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Stupid Patent of the Month: Elsevier Patents Online Peer Review

On August 30, 2016, the Patent Office issued U.S. Patent No. 9,430,468, titled; "Online peer review and method." The owner of this patent is none other than Elsevier, the giant academic publisher. When it first applied for the patent, Elsevier sought very broad claims that could have covered a wide range of online peer review. Fortunately, by the time the patent actually issued, its claims had been narrowed significantly. So, as a practical matter, the patent will be difficult to enforce. But we still think the patent is stupid, invalid, and an indictment of the system.

Before discussing the patent, it is worth considering why Elsevier might want a government granted monopoly on methods of peer review. Elsevier owns more than 2000 academic journals. It charges huge fees and sometimes imposes bundling requirements whereby universities that want certain high profile journals must buy a package including other publications. Universities, libraries, and researchers are increasingly questioning whether this model makes sense. After all, universities usually pay the salaries of both the researchers that write the papers and of the referees who conduct peer review. Elsevier's business model has been compared to a restaurant where the customers bring the ingredients, do all the cooking, and then get hit with a $10,000 bill.

The rise in wariness of Elsevier's business model correlates with the rise in popularity and acceptance of open access publishing. Dozens of universities have adopted open access policies mandating or recommending that researchers make their papers available to the public, either by publishing them in open access journals or by archiving them after publication in institutional repositories. In 2013, President Obama mandated that federally funded research be made available to the public no later than a year after publication, and it's likely that Congress will lock that policy into law.

Facing an evolving landscape, Elsevier has sought other ways to reinforce its control of publishing. The company has tried to stop researchers from sharing their own papers in institutional repositories, and entered an endless legal battle with rogue repositories Sci-Hub and LibGen. Again and again, when confronted with the changing face of academic publishing, Elsevier resorts to takedowns and litigation rather than reevaluating or modernizing its business model.

Elsevier recently acquired SSRN, the beloved preprints repository for the social sciences and humanities. There are early signs that it will be a poor steward of SSRN. Together, the SSRN acquisition and this month's stupid patent present a troubling vision of Elsevier's new strategy: if you can't control the content anymore, then assert control over the infrastructures of scholarly publishing itself.

Elsevier filed its patent application on June 28, 2012. The description of the invention is lengthy, but is essentially a description of the process of peer review, but on a computer. For example, it includes a detailed discussion of setting up user accounts, requiring new users to pass a CAPTCHA test, checking to see if the new user's email address is already associated with an account, receiving submissions, reviewing submissions, sending submissions back for corrections, etc, etc, etc.

The patent departs slightly from typical peer review in its discussion of what it calls a "waterfall process." This is "the transfer of submitted articles from one journal to another journal." In other words, authors who are rejected by one journal are given an opportunity to immediately submit somewhere else. The text of the patent suggests that Elsevier believed that this waterfall process was its novel contribution. But the waterfall idea *was not new* in 2012. The process had been written about since at least 2009 and is often referred to as "cascading review."

The patent examiner rejected Elsevier's application three times. But, taking advantage of the patent system's unlimited do-overs, Elsevier amended its claims by adding new limitations and narrowing the scope of its patent. Eventually, the examiner granted the application. The issued claims include many steps. Some of these steps, like "receive an author-submitted article," would be quite hard to avoid. Others are less essential. For example, the claims require automatically comparing a submission to previously published articles and using that data to recommend a particular journal as the best place to send the submission. So it would be an exaggeration to suggest the patent locks up *all* online peer review.

We hope that Elsevier will not be aggressive in its own interpretation of the patent's scope. Unfortunately, its early statements suggest it does take an expansive view of the patent. For example, an Elsevier representative tweeted: "There is no need for concern regarding the patent. It's simply meant to protect our own proprietary waterfall system from being copied." But the waterfall system, aka cascading peer review, was known years before Elsevier filed its patent application. It cannot claim to own that process.

Ultimately, even though the patent was narrowed, it is still a very bad patent. It is similar to Amazon's patent on white-background photography where narrowed but still obvious claims were allowed. Further, Elsevier's patent would face a significant challenge under *Alice v CLS Bank*, where the Supreme Court ruled that abstract ideas do not become eligible for a patent simply because they are implemented on a generic computer. To our dismay, the Patent Office did not even raise *Alice v CLS Bank* even though that case was handed down more than two years before this patent issued. Elsevier's patent is another illustration of why we still need fundamental patent reform.