IN THE U.S. PATENT AND TRADEMARK OFFICE

In re: Patent Eligibility Jurisprudence Study	PTO-P-2021-0032 86 Fed. Reg. 36257

COMMENTS OF CHARLES DUAN

The following comments are respectfully submitted in response to the Request for Information dated July 9, 2021. I am a senior policy fellow with the Program on Information Justice and Intellectual Property at American University Washington College of Law, and also a senior fellow for technology and innovation policy at the R Street Institute. The views expressed herein are my individual views and not those of my affiliated organizations.

The USPTO requests information on "the current state of patent eligibility jurisprudence in the United States," to inform its study on the same subject requested by Senators Tillis, Hirono, Cotton, and Coons. In order to advance that study and the overall dialogue on patent eligibility, I am currently working on an empirical study of patent application filings and outcomes, which I anticipate will be available prior to the March 5, 2022 due date of the USPTO's study.

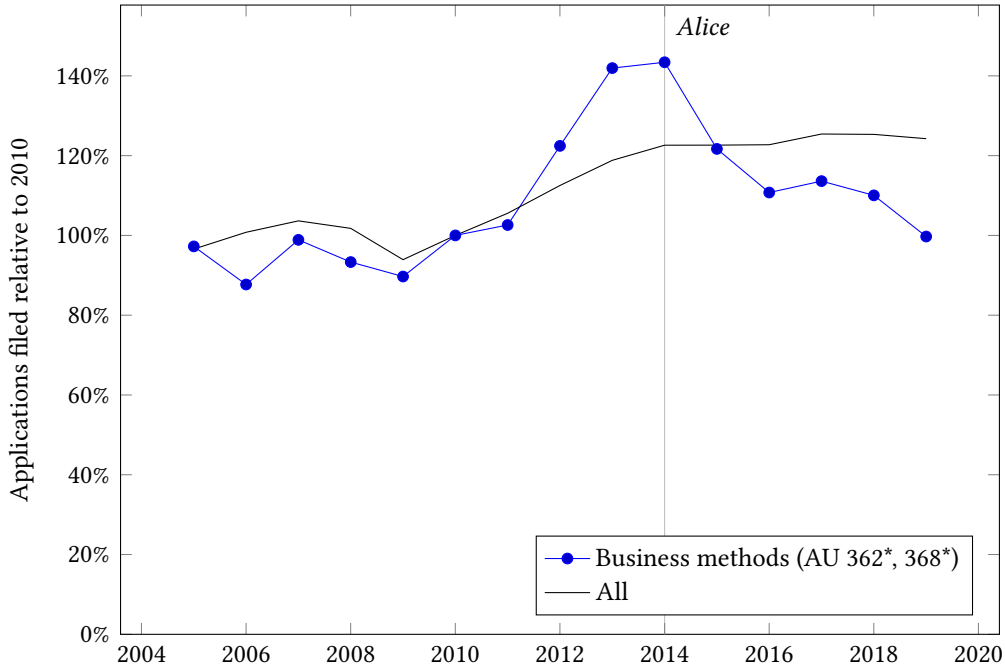
However, in order to enable the USPTO to enhance its own study of the subject as early as possible, I am presenting some preliminary results of my research in this comment. While most research on the consequences of subject matter eligibility jurisprudence has focused on outcomes following the Supreme Court's decision in *Alice Corp. Pty. Ltd. v. CLS Bank International*, I find significant and unusual patterns in filing and examination outcomes *before* that decision, particularly between late 2011 and early 2014. During that period, USPTO examiners issued subject matter eligibility rejections at an increasingly low rate, and patent application filings in art units such as business methods increased by over 40%, far outpacing overall growth in filings.

These findings are significant for at least three reasons. First, they suggest that prior studies may have overstated the impact of subject matter eligibility jurisprudence, insofar as they com-

bined post-*Alice* activity with 2012 and 2013 data that is arguably anomalous. Second, they raise the question of what changed between 2011 and 2014 that gave rise to these patterns. Third, they support an alternate view that eligibility jurisprudence has in fact only had a modest effect on patent application filings and outcomes, when compared to years prior to 2011.

I. Application Filings in Business Methods Increased Prior to *Alice*

The below graph plots the number of patent applications filed in business methods art units 3620 and 3680 against applications filed at the USPTO overall. My source of data here is the USPTO's Patent Examination (PatEx) dataset. The values are normalized to 2010 filing rates to make the graphs' scales comparable.

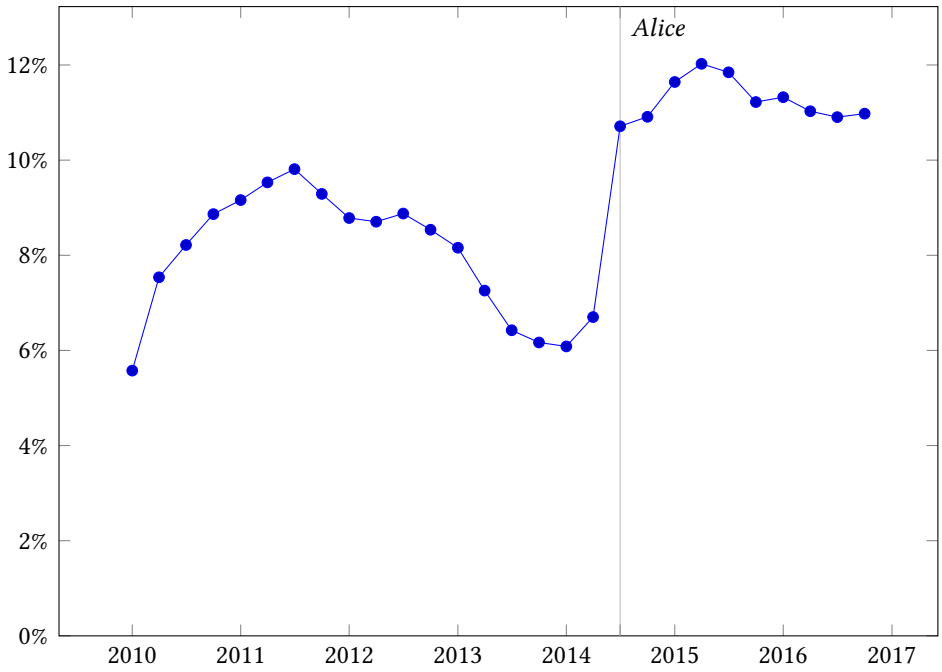


As the graph shows, prior to 2011 filing rates in business methods approximately track the overall filing rate. Starting in 2012, however, business methods filings take off, rising about 20% per year for the next two years. The rate levels off in 2014 and then falls in 2015 following *Alice*. While business methods filings ultimately do not keep pace with overall filing rates from 2016 on,

they never fall greatly compared to pre-2012 rates, and in fact remain comparable to 2010 filing rates even through the present day.[1]

II. Office Actions Decreasingly Included Eligibility Rejections Prior to *Alice*

Next, I use the USPTO's 2017 release of office action data to determine the fraction of office actions per quarter that included an eligibility rejection. The plot below shows the result of that analysis.



The research literature has made much of the seemingly dramatic jump in eligibility rejections seen between the second and third quarters of 2014. But between late 2011 and *Alice*, there is a marked decline in eligibility rejections that, to my knowledge, has not received substantial attention. If eligibility rejections after *Alice* are compared to the third quarter of 2011, prior to that decline, then *Alice* would seem to have increased such rejections only from 10% to about 11% of total office actions—a very modest change given the amount of attention the decision has received.

[1]The 2019 data may be inaccurate because the PatEx dataset, produced in 2020, does not include applications still within the 18-month publication window.

III. Conclusion

Other analysis not shown in this comment indicates that the above findings are robust in a number of different ways, and more detailed analysis of particular art units and technological fields has been further illuminative in explaining the pre-*Alice* filing and examination patterns. While my intention is to complete my own investigation of these patterns in the data, I would invite the USPTO to perform its own analysis and come to its own conclusions.

The important result at this stage, however, is that to the extent that the effects of subject matter eligibility jurisprudence are to be evaluated, the evaluation cannot simply treat the two years immediately preceding *Alice* as a baseline for measurement.

I thank the USPTO for providing the opportunity to submit these comments. If there are any remaining questions relating to the matters presented herein, the undersigned would be happy to provide further information as necessary.

Respectfully submitted,

Charles Duan

Senior Policy Fellow
Program on Information Justice & Intellectual Property
American University Washington College of Law

Senior Fellow
Technology & Innovation Policy
R Street Institute

1801 Columbia Road NW, Suite 101
Washington DC 20009

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