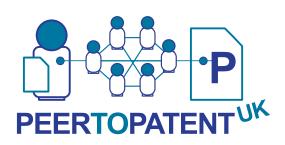


PEERTOPATENT - PILOT



Contents



Executive Summary	5
Introduction	6
Examination at the Intellectual Property Office	9
Operation of the UK Peer To Patent pilot	13
Results	17
Conclusions and Next Steps	25
Acknowledgements	26

Executive Summary



Peer To Patent is an attempt to use "crowd sourcing" to harness the collective knowledge of the Research and Technology communities through the Internet to provide information to help patent examiners determine if a patent application is for a new and inventive invention. It has already been piloted in a number of jurisdictions, notably the US and Australia, and the Government commissioned a pilot project in the UK to examine how well suited the approach is to the UK patent system.

The UK pilot involved a number of unique features compared to the previous pilots in other jurisdictions, arising from differences in the UK patent system, which has an established tradition of allowing others to comment on patent applications. One such feature was the selection of applications on the basis that they were due for examination at the time of the pilot whereas other pilots required applicants to volunteer applications. Another feature was that reviewers from the Internet community were told what the examiner had already found, unlike the other pilots where examiners undertook the search after the community made its comments.

The IPO worked with New York Law School, who devised the software used in the US and Australian pilots, to develop a UK version of the Peer To Patent website to which patent applications were put up for anyone to comment on. The IPO publicised the pilot through the use of social media, including Twitter^{RTM} and a blog which ran throughout the duration of the pilot.

Over the 7 months of operation of the Peer To Patent website, the website received over 4700 visitors from over 90 different countries. Out of 172 applications in the pilot (all in the computing technology area), observations were received on 11, just over half of which were useful to the examiner. This represented an observation rate of over three orders of magnitude greater than would usually be expected in that area. The pilot appears to validate the potential usefulness of the Peer To Patent approach in a UK context. The specific conclusions which can be drawn are:

- Peer To Patent can make an incremental, but still significant, improvement to the ability of Patent Offices to obtain prior art relevant to patent applications.
- There is considerable interest among the Internet community in this concept.
- To make the Peer To Patent system work effectively, effort will need to be put in to effectively "seed" communities who will be willing to contribute to the programme over an extended period of time.
- To use more effectively the Internet community, there needs to be clear communication of which applications would particularly benefit from assistance, for example by clearer communication of the results of examiner's searches.
- The use of social networking technologies such as Twitter^{R™} and blogs can be a highly effective method for reaching out to certain communities, specifically in the computing sphere. They enable the effective leveraging of existing communication networks spanning the Internet.

The next step would be to integrate aspects of the Peer To Patent process into the IPO's online file inspection service, Ipsum, and investigate ways of building online community interest in commenting on applications.

Introduction

In November 2010 the Government published the "Blueprint for Technology"¹ which included several commitments in the intellectual property area. One of these was a commitment for the Intellectual Property Office to run a "Peer To Patent" project.

"In addition, the Government will launch a pilot UK 'peer to patent' system that harnesses crowdsourcing technologies to help maintain patent quality. Under the 'peer to patent' system, versions of which are being trialled around the world, technology experts can comment on patent applications over the Internet, helping patent offices identify innovations which are genuinely inventive"

This objective was incorporated into the Intellectual Property Office (IPO) and BIS business plans.

The IPO launched the pilot Peer To Patent website in June 2011. Over the next 7 months, 172 patent applications were put up for "peer review", and subsequently examined by examiners in the IPO.

The contributions made by commentators on the website, along with other data about website usage and feedback received throughout the life of the pilot were analysed to determine what the pilot showed about the effectiveness of a Peer To Patent system. This report reviews the pilot and reports on the findings.

In summary, the UK pilot, operating in the context of the UK system, and with an approach geared to all patent applications, not just those volunteered for the system, has demonstrated, in line with experiences elsewhere, that Peer To Patent can make an effective contribution to uncovering relevant documents which can help examiners to determine if an invention claimed in a patent application is new and inventive. The pilot has also shown the effectiveness of the use of social media technologies in this context, and the importance of building online communities to sustain a commitment to the programme over the long-term, if Peer To Patent is to be taken forward on a larger scale.

What is Peer To Patent?

One of the fundamental principles of patent law is that patents should only be valid if they cover inventions which are new – not previously known – and inventive – not obvious compared to what is already known. For this reason, patent examiners in patent offices worldwide look for what is already known ("the prior art") when they are considering whether to grant a patent.

In recent years, there have been concerns that, particularly in areas of fast-advancing technology, it has not been possible for examiners to search effectively to find out what the prior art is. Indeed, in any system there are going to be practical and cost limitations on what examiners are going to be able to find. This brings a resulting risk that patents may be granted for old or obvious "inventions". Although such invalid patents can be challenged in court, that can be expensive, and their very existence risks creating uncertainty.

The underlying idea of Peer To Patent is to harness the existing expertise of people working in technology areas, outside patent offices, and funnel that to providing examiners with more information than they could realistically hope to find by themselves.

The concept of Peer to Patent was first put forward by Professor Beth Noveck of the (New York Law School (NYLS) in a blog post and subsequently expanded on in, the paper "Peer to Patent : A Modest Proposal"².

¹ http://www.bis.gov.uk/assets/biscore/innovation/docs/b/10-1234-blueprint-for-technology

² http://www.brookings.edu/~/media/Files/Press/Books/2009/wikigovernment/wikigovernment_chapter.pdf





The paper considered the question – particularly in the context of the US patent system – outlined above, and put forward the idea of using the "wisdom of crowds". If the public and especially the relevant technical and scientific community could be engaged in the process of examination they could provide evidence that examiners could consider in making their decision on whether to grant a patent – an approach to information gathering known as "crowd-sourcing". The paper saw the patent system as a suitable place to trial the overall concept of increasing citizen participation in Government decision-making.

How Peer To Patent Works

Peer To Patent works by making patent applications available on a website for a period of time (typically 90 days) for viewing and commenting on.

Anyone interested can then undertake their own research into a patent application. It is hoped that by making the application available to the scientific and technological communities they will be able to use sources of information that might not be readily available or accessible to a patent examiner. These may include for example specialist databases or websites, or indeed simply their own knowledge gained from working in the field. Having identified prior art that may be relevant to the claim the reviewer can then upload this information through the website – either a reference to enable an examiner to locate a document, or the document itself.

One of the key aspects of Peer To Patent as originally envisaged is that reviewers or interested parties can view the prior art uploaded by others and pass comment on it via the annotate feature of the website. They also get to vote on the relevance of the prior art which allows a basic ranking to be created.

A report is then collated based on the ranking and the top references are then sent to the IPO. The intention was originally to avoid examiners being flooded with submissions, but in fact, in the pilots conducted so far, there has been virtually no cases in which it was necessary to truncate the list of references.

The references are then considered by the examiner, along with the results of their own searches, in making their decision as to whether a patent should be granted. The role of the reviewers is therefore limited to supplying information to the examiner – they play no part in the actual decision on whether or not to grant a patent.

Pilot Peer To Patent projects internationally

The first experiment in putting Peer To Patent into practice was launched as a joint project between New York Law School (NYLS) and the United States Patent and Trademark Office (USPTO) in June 2007.

The first phase of the US Peer To Patent Pilot was launched in late 2007 and was restricted to a limited sample of 40 applications with the first US anniversary report³ being issued in 2008. These applications were "volunteered" by the applicants for inclusion in the pilot with a substantial majority being put forward by a number of companies who also provided financial support to the project. Responses were received on 23 of the cases and in 10 cases the USPTO examiner used the provided information either directly or indirectly when issuing their report.

By the time of the second anniversary report in 2009⁴ the pilot had been expanded to include 187 applications in total. Of the 66 cases which had been examined at the time of the report examiners had used Peer To Patent references to reject one or more claims in 18% of cases.

The USPTO have since started a further pilot which ran alongside the UK pilot. Users of the website were able to register once and transfer between the UK and US pilots websites.

IP Australia, in conjunction with Queensland University of Technology, ran a six month Peer To Patent pilot starting in December 2009, with a report being issued in December 2010⁵. 31 applications were volunteered by 8 applicants. In 11 of the 31 cases prior art from reviewers was used by IP Australia examiners to reject one of more claims. In 8 of these the prior art had not been discovered by the examiner.

There have also been trials of versions of the overall Peer To Patent concept, with some significant modifications, in South Korea and Japan⁶. Currently, the Canadian Intellectual Property Office is also considering a Peer To Patent trial.



IP Australia

Applying Peer To Patent to the UK patent system

The UK patent examination process differs in a number of respects from that in the US, with the result that there were corresponding differences in the way the pilot was implemented in the UK compared to the US trials. These largely originated from the greater flexibility in UK law already allowing commenting on patent applications, and the two-stage search and examination process in the UK.

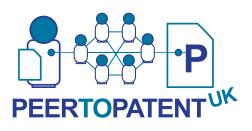


Later figures from the New York Law School showed that in total the first two phases of the Peer To Patent project included some 223 applications on which 189 received responses. In 36 (16%) cases the Peer To Patent references were used to reject one or more claims.

- http://dotank.nyls.edu/communitypatent/CPI_P2P_YearTwo_lo.pdf
- http://www.peertopatent.org.au/P2PAU_1st_Anniversary_Report.pdf 5

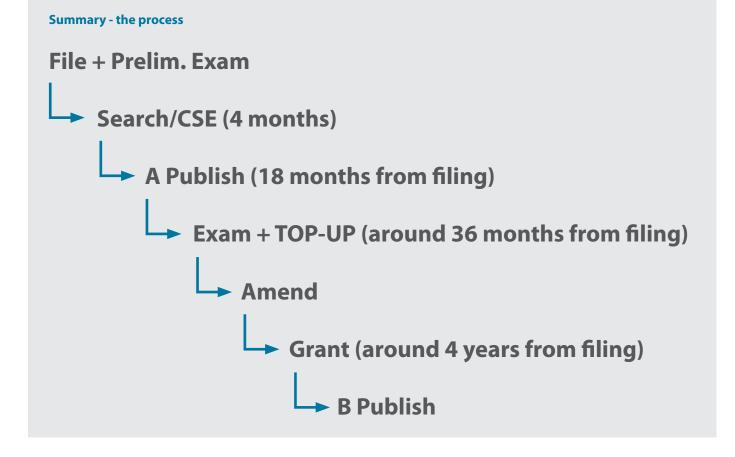
6 http://www.iip.or.jp/e/e_p2pj/

Examination at the Intellectual Property Office



The primary examination process in the UK involves an early (usually within 4 months) search to determine the prior art, followed later (usually after publication) by a full consideration of whether an application can be granted (examination). The advantage of this approach is that it enables applicants to make early decisions about whether they wish to apply for equivalent patents in other countries. It also means that a full search report is published with the patent application, which means that anyone can see at that stage some indication of how new and inventive the invention appears to the examiner. Once examined applicants can decide to respond to the examination report and provide amendments. These will be examined by an examiner and an application will either be granted or refused by the examiner. Alternatively, the applicant may decide not to respond and the application is allowed to lapse. Of all the applications received by the IPO about 30% go onto become granted patents.

The applicant can ask for acceleration of this process at any stage, and in an increasing number of cases applicants request "combined search and examination", where the full (first) examination is done at the same time as the initial search.



Third Party Observations in the UK

In the UK (and Europe, which has largely harmonised pre-grant patent law), there is already a wellestablished system for people other than the patent owner (so-called "third parties") to provide information and arguments to an examiner that a patent should not be granted for an application.

This is enshrined in law by Section 21 of The Patents Act 1977:

"Where an application for a patent has been published but a patent has not been granted to the applicant, any other person may make observations in writing to the comptroller on the question whether the invention is a patentable invention, stating reasons for the observations, and the comptroller shall consider the observation in accordance with the rules."

Anyone using this system has their submission acknowledged by the IPO, but they gain no special access to the examination process or right to directly interact with the examiner, although the examiner may contact them for further details if the examiner believes this to be warranted.

This approach contrasts with the practice in the US, where, until the passage of the America Invents Act this year, it was not possible for third parties to provide anything other than a list of patent numbers to an examiner considering a patent application. (It is for this reason that all the applications in the US patent had to be volunteered by their applicants).

Design of the UK Peer To Patent Pilot

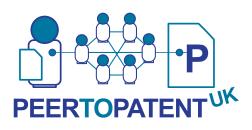
The UK pilot sought to take forward the Peer To Patent concept further in a number of ways, building on the work already done, to understand how the idea might be useful in a European context. The differences in the UK to the US required a different approach in some areas, and provided opportunities for a clearer understanding of the value-added by Peer To Patent.

The main objectives of the pilot were:

- To ascertain if the Peer To Patent concept would be useful in a UK context in finding information for examination of individual patent applications at the IPO.
- To actually provide that information to help with examination of cases in the pilot.
- To identify sources of information not necessarily available to examiners.
- To improve the understanding of IP amongst the scientific and technology communities through improved engagement.

The main differences from the prior US (and Australian) pilots were

- Because third party observations were already a well-established feature of UK law, there was no need to rely on applicants volunteering their applications to take part in the project
- The existence of an earlier published search on all cases meant that commentators could be given the results of the examiner's findings before contributing themselves.



Selection of Cases in the Pilot

As mentioned above, in the US, it was necessary in order to comply with legal restrictions that applicants volunteer their patents to take part in the pilot⁷. In the UK, by contrast, the Peer To Patent pilot could be treated legally as a mechanism for making third party observations under the existing system: once the Peer To Patent website had compiled a report on a case, it could simply be fed into the existing processes at the IPO for handling third party observations. Because under the UK system, by the time applications were due to be examined, they would have already been published, it was possible simply to republish the applications on the Peer To Patent website.

This gave the UK pilot the opportunity to trial the project on a true cross-section of its work, rather than on a selfselecting group of applications. This gave the UK pilot an opportunity to get a clearer picture of the potential impact of a Peer To Patent approach across the board.

For reasons of scale and operational efficiency, as well as not flooding the fledgling community of commentators with large numbers of applications at once, it was decided to run the pilot using roughly the same number of cases as in the second US pilot. This, however, represented a significantly greater proportion of the IPO's overall input compared to that of the USPTO's.

In considering which cases to select, one of the main areas where the Peer To Patent concept was considered to potentially provide the greatest assistance was in the area of Information Technology. For this reason, the pilot projects run by the USPTO and IP Australia both focussed on applications that were in this area. In particular, they used the International Patent Classification heading G06F as a guide to selecting cases. This is titled Electrical Digital Data processing and covers technology from controlling the power supply in a computer and how a computer mouse works to the intricate details of a pipeline processor and arbitration on a computer bus. In view of the use of G06F by other offices we also considered that this would be the most appropriate area of technology for our study. G06F is a significant area in the IPO, accounting for some 5% of the output of the office. This meant that we could provide a useful sample of applications to the pilot without the need to broaden the field of technology. It also enabled us to ensure that a majority of examinations were done within a single team of examiners. This minimised the need for any information dispersal amongst other examiners.

A particular "time-slice" of applications from this heading was then identified, these being the applications in that technology area that would come up for examination at the relevant time during the pilot project. This meant that cases would be examined at exactly the same time as they would have been had they not participated in the project, avoiding either accelerating them or holding them back.

A number of cases needed to be excluded from the sample for technical reasons, including those which originated in international applications under the Patent Cooperation Treaty⁸. This ultimately resulted in a sample of 172 cases.

The IPO ensured that applicants for selected applications were fully informed of the pilot. The Chartered Institute of Patent Attorneys (CIPA), in particular, was very engaged and helpful in explaining the nature and intention of the pilot to its members.

Use of the IPO Search Report

In previous Peer To Patent pilots, the search of prior art by the examiner happened after the application had gone through the Peer To Patent process⁹. With the early search conducted in the UK, this would simply not have been an option.

Combined with the fact that all applications on the Peer To Patent were already published, along with the search report, the examiner's findings were already in the public domain. It therefore seemed logical to include these on the Peer To Patent website, to give commentators an idea of what had already been found. Doing this had the potential to enable commentators to focus their efforts on applications where the examiner had found little or nothing, and not expend time on cases where it was fairly clear that the IPO had already identified the invention as being known.

The Search Report

The search report shows the reader which claims of the application were searched, when it was searched and by which examiner. It will also show which IPC area was searched and which online databases were used. In most cases these will the EPO and Derwent WPI data bases though others such as INSPEC are often consulted.

More importantly to most people the search report will also list the documents the examiner considers relevant to the application. In many cases these will be patent documents in which case the number will be provided. However, they may also be non patent literature such as scientific papers. One of the aims of the Peer To Patent pilot was to increase the number of these type of citations by asking people who work in the same technical field as an application to comment. It may be, for example that someone will review a patent and provide details of a paper they have written or are aware of that the examiner was unable to find during their conventional search.

Classification

All patents are classified according to an International Patent Classification (IPC) Scheme. The G06F heading indicates several levels of classification:

C	
G:	Physics
U.	I I I I J J C J

- 06: Computing; Calculating; Counting
- F: Electrical Digital Data Processing

Within the G06F heading there is a much more fine grained classification. For example patents for cooling systems in computers can be found in G06F1/20 whereas patents for a pipeline processor would be found in 9/38.

The IPO also uses the ECLA classification scheme that is used by the EPO. This allows for an additional level of classification below the IPC. For example cooling can be further subdivided as in 1/20p being a classification for cooling in portable computers. Similarly 9/38B2B is where you would find a pipeline processor with instruction pre-fetching using branching with address prediction

As you can see from these examples the classification helps examiners a great deal when trying to identify where to search an application especially when it the application is in an area of advanced technology.

A similar restriction applied in the US and Australian pilots
There was variation between the pilots as to whether the examiner was formally allowed to look at the results of the Peer To Patent consideration before conducting their examination.

Operation of the UK Peer To Patent pilot



Pilot Timeline



Work began on the pilot in November 2010, with the website going live on schedule on 1st June 2011.

The Pilot Website

The period before the launch involved working with NYLS to adapt the US version of the Peer To Patent website for the UK requirements discussed above. As well as the necessary process changes, this involved rewriting the "help" and information sections of the website to reflect UK, rather than US law. A major advantage of using the existing NYLS system was that the underlying support structure, such as procedures for registration and datagathering functions, were able to be used "as is", and indeed were shared with the simultaneously running US pilot.

The website needed to communicate with the IPO's systems at two key points: for the IPO to upload information on the applications before they were put up on the website, and for the IPO to receive the results on each application when it came off the website.

For delivery of results to the IPO, the form of report used by the US pilot was brought across unchanged, as the third party observations system in the UK does not place any constraints on the form of observations, and this report naturally contained all the relevant information from the website.

Delivery of the application data to NYLS involved a degree of work to ensure the data was in an appropriate machine-readable form. This enabled the website to break up the material in the applications in a similar manner to that used in the US to facilitate browsing of the applications compared to a simple image reproduction of the published patent document.¹⁰

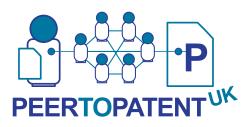
One further difference in the UK implementation was that it was not possible for commentators to directly submit copies of documents through the Peer To Patent website – only a reference was allowed. This was necessary to comply with UK copyright law, which differs from the US.



The overall look-and-feel of the website aimed to project its membership of the Peer To Patent "family", but with a UK flavour.

	ERTOPATENT	*	Welcome to Peer To Patent Register Login Contact
	ENTOPATENT	11115	
Hame	Hy Profile Tutorials	About Peer To Patent	US Pilot
pplication List Archived Application	s IPC Patent Classifications		
PROPE	LLECTUAL RTY OFFICE		Learn more about how to get involved in the patient periors process.
UK ALLOWS ONLINE REVIEW	OF PATENT APPLICATIONS		
	rove the examination of patent application references to help patent examiners make		GET STARTED
SIGN UP	ABOUT THE PROJECT	SUBMIT PRICE ART	FIND APPLICATIONS
I's free, tast, and easy to tign up as a Peer Reviewer.	Learn more about the project and how to participate.	Help patent examiners las patent application might b due to prior art.	en why a
	Learn More.		am Note
ews			NOST FOPULAR TAGS
PPLICATION LIST			How to participate. Learn more about the project or how to participate. Learn More
Most Active Teams New Applicatio	ns Applications in Nord		
Handling mailus dios/trauble in an in	formation system comprising prioritising, or	earching and race	
Vidual Machines (/M) on Server Clust	for with dedicated VM/Host OS performing e	nonption/encapsula	
Providing Access to Accilianal Conter	1 During Playback of Video Sequences		
Rule creation for an apparatus includ	ing a Configuration Management Database	(CMDR)	
Providing an secarate transaction qu	eue for posted transactions determined to t	e interrupts recei	
Selective makwate scanning of electro	onic files based on whether an associated	ngital signature b	
Displaying event notifications from a r	Instantial machine when a second virtual r	sachine has bon.	
Scheduling data processing instruction	ons to avoid short path errors		
Smart Meter with secure communicat	ions and secure hosting of third party appli	ators	
Processing VolP communication pact	kets in a peripheral device		
			more

After launch, applications were loaded on a weekly basis with the last being loaded on 15 September 2011. The reports started being received from the website from September, and were then considered by an examiner when performing the substantive examination on an application. On completion of this examination an internal survey on the use they made of the report was completed by the examiner to allow proper evaluation of the pilot.



Outreach

The communications program for the Peer To Patent Pilot had two specific objectives. Firstly, it needed to raise awareness of the pilot in order to attract reviewers. The second part was to improve our outreach to groups of people in the technological and scientific communities and raise their awareness of intellectual property.

Key to the approach was identifying the target audience for Peer To Patent. From experience of the US and Australian pilots this appeared to consist of two main categories, one being a mixture of IP professionals, IPO stakeholders, IP journalists and related groups with IP knowledge, and the other a group of scientific and technological people who would hopefully provide the reviewers for the pilot.

Each required a slightly different approach but many of the materials developed would work for both groups. Owing to lack of funds available for Government Marketing it was decide very early on to use a combination of press briefings around the time of the launch and a variety of online activities.

Launching the Pilot

Press briefings in May involved pro active engagement with various IP publications such as NextWeb and ZDnet. The launch was also accompanied by a press release including support from our then Minister, Baroness Wilcox, Minister of State for Intellectual Property.

This was a successful exercise and generated a number of interviews about Peer To Patent with over 30 articles being written and published about the launch of the UK pilot.

A number of events were also held to discuss the Peer To Patent pilot. These were targeted largely at the IP community to explain the reasons behind the pilot and to overcome some scepticism. Amongst these were presentations at CIPA in London and Leeds. We also provided an article for the CIPA journal which was published in May 2011.



The IPO having put out feelers, others volunteered to assist, notably the team behind the "IPKat" blog site, who organised an open event in London in early June. This gave us the opportunity to explain the pilot and to listen to several other speakers about their views. The IPkat also posted a number of articles on the pilot, as did the Patently-O Blog run by Dennis Crouch in the United States.

Throughout the pilot we spoke about Peer To Patent to a number of interested parties. One of these was the Biotechnology Industry Association. Conversations were also held with a number of other interested IP Offices, including the Brazilian Patent Office and the State Intellectual Property Office of China.

Building a Community of Reviewers

The use of social media was very important in our efforts to reach the scientific and technological communities. The IPO had first made use of these on a specific project with the Hargreaves Review just prior to the launch of the pilot website, and the lessons learned from that guided our efforts on the pilot.

For the pilot we established a pilot related Twitter^{RTM} feed. This was used over the life of the pilot to advertise that new applications had been loaded and the availability of other information. At the end of the pilot we had 160 followers. This channel was used to promote the blog and key milestones in the project, amongst other things. It also allowed us to engage with those talking about Peer To Patent online. It generated a pleasing amount of interest and a number of our tweets were retweeted around the web, generating further coverage and awareness. It is difficult to assess how much of a success this was but using Google Analytics data there is evidence that a weekly peak of activity on the website occurred on launch days

As part of our outreach efforts we also established a "Peer To Patent" blog. This was used as a space initially for the team to post the latest news on the pilot. However, it was also used as a medium for introducing aspects of patent law to the wider community. To date the blog has had over 6,000 visits and generated a number of comments and questions both through the blog and through phone calls and emails.

During the lifecycle of the pilot we worked closely with the Technology Strategy Board to establish a first IPO presence on the Knowledge Transfer Network _connect. This provided us with an opportunity to reach those in the scientific and research communities. The presence provided an introduction to the pilot and we regularly updated the news feed to highlight posts on the blogs and loading of applications. This was done late quite late in the pilot but nevertheless attracted 71 subscribers. In the US and Australia the pilot projects were run from Universities and students were actively engaged to provide research into applications. This could be done because all the applications had been volunteered, and so their applicants could be relied on to be enthusiastic about the project. In the UK pilot, because applicants had had no choice in whether their applications were part of the project, this could not be done, in case it appeared that an IPO-sponsored project were specifically "targeting" particular individual applications for more detailed scrutiny than others.

This meant our ability to build a community among student bodies was more restricted, primarily consisting of advertising the pilot and asking for contributors. However, we received an enthusiastic response from a number of Universities' computer science departments, including Oxford and Imperial College.

Traditional media coverage was largely limited to the press release that was sent out to selected stakeholders and IP journalists on the launch day (1 June). It generated some additional media coverage across a range of titles, and generated a wave of new followers and blog readers. The networking effect across the blogs was noticeable – for example, on 20 September the boingboing.net blog carried an article about Peer To Patent and mentioned several patent applications¹¹. This resulted in some 500 visits to the website in a three day period with 421 views of one of the applications mentioned and 253 of the other.

Email also formed part of the communication outreach program. Making use of the IPO's IP Insight eNewsletter subscriber base a special email was sent to over 7,000 subscribers. This stimulated additional interest and awareness in the project and increased visits to the blog and campaign web page.

Results



Information Sources

The results in this section are derived from two main sources. Information on the usage of the website has been provided by the NYLS using Google Analytics to describe use and access to the website for the period 1 June – 31 Dec 2011.

Information on the usefulness of the prior art provided by the reviewer body was derived from a survey completed by the examiner handling each of the 172 examinations. The basic survey was similar in many respects to that used by IP Australia and we are grateful for the help and assistance provide by Bob Bartram of IP Australia in this regard.

Prior Art References

The pilot covered 172 applications. For each application the substantive examiner completed a questionnaire form which these results are derived.

Of the 172 applications, observations were received on 11 applications.

- Pilot Observation Rate 6.4%
- Normal Observation Rate under Section 21 <.002%

Of the 11 responses

- 6 responses were considered to be helpful or useful response, of these
 - 2 were considered to be helpful.
 - 1 was considered to be helpful but was the equivalent to an existing citation and was cited at the exam stage.
 - 1 document had already been identified but not used at search stage.
 - 2 documents were considered less relevant than the examiner identified prior art.

• 5 were considered unhelpful.

Of the 11 responses

- 3 were Patent or Patent Application Literature
- 5 were Non Patent Literature
- 2 contained both
- 1 was a comment

Of the 11 Responses

- 10 were accessible to the examiner
- 1 was not readily available and considered by the examiner to be an example where public knowledge was very helpful.

Examiners overwhelmingly welcomed the use of Peer To Patent in completing the first examination.

Reviewer Community

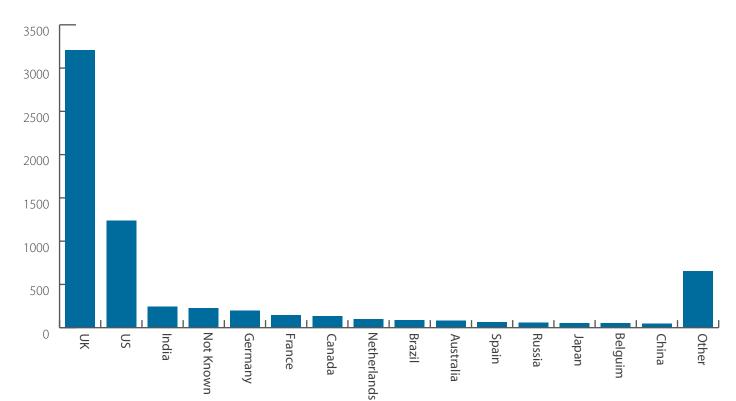
The signup procedure during the pilot was shared with the second USPTO trial running alongside the UK pilot. In that period over 450 users signed up. It is therefore difficult to analyse these numbers in any great detail as the registration process required a minimum of compulsory detail. Any further information was provided on a voluntary basis and as expected some completed more than others.

It is important to make the point here that IPO examiners were expressly prohibited from registering. The Pilot was intended to be an exercise in public participation and for this reason any examiner registration was considered unhelpful.

Web Site traffic trends

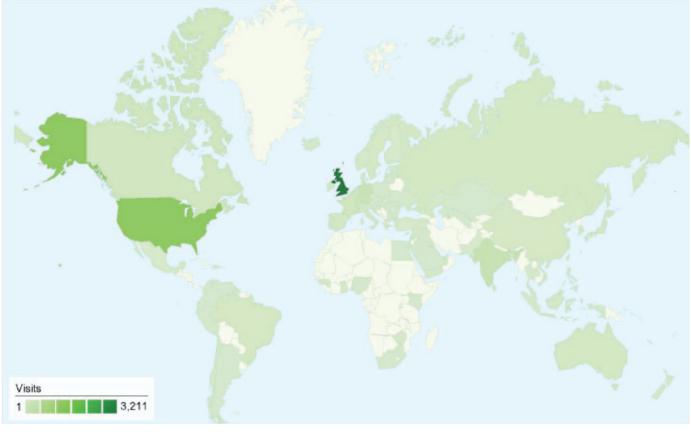
According to data obtained using Google Analytics, during the period June 1st to Dec 31st the UK Pilot website experienced:

- 6,602 Visits
- 4,713 unique visitors accounting for 71.52% of visits
- Visits from 91 countries and territories:



Visits by Country





The average time visitors spent on the web site was 3 minutes 15 seconds

The website experienced a 54% bounce rate (the percentage of initial visitors to the site who "bounce away" to view a different website, rather than continue to view other pages within the same site.)

Traffic sources were separated into three categories:

Direct Traffic:Users typing the website URL Referring Sites:Visits originating from another site having a link to the website Search Results: Visits generated from a search enquiry



The top sources of referring site traffic to the web site were referrals from

- The IPO's own website
- •
- BoingBoing,Net •
- 949 visits or 14.40% of total visits The US Peer to Patent website 777 visits or 11.79% or all visits
 - 346 visits or 5.25% of all visits



Most viewed Applications

The top 10 applications are ranked by the number of page views for the page that represented the main page for each application. Views of subsequent pages linked to the application have not been considered in deriving this list.

	Page	Unique Bounce	
Views	Rate		
GB 2456356#	590	294	45.45%
GB 2458482#	488	266	25%
GB 2457335#	474	270	1%
GB 2464360*	421	332	41%
GB 2456864*	253	186	46.99%
GB 2456161#	208	131	0
GB 2454597#	114	75	0
GB 2460955	107	62	0
GB 2456200#	104	69	66.66%
GB 2458182#	101	66	0

* GB 2464360 and GB 2456864 were mentioned in the Boingboing.net post

These applications were amongst those loaded on 1st June 2011 Launch

Evaluation

Use of the Website

It is clear from the number of visits that the initial outreach campaigns were successful in drawing people in. This (and the online media attention) demonstrates that there is certainly a substantial group of people who are interested in the Peer To Patent idea, and who were willing to investigate the pilot website.

The pilot received peak press coverage around the time of the launch. At the same time the number of hits on the website was at its maximum. Over the course of the pilot even though new applications were being added weekly interest (as measured in website hits) dwindled. However, the continued use of social media did manage to maintain a continued interest, albeit at a lower level, throughout the lifetime of the pilot.

Number of Observations

The applications in the pilot had a significant number of relevant documents provided by the commentator community. The level was lower than that in the US and Australian pilots, but orders of magnitude greater than the usual level of third-party observations. There are two clear reasons why the observation level may be lower in this pilot than the others: the publication of the search report, and the restrictions on "championing" of applications caused by applications being placed on the website without being volunteered. A further factor may be the potentially broader range of technologies in the UK pilot, again caused by the blanket nature of the selection of applications.

The use of the Search report

There is some evidence to suggest that potential reviewers may have looked at the search report and seeing that there were novelty and inventive step citations already present moved on. In one instance a tweet by one viewer of the website questioned the novelty of an application only to tweet again later that the IPO did not think it novel either given the number of novelty citations on the search report. Another correspondent also commented that he felt the presence of the search report was deterring reviewers. One knowledgeable participant carefully analysed the search reports against a significant proportion of the applications and found that in the great majority of cases, the examiner had already found relevant prior art.

This does not appear to necessarily be a cause for concern. It is apparent that the existence of a significant number of applications where there was arguably no need for input from the community did not deter comments on at least some other cases. It may be that although the number of contributions was decreased, their relevance was increased (although this is hard to test given the ability of the examiners in other pilots to build on the Peer To Patent data).

Most importantly, the result here appears to show that if scaled up to a part of examination procedure, the provision of the search report may be valuable. It does not deter all comments, and it would provide a tool for the community to prioritise among the large number of applications. In itself, it provides a signal to the community of "this application needs help" without the IPO appearing to "pick favourites". In any future development of Peer To Patent, it may be worth considering how to highlight (for example) the number of novelty/inventive step citations already found at the very top-level of the website, when reviewers are browsing lists of applications.

Communications and "championing" applications

As noted above, one of the differences between the UK and other pilots was the lack of identification of applications in need of comment by team members. In the other pilots, team members would proactively seek comments on a number of applications where commenting had been low.

The choice not to do this was a deliberate design decision in the setting up of the project. In the other pilots, team members could be confident that applicants would be happy with the pushing of their application for comments – they had volunteered for this. Our more blanket approach was driven by the wish for the pilot to most accurately test the effectiveness of Peer To Patent as an integral part of general patent examining – which would require all applicants to participate, not just those willing. As noted, because of the then situation in US law, this option had not been open to those running the US pilot.

However, that this lack of ability to effectively "seed" a community around a specific application may have reduced the actual number of useful comments obtained. Evidence in support of this is that a reference in the BoingBoing blog to specific applications led to a spike in interest in those applications.

The key lesson for any future development of Peer To Patent is that the communities will need to be built. The signs are from such examples as the BoingBoing post that these communities will to an extent self-generate, and it may well be that the relatively short lifetime of the pilot project cannot be compared with what would happen if the system were ongoing. It may well be that over time, blog-based communities with particular interest would begin to focus on patents in particular areas of interest. There may simply not have been enough time for this to happen in more than one or two isolated cases in the lifetime of the pilot. The key will perhaps be to identify online communities likely to be interested in certain areas and actively reach out to them – not to identify specific applications to them, but to ensure that they will be able to get from the Peer To Patent site information on patents relevant to them which they can then focus on.

Complexity of Applications

The sample size was restricted to a specific area of technology. This was the same as the previous pilots but the UK pilot included all patents applications within a time frame whereas the other pilots relied on the applicant to volunteer their application. This alone led to a wide range of subject matter. For example, the pilot contained patent applications about slide out mouse mats and at the same time included applications for rescheduling instructions in a superscalar processor to avoid errors. It may be that some of the more abstruse applications were simply not the sorts of things the online community would know about.

Value of Observations

The majority of observations were useful to the examiner, although only a minority of those were considered better than what the examiner had already found. On the other hand, one of those documents was essentially inaccessible to the examiner, and would never have had a chance of being found if not for the Peer To Patent website.

This appears to indicate that the pilot made a small but measureable positive impact on the effectiveness of the examination of the patent applications. It is not surprising that the effect is not dramatic – indeed, were it so, it would raise very serious questions about the quality of the existing examination process. Furthermore, as noted in the previous section, factors relating to building a community, which it might well be possible to overcome over a longer term project, almost certainly reduced the number of observations, and most likely the number of useful ones accordingly.

Overall, this suggests that Peer To Patent is a promising area for providing an incremental improvement to the effectiveness of examination.

Concerns expressed

A number of concerns about the operation of Peer To Patent, and whether it would work or indeed be of detriment to the patent system, were raised by individuals and organisations during the lifetime of the pilot. Overall, these appear to have been shown to be largely unfounded.

Gaming the System

Many professionals felt that Peer To Patent would allow applicants to "game" the system by raising objections against a competitors application. It is difficult to draw any conclusions from our pilot in this regard due to the low number of cases. However, on this basis we do not see any evidence of this happening. Further, it is not clear that this would in fact grant any unfair advantage – if an invention is not novel or inventive, the application should not be granted, and if it is, the examiner is unlikely to be deceived by irrelevant documents provided through Peer To Patent.

In the other direction, there were concerns that applicants would request accelerated examination (a free service provided by the IPO for applicants who need a quick grant) to take them out of the Peer To Patent process (because of a lack of time to wait for the applications to come off the website). As it was, this did not happen. An acceleration request was received during the pilot on two applications, but applications were not removed given the pilot had already started and an agreement was reached where any reports would be considered at later stages of the examination process.

"Targetting" of applications

Some professionals and applicants have been extremely keen on the Peer To Patent approach and highly supportive of the various pilots. Others have expressed concerns over applications being "singled out" for consideration. This has been referred to above, and influenced both the way the pilot went about building the community of reviewers, and the way the professional bodies were engaged, including agreement with CIPA on the text of a letter sent to all applicants whose applications were in the pilot. Once the pilot had actually started, only a few negative comments were received in telephone calls but once the nature and purpose of the pilot had been explained these were resolved, suggesting that these concerns had been effectively addressed by the way the pilot was run.

Incentive

There were also views expressed that the number of responses was depressed by a lack of incentive for reviewers to contribute. One particular view expressed was that potential reviewers did not see the point of contributing if they did not get paid for their time. There are currently several organisations where reviewers are rewarded. The main one of these is Article One Partners¹² which was one of the sponsors of the original USPTO trail and claims to have paid out over \$2m in rewards to reviewers. Within the UK, our attention was drawn to CrowdIPR¹³ who provide a combination of both reward and non reward based research opportunities. In addition to organisations like these there remains the traditional paid patent search service. Although it may be true that payment would have increased participation, it is not necessarily clear that it would have increased the number of useful documents, and useful documents were still provided despite the lack of payment, suggesting other, social, incentives are also operating.

Conclusions and Next Steps



Conclusions

In summary, the UK pilot, operating in the context of the UK system, and with an approach geared to all patent applications, not just those volunteered for the system, has demonstrated, in line with the experiences in the US and Australia, that Peer To Patent can make an effective contribution to uncovering relevant prior art for examiners to use when determining whether to grant a patent application.

The specific conclusions which can be drawn from the pilot are:

- Peer To Patent can make an incremental, but still significant, improvement to the ability of Patent Offices to obtain prior art relevant to patent applications.
- There is considerable interest among the Internet community in this concept.
- To make the Peer To Patent system work effectively, effort will need to be put in to effectively "seed" communities who will be willing to contribute to the programme over an extended period of time.
- To more effectively use the Internet community, there needs to be clear communication of which applications would particularly benefit from assistance, for example by clearer communication of the results of examiner's searches.
- The use of social networking technologies such as Twitter^{RTM} and blogs can be a highly effective method for reaching out to certain communities, specifically in the computing sphere. They enable the effective leveraging of existing communication networks spanning the Internet.

Next Steps

Since the Peer To Patent pilot was launched, the IPO has also launched an online file-inspection service, Ipsum, from which the Office files relating to all current and future patent applications will be accessible. This provides an alternative online platform to the Peer To Patent website for the online community to obtain information on patent applications as they are being examined.

Augmenting this existing system with aspects of the Peer To Patent approach would seem the most straightforward way of taking forward the Peer To Patent work. The most feasible method would be to incrementally enhance the Ipsum service in a number of ways:

- The first step would be to add a direct link to the IPO's online third party observations submission system from each Ipsum page, so that anyone examining the file would be able to immediately provide comments to the examiner if they wished.
- This could be further augmented by providing a discussion forum, which could include details of submissions already made.
- To assist community building, applications could be made accessible in a number of ways, such as by how recently applications have been published, classification, bibliographic data such as numbers of citations found by the examiner relevant to novelty or inventiveness, or user-defined "tags". This would enable reviewers to focus on applications of particular interest to them.

In addition to providing the technological infrastructure, the experience of the pilot has highlighted the need for effective engagement with the Internet community if the effectiveness of a Peer To Patent approach is to be maximised. The IPO should be able to capitalise on the profile already gained by the Peer To Patent brand, and seek to build links both through an online presence (blogs, social media) and through working with institutions such as the Technology Strategy Board and university computer science departments.

Acknowledgements

The IPO is grateful for the help and assistance provided by the following people during the pilot.

Jack Harvey	USPTO
Bob Bartram	IP Australia
Alasdair Poore	President, CIPA
Tibor Gold	CIPA
Roger Burt	
Jeremy Phillips	IPKAT Blog
Dennis Crouch	Patently-O Blog
Mark Webbink	New York Law School
Andrea Casillas	New York Law School



Concept House Cardiff Road Newport NP10 8QQ

Tel: 0300 300 2000 Minicom: 0300 0200 015 Fax: 01633 817 777 www.ipo.gov.uk

For copies in alternative formats please contact our Information Centre. When you no longer need this booklet, please recycle it.

Published: September 2012

