Introduction¹

In 2014, Elon Musk, the outspoken founder of Tesla Motors, surprised the automotive industry by pledging that his company would no longer “initiate patent lawsuits against anyone who, in good faith, wants to use our technology.”² Tesla’s announcement prompted a flurry of media and industry attention. But most importantly, six months later it prompted automotive giant Toyota to pledge that it, too, would permit the royalty-free use of nearly 5,700 Toyota hydrogen fuel cell patents.³

It is commonly believed that Tesla and Toyota elected to sacrifice otherwise valuable patent assets in order to pave the way for the fledgling electric vehicle industry, and to ensure that their own vehicle platforms remained integral to the development of this industry. But making such “patent pledges” is not unique to the electric vehicle industry. Beginning in the 1990s, large firms in the computing and software industries began to champion open source code platforms such as Linux and Android. They demonstrated that business models based on tight control over intellectual property are not the only viable pathways to innovation and product development. To support the growth of these emerging open source platforms, firms like IBM and Google each pledged not to assert hundreds of patents against open source products.⁴ In recent years, the number of firms venturing into this new ground has grown. For example, Monsanto, the world’s leading producer of genetically modified seeds, has publicly committed not to enforce its patents against farmers

¹ This chapter is based, in part, on Jorge L. Contreras, *Patent Pledges*, 47 ARIZ. ST. L.J. 543 (2015), with permission of the author.

² Elon Musk, *All Our Patents Are Belong to You*, TESLA BLOG (June 12, 2014), <http://www.teslamotors.com/blog/all-our-patent-are-belong-you>. Tesla Motors has since revised and clarified this initial pledge. See Appendix.

³ *Toyota Opens the Door and Invites the Industry to the Hydrogen Future*, TOYOTA CORP. (Jan. 5, 2015), <http://www.toyotanewsroom.com/releases/toyota-fuel+cell+patents+ces+2015.htm>.

⁴ *IBM Statement of Non-Assertion of Named Patents Against OSS*, IBM CORP. (Jan. 11, 2005), <http://www.ibm.com/ibm/licensing/patents/pledged-patents.pdf>; *Open Patent Non-Assertion Pledge*, GOOGLE, INC., <http://www.google.com/patents/opnpledge/pledge/>.

when trace amounts of patented genetic material appear in their fields by “inadvertent means.”⁵ And dozens of firms ranging from home-swapping website Airbnb to cloud storage giant Dropbox have committed not to enforce their software patents against businesses with 25 or fewer employees.⁶ In fact, over the past decade, hundreds of major patent holders across a broad range of industries have made pledges limiting their ability to assert thousands of patents.

The *patent pledges* made by all of these firms share several key characteristics: they are commitments made voluntarily by patent holders to limit the enforcement or other exploitation of their patents. They are made not to direct contractual counterparties, but to the public at large, or at least to large segments of certain markets. And they are made without any direct compensation or other consideration.

Patent pledges represent a middle ground between full exploitation of a patent’s exclusive rights and ceding the patent to the public domain. Unlike patent holders that willingly commit their rights to the public domain, firms making patent pledges retain ownership of, and the ability to exercise at least some rights in, their patents. Their voluntary commitments thus occupy a largely uncharted middle ground between the full commercial exploitation of patent rights and the abandonment of those rights to the public domain.

The best-known category of patent pledge today is the so-called FRAND commitment, in which patent holders promise to license their patents to manufacturers of standardized products on terms that are “fair, reasonable and non-discriminatory.” Patents covering well-known standards such as 4G LTE, Wi-Fi, H.264, and hundreds of others are subject to such pledges. To date, courts, governmental agencies, and commentators have devoted substantial attention to FRAND commitments and the potential legal issues that they raise. But patent pledges have been appearing in fields and settings well beyond technical standard-setting, and are impacting widening swaths of the global technology economy. As a result, this increasingly prevalent private ordering mechanism is reshaping conventional notions regarding the role and function of patents in the economy.

In 2012, Jorge Contreras, while at American University, began to collect and categorize patent pledges made by different organizations and to make them publicly available through an online database known as the

⁵ *Monsanto’s Commitment: Farmers and Patents*, MONSANTO, <http://www.monsanto.com/newsviews/pages/commitment-farmers-patents.aspx>.

⁶ THE PATENT PLEDGE, <http://thepatentpledge.org/>.

Patent Pledge Database.⁷ As of this writing, more than 150 different pledges covering thousands of patents have been cataloged in the Patent Pledge Database.

The Patent Pledge Database led to significant interest within academia, industry, and government. In 2014, we convened a workshop in Washington, DC, in which experts in patent law, economics, and technology commercialization gathered to chart a research agenda for patent pledges. This workshop led to a worldwide call for papers and an academic symposium in 2015 focused on the impact, characteristics, and implications of patent pledges in a wide range of industries and regions of the world.

This volume collects the results of this public dialog and academic inquiry into patent pledges, and will hopefully inspire further discussion and research into this phenomenon. Part I offers an overview of the landscape of patent pledges today. In Chapter 1, Contreras offers a descriptive survey of patent pledges by industry sector, and then outlines some common structural characteristics of pledges. He then introduces an analytical taxonomy of pledges based on the motivations driving pledgors to make these commitments, including *inducement*, *collective action*, *voluntary restraint*, and *philanthropy*.

The remainder of Part I is devoted to a series of descriptive accounts of patent pledges in specific market and industry sectors. Valz addresses open source software and other technology issues from an industry perspective. Greenbaum explores the relative scarcity of patent pledges in the biomedical sector. Awad discusses patent pledges intended to foster environmental and “green” technology development.

Part II turns to legal issues that arise with patent pledges. Contreras addresses a range of contemporary theories relating to the legal enforceability of patent pledges. Winston focuses on the treatment of patent pledges at the U.S. International Trade Commission, and Maracke and Metzger offer a perspective on legal enforcement in Germany. In Part III, antitrust and competition law issues are addressed from a range of international perspectives. Callahan and Schultz offer a US antitrust analysis of the Open Patent Agreement. Sikorski offers perspectives on competition law and patent pledges in Europe, and Sichel, Wang, and Yi and Kim provide perspectives from Brazil, China, and Korea, respectively.

⁷ Program on Info. Justice & Intell. Prop. – Am. Univ. Wash. Coll. L., Non-SDO Patent Statements and Commitments, <http://www.pijip.org/non-sdo-patent-commitments/>.

In Part IV, the authors focus on the impact of patent pledges on innovation and development. Asay addresses issues relating to the informational value of patent pledges. Maggiolino and Montagnani write about the impact of patent pledges on open innovation networks and structures. Vertinsky offers a case study of the use of patent pledges in cloud computing, and Sebastian addresses patent pledges from the perspective of developing countries.

Part V offers thoughts on the future of patent pledges. Simcoe provides a general framework for thinking about the making and enforcement of private commitments. Contreras proposes a governmental or private registry of patent pledges. Shanahan offers suggestions for the rationalization of electronic records of patent pledges. Finally, Jacob provides a best practices framework for making patent pledges in the future.

We hope that this collection offers scholars, legal practitioners, policy makers, and industry representatives new insights and inspiration regarding patent pledges, the newest frontier of intellectual property private ordering.

The Editors