

**Date:** Mon, 22 Aug 2005 09:42:06 -0400 (EDT) [08/22/2005 09:42:06 AM EDT]

**From:** Jeff Merriman <merriman@MIT.EDU>

**To:** sakai <sakai@ctools.umich.edu>

**Cc:** sakai <sakai@ctools.umich.edu>

**Subject:** Re: Continuing concerns about Sakai architecture process

Joseph,

I think a better word might be livid. I've given it a weekend, however, and now I'm down to mad :) (or :( as the case may be). And I believe you are 180 degrees wrong, "reading the manual" at any stage is critically important, especially when difficult issues are being addressed.

But I agree that the only way forward is to find a constructive path. And this has worked in the past. So let me re-phrase my original concern:

Sakai started out with a strong OKI story, that can be found in the Mellon proposal and early internal communications and communications to the public. Sakai tools would be built directly to OKI specs for service level integration.

Last summer and early fall we came to the conclusion that this was not going to be the case. It caused us a great deal of concern, and the board will recall, prior heated debates. We still don't agree with ALL of the articulated reasons for this divergence, but to move forward in a constructive way we came to a resolution. An understanding that the newly identified Sakai APIs may not meet the letter of the OKI OSID specs, but they certainly would follow the design, or model of OKI. This understanding was documented internally, agreed to at the Board level, and articulated to the community. It was also articulated in the mid-grant report to Mellon.

Part of our internal agreement has been that Sakai will work closely with OKI to assure that its architecture aligns as closely a possible to the OKI specs. We have invested in this, most recently in an exercise to implement the Sakai Superstructure with OKI Hierarchy to help flush out any issues.

My message to the community, as well as Chuck's message whenever I have heard him speak, has consistently been that we have diverged, we know why and how we have diverged, but never fear, Sakai APIs are built to the fundamental designs of OKI, therefore we also know how to eventually converge again. This has been a helpful message for both Sakai and OKI.

But now the Sakai framework is moving away from the model, in what appear to be fairly significant ways, and which don't seem necessary given the requirements we have seen. In fact the new framework directions seem to conflict with previously documented requirements that have come from the Arch Team.

Unfortunately, fundamental design decisions, or models, are very, very difficult to change later on in the game, and that is why I am concerned about this right now. We won't be able to just change these things in version 3.0.

But I am at a bit of a loss to identify a new process suggestion, as Joseph recommends, because until only a week and a half ago (and for the previous 10 months) I thought we were successfully following our earlier one. So let me offer two suggestions based on that process:

1) The Sakai architecture team should immediately compare the new model being proposed with that of OKI. Yes, this involves reading OKI doc and probably talking through some issues with the OKI team. If after such review it is determined that the design divergences are necessary, these need to be articulated clearly and documented. Many in our community continue to want to know what the Sakai framework's relationship is to OKI, and divergence needs to be well understood.

2) The architecture team should also review its own prior requirements, particularly the ones that began to be written down last September. Our reading of Glenn's new doc seems to indicate direct conflict with some of those requirements, which represented the needs of the core schools. Such a comparison would either a) indicate that the previous articulated requirements were somehow not really required or perhaps flawed, or b) point to issues in the doc that need to be considered in light of those requirements.

Jeff

On Aug 19, 2005, at 10:33 AM, Joseph Hardin wrote:

[Hide Quoted Text]

Jeff,

This note is not very constructive. You just sound mad, looking for someone to blame, and flaming in a newbie net manner. I don't think that is how you want to appear. Telling people who have been working through difficult issues for 2 years to read the manual does not work. Do you have a process suggestion that can help us resolve this?

Joseph

Jeff Merriman wrote:

Chuck,

Once again you have responded only around the periphery of my concerns, and not to the issues at the heart of them. I will however do you the courtesy of addressing your comments directly:

First of all, you can rest assured that Scott Thorne has reviewed every architectural requirements document for Sakai that we have been able to get our hands on. If there are elements of Sakai's needs and requirements that have not been adequately documented, then this is the fault of the architect and the lack of architectural process.

Secondly, do you really believe that the OKI model does not support roles!?! Have you ever LOOKED at the developer documentation? This documentation has been available on the OKI SourceForge site for over two years, and I even hand delivered bound copies to you and Glenn in the first month of the Sakai project. Did it ever occur to you that even if you couldn't find documentation for something as fundamental as how the OKI model deals with roles that you should probably ask somebody? You are the one who used to tell prospective Sakai developers to "get to know the OSIDs" and you don't even know something as fundamental as this. I found the answer within 2 minutes by going directly to SourceForge and downloading doc. Heck, there's even a clue in Webster's dictionary. Look it up.

And this is only one concept out of very many that are critical for Sakai and defined by OKI. What else has the Sakai architectural leadership failed to fully research about the OKI model? I hate to think that my response to people who ask me why Sakai isn't following OKI and the OSIDs is about to become "because the architects didn't RTFM."

I started this thread by raising issues of architectural process. You seem to have made my case. Thank you,

Jeff

On Aug 18, 2005, at 1:37 PM, Charles Severance wrote:

Jeff,

I talk to Mark about 3 times per week on this topic - he has been an essential part of the discussion and his comments have been very useful. Mark has expressed concerns all along and we have addressed them nearly instantly - his recommendations have greatly improved the document.

I would suggest that Scott has really not done any complex analysis on our work to date. So far in the past 18 months he has not offered a single useful comment which would indicate even the simplest understanding of our needs and requirements.

Groups and Roles are a critical requirement for the sectioning tool as discussed at the MIT meeting. If the OKI API does not support roles, then it is not adequate for our needs. I am sure that with some finagling we could invent an out of band agreement which would patch the OSIDs so as to "fake" roles.

In the Sakai APIs we need roles - period. Perhaps the OSIDs should be changed to reflect roles.

/Chuck

On Aug 18, 2005, at 1:07 PM, Jeff Merriman wrote:

Chuck,

I'm talking about models, not APIs. There's a distinct difference between changing a model and adding methods to an API. This is akin to the difference of adding fields to a table vs restructuring the database. It is well understood that there are some API details where discrepancies exist between Sakai requirements and the OSIDs, and we know how to deal with those. However, model level issues are more serious.

Glenn's document outlines changes to the fundamental model of objects that differ both from the original OKI model and prior Sakai versions. We have been following this closely, working with Mark Norton in a continuing attempt to map Sakai architecture with OSIDs for integration purposes. Mark was in fact the person who alerted us to this document and its implications. With Mark's able assistance, Scott and the OKI team have been tracking Sakai

architectural directions all along, and some of the model level changes outlined have clearly come as a surprise and have raised serious concerns.

An Architectural model is meant to be stable. It is the spine around which the development is organized. In Sakai this continues to change in ways that disrupt development and the community process. The core models should not be changing in the late stages of a project like this.

As you say, some of the elements of OKI might be there, but the architectural models are moving further and further away. Just as an example, the OKI model for Group does not include Roles. Roles is an Authorization related thing. This is fundamental stuff. In the first paragraph of the Groups section Glenn's doc indicates that Groups and Roles will be bound together, and we have to assume this binding will show up in the API. One can successfully model sectioning, roles within courses, and appropriate authorizations, etc without linking Roles to Groups. This was demonstrated in Denver. Binding them will significantly hinder integration efforts. For instance, if we want to replace Sakai's local group system under this proposed model with MIT's enterprise group system we couldn't do it. It also seems to imply that groups contain only individuals and not other groups. I have been referred to the requirements docs that were developed last September, which state the opposite requirement.

Jeff

On Aug 18, 2005, at 6:09 AM, Charles Severance wrote:

Jeff,

I think that Glenn's document is completely misunderstood. Glenn's document **\*is\*** the next step in the nearly 12 months of architectural discussions and API development.

Glenn's document is a textual version of the attached document which was distributed about three weeks ago and subject to extensive review in the Framework working group. Both documents are describing the same thing and represent a design consensus and capture months of architectural discussions including all of the discussion at the recent MIT all hands meeting.

What Glenn's document is doing is restating the pictures and straw man Sakai APIs developed by the architecture team and implemented by Lance in 2.0 in words so that we can get on the same page to do a final pass of modifications of Lance's common APIs and then make those APIs the true core of Sakai for 2.1.

We are literally a few days away from beginning to make some modifications to Lance's APIs and then modifying the rest of the system to use those APIs as **\*the\*** APIs that drive all of Sakai. This is the critical work for the 2.1 release of Sakai.

In terms of the OKI model, if you look at the attached document and read Glenn's document again, you will see that everything that is being proposed **\*starts\*** from the OKI APIs and has evolves from there. The OKI APIs are naturally very vague with the need for out of band agreements so as to allow great flexibility across implementations. Sakai APIs must be very explicit because we must write code around them and they must scale efficiently in large production environments.

All of the basic OKI elements are here - Nodes, Agents, Groups, Qualifiers, Functions, etc etc etc.

In a way the 12 months of discussion was needed to get to something that had enough detail that we could implement in a large production system like Sakai and meet the requirements of the existing and emerging Sakai tools. The document that you feel is evidence of "wheel spinning" is actually the end of the "wheel spinning" and beginning of the final implementation steps we started a long time ago.

With the maturity and detail of these designs, we are on track to do an awesome job on the 2.1 release, adding powerful hierarchy, groups, and fine-grained authorization which will completely support the needs of the sections capability and many more capabilities in the future. We have been waiting for these capabilities now for 19 months.

/Chuck

[see attachment: "sectioning mock-ups\_v5.pdf", size: 470813 bytes]

On Aug 17, 2005, at 4:16 PM, Jeff Merriman wrote:

Board,

I was pretty disturbed to see the document that Glenn recently distributed entitled "Sakai Framework Common APIs: Design and Application - Draft."

This document (which seems to describe a draft model, not APIs) and its timing is further evidence of the structural issues that we as a Board have been raising for many months, to seemingly no avail. Here are a few of the issues that this raises with me:

- 1) For a two-year software development project, especially for a system as complex as Sakai, one would expect this level of draft document to be distributed for comment sometime within the third or fourth month, following requirements gathering. This is month 19, near the end of the project. This is a draft model, not yet even an API. I thought project reports have been that we are almost done, in not done, with the common service APIs.
- 2) What happened to the architectural direction that was embarked upon last September? In September a set of requirements were drawn up to help inform a service level architectural model for Sakai in preparation for a "bake-off" of design ideas at Educause. In fact MIT funded a successful development effort to illustrate how the O.K.I. model supports Sakai's requirements which was presented in Denver, alongside the work that Lance was doing at the time. For whatever reason, Lance's approach was selected, even though it didn't immediately meet some of the expressed requirements -- but be that as it may, we moved forward. Since then the Arch Team has been spending significant time in refining this model. Glenn's document appears to outline a new model. What has happened?
- 3) Sakai began on day 1 with an already complete model, namely that of O.K.I. During the 2 years of the OKI project, the model level design issues that Glenn is struggling with here had all been described, discussed, designed, refined, documented and released in the form of the OSIDs and related documentation. Chuck has indicated over and over again that the Sakai Framework is starting with the OKI model. Glenn's document seems to demonstrate, yet again, that it isn't. If we are starting from scratch again on this why not REALLY try to start with the O.K.I. model this time. It was shown in Denver to meet expressed requirements of core institutions, and of course building Sakai on the architectural foundations of OKI is certainly a Mellon expectation.

This kind of wheel-spinning is indicative of a project that is driven by deadlines and technology and not by requirements and design. This has been a serious concern of a number of board members for quite some time.

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Attachments:

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