

## Mtg-2 (2010-1-27)

Wednesday, 27 January 2010  
2:01 PM

### Opening Notes (Lowe / Harward)

- Summary of first meeting
  - Confirmed the need for the consortia
  - Identified the key areas to be considered
- Still some lack of clarity - highlighted by the difficulties over the name
  - Offline discussions have indicated that this is because of the relationship between supporting the development of specific labs and platforms and supporting a broader more generalised approach.
  - For example, in the technical domain, is it about supporting the development of the iLabs (or LabShare) architecture, or is it about supporting the development of a reference architecture that promotes interoperability between platforms.
  - Both are valuable and important activities - but there has been some confusion over which of these this consortia is really about.
  - This also speaks to the difficulty over the name. If it is about development of the iLabs architecture then absolutely a name associated with iLabs is highly appropriate. If it is about more general development, then it should be independent of any specific platform.
- In essence, what we feel, is that we are likely to need to support both of the previous concepts.
  - i.e. Platform-specific consortia - there is a nascent group already for LabShare and ongoing work that is developing a more formal structure, but also a group (maybe this group?) for iLabs.
  - But we also still need the more general group - possibly under the auspices of IAOE - that coordinates the development of a reference architecture and the more general promotion of remote labs - something that IAOE is already doing really well.
- This wouldn't mean that iLabs or LabShare or LiLa or any other group couldn't (or indeed shouldn't) develop and promote new functionality, lab types, or anything else. We simply have a central coordinating body that is independent of any of the platform specific groups that handles the more general elements.
- In the discussions today and tomorrow, we therefore would like consideration given not only to the specific questions already identified - but more specifically to the distinction between platform-specific consortia issues, and general support issues.
  - For example: When discussing economics, what might the funding support for the iLabs consortia look like? But also how would the broader technical architecture reference group be financially managed and supported?
  - When discussing education - how is this promoted and what is the role of the platform-specific groups?
  - When discussing technical architectures - how do we separate work on the specific platforms, from development of the broader reference architecture.

### Open Discussion

- So what is the objective of the consortia?
- Phil L
  - Time is ripe to ensure convergence
  - Don't have the resources to continue to independently develop disparate architectures
  - End goal is an integrated (as distinct from interoperable) architecture
- Jud
  - Reality: Would any group be willing to sacrifice any key elements of their architecture?
  - Not reasonable to expect groups to change their "functional goals"?
  - Cannot sacrifice currently supported users!
- Phil B
  - Example from iLabs: wanted to implement cross-platform authentication. Wanted to be able to use standard technologies
- Thomas
  - Technology is "easy" (or at least manageable) - what is much more important is principles for sharing of labs. How can the sharing be managed given the costs associated with running labs? (Jud: provided we support current users!)
- Sandy
  - Central interest is: how can I access the various labs (iLabs, LabShare, whatever...)?
  - Consortia - are there areas where the different projects are duplicating or overlapping?
  - Had opportunity to promote concept of remote access to labs to President!
- Michael - agrees!
  - We need a world-wide consortia!!!
  - Not a question of the technology, but rather need an exchange architecture...
- Meta-consortia - what should it be named? Can it be the "iLabs consortia"?
- Q: If we do have a meta-consortia, then does there need to be a better structured group supporting iLabs?
- We did right last June: Any specification should be accompanied by a reference implementation!
  - Layered APIs with swappable elements...
- Don't want an approach that develops standards that don't have reference implementations (for years on end)
- Has to align with individual goals of each organisation that is represented.
  - The students/teachers just want to be able to access the greatest range of labs!
  - Suggestion: get each person to articulate their goals!
- The voice of the customer! (flip side of "build and they will come")
- Suggestion: make the technical working party a sub-group of ISO (re standards etc.)?
  - Would ISO processes get in the way of progress?
  - Maybe as a back-channel process?
  - But what about the involvement of vendors in this process? They tend to be significant elements in the discussion!
- Jud: Indonesia analogy - build a country out of disparate islands - but don't want to be held up by the UN! ;)

## Governance / Economics

- Interesting to think of a business strategy in the absence of knowing the objectives?
- Guiding principle: dealing with an open source solution!

Individual Initiatives 35 min.

Available Technologies (25 min)

Toolkits (Flex - appealing U/I, Sproutcore (o/s), ...  
Development tools (Java, C#.net, C++, VB.net, Lamp ...  
Documentation (Wikis, Basecamp,  
Automation (make, ant, ...  
Distributed Authentication (O-Auth, SAML, ...  
Security (SSL, WS-Security,  
Registration (Portlet, JSR 186, 268, ...  
Publishing  
Deployment (Sourceforge, Googlecode, Site/Project Wiki, ...  
LMS' (Moodle, Blackboard, .LRN, Claroline, Sakai, ...  
Workflow management tools/Data workflowtools (Tiara, Taverna, Hub0, ...  
Modelling (modelica,

Proprietary/Open Source (Limitations - Labview, Matlab,  
Licensing - Content v Code (GNU *not* v1, BSD, Creative Commons, Mozilla, ...  
Redistribution (Labview, Matlab, ...

Technology Requests (20mins)

(What functionality / technology might be desired...)  
Servers to have a standard way of publishing information about themselves: standard for describing a lab?  
Lab Owner publishes / Lab user (or portal) imports  
Lab server information vs service broker information?  
Catalogue / Portal of "available" labs  
(available = available for possible use, or = currently online?)  
Notification system (for admin? e.g. sms) re configurable status information

Single sign-on  
Standardised collaboration mechanisms?  
Integration in virtual worlds  
Support for multiple languages  
Support for user adaptation  
...

Technology Development Process (10mins)

Transparent processes for indicating what new features within subsequent release?  
This should help the convergence process!  
What is the ideal process for identifying the next release...  
  
List of requirements from the educational community regarding what they would prioritise?  
(cf. XP process? With user stories, and development spikes, and ...)  
Role of the consortium in maintaining a list of desired features?  
with a "reference" scenario? Maybe cast as a CFP  
And tracking who is "addressing" different desired features

Technology Roadmap (30 mins)

Any roadmap must be robust to droughts in funding!  
Start with a 6-12 month timeline?  
Or could overlay existing roadmaps and see what duplications exist?  
(Issue of standardised vocabulary!)  
Potential opportunities  
Commonality of data storage!  
Good starting point...  
LiLa working on meta-data  
Distributed authentication  
Just using the same technology doesn't necessarily make it easy to do integration!  
Short term goal - lab information publishing mechanism?

## Day 2

### Governance

- Michael Auer: Summary
  - Main focus on Education - general agreement?
- Phil Long: Short-term tests of our ability to work together
  - 1) Mechanism for publishing lab specs + availability (meta-data + access mechanisms)
  - 2) Code + documentation is made accessible
  - 3) Glossary?
  - 4) Standardised cross-authentication (or cross-authorization as a better first step?)
- Within 2 months, do first two (and maybe third?), and have list of technical developments (as per 4).

- Then progress 4...
- Objectives
  - Should it include some concept of outreach?
- Online Lab vs Remote Lab?
  - Online = remote + virtual?
  - Consensus for online!
- Principles of work
  - Maybe reorder?
  - Phrase as positives
  - Political vs Technical - but what about policy? Or governance?
- Structure

## Economics

- C'tee
  - PhilL (chair); Christian, DavidB, Kemi

## Naming

- Suggestions
  - iLabs, uLabs, LabCloud, farLabs, flexLabs, lab2go, wwwlab, labs4all, Labs.R.us
  - REAL labs (Remote experimentation and active learning labs)
  - LabExchange
  - uLabs (ubiquitous labs? Universal labs? You labs?)
  - MyLab, OurLab, YourLab, ...
  -
- Should we include "lab"? Or "experiment"? Or ....
- Name or acronym?
  - The Online Lab Consortium (OLC?)
  - Do we need an acronym?
- Global / Universal / Worldwide / ...
- Online / Remote / Shared / Accessible /
- Global Online *Educational* Laboratory Consortium, (trading as *Global Labs*)
- Global Lab Exchange Consortium
- Global Online Laboratory Consortium, (trading as *Edu Labs*)
  - AGREED! Woohoo!
  - [globallabsonline.org](http://globallabsonline.org) is available
  - [online-lab.net/](http://online-lab.net/) / [online-lab.org](http://online-lab.org) could be donated by MichaelA

## Education

- Issues that were discussed
  - How to find labs?
  - Use cases? Other uses for this experimental rig (see also)
  - Tuning of the interface to different users?
  - Evaluations of the labs + associated material
  - Statistics on the experiment (usage, but also where, how, when, who, ....)
  - Operational performance (how many can the lab support? Etc.); robustness; ....
  - Assessment materials
  - Templates
  - Overloading of terminology - need for a common vocabulary?
  - Desire for templates that simplify experimental design (hardware, resources, ...)
  - Ranking of priority of requests
  - Learning scenarios
  - Metadata for learning systems
  - Integration with LMSs
- Way forward?
  - Develop repository (thanks Jim!) - use *Lab2Go*, *LiLa*???
  - Template...
  - Lab info publishing
- Educational standards?
  - Q: Is there a role for the consortium in (educational) quality control?
    - Labs that have Consortia ratification / certification / seal of approval?
    - What goal would this serve? Should it instead come from users (cf restaurant critic?) or from professional educational body?
    - If we were to do this, then what standards do we use? Who gets to specify this? Us?
    - Two bars: (1) metadata is provided (2) gold tick requires educational materials etc.
      - ◆ Q: Would this give us a competitive advantage?
    - Alternative view of certification: what makes an "online" lab? Not just something you watch!
    - Minimal requirement: students design the experiment run! And get back results to analyse
- We define the criteria that makes it an online lab!
  - And we only include in our catalogue(s) those that meet the criteria
- Highlights the importance of terminology
  - One key initial activity for the educational c'tee will be developing a glossary
- If we do undertake certification, then need to recognise importance of transparency and consistency
- Who is the end user? Teacher, student, lab staff, ...?
- Q: What can the consortium do to promote the development of new online labs?

- Templates
- Published examples of labs? Use cases of successful development and/or use?
  - Example exercises, screencasts, ...
  - Hosting developers from interesting parties - leg up!!
  - Need to consider both supply and demand side! (i.e. Promoting demand!)
- Q: Is there a role for the consortium in promoting online lab educational innovation?
  - How do we identify what other disciplines can benefit?
  - Do we do an environmental scan to identify who might have something to offer, and could be linked with? And how?
  - How do we move beyond *engineering* labs? Science, health, design, nursing, ...
  - Issues associated with the design of physical spaces and how this can now change?
  - Encouraging publications of successes and failures!
  - Commission/sponsor a case study
  - Pre and post tests in labs
  - Conference tracks focused on experience reports?
- Is it within scope for the consortia to encourage promotion of (free?) access to under-represented or disadvantaged groups?
  - Links to EWB?
- Open Universities?
- C'tee:
  - MarkS, Kirky, Sandy, SteveM

## Technical

- Mechanism for publishing lab specs + availability (meta-data + access mechanisms)
  - Small task force
    - define information / meta-data on labs that should be captured and the mechanisms?
    - Thomas, Danilo, Jim, Mark, Michel?
  - Maybe use Lab2Go? LiLa?
- Standardised cross-authentication (or cross-authorization as a better first step?) AuthN vs AuthZ?
  - Small task force
    - 6 months - spec; 12 months - prototype.
    - John, PhilB, Thomas, Tania?
- Technical C'tee:
  - Key: Steve, Jud - coordinating the task forces.
  - Action (Thomas): Set up a mailing list...
- What other technical issues should have a high priority?
  - Do we want an initial website? With a wiki?
    - Action: Technical C'tee to identify process and timeline
  - Real-time status and availability reporting?
    - What does status mean? Requirements
    - How can this be determined? Design
  - ???
- Open repositories so code + documentation is made accessible
- Glossary?
- Action (DavidL): Google Poll for location and dates for next meeting.