Compendium is a visual hypertext tool for mapping discussions and collaborative modelling. See the Compendium Institute for details, and the EPSRC eScience funded CoAKTinG Project for its deployment in the context of Access Grid rooms

---

This site: 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)

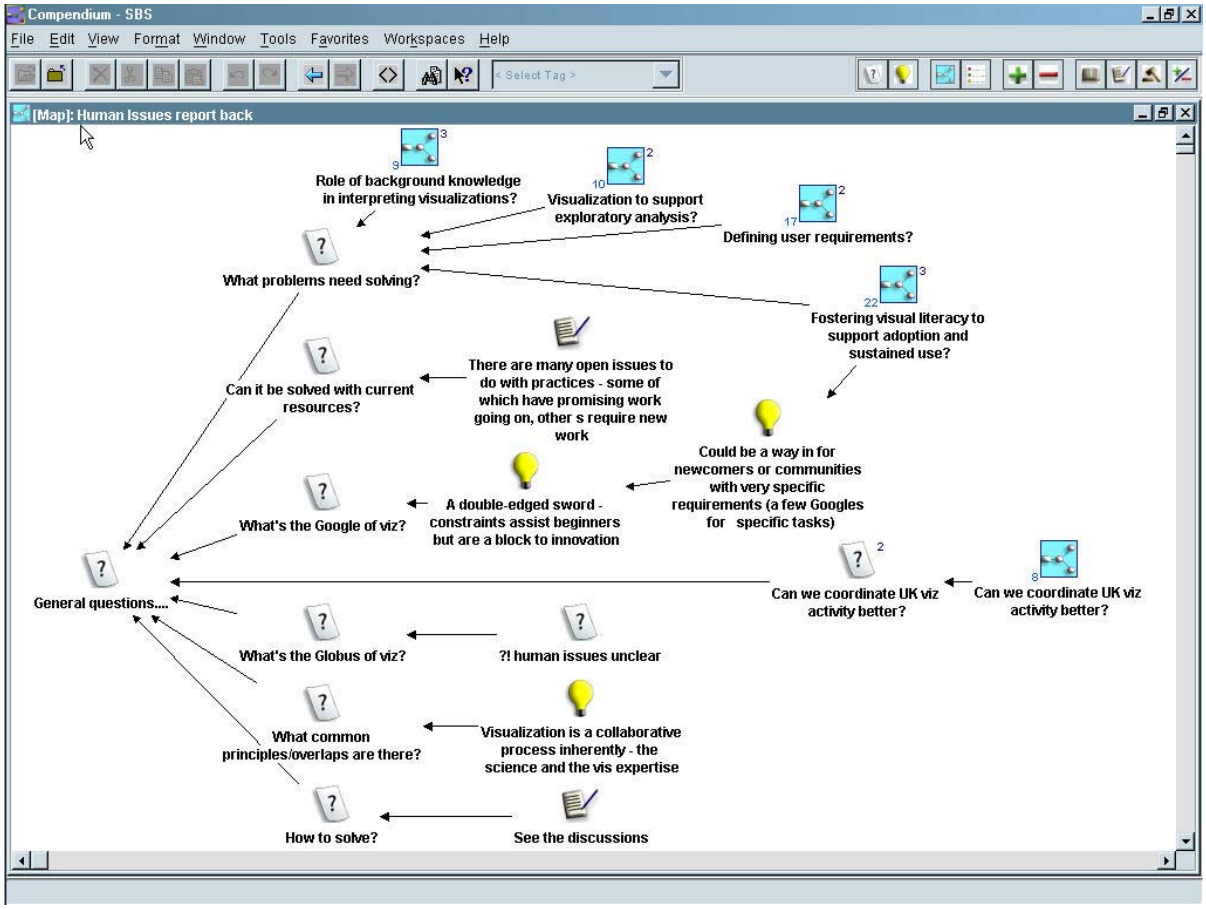
Closing session: Working Group priorities (Short, Medium and Long term)

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

Print version

All maps + outlines to print (PDF)

Human Issues report back



General questions....

What problems need solving?

Role of background knowledge in interpreting visualizations?

Visualization to support exploratory analysis?

Defining user requirements?

Fostering visual literacy to support adoption and sustained use?

Can it be solved with current resources?

There are many open issues to do with practices - some of which have promising work going on, other s require new work

What's the Google of viz?

A double-edged sword - constraints assist beginners but are a block to innovation

Could be a way in for newcomers or communities with very specific requirements (a few Googles for specific tasks)

Fostering visual literacy to support adoption and sustained use?

Can we coordinate UK viz activity better?

Can we coordinate UK viz activity better?

What's the Globus of viz?

?! human issues unclear

What common principles/overlaps are there?

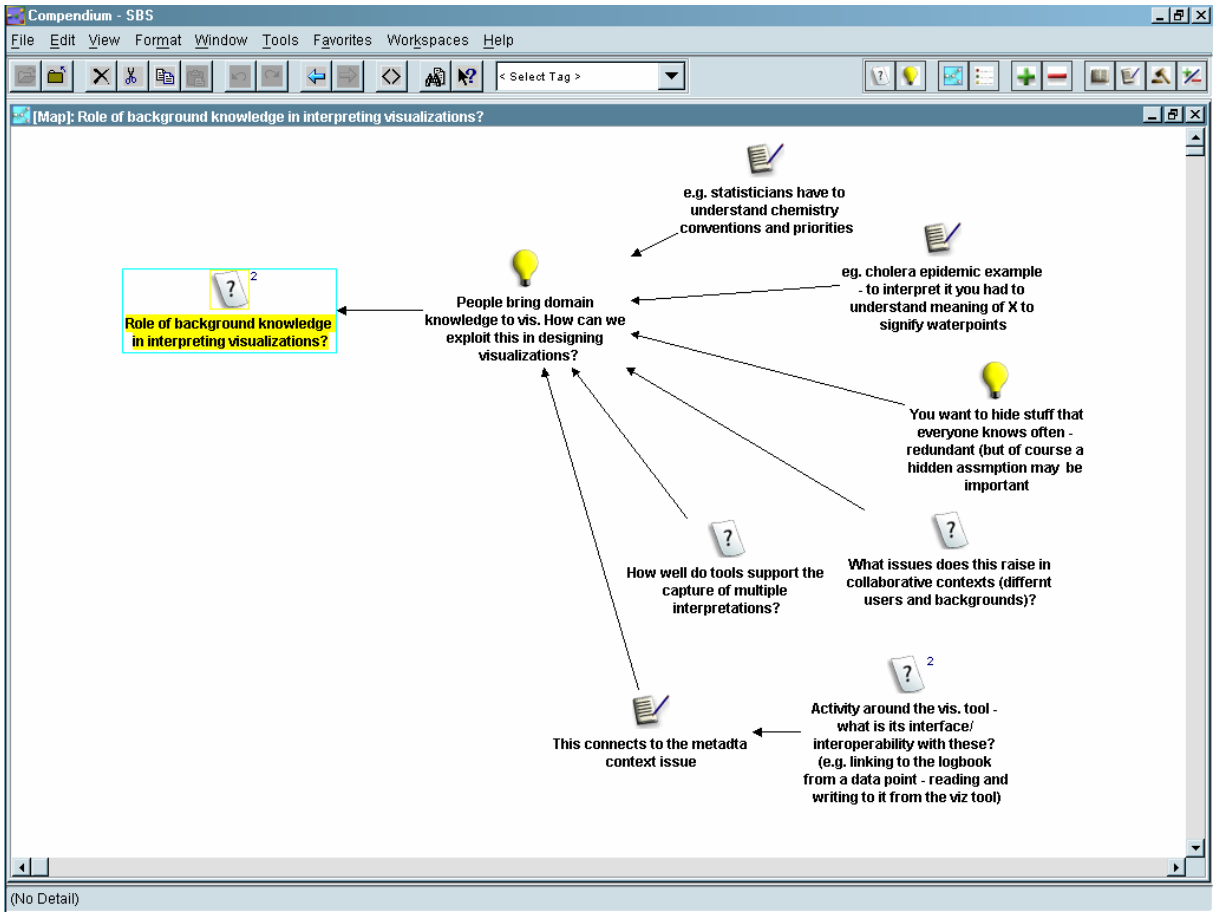
Visualization is a collaborative process inherently - the science and the vis expertise

How to solve?

See the discussions

Top

Role of background knowledge in interpreting visualizations?



Role of background knowledge in interpreting visualizations?

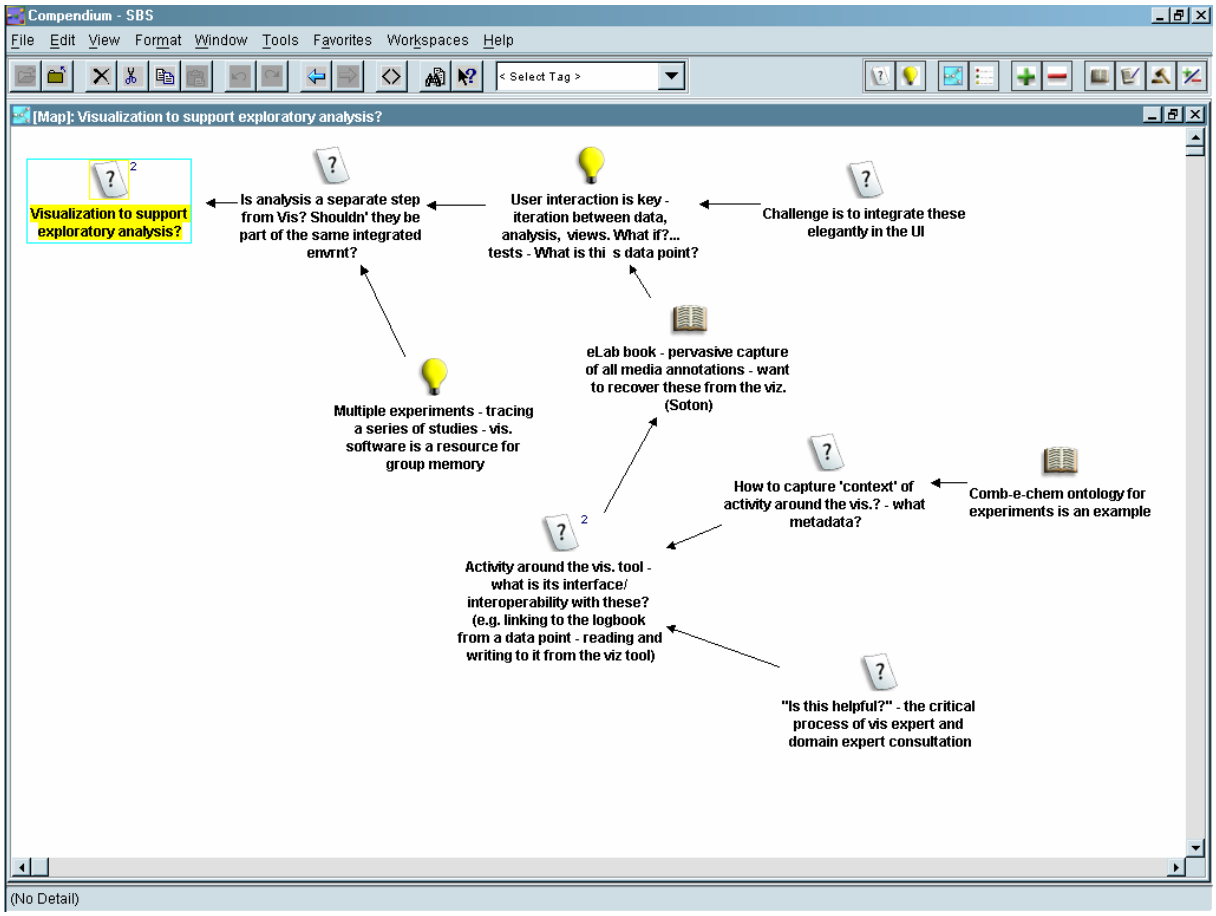
People bring domain knowledge to vis. How can we exploit this in designing visualizations?

- e.g. statisticians have to understand chemistry conventions and priorities
- eg. cholera epidemic example - to interpret it you had to understand meaning of X to signify waterpoints
- You want to hide stuff that everyone knows often - redundant (but of course a hidden assmption may be important
- What issues does this raise in collaborative contexts (differnt users and backgrounds)?
- How well do tools support the capture of multiple interpretations?
- This connects to the metadta context issue

Activity around the vis. tool - what is its interface/ interoperability with these? (e.g. linking to the logbook from a data point - reading and writing to it from the viz tool)

Top

Visualization to support exploratory analysis?



Visualization to support (eg. statistical) analysis?

Is analysis a separate step from Vis? Shouldn' they be part of the same integrated envrnt?

User interaction is key - iteration between data, analysis, views. What if?... tests - What is thi s data point?

Challenge is to integrate these elegantly in the UI

eLab book - pervasive capture of all media annotations - want to recover these from the viz. (Soton)

Activity around the vis. tool - what is its interface/ interoperability with these? (e.g. linking to the logbook from a data point - reading and writing to it from the viz tool)

How to capture 'context' of activity around the vis.? - what metadata?

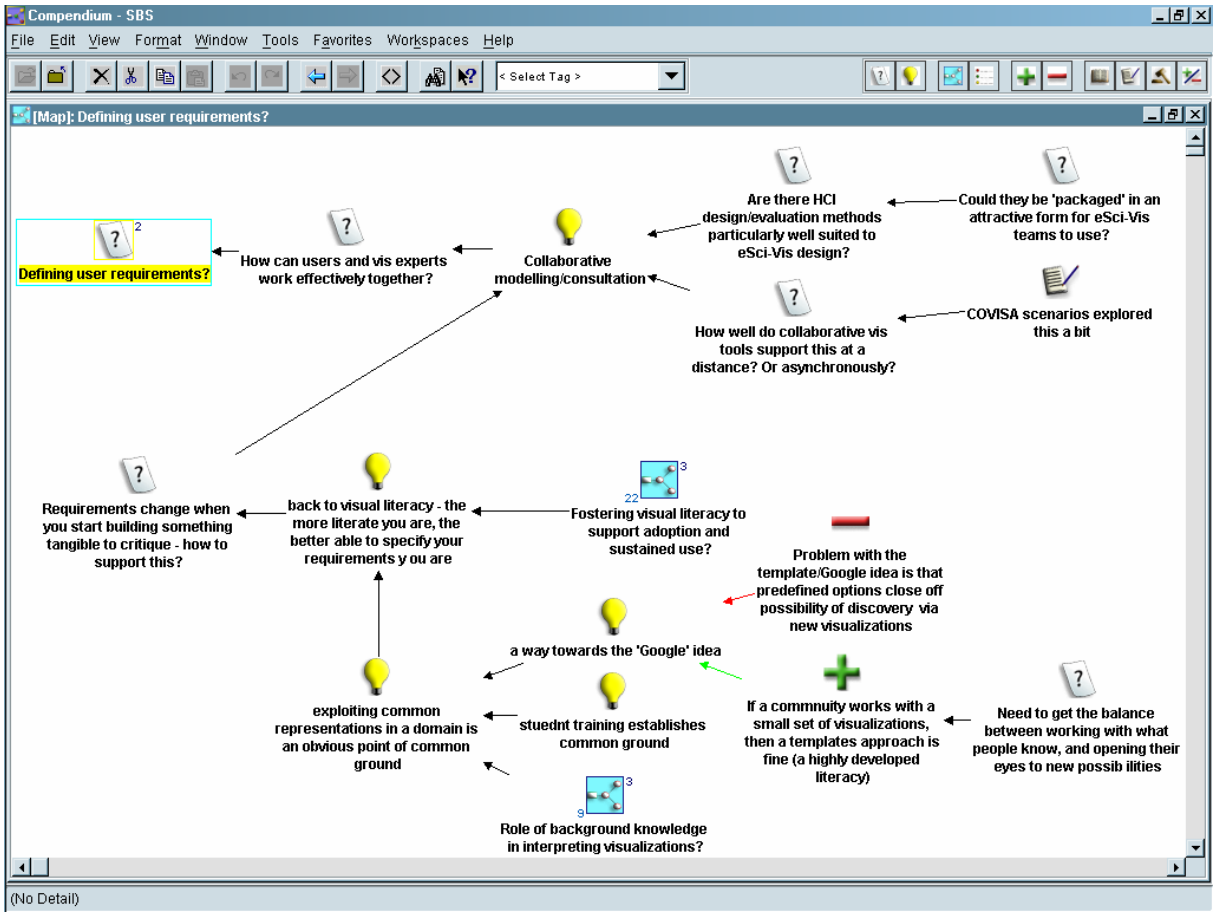

Comb-e-chem ontology for experiments is an example


"Is this helpful?" - the critical process of vis expert and domain expert consultation


Multiple experiments - tracing a series of studies - vis. software is a resource for group memory

Top

Defining user requirements?



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?

back to visual literacy - the more literate you are, the better able to specify your requirements y ou are

Fostering visual literacy to support adoption and sustained use?

exploiting common representations in a domain is an obvious point of common ground

a way towards the 'Google' idea

Problem with the template/Google idea is that predefined options close off possibility of discovery via new visualizations

If a commnuity works with a small set of visualizations, then a templates approach is fine (a highly developed literacy)

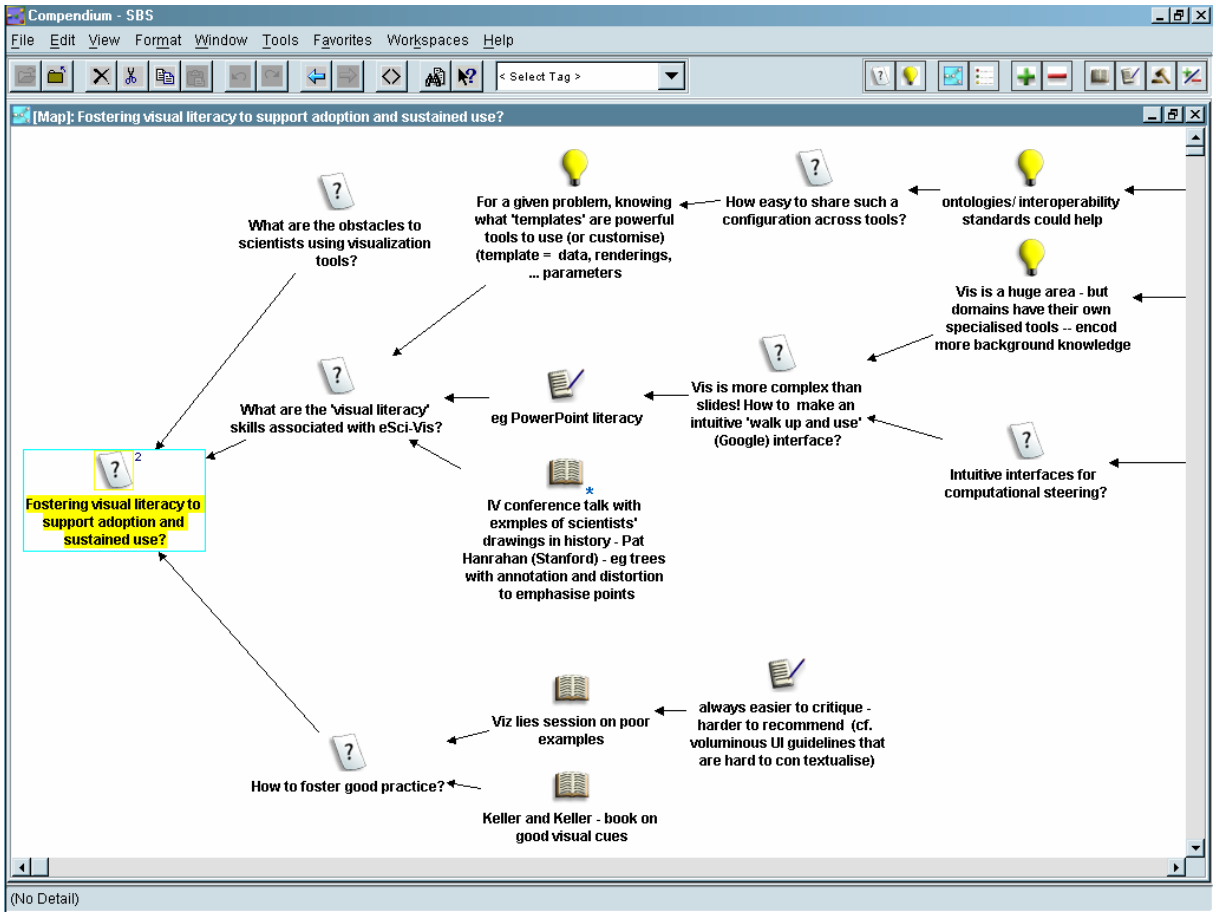
Need to get the balance between working with what people know, and opening their eyes to new possib ilities

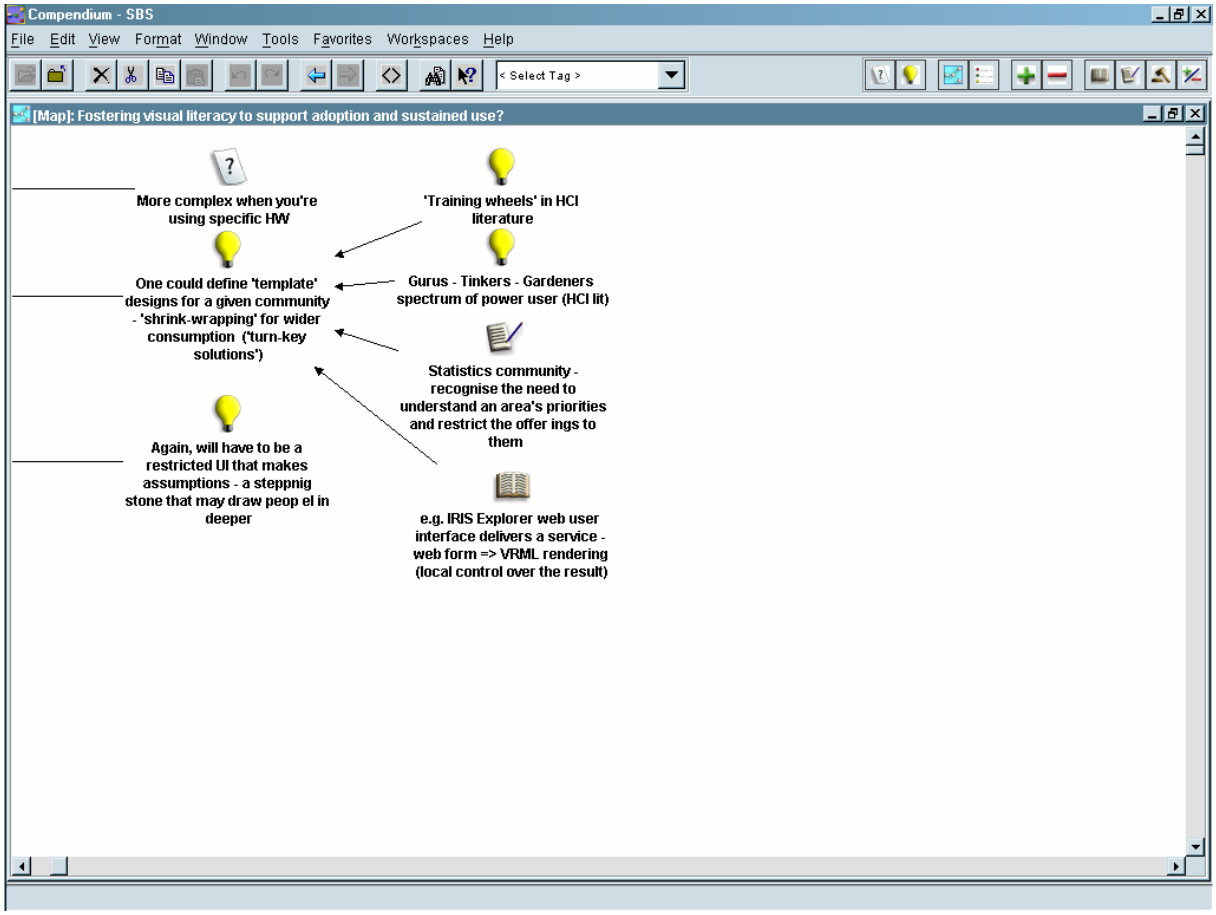
stuednt training establishes common ground

Role of background knowledge in interpreting visualizations?

Top

Fostering visual literacy to support adoption and sustained use?





Fostering visual literacy to support adoption and sustained use?

- What are the obstacles to scientists using visualization tools?
- What are the 'visual literacy' skills associated with eSci-Vis?
  - For a given problem, knowing what 'templates' are powerful tools to use (or customise) (template = data, renderings, ... parameters
    - How easy to share such a configuration across tools?
      - ontologies/ interoperability standards could help
        - More complex when you're using specific HW
  - eg PowerPoint literacy
    - Vis is more complex than slides! How to make an intuitive 'walk up and use' (Google) interface?

Vis is a huge area - but domains have their own specialised tools -- encod more background knowledge

One could define 'template' designs for a given community - 'shrink-wrapping' for wider consumption ('turn-key solutions')

'Training wheels' in HCI literature

Gurus - Tinkers - Gardeners spectrum of power user (HCI lit)

Statistics community - recognise the need to understand an area's priorities and restrict the offer ings to them

e.g. IRIS Explorer web user interface delivers a service - web form => VRML rendering (local control over the result)

Intuitive interfaces for computational steering?

Again, will have to be a restricted UI that makes assumptions - a steppnig stone that may draw peop el in deeper

IV conference talk with exmples of scientists' drawings in history - Pat Hanrahan (Stanford) - eg trees with annotation and distortion to emphasise points

other examples: graphs, tables, Role of artistry

How to foster good practice?

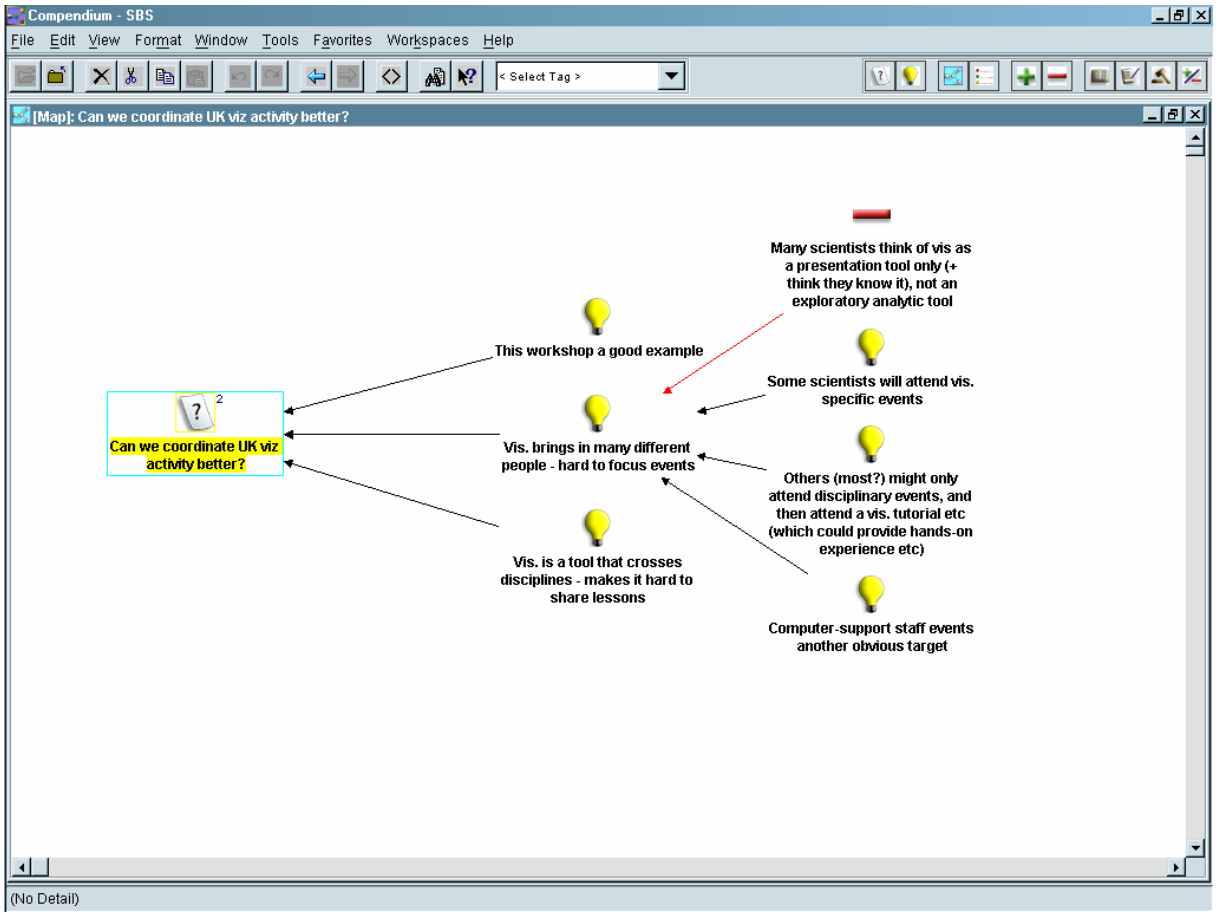
Viz lies session on poor examples

always easier to critique - harder to recommend (cf. voluminous UI guidelines that are hard to con textualise)

Keller and Keller - book on good visual cues

Top

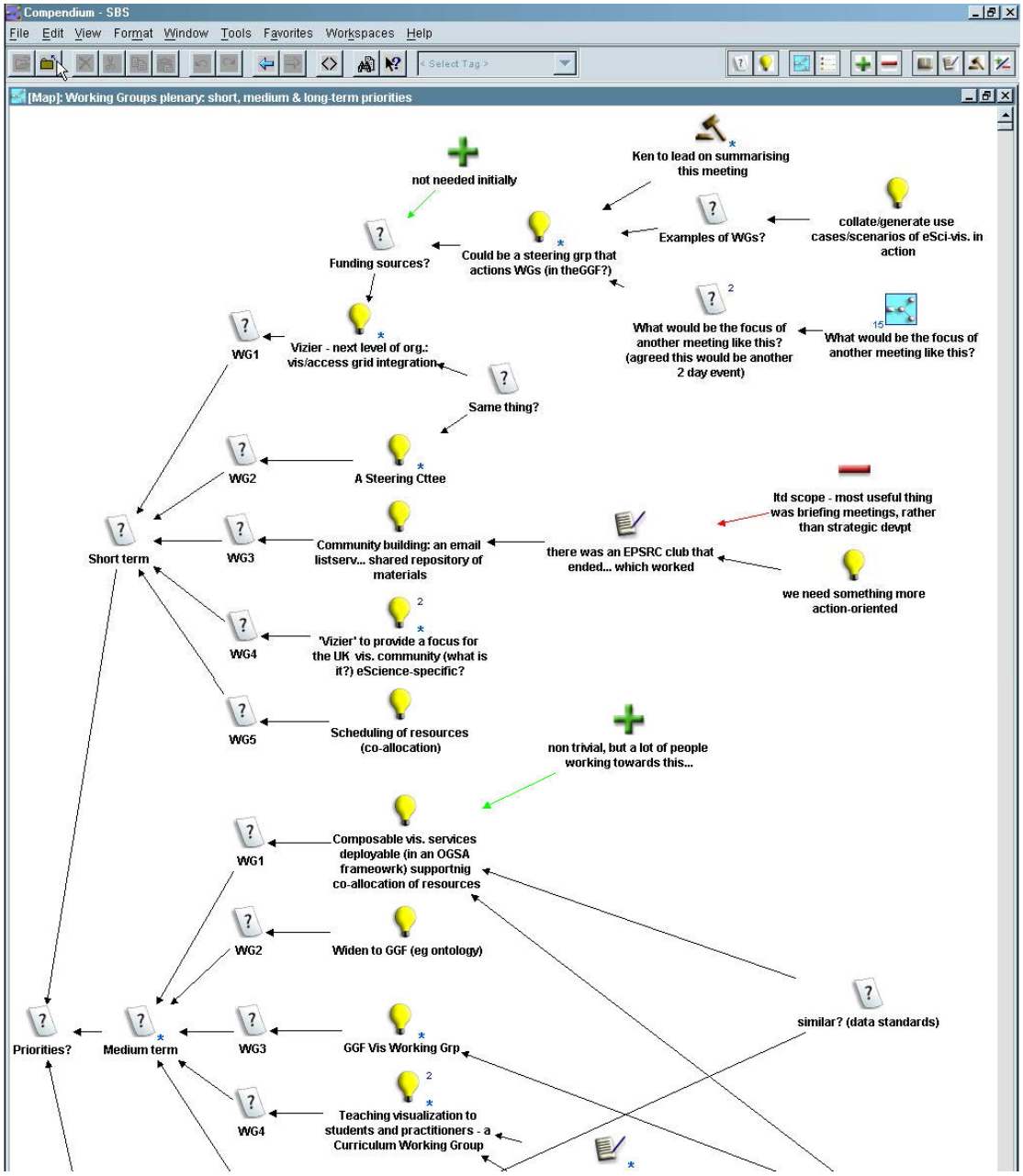
Can we coordinate UK viz activity better?

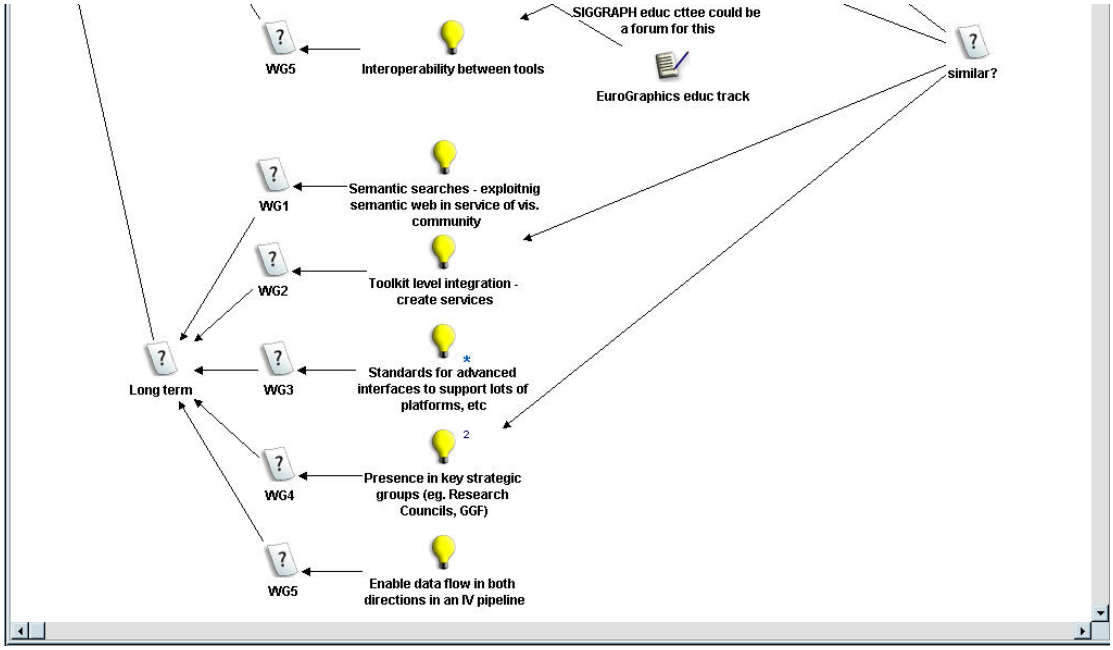


Can we coordinate UK viz activity better?

- This workshop a good example
- Vis. brings in many different people - hard to focus events
  - Many scientists think of vis as a presentation tool only (+ think they know it), not an exploratory analytic tool
    - Some scientists will attend vis. specific events
    - Others (most?) might only attend disciplinary events, and then attend a vis. tutorial etc (which could provide hands-on experience etc)
    - Computer-support staff events another obvious target
- Vis. is a tool that crosses disciplines - makes it hard to share lessons

Working Groups plenary: short, medium & long-term priorities





- Priorities?
  - Short term
    - WG1
      - Vizier - next level of org.: vis/access grid integration

        - use the AG to leverage the vis. community - eat own dogfood

        - Vizier is v short term
        - Same thing?
    - WG2
      - A Steering Cttee

-

- Funding sources?
  - not needed initially
  - Could be a steering grp that actions WGs (in theGGF?)

- UK group can bring together people easily - helps us focus when we go to GGF

- NeSC event lightweight to organise

- projects use NeSC fo project meetings


Ken to lead on summarising this meeting

- which might lead to proposals for working grps to take further (eg ontology)

- invite ontology community to help

- need for action on Chromium etc


Examples of WGs?


collate/generate use cases/scenarios of eSci-vis. in action


What would be the focus of another meeting like this? (agreed this would be another 2 day event)


What would be the focus of another meeting like this?


Same thing?


WG2


A Steering Cttee

- put on forums like this

- broker links between providers and consumers

- facilitate devpt of an ontology


Same thing?


WG3


Community building: an email listserv... shared repository of materials


there was an EPSRC club that ended... which worked


ltd scope - most useful thing was briefing meetings, rather than strategic devpt

we need something more action-oriented

WG4

'Vizier' to provide a focus for the UK vis. community (what is it?) eScience-specific?

- a portal?

- a network?

- an organisation?

- a GGF group?

WG5

Scheduling of resources (co-allocation)

Medium term

- perhaps, having written a skeleton report... move towards GGF involvement

WG1

Composable vis. services deployable (in an OGSA frameowrk) supportnig co-allocation of resources

non trivial, but a lot of people working towards this...

similar? (data standards)

similar?

WG2

Widen to GGF (eg ontology)

WG3

GGF Vis Working Grp

- target W3C vs GGF?

similar?

WG4

Teaching visualization to students and practitioners - a Curriculum Working Group

- need to collate existing courses/tutorials etc

- difference between teaching good/bad visual communication and computer science orientation

SIGGRAPH educ cttee could be a forum for this

- they're setting up a resource repository

EuroGraphics educ track

WG5

Interoperability between tools

similar? (data standards)

Long term

WG1

Semantic searches - exploitnig semantic web in service of vis. community

WG2

Toolkit level integration - create services

similar?

WG3

Standards for advanced interfaces to support lots of platforms, etc

- advanced interfaces supporting highly interactive heterogeneous networks/collaborations on the Grid

WG4

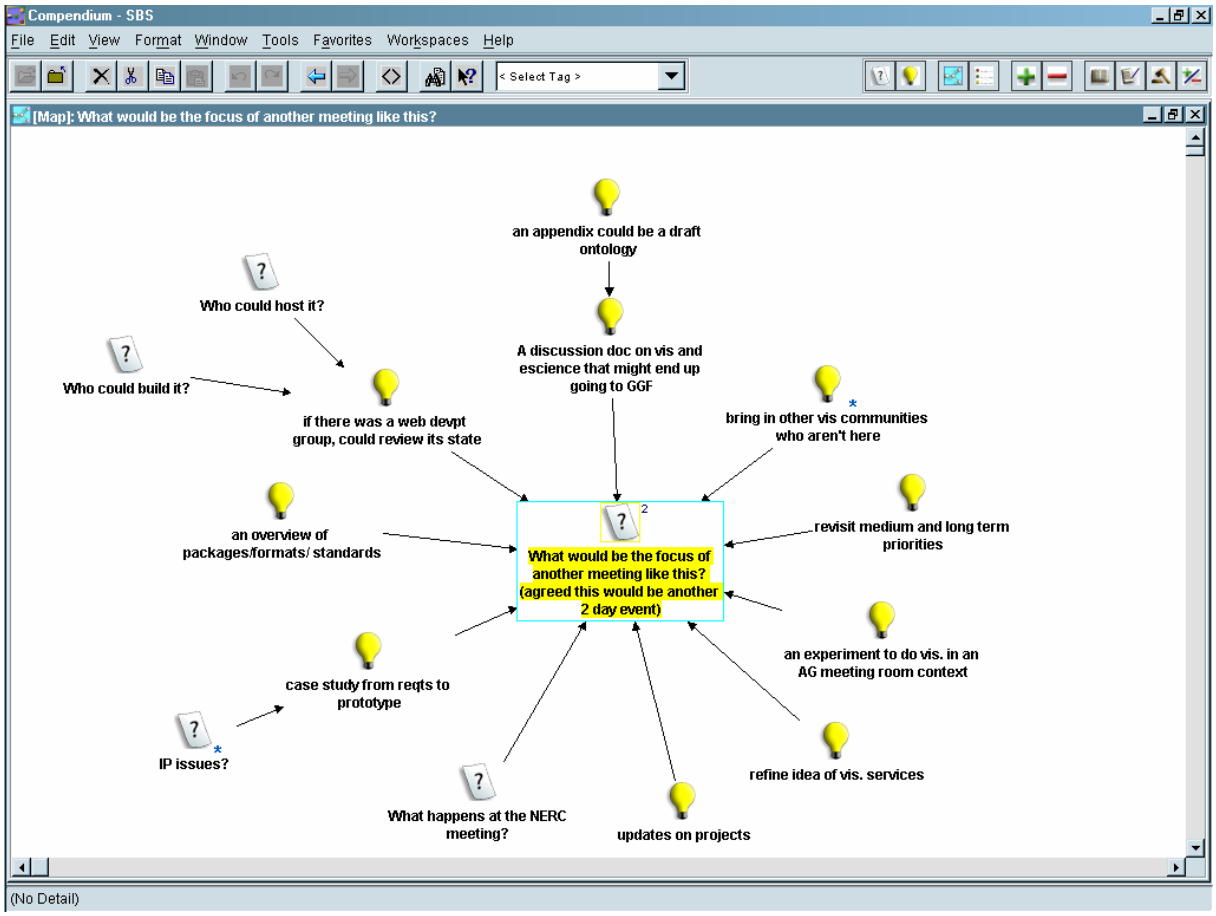
Presence in key strategic groups (eg. Research Councils, GGF)

similar?

WG5

Enable data flow in both directions in an IV pipeline

What would be the focus of another meeting like this?



What would be the focus of another meeting like this? (agreed this would be another 2 day event)

- A discussion doc on vis and escience that might end up going to GGF
  - an appendix could be a draft ontology
- bring in other vis communities who aren't here

  geographical, others...

- if there was a web devpt group, could review its state
  - Who could host it?
  - Who could build it?
- revisit medium and long term priorities

- an overview of packages/formats/ standards
- an experiment to do vis. in an AG meeting room context
- case study from reqts to prototype
  - IP issues?

  have to ensure that this was addressed in a business case study etc

- refine idea of vis. services
- What happens at the NERC meeting?
- updates on projects

Top
