

Knowledge Gardening: Sensemaking through Hypermedia Discourse Federation

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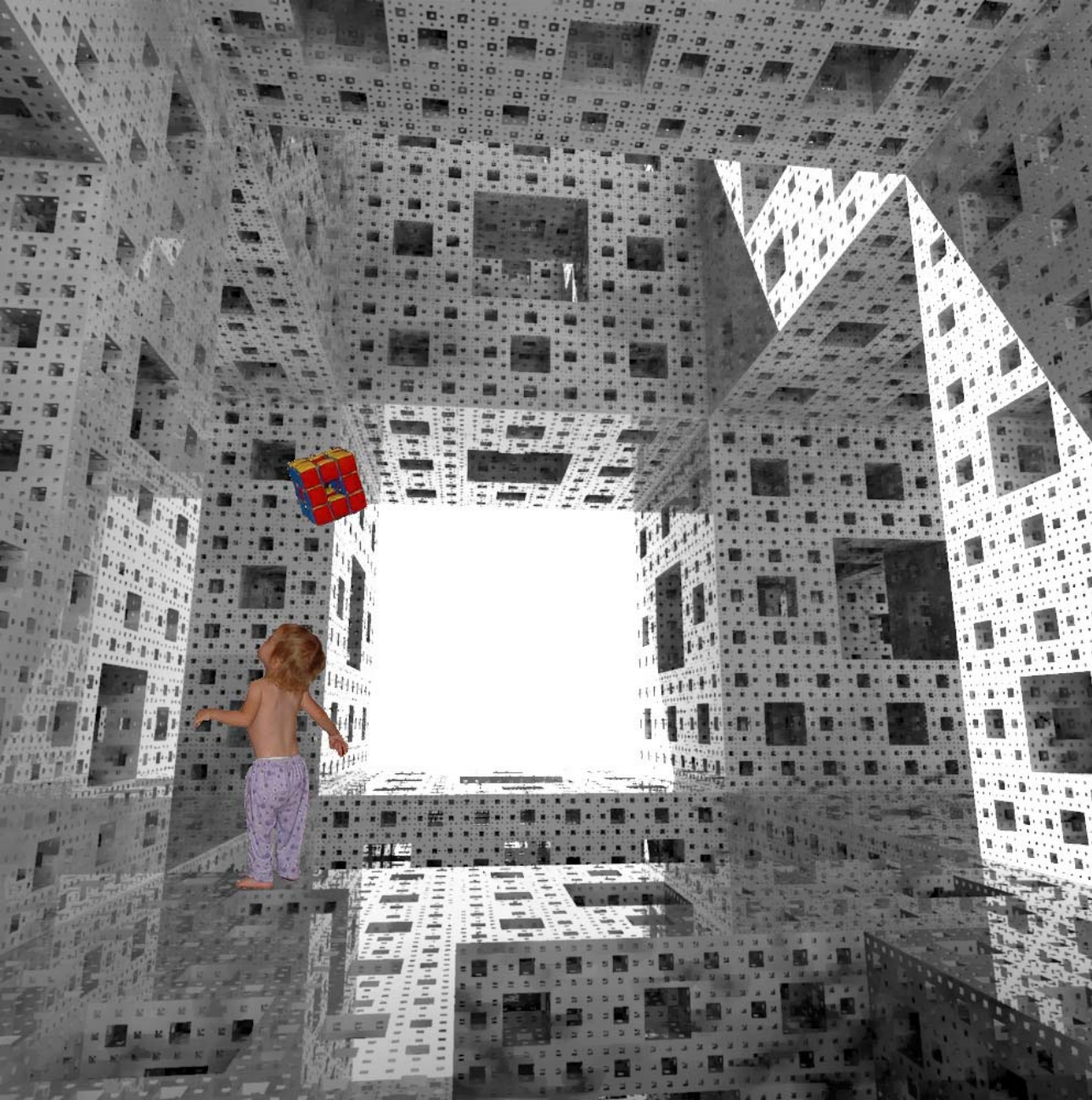
The Open University, Milton Keynes, UK

OKMDS Panel Session

April 17, 2008

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Worlds of Wonder

Sensemaking in the Wild

Knowledge Gardening as Hypermedia Discourse Federation

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<http://local.wasp.uwa.edu.au/~pbourke/>

Outline

- What is knowledge gardening?
- Activities
 - Tagging
 - Annotating
 - Conversation
 - Social networking
- Architectures
- Related tools

Knowledge gardening is...



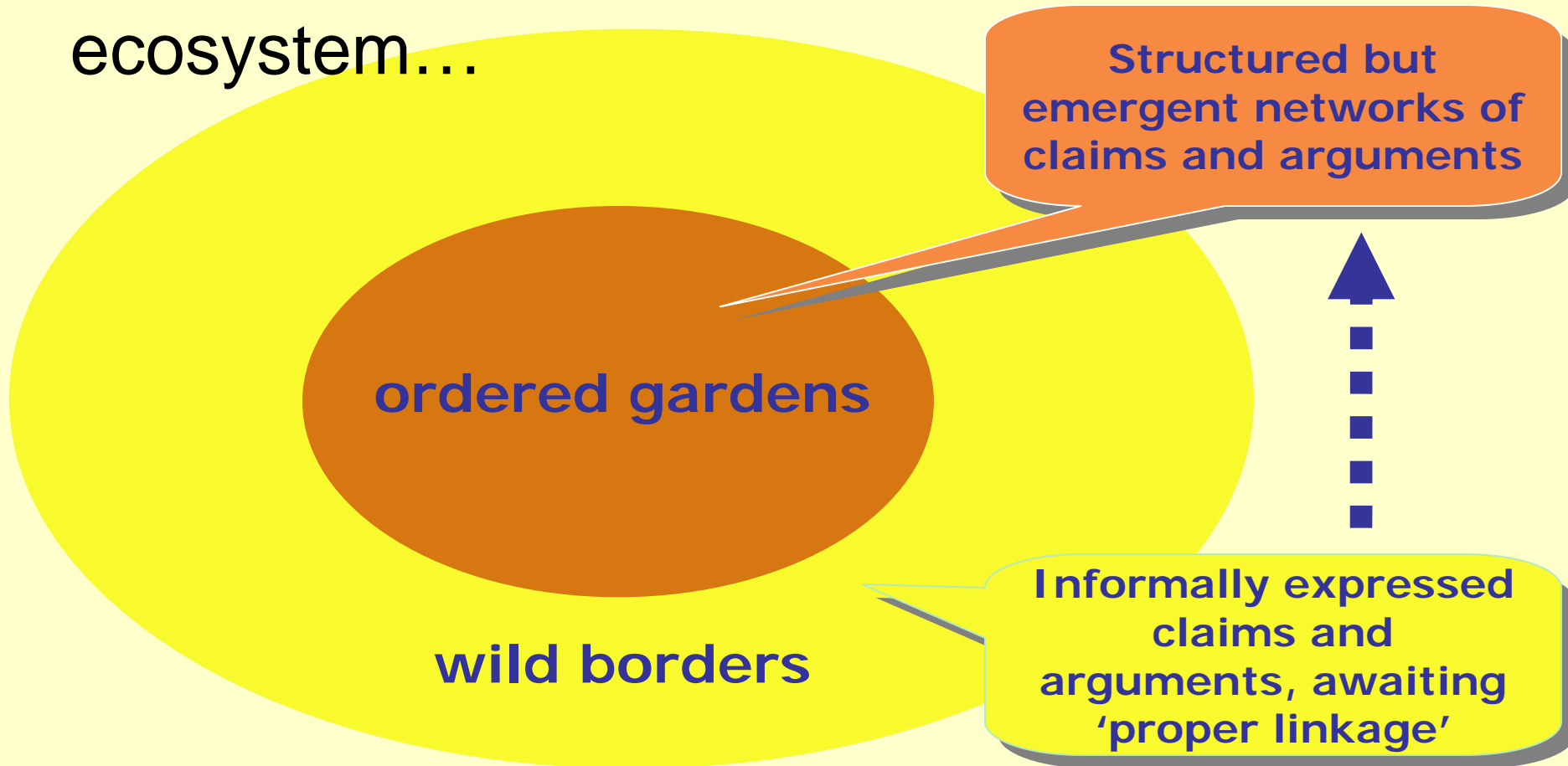
**Collaborative
problem solving in
rugged fitness
landscapes**



Knowledge gardening is...

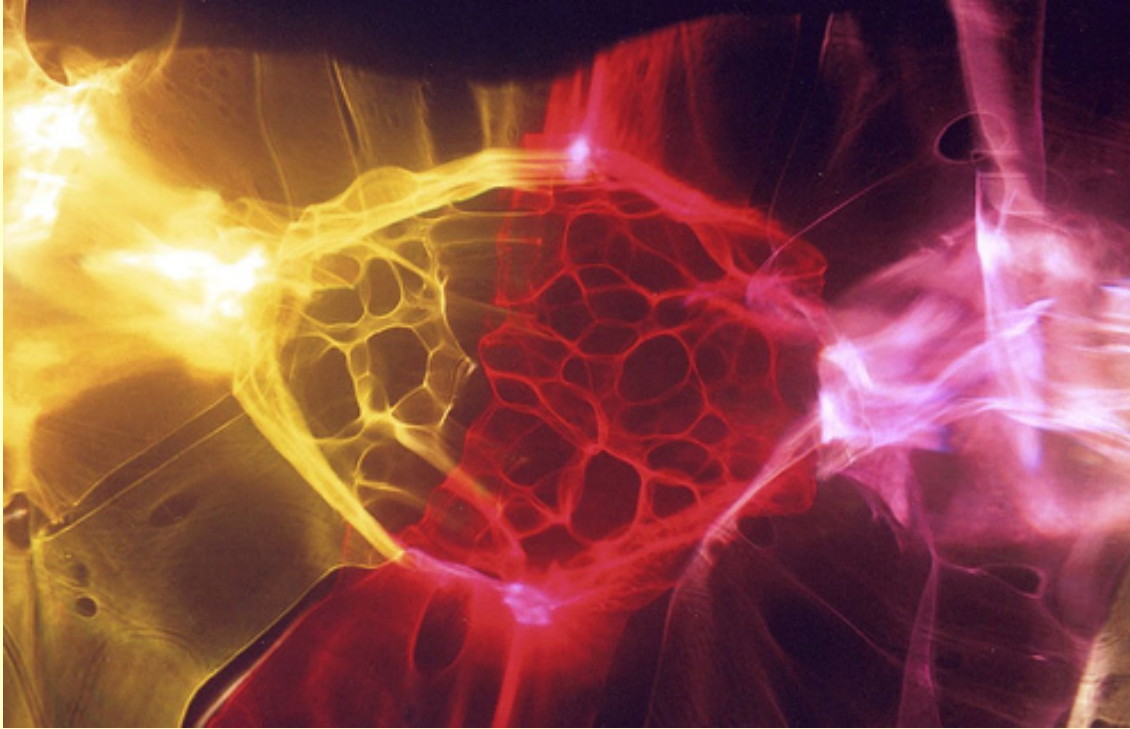
Facilitating large-scale discourse

Towards a cultivated ecosystem...



Source: Simon Buckingham Shum

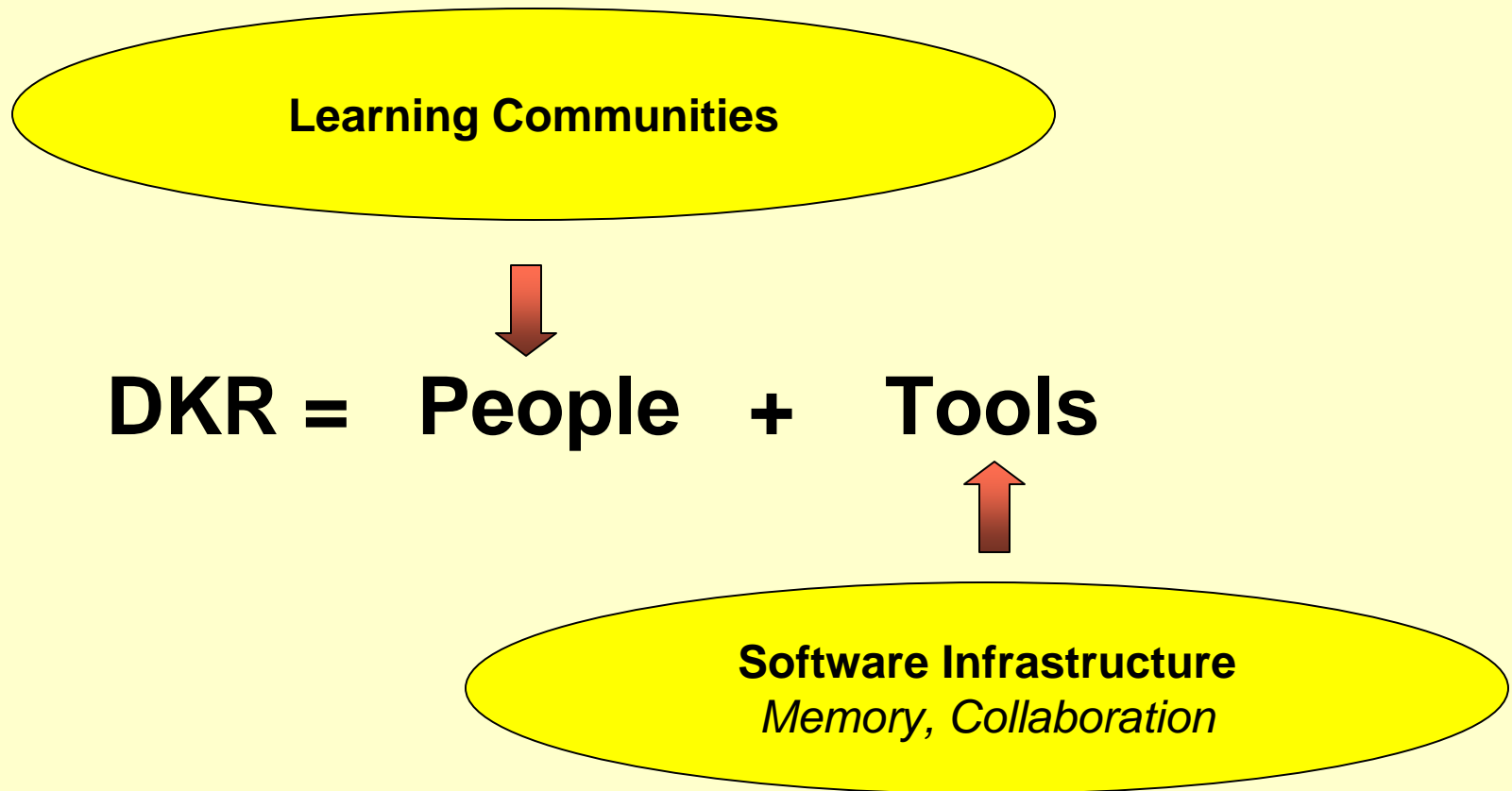
Knowledge Gardening is...



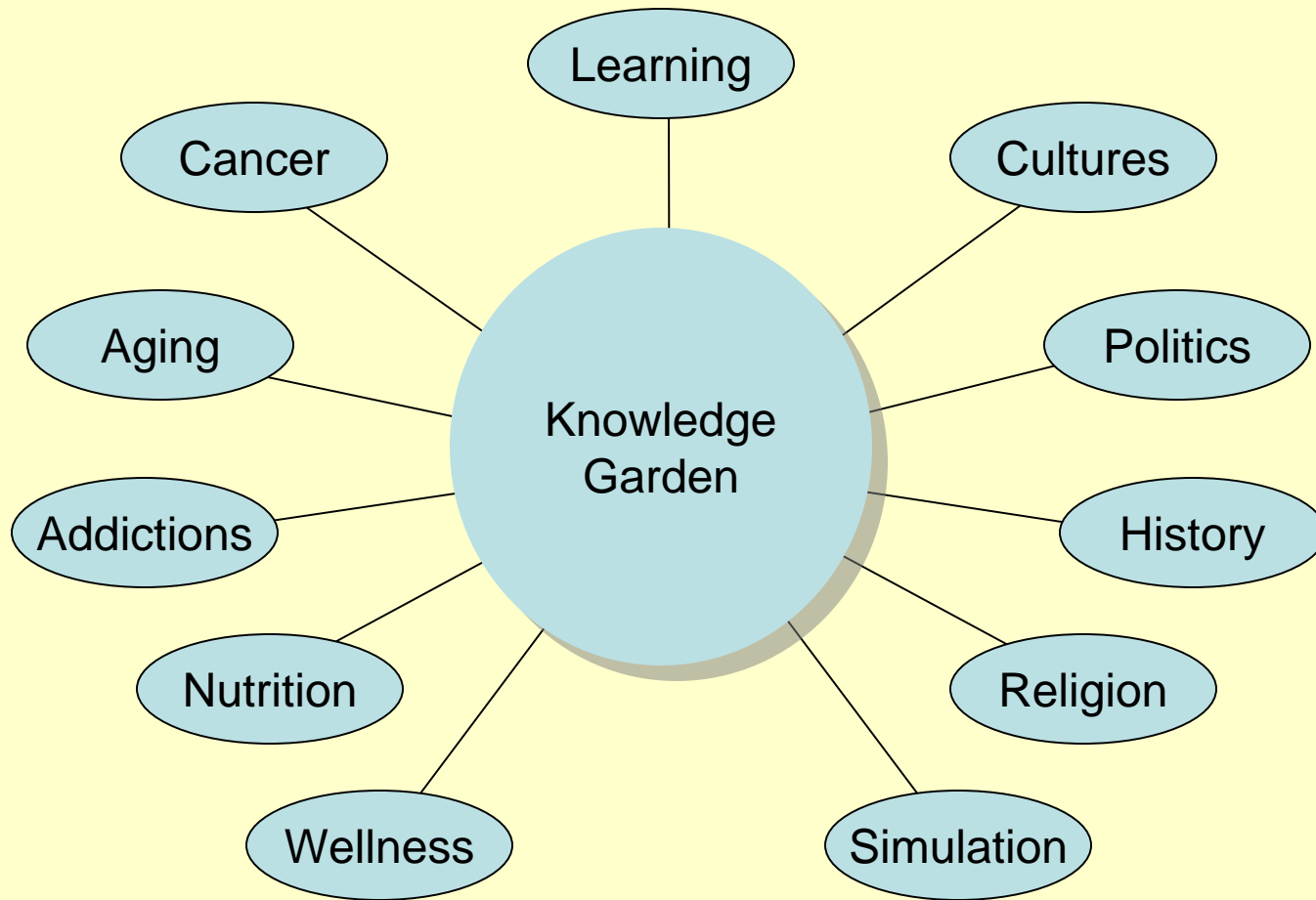
- People
 - Collecting
 - Organizing
 - Discussing
 - Cultivating
- Knowledge
 - Federated Information resources
 - Blogs
 - Emails
 - Stories
 - Dialogs
 - Tags
 - Annotations
 - ...
- Tools
 - Web portals
 - Knowledge maps

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Knowledge Gardening: Douglas Engelbart's Dynamic Knowledge Repository (DKR)



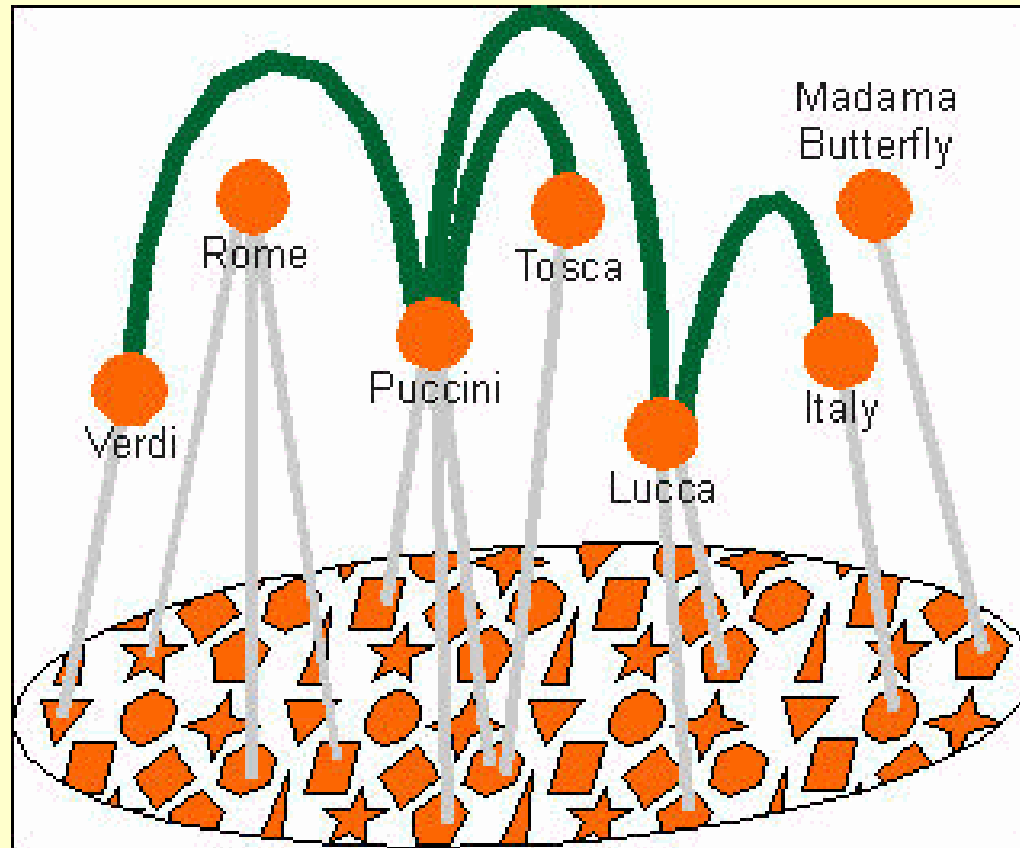
Knowledge Gardening as Federated Human Knowledge



Knowledge Gardening: Subject-centric Federation

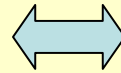
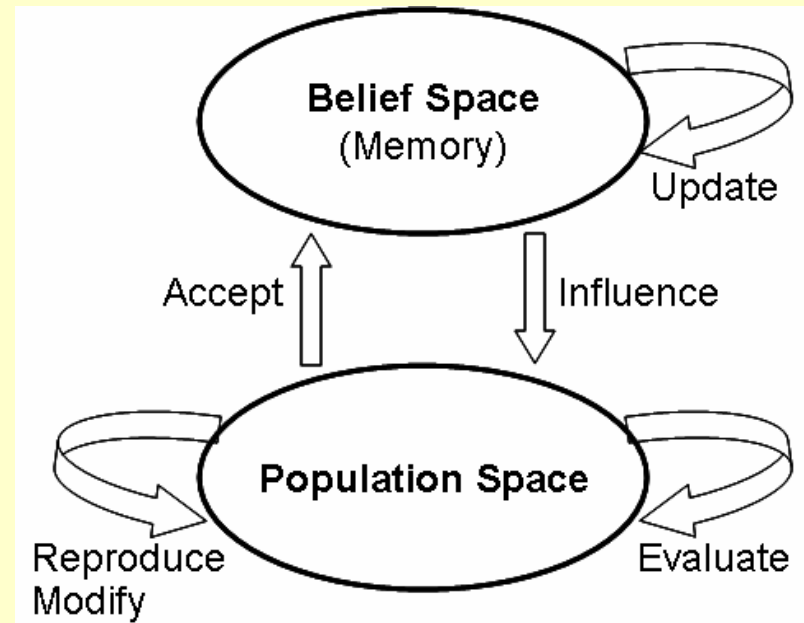
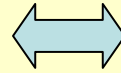
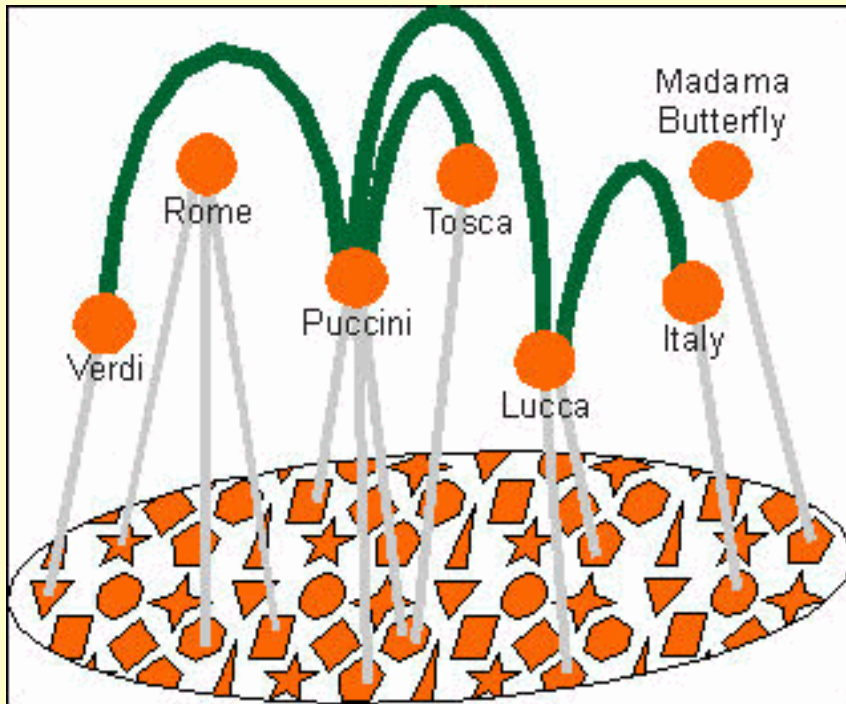
- Federation:
 - bringing heterogeneous information resources together
- Subject-centric organization:
 - Co-locating representations of the same subject together in a knowledge map
 - A map is not the territory it represents
- Provides well-organized collective memory

Knowledge Maps: Topic Maps

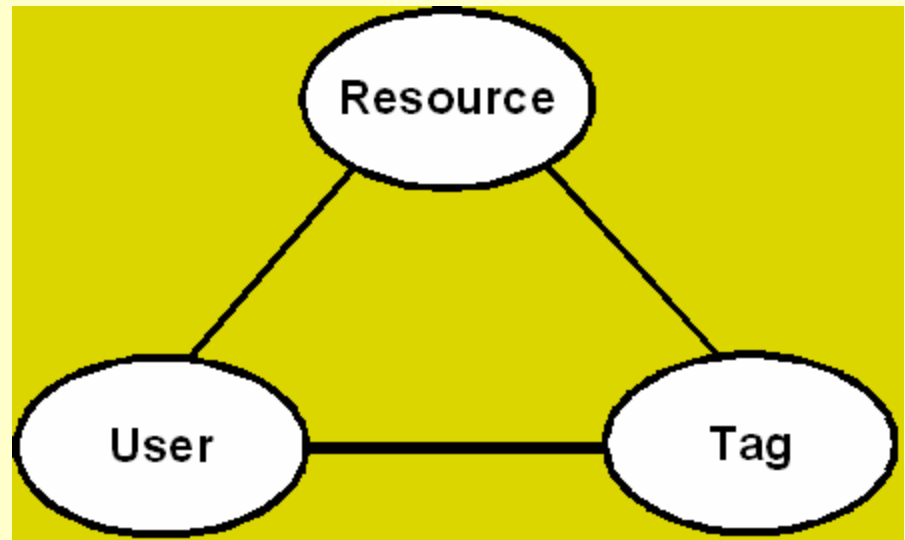
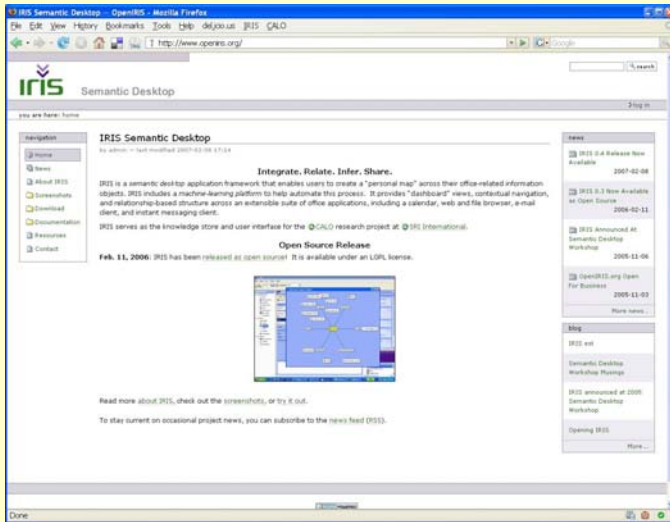


Topic Map:
Lies above
information
and weaves
that
information into
a fabric

Knowledge Maps as Cultural Memory



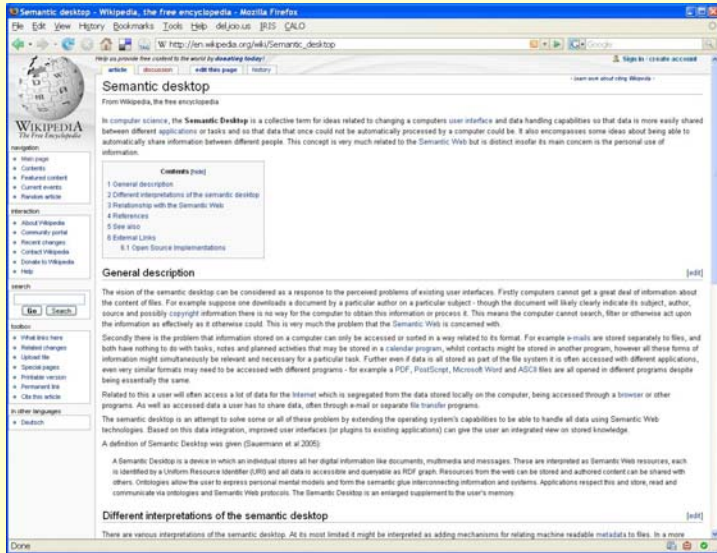
Annotation by Tagging



..... "Semantic Desktop"

A User asserts a Tag on a Resource

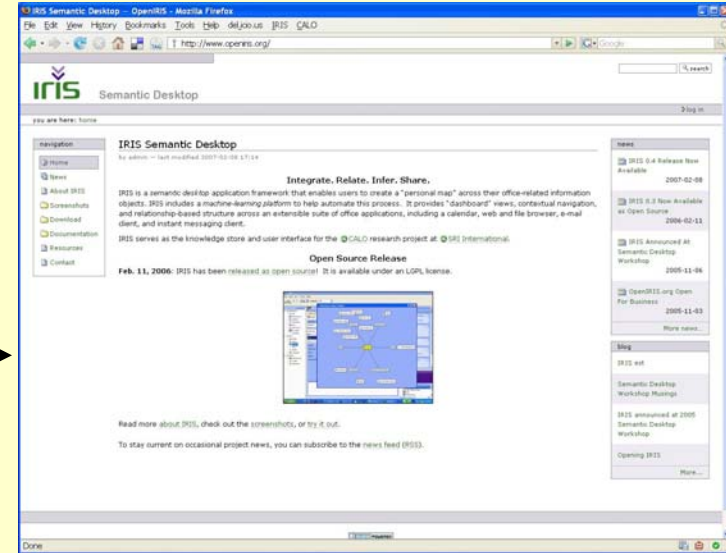
Annotating By Connecting



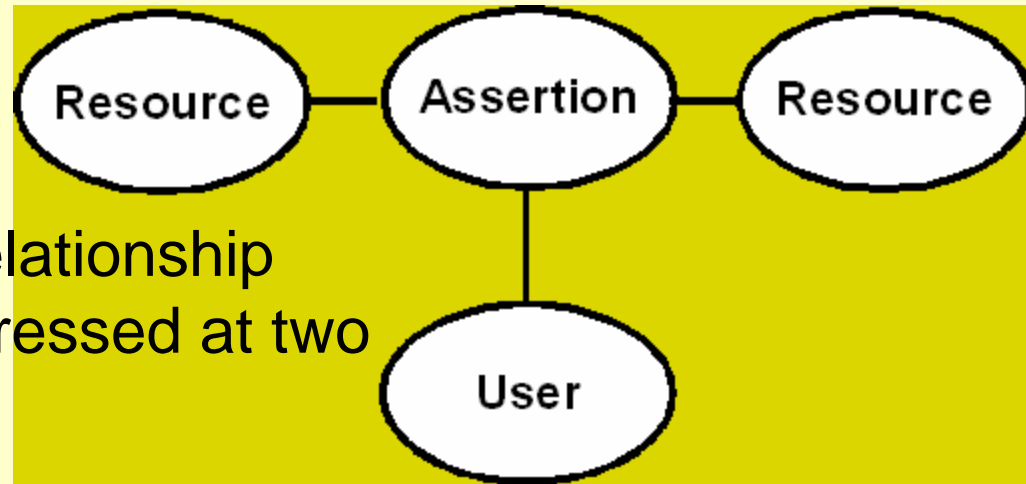
Semantic Desktop
concept

**“is exemplified
by”**

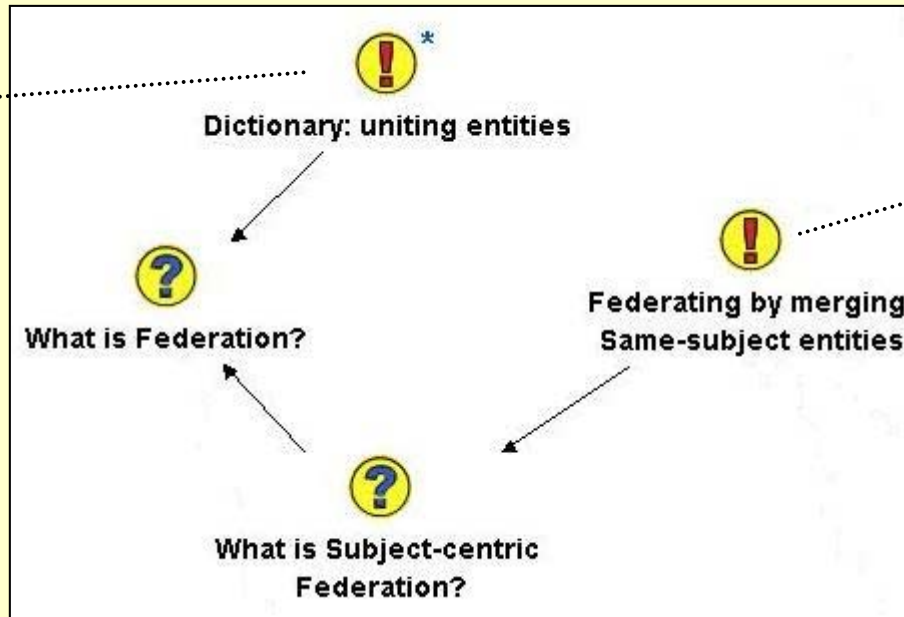
OpenIris.org



A User asserts a relationship
between ideas expressed at two
different resources



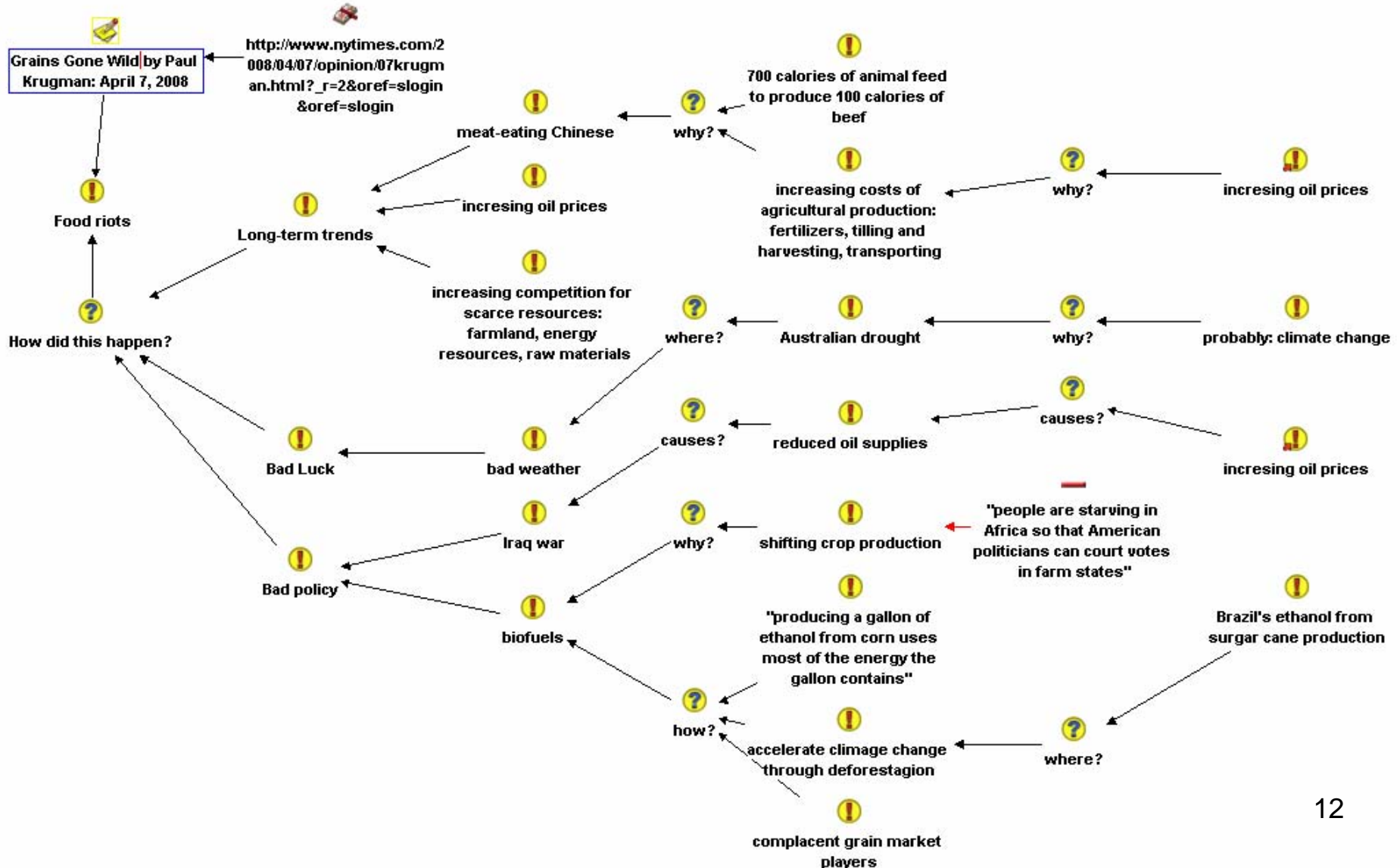
Conversation



Compendium Screenshot

Users Ask and Answer Questions,
and Discuss the Answers

Issue Map of an OpEd



Social Aspects of Collaboration

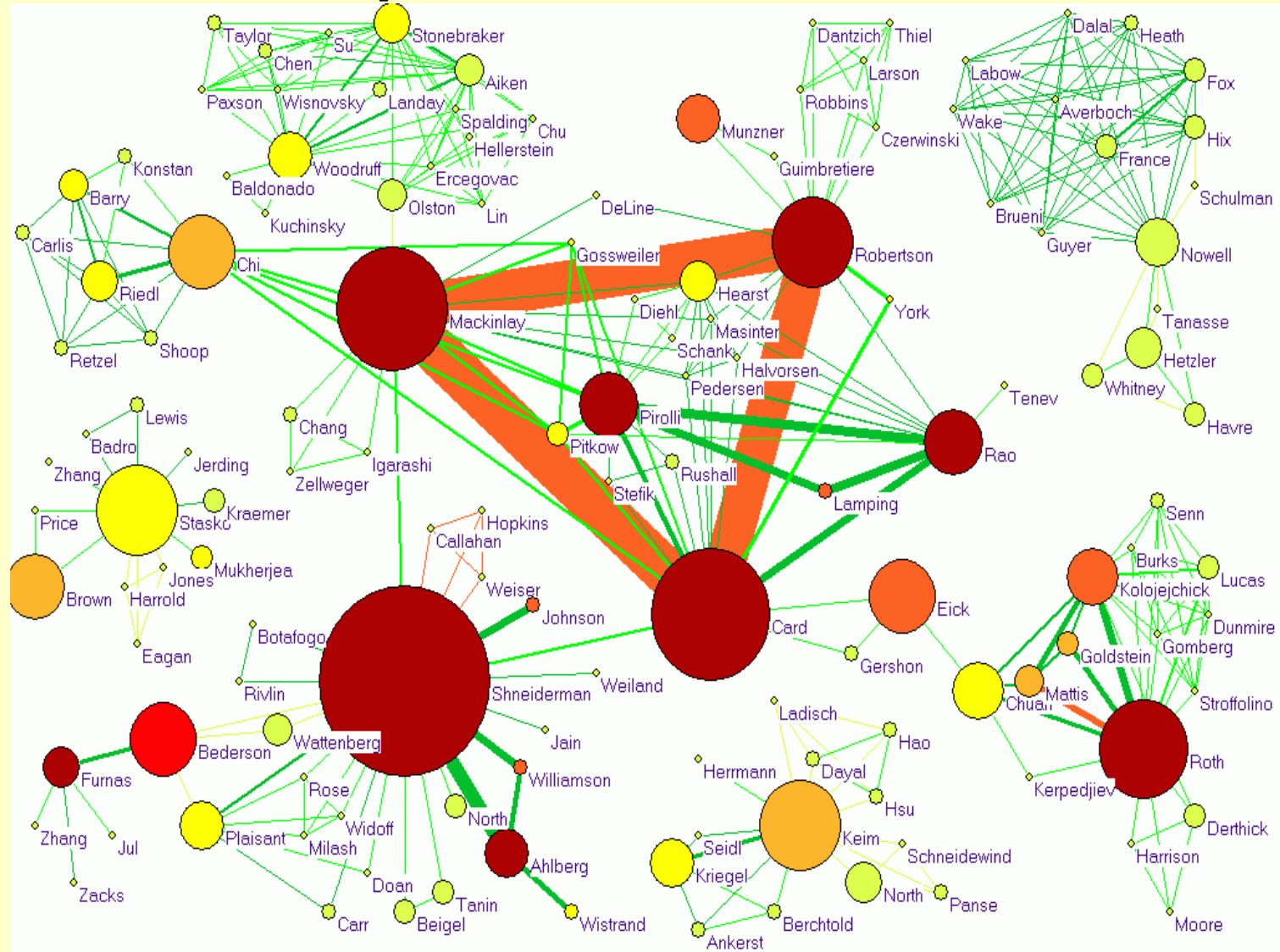
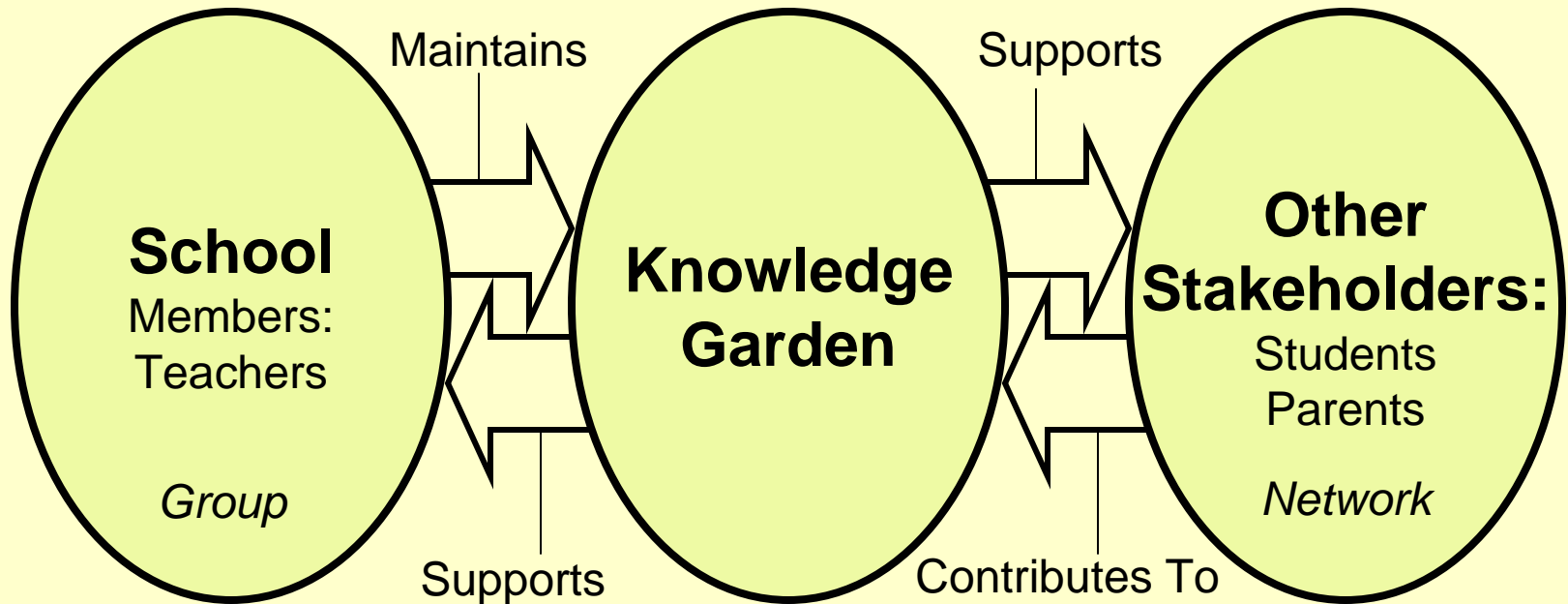
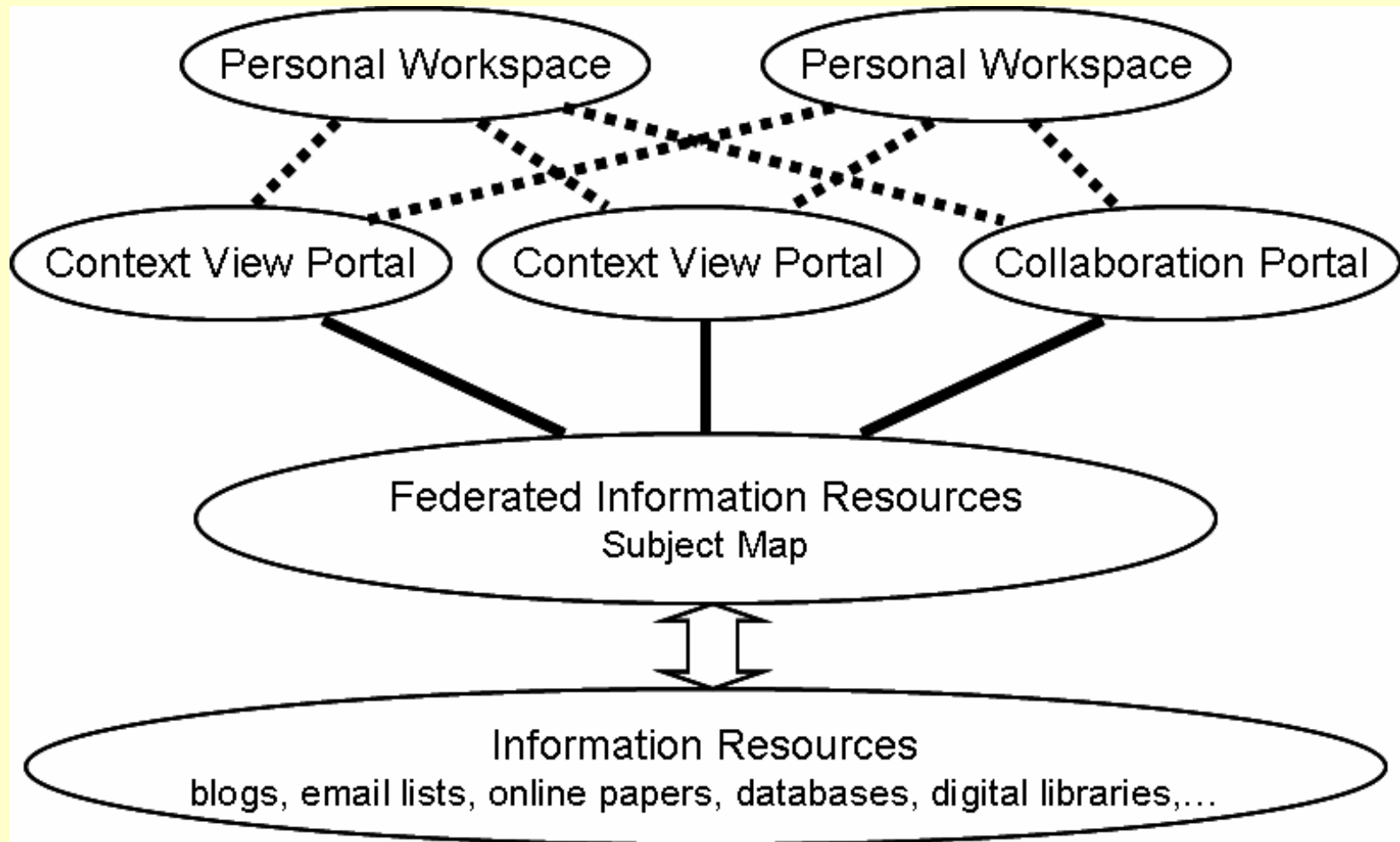


Image Courtesy Katy Borner

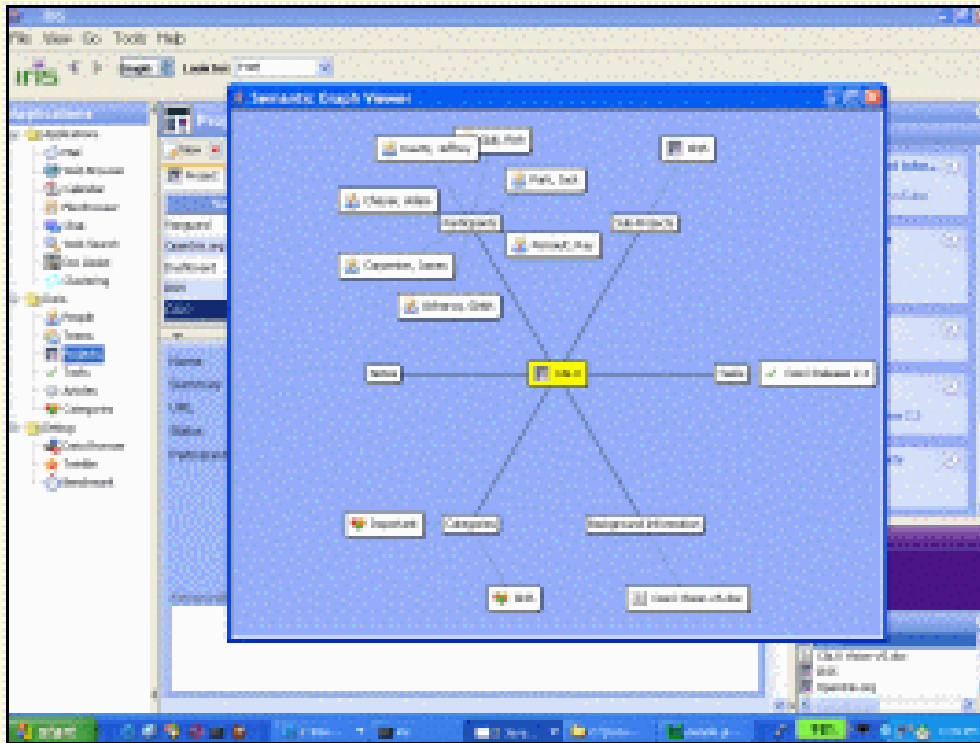
Example: Schools as Knowledge Gardens



Architecture



Related Tools: SRI International's CALO Semantic Desktop Application



<http://caloproject.sri.com>

Open Source IRIS Platform:

<http://www.openiris.org>

Related Tools: Virtual Learning Centers

Ohio University Second Life Campus



<http://www.youtube.com/watch?v=aFuNFRie8wA>

<http://www.secondlife.com/>

TopicSpaces: A Prototype



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TopicSpaces Applications

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