

Community Patent Review Research Questions and Metrics

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Research Questions

The Community Patent Review pilot aims to evaluate whether an online public consultation process can effectively be employed to improve the quality of issued patents.

To answer this question, we intend to conduct qualitative and quantitative research to answer three questions:

- What is the level of expertise of public reviewers participating via an open network and how does this online participation process shape that expertise?
- What is the impact of public participation on examiner decision-making?
- What is the impact on the resulting quality of the issued patent?

We have defined the information needed to gather answers to these questions, some of which can be automated by means of the P2Patent software system while other metrics will need to be assessed by means of surveys. In addition, we have defined a number of research experiments with control groups to test our assumptions.

Summary of Hypotheses

Our first hypothesis is that the public is capable of self-selecting on the basis of expertise and producing information relevant to the patent examination process. The second hypothesis is that an open network of human searchers will improve the quality of information available to examiners over that currently available from closed databases. Public participation can and will improve examiner searching, both by providing relevant information and guiding examiner searching, thereby improving the quality of examiners' work product and the work experience. Finally, we want to test a third hypothesis that public participation produces a better quality, stronger patent. This requires testing whether open review produces a more lucrative and less litigation-prone patent.

Metrics

1. Expertise of Reviewers: The Public Possesses Expertise about Patents

The first research question focuses on public expertise. To test our first hypothesis, we need to understand if, in fact, such a system can enable in practice “the person having ordinary skill in the art” to provide information relevant to patentability determinations. This is both an objective measure of what constitutes expertise and a subjective measure of how participation in such an online community creates expertise over time. To get at the expertise of reviewers, we need to measure a number of criteria about the public reviewers. Much of this data can be collected via the Peer to Patent software while other data will need to be gathered through surveys.

To test participant expertise we need to gather data about the participants, how they participated and what they contributed. Much of this data can be gathered from the software and from user profiles, including:

- demographics of reviewer pool
- level of education
- professional background and role
- years of professional experience
- level of inventive activity
- time spent participating
- subjective rating of participants by peers
- objective rating of participants by peers
- attrition rate for reviewers
- user satisfaction with the experience
- user sense of relevance from participation

There will also be data gathered on the nature of their participation:

- visitors to the site
- visitors that become reviewers
- peers participating per patent, by class or subclass
- peers per patent reviewed
- peer organizations (to extent known)
- patents reviewed
- prior art references submitted into system
- prior art references per patent reviewed
- patents for which references forwarded to examiner
- prior art references forwarded to examiners
- prior art references per patent forwarded to examiners
- comments submitted
- comments per patent submitted
- comments forwarded to examiner
- comments forwarded per patent to examiner

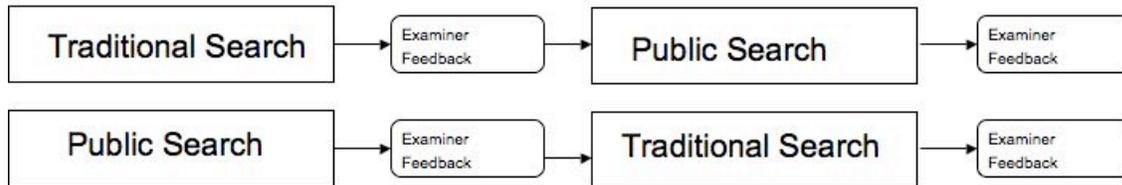
We will also survey participants about the quality and experience of using the software and of participating in the process. We will ask about how they participated (e.g. how much time) and also how much tolerance they demonstrate for doing additional work (e.g. how much more time would they have spent) to understand whether there is sufficient human capital to expand the program.

2. Examiner Decision-Making: Public Participation Improves Examiner Work and Work-Product

The second research question asks what the impact of this process is on how examiners find information and how they do their work. We need test the hypothesis that an open, human network of expertise will improve examiner work and work product. This means we need to understand how this process changes the ways in which examiners do the job. We want to know something about who examiners are and how they work now and the changes resulting from the public peer review process.

In order to deepen our understanding, we would like to have a control group to test the impact on examiners by studying the order in which examiners review the material submitted by the public. Two groups will be compared:

- One group of examiners will conduct their search prior to reviewing publicly submitted information.
- One group of examiners will review the public submissions prior to conducting their own research.



This will help us to understand the usefulness of public commentary and how public participation changes the way an examiner searches. We can randomize among the selection of examiners. We will also survey the examiners to understand how public participation affected their job and their enjoyment of it.

Among the data points we will gather to address this second question are the forwarded references and comments:

- Known/not known by examiners from their own searches
- Applied by examiners
- Applied by examiners in amendments
- Applied by examiners in rejections
- Resulting in abandonment of claims/applications

We also will track more data about the examiners and their work, including:

- % of examiners in pool participating that apply prior art references forwarded to them
- background and experience of examiners
- age of examiners
- number of years on the job
- number of hours spent reviewing prior art and performing examination
- subjective and objective measures of research practices

And there will be an examiner survey to measure satisfaction with the process.

3. Patent Quality: Public Participation Produces Better Patents

The third research question addresses the impact of public participation on the resulting quality of the issued patent. We want to understand if and how public submissions of prior art and commentary affect the nature of the resulting issued patent. This requires assessing both the number and quality of the issued claims, what claims get narrowed or knocked out and why as well as studying the longitudinal effect on the licensing and litigation potential of the resulting patent.

To assess the quality of patents, we need to scrutinize the resulting granted patent and compare to the original application that was publicly reviewed. We need to know the number of:

- narrowing amendments made by applicants in view of above forwarding
- claims rejected
- patent applications abandoned
- quantitative and qualitative assessment of the resulting claims

We also need to study the quality of resulting patents over time and gather data, where possible, about their:

- licensing and revenue generation
- the subsequent role they play in any litigation

Over time, we can follow the progress of these patents through the licensing and litigation process to understand the impact of Community Review.

To improve the effectiveness of the study, we intend to create a control group among the patents selected for public review. We will establish rules by which to select randomly among the patents proffered for public review. Not all patents for which inventors consent to invite public participation and commentary will be put through the Community Review process. Instead, these patents will form the control group against which the applications that receive public scrutiny will be compared. We can engage independent evaluators to conduct a blind evaluation of patents submitted for public review and compare those against patents without public review.

Following the Community Review pilot, the Institute for Information Law at New York Law School will publish a report on the findings of the pilot and the results of the research experiments.