This paper is at [http://trent.wdg.uri.edu](http://trent.wdg.uri.edu)

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**Open Source, Electronic Portfolios, and Vendor Participation**

**Abstract:**
The Open Source Portfolio Initiative (OSPI) is a collaborative, open source, software development project based on the University of Minnesota’s electronic portfolio (local name: ePortfolio) software. Using OSPI as the case, the speaker will describe the state of open source learning technologies development and how vendors can play a strong role.

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**Electronic Portfolios**

An electronic portfolio supports many kinds of individual, program, and university assessment functions, so an electronic portfolio could be thought of as an “Academic Assessment Management System.” However, at its core, an eportfolio is a purposeful collection of student work – including comments on student work and revisions of the work.

**Uses:**

- Storing student work during a semester in a course for reflective purposes
- Creating a student professional portfolio
- Resume-building
- Advising
- Tracking student progress toward learning goals
- Building a faculty portfolio for T&P review; and for promotion of the scholarship of teaching and learning
- Documenting success for accreditation and re-accreditation.
- Documenting compliance with professional standards

Using actual student work for these multiple purposes is a step forward by providing much better documentation for learning than we have had in the past.

[Also, see a Batson article about eportfolios at: [http://www.syllabus.com/article.asp?id=6984](http://www.syllabus.com/article.asp?id=6984) December 2003]

There is no more promising area of academic application development than electronic portfolios. Several factors came together all at once to make this so: a combination of technology advances (database-driven Web sites and Web
development environments), the cultural shift to using the Web for not just information but services as well, and the building momentum toward assessment of student outcomes. Since electronic portfolios are a way to track student progress toward learning goals within a program over time, they have become “the enforcer” for professional standards within the professions. Quickly, schools of medicine, law, education, engineering and potentially others, jumped at this opportunity.

In one year, we’ve gone from asking “what is a portfolio?” to asking about data standards and tool portability profiles to find some order in the chaos of hundreds of portfolio silos around the country. These silos mean that student work and the hierarchy within which the student work exists can’t be re-created on a new campus. Students are portable, why can’t their work be portable as well?

Here are just a tiny sample of portfolio sites, showing the proliferation of portfolio interest (Thanks to Helen Barrett):

**Chalk & Wire**
http://www.chalkandwire.com

**LiveText**
http://www.livetext.com

**TaskStream**
http://www.taskstream.com

**Aurbach & Associates**
http://www.aurbach.com/ [small site; small company]

**McGraw-Hill**
Folio Live website
Foliolive demo [includes sound]

**ProfPort**
http://portfolio.ilstu.edu/profport/ [webfolios only]
http://www.folioworld.com/

**folio by eportaro**
http://www.eportaro.com

**Concord** (a digital content server for Blackboard systems)
http://www.concord-usa.com

**iWebfolio by nuventive** now in a strategic alliance with SCT
http://www.nuventive.com/index2.htm/

**FolioTek** from Lanit Consulting
http://www.foliotek.com

**My Classroom Helper** (K-12 market)
http://www.myclassroomhelper.com/

**E-Portfolio by www.opeus.com** (an e-portfolio in the U.K.)
http://www.opeus.com [“The electronic portfolio is not an end in itself; it is a mechanism to enable learners of all ages and teachers to focus on the quality and continuity of their learning.”]

**eNVQ** - an online management system for the assessment and verification of vocational qualifications (U.K.)
http://www.envq.com/

http://electronicportfolios.com/ -- Helen’s page

ePortfolios and Assessment


“Teachers and administrators are showing increased interest in becoming part of a "new wave" of assessment in the classroom; assessment which includes authentic and performance-based measures. These methods of assessment allow students to demonstrate desired performance through real-life situations (Meyer, 1992). Such methods of assessment are not limited to multiple-choice and standardized tests, but include projects which require students to demonstrate their problem-solving skills as well as their skills in analyzing and synthesizing information. Several school districts across the United States have reported improved student performance associated with new assessment programs (Herman, 1992). Many schools are developing new methods for measuring students’ progress in both the elementary and secondary classroom. One of these new assessment measures, the portfolio, has become increasingly popular, and technology is helping with its creation and management.”

Todd Bergman in AK:

“The education of my youth, and of my undergraduate study was all delivered around packaged information and experiences designed to test my abilities to comply. All the assessment of my ability was confined to my compliance to prescribed studies.

[Later, as a teacher, aware of student work with the Web] the role of teacher [was] transformed from gatekeeper and transmitter of knowledge to facilitator and collaborator in a quest for knowledge.

[Now] there is no question that the learning environment I knew as a child is only a memory.”

Portfolios can help shift from student compliance to a model of collaborative discovery between teacher and student by providing a place for students to store their work, during semesters and between semesters.

Electronic portfolios potentially move academia concretely from “seat time” to outcomes benchmarks. To stay competitive, institutions of higher learning must take this change into account. Internationally, portfolios serve the purposes of US-based portfolios but may really be focused on citizen portfolios instead of
student portfolios. We are creating an IMS ePortfolio Secretariat to create use and implementation specifications.

**Vendor Role in Open Source**
Brad Wheeler, associate vice president at Indiana University, and our Mellon PI, recently published this article about open source:
http://www.syllabus.com/article.asp?id=9026

An excerpt:

"The Inevitable Unbundling of Software and Support"

By Brad Wheeler

Recent months reflect an important discussion of open source application software for higher education. The success of Linux and Apache at the infrastructure level and the generally collaborative nature of universities prompted Gartner to forecast that higher education would be one of the early places for open source applications, such as course management systems, portals, and ePortfolios. The classic “Build vs. Buy” decision has now been augmented with open source’s “Borrow” option—borrowing without an expectation of repayment. Some argue that the lack of commercial support is open source’s Achilles heel. Conversely, I assert that the emerging unbundled support model for open source applications is actually a feature, rather than a bug for higher education’s future.

Unbundling is inevitable. Traditional models for software have offered a for-fee license to use proprietary intellectual property (IP) bundled with for-fee support provided by the owner of the IP. Unbundling creates two distinct markets for software and support. Thus, the following points merit timely scrutiny:

- Unbundling is a general economic trend that offers greater efficiency.
- Recent open source collaborations have triggered unbundling for higher education.
- Markets segments will choose."

Like Brad, I’ve also found that people I talk about a choice is between commercial or open source. Instead, with OSP, we have followed the middle road between these two extremes: *vendor-supported* open source. Or, in Brad’s words, “the borrow option."

A scenario: OSPI has succeeded largely because one of our founding Board members is a for-profit company which also believes strongly in “open-open source.” The company is the *r-smart group* of Phoenix, Arizona, started by John Robinson, the founder of SCT. Because their continued existence depends in
part on OSPI succeeding, they make sure we meet deadlines, cover all bases, and steadily improve the code set. Carl Jacobson has called this approach – partnering with for-profits – “using hired guns to be sure to get the work done.”

Below is a brief story written by r-smart about its role in OSPI:


From Syllabus Magazine, Feb. 1, 2004:

In July 2003, the consortium released OSPI code. In August, the r-smart group (www.rsmart.com) released Mosaic, an enhanced version of the Open Source Portfolio software. The software is available free of charge to users who join the r-smart network. Network members pay r-smart for comprehensive service and support, including training and installation if desired. In other words, a campus can download OSPI for free or Mosaic for a cost. The difference is support: r-smart offers guaranteed support, as opposed to the informal support one would get from joining OSPI alone.

The r-smart group is a commercial operation, but it works with institutions to support an open source portfolio. Along with the other member institutions r-smart contributes its software engineering expertise to develop and improve the product.

“When a school selects Mosaic it gets expert support. They still get the freedom to use the software, modify it, and share it again without restriction, but they get the assurance that we’re there to support it,” says Chris Coppola, the r-smart group’s president. He adds, “Our aim as a company is to fill a void supporting open source software in higher education.”

r-smart group, Phoenix, AZ; (602) 840-7300; www.rsmart.com.

r-smart offers consulting and tech support to OSP adopters and the only charge is for the services, not the code. They have contributed developers, Web site work, code for OSP enhancements, and have served as collaborators in the development of the OSP open-source community. They also have been open to talking with other vendors such as Unicon, Nuventive, and WebCT. While they must protect proprietary information and plans, they have consciously adhered to their “good vendor” philosophy. See www.rsmart.com.

As a community development leader for OSPI, I have been free to refer inquiries to r-smart. An open source community is more likely to thrive with a revenue-driven partner. The key to an open source community is the vitality of the community. No matter what license you adopt, if the center of your community is not vital – constant contributions of useful enhancements to the standard code – the community will diverge and lose its center. Having a vendor partner, thus, can help sustain that vital center.
How does a campus support open source applications?

At the University of Rhode Island, we have had a Linux group of staff members for a number of years, which also supports the other three parts of LAMP: Apache, MySQL, and PHP. Three years ago, in partnership with the URI Computer Science Department, we started the URI Web Development Group, a for-fee, self-supporting group which has clients both on and off campus. A percentage of the time of each member of this group (made up of graduate students in Computer Science and Art) is devoted to University work supporting open source applications. Examples are a URI Web Content Management System and OSP 1.5.

Open source, as we all know, continues to nag at us, won’t go away, and seems to be gathering steam both in the corporate world and in academia. Linux is the fastest growing operating system in the world.

The Mellon Foundation has had a big hand in open source in academia. The "Mellon Constellation" of open-source academic applications grows. The Open Source Portfolio Initiative is within this Mellon Constellation. The SAKAI project at MIT, Indiana, Michigan, and Stanford is, too. There are perhaps 15 or more in the constellation (haven't counted recently). On some campuses now, uPortal is the front end to OSP, WebCT has PowerLinks to OSP, and a PeopleSoft interface has been implemented. I hope to see VUE (http://vue.tccs.tufts.edu/, another of the Constellation) from Tufts (Visual Understanding Environment) used as a concept-mapping authoring tool for OSP. Also, check on what Mitch Kapor is up to: http://www.osafoundation.org/. I've also heard of an open-source financial management system under development. No details yet.

The reasons I’m interested in the open source option for some of our applications at URI:

1. Total cost of open source is estimated at 80% of commercial.
2. Cost per year with open source may be more predictable than with commercial apps. Open source apps may help keep commercial price increases within reason.
3. We have access to the code.
4. Enhancements are user-driven, not revenue-driven; we may be less subject to “feature creep.”
5. Opportunity for advanced computer science majors to learn development in an open-source environment in a fee-driven campus group.

OSPI

OSPI on March 8 announced release of OSP 1.5 – see sourceforge.net or go to the OSPI site, www.theospi.org. A few screen shots of this beta release are at [http://addsomespark.com/ospi/]. OSP from its initial release July 30, 2003, has
remained in the 70-80 percentile for file activity at Source Forge. We have had over 1,000 unique downloads in 47 countries.

The descriptors at Source Forge about OSP:

http://sourceforge.net/projects/ospi/

- Development Status: 5 - Production/Stable
- Environment: Web Environment
- Intended Audience: Developers, Education
- License: OSI Approved
- Natural Language: English
- Operating System: OS Independent
- Programming Language: Java
- Topic: File Sharing, Testing, Software Development

Last fall, WebCT announced an interface with OSP through its PowerLinks:

http://itc.uncc.edu/steve/weblog/archives/002538.html -- announcement about WebCT and OSP at EDUCAUSE

OSPI is a Mellon-funded open source project based at Indiana University, University of Minnesota, University of Rhode Island, University of Delaware, and the r-smart group of Phoenix which provides vendor support and services. Also supporting OSPI are the following universities and organizations: The Carnegie Foundation, NLII, University of Michigan, and Virginia Tech.

OSPI is also related to the Sakai Project (www.sakaiproject.org).

**Conclusion**

Open source, eportfolios, and vendor support of true open source initiatives are all strong trends in IT on campuses. Because of the success of Linux, growing awareness of competitive realities among vendors, and the horizontal adoption of eportfolios across the professions, these trends will only gather strength.

To the extent that open-source re-creates the traditional IP publishing process in academia and to the extent that eportfolios serve to accelerate the assessment movement, these trends map well onto academia and are thus just going with the flow.

Also, to the extent that our cultural use of the Web results in “client” expectations for easy access to learning resources online, eportfolios seem to have an international mandate for the extension of usability.