THE CASE FOR PATENT CLARITY

Jonathan H. Ashtor*

This article demonstrates the importance of patent clarity to both the social benefits and private value of patent rights. It employs sophisticated machine learning techniques to model patent clarity, and it uses these models to study how patent clarity relates to cumulative innovation and patent enforcement. Specific policy proposals for improving patent clarity are then derived from these results.

A variety of machine learning models are trained on a large dataset of U.S. patent applications. Features are constructed based on the language attributes of over 2 million published patent applications, drawing from advances in computational linguistics. The resulting models achieve greater than 70% accuracy, thereby enabling direct empirical study of patent clarity.

Using these models, this article examines how patent clarity relates to cumulative innovation. Patents serve a public function by disclosing new and useful technical information that other inventors can learn from. A significant positive correlation is observed between patent clarity and cumulative innovation by third party inventors.

Next, the relationship between clarity and patent enforcement is investigated. Litigation theory teaches that unclear legal rights can give rise to and exacerbate disputes. Both relationships are observed empirically. As patent clarity decreases, there is a significant increase in both the likelihood of infringement actions and the duration of these cases.

These results suggest that improving clarity could yield benefits for patent holders and follow-on innovators alike. This article concludes by proposing targeted initiatives to improve the clarity of U.S. patents.

* Professor of Practice at Benjamin N. Cardozo School of Law; Counsel at Paul, Weiss LLP. This project does not reflect the views of Paul, Weiss LLP or any of its clients or attorneys. The research and writing of this paper was supported by a Leonardo da Vinci Research Grant from the Center for the Protection of Intellectual Property at George Mason University School of Law. I am grateful for the helpful comments of Jeff Kuhn, Andy Toole, Chris Buccafusco, Dave Schwartz, Gaëtan de Rassenfosse, Rosemarie Ziedonis, Neel Sukhatme and others at Empirical Methods in IP 2018.