The Value of a Common Foundation 1.1

Jasig and The Sakai Foundation

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Introduction

Over the last ten years, open source solutions have become a major force in answering a range of software challenges facing higher education. Yet open source initiatives in education remain fragmented, with not-for-profit entities proliferating to serve a diverse range of communities and solutions. Recognizing such diversity is essential; there is no one "correct" solution to the governance of communities operating in such a wide variety of contexts. Yet rationality should also drive an examination of the continued formation of these entities. Is higher education best served by the level of duplication this represents? Could the resource we might free by a measure of consolidation and increased coordination make a significant difference to the overall health of these communities? Are there ways we can reflect and celebrate diversity, whilst achieving a more rational organizational approach?

With these questions in mind, two organizations that evolved from some of the earliest open source in education initiatives, Jasig and The Sakai Foundation, chartered the Jasig-Sakai Joint Working Group (JWG). In 2010, this group was tasked with an initial evaluation of the benefits and feasibility of bringing the two organizations together. Following a positive initial investigation, the Working Group began to develop this document as means to describe the value we expected to realize from the merger. This is the second iteration of the document.

The document is divided into three broad sections. The first two deal with some of the unifying forces that have brought Jasig and Sakai together - the success and variety of open source models for software development, and its deployment in higher education. If you feel that you are familiar with open source software and its benefits, both in a general sense, and in an educational context, you may wish to skip ahead to the third section:

1. The value of open source
2. The value of open source in education
3. The value of a common foundation

This document reflects the current stage in articulating the value of the merger of Jasig and Sakai, rather than providing a final word on the matter. It will remain a work in progress, which will guide the common organisation beyond the initial merger, and become something of a working value statement for the merged organisation. We submit this second iteration to our own communities, and the broader educational community, in that light.

1: The value of open source

The last decade and a half has seen open source and free software move from the periphery to the mainstream of the information technology landscape. Thousands of open source projects exist. Some serve relatively small groups of individuals. Others support the activities of organizations operating at significant scale, or underpin web-delivered services for millions of end-users. Governments increasingly advocate or mandate either the consideration or use of open source software in a wide range of contexts.

The key driver for this growth might at first appear obvious: who could turn down an apparent “free lunch”? The cost of licensing is, however, only one factor driving the increased use of open source software. The examples of Linux and Apache speak not only to the cost of software consumption, but also to the success of extended and highly distributed development communities collaborating to realize software innovation at scale. This is one reason why major corporations, such as IBM, make such significant investments in open source software.

Software licensing – whether open source or proprietary – is, of course, a guarantee neither of quality nor sustainability. It is manifestly the case, however, that a significant number of open source licensed projects now produce software that is equal to, or better than, their commercial-proprietary counterparts.

Open source software offers several distinct advantages beyond freedom from licensing costs. These advantages are intimately connected with both choice and innovation. Organizations adopting open source software can choose to support it with internal resources, with external contractors, with the support of open source communities, or with an admixture of the three. In these scenarios, then software *licensing* can therefore be decoupled more readily from software *support* services. The forced march of upgrades or migrations to maintain "officially supported versions" of software can be avoided, or at least more readily mitigated or controlled. The pace of change is driven by the deploying organization, rather than an external entity – the interests of which may at variance with the interests of the deployer.

Those who adopt open source software are free to choose to contribute their own improvements and innovations back into a common community pool, and take advantage of the innovative contributions of others. Indeed, there is a strong economic imperative to collaborate in this way: past a certain point, a local adaptation of open source software becomes in effect, a “fork”. The cost of maintaining such a fork is no longer shared by those maintaining the community pool, but becomes a matter of in-house support. These issues are increasingly well understood by businesses globally. Indeed, the principles of open source software production, implementation, and maintenance are being applied and tested in a variety of other contexts.

2: The value of open-source in education

A recent report surveying the global context facing higher education[1] noted that, "Higher education is under pressure to meet greater expectations, whether for student numbers, educational preparation, workforce needs, or economic development. Meanwhile, the resources available are likely to decline". Higher education faces an increased range of policy and structural challenges, combined with the growing licensing and deployment costs associated with proprietary software, at a point when budgets have rarely been more constrained. Freedom to choose commercial closed solutions is often limited; as the 'Courant Report[2]' noted "the relatively small size of higher education may also make it especially vulnerable to monopolization." There is growing recognition from higher education IT leadership that standard, closed and proprietary "business" software is often a poor fit for the academic enterprise; that it frequently does not serve often unique processes supporting our institutions, and that, critically, it may act to stifle innovation at precisely the economic and educational inflexion points where innovation is most required.

It is entirely appropriate, in this context, that urgency surrounding resource constraint and *cost* drives education to consider open source software more thoroughly. That thorough consideration should be rounded, however, and go beyond the simple cost of *adoption*. It should begin to factor in the longer-term perspective of the relationship between *collaboration*, *open source software*, and *sustainable innovation* serving education. It should consider that adoption is only part of the equation, and that *contribution* – which is not limited to contributing *software* and *technical resources* - is vital for the future health of our emergent open source communities.

It is entirely appropriate, in a period of declining available resource for higher education, and matching decline in institutional IT budgets, that due consideration is given to how those budgets are spent. It is increasingly obvious that the cost of information and communication technologies supporting administrative purposes is disproportionate when considered against the costs of technologies deployed to support the core mission areas of learning, teaching and research. This is in part, at least, an artifact of the frequently excessive licensing costs associated with "business" software transposed into an academic environment.

Cost, however, is not the only factor. We should remind ourselves that supporting and enabling learning, teaching and research with digital technology are new phenomena. Whilst certain areas are better understood than others, education, including higher education, is at the start of a transformative journey in this respect. Inclusive collaboration within education to produce software, collaboration that draws on lessons from highly distributed open source software development, can enable the early realization of innovation far more readily than more circuitous commercial-proprietary routes. This *disintermediation* of innovation, closing the loop between the practitioner capable of identifying needs, and developer capable of creating software to realize solutions to meet them, is arguably the central objective of educational software development. Methods associated with open source software do not necessarily close this loop automatically - but *make the loop far easier to close by making its elements more visible and transparent*.

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[1] The report – 'The Future of Higher Education: Beyond the Campus' was produced by Educause, CAUDIT, SURF and JISC http://www.educause.edu/Resources/TheFutureofHigherEducationBeyo/194985

[2] Software and Collaboration in Higher Education: A Study of Open Source Software Paul Courant and Rebecca J. Griffiths http://www.ithaka.org/ithaka-s-r/strategyold/oss/OOSS_Report_FINAL.pdf

The direction we advocate is sometimes portrayed as anti-commercial. The opposite is actually the case. Licensed appropriately, open source software creates conditions for commercial opportunity, and the development of a healthy software ecosystem that serves and facilitates innovation in education, rather than acting to restrain it. Both Jasig and Sakai have developed commercial partnership programs over the last decade. Continuing to nurture those programs, and engage with a variety of commercial partners is a vital part of ensuring choice and flexibility for educational institutions into our joint future.

3: The value of a common foundation

Jasig and Sakai share a common origin as projects funded by the Andrew W Mellon Foundation Research in Information Technology Program, which operated for most of the last decade. The communities which grew up around these projects organized around principles of openness, and aimed to create collegial governance structures appropriate to the sector they sought to serve and represent. Both Jasig and Sakai have evolved into not-for-profit organizations, registered in the United States, but with broad international participation, which span multiple projects. Both operate in areas either directly supporting academic mission delivery, or in the development of infrastructure pieces designed to meet the needs of higher education. As a consequence of the relative jurisdictional neutrality of their areas of work, both organization have developed very much as *international* communities. The time has come to build on the collective strength this experience represents, pool resources to improve the services provided by both organisations now, and create fresh opportunities for the future

i Economies of Scale

Many of the activities of the new foundation will benefit from the larger scale of a combined organization. Opportunities exist for bringing new and consolidated resources to bear on issues such as quality assurance, management of intellectual property, and licensing, particularly in an international context. In the short-term, we anticipate efficiency gains from:

a) *More Efficient Deployment of Staff resource* - A combined organization will allow us to better allocate our deliberately limited staff resources towards key foundation roles such as coordination, communication, and quality assurance.

b) *Holding a Combined Annual Conference* - A combined annual conference will provide cost savings for both organizers and participants through economies of scale. It will also help to promote cross project collaboration and synergy.

c) *Consolidating "Back Office" Operations* - By centralizing our accounting, billing and administrative functions we will be able to reduce expenditure on a range of operational costs.

d) *Consolidating our Technology Infrastructure* - We expect to see cost savings and increased synergies from moving towards a common suite of centrally hosted communication and coordination tools.

ii Strategic Imperatives

For over a decade, software developers in the educational community who are active in the Jasig and Sakai communities have sought, wherever practicable, to re-use code shared by other open source initiatives. As other open source initiatives have addressed areas we once needed to develop ourselves, we have become more able to replace large sections of our code bases with best of breed implementations. Portlet support from Apache Pluto in both uPortal and Sakai CLE; Distributed Cache components across all Jasig and Sakai projects from Terracotta; Component Managers in the form of Spring and Apache Felix- these are just a few examples of the open source libraries we reuse over many of our projects.

This re-use is healthy, enabling software developers employed by educational institutions to focus their attention on adding value in support of objectives related to education. Re-use, however, brings with it a range of dependencies and attendant risks. In order to mitigate those risks, software developers in educational institutions need to network more effectively, sharing experiences, learning, and acting to influence open source communities outside an educational setting. The new organization will form a key element of such a network by aggregating resource and experience, and by developing a stronger and more effective voice to represent education in broader open source communities.

The Jasig community projects currently produce largely – but not entirely - infrastructure pieces; an enterprise portal framework, a calendaring solution, a single/simplified sign on solution. Over time, the new organization will encourage re-use of these infrastructure pieces in more user-facing environments. This is an illustration of the long term synergies we seek to create.

The value of the merger of Jasig and Sakai is not limited to resource aggregation and increased organizational efficiency. Each community brings with it specific strengths in a variety of areas - user engagement, release management, incubation processes, and so on. The new organization will draw on these strengths; the collective experience of the Jasig and Sakai communities will be used to help nurture new projects, mentoring them as they proceed along the path from project to sustainable software community. The emphasis throughout will be on dialog and development, with a profound recognition that there is no universal template to which every project must fit in order to succeed. This forms a critical element of a strategy that aims to develop an ecology of sustainable innovation in service of the academic mission.

iii Benefits of a Global Community

The international nature of both current organizations brings with it specific cultural and organizational challenges, but is a critical element in developing sustainability, and a fundamental aspect of the value proposition of the new foundation. An international organization serving higher and tertiary education suffers less from transitory changes in funding arrangements in any single part of the world, and can potentially draw on significantly greater resources from its distributed constituents.

iv Software Communities and Branding

Bringing together the Jasig and Sakai Foundations will not dissolve or merge their respective software communities and projects, but will provide *better conditions to nurture them*.

Each of the founding Software Communities of the merged organisation has a distinct ‘brand’. These brands are known and understood, to a significant extent, amongst the natural constituencies they serve. The new organization will not seek to supplant or dilute that brand equity, but will seek instead to augment it. This will happen in two distinct ways.

Firstly, the new organization will encourage information sharing and cross-fertilization between software communities and the projects they support. This will act to increase awareness of products and their capabilities across the broad community.

Secondly, the new organization will build its own brand slowly and organically, through good stewardship of common resources and practices, and the quality and success of the Software Communities and projects it supports. Over time, association with the new organisation will give such communities additional stature, and the foundation brand will become a mark of quality that contributes to the overall brand equity of affiliated projects. It is not anticipated, however, that substantial resources will be focused on building the new foundation's brand outside these organic processes.

Existing brands will not go away, but will be exposed to the new audiences reached by the new organization. The Sakai Collaboration and Learning Environment will still be promoted and maintained as the Sakai CLE, Jasig uPortal as uPortal, and so on. The new organization will build on the successes of the past in developing brand recognition, without seeking to supplant existing brands.

v Addressing Common Challenges

Over time, the new Foundation will encourage the exploration of better connections between the software products we support, new models for collaboration, and new areas of work to face the challenging environment ahead. The new foundation will be better positioned to tackle these challenges:

1. *Funding models* - Developing long-term sustainable funding/membership models for open-source Higher Education initiatives.
2. *Inter-project collaboration* - Understanding how resources can be leveraged across independent projects to address common needs (e.g. areas of quality assurance, accessibility, internationalization).
3. *Closing the innovation "gap"* - Finding new ways to further bridge the "gap" between end users, designers and developers.
4. *Governance models* - Understanding which governance models work best within the context of different independent projects, and the stages that those projects pass through - from initial formation to maturity.
5. *Development models* - Understanding the development spectrum from "organic" to "managed" across the lifecycle of an innovation, and recognizing an approach that is appropriate for each circumstance or context.

Conclusion: Our Mutual Core Values

The new organization will build on the core values embedded in the approaches of its predecessors. As we work to bring our two organizations together we will not lose sight of the core values that have come to define our communities. These include:

- Openness and transparency in all aspects of our communities work.
- An organizational philosophy based on the concepts of collegiality and meritocracy.
- A global community that values international participation.

We believe firmly that other synergies will be created by the new organization that remain, in part, to be explored. The fact remains that the clear benefits identified above *alone* make proceeding with the merger of the two organizations a significant priority. We are confident that we will be able to address problems - old and new - in more innovative ways as a joint organization than we could as separate entities.