Map]: Brent's Analysis**

(In Brent's map) Please verify that the Rock and Back Hill location names are correct, as Sci Org says they are Red and Rock

LOCATION: Rock Hill

LOCATION: Gap between Rock Hill and Back Hill

LOCATION: Back Hill

Mosaic of Rock Hill w/ Abby and Boudreaux for scale

dsc02581.jpg dsc02590.jpg dsc02589.jpg

voice\_note\_2004-3-29\_22-40-25.wav

dsc02596.jpg dsc02595.jpg dsc02592.jpg

Context photo of Sample RK/M1/01 (SEE TAG for more detail)

dsc02587.jpg

Summary of Field Work at Rock Hill

(In Abby's map) Which of these 4 samples came from the rock perspective photo in Brent's map?

OBSERVATION: Rock Hill looks to have two layers not three as observed in Panoramas

Did not get to sample the reddish hills off to the north (left side in photos)

dsc02585.jpg

Close up photo of sample RK/M1/01

NOTE ON SAMPLE BAG Naming:

voice\_note\_2004-3-29\_22-22-35.wav

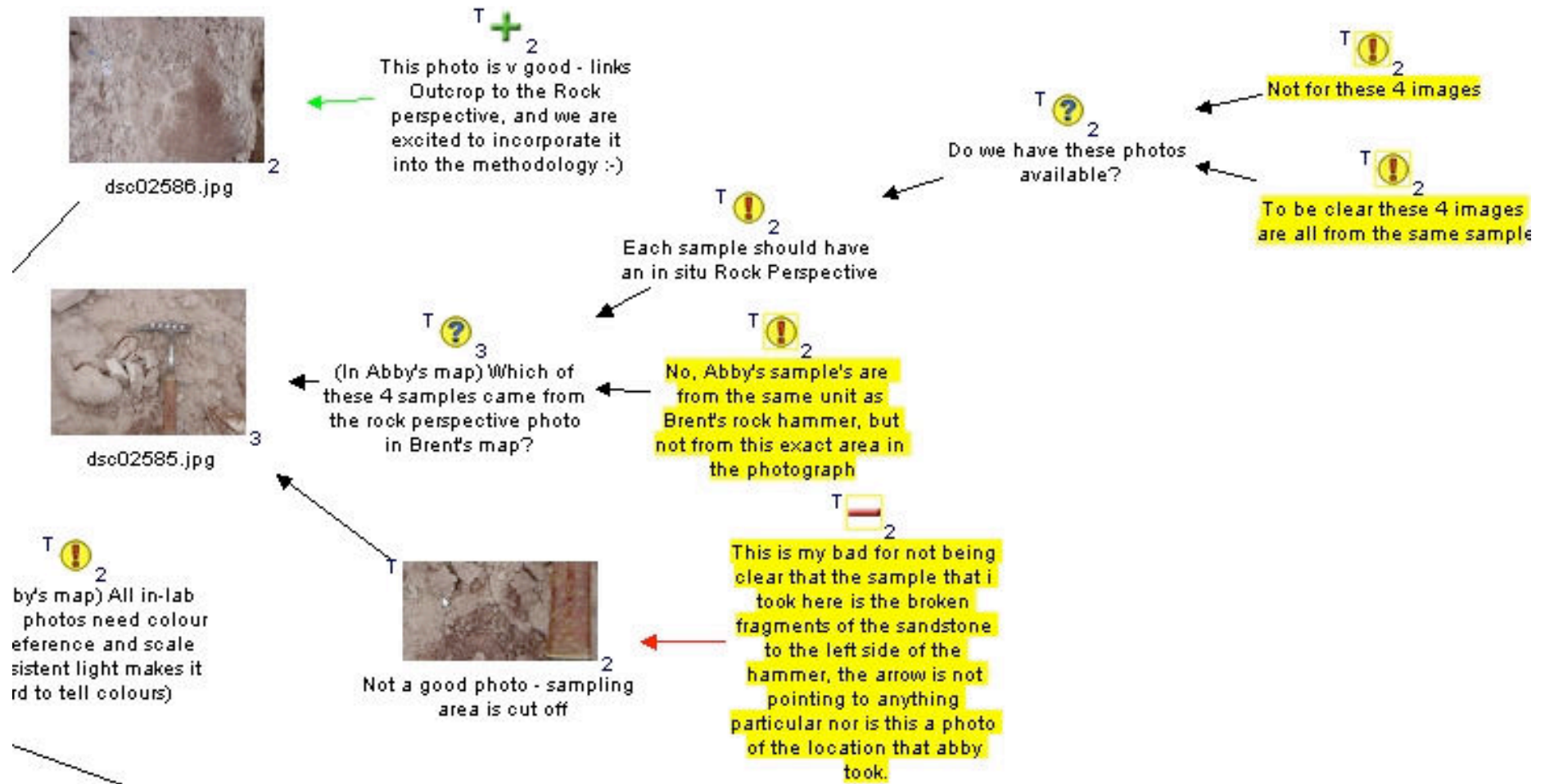
This photo is v good - links Outcrop to the Rock perspective, and we are excited to incorporate it into the methodology :-)

Not a good photo - sampling area is out off

This is my bad for not being clear that the sample that i took here is the broken fragments of the sandstone to

# NASA testbed:

## Compendium scientific feedback map *from Earth scientists to Mars colleagues*





# Collaborative sensemaking in e-Science:

Meeting Replay tool for *Earth scientists*, synchronising video of *Mars crew's* discussion as they annotate their mission plans

[Map]: Lith Canyon EVA Segment 1 Crew Planning Meeting 05/03/04

lithseg1wproute.jpg

Where should Boudreaux take Panoramas?

WayPoint0

WayPoint1

WayPoint2

WayPoint3

WayPoint4

Where should Boudreaux take Pictures?

Start Boudreaux Watch me when descending into the canyon starting at Fossil Hill

You can have Boudreaux take a picture of AstroOne at any time after that

Make sure that Boudreaux is in line of sight from AstroOne. Thus move it to

**Title:** Lith Canyon EVA Segment 1 Planning Meeting - 3rd May 2004  
**Date:** Tue May 4 00:37:00 2004  
**Participants:** [Maarten](#), [Brent](#), [Abigail](#), [John](#)

**Current Speaker:** Maarten  
**Nodes:** ⚠️ Make sure that Boudreaux is in line of sight from AstroOne. Thus move it to WP 2 and 3 at appropriate times

Agenda  
Compendium  
Abigail  
Brent  
John  
Maarten

Video **Playing** 00h 20m 09s **Pause**  
Group Sync **Offline**  Online  
Mode **Master**  Slave  
Receiving **Yes**  No

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Not to be used without permission



# Literatures as discourse networks: Don't try this in Google...

**Google** **Advanced Search** [Advanced Search Tips](#) | [About Google](#)

<b>Find results</b>	with <b>all</b> of the words	<input type="text" value="evidence refutes"/>	10 results ▾
	with the <b>exact phrase</b>	<input type="text" value="Alan Bundy"/>	
	with <b>at least one</b> of the words	<input type="text"/>	
	<b>without</b> the words	<input type="text"/>	

# Don't try this in Google...



Web Images News Maps<sup>New!</sup> Products Groups Scholar more »  
evidence refutes "Alan Bundy" Search [Advanced Search](#)  
[Preferences](#)  
Search: the web pages from the UK New! [View and manage your web history](#)

Web Results 1 - 10 of about 108 for [evidence refutes "Alan Bundy"](#). (0.43 seconds)

Did you mean: [evidence refuted "Alan Bundy"](#)

## [Professor Alan Bundy - School of Informatics, University of ...](#)

Abstract: All branches of science and engineering advance by the conjecturing of hypotheses and the accumulation of **evidence** to support (or **refute**) them. ...

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[Cached](#) - [Similar pages](#) - [Note this](#)

### [PS] [A Scientific Checkl](#)

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**Alan Bundy**. December 3,  
provided to support (or ref  
[homepages.inf.ed.ac.uk/b](#)  
[ [More results from homep](#)

## [Bundy](#)

... of hypotheses and the accum  
**Bundy** was educated as a Mathe  
[wit.tuwien.ac.at/events/bundy/ind](#)

## [fFORTE ausschreibungen](#)

**Alan Bundy** (University of Edinb  
and the accumulation of **evidenc**  
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### [PDF] [How to Get a PhD](#)

File Format: PDF/Adobe A  
**evidence** that is required t  
Mathematician, obtaining a  
[www.fforte.at/pdfgenerator](#)  
[ [More results from www.f](#)



Web Images News Maps<sup>New!</sup> Products Groups Scholar more »  
evidence supports "Alan Bundy" Search [Advanced Search](#)  
[Preferences](#)  
Search: the web pages from the UK New! [View and manage yo](#)

Web Results 1 - 10 of about 924 for [evidence supports "Alan Bundy"](#). (

## [Professor Alan Bundy - School of Informatics, University of ...](#)

**Professor Alan Bundy** - School of Informatics, University of Edinburgh. ... I provide **evidence** to **support** the following hypothesis: By complementing each ...

[homepages.inf.ed.ac.uk/bundy/seminars.html](#) - 5k - [Cached](#) - [Similar pages](#) - [Note this](#)

### [The Researcher's Bible](#)

**Alan Bundy**, Ben du Boulay, Jim Howe and Gordon Plotkin 1985 ... This methodology **supports** a variety of approaches to your research project. ...

[homepages.inf.ed.ac.uk/bundy/how-tos/resbible.html](#) - 45k -

[Cached](#) - [Similar pages](#) - [Note this](#)

[ [More results from homepages.inf.ed.ac.uk](#) ]

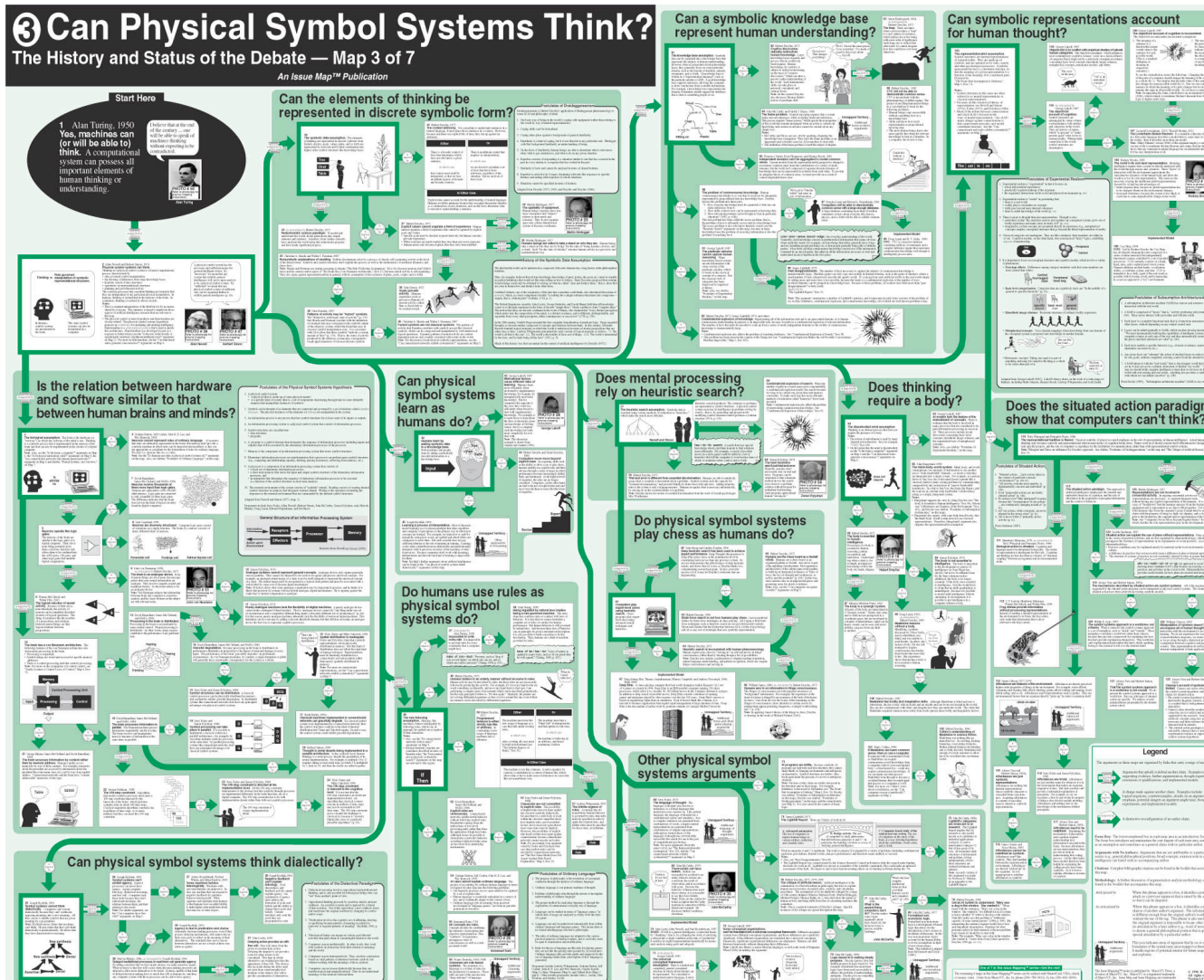
## [PDF] [Eleventh Knowledge Representation and Reasoning Distinguished ...](#)

File Format: PDF/Adobe Acrobat - [View as HTML](#)

30+ years, I provide **evidence** to **support** the hypothesis. that by complementing each other,  
... About the Speaker: **Alan Bundy** is a professor in the ...

[www.cs.york.ac.uk/seminars/07Spring/bundy.pdf](#) - [Similar pages](#) - [Note this](#)

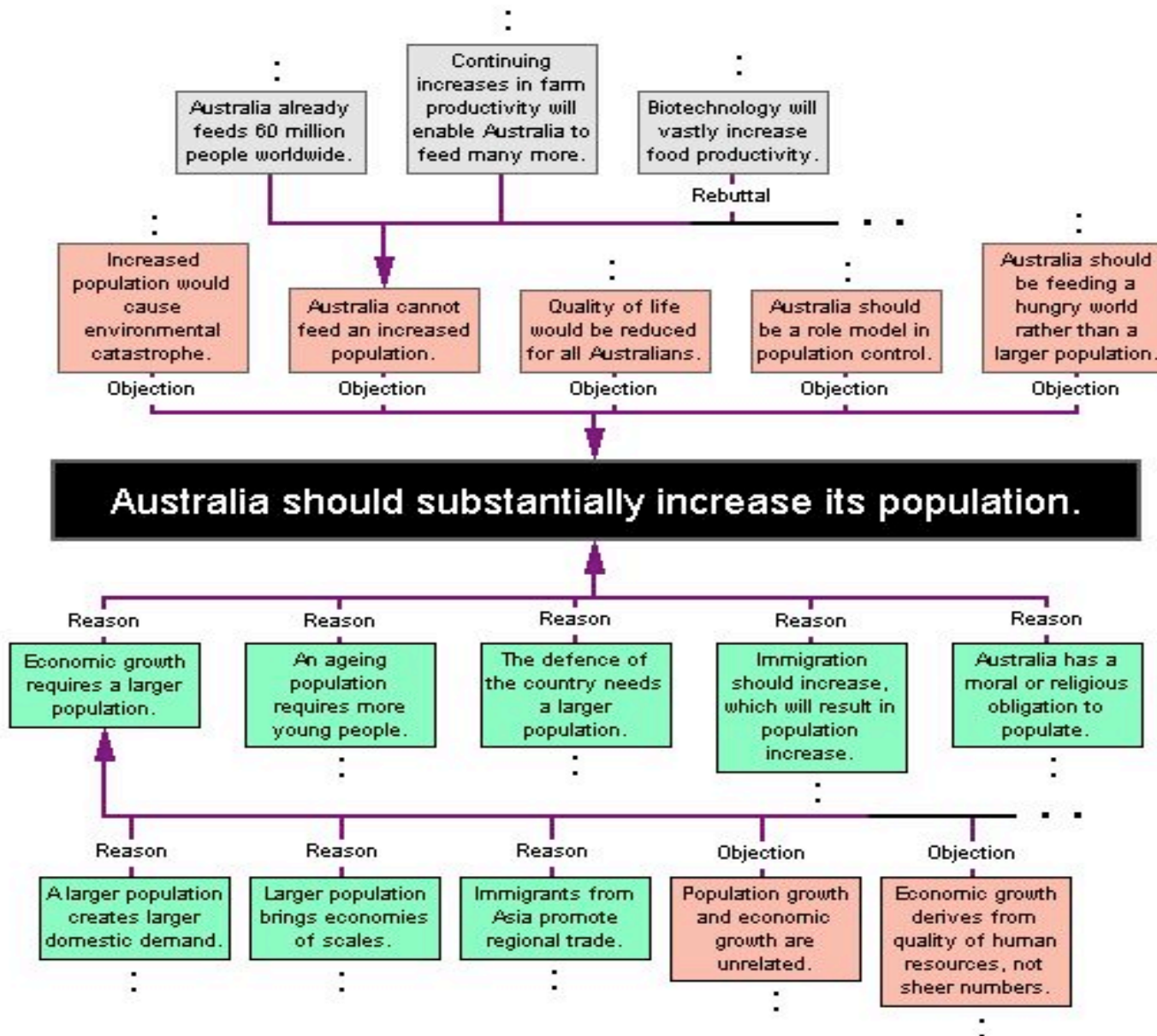
# What if we could get search results like this?...



One of seven maps in the *Mapping Great Debates: Can Computers Think?* Series. MacroVU Press. [www.macrovu.com](http://www.macrovu.com) (Horn, 2003; Yoshimi, 2006)



# Reason!Able argument mapping tool





# Rationale argument mapping tool



The US should adopt Op Plan Pericles I as a response to Syria shooting down a US airliner.

Pericles I would be a proportional response to the Syrians shooting down a US airliner.

The United States should adopt a proportional response to Syria shooting down a US airliner.

support

Pericles I would involve destroying 2 ammunition dumps, an abandoned railway bridge and a Syrian intelligence facility.

Destroying 2 ammunition dumps, an abandoned railway bridge and a Syrian intelligence facility would constitute a proportional response to the Syrians shooting down a US airliner.

support

Proportional responses what the United States has always done in such cases.

In any case, the US should adopt a response that is the same as it has always done.

Syria shooting down a US airliner is the same as any case.

support

The Syrians would know the United States will limit itself to a proportional response.

The United States should not adopt a response in which the Syrians know what it will do.

oppose

The US should respond by inflicting total disaster on Syria.

These areas have all been abandoned for three days.

Bombing abandoned sites does not constitute a proportional response to the shooting down of an airliner.

oppose

A proportional response is all there is.

support

Adopting a response in which the Syrians know what the US will do would be like just docking their allowance.

The United States needs to respond in such a way that it doesn't seem to be just docking somebody's damn allowance.

support

This would make the US president look like an irrational leader.

rebutts

The US should send a message that you are away with American.

Satellite images show that that all these areas have been abandoned for three days.

support

The Syrians will have factored in such response as the cost of doing business.

support

It would look like a staggering over-reaction by a first time CinC.

support

# Argument mapping



- 

17 75  
What is Global Argument.net?
- 

8 75  
Navigating these Argument Maps
- 

11 75  
One War, Many Theories  
Michael Cohen
- 

55 75  
Who are against the war?
- 

39 75  
Who are pro war?
- 

18 75  
What concepts can help us to understand the war?
- 

43 75  
How could the Iraq invasion be understood?

**Mapping the ideas, themes and arguments in a complex debate (Iraq)**

**An overview map of pro-invasion authors**

[www.kmi.open.ac.uk/projects/compendium/iraq](http://www.kmi.open.ac.uk/projects/compendium/iraq)

Prof.international affairs  
2003 Feb Walt [-]

Editor/commentator  
2003 Mar AliTank [-]

Politica philosopher  
2003 Aug Gray [-]

Moral philosopher  
2003 Sep Gaita [-]

Prof sociology  
2003 Nov Mann [-]

Academic/commentator  
2003 Dec Chomsky [-]

Historian/journalist  
2003 Manne [-]

Writer/commentator  
2003 Manne [-]

Iraq: The War Debate

The price of occupying Iraq

'Bush and Blair deceived about its impact on Iraq'

The war against Iraq was not a last resort

The Incoherent Empire

Iraq, War Profiteers...

Who are against the war?

What are the war's causes?

What ethical principles are at stake?

What are the war's effects?

See all the Reference Source

G2 Power [-]

le in the USA

Int.relations academic/editor  
2002 Sep Harries [-]

Academic/author  
2003 Feb Mearsheimer [-]

Prof political science  
2003 Feb Waltz K. [-]

Int.relat academic/commentator  
2004 Mar Fukuyama [-]

Former Aust foreign minister  
2004 Jul Evans [-]

Political philosopher  
2001 Elstain [-]

Prof.political science  
2003 Nov Walzer [-]

On Prudence and Restraint in Foreign Policy

Keeping Saddam in a Box

Deterrence and Rogues

Roundup: Historians' Take on the News

invasion of Iraq was

Just War and Human

Mapping the ideas, themes and arguments in a complex debate (Iraq)

An overview map of pro-invasion authors

Academic/author  
2002 Pollack [+]

Journalist/commentator  
2003 Feb Kristol [+]

Journalist  
2004 Jan Friedman [+]

Philosopher  
2004 Feb Scruton [+]

Journalist/commentator  
2004 Jun Krauthammer [+]

sect state  
2005 Jan Kagan [+]

The Threatening Storm The Case for Invading Iraq

Iraq: The War Debate

Liberal Hawks Reconsider the Iraq War

Kant and Iraq

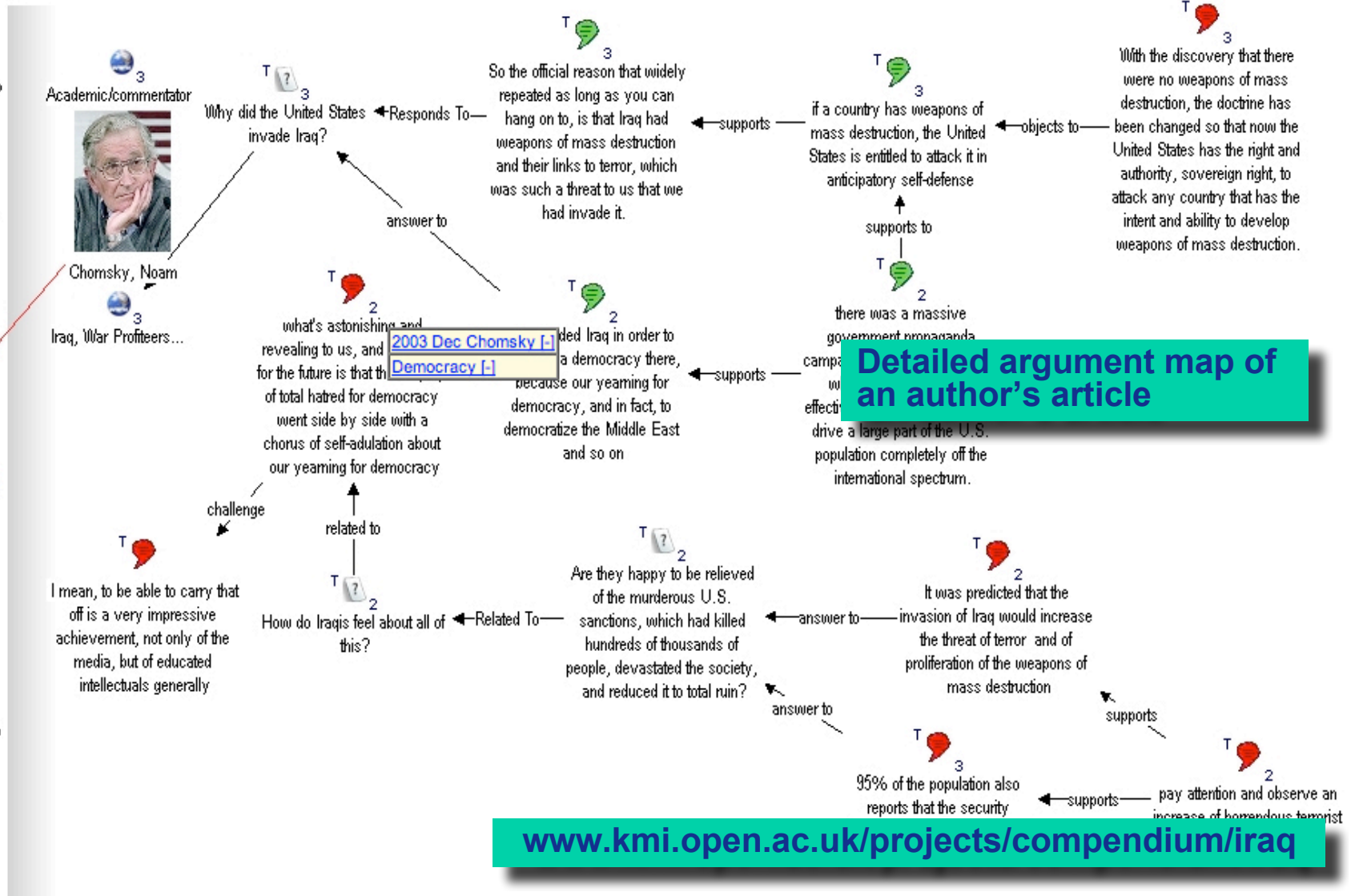
Iraq History Lesson

A Higher Realism

# Argument mapping



- 17 75  
What is Global Argument.net?
- 8 75  
Navigating these Argument Maps
- 11 75  
One War, Many Theories  
Michael Cohen
- 55 75  
Who are against the war?
- 39 75  
Who are pro war?
- 18 75  
What concepts can help us to understand the war?
- 43 75  
How could the Iraq invasion be understood?



# Voluntary metadata! People are now up for tagging pages with keywords in personal and social bookmarking



del.icio.us / popular / **politics**  
your bookmarks | your network | subscriptions | links for you | post

popular | recent

logged in as sbskmi | settings | logout | help

Popular items tagged politics → view yours, all

- Privately, Hollywood admits DRM isn't about piracy save this  
first posted by acedtect on 2007-01-15 ... saved by 104 people ( 19 recent)
- CJR January/February 2007 - Beckerman save this  
first posted by ninathedog on 2007-01-11 ... saved by 32 people ( 14 recent)
- YouTube - Why people belive Americans are Stupid! save this  
first posted by duruq on 2007-01-14 ... saved by 30 people ( 11 recent)
- Did we just declare war on Iran? - By Shmuel Rosner save this  
first posted by WinterPatriot on 2007-01-14 ... saved by 11 people ( 1 recent)
- Anti Bush Bumper Stickers, Decals, Buttons & Signs save this  
first posted by norm111 on 2004-08-31 ... saved by 32 people ( 9 recent)
- American Rhetoric save this  
first posted by feil0014 on 2005-03-29 ... saved by 40 people ( 8 recent)
- Independent Online Edition > Bearing Point finances a save this  
first posted by DaaITouLaam on 2007-01-14 ... saved by 9 people ( 7 recent)
- Transcript: Bush Interview, President Spoke to 60 Min save this  
first posted by alanosullivan on 2007-01-15 ... saved by 25 people ( 7 recent)
- When Britain and France nearly married save this  
first posted by webmink on 2007-01-15 ... saved by 12 people ( 7 recent)
- US set for climate change U-turn save this  
first posted by alanosullivan on 2007-01-14 ... saved by 14 people ( 6 recent)

flickr

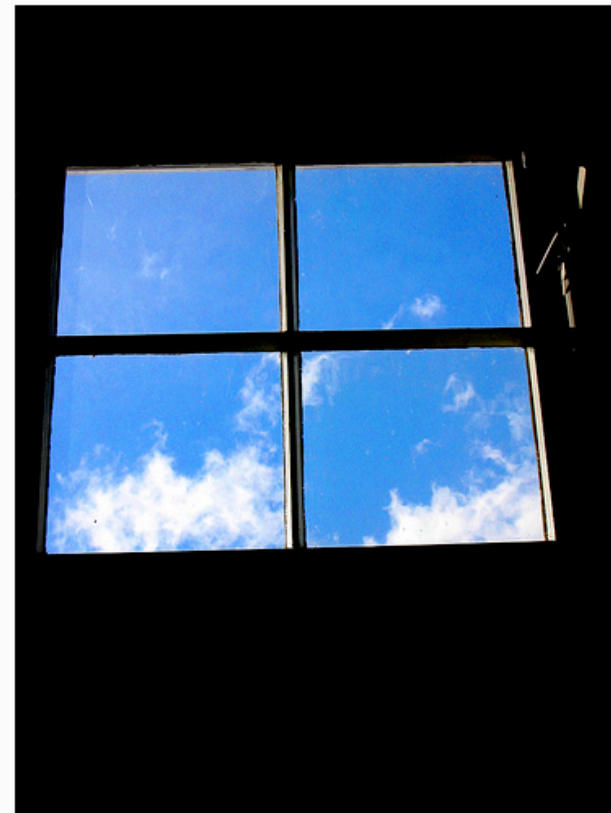
Home You Organize Contacts Groups Explore

Signed in as wildpeace Help Sign C

Search everyone's photos Search

## blue window

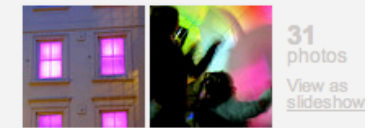
ADD TO FAVES BLOG THIS ALL SIZES



Uploaded on May 23, 2006 by asboluv

asboluv's photostream

photos of interest (Set)



This photo also belongs to:

- mood and emotion (Set)
- windows/doors/doorways (Set)
- Doors & Windows Project (Pool)
- Just Windows! (Pool)
- The FLICKYS... COLORS OF FALL !!! (Pool)
- Shadows & Light (Pool)

Tags

- window
- blue
- sky
- blue sky

# Academic social bookmarking: Connotea



The screenshot shows the Connotea website in a browser window. The browser's address bar displays 'http://www.connotea.org/cloud'. The page features a search bar with the text 'Search All' and a 'Find results' button. Below the search bar is the Connotea logo and the tagline 'Organize. Share. Discover.'. To the right of the logo are buttons for 'Sign up' and 'Log in'. A navigation menu includes links for 'Home', 'Latest News', 'About Connotea', 'Site Guide', and 'Community pages'. The main content area displays a word cloud of various tags, with 'library' being the most prominent. At the bottom, there are five columns of links: 'Explore', 'Beginner's guide', 'Account details', 'Help', and 'Advanced'. The footer contains the copyright notice '© 2005-2007 Nature Publishing Group' and a link to 'Subscribe to Nature'.

Connotea: cloud

http://www.connotea.org/cloud

Search All Find results

**Connotea** Organize. Share. Discover.

Sign up Log in

Home Latest News About Connotea Site Guide Community pages

2.0 adhesion air and **ants article** Audio Autopsy bag Bioinformatics blog book bridal **Business cancer car** carolina center cheap **Child children** chondrogenesis college company create Development **digital** Drug education **evolution expression focus** folksonomy Franchise **Free genetics** gift gifts **guide hair health HIV** Homes horse houses housing hyaluronan infertility info **insurance internet** isolation keyboard laser **learn lesson library** machine malpractice Mattress medical memory method money mp3 MSC **music** neprectene notes **online open access** osteogenesis photo piano picture **programming property removal REPLACEMENT review** shopping social bookmarking social software **Software sports stock stress success Supply systems biology tagging taxonomy** thermodynamics tools trading **treatment tutorial** washington **web women**

<b>Explore</b> Home Recent Activity Popular Links Popular Tags	<b>Beginner's guide</b> About Connotea How It Works Getting Started Introductory Videos	<b>Account details</b> My Account Advanced Settings My Library My Community Profile	<b>Help</b> Site Guide FAQs Mailing Lists Contact Us	<b>Advanced</b> Browser Buttons Connotea Code Connotea Web API Community Pages
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# Academic social bookmarking: Connotea



The screenshot shows the Connotea website interface. At the top, there is a search bar with a magnifying glass icon, a dropdown menu for "My library", and a "Find results" button. Below this is the Connotea logo and the tagline "Organize. Share. Discover." To the right, a user is logged in as "joanna" with options for "My library" and "Log out". A navigation menu includes "Home", "Latest News", "About Connotea", "Site Guide", and "Community pages".

The main content area is divided into several sections:

- joanna's groups:** Lists "NPG Web Publishing (created by time)" and "Origin of Mammals (edit)".
- joanna's tags:** Includes a "By Usage" and "A - Z" filter. The list of tags includes "Conservation", "tigers", "evolution", "animal behaviour", "animal behav", "elephants", "dolphins", and "zoos".
- joanna's bookmarks:** Features an "EXPORT LIST" button, an "RSS" button, and a "?". It includes a link to "Go to my Community Pages Profile" and a "Number of bookmarks per page" selector with options "10", "25", "50", and "100". Below this, a bookmark titled "Conservation biology: The tiger's retreat" is shown, with details: "Erika Check", "Nature 441 (7096), 927-30 (22 Jun 2006)", "doi:10.1038/441927a", and "Posted by joanna and 1 other to tigers Conservation on Wed Aug 02 2006 at 10:43 UTC | info".
- Toolbox:** Contains links for "Add a bookmark", "Create a new group", "Create a tag note", "Rename a tag", "Import from local file", "Export my library", and "Report a problem".
- Related users:** A section for related users, currently empty.

A callout box with a white background and a grey border is overlaid on the "animal behaviour" tag, containing the text: "If you click on a tag, you will see a list of all the articles you have saved under that tag."

# What would it mean to add “tags” to web links?

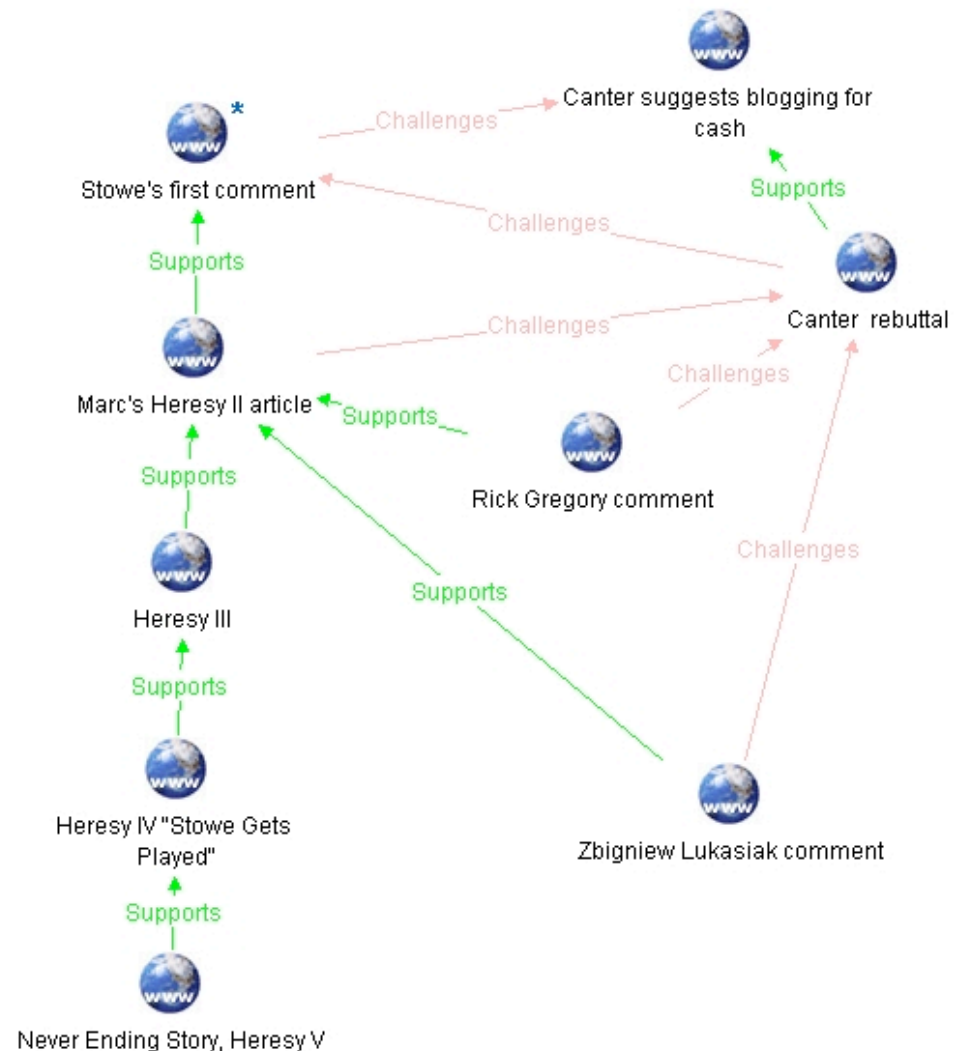
*semantic trackbacks between blogs*

## More Duelling Blogs (w clickable image)

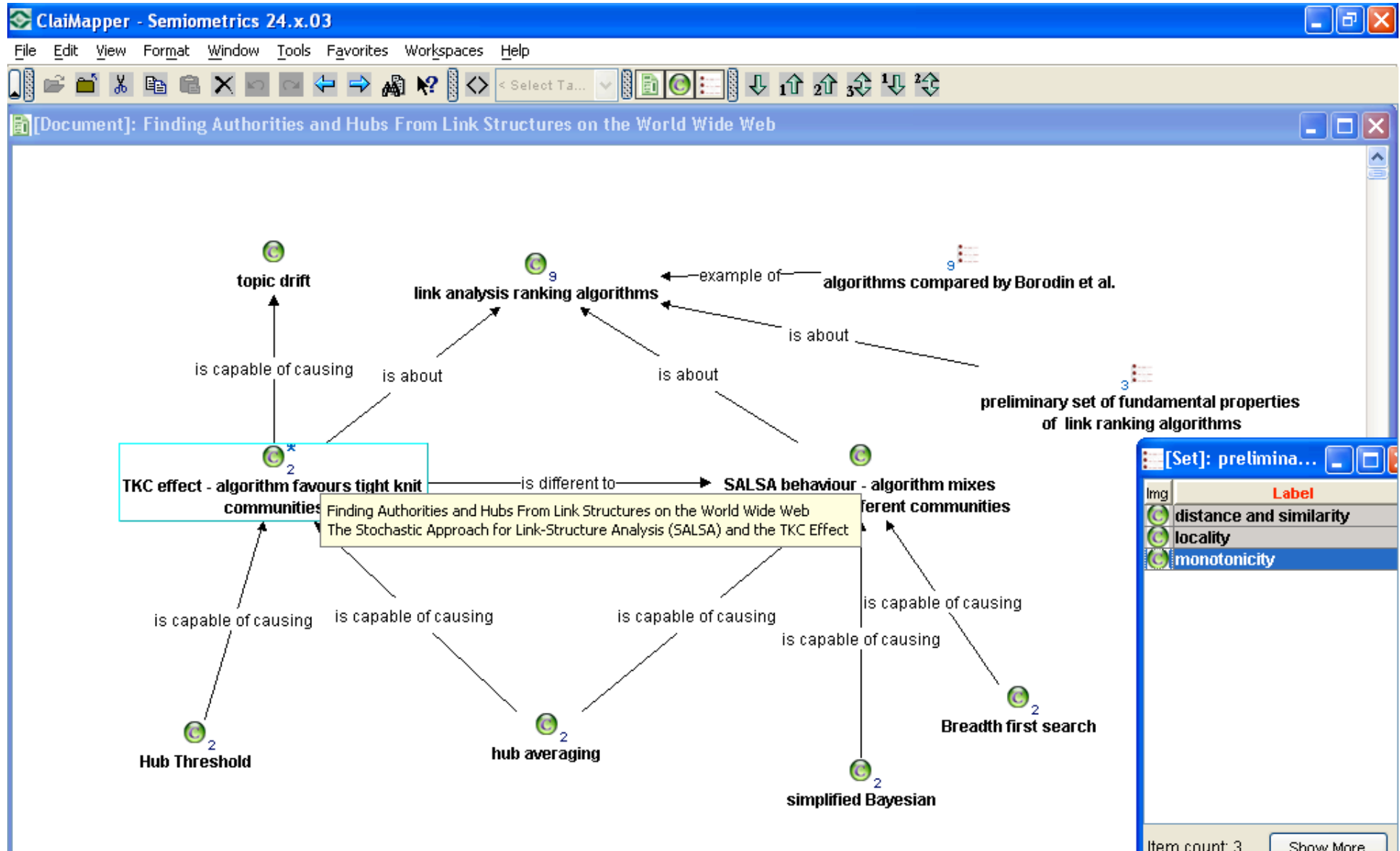
Posted by Marc on Tuesday, November 9th, 2004 at 7:48 pm

**UPDATE 9-Nov-04 @ 21:43 GMT:** originally forgot to include the clickable nodes that Compendium generates... so now the nodes in the image below are properly clickable, and take to the original blog entries.

The painfulness of both the manual and diagrammatic representations of the 'duelling blog thread' I referred to in the [previous post](#) prompted to have another go at doing it more cleanly. I downloaded [Compendium](#) (which requires a prior [MySQL](#) download to support the database) and quickly whipped the following, all of which include dragged-and-dropped nodes directly from the websites/blogs/comments in question, and all of which are clickable to launch those aforementioned sites... cool, huh?



# And what would it mean to join up not just URLs, but their *tags*? (KMi's ClaiMapper/ClaimFinder)





# “Semantic del.icio.us”: assigning *and* linking freeform tags



ClaimSpotter 0.4.5 | Annotate

http://127.0.0.1/claimspotter/0.4.5/index.php?user=1&document=1#section-H-1

Login History Add a document Standard Alternate .dot Export Help About

More Ideas Concepts: All Relations: [ ] Argument Zones: [ ] Importance: >5 Term(s): trust find clear Reset

Document

TABLE OF CONTENTS:

- Abstract
- Introduction
- Information Analysis in TRELLIS
- Source
- Attribution and Description
- Deriving an Assessment about a Source
- Helping Users Select Sources
- Related Work
- Conclusions
- References

**INTRODUCTION**

The **Semantic Web** can be described as a substrate to support advanced functions for collaboration (human-human, computer-human, computer-computer), sharing of Web **resources**, and **reasoning** about their content [3]. The markup languages that are being proposed for the **Semantic Web** will be the basis to develop reasoners, proof checking and derivation tools, and many other functions such as Web services.

The **Semantic Web** will also be the basis for the Web of Trust, which will provide mechanisms to handle authentication, permission, and validation of attribution in a Web where, by design, anyone can contribute content, links, and services.

A lot of current emphasis on the Web of Trust is in accessing **resources**, specifically authentication and permission issues. Digital signatures and public keys support authentication. Proofs are another important technology in the Web of Trust, since permission schemes are often described with rules and statements (e.g., anyone working for company C should be allowed to **access** D) and will need to rely on proofs that can reason about the rules and conclude whether **access** should be granted. An important issue with respect to both authentication and permission is checking that a document can be attributed to the source specified. For example, if Joe Doe writes an article and publishes it claiming Henry Kissinger as the author, it should be possible to check the truth about the document's authorship.

Show: Notes: [ ] Concepts: [x] Claims: [x]

concepts

My | Add | Remove all

Type	Label	Copy in...
remove n/a	Trellis	[X] [X]
remove n/a	ix of formal and human language	[X] [X]
remove n/a	Representing trust	[X] [X]
remove n/a	Semantic Web	[X] [X]
remove n/a	measures of trust in the content	[X] [X]
remove n/a	Trusting different information sou	[X] [X]

claims

My | Add | Remove all

Source	Relation	Destination
Trellis	is about	Trusting different information
n/a		n/a
Concept		Concept
some evidence	is evidence against	[claimNumber29]
n/a		n/a
Concept		Link

Submit Reset

Sereno, B., Buckingham Shum, S. and Motta, E. (2007). Formalization, User Strategy and Interaction Design: Users' Behaviour with Discourse Tagging Semantics. Workshop on Social and Collaborative Construction of Structured Knowledge, 16th Int. World Wide Web Conference (WWW 2007), Banff, 8-12 May 2007. [http://www2007.org/workshops/paper\\_30.pdf](http://www2007.org/workshops/paper_30.pdf)



# “Semantic Google Scholar” KMi’s ClaimFinder



**find** **discover** **advanced** **claiMaker**

---

machine learning

Perspective In  contrast  agree

---

Neural network text categorizer Depth

---

machine learning Depth







---













[About](#) - [ClaiMaker](#) - [Problems](#) - [Help](#)











# “What papers contrast with this paper?”



1. Extract concepts for this document
2. Trace concepts on which they build
3. Trace concepts challenging this set
4. Show root documents

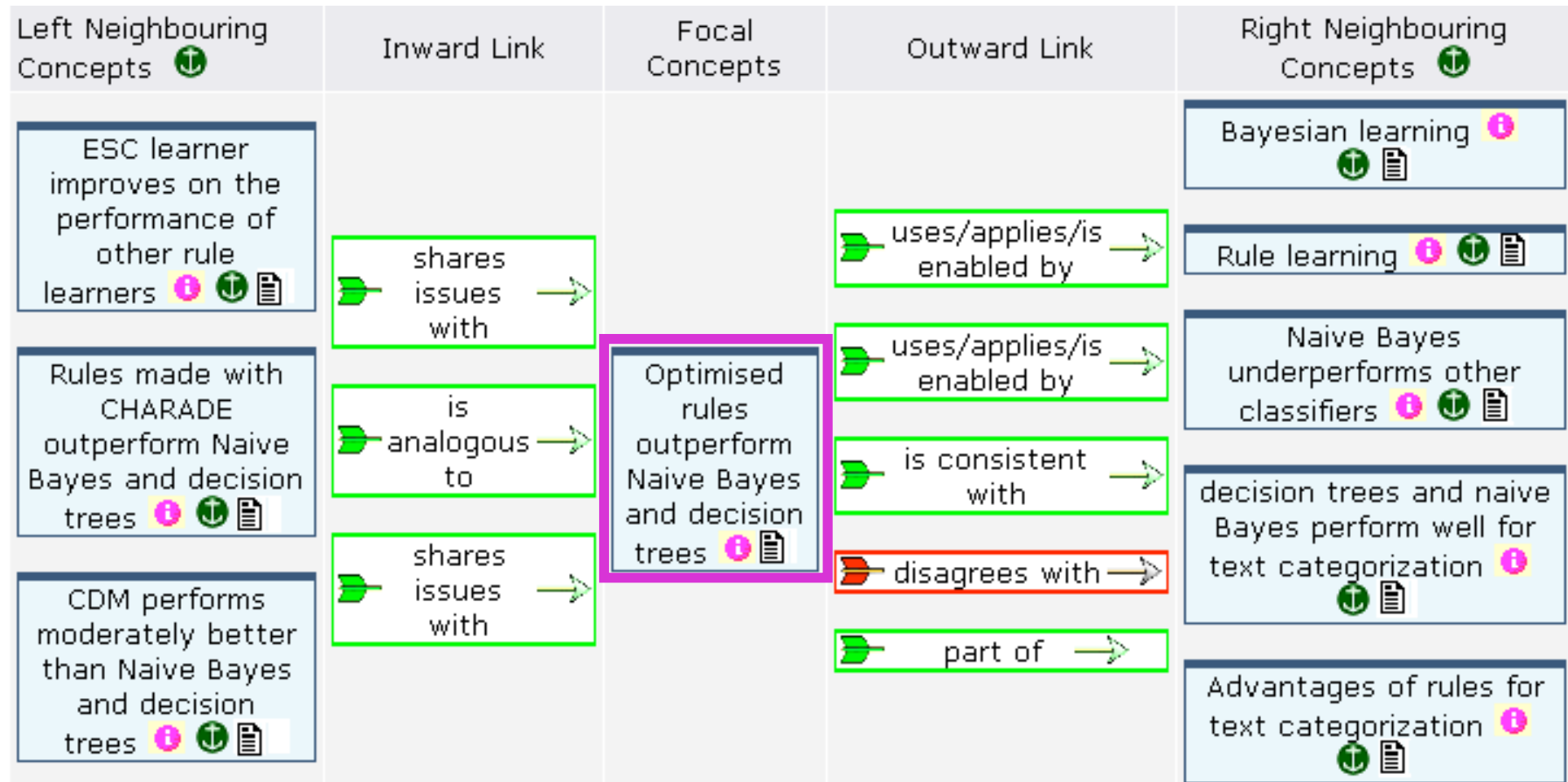
The key issues you are concerned with:	
445	Decision Forest classifier   
446	Decision Forest classifier improves on C4.5 and kNN   

The related issues you may be concerned with:	
446	Decision Forest classifier improves on C4.5 and kNN   
515	Instance based learning   
511	Decision tree learning   
277	decision trees and naive Bayes perform well for text categorization   

The following claims disagree ...				
1	Optimised rules outperform Naive Bayes and decision trees   	 disagrees with 	decision trees and naive Bayes perform well for text categorization   	 3621  2



# Focusing on a concept incoming+outgoing links



# “Semantic Google Scholar” KMi’s ClaimFinder



**find** **discover** **advanced** **claiMaker**

---

machine learning

Perspective In  contrast  agree

---

Neural network text categorizer Depth 10

---

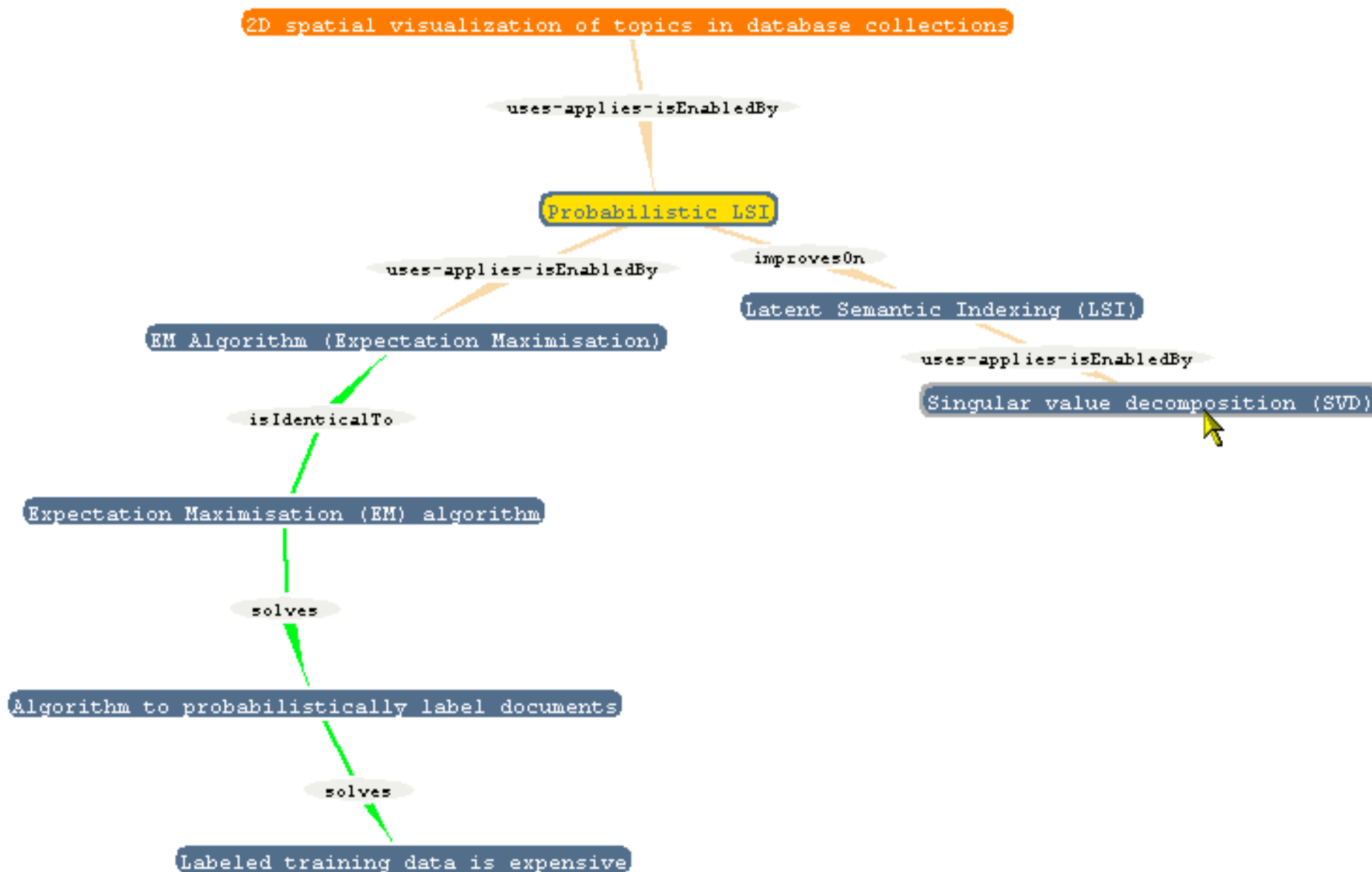
machine learning Depth 10

---

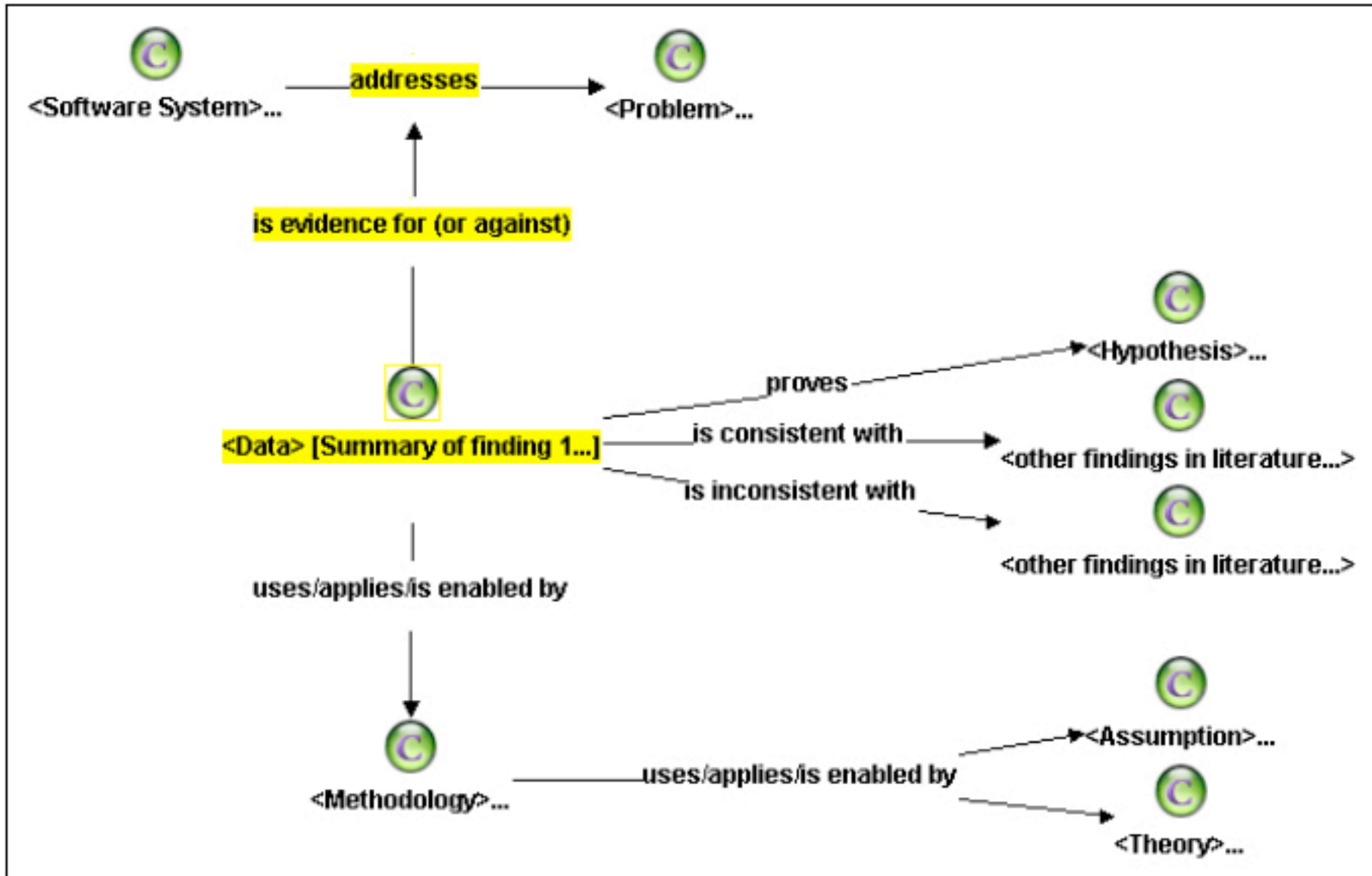
[About](#) - [ClaiMaker](#) - [Problems](#) - [Help](#)



# Lineage tree (the roots of a concept)

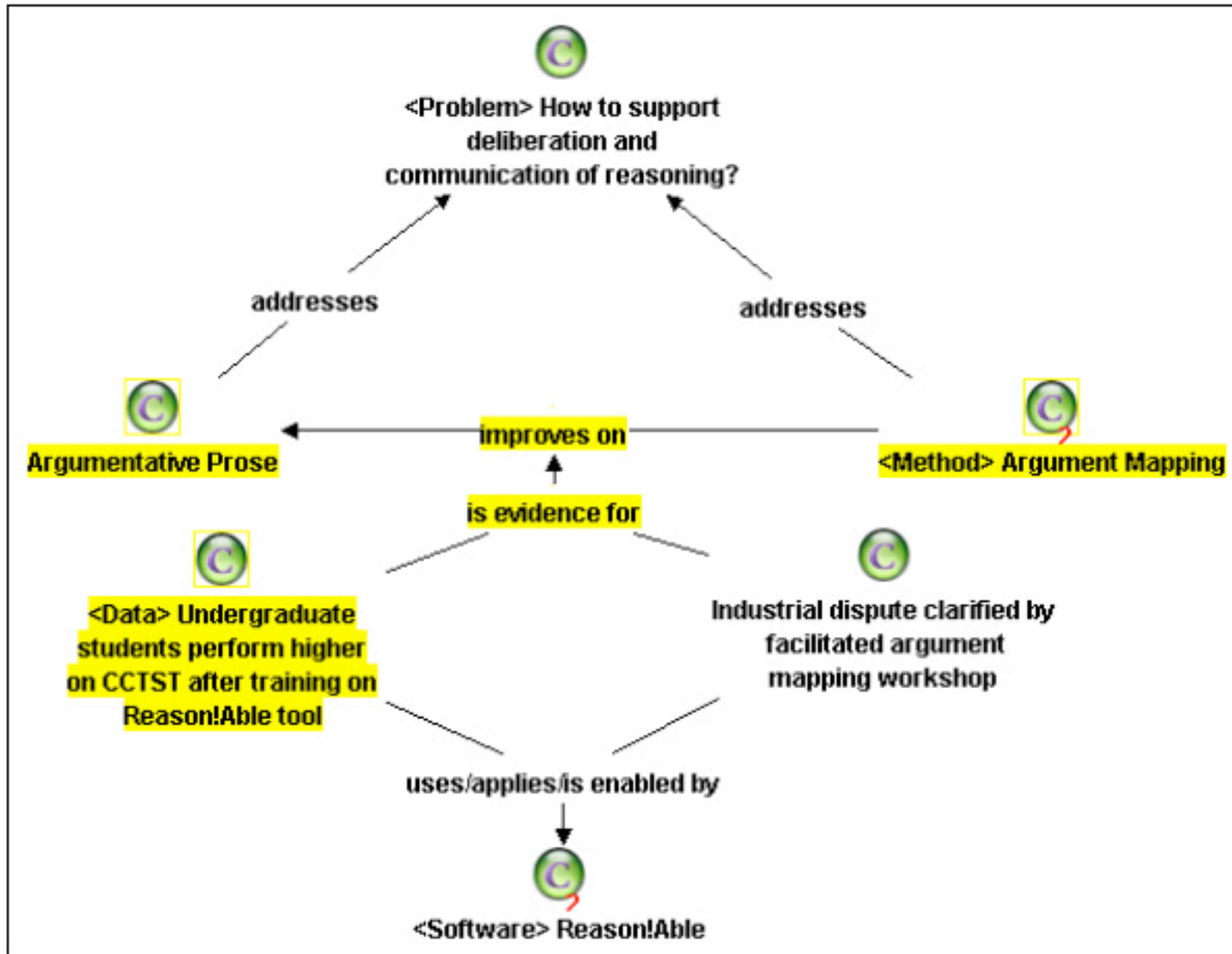


# Template for an HCI evaluation paper

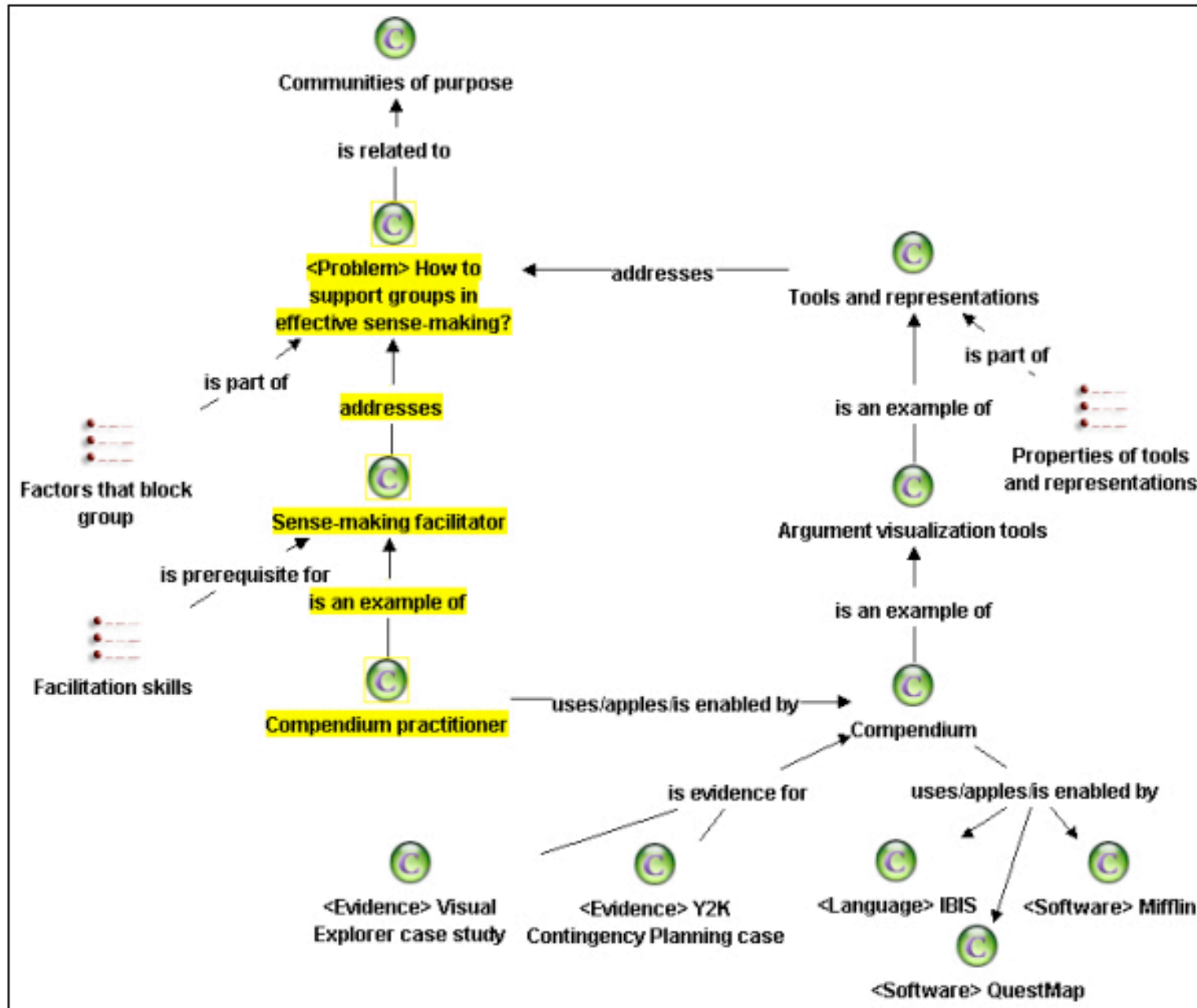




# Essence of a paper (1)



# Essence of a paper (2)



# Scholarly hypertexts



**Serious writing is linear,  
right?  
*Especially*  
argumentation.**

# Hypertextual scholarly argumentation



## **3 REGIONS AND SELF-REPRESENTATIONS**

To manage emphasis and attention in extended thought, then, hypertext needs what music has: different kinds of unities on many levels that interact with each other in complex ways. The single node should not stand alone, nor should a single level of linking. There should be larger structures and discursive moves as well as ways to become aware of them and their relations and links. We are familiar with discursive moves such as making an assertion, giving backing, offering alternatives, contesting a question, expanding a topic. Less familiar are moves might be undermining a duality, raising questions about criteria, ironic parody, showing internal tensions within a set of concepts, and the like. Are there new moves possible in hypertext that might take advantage of more expansive and self-reflective linking?<sup>1</sup>

# Hypertextual scholarly argumentation



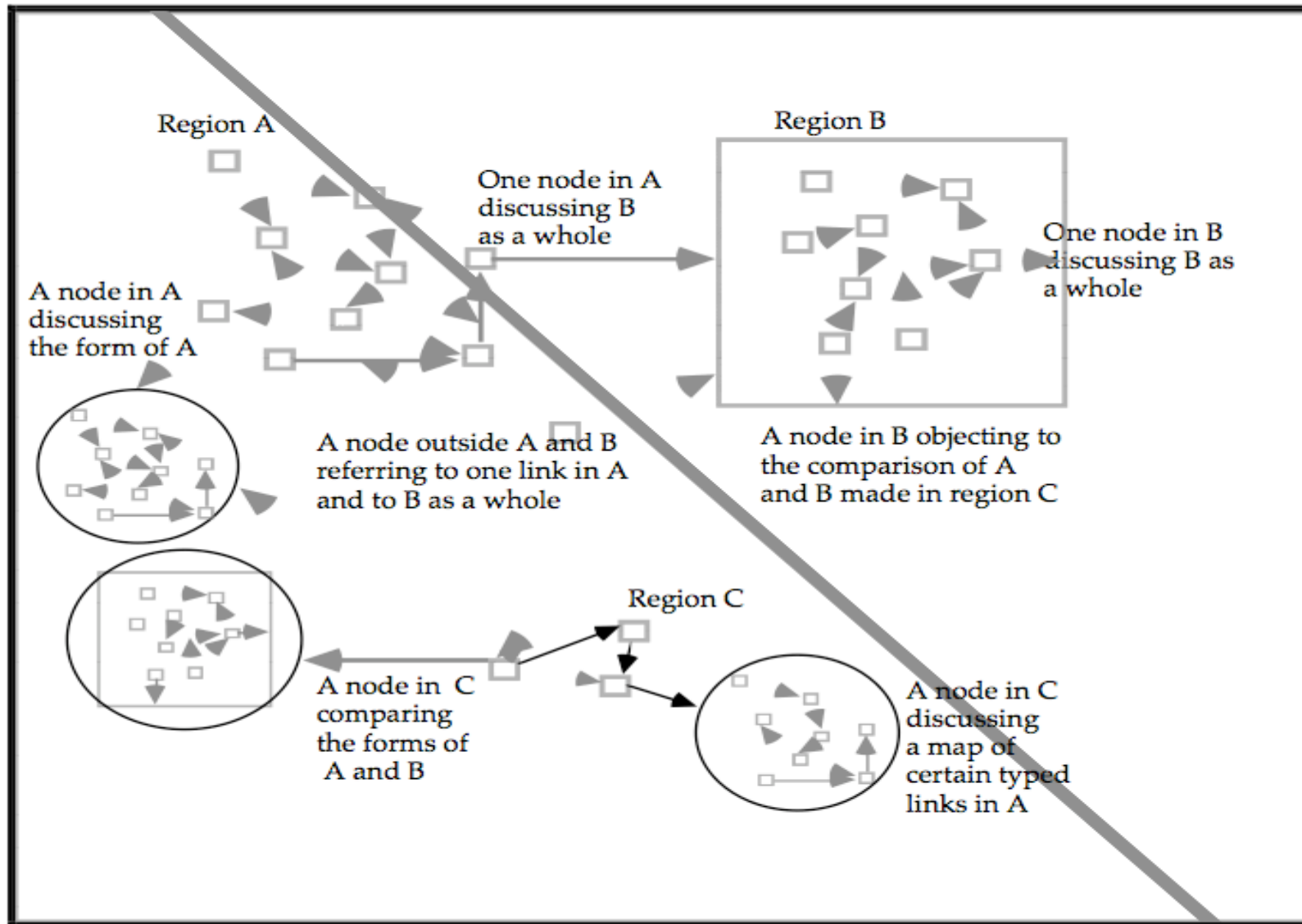
## 3 REGIONS AND SELF-REPRESENTATIONS

To manage emphasis and attention in extended thought, then, hypertext needs what music has: different kinds of unities on many levels that interact with each other in complex ways. The single node should not stand alone, nor should a single level of linking. There should be larger structures and discursive moves as well as ways to become aware of them and their relations and links. We are familiar with discursive moves such as making an assertion, giving backing, offering

alternatives, contesting, and so on. Familiar are moves that raise questions about contradictions within a set of moves possible in a more expansive and

A complex discursive move could be made by a locality composed of many nodes. There could be a region that is an explorable landscape whose links and transitions are meaningful in themselves but also contribute to the regional effect. Such units of meaning could have complex internal structures and external relationships. There could also be partial localities. Or a region might itself be a node in some larger move or gesture. As in nature, units of meaning would occur on many scales.

# Hypertextual scholarly argumentation



Kolb, D. Scholarly Hypertext: Self-Represented Complexity. In Proceedings of The Eighth ACM Conference on Hypertext, Southampton, 1997, pp. 29-37 <http://citeseer.ist.psu.edu/kolb97scholarly.html>

# Scholarly hypertexts



Hypertext 2004 – Hypertexts Call for Participation


http://www.ht04.org/cfpHypertext.php

Google Maps post to del.icio.us my del.icio.us Freebase BBC+OL OCI demos Pragmatic Web LabSpace HyperDisc SBSminis

## Hypertext 2004

### Fifteenth ACM Conference on Hypertext and Hypermedia

University of California, Santa Cruz, August 9-13, 2004



#### Attending the conference

- Conference Registration
- Fees
- Housing
- Getting There
- US Visas

#### Program

- Papers and Hypertexts
- Schedule
- Keynotes

#### Workshops

- Scholarly Hypertext
- Spatial Hypertext
- Web Engineering

#### Tutorials

- Overview
- Adaptive Hypermedia
- Mozilla
- Development
- Blogging
- Web Hypermedia Technologies
- Introduction to the Semantic Web
- Developing for the Semantic Web
- Standards-Oriented Design

## Hypertexts

*This is the 15th ACM conference on hypertext and hypermedia, but no-one has published a research hypertext at the conference.*

In a bold experiment, for the first time we are calling for hypertext submissions of research results. Part of the conference's mission is to create an incubator which fosters and reflects on non-linear writing, and this new step will tackle directly a key intellectual question for our field: how do non-traditional, hypertext structurings of scholarly materials enhance the scientific communication process? As the hypertext community, we are uniquely poised to analyze this question.

**In short, we invite you to submit your hypertext research as hypertext.**

As this is a new initiative, we've provided a brief introduction, notes on review criteria, and submission guidelines. In the resources section you'll find some hypertext design ideas, example hypertexts, hypertext tools and research papers published on scholarly hypertext and hypertext argumentation.

## Introduction: Research Hypertexts

Research Hypertexts — also called scholarly hypertexts — are distinct from other literary genres such as poetry and fiction which have produced more widespread hypertext examples. As a researcher, you want on the one hand to offer readers the benefits of hypertext (e.g. choosing their own paths and seeing different kinds of structures), while on the other hand wanting enough control over the reader's experience to ensure that your reasoning and arguments are experienced in a coherent manner, and have maximum persuasive impact. It is this tension which makes Research Hypertexts such an interesting challenge.

## Review criteria

#### Important Dates

Hypertext submissions:  
**Past Deadline**  
(March 12, 2004)

#### Contact:

Simon Buckingham Shum  
[sbs@acm.org](mailto:sbs@acm.org)



# Scholarly hypertexts

## Review criteria

Hypertext submissions raise interesting new issues when it comes to peer review:

- **Quality of the contribution.**  
The same standards of scholarship apply to hypertexts as to paper. If the reviewer cannot rate the submission highly on the standard dimensions of quality used by HT reviewers, the submission fails. Cool design is not a replacement for substance.
- **Quality of design.**  
That being said, we do of course want to encourage design excellence, and just as a paper increases its chances of acceptance if it is engagingly written, so will your hypertext. Moreover, content and form may be hard to separate.
- **No size limit.**  
We are not going to restrict a hypertext submission to the same arbitrary word count as can be fitted onto 8 ACM-styled pages. Such a restriction would make the hypertext a derivative cousin to paper, when we want to encourage the breaking of new ground. Removing the size limit will be an inducement for some to move to a hypertext submission (but clearly, you present more at the possible cost of dilution, and reviewer patience). Reviewers will be asked to give the same time to reviewing hypertexts as they would spend on a paper submission, but you may be good enough to communicate more persuasively in that timeframe, or entice the reviewer to read more.
- **Archival versions.**  
The ACM SIGWEB website will archive accepted hypertexts, and the entry in the ACM DL will point clearly to this as the full and definitive version.



# Scholarly Hypertext wins “Best Paper”



The screenshot shows a web browser window with the URL <http://portal.acm.org/citation.cfm?doid=1012807.1012817>. The page features the ACM Portal logo and navigation links. The main content area displays the article title "Twin media: hypertext structure under pressure" and provides details such as the source (Conference on Hypertext and Hypermedia), author (David Kolb), and publisher (ACM Press). A sidebar on the right contains a "Press room" section with contact information for Peter J. Nuernberg and Virginia Gold, and a headline about David Kolb winning the ACM Award for Research on Hypertext Argumentation. Below the headline is a paragraph of text describing the award and the significance of Kolb's research.

**Twin media: hypertext structure under pressure**  
Full text (148 KB)  
Source **Conference on Hypertext and Hypermedia** [archive](#)  
**Proceedings of the fifteenth ACM conference on**  
Santa Cruz, CA, USA  
SESSION: Stories and scholarship [table of contents](#)  
Pages: 26 - 27  
Year of Publication: 2004  
ISBN:1-58113-848-2

**Author** [David Kolb](#) Bates College, Lewiston, ME

**Sponsors** [ACM](#): Association for Computing Machinery  
[SIGWEB](#): ACM Special Interest Group on Hyper

**Publisher** ACM Press New York, NY, USA

**Additional Information:** [appendices and supplements](#) [abstr](#)

**Tools and Actions:** [Find similar Articles](#) [Review this A](#)  
[Save this Article to a Binder](#) Disp

**DOI Bookmark:** Use this link to bookmark this Article: [http:](#)  
[What is a DOI?](#)

**APPENDICES and SUPPLEMENTS**  
 [HT04-p26-kolb1.zip](#) (984 KB) The Zip archive contain  
browsed locally with no  
text, though there are  
external web pages. It  
and requires a CSS-con

**Press room**  
*The First Society in Computing*

Contacts:

Peter J. Nuernberg Aalborg University +45 2168 8118 chair_sigweb@acm.org	Virginia Gold ACM 212-626-0505 vgold@acm.org
---	---

**KOLB WINS ACM AWARD FOR RESEARCH ON HYPERTEXT ARGUMENTATION**

**Computer Pioneer Douglas Engelbart to Present Award Named for Him**

NEW YORK, August 13, 2004 - ACM's Special Interest Group on the Web and Hypertext (SIGWEB) will present its 2004 Douglas Engelbart Award to David Kolb for his groundbreaking research on hypertext links used in many of today's media applications. Kolb, a Bates College professor, examined the challenges involved in re-presenting an argument from a book in a different, hypertextual form. His paper, "Twin Media: Hypertext Structure Under Pressure," pioneers the use of hypertext to express research results. Kolb will receive his award personally from hypertext pioneer Douglas Engelbart at the Hypertext 2004 conference ([www.ht04.org](http://www.ht04.org)), August 9 -13, at the University of California, Santa Cruz.



# Accelerating the feedback loop: academic blogging

The Chronicle: 6/6/2003: Scholars Who Blog

http://chronicle.com/free/v49/i39/39a01401.htm

CompWiki OCI LabSpace - OpenLear... gmail OUSA Moderators - ... LearningS

THE CHRONICLE OF HIGHER EDUCATION

*Research & Publishing*

From the issue dated June 6, 2003

## Scholars Who Blog

### The soapbox of the digital age draws a crowd of academics

By DAVID GLENN

Is this a revolution in academic discourse, or is it CB radio?

In one form or another, that question inevitably arises in conversations with scholars who have taken up the habit of writing Web logs, or "blogs." Some have started blogging in order to muse aloud about their research. Others want to polish their chops at opinion-writing for nonacademic audiences. Still others have more urgent and personal reasons.

**ALSO SEE:**

[A Blog Takes Off](#)

[From Nascar to Ugly Robes: Some Academic Blogs to Note](#)

Colloquy Live: Read

<http://chronicle.com/free/v49/i39/39a01401.htm>



# Accelerating the feedback loop: academic blogging

## EducationPR

Technology for communicators in education

Home About EducationPR Paul's speaking schedule

### Profs who blog

"The hope of all of us who blog is that we will become smarter, do more useful work, be happier and more productive, and will also impress our deans so they will raise our salaries," writes Brad DeLong in his [Semi-Daily Journal](#). He's an economist at UC-Berkeley. "The first three hopes are clearly true: Academics who blog think more profound thoughts, have a bigger influence on the world — both the academic and the broader worlds — and are happier for it. Are we more productive in an academic sense? Maybe. We will see when things settle down."

"Are our deans impressed? Not so far, but they should be. A lot of a university's long-run success depends on attracting good undergraduates. Undergraduates and their parents are profoundly influenced by the public face of the university. And these days, a thoughtful, intelligent, well-informed Web logger like Juan Cole or Dan Drezner is an important part of a university's public face. Michigan gains in reputation and mindshare from having a Cole on its faculty. Yale loses from not having an equivalent."

(via [Canuckflack](#))

#### CATEGORIES

- o AERA
- o blogging
- o book review
- o education
- o education research
- o EWA
- o how-to
- o IABC
- o measurement
- o Organizations
- o podcasting
- o Policy
- o presentations
- o public relations
- o Publications
- o radio
- o reading list
- o resources
- o RSS
- o Social media
- o Strategy
- o Uncategorized
- o wikis

<http://pbaker.wordpress.com/2006/07/25/profs-who-blog/>

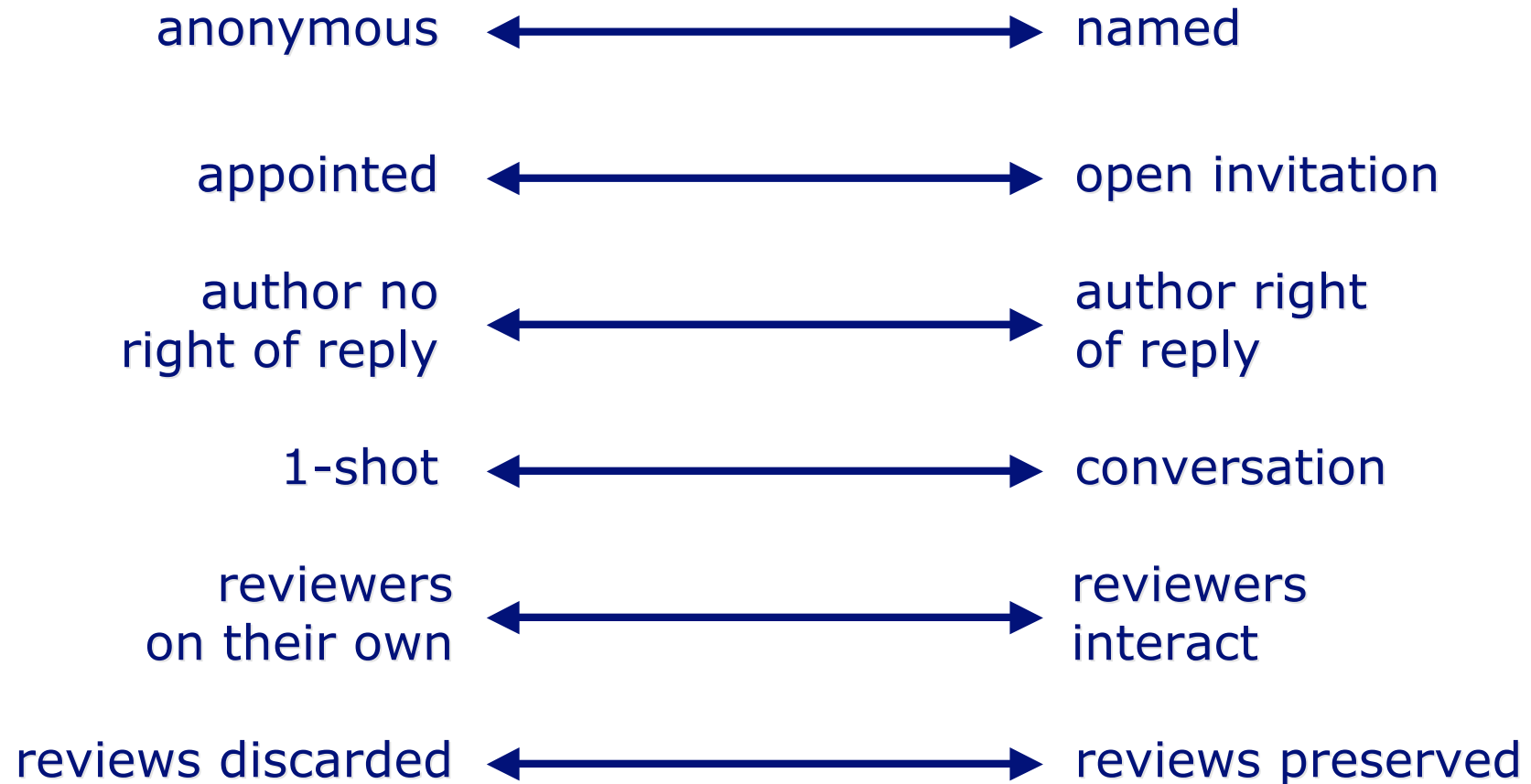
# eJournals: Levels 1-6

Lancaster, F. W. (1985). The Paperless Society Revisited. *American Libraries*, 16, (8), 553-555



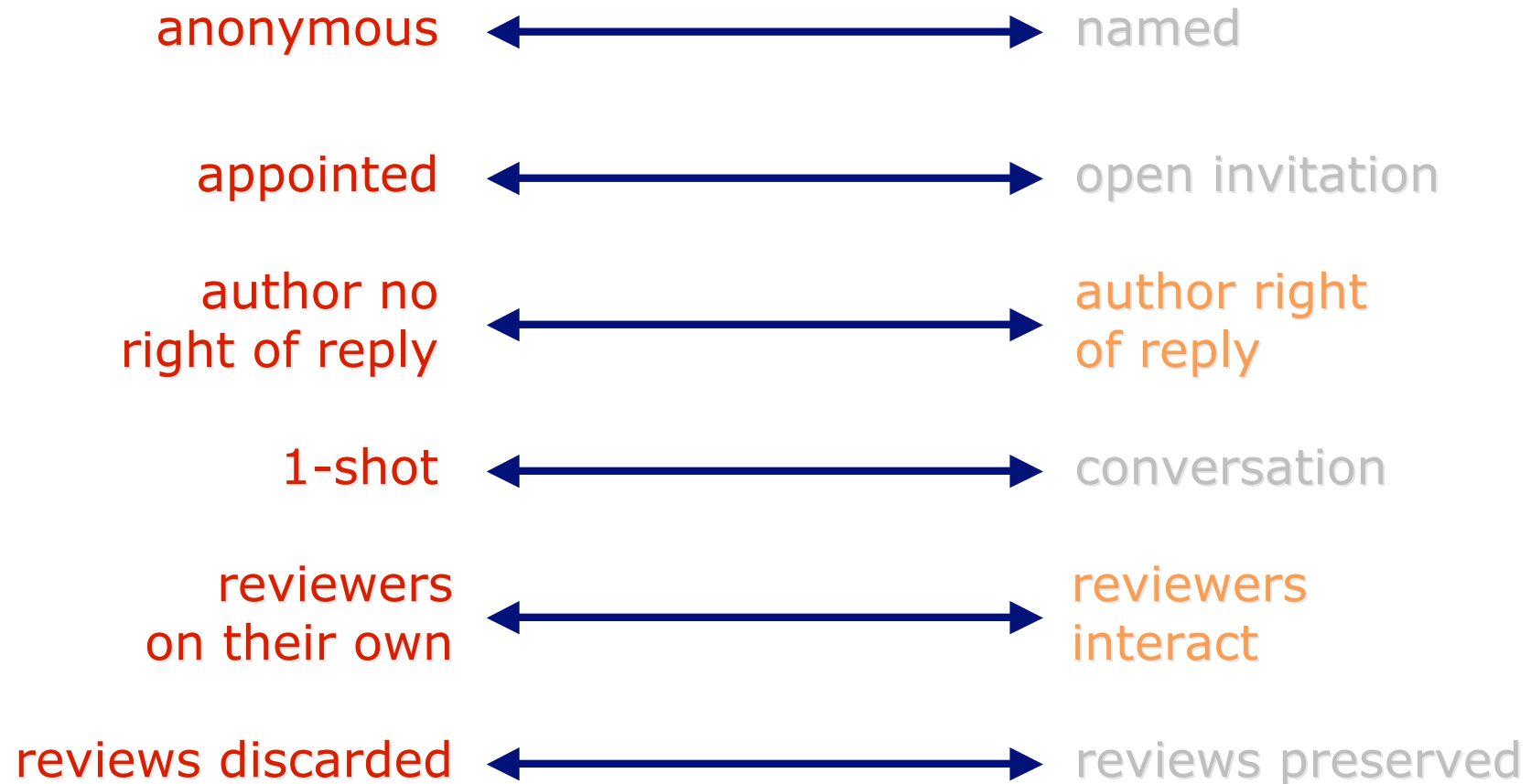
1. computers used for print production
2. journal distributed in both print and electronic formats
3. publication design is rooted in print, but articles are developed solely for electronic distribution
4. interaction between authors and readers is possible; publications can evolve as a result of such interactions
5. the inclusion of multimedia content
6. both interactive participation and multimedia capabilities are supported

# Peer review dimensions



# Peer review dimensions: most journals and conferences

(recent changes with the web)





# Conventional peer review

- All peer review models have +/-
- Anonymous, 1-shot peer review
- Pros
  - + anonymity  $\Rightarrow$  honesty
  - + 1-shot job
  - + “stick with what you know...”
- Cons
  - - anonymity  $\Rightarrow$  lack of accountability
  - - research demonstrates its weaknesses
  - - typically no author right of reply



**Journal of Interactive Media in  
Education**

*An Interactive Journal  
for Interactive Media*

[www-jime.open.ac.uk](http://www-jime.open.ac.uk)

[jime@open.ac.uk](mailto:jime@open.ac.uk)



# JIME: a venerable 10yr old e-journal



**JIME**  
Journal of Interactive Media in Education

[Articles](#)  
[About JIME](#)  
[Editorial Board](#)  
[Submitting to JIME](#)  
[Feedback](#)  
[Help](#)

**KMi**  
The Open University

**jime.open.ac.uk**  
ISSN:1365-893X

[2006](#) | [2005](#) | [2004](#) | [2003](#) | [2002](#) | [2001](#) | [2000](#) | [1999](#) | [1998](#) | [1997](#) | [1996](#)

**Free access and comment**

JIME offers free access to all articles in HTML and PDF format. You can also comment on each article in its Review Discussion Forum.

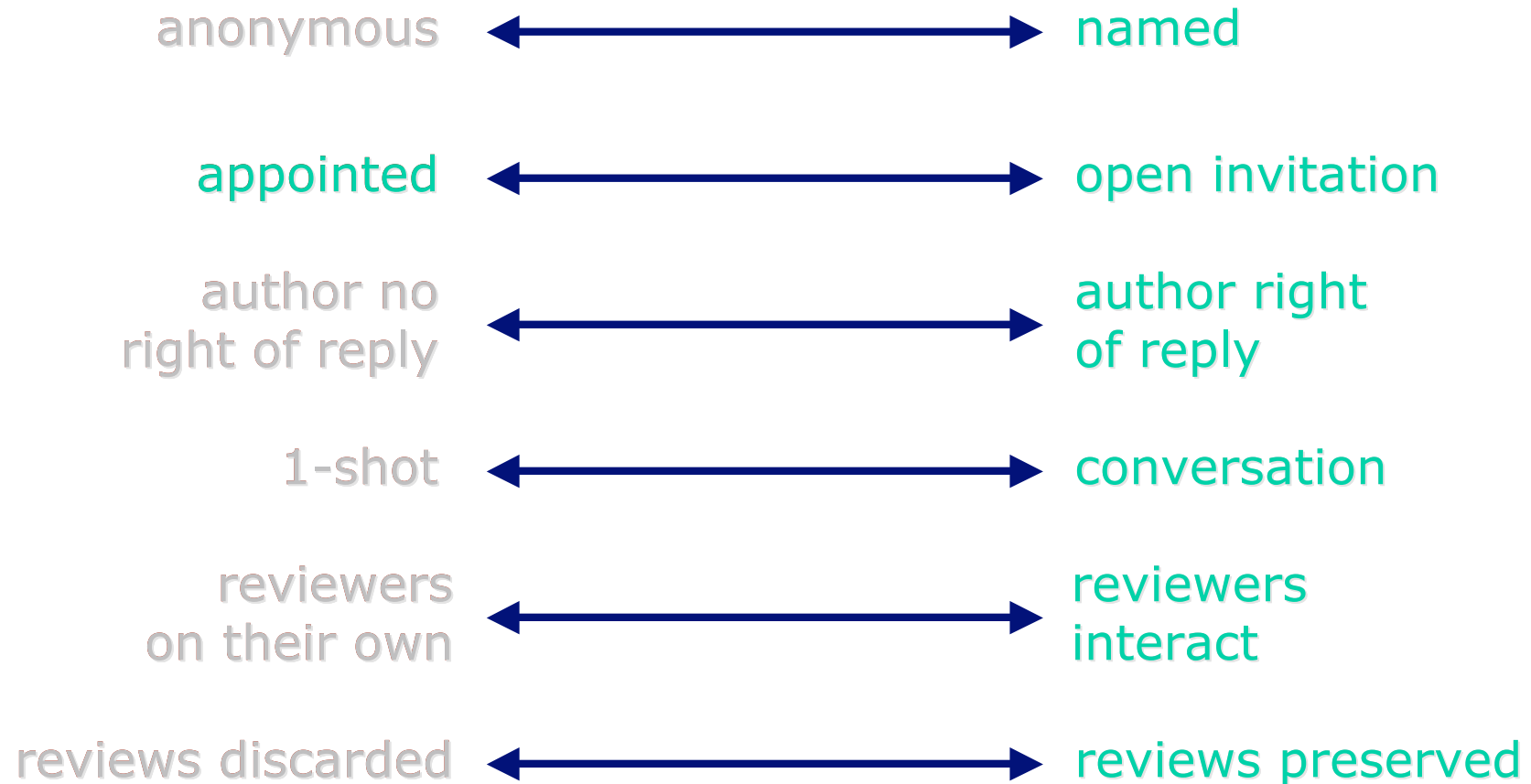
(NOTE: Commenting temporarily disabled .)

[December 2006: JIME article: Young People and Seniors in Finnish 'Mobile Information Society'](#)

*Virpi Oksman:* What is the significance of the mobile phone in the social relationships of young people and seniors? What kinds of informal and formal learning strategies do young people and seniors have in acquiring mobile phone and other ICT literacies? ...

*Editor's note:* This paper adds to the theme established in the [Special Issue on Portable Learning - Experiences with Mobile Devices](#).

# Peer review dimensions: most journals and conferences

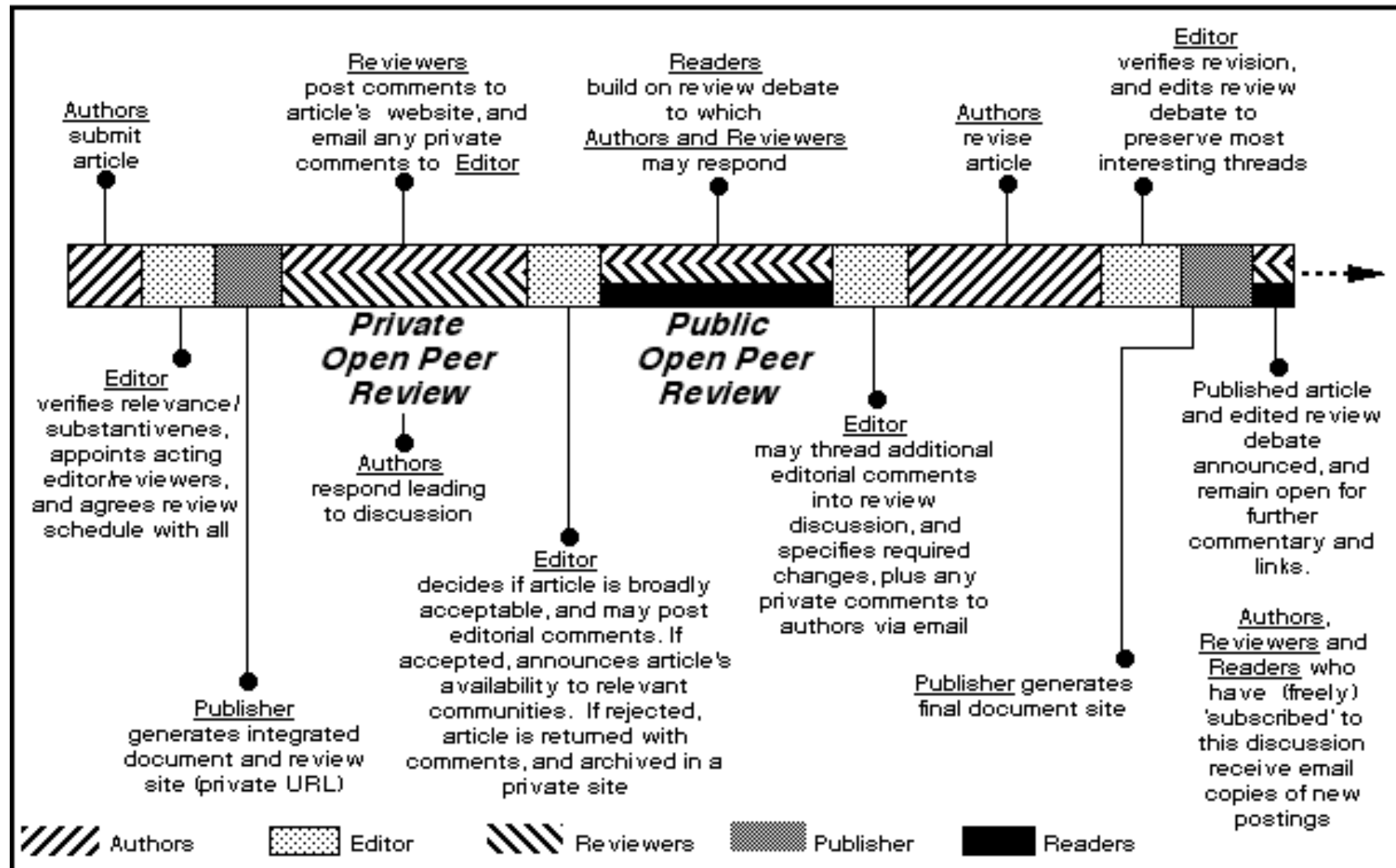


# A 'native internet' peer review model



- Private+Public conversational open peer review edited + co-published with final article ...
- Reviewers assigned and named/ hyperlinked
- Conversational/argumentation model (web)
- Private emails to editor if preferred
- Hybrid 2-step process: private then public
- **⇒** revision, publication + open for further comments
- Intellectual trace of the article's history

# JIME's peer review lifecycle



# JIME



- conversational open peer review intrinsic to journal's review model: *the social contract*
- authors encouraged to back claims about technology with demonstrations/ walkthroughs for readers and reviewers

# Interactive Web demonstration of a CD-ROM



Readers can 'play' with the construction of a painting, as students were encouraged to do

The screenshot shows a Netscape browser window with the title "Netscape: JIME: Varying the Texture...". The page content includes a navigation menu on the left with links like "Abstract", "Introduction", "Leamer Need", "Perceptual/Conceptual", "Mystique", "Mismatch in Expectations of a Discipline", "Abstrachness", "Aridity", "Summary", "Multimedia - Design Issues", "Multiple Learning Textures", "Defining the Structure - A New Analogy", "Episode Design: The Ingredients of Art Explorer", "Episode 1", "Episode 2", "Episode 3", "Episode 4", "Conclusions", and "References". The main content area is titled "Art Explorer: Interactive Demonstration 1" and "Seeing". It contains a paragraph: "This is an interactive extract on 'Seeing', from Episode 2 of the Art Explorer (see [main article](#) for details). You can move and modify (flip/resize) the three foreground characters, or the front-most tree, to change the painting's construction." Below this is a painting of a street scene with a man on a horse, a man on a bench, and a man walking. Below the painting are controls: "Flip", "Size" with "-" and "+" buttons, and "RESET". At the bottom, there are links: "Return to main article" and "Demo of '3D' from Episode 3...". The browser's status bar at the bottom says "Click on any Comment icon to browse/contribute to discussion on this article".





# AV presentation guiding the reader through the e-learning tool

The author introduces the multimedia system with a series of slides and commentary (streaming audio)

**JiME**

WinEcon / Introductory Economics / 3.6 Optimal Consumption Choice

**Optimal Consumption Choice**

You have chosen a combination of goods that is just affordable, but is it on the highest possible indifference curve?

Show me the optimal choice  
I would like to try again  
I require more information

Quantity of good X: 26.3  
Quantity of good Y: 28.1

Conditions for optimal consumption?

Click to comment on this slide

Playing 15.2 Kbps network stream





# Video data embedded in the article

The authors include video clips showing their work (children programming a robot)

Netscape: JIME: Learn to Communicate and Communicate to Learn

Published Learn to Communicate and Communicate to Learn - Alex Repenning, Andri Ioannidou and Jim Ambach User Interface

JIME  
return home

Allowing Active Construction

4.2 Richness

4.2.1 The Weather Agent: Simulation Meets Web Browser

4.2.2 Moving from the Computer to the Real World: LEGOSheets

4.3 Accessibility

4.3.1 The AgentSheets Behavior Exchange

4.3.2 Rishetto™: the Agent-to-Java Generator

5. Future

5.1 Combining Simulation with Analysis: SimCalc and AgentSheets

5.2 Educational Object Economy

6. Conclusion  
References

Reprint PDF HTML

Papert, S. (1980). *Mindstorms: Children, Computers, and Powerful Ideas*. Basic Books Inc.: NY. [cited]

# JIME



- conversational open peer review intrinsic to journal's review model: *the social contract*
- authors encouraged to back claims about technology with demonstrations/ walkthroughs for readers and reviewers
- articles tightly integrated with reviews in a web document-discussion interface
- edited review discussions co-published with final article

# JIME document user interface (generated by D3E from an HTML submission)

The screenshot displays the JIME (Journal of Interactive Media and Education) document user interface. The main content area features a document titled "2. The Media Cube" with a 3D diagram of a media cube. The cube's axes are Richness (vertical, from low to high), Interactivity (horizontal, from passive to active), and Accessibility (depth, from inaccessible to accessible). Media items are plotted as blue spheres: Immersive Virtual Reality (high richness, active interactivity), SimCity (medium richness, active interactivity), Text (low richness, passive interactivity), Books (medium richness, active interactivity), and On-Line Threaded Discussion (medium richness, active interactivity). A red arrow points from Text to Books to On-Line Threaded Discussion. A light blue callout box highlights a quote from the Editor: "The media cube framework provoked some interesting review discussion (Editor)".

Overlaid on the left side of the screenshot is a light blue box with the text: "Submission under review PrePrint or Published".

Overlaid on the right side of the screenshot is another light blue box with the text: "Peer review comments and discussion: tightly integrated + co-published".

The interface includes a navigation menu on the left with sections like "Abstract", "1. Introduction: The Computer as a Communication Medium", "2. The Media Cube", "2.1 Interactivity", "2.2 Richness", "2.3 Accessibility", "4.1.1 Visual AgentTalk: Allowing Active Construction", "4.2 Richness", "4.2.1 The Weather Agent: Simulation Meets Web Browser", "4.2.2 Moving from the Computer to the Real World: LEGOsheets", "4.3 Accessibility", "4.3.1 The AgentSheets Behavior Exchange", "4.3.2 Rishetto™: the Agent-to-Java Generator", "5. Future", and "5.1 Combining Simulation with".

The document text includes: "Out of the many dimensions one could select to classify media, we have chosen the following: media richness, interactivity and accessibility to ground the following discussion. Mok defined a subset of this framework relating the richness and interactivity dimensions of media (Mok, 1996). The cube (Figure 4) formed by these dimensions is used to classify different media and to help understand the value added (or lost) by moving to different spaces within the cube."

The peer review thread shows a comment by Tom Moher: "I have some concern about the rendering of specific technologies as points rather than as spaces within the cube. In particular, the characteristic point on the interactivity dimension for such applications (such as an example of applications which exploration or even construction".

The response by S. Buckingham Shum: "Reflecting on the reviewer-author exchanges which took place with respect to the different dimensions of the 'media cube', I've ended up writing more than I planned, but I hope it's useful... A conceptual space which clarifies tradeoffs is always useful, so I'd like to explore this further. However, a space is only as useful as its dimensions, and as reflected in the review exchanges, the ones you have defined seem to conflate more than three dimensions, and fail to address some other important ones. Why we were confused... There seems to be an important distinction to make between the symbol system and the technology by which it is instantiated and rendered tangible. You might want to look at Salomon (1979), who presents a detailed analysis of media and learning. He argues that a medium comprises a \*technology\* and a \*symbol system\*. A medium also has \*content\* and a \*situation of use\*. Or take Thomas Green's (1980) analysis".

The footer of the page reads: "Mok, C. (1996). Designing Business. Adobe Press: San Jose, CA. [cited]".



# Author links from revised article to a discussion thread

The screenshot shows a Netscape browser window with the title "Netscape: JIME: Teaching Programming at a Distance: The ISVL". The address bar shows the URL: [http://www-jime.open.ac.uk/97/1/references.html#EISENSTADT+BRAYSHAW+HASEMER+ISSROFF\(1996\)](http://www-jime.open.ac.uk/97/1/references.html#EISENSTADT+BRAYSHAW+HASEMER+ISSROFF(1996)). The page content includes a table of contents on the left and a main text area. A red circle highlights the link "comments on what richness of media means in the context of this paper" in the table of contents. Two arrows point from this link to a discussion thread on the right. The discussion thread has a title "Re: 3.3 Teaching computer programming at a distance" and a sub-title "Re: Re: 3.3 Teaching computer programming at a distance".

student: "Well the first line is..."

The reason for the poor interaction above is because it is very difficult for the tutor in such circumstances to understand what precisely the student is having a problem understanding. This means either the tutor has to guess and plough through areas of the course (which could confuse the student further) or require the student to undertake the difficult task of explaining what it is that they do not know. There is of course the added difficulty of describing a program over the telephone. An earlier attempt to teach students at a distance was the virtual summer school (Eisenstadt, Brayshaw, Hasemer and Issroff, 1996). Use was made of technology such as video conferencing to provide a richer level of contact between students and tutors (see review comments on what richness of media means in the context of this paper). An important design aim of ISVL is that it will provide an internet communication environment within the course, used synchronously to establish a context within which the tutor can understand and help the student with their difficulty.

Providing a rich synchronous communication medium will not however solve all of the problems inherent in teaching at a distance. Students study part-time and have to fit their course

Re: 3.3 Teaching computer programming at a distance  
(Lisa Neal, [lisa.neal@eds.com](mailto:lisa.neal@eds.com)) 30 Jun 1997 17:38 GMT

I suggest some clarification in the paragraph starting "Teaching any course at a distance involves two kinds of staff: the course team and the tutors." Based on my own experiences, the course developers and deliverers can be one person. Therefore, your situation is either based on the complexity of the material or topic or the size of the class. Also, since you mention your "impoverished media" and the consequences in terms of communication, is it possible to also state that the use of richer media, such as desktop videoconferencing, was not possible because...

Re: Re: 3.3 Teaching computer programming at a distance  
(Paul Mulholland, [P.Mulholland@open.ac.uk](mailto:P.Mulholland@open.ac.uk)) 09 Jul 1997 18:28 GMT

It is interesting that you mention video conferencing and richer media - it has set me thinking. I have a feeling we're

richer level of contact between students and tutors (see review comments on what richness of media means in the context of this paper). An important design aim of ISVL is that it will

...easily to leave meaningful queries or thoughts for the tutor or other students to view at later times.

Within a conventional university, practical sessions within a

Eisenstadt, M., Brayshaw, M., Hasemer, T. and Issroff, K. (1996). *Teaching Learning and Collaborating at a Virtual Summer School*. In: A. Dix and R. Beale (Eds.) *Remote*

# Linking from one review discussion to a relevant document

[Go to top of Review Debate](#)

▶ ● [4.2.1 The Weather Agent: Simulation Meets Web Browser](#)

*(JIME Editor (Simon Buckingham Shum)) 10 Mar 1998*

▶▶ [Re: 4.2.1 The Weather Agent: Simulation Meets Web Browser](#)

*(Josie Taylor) 12 Feb 1998*

▶▶ ▼ **Re: 4.2.1 ...Simulation Meets Web Browser**

*(Simon Buckingham Shum, [S.Buckingham.Shum@open.ac.uk](mailto:S.Buckingham.Shum@open.ac.uk))*

*27 May 1998 15:03 GMT*

"The ability to connect a simulation to this kind of live information results in a new genre of information medium unifying notions of simulation and web browser."

In this respect, you may be interested to see the very large scale use of the web for human-based educational simulations (no computational agents involved):

"Teaching Middle East Politics by Interactive Computer Simulation" (Vincent et al, under revision)

<<http://www-jime.open.ac.uk/me-sim/me-sim.html>>

Simon

[Add Comment](#)

to: **"Re: 4.2.1 ...Simulation Meets Web Browser"**

# Reviewer-author exchanges

The screenshot shows a Netscape browser window with the title "Authoring Content in the PAT Algebra Tutor...Review Debate - Netscape". The address bar shows the URL "e.open.ac.uk/Reviews/get/ritter-reviews.html?embed=-1". The main content area displays a discussion thread with the following elements:

- A header for a thread: **Re: Re: Re: 4.4 Design Principle 4: Make the cognitive model visible** (Chris DiGiano, [digi@unix.sri.com](mailto:digi@unix.sri.com))  
18 Feb 1998 20:27 GMT
- A text box containing the message: "Ahh. Now I understand. Thanks for clearing this up. By explicitly describing a series of inferences like you did in you response, I think you will make things clearer for other naive readers such as myself."
- A status bar: **(End of Thread - This comment has no responses yet)**
- A header for another thread: **4.5 Design Principle 5: Build from specific to general** (JIME Editor) 18 Dec 1997 13:50 GMT

On the left side of the browser window, there is a sidebar with a list of items and a text area containing the following text:

I find  
visit  
muc  
succ  
a re

After re-reading the how the TDK work for the author to un

The rules are comp. the cognitive model author.

Following the exam times X plus 5."). It variable. The value author recognizes th will be re-generated

The author never di (e.g. "slope=3, initia

This goes with your pSAT more clearly.

# Document-related news updated in the discussion space



[Put WinEcon on the web and use for group discussions?](#) (Greg Kearsley) , 29 Jan 1997  
👍 [copyright, and limits of the web](#) (Jean Soper [author]) , 29 Jan 1997  
[Mix 'n' match approach to designing Web-based materials](#) (Tamas Szumner) , 10 Apr 1997  
👍 **UPDATE: Web.Econ now in development** (Simca Buckingham Slum) , 26 Oct 1998  
... Has 1 Related Comment

**Netscape: UPDATE: Web.Econ now in development**

Location: <http://www-jime.open.ac.uk/Reviews/get/winecon-reviews/1/5/3.html>

▶▶ [Put WinEcon on the web and use for group discussions?](#) (Greg Kearsley) 29 Jan 1997  
▶▶ **👍 UPDATE: Web.Econ now in development**  
( [Simca Buckingham Slum](#) , [S.Buckingham.Slum@open.ac.uk](mailto:S.Buckingham.Slum@open.ac.uk) ) 26 Oct 1998 11:33 GMT

The following introduction to the Web.Econ project taken from:  
<http://www.webecon.bris.ac.uk>

- Editor  
=====

Web.Econ  
WinEcon II  
Interactive Economics on the Web

WinEcon TLTP Phase Three Project Proposal

ILRT WinEcon II  
Submitted by the Institute for Learning and Research  
Technology, University of Bristol

-----



## So, there are signs of more radical changes...

- You can look at a visualization of a research literature and spot possible turning points in the field
- You can search a literature for inconsistent positions, or evidence refuting a prediction
- A hypertext wins best “paper” award at an ACM conference, and is archived in the Digital Library
- A research meeting can be recorded and indexed in real time to provide an instantly replayable webcast



# Computation shaping Discourse?



- How are digital tools changing current practices?
  - dissemination, peer review, literature analysis, meetings and teamwork
- How can we conceive ‘digitally-native’ practices?
  - dissemination, peer review, literature analysis, meetings and teamwork
- **Research challenges**



# Challenge 1:

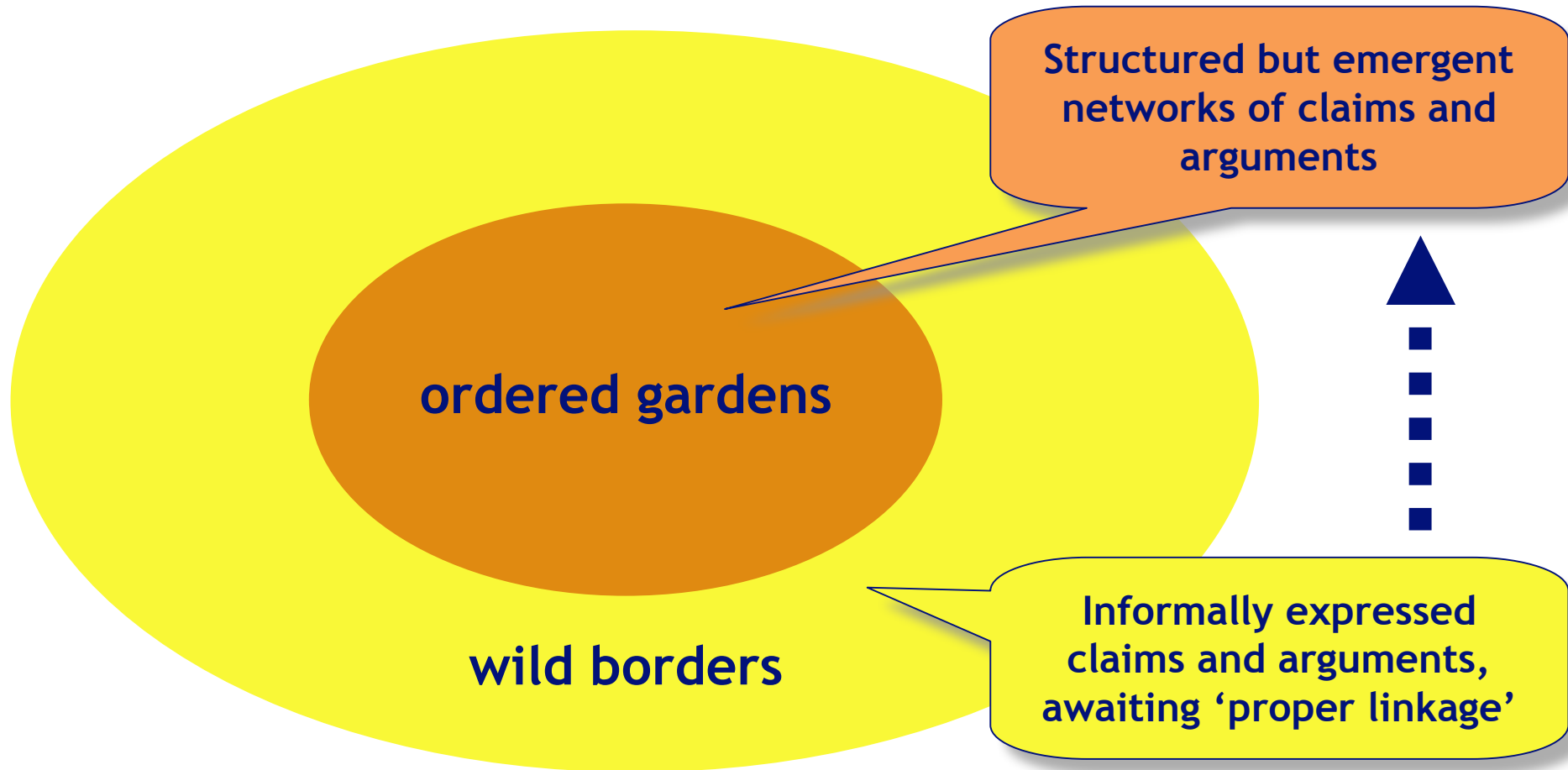
## Representing large scale discourse

- How to model “naturally occurring” argumentation
  - striving for the optimal balance in computational power ‘vs’ usability:  
<http://kmi.open.ac.uk/projects/hyperdiscourse>
- Web-centric argumentation
  - KR: Argument Interchange Format
  - Argumentation schemes (patterns)
  - Argument visualization
  - Web 2.0 social tagging as a way in?...
  - From the *Syntactic* Web, via the *Semantic* Web, to the *Pragmatic* Web: context, interpretation, negotiation, commitment [[www.PragmaticWeb.info](http://www.PragmaticWeb.info)]



# Challenge 1: Representing large scale discourse

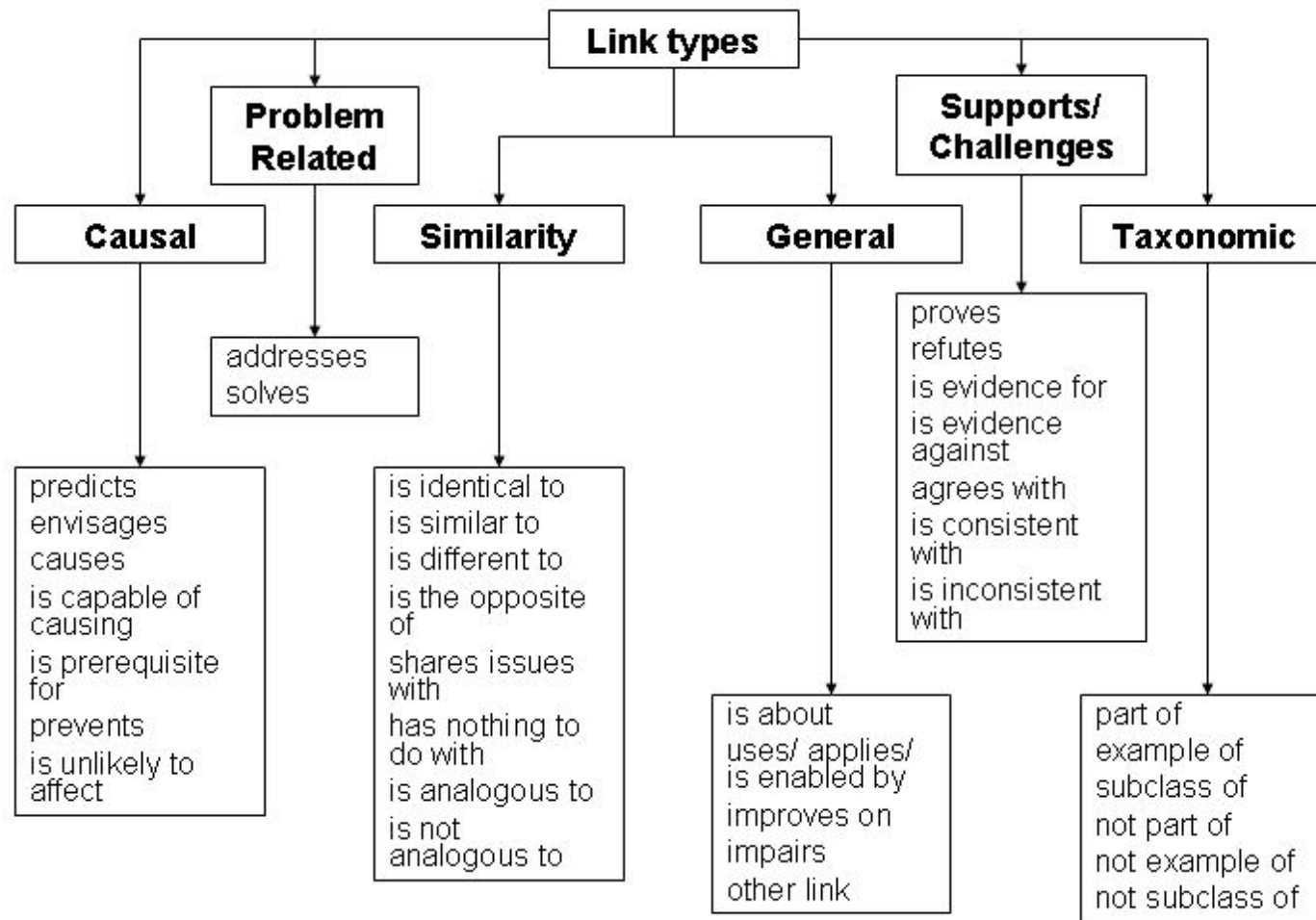
- Towards a cultivated ecosystem?...





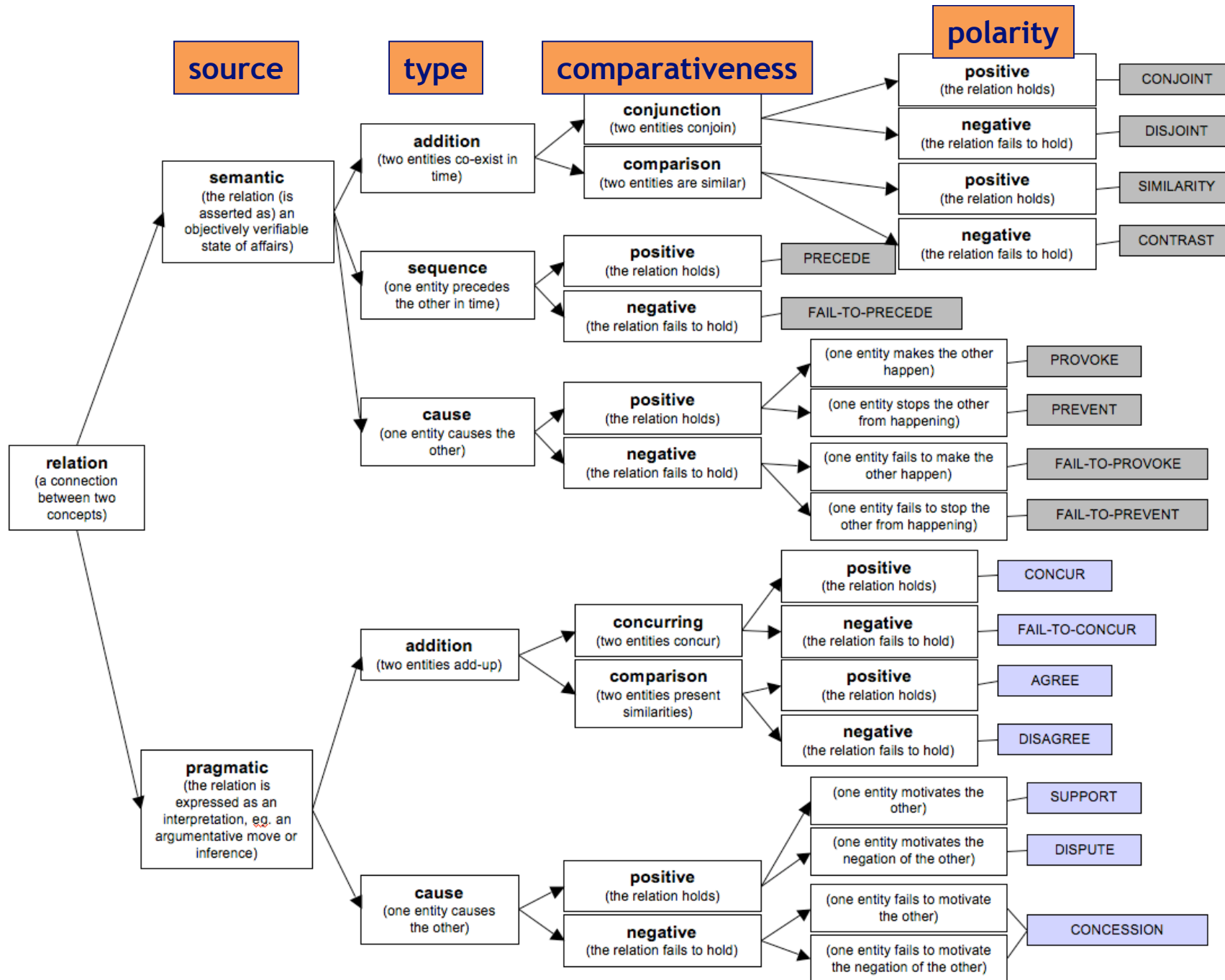
# Combining formal relations with the expressive freedom of ‘folksonomies’

Relational classes and dialects (KMi Scholarly Ontologies project)





# Cognitive Coherence Relations as abstract discourse primitives





# Challenge 2:

## Co-evolving new work practices

- **Embedding** new tools into personal, organisational and professional community activity
  - cf. how our practices are changing:
    - Web-based peer review
    - E-typesetting
    - ePrint Archiving
    - Use and sharing of slides
    - Academic blogging
    - Academic social bookmarking
- Understanding what it means to become **literate**: reading and writing in the new medium
  - Empirical research is ongoing
  - Observation of naturalistic behaviour as it takes off

# Indicators of ClaiMaker literacy?



expert user makes more extensive use than novices of semantic queries to interrogate the network

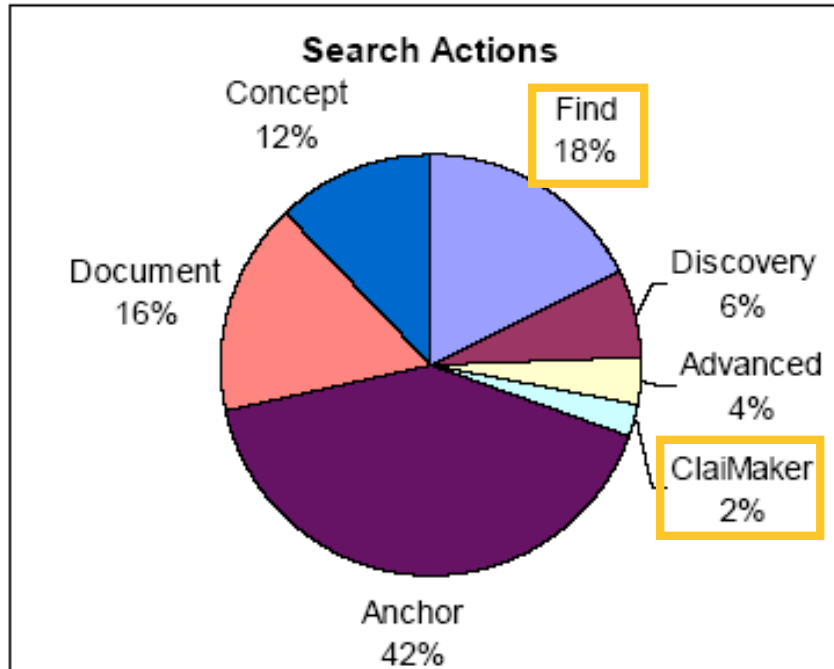


Figure 19: Breakdown of search actions by type (totals for Claim Network)

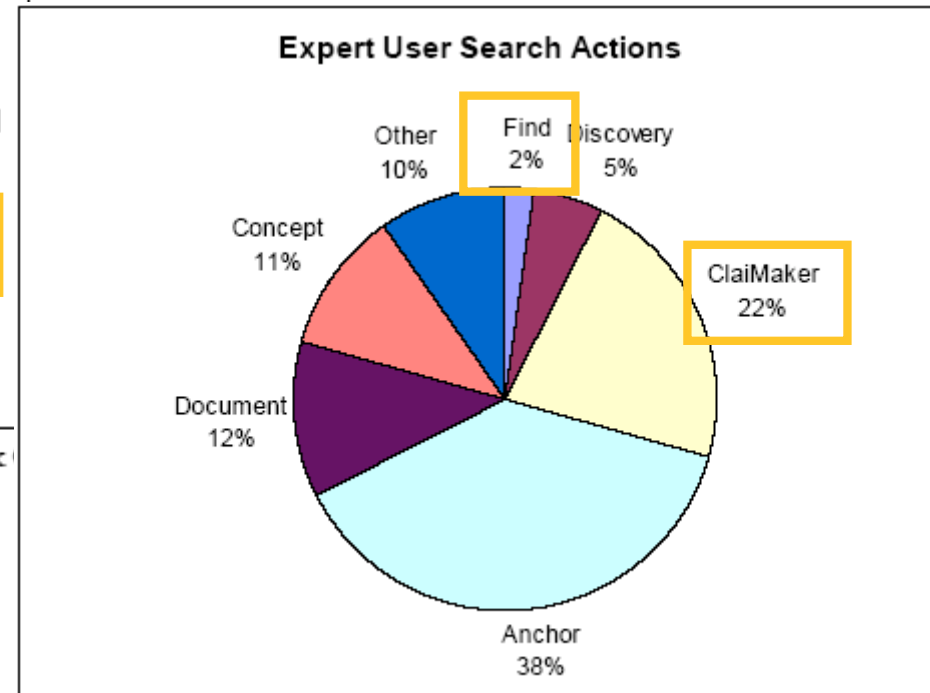


Figure 20 Breakdown of expert user search actions





# Literacy: expertise analysis

## (Albert Selvin)

- *What is the nature of expert human performance in creating and modifying real time conceptual structures for groups?*

- **The NASA knowledge mapper role:**

- Listening and interpreting
- Intervening in 'normal' conversation flow
- Getting validation for captured material

} Conventional  
facilitation  
skills

- Building hypertext representations on the fly
- Interrelating data and objects
- Adding metadata
- Software-specific skills

} Knowledge  
media  
facilitation  
skills

# Compendium literacy: expertise analysis

Selvin 2005



## *Practitioner stances*

- The position of the practitioner with regard to the current activity:
  - Knowledge Navigator
  - Facilitator
  - Participant
  - Technical Expert
  - Editor

**Practice shifts...**

We expect scholarly publications to be online and freely available

Scholarly blogging becomes a serious form of discourse

Web tagging and linking become as important as citations

A scientific contribution becomes a rigorously connected, substantiated node or region in the global network

**In what ways could computation change scholarly cognition and discourse?**

We expect public scientific discussions to be replayable, indexed, linkable resources

It starts to feel strange to linearise one's ideas when publishing

When we think of literatures and arguments, we think first of networks, not texts

Researchers start to create native, argumentative hypertexts, not print-derivatives

**Ontological shifts?...**

# Acknowledgements



Compendium Project:

**Al Selvin (Verizon/Open U.)**  
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**Gangmin Li**  
**Clara Mancini**  
**Neil Benn**  
**Bertrand Sereno**  
**John Domingue**  
**Enrico Motta**

Funding gratefully acknowledged:



THE WILLIAM AND FLORA HEWLETT FOUNDATION



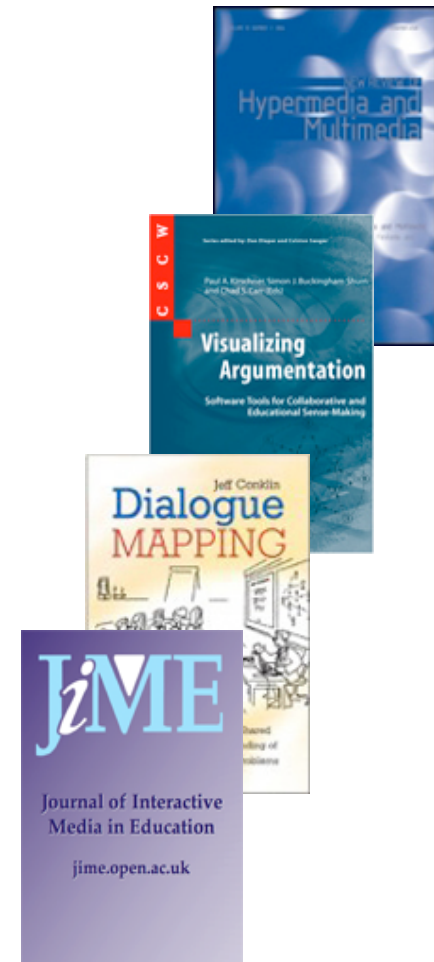
# To know more...

## Reading

- **Scholarly Hypertext by David Kolb**  
[www.dkolb.org/twin.media.ht04/covershe.html](http://www.dkolb.org/twin.media.ht04/covershe.html)
- **Scholarly Hypermedia, NRHM special issue**  
[www.informaworld.com/smpp/title~content=g723956903~db=all](http://www.informaworld.com/smpp/title~content=g723956903~db=all)
- **Towards Electronic Journals**  
Historical review and survey: Tenopir & King, 2000: SLA
- **The Electric Word**  
Philosophical reflections on how the digital medium changes how we think and write: Michael Heim

## KMi's scholarly software R&D

- **Hypermedia Discourse project**  
[www.kmi.open.ac.uk/projects/hyperdiscourse](http://www.kmi.open.ac.uk/projects/hyperdiscourse)





KNOWLEDGE MEDIA

**K M I i**  
I N S T I T U T E