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A Patent Dilemma

by Stephen Downes

Provoking a furious reaction in the educational technology community, [Blackboard](#), an enterprise learning management system provider, unveiled a U.S. patent for 44 features of learning management systems (LMS) on July 26 (cf. U.S. Patent and Trademark Office [2006](#)) and almost immediately filed suit against a Canadian company, [Desire2Learn](#), for patent infringement. "In addition," Blackboard announced in its July press release, "patents corresponding with the U.S. patent have been issued in Australia, New Zealand, and Singapore and are pending in the European Union, China, Japan, Canada, India, Israel, Mexico, South Korea, Hong Kong, and Brazil" ([2006a](#), ¶ 2).

A large part of the negative reaction on the part of the educational community stems from the fact that the inventions claimed by Blackboard were discovered independently by many developers, some of them prior to Blackboard, and the underlying technology was long thought to be obvious and in the public domain. As noted by columnist and University of Ottawa Internet law professor Michael Geist, "Many educators have been working on these technologies for years, so the claim that one single company now holds exclusive patent rights on widely known applications that have been implemented into hundreds of learning systems worldwide came as a shock" ([2006](#), "Tool toll," ¶ 7). A [directory of prior art](#) was immediately created on Wikipedia and, as of this writing, contains hundreds of documented instances.

Not only angry education bloggers share this belief: "I'm not worried as I think there is plenty of prior art," writes [Moodle](#) founder Martin Dougiamas on a Moodle forum ([2006](#), ¶ 4). [eCollege](#) has also come out against the Blackboard patent; as expressed by eCollege chairman and CEO Oakleigh Thorne, "As one of the pioneers of online education, we launched our first customer's eLearning program in January 1997, before Blackboard even existed. . . . In fact, we had online programs for numerous institutions up and running more than a year before the filing of Blackboard's patent application. After consulting with patent counsel, we believe the patent is invalid" ([2006](#), ¶ 2-3). The British Educational Communications and Technology Agency ([BECTA](#)) likewise casts doubt on the patents, saying "the BBI (Blackboard) claims could not be considered novel" (qtd. in Feldstein [2006](#), ¶ 3).

Many observers feel that Blackboard's action was not merely an attempt to respond to commercial competition but was instead a response to the success of open source learning management systems such as [Moodle](#) and [Sakai](#), both recently reviewed in *Innovate* (Downes [2006a](#), [2006b](#)). As Alfred Essa, former Chief Information Officer (CIO) of the MIT Sloan School of Management and current Executive Director and founder of [.LRN](#), observes, "By filing a patent infringement lawsuit against Desire2Learn, Blackboard has at the same time fired a shot across the bow of open source projects such as Moodle, Sakai, and .LRN, which are slowly emerging as disruptive innovations in the e-learning space. In the long run, Blackboard knows it can't win on product quality or innovation. Therefore, it will exploit patents as its WMD" ([2006b](#), ¶ 1).

The strategy does not require a lawsuit against open source providers—who operate mostly outside of the American patent's jurisdiction and who probably do not have much money in any case. As Essa argues, "I don't believe they will directly go after the open source projects. They don't need to. Blackboard just needs to create enough FUD [fear, uncertainty, and doubt] among lawyers, whose entire frame of reference is built around litigation avoidance, so that new institutions interested in adopting an open source solution just won't go there" ([2006b](#), ¶ 2).

What the lawsuit could signal, say some, is the end of the learning management system as a viable technology for online learning, a development that should be welcomed and not lamented. Writing in his blog, Alex Reid ponders, "Perhaps Blackboard's patent is the evil impetus to move us away from a 'course-based

system' of 'online courses:' the bad idea that they want to claim as their fundamental intellectual property" ([2006](#), ¶ 6). From Britain's Centre for Educational Technology Interoperability Standards ([CETIS](#)), Scott Wilson suggests, "I hope we can use this as an opportunity. . . perhaps Tony Karrer [CEO/CTO of TechEmpower, a software and eLearning development firm based in Los Angeles] is correct and that we are at the point of technology disruption, and we'll see the LMS displaced by simpler technologies with different nonfunctional characteristics (following the typical technology pattern)" ([2006](#), ¶ 3).

While such a development may be welcome for pedagogical reasons, it is not clear that a mere move away from the LMS is a satisfactory response to the Blackboard patent. After all, it remains clear that Blackboard did not develop the technology they are claiming to have invented, no matter what the patent office says. As Mike Malloch comments, "Let me just say that having spent the summer of 1998 in Blackboard's DC offices (seconded there from the UK to do some IMS work on metadata) and having spent a lot of that time interacting with the architects of Blackboard's subsequent systems, I know that these guys did not 'invent' the VLE, and that they knew they weren't 'inventing' the VLE" ([2006](#), ¶ 5).

If this is the case, what is to prevent them from claiming successfully to have invented the new technologies proposed to replace the LMS—technologies such as e-learning 2.0, e-portfolios, and the personal learning environment (PLE)? They have already indicated a desire to pursue 2.0 methodologies, as noted in one of their earlier press releases: "e-Learning 2.0 is about integrating the educational journey students take from elementary school to higher education to the workplace. As more and more faculty and students use e-Portfolios to store and showcase their scholarly achievements, Blackboard announces a unique 'e-Portfolios-for-life' service that will allow Blackboard users to post their portfolios to a central site for long-term use." ([2006b](#), ¶ 8). The concern, therefore, is that Blackboard—or some other company responding to Blackboard—could lay claim to what has, up until this point, been a development project undertaken by the educational community as a whole.

Moreover, even if there is no merit to the patent, the mere threat of a lawsuit in the same space can be intimidating. It is like that old story describing how IBM leaned on Sun: "OK, he [IBM] said, maybe you don't infringe these seven patents. But we have 10,000 U.S. patents. Do you really want us to go back to Armonk [IBM headquarters in New York] and find seven patents you do infringe? Or do you want to make this easy and just pay us \$20 million?" (Reback [2006](#), ¶ 5).

This is why educators are upset at the patent lawsuit. Taken to its logical conclusion, it results in the monopolization of development in the space by the largest player—Blackboard. It therefore results in the elimination of the open source initiatives and, given Blackboard's affiliations with commercial content providers, could also result in the elimination of open content initiatives as well. It would mean the effective commercialization of the entire educational technology space, a consequence that many advocates consider regressive and intolerable. There is widespread concern, for example, in India. As the *Times of India* notes, "The patent is already applicable in [the] U.S., New Zealand, Australia, and Singapore. Its sweep spans every little bit of online education including processes like how courses are offered and managed" (Surenadar [2006](#), ¶ 4).

The U.S. patent system has been the subject of numerous complaints over the years. Backlogged by half a million applications (Terdiman [2005](#)) with a ten-year delay in filing applications (Krajec [2006](#)), the system is ripe for abuse by submarine patents on applications that cover basic processes, which are mistakenly approved and then lie dormant for years before a company is allowed to lay claim to an established practice. Additionally, the uniquely U.S. practice of patenting business methods and software has led to sweeping patents covering entire disciplines, arguably hindering research and development in those fields (Bessen and Hunt [2004](#)).

It is for this reason that there is significant objection to software patents in Europe. The educational open source community in Europe, in conjunction with its counterparts in other sectors, has launched a no-software-patents campaign. As they argue on one of their major Web sites, "Patents turn software

publishing into the privilege of a few. Of course, everyone can still develop software. However, in a world with countless software patents, only large corporations are equipped to deal with the incremental costs and legal risks. Even they will increasingly take a negative view on software patents if patent inflation rages on" (NoSoftwarePatents.com [n.d.](#), ¶ 1). Riina Vuorikari, one of the people behind the "no e-Learning patents" initiative in Europe, likewise argues that software patenting will have negative consequences:

We are concerned about the potential reduction of access to Lifelong Learning and global digital knowledge.

- First, the cost of applications could become higher because of the software patent system; the choice of available software could become limited, and costs of using underlying communication structures, operating systems and any software could increase.
- Second, it could have a negative effect on 'in-house' and/or open source development of educational applications. Many European Educational authorities, universities, and small and medium size enterprises (SME) develop educational platforms and applications for educational use. Money spent on defending against software patent litigation would be better spent on development, education, and training.
- Third, the roll-out of educational FOSS in education could be jeopardised by the danger of software patents. ([2006b](#), ¶ 4)

She calls the Blackboard patent "a showcase demonstration on the absurdity of software patents" ([2006a](#)).

Perhaps Blackboard did not realize that its actions would spark a no-holds-barred conflict between the commercial educational software industry and the advocates of open source and open content in learning. That would be regrettable, but there is a way out—the company could assign its patents to the patent commons and withdraw its lawsuit, which would ensure peace in the educational technology community. With this action, Blackboard would insulate itself against frivolous lawsuits from other companies and be free to develop and innovate. The evidence, however, seems to run against this supposition. As Alfred Essa ([2006a](#)) reports, Blackboard seems to have turned up its spin machine to full force: It has asked not only for compensation but also for treble damages from Desire2Learn, and although CEO Michael Chasen is saying the patent claims only specific developments, he has failed to amend the sweeping language of the patent or to identify exactly what those innovations are.

Whatever Blackboard may have been expecting, it is now evident that the educational software community is fighting back. Shortly after the patent judgment Desire2Learn announced a defense and a countersuit against Blackboard, arguing that the company did not file any prior art with the patent board despite knowing about the crowded instructional technology field and even its own participation in the Instructional Management Systems project. While their motion to dismiss the suit has been denied, it appears that the legal battle has only begun (for access to all substantive papers related to the case, see the [Desire2Learn patent information weblog](#)). At EDUCAUSE, meanwhile, Blackboard representatives were subjected to scrutiny and criticism. As reported in the *Chronicle of Higher Education*, "Brian L. Hawkins, president of Educause, said the organization's Board of Directors had voted unanimously on Sunday to encourage Blackboard 'to drop the patent, drop the lawsuit,' and put the technology 'in the public domain'" (Carnevale 2006, "Concerns about Service," ¶ 7).

The open source community has also announced its opposition. Responding to concerns that the open source consortium might strike a licensing deal with Blackboard, Sakai project Board Chair Joseph Hardin writes "we are working with the Software Freedom Law Center [SFLC], along with Moodle and ATutor, and the SFLC is rather well known for upholding the interests of open source and free software developers, supporters, and users. We are not interested in any outcome that benefits only the Sakai Community and not the whole open source community" (personal e-mail, October 12, 2006).

This sort of action not only disrupts and detracts from research and development in education and technology but also fosters a hardening of attitudes toward corporate participation in the space. As Curtis Bonk writes, "Tis patentin process and lawsuit serves as notice that Blackboard the Pirate tis definitely not in tis game for the education of the citizens of tis planet. They are in it only for doubloons, booty, market share, profits, and cash flow into their own (dare I say greedy) hands. Arrrrr!!!!" (2006, ¶ 27).

Moreover, it violates the tacit understanding that has underpinned the educational software community from the beginning—that developments are created by the community as a whole. This is what has enabled universities to easily develop and transfer software to the private sector and what has allowed the public and private sector to work together in initiatives such as EDUCAUSE and IMS. This sense of betrayal is palpable in a recent and unprecedented letter from the EDUCAUSE Board to Blackboard: "There are two core tenets behind the community concern," they write. "One deals with co-creation and ownership; the other deals with innovation. Course management systems were developed by the higher education community, which includes academics, organizations, and corporations. Ideas were freely exchanged, prototypes developed, and refinements continue to be made" (2006, "Appendix A," ¶ 7). Blackboard's patent move represents a fundamental betrayal of such tenets and merits condemnation as such.

I have argued in the past that the thieves in our community are not the file sharers and the advocates of open source, but rather, those who use the nuances of the legal system to take something created by others and to make it their own (Downes 2003). I agree with Howard Rheingold: "Blackboard's actions are shameful, greedy, and bogus, and they have the potential for retarding the development of online learning throughout the world" (2006, ¶ 1).

[Editor's Note: Blackboard representatives were asked to submit a counterpoint article, but this offer was declined.]

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