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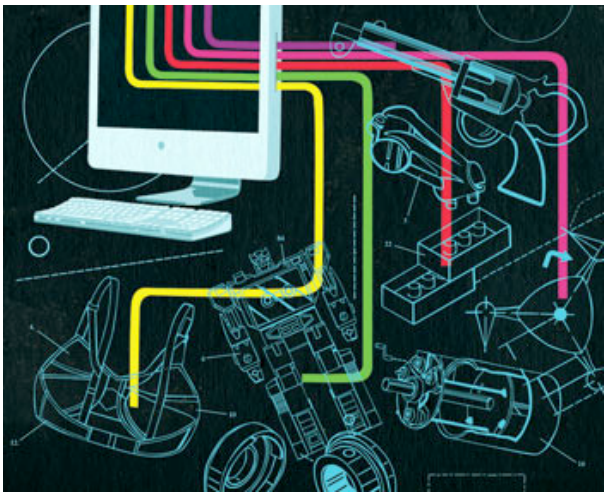
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A patent improvement

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Intellectual property: A new scheme will solicit comments via the internet to improve the vetting of patent applications

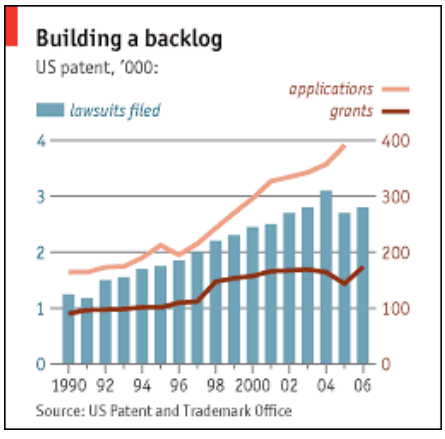
Lucy Vigrass



PATENT examiners, who scrutinise applications for patents and determine whether they ought to be granted or not, are used to poring over diagrams of complicated contraptions. But now the patent system itself, just as complex in its own way, is under increasing scrutiny.

The number of applications has soared in recent years, but patent offices have been unable to keep up—resulting in huge backlogs and lengthy delays. Standards have slipped and in America the number of lawsuits over contested patents has shot up (see chart). In an attempt to fix these problems, the United States Patent and Trademark Office (USPTO), Britain's Intellectual Property Office (IPO) and the European Patent Office are evaluating a radical change: opening the process up to internet-based collaboration.

The scheme, known as "Peer to Patent", was created by Beth Simone Noveck, a professor at New York Law School. It applies an unusual form of peer review to a process which traditionally involves only a patent applicant and an examiner. Anybody who is interested may comment on a patent application via the internet. The scheme was launched as a one-year pilot programme in America on June 15th. Sean Dennehey of Britain's IPO, who sits on the project's advisory board, says his organisation will follow suit by the end of the year. The project is being supported by big technology firms including IBM, Microsoft and Hewlett-Packard.



An efficient patent system is essential for the promotion of innovation. Patents give inventors a temporary monopoly on a new idea in return for disclosing how it works, so that others can subsequently build upon it. But if a patent is granted for something that is not novel (people are already doing it), or is obvious (any Tom, Dick, or Harry in the field could think it up), it can hamper innovation by turning a widely used

invention or process into one person's monopoly. The trouble is that examiners cannot always tell when a patent is unwarranted.

To prove that an invention is not novel, the patent examiner must find evidence that others have already done everything claimed in the patent, a quest known as a "prior art" search. Prior art is also the basis for determining whether some new step claimed in the invention is obvious—and therefore not worthy of a patent. But prior art can be elusive. It might be buried in an obscure technical journal, in conference slides, or in a doctoral thesis tucked away in a university library. It could even be embodied in a machine taken off the market years earlier. Finding prior art is hardest in fields where patenting is fairly new, such as software, biotechnology, financial services and business methods.

Examiners are usually well versed in the technology they review and are adept at searching their office's collections of patents, along with other databases. But given the specialisation of modern science and technology, they cannot be expected to keep abreast of all the technical literature. To complicate matters further, says Jon Dudas, the director of the USPTO, patent applications have become more complex as well as more numerous: some applications contain thousands of claims. A biotech patent may be accompanied by gigabytes of computer data. And a quarter of the applications handled by the USPTO contain no references to prior art, adds Mr Dudas, while another quarter contain more than 25 references. This makes it hard for examiners to decide which ones deserve the closest scrutiny.

There have already been several attempts to overhaul the system. Court cases and regulatory changes have altered it in various ways in recent years, but this has not done away with the perception that the system is in crisis, nor silenced those calling for further reform. In "Innovation and its Discontents", a book published in 2004, Adam Jaffe and Josh Lerner argue that some reforms have even made things worse. And "Patent Failure", a forthcoming book by James Bessen and Michael Meurer, argues that America's system does inventors more harm than good. Other critics have called for the elimination of patents on software, business processes and human genes.

Several independent outfits already supplement the official patent-granting institutions. Among them is Patent Lens, run by CAMBIA, a non-profit research institute, which tries to make it easier to track down relevant patents in a particular field. Similarly, PatentFizz is a website that makes it easy to find out about particular patents, comment on them and even add references to prior art. In both cases the aim is to open the working of the patent system up to greater scrutiny.

Peer to Patent builds on these ideas, especially the notion that practitioners and researchers within a particular field collectively have all the relevant prior art at their fingertips already. All the patent office needs to do, therefore, is to get that community to tell it what it already knows. Peer to Patent does this using the latest web-based collaboration tools, such as voting and tagging, which can harness the collective knowledge of a large number of users.

The USPTO wants YOU

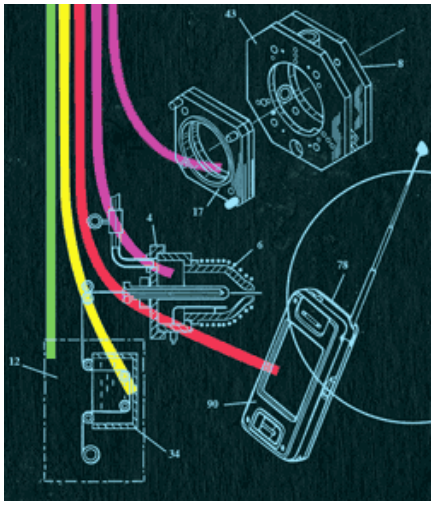
The USPTO's pilot scheme will scrutinise 250 patent applications in a handful of computer-related fields, with the approval of the applicants. The first examples have been submitted by IBM, Intel, Microsoft and other technology giants. The text of each application is posted in full for public scrutiny, and members of the public can sign up to participate in the review process. They can discuss each application in an online forum, suggest examples of prior art, and vote for the prior art they consider most relevant. Messages that are considered off-topic can be flagged, and there are plans to allow participants to rate each other, so that the most highly regarded participants' recommendations rise to the top of the pile.

Tagging, a common feature of many modern websites, is also used. Patents in new fields often sound like gobbledygook, since each inventor makes up his own terminology. But a user familiar with the field in question may realise that the invention matches something already in use under a different name. By adding an appropriate tag, that user can attract the attention of experts with a comprehensive knowledge of the field's prior art.

Eventually, the ten pieces of prior art that receive most votes in the Peer to Patent community perusing each patent are sent to the patent examiner. As with conventional patent applications, examiners will still choose which prior art is referred to in their decision on a patent application, known as an "office action". But the community's explanations, discussion and examples will be taken into account.

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The pilot Peer to Patent scheme allows examiners and volunteer participants to provide feedback to refine the process. A total of 18 measures will be used to assess the scheme and evaluate its effectiveness, including the number of items of prior art provided by the community that appear in office actions; the number of claims changed by applicants as a result of queries raised by the community; and the number of volunteer participants signed up, as well as their level of participation.



"The information provided should improve patent examiners' grasp of highly technical fields."

Mr Dudas says he considers Peer to Patent to be a "natural step" in opening up the patent system and fulfilling its original goal of encouraging the publication of new ideas. In Britain, Mr Dennehey regards Peer to Patent as a more up-to-date way for the public to submit observations during a patent examination, something already permitted by law. (In America, third parties are allowed to submit only prior art without comments under the current system.) Patent lawyers are also intrigued. Mark Costello, general patent counsel at Xerox, an American document-management company, says the idea has merit, but that he will be watching closely to see "whether it remains a fair and objective system after competitors enter the process".

The scheme's immediate impact is likely to be minimal. Patent applicants are free to ignore the online community's discussions and respond only to the office action, as they always have. But if Peer to Patent succeeds, "we will have made the most significant improvement to the patent system in decades, and done a great service to the public and the economy," says Manny Schecter, a member of the project's steering committee and an intellectual-property lawyer at IBM.

The hope is that Peer to Patent will reduce both uncertainty for inventors and unnecessary lawsuits because dodgy applications will be uncovered and rejected quickly. This ought to mean that patents issued will be stronger, leading to fewer challenges by those required to license them. Indirectly, the scheme could also help innovators to commercialise their ideas, since stronger patents will make patent-holders' work more attractive to investors.

The information provided by the Peer to Patent community should also help patent examiners to improve their understanding of highly technical fields. Inventors and patent lawyers—who currently depend on the patent office's collection of patents and prior art when conducting prior-art searches—should gain, too.

For all that, some observers are sceptical about bits of the Peer to Patent process. They wonder whether people will really volunteer to provide examples of prior art, join discussions, and so on. Ms Noveck cites the widespread participation in other online communities—such as Wikipedia, a collaborative online encyclopedia—as evidence of the public's desire to contribute. But although everyone knows what an encyclopedia is, and the pages of Wikipedia can be edited with a few clicks, not many people understand the patent process, or know how to read a patent.

Another concern is that the people who take part in the project will represent vested interests—in particular, big technology firms which can assign staff to review patents. There are also worries about the possibility of tacit collusion among large patent-holders, who might attack individual inventors in order to keep them out of specific markets.

Ms Noveck, however, is a believer in grassroots democracy. If Peer to Patent's goal of cleaning up the patent system was not already audacious enough, she thinks the project could also serve as a demonstration that the public, helped by technology, can participate more fully in its own governance. Unfortunately, Peer to Patent suffers from the same vulnerabilities as other democratic institutions. If the public engages with it earnestly, it could produce marvellous results. But if people tire of it and cede control to special interests that do not align with the public interest, Peer to Patent could devolve into just another prop for the status quo. The project's outcome, at this early stage, remains uncertain. But it is surely worth a try.

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