

Comments on the Federal Trade Commission's  
"Competition and Consumer Protection in the 21<sup>st</sup> Century Hearings,  
Project Number P181201"

August 20, 2018

Topic 8: The Role of Intellectual Property and Competition Policy in Promoting Innovation

I. INTRODUCTION

InterDigital, Inc. welcomes the Federal Trade Commission's (FTC's) plan to convene a series of hearings on Competition and Consumer Protection in the 21<sup>st</sup> Century, and hereby provides its comments on topic #8 – "The Role of Intellectual Property and Competition Policy in Promoting Innovation." The landscape for understanding the appropriate relationship between intellectual property rights and competition policy has changed significantly since the FTC published its 2003 and 2011 IP reports, and InterDigital, Inc. encourages the FTC to update its enforcement and competition advocacy policies in light of those developments.

Background on InterDigital

InterDigital, Inc. is a Pennsylvania corporation with headquarters in Wilmington, Delaware. It was founded in 1972 with the objective of developing new and innovative wireless technologies. It became a publicly traded company in 1981, and is now a significant commercial research and engineering organization, with research centers in Pennsylvania, New York, California, Maryland, Canada, England, Germany and South Korea. At the end of 2017, InterDigital, Inc. and its affiliates (hereinafter "InterDigital") had about 350 employees, approximately 190 of whom are engineers. Around 80% of its engineers hold advanced degrees, 70 of whom have Ph.Ds.

For over four decades, InterDigital has been a pioneer in mobile technology and a key contributor to global wireless standards. InterDigital does not manufacture mobile communications devices; instead it has chosen a business model that focuses on innovation through advanced research, and monetization of the resulting innovations primarily through licensing of its patent portfolio. Since 1993, InterDigital has invested more than \$1 billion in research and development. InterDigital's R&D efforts have resulted in InterDigital owning, as of December 31, 2017, a portfolio of approximately 19,000 patents and patent applications, spanning some 50 jurisdictions worldwide, with about 90% of its cellular and wireless patent portfolio developed in-house.

As mentioned, the primary source of InterDigital's revenue has come from the royalties received from licensing its worldwide portfolio of patents developed by its scientists and engineers, with licensing revenues over the past three years averaging more than \$530 million per year. InterDigital has entered into dozens of patent licenses, counting as some of its current and past licensees such prominent companies in the mobile wireless industry as Apple, HTC, Huawei, LG Electronics, NEC, Panasonic, Pegatron, RIM/Blackberry, Samsung, Sanyo, Sharp, and Sony.

InterDigital's innovation-centric business model has led the company to be an active participant in the development of some of the most important global technology standards, including standards that have enabled many of the most groundbreaking mobile phone developments. In order to develop those new and innovative technologies, InterDigital's engineers examine the challenges of current technology and identify future issues that will require innovative solutions. Additionally, InterDigital undertakes standards research at a more

fundamental level than most manufacturers, partnering with many universities in research that is not directly product-oriented. This allows InterDigital to contribute to standardization by bridging academic and commercial approaches. Standards development organizations (SDOs) have historically begun developing the next generation of wireless standards approximately seven to eight years prior to adoption, but InterDigital often has started work on developing the technologies relating to those standards several years before even the SDOs' work begins. InterDigital's constant commitment to innovation, and its particular focus on developing new and innovative standards, has benefitted markets, technology, and consumers around the globe. InterDigital's experience in participating in standardization efforts and in licensing a large global patent portfolio relating to wireless standards gives it a unique perspective.

## II. IMPORTANCE OF STRONG INTELLECTUAL PROPERTY RIGHTS TO PROTECT AND FOSTER INNOVATION INCENTIVES

InterDigital's success as one of the leading contributors of technologies for the next generation of cellular standards has depended on the existence of a strong and robust patent system in the United States and abroad. Without the assurance that its technological innovations will be protected from unauthorized appropriation through strong patent laws, InterDigital would not have had the ability to license its patented technologies and therefore would not have been able to justify or support the substantial R&D investments it has made over the past five decades. We have no doubt that strong patent protection has been and will continue to be the *sine qua non* of the continued success and dynamism of the American economy.

Innovators like InterDigital have invested billions of research dollars into developing the wireless mobile technologies that form the basis for the global standards that have allowed the

market for mobile phones and a myriad of other products to expand and flourish. As mentioned above, these investments often begin many years before a standard is adopted, and even after adoption it is usually several more years before the first products implementing that standard are brought to market and technology owners begin to receive royalty payments for the use of their patents.

These long lead times entail significant risk. In addition to the substantial time lag between investment and return, there are many examples of standards that were never successfully commercialized, with WiMax being a prominent case in point.<sup>1</sup> And, of course, there is the very real risk that technological solutions developed by companies such as InterDigital will not be selected for incorporation into the standard. For example, InterDigital started work in 2009 on concepts relating to the 5G standard, knowing that standardization would not even start until at least 2015. InterDigital spent well over \$100 million on 5G concepts and features between 2009 and 2015 without the prospect for seeing any income from that investment for many years. 3GPP released the first 5G specifications for non-standalone operation in December 2017 and approved and froze the standalone 5G NR Release 15 in June 2018, with commercial deployment of 5G smartphones not expected until sometime in 2019. In other words, there will have been a 10-year gap between when InterDigital first started work on 5G concepts and when it could first begin to expect returns on any of its 5G innovations through licensing of 5G-compliant products sold in the market.

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<sup>1</sup> See, e.g. T. Jowitt, “Tales in Tech History: WiMax” (Feb. 2, 2018), [https://www.silicon.co.uk/networks/tales-tech-history-wimax-227889?inf\\_by=5b770560671db8db028b4a72](https://www.silicon.co.uk/networks/tales-tech-history-wimax-227889?inf_by=5b770560671db8db028b4a72).

For firms like InterDigital, investments in R&D for future standards will only be made if the expected return (defined as the probability of success multiplied by the royalties expected to be received from successful innovations) is greater than the cost of the R&D investment. In the standards context, successful innovation means having one's technology included in the standard, as the unsuccessful technologies will likely have little if any value – in other words, it is a “winner-take-all” competition. Therefore, each firm that decides to invest in R&D to develop technologies for future standards must evaluate the probability that their R&D efforts will lead to technologies that will actually be included in the future standard and the royalties or other revenues that they will receive in the event they are successful. They will commit resources to that R&D investment only if the present value of the expected returns is greater than the investment.<sup>2</sup>

When the expected returns are lowered, the amount of investment in R&D will fall as well, to the potential detriment of future standards, technological competition and consumers. There are several factors that can lower expected returns and thereby lower R&D investments that should be of interest to competition agencies. First, there is the risk of opportunistic “hold-out” and “reverse hold-up” behavior by implementers. Both strategies reduce the ability of patent owners who contributed technology to a standard to realize an adequate and fair return on their risky R&D investments, pushing down expected revenues from those investments potentially below fair and reasonable levels.<sup>3</sup> The significant sunk costs incurred

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<sup>2</sup> See, Jonathan Putnam, “Economic Determinations in “FRAND RATE” Setting: A Guide for the Perplexed,” 41 Fordham International Law Journal 953 (2018).

<sup>3</sup> See, Remarks of Commissioner Joshua W. Wright, “SSOs, FRAND, and Antitrust: Lessons from the Economics of Incomplete Contracts” at 32 (Sept. 12, 2013).

by companies such as InterDigital that commit to investments in research many years before a standard is adopted make them a ripe target for opportunistic hold-out or reverse hold-up behavior by licensees who use valuable essential technologies without taking a license or who seek to force licensing terms far below the fair market value of those technologies. In fact, InterDigital has on several occasions been found to have been the victim of such hold-out and reverse hold-up practices.<sup>4</sup> InterDigital notes that the FTC's March 2011 report on The Evolving IP Marketplace<sup>5</sup> is rife with discussion of the theoretical concerns of **hold-up** by patent owners, but barely mentions the significant effects on innovation incentives from the types of **hold-out** behavior that InterDigital has actually been the victim of.

Second, SDOs that are dominated by implementers may adopt patent policies aimed at reducing royalties that must be paid by standards implementers to innovators who contribute technologies included in the standards. Even if those patent policy changes purport to be prospective in application, they can still apply to patented technologies included in letters of assurance that resulted from earlier R&D investments. In other words, IPR policies of SDOs dominated by implementers can have anticompetitive effects on innovation by taking advantage of the sunk R&D costs of innovators to force royalties below levels that fairly and adequately compensate patent holders for their innovations. The risk of such *ex post* behavior

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<sup>4</sup> See, e.g. Initial Determination on Remand, *In the Matter of Certain 3G Mobile Handsets and Components Thereof*, Inv. No. 337-TA-613 (April 27, 2015); Initial Determination on Violation of Section 337 and Recommended Determination on Remedy and Bond, Inv. No. 337-TA-868, (June 12, 2014).

<sup>5</sup> Federal Trade Commission, "The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition," (March, 2011), available at <https://www.ftc.gov/sites/default/files/documents/reports/evolving-ip-marketplace-aligning-patent-notice-and-remedies-competition-report-federal-trade/110307patentreport.pdf>.

by SDOs and their members, especially when tolerated by competition agencies, must be taken into account in deciding whether to make R&D investments.

Third, another technique of licensees engaged in hold-out and reverse hold-up is to file antitrust complaints with competition agencies and private antitrust treble damages actions against standards-essential patent (SEP) holders claiming that the seeking of “above-FRAND” royalty rates amounts to a violation of the antitrust laws. The increased risks to patent holders from these strategies — however unfounded and spurious — act to further erode expected returns below fair and reasonable levels, reducing innovation incentives and ultimately harming competition in the marketplace. As noted by Werden and Froeb, “[u]sing antitrust law to push royalties even lower distorts antitrust law, disservices patent law, and possibly even harms the consumers it is meant to protect.”<sup>6</sup> AAG Delrahim recently made a similar point:

“Using the antitrust laws to impugn a patent holder’s efforts to enforce valid IP rights risks undermining the dynamic competition we are charged with fostering. So when it comes to disputes that arise between intellectual property holders and implementers regarding the scope of FRAND commitments, we advocate for the application of more appropriate theories, other than the blunt instrument of antitrust.”<sup>7</sup>

InterDigital hopes that the FTC will also recognize the potential harmful effects of applying antitrust laws in this context, and adopt a similar perspective.

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<sup>6</sup> G. Werden and L. Froeb, “Why Patent Hold-Up Does Not Violate Antitrust Law,” unpublished paper (2018).

<sup>7</sup> Makan Delrahim, “The Long Run: Maximizing Innovation Incentives Through Advocacy and Enforcement,” keynote address at the LeadershipIP Conference on IP, Antitrust, and Innovation Policy (April 10, 2018), available at <https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-keynote-address-leadership-conference>.

### III. INTELLECTUAL PROPERTY AND MARKET POWER

It has been a fundamental tenet of contemporary U.S. antitrust law that patents should not be presumed to create market power.<sup>8</sup> However, despite that long-standing policy there has been a common misperception that SDOs necessarily confer market power when they include patented technologies into the standard, and that therefore SEPs should be presumed to create market power.

The idea that patents may confer market power derives from the idea that patents provide a “right to exclude.”<sup>9</sup> However, after the Supreme Court’s *eBay* decision<sup>10</sup>, it has become much more difficult for patent holders, and especially owners of SEPs, to obtain injunctive relief from the courts. In situations where injunctions are not available, users of patented technologies are provided a roadmap on how to implement patented technologies (such as is the case with the technical specifications of most standards), and the only recourse for patent owners is to seek retroactive infringement damages, the ability of the patent holder to exercise monopoly power by excluding others from using its patented technology is a mere theoretical construct with no basis in reality. InterDigital’s experience with implementers who have used InterDigital’s technologies without taking a license and who have been determined by independent adjudicators to have engaged in hold-out provides factual support for the conclusion

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<sup>8</sup> See, USDOJ and FTC Antitrust Guidelines for the Licensing of Intellectual Property (January 12, 2017) at 2. <https://www.justice.gov/atr/IPguidelines/download> (“the Agencies do not presume that intellectual property creates market power in the antitrust context”).

<sup>9</sup> See, 35 USC §154 (“Every patent shall contain a . . . grant to the patentee, his heirs or assigns, of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States . . . ”)

<sup>10</sup> *eBay v. MercExchange, LLC*, 547 U.S. 388 (2006).

that SEP holders in reality generally do not have the ability to restrict output and raise price above competitive levels.

Therefore, we urge the FTC to reevaluate its enforcement policy and competition advocacy positions in light of the Supreme Court's *eBay* decision and the current market realities faced by patent holders in preventing infringements of their patents, and to take these into account before making any determinations regarding the existence of, or ability to exercise, market power as a result of the ownership of patents, including SEPs.

#### IV. CONCLUSIONS AND RECOMMENDATIONS

U.S. antitrust enforcement should reflect a recognition of the importance of strong intellectual property protection, and the need to ensure adequate and fair remuneration for technology innovators in order to preserve and foster dynamic competition in U.S. and global markets. However, some antitrust enforcement and policy pronouncements in the last decade appear to have questioned if not rejected these basic tenets, particularly with respect to technologies developed for incorporation into standards. During this period, antitrust policy appeared to change course toward downplaying the importance of innovation-based competition, tilting instead toward a preference for short run consumer welfare gains in the form of lower royalty levels for patent holders at the expense of long-run innovation incentives. The FTC's March 2011 report on "The Evolving IP Marketplace" seems to reflect some of that unfortunate "tilt," especially in its views of IP licensing where it appeared to take a static, rather than dynamic, view of the costs and benefits of IP licensing on innovation and competition.

Recently, Assistant Attorney General for Antitrust Makan Delrahim gave a series of speeches rejecting the static view of patent protection and licensing, and re-embracing the

notion that dynamic competition and innovation, fostered by strong intellectual property protections, is fundamental to ensuring competitive markets and a healthy and robust economy.

InterDigital hopes that the Federal Trade Commission will follow suit. In particular, we recommend that the FTC:

- Embrace the importance of strong patent protection in ensuring dynamic and competitive markets;
- Support patent licensing as an important and procompetitive mechanism for providing innovation incentives;
- Adopt an agency position, consistent with that recently articulated by the Antitrust Division, that antitrust law should normally not be used to resolve disputes between intellectual property holders and implementers regarding the scope of FRAND commitments;
- Reevaluate the FTC's enforcement policies and competition advocacy positions in light of the fundamental changes brought about by the Supreme Court's *eBay* decision on the ability of patent holders to obtain injunctive relief, and the implications on the ability of patent holders to hold and exercise any actual market power as a result of their ownership of patents, and particularly SEPs;
- Keep alert to the potential competitive harms from agreements among SDO implementers, and practices by SDOs dominated by technology users, to adopt anticompetitive policies aimed at reducing royalties to owners of SEPs below fair and adequate levels; and
- Minimize if not eliminate any differences in the standards for enforcement actions against IP-related conduct under section 5 of the FTC Act as compared to Sections 1 and 2 of the Sherman Act.

InterDigital appreciates the opportunity to submit comments to the FTC on these important topics. If you have any questions about these comments, please contact Jannie K.

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