

*DEMO-net Workshop on
Argumentation Support Systems for eParticipation
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Capturing, Mapping and Integrating Argumentation as Project Memory in Participatory Urban Planning



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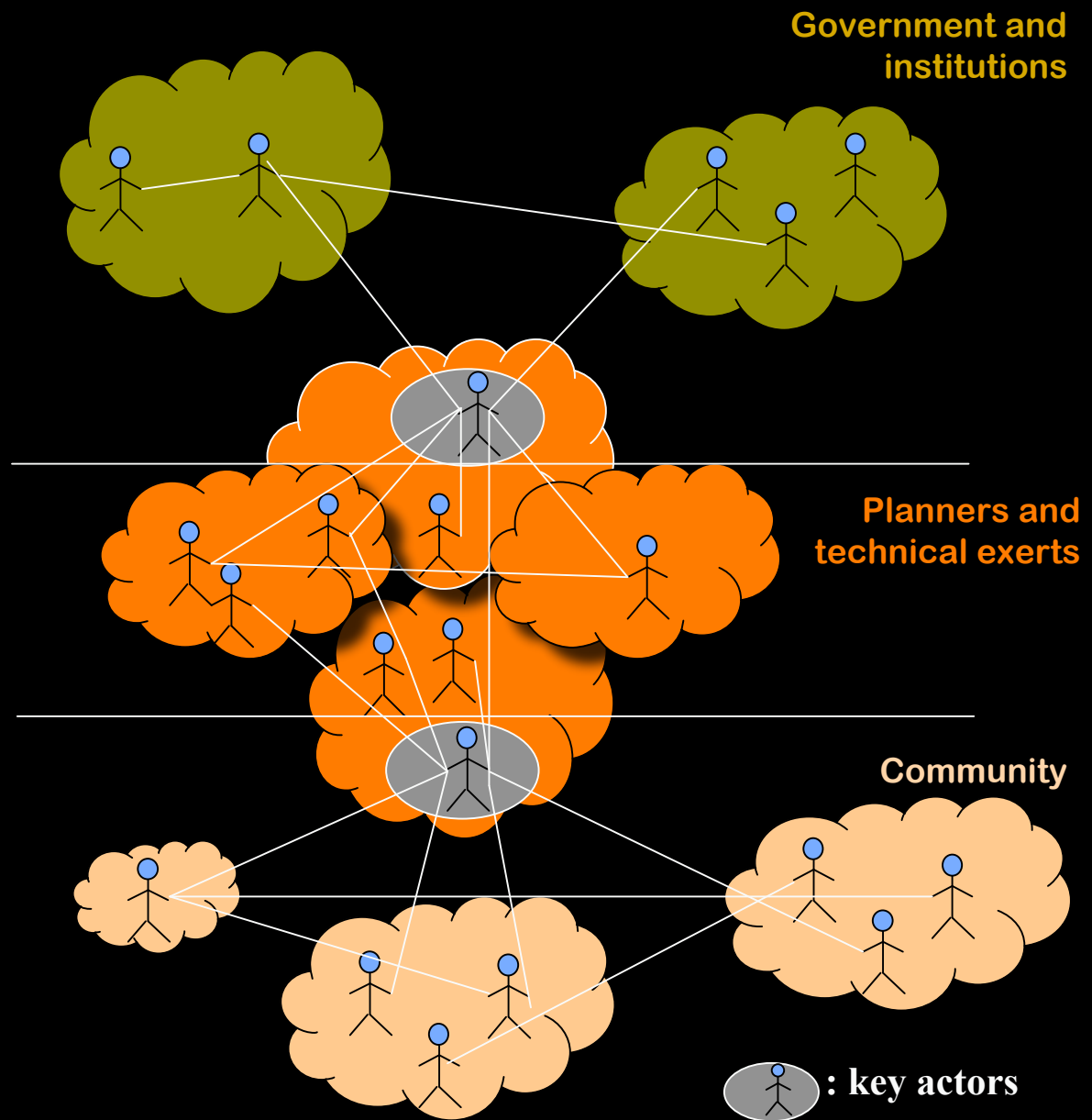
KMI - Knowledge Media Institute, Open University, Milton Keynes, UK / sbs@acm.org

PP is a **collaborative governance practice** involving institutional and non-institutional stakeholders in a collaborative process of **deliberation** in order to:

- ✓ build multiple views of problems and resources
- ✓ achieve better informed and shared decisions

The challenge is to trace the **intense process of information and knowledge exchange and production** through deliberation and reflection

...loss of **democratic sharing of information and building knowledge** about the project between stakeholders; **weakening of transparency and accountability** of the PPP itself.



overall aims

Support Participatory Planning Processes in order to improve:

- ✓ management and transferability of complex, evolving and eclectic information and knowledge produced during participatory processes
- ✓ transparency, evidence and accessibility of the rationale behind decisions, explaining and showing the transition from consultation contents to decisions

Research hypotheses: the memory system

We are investigating the development of a **memory system** that aims at supporting:

1) **transparency and accountability** of planning decisions trying to link:

- consultation results
- technical choices and
- political decisions

2) **democratic sharing of information and building novel knowledge** about the project: trying to represent in an integrated environment the information produced and knowledge generated throughout the Participatory Process; capturing traces and contextualizing them to the evolution of the Planning Project

Memory System

Transparency and
Accountability
Improvement



Definition of Rules
and Schedule

Sharing, producing,
managing Knowledge



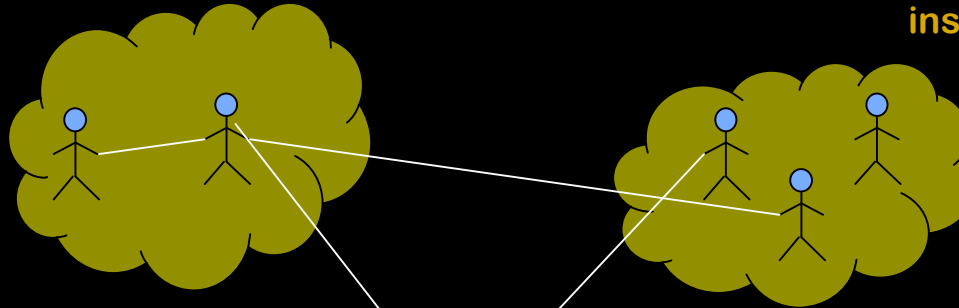
Technical feasibility and
Planning Alternatives def.

Publicity: Informing,
Involving new key actors

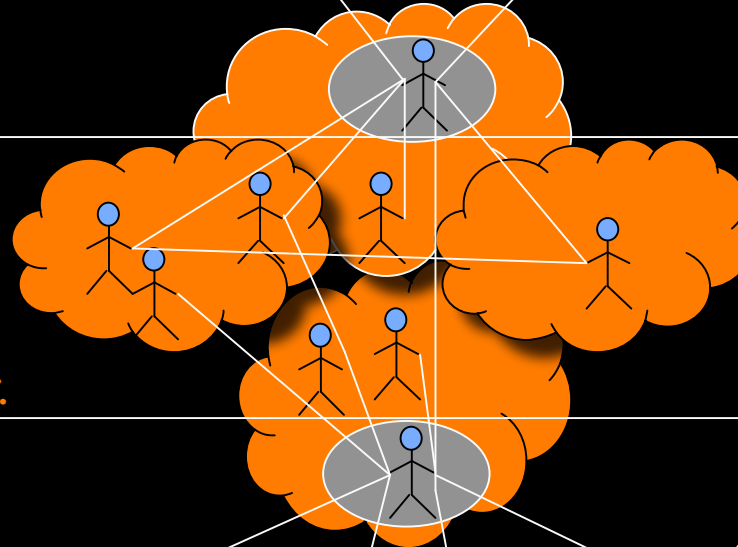


Contributing with local knowledges
about needs and resources

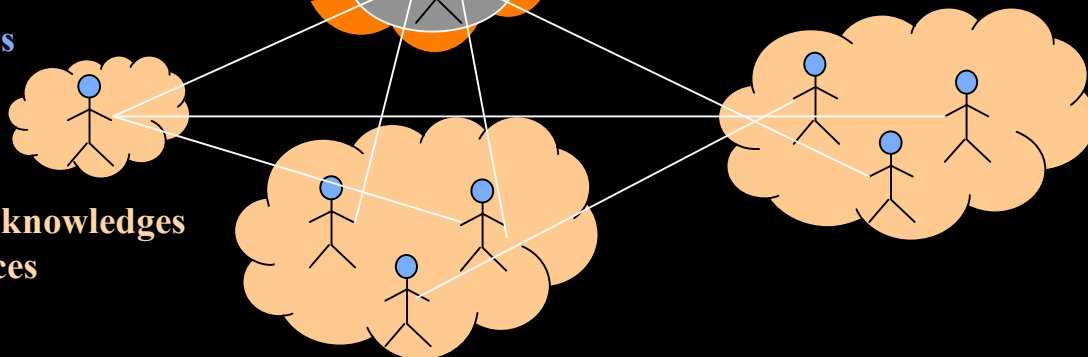
Government and
institutions



Planners and
technical exerts



Community



How?

mediating and capturing deliberation in order to:

- ✓ promote more reflective interaction by making tangible the connections between planning options, arguments and other issue/documents;
- ✓ build common awareness and understanding, not only of the planning issues at stake, but also of the diversity of viewpoints and counterarguments in play;
- ✓ maintain coherence between the past and the future, by helping stakeholders to navigate the history of the project in helpful ways.

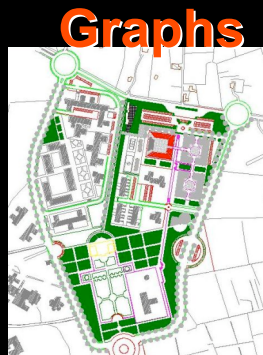
The Memory Environment: COMPENDIUM

Compendium is a visual hypermedia and sensemaking tool. It enables the rapid construction of multimedia group memory environments (many case studies). Used to build a PPP memory so as to capture, index, and visualize the connections between information, issues, options and arguments generated throughout the project

Open environment in which dialogues, narratives, conversational models, flux of thoughts can be represented and stored by different mediums:



Texts

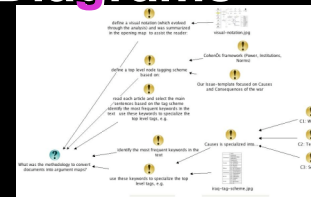


Graphs

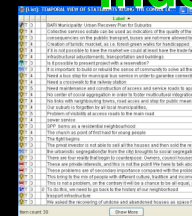


Symbols

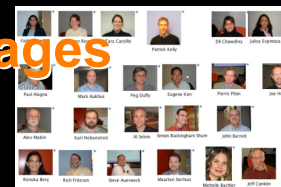
Diagrams



Indexes



Images



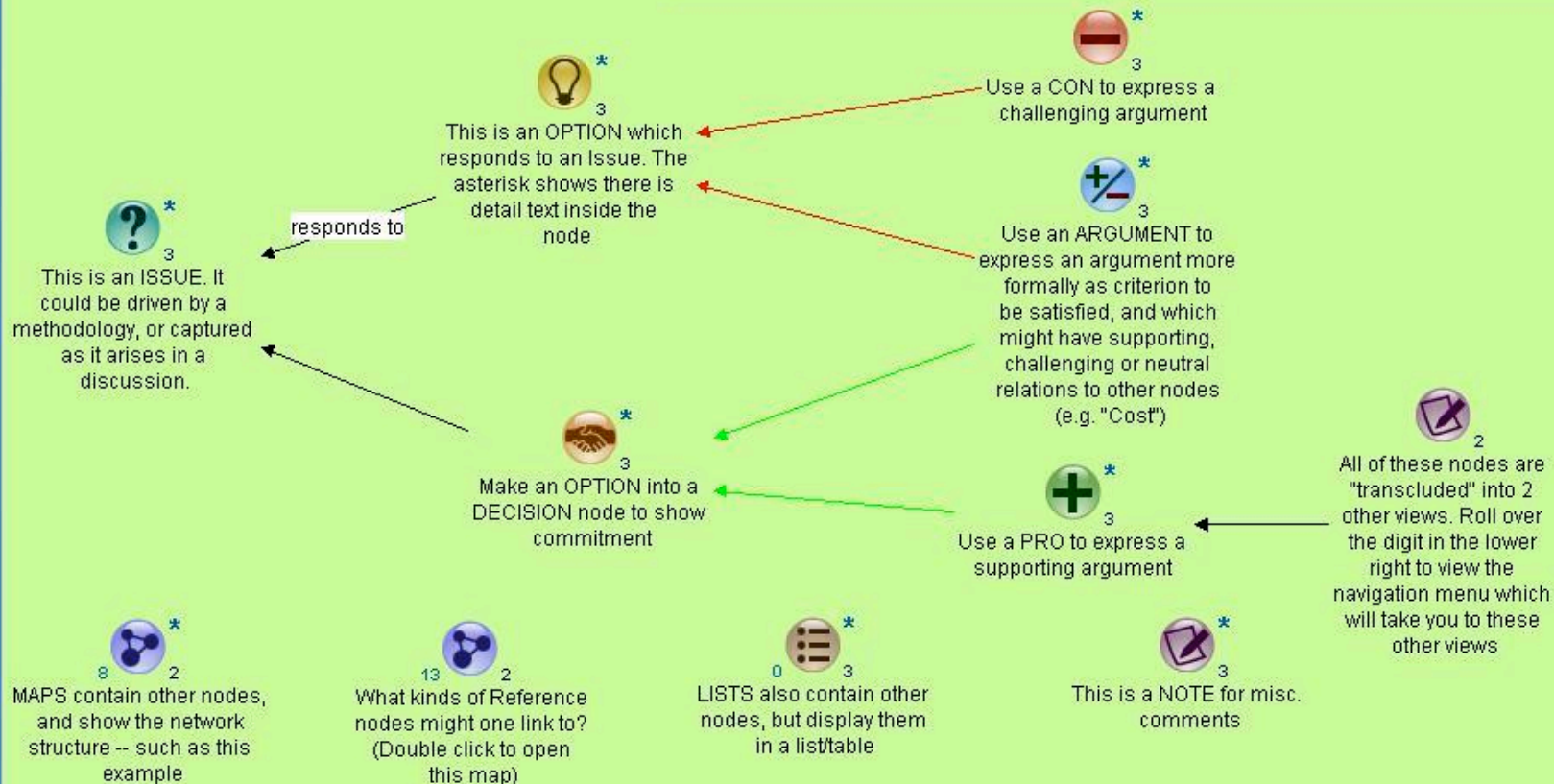
The Memory Environment: COMPENDIUM

[Map]: How to navigate in the system?

NODE TYPES



www.CompendiumInstitute.org



Case Study

A Participatory Planning Process carried out by **Engineers Without Frontiers (I.S.F.)** (association for social promotion of cooperation and development) within the community of San Pietro Piturno (Southern Italy)



San Pietro Piturno memory support system: SPPmem

"SPP Mem" is a Memory support system designed for the Regneration Programme of urban suburbs in San Pietro Piturno (SPP) in southern Italy

The system has been designed in order to help ISF and the Planning Project team in charge of the project to capture, map and visualize not only information about the Programme but also about the issues, options and arguments generated and raised throughout the Consultation process

Step 1: A **post-hoc analysis of videos** collected during community consultations in order to assess Compendium's expressive capabilities and elicit ISF reactions

Two recorded face-to-face meetings have been mapped into the prototype memory system, to explore the structures, visual language, tagging schemes and views that can be provided

San Pietro Piturno memory support system: SPPmem



15

How to navigate in the system?



4

Actors - Who they are? What they said?



10

Consultation meeting: Contents and Dialogues



10

Localize the discussions



4

The history of Consultation Meetings



4

The Technical Plan: "The Neighborhood Agreement" Project



SAN PIETRO PITURNO

Memory Support System

SPPMem

12

2

What is this?

San Pietro Piturno memory support system: SPPmem

Each element in the system (e.g. people, buildings, issues, options, arguments, documents) is represented as a node of the hypermedia database, indexed by views defined by 4 different dimensions:

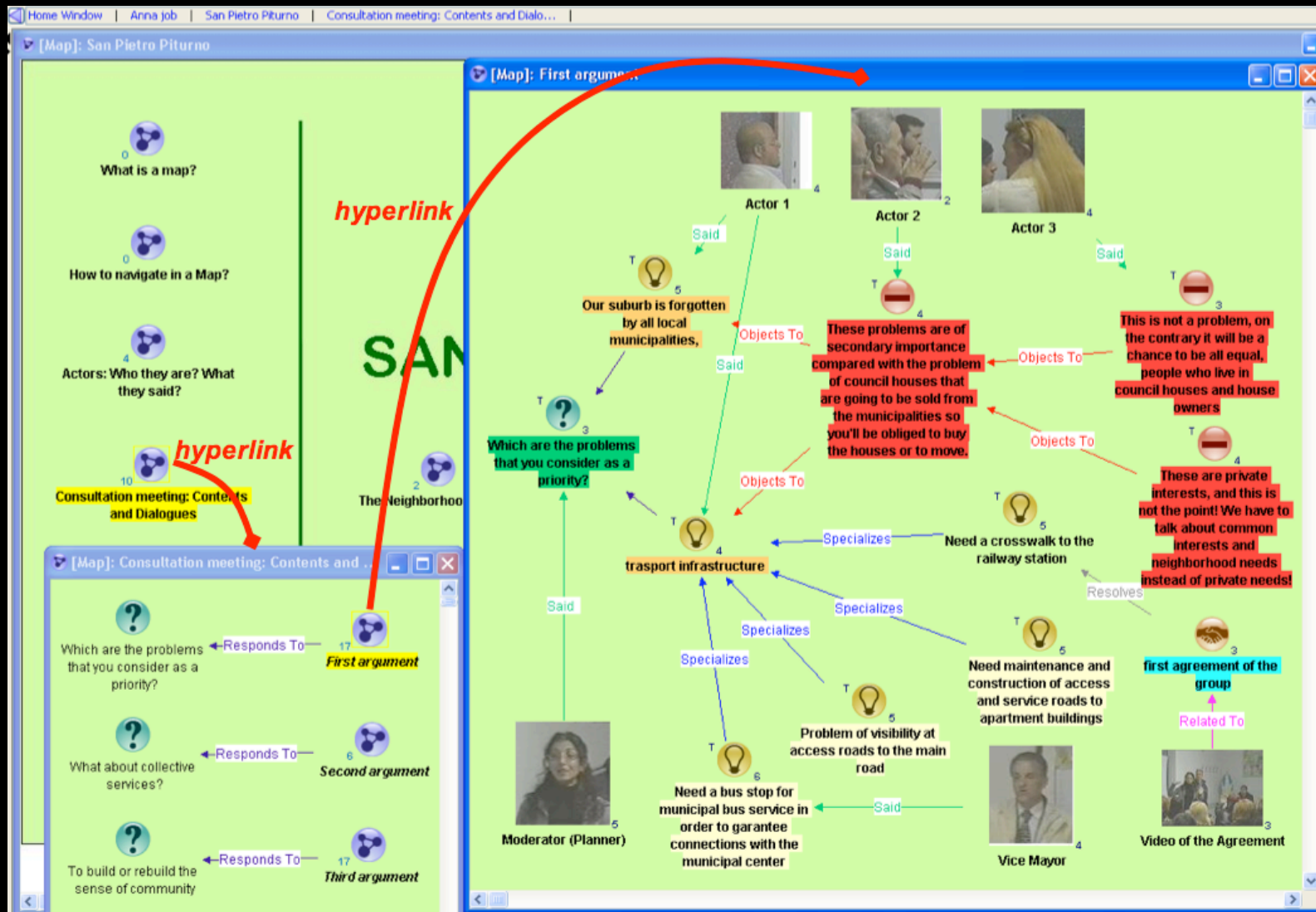
- **social**: which person/stakeholder group contributed the element, and their role
- **conceptual**: what discussion(s), about what topics, the element arose
- **geographical**: the area or physical object (e.g. building) to which the argument pertains
- **temporal**: when an element occurred along the planning process

The screenshot displays a web application titled "Compendium: Anna De Liddo [Compendium server]". The main content area is a map titled "[Map]: San Pietro Piturno Community" showing eight actors (Actor 1 to Actor 8) with their photos and associated information. Each actor has a "General informations" icon and a "What she/he said" icon. A red arrow labeled "hyperlink" points from the "General informations" icon of Actor 1 to a pop-up window titled "[Map]: General informations". This window contains a list of fields for data entry, each with a question mark icon and a pencil icon, with instructions to "clic on this icon and enter the data". The fields are: Name & Surname, Association (Representative of), Work, Role(if any, in the Planning process), and Description (add news about you). Another red arrow labeled "hyperlink" points from the "What she/he said" icon of Actor 1 to a pop-up window titled "[List]: List of personal statements". This window contains a table with columns for "Img", "T", and "Label".

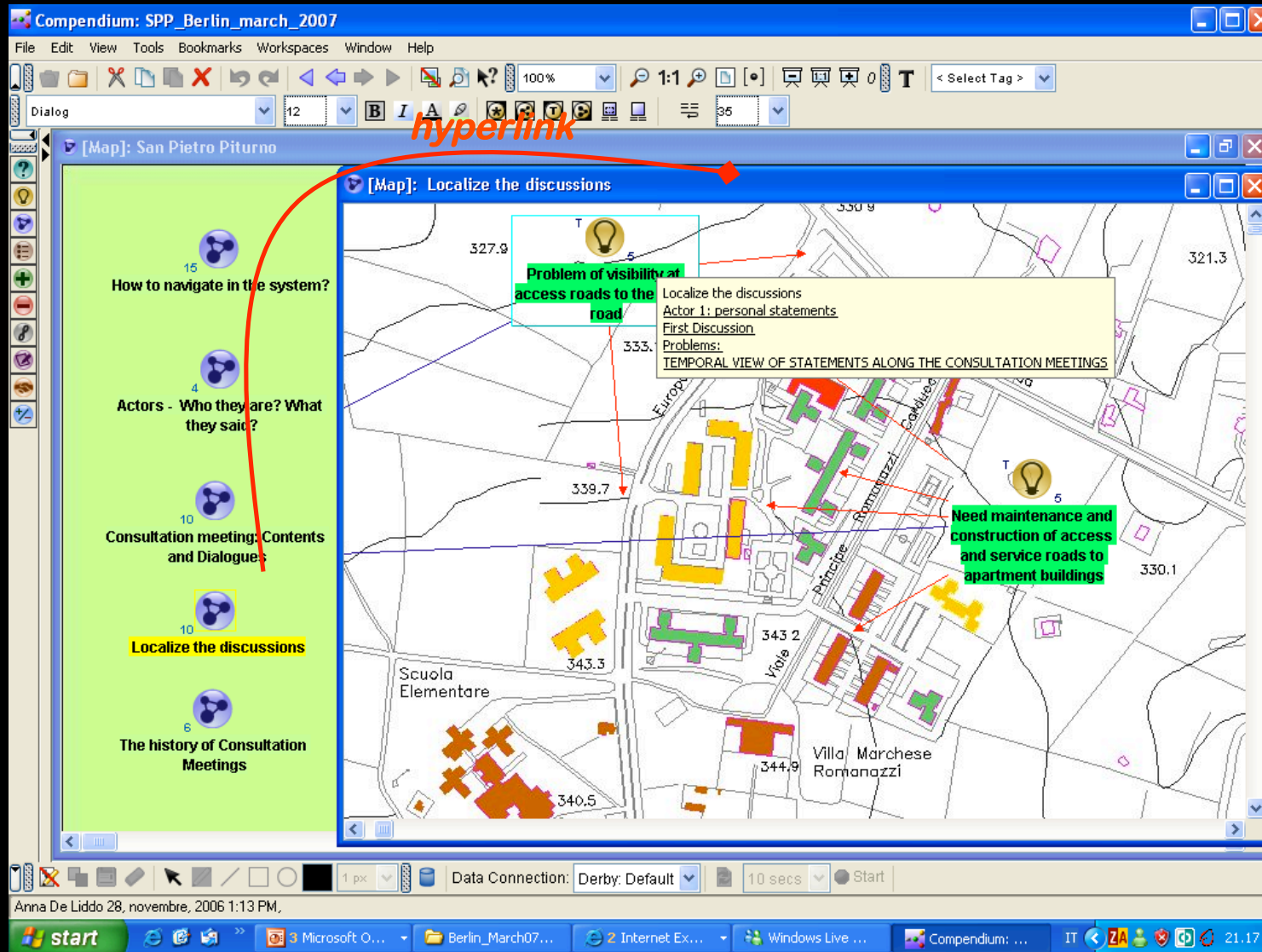
Img	T	Label
	5	Need a crosswalk to the railway station
	5	Need maintenance and construction of access and service roads L...
	5	Our suburb is forgotten by all local municipalities,
	5	Problem of visibility at access roads to the main road
	4	These are private interests, and this is not the point! We have to tal...
	4	trasport infrastructure

Item count: 6 Show More

Social Dimension (Photos of the stakeholders are associated to both the general info about them and the whole list of personal statements they raised all along the consultation process)



Conceptual Dimension (Argumentative contents are organized by discussions, and then represented with IBIS model)



Geographical dimension: the area or physical object (e.g. building) to which the argument pertains

Compendium: SPP_Berlin_march_2007

File Edit View Tools Bookmarks Workspaces Window Help

Dialog 12 B I A 25

[Map]: The history of Consultation Meetings

FIRST CONSULTATION MEETING
April 12th

hyperlink

SECOND CONSULTATION MEETING
April 28th

39
TEMPORAL VIEW OF STATEMENTS ALONG THE CONSULTATION MEETINGS

[List]: TEMPORAL VIEW OF STATEMENTS ALONG THE CONSULTA...

...	Label	Create ...
T 4			Our suburb is forgotten by all local municipalities,	Tue Nov 28 ...
T 3			transport infrastructure	Tue Nov 28 ...
T 4			Need a crosswalk to the railway station	Tue Nov 28 ...
T 5			Need maintenance and construction of access and servic...	Tue Nov 28 ...
T 5			Problem of visibility at access roads to the main road	Tue Nov 28 ...
T 3			These problems are of secondary importance compared ...	Tue Nov 28 ...
T 3			This is not a problem, on the contrary it will be a chance to...	Tue Nov 28 ...
T 3			These are private interests, and this is not the point! We h...	Tue Nov 28 ...
T 4			First Discussion	ue Nov 28 ...
T 3			Needs	ue Nov 28 ...
T 3			TEMPORAL VIEW OF STATEMENTS ALONG THE CONSULTATION MEETINGS	ue Nov 28 ...
T 3			Vice Mayor: personal statements	ue Nov 28 ...
T 3			BARI Municipality: Urban Recovery Plan for Suburbs	Tue Nov 28 ...
T 3			the urbanistic segregation(far from the city) brought to so...	Tue Dec 05 ...
T 3			There are four reality that begin to counterpose: Owners, c...	Tue Dec 05 ...
T 3			This bring to the mix of people with different culture, traditi...	Tue Dec 05 ...
T 3			SPP boms as a residential neighbourhood	Tue Dec 05 ...
T 3			The privat investor is not able to sell all the houses and th...	Tue Dec 05 ...
T 3			The fight begins	Tue Dec 05 ...
T 3			consequencies on the public transport, buses are not m...	Tue Dec 05 ...
T 4			No links with neighbouring towns, road acces and stop fo...	Tue Dec 05 ...
T 4			No center of social aggregation in order to foster multicult...	Tue Dec 05 ...

Item count: 39 Show Less

Data Connection: Derby: Default 10 secs Start

start 3 Microsoft O... Berlin_March07... 2 Internet Ex... 2 Messenger Compendium: ... IT 21.34

Temporal dimension: when an element occurred in planning process

Compendium: SPP_Berlin_march_2007

File Edit View Tools Bookmarks Workspaces Window Help

Dialog 12 B I A 25

[Map]: The history of Consultation Meetings

hyperlink

FIRST CONSULTATION MEETING
April 12th

SECOND CONSULTATION MEETING
April 28th

[Map]: FIRST CONSULTATION MEETING April 12th

first agreement of the group

Second agreement of the group

related to

Related to

Video of the Agreement

Video of the Agreement

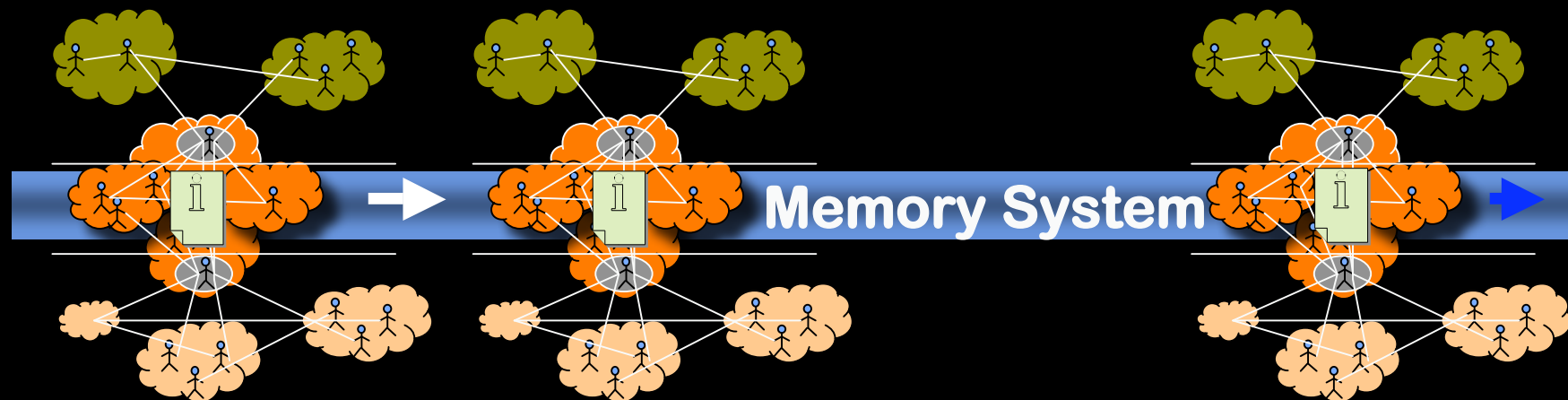
39
TEMPORAL VIEW OF STATEMENTS ALONG THE CONSULTATION MEETINGS

Temporal dimension: when a decision or agreement in the planning process

Preliminary results and future agenda

In this case study we have tested the system as a **Project Memory aid**:

1. to represent and reconstruct the group memory of consultation meetings
2. to allow the planning team to navigate and reuse the contents of those meetings

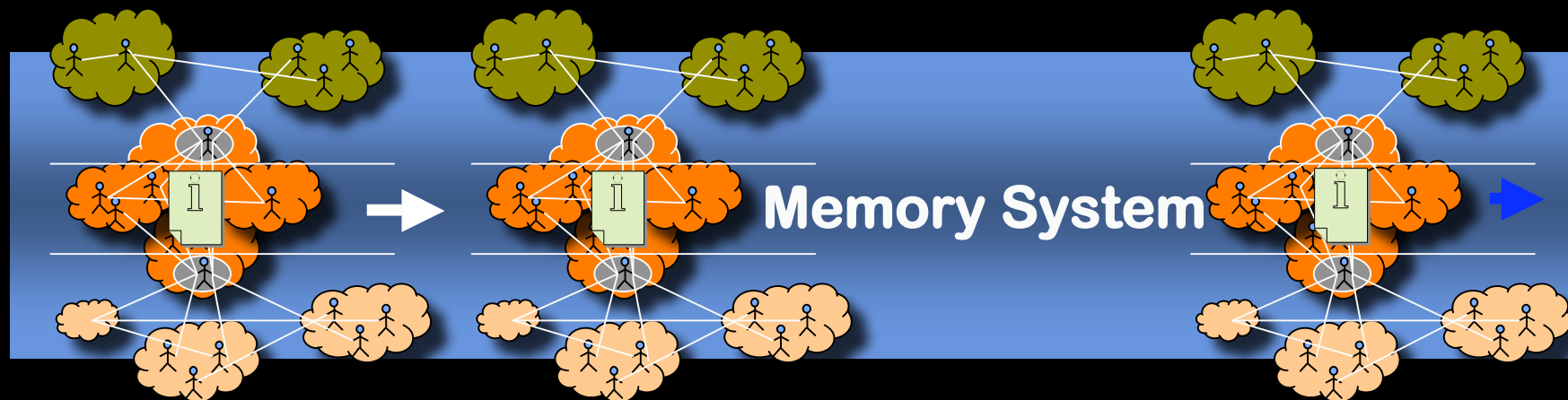


In a second case study:

We plan to open the use of the memory system to a wider community on the WWW, allowing automatic or semi-automatic posting of statement and arguments to the Compendium maps.

Challenge:

To support these and other activities, to build confidence with the memory system, firstly as an internal knowledge management tool, and then moving to the point where it may be introduced to the community



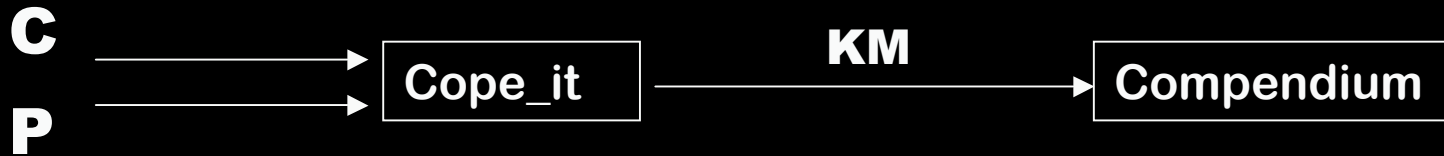
Integration of the system with an on line argumentation support tool (CoPe_it)

The screenshot displays the CoPe_it web application interface. At the top left is the logo "CoPe_it!" with the tagline "To cope better, solve it with a CoP". The date "Monday, July 17, 2006" is shown in the center, and the user is logged in as "Group User!" with a "Log out" link. A navigation bar contains "1 Users Currently Online", "Join an Ongoing Discussion", "View Closed Discussions", and "View Users of Your Group". Below this, a welcome message says "Welcome to group: 1st CoP" with links for "View detail window", "View submission dates", "View message creators", and "Show help".

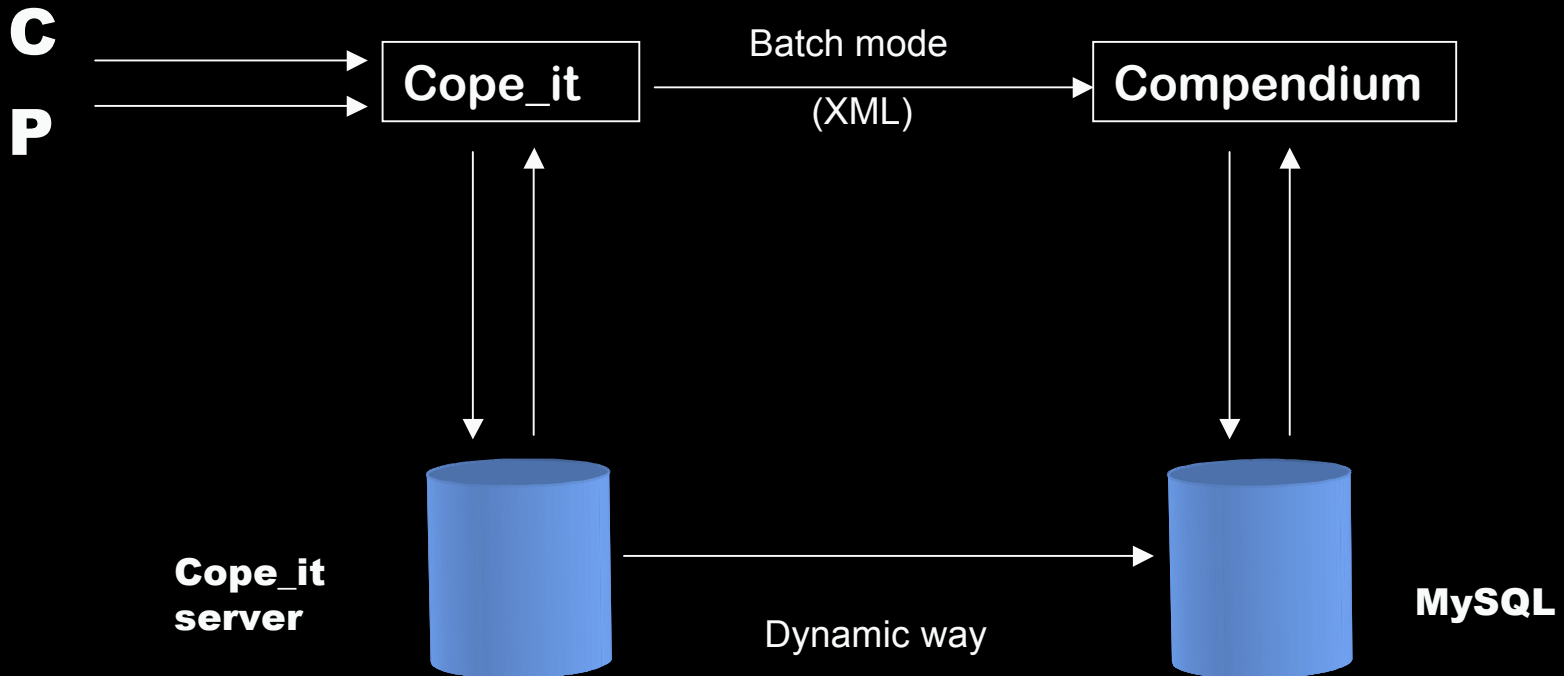
The main content area is titled "Ongoing discussion: The establishment or not of non-state universities". It features a hierarchical tree structure of discussion points:

- [-] The establishment or not of non-state universities
 - [+] Non-state profit universities
 - [+] Students fees will finance high quality education
 - [-] High student fees may lead to high profits and not high level education
 - [+] They will attract foreign students and income for the national economy
 - [+] Highly dependent on sponsors
 - [-] *The only sponsors will be the students*
 - [-] Finally big enterprises will be the main sponsors
 - [+] No enterprises will sponsor these universities
 - [-] *Professors' salaries will be from the students' money*
 - [-] This is not bad: students' fees will be a good source for paying proper salaries to the Professors
 - [-] There will be many cases where students will 'buy' their degrees
 - [-] These private universities will be predominantly companies and not educational Institutions
 - [-] Low level of studies
 - [+] High level of competition will result in higher level of studies
 - [+] More options will be offered concerning subjects and specializations
 - [-] It will be the 'easy solution' for those who can succeed in the state university entry exams
 - [-] *This is not bad - they will offer them a solution*
 - [-] More effort would required and not 'easy solutions'
 - [+] 'Easy solutions' are disastrous
 - [+] Non-state non-profit universities
 - [+] Independent from state authorities and enterprises

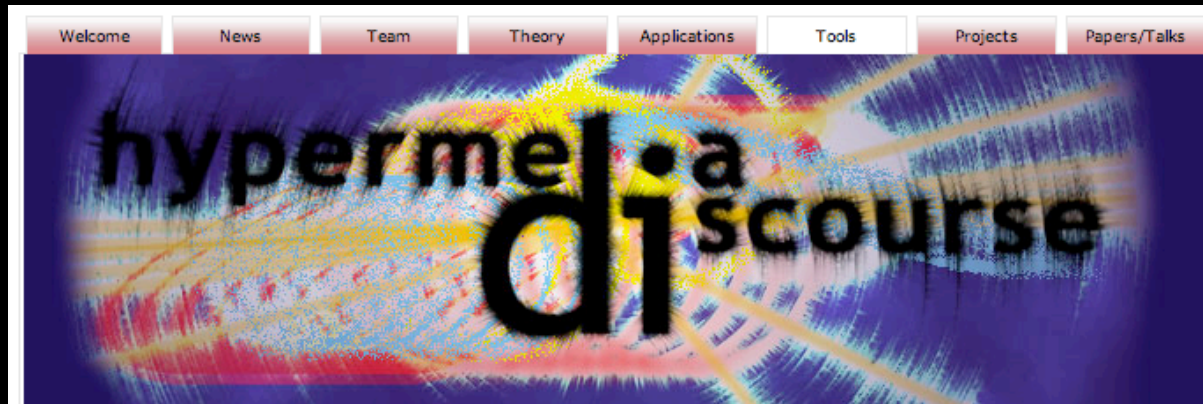
Manual, human assisted way



Automatic way

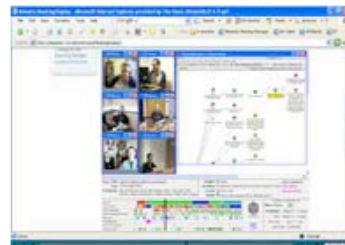


<http://kmi.open.ac.uk/projects/hyperdiscourse>



Compendium: The action research platform around which we're developing the Hypermedia Discourse approach is Compendium. This supports real time knowledge construction in meetings, or can be used for personal information management and reflection. This is a robust hypermedia mapping tool that is freely available with a growing community of practice, and developer community. Now integrated with the Moodle virtual learning environment as part of the [LabSpace](#).

Screencasts: [Knowledge Mapping Open Educational Resources](#)



Memetic: Memetic is an extension of Compendium's meeting capture capability by integrating Compendium maps with the Access Grid video conferencing system, generating semantically indexed meeting replays. Now you can jump to the point in a meeting replay when a particular argument was made, when a document was opened, or when an agenda item was discussed.

Screencasts: [Booking, recording and replaying Memetic meetings](#)

Thank you