

Antitrust Chronicle

NOVEMBER · VOLUME 2 · FALL 2017

**IP ON TECH'S CUTTING EDGE:
LEADERSHIP EU**

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LETTER FROM THE EDITOR

Dear Readers,

The November 2017 Antitrust Chronicle addresses issues related to the inaugural Leadership EU Conference, which took place in Brussels on September 25th. The panelists at the conference came from the private and public sectors: regulators, academics and private practitioners. We are pleased to have articles from speakers at the Leadership EU conference from all of the panels.

A focus of the day-long conference featured ranging views on how to “get it right” in innovation policy, intellectual property policy and antitrust policy. Notably, the intersection and overlay of IP and antitrust with respect to the development of standardized technology was a hotly-debated topic.

5G technologies and the Internet of Things have the potential to make a big impact on our lives, the way we interact, communicate socially and do things in the future, in the same way that today's cellular technologies have become ubiquitous throughout the world. What are the best practices and policies to make sure these technologies achieve their greatest potential?

CPI thanks Qualcomm Inc. for their sponsorship of this issue of the Antitrust Chronicle. Sponsoring an issue of the Chronicle entails the suggestion of a specific topic or theme for discussion in a given publication. CPI determines whether the suggestion merits a dedicated conversation, as is the case with the current issue of the Chronicle, and takes steps to ensure that the viewpoints relevant to a balanced debate are invited to participate.

The next Leadership conference will take place in Washington, D.C. on April 10, 2018.

As always, thank you to our great panel of authors this month.

Sincerely,

CPI Team

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LEADERSHIP

DISCUSS. DEBATE. UNITE. LEAD.



IP Leadership Brussels: Highlights And Economic Analysis

By Kirti Gupta, Koren W. Wong-Erwin, Joseph V. Coniglio & Dylan Naegele

In September 2017, IP Leadership held its first conference in Europe. The event, which was attended by policymakers, practitioners, and scholars, featured diverse views on topics such as: balancing the interests of contributors and implementers of technologies; possible adverse consequences on innovation and consumer welfare of deterring participation in open, collaborate standards; the role of governments in shaping intellectual property policies of private standard-development organizations; whether small and medium-sized enterprises can meaningfully participate in and benefit from standard-development activities; and the level of the distribution chain licensing should occur at, particularly for the Internet of Things. This article provides key highlights and the economic analyses for the various topics discussed at the conference.

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Smartphone Wars: A Phantom Menace

By Richard Vary

The Smartphone Wars resulted from new adopters of wireless technologies displacing the traditional mobile phone companies, and courts ill-equipped to address portfolio disputes. With IoT and 5G, some fear that the latest influx of new adopters of wireless technologies will result in a further increase in patent litigation: Smartphone Wars II. Regulators see a need to intervene. However, the conditions that created the last increase in litigation don't exist today. The courts are better equipped to resolve the underlying commercial dispute. There is less need for regulatory intervention.

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The Superior Performance Of Voluntary Technology Standards

By Jorge Padilla & John Davies

Standards defining how technologies work together have profound effects on market structure and incentives for innovation. They enable suppliers to co-operate and compete in product markets, while allowing diverse contributions to R&D, through a “market for technology.” The governance structure is crucial. Voluntary participation in Standards Development Organizations (“SDOs”) allows innovators and implementers to contribute to standards and license technology with confidence. We describe the economic outcomes but we note they could be lost if rules are changed ex-post: by competition authorities or the SDOs themselves. Standards already underpin some of the largest, most innovative industries but will become ever more important with the development of the “Internet of things.”

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Standard Development Organizations And IPR Policies: Their Role In Realizing Future Technologies

By Bardo Schettini Gherardini & Spiro Dhapi

In the growing digitalized economy, interconnected devices in all sectors need technology standards to operate. As standards are drivers for innovation, when they embed proprietary technology, notably Standard Essential patents (“SEPs”), their widespread use may be seen as an opportunity, but also may raise concerns. Hence, an increasing number of economic players with opposing IP interests are involved in the work of the Standard Development Organizations (“SDOs”). Can SDOs develop policies balancing successfully the interests of SEPs owners, “open source” developers and standard users? What about compliance with competition law? This article touches on some key aspects of this debate and gives hints on how to foster greater SEPs transparency and predictability in the development and use of standards.

SUMMARIES

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“That’s What Frands Are For”: The Antitrust Boundaries Of The Patent Holdup Problem

By Giorgio Corda & Antonio Nicita

In recent times, antitrust agencies seem to be willing to limit the scope of antitrust liability for SEP holders who seek injunctions against implementers. We welcome this policy shift as past approaches granting “FRAND defense” for licensees against SEP holders’ injunction, may generate strong incentives for a reverse holdup against SEP holders.

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The *Intel* Case: Issues Of Economic Analysis, Comity And Procedural Fairness

By Luis Ortiz Blanco & José Luis Azofra Parrondo

The Court of Justice’s judgment in the Intel case has provoked mixed reactions as it gathers important points of law in three relevant fields of EU competition practice. First, the Court may have laid the foundations for a more demanding economic analysis in abuse of dominant position cases. Second, it has confirmed that the Commission’s territorial jurisdiction has very flexible boundaries, in what represents an expansive reading of the European Union’s competences under public international law. And third, it has set a stricter standard for the conduction of meetings in the context of antitrust investigations.

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European Competition Law: Enforcement Or Regulation After *Intel*?

By D. Daniel Sokol

The EUCJ *Intel* decision is a reminder that European competition law looks different from that of the North American jurisdictions where economic effects drive enforcement policy and a tradition of due process and procedural fairness exists. *Intel* suggests limits to DG Competition’s enforcement with regard to due process and is a wake-up call for DG Competition to reiterate its commitment to procedural fairness.

Although there is some gap as between North American and European views on economic effects in cases, *Intel* suggests that this gap may be narrowing. *Intel* provides a roadmap for further reworking of European case law towards more of an effects based approach. Perhaps *Intel* offers European competition law a *GTE Sylvania*-like moment with regard to an effects based approach to conduct, where cases had hereunto been form based “by object.”

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IP And Antitrust: The Importance Of Due Process And The ICC Best Practices

By Paul Lugard

Effective observance of due process principles across jurisdictions is essential to ensure procedural fairness and transparent decision-making and to minimize the risk of ill-informed decisions. This contribution discusses the relevance of procedural rights in antitrust enforcement in light of the 2017 Due Process Best Practices issued by the Competition Commission of the International Chambers of Commerce, the world’s largest business organization and highlights their crucial role in the context of IP-related cases.

WHAT'S NEXT?

To finish out the end of the year, our December 2017 Antitrust Chronicle will address issues related to the **News and Antitrust**. The way we get our news is changing. A significant percent of the U.S. population gets its news from Facebook and Google. Are they “killing news” and does antitrust have a role to play?

ANNOUNCEMENTS

ROUNDING THE BEND OF 2017

CPI wants to hear from our subscribers. For the remaining months of 2017, we will be reaching out to members of our community for your feedback and ideas. Let us know what you want (or don't want) to see, at: antitrustchronicle@competitionpolicyinternational.com.

CPI ANTITRUST CHRONICLE JANUARY 2018 & FEBRUARY 2018

The January 2018 Antitrust Chronicle will address issues related to **Private Equity and Antitrust**.

As a reminder to potential authors, our topic for the February 2018 Antitrust Chronicle is part two of our series focusing on the **Digital Economy – Mergers**.

Contributions to the Antitrust Chronicle are about 2,500 – 4,000 words long. They should be lightly cited and not be written as long law-review articles with many in-depth footnotes. As with all CPI publications, articles for the CPI Antitrust Chronicle should be written clearly and with the reader always in mind.

Interested authors should send their contributions for the February 2018 edition by January 20, 2018 to Sam Sadden (ssadden@competitionpolicyinternational.com) with the subject line “Antitrust Chronicle,” a short bio and picture(s) of the author(s).

The CPI Editorial Team will evaluate all submissions and will publish the best papers. Authors can submit papers in any topic related to competition and regulation, however, priority will be given to articles addressing the abovementioned topic. Co-authors are always welcome. and regulation, however, priority will be given to articles addressing the abovementioned topic. Co-authors are always welcome.



IP LEADERSHIP BRUSSELS: HIGHLIGHTS AND ECONOMIC ANALYSIS

LEADERSHIP **IP**

DISCUSS. DEBATE. UNITE. LEAD.

BY KIRTI GUPTA, KOREN W. WONG-ERVIN, JOSEPH V. CONIGLIO & DYLAN NAEGELE ¹



¹ Kirti Gupta is Senior Director for Economic Strategy at Qualcomm Inc. Koren W. Wong-Ervin is Director of Intellectual Property and Competition Policy at Qualcomm Inc. and former Counsel for Intellectual Property and International Antitrust at the U.S. Federal Trade Commission. Joseph V. Coniglio is an associate in the Washington D.C. office of Wilson Sonsini Goodrich & Rosati, which represents Qualcomm. Dylan Naegele is a J.D. Candidate at the Antonin Scalia Law School at George Mason University. All views are those of the authors.

I. INTRODUCTION

In September 2017, IP Leadership held its first conference in Europe. The event, which was attended by government enforcers and policymakers, practitioners, and scholars, featured diverse views on topics such as:

- the importance of striking the right balance between the interests of technology contributors and technology implementers;
- possible adverse consequences on innovation and prices for consumers of deterring participation in open, collaborative standards;
- the role (if any) of governments in shaping the intellectual property rights (“IPRs”) policies of private standard-development organizations (“SDOs”);
- proper antitrust analysis in matters involving standard-essential patents (“SEPs”) where a patent holder has made a commitment to license on fair, reasonable and nondiscriminatory (“FRAND”) terms;
- whether small and medium-sized enterprises (“SMEs”) are able to meaningfully participate in, and benefit from, standard-development activities; and
- the issue of at what level in the distribution chain licensing should occur, particularly for the Internet of Things (“IoT”).

This article provides key highlights from the conference, as well as economic analyses of the various topics discussed.

II. STRIKING THE RIGHT BALANCE BETWEEN INNOVATORS AND IMPLEMENTERS: WHAT’S AT STAKE AND THE ROLE OF GOVERNMENT INTERVENTION

There was a strong consensus among panelists on the need for balance, in both SDO IPR policies and government intervention, between the interests of innovators and implementers. Patrick McCutcheon, a Policy Officer at the European Commission’s (“EC’s”) Department for Research and Innovation, said that balance was necessary in order to determine “a practical and fair definition of what fair and reasonable is and what amounts really to nondiscriminatory” licensing.² Similarly, Emilio Dávila-Gonzalez, Head of Sector ICT Standardization at the EC’s Communications Networks, Content and Technology, stated that by balancing the interests of innovators and implementers, SDOs create “sustainable standardization system[s].”³ Another panelist, Bardo Schettini Gherardini, the Director of Legal Affairs for the European Committee for Standardization and European Committee for Electrotechnical Standardization, spoke of how voluntary participation by industry experts is a “win-win” and that without balance “the system will not work.”⁴ Another panelist noted that absent balance, “we will not have investments going into open standards, [and] we’ll have a lot of proprietary standards instead and proprietary technologies.”⁵

The likely consequences of disrupting this delicate balance were underscored by Dr. Jorge Padilla, who assessed the merits of collaborative standards relative to alternatives, such as government set or proprietary (or *de facto*) standards. Dr. Padilla presented a new study that examines the comparative performance of these different types of standards across three industries: the wireless industry, where a collaborative SDO environment prevailed; the personal computing operating system, where Microsoft’s Windows constituted a proprietary technology that became a *de facto* standard; and broadcasting, with a government set standard.⁶ Relative to the other industries, the wireless industry was found to have

2 IP Leadership Brussels Transcript, Panel 1 at 4 (on file with authors) [hereinafter Transcript].

3 Id. Panel 2 at 11.

4 Id. Panel 2 at 18.

5 Id. Panel 1 at 3.

6 Padilla et al., *Economic Impact of Technology Standards* (2017), <http://www.compasslexecon.com/highlights/economic-impact-of-technology-standards> [hereinafter *Technology Standards*]. The study finds that cooperative standards are a more optimal means of developing technologies that rely on positive externalities flowing between users on a common platform by both allowing firms to focus on niche specializations and creating a level playing field for implementing the common technology standards.

demonstrated greater downstream and upstream (in the form of greater fragmentation) competition.⁷ More generally, the study indicates that collaborative standards result in more competitive and dynamic markets for innovators and lower prices and better quality for consumers.⁸ This is consistent with the available empirical evidence indicating a competitive mobile industry, with output having increased exponentially and market concentration and prices fallen.⁹ For the United States in particular, prices in SEP-reliant industries have decreased more rapidly than in non-SEP-reliant industries.¹⁰ These outcomes, however, depend on SDOs striking the right balance between the interests of innovators and implementers. Indeed, if innovation is not sufficiently rewarded, a collaborative model ceases to work and standards will be established by other means.

Some panelists favored government intervention on the grounds that clarity is needed on the meaning of FRAND. For example, in his keynote address, Antti Peltomäki, the EC's Deputy Director General of the Internal Market, identified three areas of regulatory concern with SDOs, indicating a need for government intervention through the issuance of policy recommendations.¹¹

First, he suggested that implementers may continue to face difficulties identifying the parties from whom they must obtain licenses.¹² He added that increased transparency should improve the standard-development process, whether put forward by the SDO itself, or by regulators.¹³ Second, patented technologies remain difficult to value.¹⁴ While the primary responsibility falls on market participants to address this problem, regulators may be able to assist in certain key areas, such as defining the level of the distribution chain at which SEP licensing should occur. Third, continued uncertainty following the European Court of Justice's ruling in *Huawei v. ZTE*¹⁵ was said to be reflective of an "incomplete" legal framework that might benefit from additional and clearer rules.¹⁶

Some panelists agreed, contending that difficulties in determining a FRAND royalty range allow innovators to abuse their alleged market power by engaging in holdup. As retired Judge Joachim Bornkamm of the Bundesgerichtshof stated, "[i]f the question of FRAND could be easily answered there would not be much of a chance for [holdup]."¹⁷ However, as several panelists observed, the nature of the standard-development process as a repeated game can serve to deter opportunistic behavior by SEP holders for fear of future punishment, such as exclusion from a later standard.¹⁸ Moreover, the available evidence does not support the claim that holdup is widespread. Theories of anticompetitive harm predict systematic opportunism by patent holders and price increases across output markets that depend upon patented technology as an input. These theories predict, in addition to higher final product prices, reduced output and less innovation.¹⁹ As discussed above, evidence suggests that SEP-heavy industries are highly competitive, being characterized by robust innovation as well as falling prices and increased output when compared to industries that do not rely upon SEPs.²⁰

7 See *id.*

8 *Id.*

9 See Ginsburg, Wong-Ervin, & Wright, *The Troubling Use of Antitrust to Regulate FRAND Licensing*, 10 CPI ANTITRUST CHRONICLE 1, 4-5 (2015) [hereinafter *FRAND Licensing*].

10 *Id.* at 5.

11 Transcript Keynote at 4. Deputy Director Peltomäki's expressed concerns would ultimately track closely with those put forward by the European Commission in a communication on SEPs, which was released shortly after the conference. See EUROPEAN COMMISSION, COMMUNICATION FROM THE COMMISSION ON STANDARDS ESSENTIAL PATENTS FOR A EUROPEAN DIGITALISED ECONOMY (Oct. 4, 2017), https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-1906931_en.

12 Transcript Keynote at 4.

13 *Id.*

14 *Id.* at 4-5.

15 Case C-170/13 *Huawei Technologies Co. Ltd v. ZTE Corp.*, (July 16, 2015).

16 Transcript Keynote at 5.

17 *Id.* Panel 3 at 3.

18 *Id.* Panel 3 at 7-8; see also Larouche & Schuett, *Repeated Interaction in Standard Setting*, TILBURG LAW SCHOOL RESEARCH PAPER NO. 16/2016 (2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2792620.

19 Ginsburg et al., *FRAND Licensing*, supra note 9, at 4.

20 See, e.g. Sidak, *The Antitrust Division's Devaluation of Standard-Essential Patents*, 104 GEO. L.J. ONLINE 48, 61 (2015) (collecting studies at n.49) ("By early 2015, more than two dozen economists and lawyers had disapproved or disputed the numerous assumptions and predictions of the patent-holdup and royalty-stacking conjectures."), <https://www.criterioneconomics.com/docs/antitrust-divisions-devaluation-of-standard-essential-patents.pdf>; LAYNE-FARRAR, PATENT HOLDUP AND ROYALTY STACKING THEORY AND EVIDENCE: WHERE DO WE STAND AFTER 15 YEARS OF HISTORY? (2014) (surveying the economic literature and concluding that the empirical

For example, evidence from the smartphone market, which is both standard and patent intensive, is to the contrary: output has grown exponentially, market concentration has fallen, and wireless service prices have dropped relative to the overall consumer price index (“CPI”).²¹ More generally, prices in SEP-reliant industries in the United States have declined faster than prices in non-SEP intensive industries.²² A study by the Boston Consulting Group found that, globally, the cost per megabyte of data declined 99 percent from 2005 to 2013 (reflecting both innovations making data transmission cheaper and the healthy state of competition); the cost per megabyte fell 95 percent in the transition from 2G to 3G, and 67 percent in the transition from 3G to 4G; and the global average selling price for smartphones decreased 23 percent from 2007 through 2014, while prices for the lowest-end phones fell 63 percent over the same period.²³ All of this indicates a thriving mobile market as opposed to a market in need of fixing, and suggests the need for caution prior to disrupting the carefully balanced FRAND ecosystem.

Nevertheless, for retired Judge Bornkamm, SDOs conferring SEP holders with market power resulting in holdup constitutes the “core of the problem.”²⁴ Empirical research, however, suggests that the standardization process does not necessarily, and in fact generally may not, confer market power.²⁵ Rather, already more valuable technologies are natural candidates for inclusion in standards such that SDOs tend to “‘crown winners,’ not create them.”²⁶ This evidence is consistent with the institutional mechanics of SDOs, whereby standardized technologies are chosen based upon their technical merits through a consensus-driven or majority-based decision process in which most participating firms are not SEP owners, but implementers.²⁷ Furthermore, any market power held by an SEP holder to extract supra-competitive prices is mitigated by a valid FRAND commitment.²⁸

With respect to calls for clarity, while we agree that from a policy standpoint, if one assumes no error rates, clearer rules are better than less clear rules because clearer rules are cheaper to implement. However, rules aimed at increasing clarity can only be considered procompetitive when supported by evidence that the rule would result in net benefits for consumers. In other words, clarity alone cannot justify policy choices such as requiring licensing at all levels of the distribution chain. Indeed, a rule that allows SEP holders to continue the longstanding industry practice of licensing at the end-user device level would be equally as clear.

Moreover, attempts to regulate SDO policies after standards have been developed could entail significant costs. Specifically, *ex-post* changes in a SDO’s IPR policy were identified at the conference as a form of holdup against SEP holders that could reduce *ex-ante* asset specific R&D investment incentives. Indeed, Dr. Padilla cited recent studies showing that policy uncertainty can have significant negative effects on investment.²⁹ Italian Communications Regulatory Authority Commissioner Antonio Nicita cautioned that policy changes that further constrain the behavior of SEP holders (e.g. prohibitions on the ability to seek or enforce injunctive relief) could increase the incentive of implementers to infringe on valid IPRs if efforts by IP holders to prevent infringement are broadly considered anticompetitive.³⁰ Given the time value of money and

studies conducted thus far have not shown holdup is a common problem), <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD%282014%2984&doclanguage=en>.

21 According to data from Gartner, worldwide smartphone sales to end-users have increased over 900 percent from 2007 to 2014, and 320 percent from 2010 to 2014. Market concentration in smartphones, as measured by HHIs, went from “highly concentrated” in 2007, as defined by the U.S. Antitrust Agencies’ Horizontal Merger Guidelines, to “unconcentrated” by the end of 2012. See Mallinson, *Theories of Harm with SEP Licensing Do Not Stack Up*, IP FIN. BLOG (May 24, 2013), <http://ipfinance.blogspot.com/2013/05/theories-of-harm-with-sep-licensing-do.html>. According to the U.S. Bureau of Labor Statistics, the ratio of the CPI for wireless telephone services to the overall CPI has dropped 34 percent from 2007 to 2014.

22 Galetovic et al., *An Empirical Examination of Patent Hold-Up* (Nat’l Bureau of Econ. Research, Working Paper No. 21090, Apr. 2015), <http://www.nber.org/papers/w21090.pdf>.

23 BEZERRA ET AL., *THE MOBILE REVOLUTION: HOW MOBILE TECHNOLOGIES DRIVE A TRILLION DOLLAR IMPACT* 3, 9 (The Boston Consulting Grp., Jan. 15, 2015), https://www.bcgperspectives.com/content/articles/telecommunications_technology_business_transformation_mobile_revolution/#chapter1.

24 Transcript Panel 3 at 4.

25 See Layne-Farrar & Padilla, *Assessing the Link Between Standards and Patents*, 9 INT’L J. IT STANDARDS AND STANDARDIZATION RES. 19 (2011).

26 Layne-Farrar & Wong-Ervin, *Standard-Essential Patents and Market Power*, CUTS INTERNATIONAL 7 (Dec. 2016).

27 See Gupta, *Technology Standards and Competition in the Mobile Wireless Industry*, in HANDBOOK OF STANDARD SETTING (forthcoming 2017), <http://www.georgemasonlawreview.org/wp-content/uploads/2015/06/GuptaTechStandards.pdf>.

28 See Page, *Judging Monopolistic Pricing: F/RAND and Antitrust Injury*, 22 TEX. INTELL. PROP. L.J. 181, 206 (2014).

29 Transcript Panel 2 at 14; see also Baker, Bloom & Davis, *Measuring Economic Policy Uncertainty*, 131 Q.J. ECON. 1593 (Nov. 2016) [hereinafter *Policy Uncertainty*].

30 Transcript Panel 3 at 14.

the fact that the worst penalty an SEP infringer is likely to face is merely paying after adjudication (likely on a patent-by-patent basis around the world) the FRAND royalty that it should have agreed to pay when first asked, it is easy to understand why holdout can be an attractive strategy for implementers.³¹

Another economist panelist observed that the Institute of Electrical and Electronics Engineering Standards Association (“IEEE-SA”) 2015 amendments to the IEEE IPR policy have led to a notable decrease in non-duplicate Letters of Assurances (“LoAs”), the licensing commitments given by patent owners for licensing their SEPs on FRAND terms.³² For the flagship IEEE 802.11 Wi-Fi standards, there has been an 86 percent surge in the number of negative LoAs submitted by patent owners relative to the past year. At the same time, almost all of the positive LoAs constitute repeat submissions for which a LoA was already submitted for the same standard under the old policy. A reduced willingness to submit LoAs is a possible indicator of the degree to which the inventors contributing their technologies to standards are willing to invest in R&D and license their IP under the new policy. Furthermore, new IEEE projects initiated via Project Authorization Requests (“PARs”) have dropped by approximately 5 percent in the IP-intensive IEEE 802 working groups, raising the possibility of a broader decline in the standard-development process.

With respect to government issued best practices or other uniform policy recommendations, although uniformity of SDO IPR policies may have some benefits, it also entails potential costs stemming from difficulties associated with the need to keep up with fast-moving technology without knowing how well particular best practices will function.³³ Indeed, uniformity is generally ill-suited to deal with dynamic sectors such as 5G technology.

First, in dynamic industries, uniform rules imposed by a regulator can hinder an organization’s ability to adapt to rapidly changing circumstances by adopting the most efficient responsive rules.³⁴ Second, uniform rules can stifle experimentation among different rule frameworks and suppress learnings obtained from empirically observing the costs and benefits associated with a particular rule regime.³⁵ Third, from a governance perspective, in as much as the imposition of uniform rules is coupled with a more centralized decision process, uniformity can come at the expense of the benefits associated with a multi-stakeholder, collaborative and decentralized governance model, resulting in sub-optimal rules.³⁶

All three of these concerns about uniform rules are applicable to standards development for IoT and 5G. First, as more implementers from a range of industries participate in the standard-development process, the diversity and dynamism associated with communication standards will only increase, making an adaptive rule framework even more essential to SDO well-functioning. Second, empirical evidence has confirmed that the policies of SDOs vary over time in response to changing conditions, including the perceived risk of holdup,³⁷ suggesting that SDOs have incentives for varying their policies. Third, as discussed during the conference, private collaborative multi-stakeholder SDOs have been shown to

31 As Dr. Layne-Farrar has explained: “Working backwards through a simple example illustrates this point. After litigation is concluded, if an implementer is found to infringe the asserted SEPs it will have to pay FRAND damages/royalties of F . But there is some chance (call it p , where $0 < p < 1$) that the court will decide the litigation in the implementer’s favor, in which case it will pay nothing in damages. Abstracting from litigation expenses that both the plaintiff and the defendant must pay, on the eve of litigation the implementer’s expected loss is only $p \times F$, which is clearly less than F . Stepping back even earlier in time, there is some chance (call it δ , where $0 < \delta < 1$) that the SEP holder will never file suit, say because it is focused on its downstream market or because it is worried about retaliation in other commercial dealings with the implementer. Thus, before the implementer ever makes its first investment in bringing standard-compliant products to market, it faces two options: 1) enter into a license with the SEP holder now and pay the FRAND royalty F with certainty, or 2) practice patent holdout, which has the expected payout of $\delta \times p \times F$, an amount clearly lower than either $p \times F$ or F .³ It would be entirely unsurprising for a significant number of implementers to choose option 2.” Layne-Farrar, *Why Patent Holdout is Not Just a Fancy Name for Plain Old Patent Infringement*, CPI NORTH AMERICA COLUMN 4 (Feb. 2016), <https://www.competitionpolicyinternational.com/wp-content/uploads/2016/02/North-America-Column-February-Full.pdf>; see also Ginsburg et al., *FRAND Licensing*, supra note 9, at 4-6.

32 Transcript Panel 2 at 15-16; see Katznelson, Presentation at IEEE GLOBECOM 2015: Decline in Non-Duplicate Licensing Letters of Assurance (LOAs) from Product/System Companies for IEEE Standards (updated Mar. 30, 2016), <https://works.bepress.com/rkatznelson/80/>.

33 See Kobayashi & Ribstein, *Uniformity, Choice of Law and Software Sales*, 8 GEO. MASON L.R. 261, 275 (1999-2000).

34 Id. at 275-76.

35 See Wong-Ervin, *Troubling Aspects of the European Commission’s Standard-Essential Patent Roadmap*, CPI EUROPE COLUMN (May 2017) [hereinafter *EC Standards Roadmap*].

36 See generally Ribstein & Kobayashi, *Uniform Laws, Model Laws and Limited Liability Companies*, 66 U. COLO. L. REV. 947, 951-52 (1995).

37 See Tsai & Wright, *Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts*, 80 ANTITRUST L.J. 157 (2015); Layne-Farrar, *Proactive or Reactive? An Empirical Assessment of IPR Policy Revisions in the Wake of Antitrust Actions*, 59 ANTITRUST BULL. 373 (2014).

result in greater competition and welfare gains than approaches associated with unilateral rulemaking by a governmental body.³⁸

Lastly, issuance of best practices by a government agency may unduly influence private SDOs and their members to adopt policies that might not otherwise gain consensus support within a particular SDO and that may not best meet the needs of that SDO, its members, and the public. This could occur because the SDO believes failing to adopt the specified best practices is not permitted or because failing to adopt the best practices could subject the SDO and its members to other forms of legal liability.³⁹

III. SMEs

Deputy Director Peltomäki's keynote speech highlighted the importance of SMEs being able to participate in, and benefit from, the innovation inherent in the standard-development process.⁴⁰ Patrick McCutcheon added that the intense and expensive litigation which seems to pervade the SEP licensing process can be a barrier toward participation by less capitalized SMEs.⁴¹ Other panelists disagreed, noting that large licensors may not find it rational to sue small implementers who represent only minor revenue streams.⁴² Furthermore, rather than be understood as a market imperfection, lack of engagement from startups and SME SEP holders could be the result of a rational decision not to license their IP.⁴³

Several panelists reiterated Deputy Director Peltomäki's emphasis on transparency as a way to facilitate participation by SMEs.⁴⁴ Other panelists went further, and pointed to the European Commission's efforts to achieve consensus on a methodology for valuing SEPs as a way to assist SMEs in securing early stage funding.⁴⁵ For several panelists, the idea of a "one size fits all" approach to calculating FRAND was fundamentally at odds with licensing technologies for IoT standards, which will be characterized by diversity of industries, technologies, and licensing traditions.⁴⁶ One panelist from Audi added that while agreement upon valuation methodology invariably fails, licensing terms are ultimately reached.⁴⁷ Even one larger implementer expressed concern that valuation guidelines risk becoming too burdensome for technology developers, who would then be pressured to leave the SDO or refuse to sign FRAND commitments.⁴⁸

Empirical and economic analyses can help to explain the nature of SME participation in SDOs. A recent empirical study evaluating participation by SMEs and startups in the 3G and 4G standard-development processes finds that SMEs consistently represented around 15 percent of participants in meetings.⁴⁹ While less likely to contribute their technologies to standards, SMEs and startups are often specialized in niche areas of expertise, and lack the resources required to perform large scale and risky R&D by sinking costs years in advance without any guarantee of return.⁵⁰ However, when SMEs or startups do contribute their technology for inclusion in standards, their likelihood of acceptance is

38 See Padilla et al., *Technology Standards*, supra note 6, at 25.

39 *EC Standards Roadmap*, supra note 35, at 3.

40 Transcript Keynote at 3-4. The European Commission has in other instances explored concerns that SMEs are in general under-represented in European standardization activities and therefore lack influence in the standard-development process. See ERNST & YOUNG, INDEPENDENT REVIEW OF THE EUROPEAN STANDARDISATION SYSTEM FINAL REPORT, *March 2015*, Ref. Ares (2015)2179280 - 26/05/2015. As the Secretary General of the European Association of Digital SMEs stated, "[e]xperience has shown that standardization processes at the international level can be misused by global actors, like multinational companies, to impose technical solutions and requirements that are less in line with SMEs' needs." Toffaletti, Sebastiano, *European SMEs and Standards* (2016), <http://www.astm.org/standardization-news/?q=first-person/european-smes-and-standards-ma16.html>.

41 Transcript Panel 1 at 3-4.

42 See, e.g. id. 11-12, 18-19.

43 Id. at 5.

44 See, e.g. id. 10-12.

45 Id. at 9-10.

46 Id. at 11-12.

47 Id. at 13.

48 Id.

49 Gupta, *The Role of SMEs and Startups in Standards Development* 5 (Jul. 18, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3001513.

50 Id. at 6-7.

similar to that of both larger participants, and the firms that represent the majority of contributions to the development of the standards.⁵¹ Thus, the collaborative SDO system seems to be well designed to attract participation by SME licensors.

Panelists also recognized the need to consider SMEs on both sides of the standard-development process. As an implementer panelist stated, any government guidance that attempts to set out one methodology for calculating FRAND risks reducing the incentives of SEP holders to invest in the standard development.⁵² Because a uniform methodology would have to accommodate the most complex technologies, SME licensors of technologies that admit of simpler valuation methods may in particular face increased transaction costs by having to comply with a more complicated FRAND methodology.

Lastly, well-intentioned “fairness” concerns could ultimately lead to a less optimal standards regime for SMEs. In addition to the vague and subjective nature of “fairness” concerns, putting pressure on SDO participants to conform to a uniform method of valuation may cause SEP holders to abandon collaborative standards in a way that results in less socially optimal standard-development processes, such as a series of *de facto* proprietary standards. Indeed, as discussed above, collaborative standards have resulted in greater downstream and upstream competition — and therefore more opportunity for SMEs — than either *de facto* proprietary standards or regulatory alternatives.⁵³

IV. END-USER DEVICE LICENSING

As one panelist explained, IoT standard-development brings the issue of at which level licensing should occur to the “center of the debate.”⁵⁴ With respect to the value of a given SEP, retired Judge Bornkamm suggested that end-user device licensing wrongly includes the value of other technologies present in the device.⁵⁵ One implementer from the automobile industry expressed the view that end-user device licensing increases transaction costs for implementers, stating that it would be a “nightmare” for implementers to individually “deal with all our suppliers and try [...] to get the money back for the indemnifications that they have given to us.”⁵⁶ Concerns about high royalties and transaction costs, of course, can be particularly acute for IoT implementers that are also SMEs.

As a threshold matter, the debate seems to ignore the fact that, absent an explicit agreement by a patent holder to limit the rights afforded to it under patent law, licensing commitments cannot later be interpreted to deprive a patent holder of its rights. This includes the core right to exclude, which allows patent holders to choose who to license, who to sue for patent infringement, and who not to sue.

Dr. Padilla suggested that while much of the debate about whether to require licensing at the component level takes a “quasi kind” of “ethical and moral perspective,” the debate should instead be driven by “efficiency considerations.”⁵⁷ From the perspective of competition and consumer welfare, end-user device level licensing is a longstanding practice among non-vertically integrated SEP holders who have neither the incentive nor the ability to exclude downstream component makers, which strongly indicates that the practice has legitimate procompetitive rationales.⁵⁸ In terms of overall welfare, Gerard Llobet and Jorge Padilla show that, compared to per unit component royalties, ad-valorem royalties based on the price of the end-user device tend to decrease the prices paid by consumers, particularly in the context of successive monopolies, which result in double-marginalization. Specifically, they find that “the resulting price in the final market is never higher under ad-valorem royalties. The reason is that ad-valorem royalties are more similar to fixed fees than per-unit royalties. As a result, they make the double-marginalization problem less severe, generating lower distortions in the final market.”⁵⁹ The authors also conclude that ad-valorem rates tend to spur innovation. These rates tend to benefit upstream producers without hurting downstream producers. When there are multiple upstream developers with complementary innovations, “numerical results indicate that ad-valorem royalties typically work better [because] by increasing

51 Id. at 7-8.

52 Transcript Panel 1 at 13.

53 See Padilla et al., *Technology Standards*, supra note 6, at 22.

54 Transcript Panel 2 at 20.

55 Id. Panel 3 at 11-12.

56 Id. Panel 1 at 13.

57 Id. Panel 2 at 20.

58 See Blecker, Sanchez & Stasik, *An Experience-Based Look at the Licensing Practices that Drive the Cellular Communications Industry: Whole Portfolio/Whole Device Licensing*, 221 LES NOUVELLES 221 (2016).

59 Llobet & Padilla, *The Optimal Scope of the Royalty Base in Patent Licensing*, (Jun. 25, 2014), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2417216.

upstream profits they generate a positive feedback on the incentive to innovate of all parties.”⁶⁰

During the conference, Dr. Padilla also highlighted how requiring SEP holders to license at the component level in order to aid SMEs would encumber them with large transaction costs as they try to comprehensively license their technology at multiple levels of the distribution chain.⁶¹ Another panelist from the University of Liège School of Law noted that because the “long tail” of SME licensees, who may be more likely to not take a license, will represent a greater amount of revenue for SEP holders in IoT standards, requiring licensing at all levels could increase the degree of holdout and reduce *ex-ante* incentives to invest in the standard.⁶²

In order to fully appreciate the industry practice of licensing at the end-user device level, it is important to understand the nature of technologies incorporated in 3G and 4G standards. Specifically, these technologies are designed to optimize the usage of a scarce and expensive physical resource — the radio frequency spectrum — and thus enhance the performance of the entire wireless system and network, making their value derivative of functionalities well beyond a specific component or the device. For example, one study that examined a representative sample of patents in a large portfolio of SEPs owned by Ericsson found that more than 80 percent of the SEPs read on the cellular network or the end device, and not on an individual component.⁶³

V. CONCLUSION

The IP Leadership Brussels conference brought forth both a learned and diverse set of perspectives on the standard-development process, the question of whether FRAND is somehow “broken” and in need of fixing, the proper way to ensure SME engagement, and the merits of imposing component level licensing. While the advent of IoT and evolution toward 5G will undoubtedly present regulators and industry participants with new challenges, the existing SDO environment typifies a collaborative and innovative process that has facilitated immense consumer benefits. This evidence suggests caution prior to issuing policy recommendations that are not responsive to empirically demonstrable problems, and which might disrupt an otherwise well-functioning standard-development ecosystem.

⁶⁰ Id. at 6-7.

⁶¹ Transcript Panel 2 at 20.

⁶² Id. Panel 3 at 15.

⁶³ Putnam & Williams, *The Smallest Salable Patent-Practicing Unit (SSPPU): Theory and Evidence*, 41 *tbl.* 3, (Sept. 2016), <http://www.ipleadership.org/articles/smallest-salable-patent-practicing-unit-ssppu-theory-and-evidence>.

SMARTPHONE WARS: A PHANTOM MENACE

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I. LAW AND POLICY FOR 5G AND THE IoT

“When we get beyond 4G, 5G will make 3G look like 2G.” That was the prediction of one panelist at AIPPI’s Sydney conference in October. But he wasn’t talking about another leap in speed or capacity. His prediction concerned the volume of patent litigation.

One can understand the basis for his prediction. The 2G era (1990s and early 2000s) saw comparatively little patent litigation around wireless connected devices. From 2006 to 2012, 3G cellular networks started to make wireless data as fast as a desktop internet connection. We saw three industries converge. One was the mobile phone industry, which had created the fast wireless data connection. The other two industries involved in this convergence were the computer and consumer electronics industries. These industries made products that worked better when they were harnessed to the wireless connectivity of the mobile phone: cameras, media players and personal digital assistants. They became a single device: the smart phone.

And with that convergence we saw an increase in litigation: the Smartphone Wars. Why was that? Before convergence, the mobile telecommunications industry had been characterized by cross-licensing. Each participant needed others to pay for its technology: developing wireless cellular radio is probably the most expensive technological investment that we have ever made. Unless that investment is recouped as we go along, development will cease. But before convergence, each participant also needed the other participants’ technology to build its devices. And so both sides had an incentive to reach agreement, and each had something to trade. No one was incentivized to demand very high or very low royalties for intellectual property because what was sauce for the goose was sauce for the gander: what helped a company in one area would hurt them in another.

There was also little room for debate about where in the product chain to license. Most manufacturers were vertically integrated: they ultimately made end user consumer devices. If the company that made the end user product also designed the chip, there was little incentive to push the royalty cost up the supply chain. There was no room to push the royalty burden down the chain, because down the chain were the carriers. As everyone’s customers they wielded the power in the industry, and no patent owner dared assert patents against them. And so, before convergence, cross-licensing occurred, and it became understood that royalties were paid on the handsets.

The new entrants from the computer and consumer electronics industries had not played as much of a part in standards development, so they did not have as many patents to cross-license. Recognizing that they would be the net payers, they were understandably less keen to reach a deal. As a result, many launched their products without having licenses agreed, knowing that they could later obtain the licenses, on fair, reasonable and non-discriminatory (“FRAND”) terms. Coming from a different industry tradition, some also questioned whether they could push the royalty burden to a different place in the supply chain.

When deals could not be reached, patent owners brought infringement proceedings. Implementers complained to regulatory bodies that the patent owners were not offering their standards-essential patents (“SEPs”) at a rate that was fair, reasonable and non-discriminatory, and brought claims in competition law. These were the Smartphone Wars.

With the development of 5G we will see another convergence. 5G allows wireless telecommunication technologies to be incorporated into a whole range of products: cars, smart meters, domestic appliances and aircraft engines – the Internet of Things (“IoT”). It isn’t just one or two new companies that are entering the wireless arena, it is hundreds: some large, some very small, from start-ups to companies with over a century of tradition. All come from very different industry backgrounds. Many have no idea that the wireless technology being incorporated into their products comes with a technology cost. They buy the technology in component form and rely on indemnities from their various suppliers. But the suppliers, who are fiercely competing on price, cannot compete if they build the technology cost into the components that they supply. Each company in the supply chain points up or down the chain: someone else should pay.

And so, the cycle that led to the Smartphone Wars will repeat. With greater divergence among the technology developers and technology implementers, we will see more disputes. Patent owners, unable to reach agreement, will bring proceedings, or if they cannot justify the cost of doing so they will sell their patents to assertion entities. Investors, driven by low interest rates to look for alternative places to invest, will increasingly fund patent acquisition and litigation. The stage is set for Smartphone Wars II. That, at least, is the theory.

II. SMEs

Many of the new implementers in IoT are small to medium enterprises: start-ups with new ideas made possible by the use of wireless connectivity. They will, it is hoped, grow into the big employers of tomorrow. They face five immediate problems.

First, they are in a race. Conventional start-up wisdom is that speed is everything: the product must be launched and scaled as fast as possible, before cash runs out and before competitors catch up. That sort of timescale simply doesn't allow the negotiation and acquisition of licenses.

Second, they operate at a loss: they cannot afford to pay for anything that does not immediately and obviously contribute to launch and scaling of the product. While they are small, they can get away with that because the patent owners have limited resources and can't approach everyone.

Third, in Europe at least, they struggle to attract the investment that might alleviate these problems. All they have is an idea. Ideas are difficult for Europe's more conservative investors to value.

Fourth, they don't have the resources or expertise to involve themselves in Standards Development. Some argue that they cannot be part of SDOs: they know how to make products, not how to optimize wireless carrier channel selection, for example. This matters because they are the beneficiaries of the technology being developed on the SDOs. If they don't have a say in the process, the standard may not meet their needs. And if their innovations and new ideas do not contribute to the standard, they won't acquire a portfolio of SEPs that would make them a more attractive investment proposition, or strengthen their hand in cross-licensing negotiations.

When SMEs do participate in SDOs, they do well: a recent study² revealed that the rate of acceptance of technologies developed by SMEs into 3GPP standards was equal to the rate of acceptance by the more established members. But it is hard for a small company to justify spending time and money on long-term standards development projects when its main concern is trying to grow in the short-term.

Lastly, patent litigation is expensive. If an SME develops technology, and obtains patent protection, it cannot realistically assert the patents. There is a critical mass of patents necessary before the risk and cost of patent assertion becomes worthwhile. Even for those with enough patents, it is probably only worthwhile to assert against a large-scale implementer of the technology. Otherwise the costs of litigation exceed the possible royalties.

III. A COINCIDENCE OF TIMING

It is usually hard for SMEs to attract regulatory attention. SMEs have no lobbying budgets, and little opportunity to meet regulators or explain their problems. Even if they do have the opportunities, as newcomers to an area they are often unaware of the difficulties that they are likely to face.

But today's new entrants into the wireless technology world coincide in timing with the first wave of new entrants peaking in strength. The former computer and consumer electronics companies have become today's smartphone giants. The giants have the money and the political strength to lobby regulators.

The giants are facing price competition from the low cost manufacturers from China who are taking market share and (for the most part) not paying royalties. The giants are now paying (or recognizing that they need to pay) royalties to the original mobile phone companies who were more involved in the standards development. So it makes sense for the smartphone giants to use that money and political strength to lobby to bring down SEP royalties, or push the burden of patent licensing further up the chain to the component suppliers.

In this aim of reducing SEP royalties, the interests of the smartphone giants align with the interests of the new entrants. United in this common interest, they form lobbying groups. One such group, the Fair Standards Alliance, recently published a paper condemning use-based licensing, and discussing where in the chain licensing should occur.³

² Kirti Gupta, The Role of SMEs and Startups in Standards Development, July 12, 2017, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3001513.

³ www.fair-standards.org.

Use-based licensing is the idea that a person who makes a greater use of technology should pay more for it. So, the argument goes that a seller of a smartphone which is connected to the network for much of the day should pay more in dollars per device than the seller of a water meter which connects to the cellular network a few times per year. The FSA argues that if SEP holders would be able to charge different rates depending on the use of the technology, users would be required to pay a portion of the value they themselves create. The SEP holders argue that the FSA, if it achieves a single rate, will then insist on the lowest common rate across all products. The small manufacturer of a cellular connected meter may well have a good argument that cellular connectivity brings only a small value to his product, that profit margins are slim and that a fair royalty is only a few cents. The smartphone giants support a ban on use-based licensing because they can drive down their own royalty costs by arguing that their products (which make heavy use of wireless technology) should pay no more than the low rate sustainable on the product which makes only occasional use.

The FSA also raises concerns over any effort to license at a common point in the chain. It argues that all component manufacturers “have a right to” a FRAND license. It argues that unless European companies are able to sell and to purchase fully licensed standardized components, they would be disadvantaged as against their international competitors.

The SEP owners argue that this is again a ruse. A manufacturer of a component which sells for a few dollars can argue that he can only afford to pay a few cents on each product for wireless connectivity technology. If he can then sell a chip which carries with it the benefit of a license to all wireless technology patents, the smartphone giants can save themselves dollars per phone in royalty payments. In short, say the SEP owners, the argument about “entitlement for everyone” in the chain is simply a mechanism for the smartphone giants to drive down their own royalty payments. In contrast, there are good reasons to adopt the practice from the mobile phone industry of agreeing to a common point for licensing. This avoids double dipping (royalties being paid twice) or the problems of working out what is licensed and what is not. And, SEP owners argue, it is only once you have a fully functioning device that most SEPs are utilized.⁴ If components alone don’t infringe the SEPs, the component maker will not want to pay for them.

It is this coincidence of timing, with new entrants joining as the smartphone giants peak in strength, which allows the smartphone giants to put forward arguments that favor themselves in the guise of arguments that favor new entrants. The combination of large corporate lobbying dollars and the cause of “supporting SMEs” has proven to be an irresistible political force.

IV. THE DRAGON AWAKES

There have been two major changes in patent litigation during the Smartphone Wars. The first is the increasing willingness of government authorities to intervene.

In the case of most intellectual property rights, we associate government intervention with supporting the enforcement of rights. Our taxes fund customs authorities and trading standards officers, who seize infringing goods and prosecute infringers. And as a result, a consumer can walk into any drug store, music store or bookseller and be pretty confident that the product he or she picks off the shelf is lawful. The author, the composer or the pharmaceutical researcher will each get a share of the price that the consumer pays to buy the product.

But walk into a store selling high-tech goods, and the position is entirely reversed. The products on the shelves are often unlicensed to the patents that they use. And instead of supporting the rights holders, the tax dollars in this area of intellectual property are being spent on the other side.

How has this come about? Defendants in the Smartphone Wars have long complained to competition authorities that they believed that a patent owner was not offering them a license on FRAND terms. But in the first decade of the Smartphone Wars, the competition authorities, reluctant to intervene in what was essentially a commercial dispute between large companies, preferred to leave matters to the courts to resolve.

Today, in contrast, few patent disputes in the industry do not have some degree of regulatory involvement. Indeed in the litigation around Qualcomm a casual observer might be forgiven for not realizing there is a patent dispute at the heart of it: Apple infringes Qualcomm’s patents, and Apple isn’t paying. Ordinarily that would result in a patent litigation, and perhaps a court determining what Apple should pay. But instead we see a storm of competition law claims against Qualcomm, many brought by regulators at the instigation of Apple and others. The combined lobbying of the smartphone giants has raised the regulatory dragon from its sleep.

⁴ Puttnam & Williams, The Smallest Saleable Patent-Practising Unit (SSPPU): Theory and Evidence (September 6, 2016), available at: <https://ssrn.com/abstract=2835617>.

But dragons are clumsy creatures. Although effective at scaring off the raiders, they are apt to set fire to houses and trample the crops. By the time they have returned to their cave, there may not be much left of the village that they were summoned to save. This is the fear of the mobile phone industry. If competition regulators breathe fire on the SEP owners, there will be little incentive to participate in standardization. Innovators will revert to developing proprietary technology, which is less vulnerable to competition law arguments.

Taiwan's economics industry has said it is "deeply concerned" about its antitrust agency's "me too" fine against Qualcomm, recognizing the chilling effect it will have on foreign investment.⁵ The European Commission has been invited by the CJEU to reconsider its fine against Intel.⁶ Within the Commission, the Directorates-General of Internal Market and Industry and Research are reportedly trying to rein in Competition's desire to intervene in SEP licensing.⁷ The Federal Trade Commission's apparent political motivation in its case against Qualcomm raises eyebrows, and the Supreme Court is reconsidering the U.S. government's ability to revoke granted patents. Even the most ardent of advocates for SEP reform would probably agree that it may be the competition authorities themselves who now need reining-in.

V. PORTFOLIO DETERMINATION

The second change in patent litigation during the Smartphone Wars has been the rise of portfolio determination. The Smartphone Wars were characterized by patent-by-patent, country-by-country litigation. But litigating large numbers of patents actions in large numbers of countries is costly and inefficient, and for companies that wish to give or receive a patent license the real question is "how much?"

The first attempts at portfolio rate determination were in 2007/8, when Nokia and Bosch asked the Mannheim court to determine whether their respective offers for a license to the Bosch patent portfolio was FRAND. The Mannheim court declined to do so, and was supported in its decision by the Karlsruhe appeals court. Nokia and Qualcomm came close to a portfolio determination for a rate to Qualcomm's portfolio in the Delaware courts, but settled before trial.

Other licensees have shied away from standards-essential portfolio determination. It has often been a better negotiating tactic to put the SEP owner through the pain of patent litigation on multiple patents in many countries, because if the worst outcome of losing was paying a FRAND rate on the patent you lost, that was far better than paying FRAND on the entire portfolio, globally.

The change occurred with the *Huawei v. ZTE*⁸ case in Europe, and the Google consent order⁹ from the FTC. These established that if a patent owner was willing to go through independent third party portfolio determination, but the infringer was not, the infringer was at risk of being enjoined from selling products. Now, there was an incentive to both sides in having a third party set the rate.

Nokia arbitrated with Samsung and later LG. Another large company arbitrated rates with Ericsson and with Interdigital. These first four arbitrations showed that it was possible to set a rate even where the licensee challenged the extent of validity and infringement. Courts have also shown that they were prepared to set rates. Most recently the English Court in its *Unwired Planet* decision¹⁰ set the rate that Huawei must pay for a license to Unwired Planet's patent portfolio.

⁵ Reuters Wednesday Oct 18, 2017/6.23am.

⁶ C-413/14 P - *Intel v. Commission*.

⁷ IAM Magazine, blog October 26, 2017.

⁸ C170/13 <http://curia.europa.eu/juris/document/document.jsf?docid=165911&doclang=en>.

⁹ Motorola Mobility LLC, and Google Inc., In the Matter of FTC Matter/File Number: 1210120, available at: <https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724googlemotorolado.pdf>.

¹⁰ Neutral Citation Number: [2017] EWHC 711 (Pat).

VI. A SOLUTION?

This is good news, because it unblocks the bottleneck in licensing. If a court or tribunal can set a rate, it becomes easier to resolve the impasse in negotiations. An implementer cannot hold out indefinitely, arguing that the rate is excessive. A SEP holder cannot demand high royalties with a threat of injunction: the implementer can just ask the court to determine a fair rate.

For the SEP owner, there are good reasons to maintain a large portfolio. If the rate that he can secure in arbitration or litigation depends on the size and strength of his portfolio, the SEP holder will want to retain his patents, and not sell them on the secondary market to patent assertion entities. The incentives will be to aggregate patents, to obtain efficiencies of fewer transaction costs, and so models such as the Avanci licensing scheme or some large patent owners' patent accumulation strategies will become more common. With fewer licensors to deal with, patent licensees will have greater transparency: they will know who they have to deal with, and what the rates are.

It is good news for SDOs because there is now a business case for participating in standards-setting. Whether an industry participant is a large or small company, whether they are from a traditional wireless background or are a new entrant in the world of IoT, they can be relatively sure that patents that they create from standards development can be rewarded. They don't need to obtain the critical mass of patents needed for large-scale patent litigation, and it is not only the large-scale implementers who are worth approaching. This all makes it more likely that companies will invest in collaborative standards-development, and less likely that they will choose to develop proprietary technologies.

It is good news for implementers too. If innovators see a benefit in participating in SDOs, then there is a greater chance of SDOs developing the technology that implementers need. It remains true that most implementers may have little to contribute on the technical detail: the example of channel selection above. But they can and will be able to contribute by explaining what types of technology their idea needs, and steer the direction in which standards develop.

And finally, it is good news for us, the taxpayers. If a court can decide whether an offered rate is too high or too low there should be less need for taxpayer-funded intervention by the competition authorities.

VII. CONCLUSION

The current feeling among competition authorities that "something must be done about all this patent litigation" does not take into account the change that industry and the courts themselves have brought about in addressing the bottleneck in licensing. Following this change, the perceived problems may well work themselves out in the very near future. Competition regulators should allow time for that to happen before deciding whether further intervention is necessary.



THE SUPERIOR PERFORMANCE OF VOLUNTARY TECHNOLOGY STANDARDS



BY JORGE PADILLA & JOHN DAVIES ¹



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I. INTRODUCTION

There can be few more important questions in competition policy than how to deal with technologies that connect different products and companies. Technological progress is the most important contributor to long-term economic growth, as well as driving social and environmental change. Yet ownership of key technologies creates concerns about concentrated economic and social power, particularly for platforms with which other products must interact. The rules governing these interactions will influence the success and development of firms, new technologies and the economy as a whole.²

Some politicians have gone so far as to call for regulation of tech giants such as Google or Facebook as if they were utilities. While still a minority view, such a proposal brings out the dilemmas very clearly. We need the owners of such technologies to be entrepreneurial and dynamic but also to be restrained from abusing their power. We need global businesses, to take advantage of economies of scale, while preserving opportunities for innovative, small firms. We need technology owners to work together and produce compatible products, while also competing in the marketplace and in the race for the next innovation.

These questions are often debated as if these choices are zero-sum. However, there are better solutions and they have arisen within the technology industry itself. In the mobile telephone industry, and other mostly telecoms-related industries, technology standards allow firms with many different specializations to work together both to design products and also advance the underlying technology, without a single supplier owning the process. The Standard Development Organizations (“SDOs”) that do this provide a mechanism that, while not perfect, enables innovators and manufacturers to co-operate *and* compete.

Standards are not new. Since the nineteenth century, railway tracks have increasingly come to use the so-called “standard gauge” initially established by George Stephenson.³ The advantages of a single standard for the industry and its consumers are obvious and there are no longer any competing contenders for the dominant standard, yet some alternative gauges persist.

The economics of many information technology industries strongly favor the emergence of a single standard. Such industries often have strong economies of scale and scope, as it costs next to nothing to provide information to more consumers. Network effects, in which users gain value from the presence of other users on the network, are often important too, whether through direct effects (the more people are on Facebook the more each subscriber benefits) or indirect (the more people use Windows, the more software developers will produce applications for Windows).

Standards help these industries achieve scale, giving users and suppliers the confidence to buy or make compatible products. However, economists have also found that industries making use of standards are more innovative and dynamic over the longer term. Galetovic et al. (2015) compare productivity growth rates in industries reliant on standards to those that are not, finding notably better performance in the “standard-reliant” industries, even when comparing only products based on semi-conductors to one another.⁴

Standards seem to do more than simply solve a co-ordination problem, they seem to lead to rapid innovation. We recently published a report exploring why.⁵ We conclude that the institutional framework for developing and updating standards is crucial: the “gatekeeper” who defines and updates a standard possesses great power. The gatekeeper has technological power to determine the way in which the industry develops and also economic power to monopolize several levels of the supply chain.

2 This article is based upon a report by the same authors commissioned by Qualcomm Inc.: *The Economic Impact of Technology Standards*, available for download at: <http://www.compasslexecon.com/highlights/economic-impact-of-technology-standards/?year=2017>. In the interests of space, we have not fully referenced all of the material used here but the longer report contains extensive references.

3 Stephenson used the 4'8½" gauge for the Liverpool and Manchester railway in 1830, apparently basing it on existing tracks for mine-carts. Sadly, the story that the gauge itself reflects an ancient standard created by the ruts and axle widths in use on British roads, ultimately going back to the wheel base of a Roman chariot, is almost certainly a myth. The gauge is widely agreed to be inefficiently narrow, but the world is surely stuck with it by now.

4 Galetovic, Haber & Levine: “An empirical examination of patent hold-up,” 2015, *Journal of Competition Law and Economics* 11(3): 549–578. doi:10.1093/joclec/nhv024.

5 Op cit. 2.

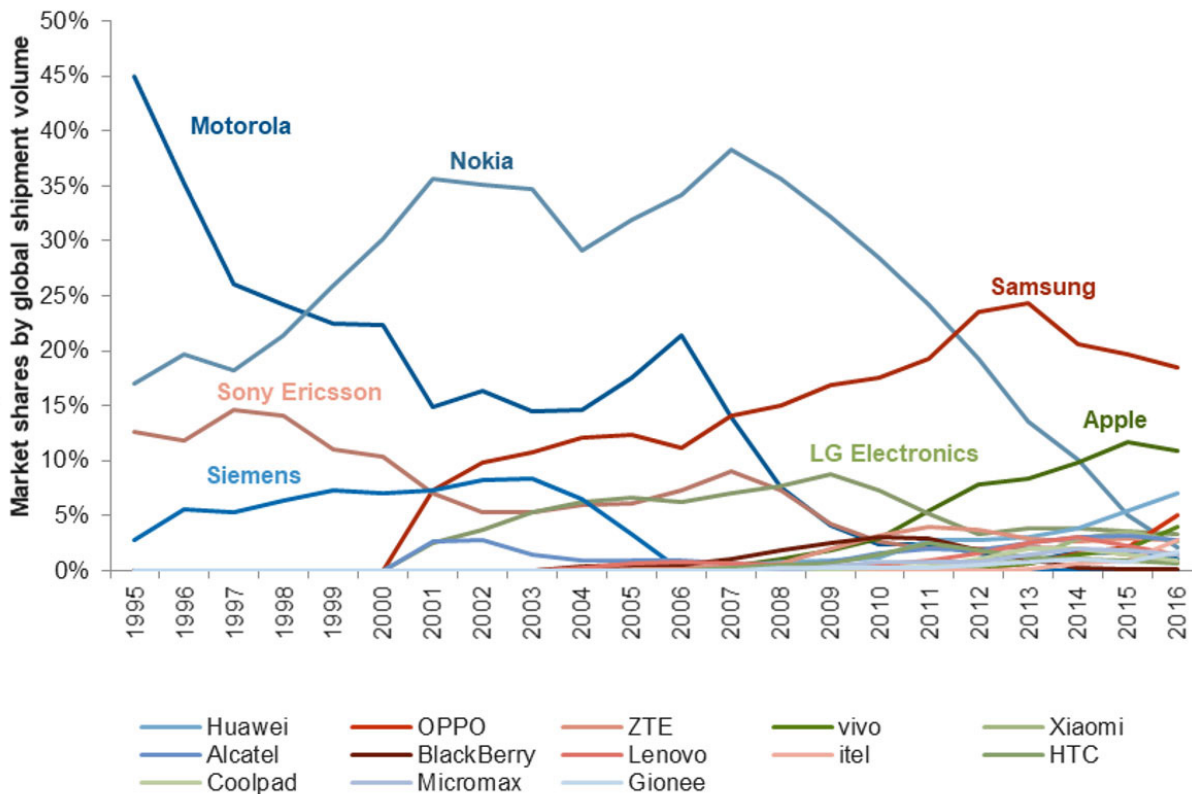
II. WHO IS THE GATEKEEPER?

What kind of organization acts as the gatekeeper will depend on how standards are developed in the industry. There are three broad models.

- Firstly, a standard might simply “emerge,” becoming a *de facto* standard for the industry. Typically, such a standard will be under the proprietary control of a single company. Operating systems (“O/S”) used on personal computers provide an example.
- Secondly, standards can be sponsored by governments. Television broadcasting is an industry which has always relied on government-set standards over most of the world: from the initial “wars” over color TV standards, through to modern standards for digital broadcasting.
- Finally, wireless telephony standards and many others are set through voluntary participation by experts from many different companies collaborating together in SDOs.⁶ In general the process allows for participation both by innovators (technology providers) and implementers (firms that will manufacture the resulting devices). Innovators normally receive license fees payable on Fair, Reasonable and Non-Discriminatory (“FRAND”) terms for technology declared essential to implementation of the standard.

In our report, we conclude that the collaborative, voluntary standard development process in the mobile telephony industry has led to a more competitive market structure than in other industries, where standards have a single proprietary owner or are set by government. In the mobile phone supply chain, for example, there are many producers of telephone handsets, as we illustrate below, and there are even more competitors supplying their components and the software and applications that run on them.

Global market shares of handset manufacturers, 1995 to 2016



Notes: Sony Ericsson data also includes sales of Ericsson (1995-2001) and Sony (2012-2016).

Sources: 1995-2003 sales Strategy Analytics; 2004-2016 sales IDC Worldwide Quarterly Mobile Phone Tracker.

⁶ Often referred to as “standard-setting organizations;” (“SSOs”), but we prefer the SDO terminology as a better descriptor of what these bodies actually do, as the process of developing a standard is a dynamic and interactive one.

Crucially, many firms also supply technology *into* the mobile communications standards themselves. With more innovators participating “upstream,” competing to provide the technology and then collaborating in the resulting standard, there are more independent sources of ideas, there can be more competition and there can be more specialization than would otherwise be the case. For example, Neul, a small company with less than 200 employees founded in 2010, was a major contributor to “weightless” standards. “Weightless” is a set of open standards developed by a Special Interest Group comprising 1400 members including large firms, such as Qualcomm and Huawei.

The resulting technical progress has been astonishing. Download speeds have improved by a factor of 150 since 2004 but more fundamentally there are many more things that mobile telephones can do than before. The contribution of collaborators in research shows its effects not merely in faster performance but in disruptive and transformative technologies, which can come about because innovators of many different types can contribute ideas to the mobile telephony ecosystem.

In contrast, PC operating systems embody a standard for the apps-hardware interface that is usually under the proprietary control of a single company. The great majority of PCs continue to run Microsoft’s operating system, which can work with hardware and applications produced by multiple suppliers, but its development is under the control of a single company. Apple is the second player in the industry and its operating system is still more closed: working with Apple hardware and exercising more control over the applications that run on its systems.

It would be wrong to think of the high share of Microsoft O/S on PCs as a problem. The near-universality of this standard provides great benefits, through network effects and economies of scale. Where there are no institutions setting standards, multiple standards might fight out a “standards war” – which is competition in a sense, but it also misses out on efficiencies of a single standard and there is no guarantee that the best technology will win.

However, there are downsides to this proprietary control. Firstly, it is possible that the O/S itself would be better with a more collaborative approach. Studies of handheld computers have shown faster innovation when other companies can participate in development of the O/S itself.⁷ Secondly, the standard owner has economic power that enables it to monopolize other layers of the supply chain. Whether that power is used or not, the perception of its can make other firms reluctant to invest in connecting products, for fear that the standard owner might make a change rendering those products incompatible or even itself begin providing the functionality of those products within the O/S.

Alternatively, standards can be set by government. However, the history of government standard development – from TV broadcasting for example, or for that matter in the early days of mobile telephony, shows that competition and innovation can often be stifled. Since the 1960s, Europe has had two standards for analogue broadcasts of color TV: PAL, which was originally German, and SECAM deliberately developed and promoted by the French state out of concerns to protect French TV set producers from their more efficient German rivals. The resulting global map of standards reflects political allegiances more than any economic considerations, with countries historically within the sphere of influence of France and the USSR adopting SECAM while others adopted PAL or the U.S. NTSC standard. Protectionist economic policies rarely succeed even in their own stated aims, and the result was more expensive TVs and eventually an uncompetitive industry.

Lest this story be assumed to belong to the bad old days of state intervention, the more recent adoption of digital TV standards in Latin America has followed a similar pattern. In 2006, Brazil adopted a Japanese standard as part of an agreement to produce sets to that standard, then sought to persuade other Latin American countries to adopt it, to promote its producer interests. Some other countries chose their standard for political reasons – Mexico choosing the U.S. standard, Venezuela rejecting it, for example. None of this is likely to help create an innovative and competitive industry.

⁷ Boudreau, “Opening the Platform vs. Opening the Complementary Good? The Effect on Product Innovation in Handheld Computing,” 2008, available at: <https://ssrn.com/abstract=1251167>.

III. MARKETS FOR TECHNOLOGY

Why do we see these differences? One reason is that voluntary, collaborative standard-setting allows for a diversity of firms working in R&D. The system makes it easier for many different innovators to contribute technology to a huge technological system (such as the mobile wireless network) and – crucially – be rewarded for it. Licensing of intellectual property rights creates what has been called a “market for technology” in which firms buy and sell the rights to use innovations rather than products embodying them.

Of course, markets for technology can exist without SDOs. Many American inventors in the nineteenth century, including Thomas Edison and Charles Goodyear, relied mainly on others to commercialize their innovations through licensing.⁸ Effective legal protection of intellectual property rights is important for licensing to be possible. For example, semi-conductor designs only became clearly covered by IP protection in the U.S. with the Semiconductor Chip Protection Act (1984). Only after that did self-standing “fabless” companies emerge: specialized in design and without any manufacturing activity. Without this development, there would be many fewer firms researching in semi-conductors because of the economics of chip manufacture. The “fabs” where semi-conductors are manufactured are huge, benefiting from large economies of scale. If every semi-conductor designer needed also to be integrated with a “fab” there would be many fewer designers. However, because of the market for technology, it is possible to have a few giant firms in manufacturing, while preserving a diverse field of specialized R&D outfits.

The mobile phone industry demonstrates how licensing combined with collaborative standard-setting can lead to more diversity in R&D. An astonishing number of inventions are incorporated in each mobile standard. The top 40 companies contributing technology to each standard together held 2802 patents in 2G, 7088 patents in 3G and 10,476 patents in 4G. This increasing complexity has not, however, been accompanied by more concentrated ownership. Quite the reverse: the top five companies held 69 percent of inventions in the 2G standard, 58 percent of the 3G and just 48 percent of the 4G standard. Even the top 20 companies own only around 90 percent of the inventions in any of the generations, implying a very long tail of smaller contributors to the technology. In contrast, in TV broadcasting standards, the top five patent-holders hold between 83 percent and 98 percent of technologies in the standard, while obviously in PC operating systems, only Microsoft and Apple own technologies in Windows and OS, respectively.⁹

Small firms contributing significant R&D runs against traditional economic thinking, which saw R&D expenditure as being almost entirely carried out by larger industrial concerns. Economists have often regarded R&D – like advertising or the creation of brands – as a strategic tool by which larger firms keep smaller rivals out of their industry. Empirical studies have reliably found that higher R&D/sales ratios are associated with more concentrated industries – those dominated by larger firms. Indeed, this makes perfect sense if the only way to make money from an invention is to produce a product that incorporates it.

However, if successful innovation can be rewarded directly through licensing this link becomes weaker. To be sure, the majority of industrial R&D is still carried out in larger firms, but the trend has started to reverse. U.S. National Science Foundation surveys find around 12 percent of R&D carried out in firms with less than 500 employees in the early 1990s and between 16 and 20 percent in recent years. It is becoming more viable to be a small R&D player and indeed to be a “pure-play” researcher, as it was in the nineteenth century U.S. Perhaps the assumption that R&D is usually conducted in an integrated R&D department in a large industrial firm should be seen as a twentieth-century historical aberration. Licensing is essential to this development. Standards can be still more effective in promoting R&D, because the smaller innovator does not need separately to demonstrate its ownership of the technology rights through bilateral negotiations.

The more firms there are engaged in R&D, the more independent solutions to problems will emerge. Furthermore, these firms can specialize. So innovation will be faster but there may be wider benefits as well. This market structure seems likely to reward individual inventors more than would a more concentrated industry. When technology markets are dominated by a few giants, an inventor might have very few alternative possible buyers for their innovation. If you have a suggestion for how to improve Microsoft Windows, you need to talk to Microsoft about it. However, with standardized technologies, there can be multiple implementers of an innovation, making it more likely that innovators will be rewarded for their creativity and hard work.

⁸ Edison should have made more use of licensing than he did: his manufacturing efforts were less successful, as Henry Ford noted when describing him as “the world’s greatest inventor and the world’s worst businessman.”

⁹ References for all data are in our main report, op. cit. 2.

IV. THE IMPORTANCE OF FRAND AND DEPENDABLE OUTCOMES

These impressive economic outcomes arise from many firms working together, through institutions that set the rules of the game: SDOs. To understand the importance of the rules, consider a very simple arrangement with just one innovator (“she”) developing technology and one implementer (“he”) who can manufacture and sell devices. If the resulting product can be sold for more than enough to cover each of their investments, they should be able to strike a deal to work together, but whether they will be able to do this depends on the rules of the game.

The problem is one of timing and commitment. If the innovator invests time and money in the new technology and then seeks a deal with the implementer, her bargaining power may be weak. The implementer knows that the innovator’s costs are sunk – at that point, she will accept a deal giving her less than her investment costs because it is better than nothing. However, if the innovator fears this outcome in advance, most likely she will not invest. A similar problem arises if the implementer invests first, building a factory, or indeed if they both invest before attempting to negotiate a deal. If negotiations on licensing take place after investment, there is no reason to think the split will cover both parties’ investments.

It therefore makes sense, instead, to negotiate before investment has taken place. However, innovation is an uncertain business. It is by no means certain what value the two should put upon the finished product and it is very risky to commit to a particular number. One solution to this dilemma is for the two to merge together into a single integrated firm – it is precisely for this reason that we might expect to see industries dominated by vertically-integrated firms doing their own R&D and making devices that incorporate its results. As we have seen, however, this industry structure is far from ideal.

An alternative solution is therefore to agree to the broad rules of how a licensing negotiation will be conducted in advance, without agreeing to a specific number. This is why SDOs typically require innovators to commit to FRAND licensing terms when innovators declare their inventions to be essential to implement a standard. All the participants in the SDO commit to this rule in order to provide one another with the certainty required to invest – the rule provides a commitment device, which is essential because after investment has taken place, each side would prefer a deal that does not reward the other’s investment, as we have seen.

Crucially, however, the rules-setting organization must stick to the rule. There is nothing more likely to harm the incentives of innovators and implementers to invest than to change the rules for how license fees should be set after the participants have committed to investments. In a few cases, SDOs have indeed changed their rules and have seen a fall in participation by innovators as a result.

In 2015, in an attempt to address issues arising from the vagueness of FRAND commitments, the Institute of Electrical and Electronics Engineers (“IEEE”) amended its policy which required licensors to offer licences to all applicants, to forego their right to injunction except under limited circumstances and also recommended a method of calculation of reasonable royalty rates. Katznelson (2016) examines rates of licensing Letters of Assurance (“LOAs”) at IEEE and finds a sharp (and statistically significant) reduction when changes to patent policy were brought in 2015.¹⁰ Not only did the rate of new LOAs fall, some patent holders actually declined to license under the new terms, on previously-issued LOAs.

More common, however, are appeals to outside parties with the power to over-rule the SDOs’ own internal decision-making: such as competition authorities.

Superficially, it is very attractive for a competition authority to intervene to prevent (for example) the holder of some intellectual property rights embodied in a standard from insisting on a particular license fee from manufacturers of equipment that use that standard. After all, the R&D has already taken place and the invention is there. The same considerations would apply to – for example – contracts put in place prior to the construction of a bridge or a pipeline or any other large sunk investment. Once it has been built, it might as well be used for free. However, competition authorities and other public bodies will normally be very reluctant indeed to break contracts in this way, because of the dismal effect this would have on future such arrangements.

In the case of a contract, with well-defined rates agreed in advance, this reasoning is clear. If one side appeals to a public body to break the contract, that public body should treat such an application with great skepticism. Yet in the area of IP licensing, such calls to break the agreement *ex-post* are common – perhaps because the inevitable uncertainty of invention requires that terms be less specific than they would be in a contract. Nonetheless, it would be poor public policy to accept such appeals, as this would damage confidence that innovators will be rewarded fairly, which must lead to a decline in invention.

¹⁰ Katznelson, “The IEEE controversial policy on Standard Essential Patents – the empirical record since adoption,” 2016. Symposium on Antitrust, Standard Essential Patents, and the Fallacy of the Anticommons Tragedy, Berkeley, CA, available at: <http://bit.ly/IEEE-LOAs>.

Furthermore, as our report shows, such a change would have wider economic effects. Economists understand very well what an innovator and a manufacturer will do if they cannot commit to dealing with one another fairly in a market for innovation, after each has invested. They will merge instead, thus eliminating any uncertainties that they might create for one another. Yet to do this would be to lose the benefits that we have tried to highlight in this article.

V. CONCLUSIONS

The success of industries needing technological standards depends crucially on the gatekeeper – the organization that develops and updates the standards. Industries in which SDOs act as gatekeepers seem to be more competitive and innovative than those in which a single private company or the government plays that role. The SDOs and the licensing arrangements they support enable a “market for technology,” in which smaller and specialized technology providers can thrive. However, to be effective this system depends on achieving a balance of incentives between innovators and implementers – and not undermining confidence by changing that balance once one or other party has made irreversible commitments.

As a matter of sound economic policy, therefore, competition authorities and others should take a very skeptical attitude to complaints that steps to enforce FRAND principles are anti-competitive. Harm to this system will only result in vertical integration, closed systems and proprietary technologies – the very opposite of what competition authorities should want.

This is important not merely to preserve the dynamic and effective mobile telephony industry that we currently have. Communications technologies are likely to appear in many, many more products in the “Internet of Things.” As more industries start to depend on communications technologies, they too will participate in the collaborative standard development process. On the evidence we have seen, for how those processes have driven innovation and competition in the mobile telephone industry, that will not be a bad thing.



STANDARD DEVELOPMENT ORGANIZATIONS AND IPR POLICIES: THEIR ROLE IN REALIZING FUTURE TECHNOLOGIES

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I. INTRODUCTION

We live in an interconnected world with more than three billion people having Internet access worldwide. Information and Communication Technology (“ICT”) has become all-pervasive and its rapid growth is a key driver for innovation and the build-up of knowledge in a wide range of sectors.

Internet of Things (“IoT”) technologies are increasingly used to interconnect smart devices, vehicles, household appliances and industrial machines using wireless communication, software or sensors. According to some estimations, IoT systems could represent a market of more than \$11 trillion per year by 2025.²

Industry is therefore rapidly transforming itself through the adoption of a wide range of innovative digital technologies, while traditional sectors of the economy, including those which were not previously significant users of digital technologies, have now expressed the need to be part of the digital revolution.³

In turn, the need for connectivity of different systems across multiple devices has spurred a great demand for interoperability solutions; and this is why commonly agreed technical specifications, namely standard documents, come into play. Standards, being the most effective known way to ensure efficient use of multiple devices across different domains, have taken center stage as enablers of the visions for the new digital economy.

It is clear that interoperability through standards may increase efficiency because of network externalities and economies of scale. In addition, it is expected to stimulate demand and development of complementary products. According to a study, the economic impact of interoperability IoT systems could deliver \$3 trillion out of an estimated total \$11 trillion of IoT impact.⁴

And what is the role of the Standard Development Organizations (“SDOs”) in this digital revolution? Taking into account that the digitalization of the economy is shortening the lifecycle of technological solutions, SDOs are not only facing demand for faster standardized solutions, but also increasingly confronted with ever closer interlink between the development of their standards and the R&D investment that companies participating in the development of those standards dedicate to advance the performance of the relevant technologies being standardized. The financial interests and corporate strategies of such companies come into actual effect to this point. The debate within SDOs’ Technical Committees is therefore no longer confined just among technical experts, i.e. engineers.

As part of this trend, the expected increase in the patent density in interoperability standards is also triggering intense interest from industry and stakeholders contributing to the SDOs’ work, as well as regulators, on the crucial aspects of IP licensing and enforcement which are linked to the exploitation of ICT and IoT technologies.

Clearly SDOs, being at the center of this debate, are facing a real challenge regarding the management of their IP policies. Notably when coming across patents that are deemed essential for the use of their standards.

II. SDOs’ POLICIES ON STANDARD ESSENTIAL PATENTS (“SEPs”)

A. SEPs and the Competition Law Challenges

The further increase of interaction between standardization and companies’ financial strategies also brings competition law considerations into focus. This is particularly relevant in the framework of SDOs’ IP policies on the management of those patents that are essential for the use of the related standards in the market. Before elaborating further on this point, we first need to clarify some general concepts around the notion of SEPs, their compliance with competition law, and why these are so critical for SDOs.

2 Chee, Reuters: U.S. LEGAL NEWS, October 2, 2017 “[Apple faces down Qualcomm, Ericsson over EU patent fees.](#)”

3 See also the Communication of the Commission on a Digital Single Market of June 6, 2015, which also emphasizes the expected impact of interoperability in many different sectors, such as e-health, e-transport, e-education, e-environment, e-energy, etc. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52015DC0192>.

4 McKinsey Global Institute, Study on “The Internet Of Things: Mapping The Value Beyond The Hype,” June 2015.

In the typical market model, when a company registers a patent, such registration does not – *per se* – give the patent owner any dominant position in the relevant market. Of course, that patented technology may always become dominant, but this will normally occur in the event that the embedded innovation proves to be successful in the market. Eventually, the patent owner’s dominant position in the relevant market is the result of the market appeal and the high volume of licensing requests from other “players”— competitors operating in the same market, who may prefer to pay for the use of that patented technology rather than develop their own alternative technological solutions.

In the standardization context, the dominant position reflected on a patent is generated through a different process. SDOs usually offer the possibility to patent owners to declare if their patents will be “essential” to the future use of the standard under development. Hence, by the simple fact that a patent owner has made a declaration of the “essentiality” of its patent, this patent is registered by the SDO as a (potential) SEP. Consequently, this declaration gives the presumption that implementers of the future standard may be “locked into” the SEP, as they cannot “work around” with other available technology solutions and still implement that standard. Therefore, a declaration of SEP gives the patent owner a *de facto* dominant position in the market that will be covered by the standard.

Furthermore, while participants working in the development of a standard within SDOs’ technical committees are often also competitors, they consensually accept to agree on common technological solutions that will be incorporated in the text of a standard. Hence, if the standard includes one or more SEPs, from a competition law perspective this could offer a dominant position to the SEP holders. This dominant position is the result of a collective decision by competitors involved in the standard making process.

In principle, antitrust authorities widely acknowledge that standardization agreements and competition law are compatible and, if all the conditions are fulfilled, the former could even enhance the latter. In Europe these competition aspects have been dealt with by the European Commission (“Commission”) in its Guidelines on the applicability of Article 101 TFEU, and confirmed by the European Court in its Judgment of March 31, 1998 known as the *EMC* case.⁵ The Commission Guidelines essentially state that standardization agreements are in line with competition law as long as they abide by a few criteria; fair reasonable and non-discriminatory access (“FRAND”) to standards – and to SEPs – is one of those criteria.

Many SDOs have developed policies to minimize the risk of anti-competitive behaviors of stakeholders. Of course, compliance with competition law can be further facilitated when SDOs are able to provide policies that ensure balancing the interests of the patent holder of a declared SEP and the future patent implementers.

B. SEP, Interoperability Standards and the Open Source Challenge

Digitalization also brings new “players” and new solutions within standardization activities, and SDOs’ IP policies need to address these aspects effectively. Let’s take the example of open source software. If a truly interoperable technological revolution is to materialize, the co-existence of the open source projects and standards development needs to come into maturity, by providing important solutions for both.

The involvement of the open source community in the standardization process as early as possible can certainly contribute to the successful implementation of standard solutions in the interoperable economy.⁶ Open source developers can feed the standardization system with revolutionary technologies to be introduced at minimal cost within the IoT. Open source developers and the industry can jointly transform the underlying technology into new innovative customer oriented solutions.

The open source community has a great deal to offer SDOs. However, open source solutions represent the antitheses of a proprietary technology strategy. Rather than using formal IP protection for the extraction of royalties, open source enlists all contributors as collaborators, maximizing adoption throughout the value chain, while minimizing the options for appropriation of fees resulting from the software.

The challenge for open source developers is that often standards in open source projects require the use of underlying technologies which are necessary for the implementation of the standard itself, i.e. SEPs, and for which specific licensing agreements need to be reached with the individual SEP holders.

⁵ Judgment of March 31, 1998, *French Republic and Société commerciale des potasses et de l’azote (SCPA) and Entreprise minière et chimique (EMC) v. Commission*, Community control of concentrations between undertakings - Collective dominant position. - Joined cases C-68/94 and C-30/95.

⁶ Siegel & Soley, “[Open Source and Open Standards: Working Together for Effective Software Development and Distribution](#),” Technology Innovation Management Review, November 2008.

In this debate, a source of some confusion is often the perception that open source can only coexist with SDOs' "open" standards. Let's clarify the misunderstanding on the meaning of "open" in the context of standards.

When we refer to "open source," the word "open" denotes the ability of the users to have full access to it and to be able to further modify and distribute the source code to subsequent users. There are of course variations of licensing models for open source solutions, however, in principle they all aim to spread the use of a technology as widely as possible.

When we refer to "open standards" the meaning of the word "open" refers to the ability of the industry and stakeholders to participate to the standard making process, and to the fact that said standards can be accessible to the general public for use.⁷

Some SDOs choose to make their standards available free of charge, while others have introduced a paid-for-fee policy for their distribution. Whatever distribution policy SDOs implement, the important aspect is the openness and accessibility to the standard making process and to the technical specifications themselves.

Where the concept of open source and open standards come to the same conclusion is that they both aim to spread the use of their deliverables to as wide an audience as possible.

This is an important factor, which leads to the assertion that open source and standardization are not mutually exclusive, but rather they can coexist within the same SDO and supplement each other when needed, since they eventually serve the same purpose of maximizing distribution and implementation of proposed technological solutions.

The next core aspect which needs to be addressed is how SDOs can manage the ability of open source technology to coexist with the proprietary licensing models for SEPs. This touches on the wider fundamental policy discussions regarding the fair access to proprietary technologies embedded in standards that is currently taking place at a global scale, and it is something that we examine below.

C. SEP and the FRAND Conditions

An important element that needs to be considered is that stakeholders' and companies' participation in the standardization process is on a voluntary basis. Hence, a company will invest time and resources in the standard making only if it can get a reasonable return on investment from such participation.

SDOs can attract companies' interest to participate in standardization as long as participants in their technical group meetings have the assurance that they can contribute within a level playing field that is acknowledged by all "players" as being truly neutral.

The neutrality concept is therefore intimately linked with the SDOs' IP policies to the extent these provide a fair symmetry to opposing interests between patent holders and standards implementers.

With this in mind, most SDOs try to keep this balance by requiring that holders of patents covering technology incorporated into standards (i.e. SEPs holders) commit to making patent licenses available to an unlimited number of potential licensees on licensing terms and conditions that are "fair reasonable and non-discriminatory."

The concept of FRAND licensing though is not a clearly defined concept, and it has generated a great deal of policy discussions⁸ and litigation at a global scale.⁹ In many cases SDOs policies do not provide detailed guidance as to what FRAND licensing terms should be, nor a specific calculation model on "reasonable pricing." For instance, ISO, IEC, CEN, CENELEC and ETSI follow this approach. On the other hand, some SDOs have IP policies which give specific instructions on the way to calculate FRAND licensing. This is the case of IEEE. We will not debate the merit and challenges of the above different approaches in policies. However, it is worth highlighting some factors that come into play.

7 See also the definition of "openness" for standards and the interplay with open source as defined in the [European Interoperability Framework](#) in Public Services.

8 See e.g. Communication from the Commission on Standard Essential Patents for a European digitalised economy (Roadmap) of April 10, 2017, available at: https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-1906931_en.

9 See e.g. latest [Decision from the UK High Court](#) on the case *Unwired Planet International v. Huawei Technologies*, of April 5, 2017.

When an SDO's policy cannot warrant that contributors who are patent owners can get the expected return from the future licensing of their SEP, such patent owners will likely decide not to invest in R&D associated with that standard development activity. In other words: an SDO's policy that creates the conditions for under-compensation (or potential for under-compensation) of SEP will eventually result in slowing down the involvement of the most advanced technology companies and, consequently, the development of new technology of standards.

On the other hand, over-compensation (or potential for over-compensation), will be detrimental to the use of the standard once this will be in the market. If an SDO implements a policy that is favoring over-compensation for patent holders, it will risk eventually hampering the broad adoption of that standard by implementers.

From a practical perspective, to reach such a balance within a policy that can fit all cases is clearly not an easy task. Furthermore, the more diversified sectors and domains an SDO covers the more difficult it is to define a FRAND policy that can ensure in all occasions the balance between these divergent stakeholders' interests in SEP implementation. As a matter of principle, the SDOs' room for maneuver in setting their IP policies on SEP may be fairly limited.

Things get even more complicated if we associate the practical implication of FRAND with open source. We have already seen the difficulties in linking SEPs with the collaborative approach of the open source community. Applying the FRAND concept does not seem to solve the core issue.

Indeed, there are opinions within the open source community arguing that, even if licensing is done at FRAND conditions, the holder of a SEP patent still gets undue financial benefit from the implementation of the SEP "encumbered" standard by the open source project developers. Even if the licensed SEP does not add further value to the development of the open source project itself.¹⁰

Many in the open source community support royalty free implementation of SEPs, particularly at higher levels of the technological implementations.¹¹ However, if progress is to be made in this debate, the open source community collectively should acknowledge that the FRAND approach is inherently linked with innovation, and that FRAND licensing remains, at the moment, the most appropriate mechanism to recognize that R&D is costly and there is a need for return on investment which in turn can fuel the drive for new interoperable solutions.

If this role of FRAND is accepted, FRAND can become an attractive level playing field for all interested parties, including the open source developers.

III. THE WAY FORWARD: MORE TRANSPARENCY IN COMPANIES' BEHAVIOR?

A. A Behavioral FRAND Commitment

The debate within the standardization systems between patent holders and open source communities shows that the best way forward is to depart from the interpretation of FRAND as a pricing mechanism, and instead to approach it as a participative instrument that seeks to foster stakeholders' *ex-ante* incentives to get aboard the SDO's standard making process. In other words, the nature of a FRAND commitment should be procedural and behavioral, not distributional.

SDOs' patent policies on FRAND shall essentially provide an early assurance that patent owners and standard users of protected technologies will themselves enter into negotiations in good faith with the ultimate objective of agreeing to licensing conditions. Hence, SEPs licensing is an issue that should be governed by private negotiations between the parties outside of SDOs.

The maximum that SDOs should do in this domain is to set some general guidance encouraging patent holders and implementers who encounter problems to reach a mutually agreeable understanding of FRAND to seek either judicial or extrajudicial determination by third party experts or alternative dispute resolution bodies (such as mediation or arbitration) before engaging in court cases.

¹⁰ Open Forum Europe, *The Interplay between IPRs and Standardisation in the Open Innovation Ecosystem*, April 12, 2017.

¹¹ See *supra* note 6.

This view on FRAND as a “behavioral” tool of bilateral fair play obligations, recognized by the accepted commercial practices between the patent owner and prospective licensees in a given market, has also been recognized in the EU by the European Court of Justice in its regularly referenced judgment *Huawei v. ZTE*.¹² This judgment clarifies that FRAND commitments entail good will obligations on both SEP owners and prospective licensees.

While SDOs should not interfere with the determination of FRAND licensing conditions, there are other areas where SDOs policies can yet encourage a better understanding and use of FRAND commitments. For instance, SDOs could set pre-standard adoption transparency policies requesting SEP owners to make further efforts in the provision of relevant information in their SEP declaration for the benefit of the future patent users. More transparency at an early stage will enhance the management of the SEPs by the patent holders and improve the predictability on the SEP licensing conditions and implications for patent users.

In practice, when a patent holder, contributing to the elaboration of the standard, declares a SEP on that standard, it shall also identify the relevant section in that standard to which the SEP will be essential. Furthermore, it should also provide a detailed list of all those patents that are actually to be considered as essential to implement that section of the (future) standard. “Blanket” declarations (i.e. general declarations by the patent owners regarding claims to hold essential patents over a standard without any identification these patents) cannot facilitate the creation of an effective transparency process.

This effort of transparency will allow all participants in the development of a standard to make better informed consensual decisions when incorporating a specific contribution involving proprietary technology. At a later stage, prior to the finalization of the standard, the SDOs may request patents holders who claim SEPs on that standard to re-assess their position in order to confirm the linking between their claimed SEPs and the identified section of the standard.

These are only a few examples of possible improvements that SDOs’ IP policies could implement. However, irrespective of the solutions examined, with the well thought pre-standard adoption transparency approaches SDOs can eventually enhance predictability for implementers, who will benefit from a clearer understanding on (i) who is the SEP holder; (ii) the claims linked to the implementation of the specific part of the standard; and (iii) the corresponding FRAND commitment.

Certainly not all challenges will be addressed, however SDOs’ IP policies that successfully address these aspects can be an important step towards balancing the relevant interests while ensuring truly interoperable innovative solutions that incorporate the best available technologies from all sectors of the economy.

¹² Judgment of the Court (Fifth Chamber) of July 16, 2015 (request for a preliminary ruling from the Landgericht Düsseldorf — Germany) — *Huawei Technologies Co. Ltd. v. ZTE Corp.*, ZTE Deutschland GmbH (Case C-170/13).

“THAT’S WHAT FRANDS ARE FOR”: THE ANTITRUST BOUNDARIES OF THE PATENT HOLDUP PROBLEM



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I. INTRODUCTION

The intersection of the “contractual relationship” between standard technology developers and implementers (especially focused on standard essential patents – (“SEP”)), on the one side, and the *ex-post* antitrust scrutiny of the resulting pricing terms on the other side, has been controversial as it generated a large amount of litigation before courts and agencies, together with a significant array of economic literature.²

The issue of the so-called patent holdup problem has characterized the first stream of antitrust decisions in Europe and in the U.S., mainly focused on the “Smartphone War” among firms such as Apple, Motorola, Google and so on.³

The *holdup problem* – a notion derived from the incomplete contracts literature and generally referred to *ex-post* bilateral renegotiation over contractually agreed terms, after specific investments are made⁴ – has been extended in the context of SEP as a form of “constructive refusal to deal” by a SEP holder against implementers. As it is generally stated, constructive refusal to deal involves a SEP holder issuing a patent infringement injunction to implementers. As the argument goes on, through the injunction the SEP holder forces the implementer to start a “new” bargaining, delaying the time-to-the market business and increasing the entry costs through litigation.

In this paper we argue that the “FRAND defense” for licensees against SEP holders’ injunction, may generate strong incentives for a *reverse holdup* against SEP holders, moving from a property rule to a liability rule system of protection of SEP holders’ rights.

In more recent times, however, there has been a change in the policy of antitrust agencies in holdup cases within the EU, which seems to be moving in favor of standard developers, thereby limiting the scope of their antitrust liability. In the EU, the policy change can be identified by the adoption in July 2015 of the *Huawei/ZTE* decision by the Court of Justice of the European Union (“CJEU”), while in the U.S., for example, Acting Chairman Ohlhausen has expressed a favorable view on the limitation of antitrust liability for dominant SEP owners, dismissing the main argument of the so-called “FRAND defense” for licensees.⁵

We believe that the recent shift in antitrust policy should be welcome and that issues of contractual liability under SEP should take into account the two sides of the holdup problem.

II. FRAND AND POST-CONTRACTUAL OPPORTUNISM

The holdup problem has been first analyzed in the field of the so-called incomplete contracts literature.⁶ Following the definition provided by Oliver Hart (1995) a contract is incomplete when it “has gaps, missing provisions, and ambiguities and has to be completed (by renegotiation or by the courts) with strictly positive probability in some states of the world.”⁷

These gaps may derive from many different sources of transactions costs: the cost of anticipating the various eventualities that may occur during the life of the relationship; the cost of deciding, and reaching an agreement about how to deal with such eventualities; the cost of writing the contract in a sufficiently clear and unambiguous way that the terms of the contract can be enforced; the legal cost of enforcement.

When incomplete contracts involve specific assets, parties may have weaker incentives to reach an agreement and, anticipating this outcome, to even invest *ex-ante*. Specific investments are valuable only if the underlying transaction takes place. Once made, a specific investment will lock-in the investors into the contractual relationship by raising their *ex-post* exit costs. As a consequence, the contractual party who makes specific investments will be vulnerable to their counterpart’s post-contractual opportunism, such as forced renegotiation of the contractual terms agreed upon (holdup). Absent appropriate safeguards, incomplete contracts will lead to underinvestment.

2 See Hovenkamp, Janis & Lemley, *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law*, (2003-04 Supplement) at 35.1.

3 See Oberlander et al., *The Smartphone Patent Wars*, *Financial Times*, 17 October 2011, available at: www.ft.com/intl/cms/s/2/de24f970-f8d0-11e0-a5f7-00144feab49a.html#axzz45QxPM0iP; *Fighters in a Patent War*, NY Times, Oct. 7, 2012, <http://www.nytimes.com/interactive/2012/10/08/business/Fighters-in-a-Patent-War.html>.

4 See Nicita & Sepe (2012), “Incomplete contracts and competition: another look at *Fisher Body/General Motors?*” *European Journal of Law and Economics*, Vol. 34, 495—514.

5 Acting Chairman Ohlhausen, *Interview on CPI Talks*, CPI Antitrust Chronicle, volume 1 (April 2017).

6 See Williamson (1985), *The economic institutions of capitalism: Firms, markets, relational contracting*, The Free Press, New York.

7 Hart (1995), *Firms, Contracts and Financial Structure*, Oxford University Press.

Maintaining property rights over the assets in which specific investments are embedded (such as IP rights) partially solves the problem, providing second best incentives to invest, as having the property of those assets increase investor's outside option (and thus his *ex-post* bargaining power) in the case of *ex-post* contractual failure.⁸

However, the holdup problem is even exacerbated when specific investments in assets protected by IP, compete for building a technological standard. Indeed, the emergence of a technological standard on the one side increases the *ex-post* outside option of the investor who wins the competition for the market by imposing the standard; but on the other, it decreases the incentives to invest *ex-ante* as the losers will *ex-post* bear the full cost of specific investments that fail to become a technological standard.

A requirement that SSO members have to license SEPs on "Fair, Reasonable, and Non-Discriminatory" terms to other members of the SSO and, in many cases, to non-members who use the standard, plays a very interesting role in this respect, as they are supposed to achieve two different – and sometimes conflicting – objectives.⁹ The first objective of FRAND terms is to determine that the licensing process, after the definition of the standard, effectively results in a competitive market equilibrium. Indeed, the sterilization of holdup problems should allow the technology to be adopted by implementers at an affordable price, without undue delay and with a widespread availability. On the other side, FRAND terms define *ex-ante* incentives to innovate, as the pricing of SEPs defines the revenue stream of a patented technology.

The achievement of this double objective can make FRAND definition and enforcement rather problematic, as FRAND conditions cannot be specified *ex-ante* in great detail by SSOs. This means that FRAND terms are incomplete to some extent. Technology providers have to enter into a FRAND agreement before the standard is set, with a rather limited set of available information. In addition, SSOs cannot be too specific in defining FRAND terms, as a strong coordination on contractual terms might suggest a collusive behavior. This kind of contractual incompleteness is the main reason for the insurgence of post-contractual opportunistic behavior of parties (e.g. holdup, holdout), and therefore is the main cause of courts' and antitrust agencies' activism.

The most interesting point of the evolution from the EC case law *on Motorola and Samsung to Huawei/ZTE* is that it shows an important swing from a policy focus based on the protection of the competitive process in *Motorola and Samsung*, to a more pronounced protection of the incentive to innovate in *Huawei/ZTE*. In the *Motorola and Samsung* cases the evidence and the theory of harm produced by the EC have led to an "antitrust liability" solution, which focused on the protection of the competitive outcome of the standardization process. As far as the *Huawei/ZTE* case is concerned, the EC has limited the scope of antitrust liability, leaving room to a "contractual" solution to the holdup problem, i.e. to a treatment of the question of holdup in the context of the bilateral dynamics of parties' bargaining power rather than insisting on the adoption of standard antitrust categories.

III. THEORY OF HARM AND REMEDIES IN *SAMSUNG AND MOTOROLA*

Both EC cases focused on the two firms seeking of injunctions against Apple for the alleged violation of SEPs on the GPRS and UMTS standards.

In particular, Samsung sought a preliminary and permanent injunction against Apple before courts of several Member States for the infringement of a UMTS-essential patent. The main indicators for Samsung dominance, according to the EC, were that the UMTS standard was the only 3G standard in Europe, while industry players, such as manufacturers and equipment producers, incurred in significant sunk costs to deploy UMTS infrastructure. Moreover, other standards in wireless communication such as 4G's LTE, were complementary rather than substitutes for UMTS, therefore not putting any significant competitive constraint on Samsung.¹⁰

In this context, the main anticompetitive effects of the injunction against Apple were identified in the potential exclusion of Apple from the relevant market of UMTS-compliant mobile devices. The conclusion of the EC has been that the Samsung exercise of an exclusive property right on a SEP, enforced through an injunction, was abusive because the industry was, at the time, locked in the UMTS standard, and Apple was willing to enter into a FRAND agreement. The EC also specified that a dominant SEP holder would have been able to seek an injunction if the potential licensee was in financial distress, but given the conditions of the market, the access to court by Samsung would have produced serious anticompetitive effects. As a result, the case ended with the presentation of binding undertakings by Samsung, which agreed not to seek injunctive relief for a long period of time (five years) against licensees that agreed on a specified licensing framework.

8 Hart & Moore (2007) "Incomplete Contracts and Ownership: Some New thoughts", *American Economic Review*, 97(2): 182-186.

9 See Farrell, Hayes, Shapiro & Sullivan (2007), "Standard Setting, Patents, and Hold-Up", 74 *Antitrust Law Journal* No. 3.

10 EU Commission, *Samsung – Enforcement of UMTS Standard Essential Patents*, AT. 39939, April 29, 2014.

In the *Motorola* case, structural parameters in terms of dominance and assessment of the industrial lock-in were rather similar to the *Samsung* case. The EC added some economic reasoning and evidence showing the alleged countervailing buyer power of Apple was not, in any case, sufficient to restrain Motorola's ability to behave independently from competitors, because there were no credible alternatives to GPRS technology. The EC pointed out that Motorola's conduct resulted in strong anticompetitive effects, such as the emergence of an actual temporary ban of Apple products online sales – with a potential elimination of competing products from the market – in Apple accepting very disadvantageous licensing terms, and, most importantly, in the probability that this injunction would have undermined the confidence in the standard setting process.¹¹

As far as this last point is concerned, the Commission concluded that, given Apple's explicit agreement on entering in a FRAND royalty rate set by a competent German court, Motorola's injunction would have – *de facto* – frustrated the FRAND commitment in the standard setting process. Indeed, Apple's willingness to be bound to a FRAND license would have ensured the ability of Motorola to be appropriately remunerated for the use of SEP, excluding any risk of "reverse holdup" by Apple. It is interesting to observe that, as far as the remedies are concerned, the EC did not impose a fine on Motorola, simply stating that the dominant firm should not seek SEP-based injunctions.

The main common grounds in the *Samsung* and *Motorola* cases was the focus on the potential damages that dominant SEP owner injunctions would have on the availability on a mass market of innovative, standard-compliant smartphones, and the possibility that an excessive litigation on licensing terms could have a definitive negative effect on the standard setting process.

However, if the economic evidence and analysis on the exclusionary side of the theory of harm was reasonably extended and detailed, very limited effort was put on the potential emergence of an exploitative abuse. In particular, no extensive reasoning or evidence was provided on the effect that the holdup caused by the injunction would have had on the (alleged) increase of royalties. More specifically, there has not been a comprehensive analysis of why royalties requested by Samsung and Motorola would have been exploitative, namely above the real technological value of the patent.

Moreover, the EC stated that Apple's countervailing bargaining power, due to the strong patent portfolio, was not relevant in the case, because – even if Motorola would have accepted lower royalty rates in exchange of the patents – this would have only indicated that Motorola preferred to be (partially) remunerated in kind instead of obtaining cash from royalties.¹² Therefore, it is easy to conclude that the EC did not even consider that cross-licensing could significantly reduce the holdup problem on royalties.

Both in the *Samsung* and *Motorola* cases, the EC has defined a strong antitrust liability upon SEP owners, without providing detailed evidence or suggestions on the risk of significant increases in price due to holdup. As a result, the holdup issue has been characterized more as a presumption, namely a potential risk, than a concrete situation, as far as the effect on royalties is concerned, while stronger evidence was placed on the exclusionary effect of an injunction by a vertically integrated SEP owner against a downstream market competitor. Moreover, it is interesting to underline that, from a remedial point of view, the EC seemed to have relied upon the ability and the incentives of parties to solve the FRAND pricing issue before the competent court (as in *Motorola*).

IV. THE HUAWEI-ZTE CASE

Huawei Technologies was the owner of a SEP to the Long Term Evolution ("LTE") standard and sought an injunction against ZTE, who was using the Huawei patent without paying a royalty. In this context, the Court of Dusseldorf – that was competent on the case – requested to the CJEU a preliminary ruling to clarify the circumstances under which a dominant SEP owner could abuse its dominant position by seeking an action for patent infringement.

The CJEU, in its judgment of July 2015, stated that a "dominant" SEP owner could seek an injunction against a standard implementer to enforce its patents without incurring antitrust liability if it had followed a specific framework of detailed obligations. This detailed procedural framework places obligations both on the SEP owner and on the licensee, thereby offering a balanced solution and restricting spaces for opportunism in structurally incomplete FRAND contracts.

¹¹ EU Commission, - *Motorola - Enforcement of GPRS standard essential patents*, Case AT.39985, April 29, 2014.

¹² EU Commission - *Motorola* - page 46.

Huawei requested an injunction that encompassed the prohibition of the patent infringement, the recall of all ZTE products that used the SEP, the rendering of accounts and the award of damages. In particular, the CJEU established that the dominant SEP holder could seek an injunction asking for rendering of accounts or an award of damages without any procedural limitations, as these kind of actions did not have a direct impact on standard-compliant products manufactured by competitors.

As far as the prohibition and the recall of products are concerned, the CJEU established that the SEP owner could seek an injunction if it has alerted the alleged infringer in advance the licensee, particularly “by designating that SEP and specifying the way in which it has been infringed.” At this point, the alleged infringer could express its willingness to take a license on FRAND terms, while the SEP owner should have presented to the alleged infringer a written offer for a license, specifying the methodology for the calculation of the royalty and the unitary value to be paid. Thus, it was for the alleged infringer to respond to that offer diligently and in accordance with “recognised commercial practices in the field and in good faith.” If these procedural steps were satisfied by the SEP owner and the negotiation still fails, there was the possibility of seeking an injunction without any antitrust liability.

The interesting point of the *Huawei/ZTE* solution – that shows some similarity with the “Smartphone Patent War” decisions – is the attention put on the SEP litigation not to prevent competition in the downstream market, as highlighted by the different regime acknowledged to the rendering of accounts and damage award injunction. On the other side, as far as the exploitative holdup story is concerned, the approach by the CJEU is much more balanced than the *Samsung* and *Motorola* cases, as, instead of enlarging the limits of antitrust liability for SEP owner on the basis of a holdup presumption, a complex and detailed procedural machinery is put in place, in order to solve the holdup/holdout through the interactions of the SEP owner and the licensee.

V. DOES THE HOLDUP ISSUE DESERVE A PRESUMPTION?

Looking at the standard antitrust approach, the antitrust scrutiny has indeed interpreted the patent holdup problem as an exclusionary conduct, assuming the SEP holder as a “dominant” firm in a “relevant market” whose dimension is determined by the patented technological standard.

The main difference, relative to the traditional antitrust approach applied to IP (for instance, in the pharmaceuticals and music industries), seems to be that in the case of SEP, it is the technological standard that *ex-ante* defines “dominance” *per se*. Given that the standard is defined among industry stakeholders, the generation of a technological standard should imply a sort of “special responsibility” or stronger liability on the SEP holder, such as the IP should be treated as an essential facility for all the implementers.

Moreover, as the generation of a standard requires coordination and collaboration among all the possible stakeholders, many standard setting organizations (“SSOs”) require SEP holders licensing their technology on FRAND terms. With the 2014 landmark decisions involving Samsung Electronics and Motorola, the EC set out a framework limiting the right of dominant SEP holder to seek an injunction in order to avoid holdup, leaving room to the “FRAND defense” for licensees, as the U.S. Federal Trade Commission (“FTC”) did in the *MMI/Google* case.¹³

Going back to the famous distinction traced by Professor Guido Calabresi,¹⁴ the “FRAND defense” approach recalls the notion of a liability rule, as a rule of protecting the SEP’s property right. Under a liability rule, an entitlement is protected by recognizing a fair price to the owner, and “access” to the entitlement does not require the owner’s prior consent. On the opposite side, under a property rule, “someone who wishes to remove the entitlement from its holder must buy it from him in a voluntary transaction in which the value of the entitlement is agreed upon by the seller.”

If the SEP holder is not allowed to issue an injunction against the implementer, when a commercial agreement has not been signed in the first instance, granting a “FRAND defense” for licensees is equivalent to saying that the implementer has a right of access without the need of obtaining a preliminary consent by the SEP. That is to say that the SEP holder’s right is protected by a liability rule.

¹³ Decision and Order, *In the Matter of Motorola Mobility LLC, and Google Inc.*, Docket No. C-4410 Section II.E (July 23, 2013), available at: <http://ftc.gov/os/caselist/1210120/130724googlemotorolado.pdf>.

¹⁴ Calabresi & Melamed (1972), *Property Rules, Liability Rules and Inalienability: One View of the Cathedral*, 85 Harvard Law Review 1089.

In turn, this implies attributing all the *ex-post* bargaining power (over SEP terms) to the implementer, raising the risk of a *reverse holdup*.¹⁵ The implementer can make a “take it or leave it” offer and then, in case of contractual failure, she can continue to have access to the standard in the absence of injunction. Thus, inhibiting SEP holder to seek injunction is equivalent to decide who has all the *ex-post* bargaining over quasi-rent sharing. An outcome that, when anticipated *ex-ante* by the potential SEP holder, may generate adverse incentives to cooperation and, consequently, underinvestment in specific or sunk assets. Indeed, under a “FRAND defense” for licensees all the potential implementers may find it fully rational to start negotiations only after having had preliminary access to the asset, delaying payments and transfer to the SEP holder. In this opportunistic context, being entitled to “a standard-essential patent” does not provide the SEP holder with the appropriate incentives to invest *ex-ante* optimally, given the uncertainty over the *ex-post* quasi-rent distribution *vis-à-vis* the implementers. In other words, being a SEP holder could not be sufficient to grant to investors the optimal portion of quasi-rent which justifies the *ex-ante* decision to invest.

The prevention of exercising the right to enforce a SEP by seeking an injunction seems thus a very invasive remedy.¹⁶ Indeed, setting limits on the SEP holder’s right to access to a tribunal has very strong consequences both from a legal and economic standpoint.

From a legal point of view, it should be underlined that dominant patent holders are not comparable to dominance by providers of physical goods, infrastructures or services. Indeed, in order to make their technology profitable and to prevent free riding, they should engage in the costly activity of enforcement in courts.¹⁷ Additionally, the prevention of seeking an injunction has a very negative effect on innovators’ decision to invest, as the absence of injunction probably results in a delay in obtaining licensing revenues, negatively affecting the inventor’s expected return on investment.¹⁸

Moreover, market players in highly technological markets normally can rely of specific conditions and procedures that can limit the opportunistic behavior of SEP owners. For example, the repeated interaction of standard developers and implementers in the SSOs can be – *per se* – a constraint to opportunistic behaviors. In order for holdup to arise, there should be an asymmetric distribution of the specific investments to be made. It is not always true, for example, that only implementers have to make investments in specific assets.¹⁹

It should be underlined that the need for a holdup presumption against SEP holders is not supported by the observation of a large and systemic impact on consumer markets. As an example, the evolution of the smartphone market, quite on the contrary, shows that the standard setting process has led to intense and pervasive competition in terms of low prices, innovation and rivalry between competitors.²⁰ Therefore, the argument made by the EC in the *Motorola* case on holdup of SEP owners risking to undermine the competitive process following standardization seems to be over-emphasized. Finally, the need to impose antitrust liability to a SEP owner can be non-proportional when, for example, contract law already provides for some effective deterrence against opportunistic behaviors.

15 Langus, Lipatov & Neven (2013), “Standard-Essential Patents: Who is Really Holding Up (and When)?”, *Journal of Competition Law & Economics*, Volume 9, Issue 2, pp. 253–284.

16 See Geradin & Rato (2007), “Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-Up, Royalty Stacking and the Meaning of Frand,” *European Competition Journal*, Vol. 3, Iss. 1.

17 Teece & Sherrye, *On Patent Monopolies: an economic re-appraisal*, CPI Antitrust Chronicle, volume 1 (April 2017).

18 Taladay, *Measuring the impact of injunctive relief on innovation*, CPI Antitrust Chronicle, volume 1 (April 2017).

19 Geradin, *Moving Away from High-Level Theories: A Market-Driven Analysis of FRAND*, The Antitrust Bulletin, Volume: 59 issue: 2, page(s): 327-371.

20 Ginsburg, Wong-Ervin & Wright, *The Troubling Use of Antitrust to Regulate FRAND Licensing*, CPI Antitrust Chronicle (October 2015).

THE *INTEL* CASE: ISSUES OF ECONOMIC ANALYSIS, COMITY AND PROCEDURAL FAIRNESS



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I. INTRODUCTION

The recent judgment of the Court of Justice of the European Union (“the Court of Justice” or “the Court”) in the *Intel* case² drew much attention in the Leadership Conference held on Brussels on September 25, 2017. Much literature on the judgment is also being published ever since then although comprehensive and more settled analyses are yet to come as academics and practitioners have further chances to share views on such a relevant piece of case law.

This article aims to contribute a grain of sand to this collective debate on the evolution, not only of competition law, but of European law as a whole. The judgment addresses three main issues: (i) the role of thorough economic analysis in general and the as-efficient-competitor principle in the context of Article 102 of the Treaty on the Functioning of the European Union (“TFEU”) in general and loyalty rebates in particular; (ii) comity principles and the jurisdiction of the European Commission (“the Commission”); and (iii) procedural fairness and the rights of the defense. Our paper is structured according to these three points of law.

Below you will find more questions than answers from a couple of practitioners’ perspective; indeed, accurate questions precede and generate accurate answers. Here is our try.

II. ECONOMIC ANALYSIS: THE AS-EFFICIENT-COMPETITOR TEST

This is undeniably the part of the judgment that raises the most disputes as to what the Court of Justice really meant to adjudicate. In our view, it is not easy to conclude whether the Commission will consider this judgment as a win, as a defeat or as a tie. For the moment, it has carefully avoided giving any views, but one could wonder whether the Court has willingly or unwillingly opened the door to an obligation to drive thorough economic analysis in all abuse-related cases without exception. We first summarize the essentials of the facts and Intel’s claims to then look into two alternative readings of this judgment which lead to very different outcomes for the way abuses are to be assessed in the future.

In its Decision,³ the Commission devoted 575 paragraphs (from 1002 to 1576) to a very detailed analysis of the as-efficient-competitor (“AEC”) test. Its conclusion was that an AEC would have had to offer prices which would not have been viable. Unsurprisingly, the Commission had previously advised that Intel’s rebates at issue were by their very nature capable of restricting competition such that the AEC test was not necessary in order to find the existence of the abuse (para. 925).

Intel’s appeal pursued the annulment of the decision based, among other grounds, on the fact that the application of the AEC test by the Commission was badly flawed and that, had it been correctly applied, it would have led the Commission to the conclusion that the rebates at issue were not capable of restricting competition. The General Court, nonetheless, held in its judgment⁴ that it was not necessary to consider whether the Commission had carried out the AEC test in accordance with the applicable rules and without making any errors. Consequently, it attached no relevance to the AEC test carried out by the Commission and did not address Intel’s criticisms of that test.

The debate behind this point of law was whether exclusivity rebates by dominant firms are *per se* capable of restricting competition. It was widely accepted that EU Courts’ case law on rebates up to the Court of Justice’s *Intel* judgment was, without exception, founded on Hoffman-La Roche’s quasi *per se* rule of illegality.

At this stage, Intel challenged the General Court’s position and argued that it was obliged to examine its line of argument against the Commission’s way of applying the AEC test and that, by failing to do so, it had breached its rights of defense provided for in the European Convention for the Protection of Human Rights and Fundamental Freedoms.

It is evident that the Court did assume Intel’s arguments in this regard. What is not as clear, however, is the actual scope of this declaration by the Court in paragraphs 136, 138 and 139. In our view, the judgment can be read in two different ways. One possible reading is that the Court meant to raise a merely procedural flaw by the General Court when refusing to address Intel’s arguments over the application of the AEC test by the Commission. The other is that the Court purposely meant to clarify previous case law in the sense that there is no such a thing as a *per se* abusive conduct. The consequences of these alternative interpretations are significantly different.

2 Judgment of September 6, 2017, *Intel*, C-413/14 P, EU:C:2017:632.

3 Commission decision of May 13, 2009, COMP/37.990 Intel, D(2009) 3726 final.

4 Judgment of June 12, 2014, *Intel*, T-286/09, EU:T:2014:547.

If we were to assume that the Court of Justice's reproach was of a strictly procedural nature, the case would have a short way to go in terms of legal debate. Indeed, any serious claim by a dominant firm that its pricing strategy was not capable of restricting competition should be examined by the General Court, in order not to breach the firm's rights of defense. However, such a declaration would not shift the burden of proof to the Commission, but it would rather require the General Court to deal with the arguments of the respondent. As regards the administrative procedures, the judgment would have virtually no effects, as the Commission is already used to examining all the arguments put forward by respondents in its decisions, as it did in the *Intel* case with the AEC test.

If, contrary to this, we assumed that the judgment truly meant to go to the substance and the Court required the AEC test to be examined in every case of abuse where respondents allege this defense, then we would be facing not merely a further clarification of the case law (as the Court states in paragraph 138), but a novelty in the assessment of abuses of a dominant position: a movement away from a quasi *per se* rule to the rebuttable presumption perspective.

Should this be the intention of the Court, where a respondent claims that a given competitor is less efficient, the Commission would be required to carry out an AEC test which would no longer be for the sake of completeness or dispensable (as the Commission stated in paragraph 925 of its decision) but it would rather become a substantive element of the assessment, which might later be subject to review by the General Court just as any other ground of appeal.

III. THE COMMISSION'S JURISDICTION AND COMITY PRINCIPLES IN PUBLIC INTERNATIONAL LAW

Although this point of law represented the strongest win for the Commission in the case (the Court of Justice plainly confirmed its jurisdiction over the entirety of Intel's behavior) this has not come without criticism. Indeed, as it will further discussed below, the Court of Justice's application in *Intel* of the relevant tests for establishing jurisdiction to find and punish conduct adopted outside the European Union may not be unproblematic with regard to the perennial debate on whether the Commission's jurisdiction is becoming global in practice.

The dispute around the jurisdiction of the Commission arose in relation to the agreements concluded between Intel and Lenovo (a Chinese company), which played a part in the alleged infringement although they did not involve Intel selling products to Lenovo in the EU internal market. The General Court held that the jurisdiction of the Commission may be established on the basis of either the implementation test (the Commission will have jurisdiction over anticompetitive practices that are implemented in the European Union), or the qualified effects test (the Commission can apply European Union law when it is foreseeable that the conduct will have an immediate and substantial effect in the European Union). In practice, the General Court first assessed the Commission's jurisdiction in the case in light of the qualified effects test and then, in the alternative, in light of the implementation test. The qualified effects test had not, until the *Intel* case, been assessed by the Court of Justice.

Nonetheless, the Court immediately blessed the possibility of approaching jurisdiction from the perspective of the qualified effects of the conduct provided that this test pursues the same objective as the implementation test, i.e. preventing conduct which, while adopted outside of the European Union, has anticompetitive effects liable to have an impact on the internal market (para. 45).

The most important question, however, remains whether the actual conduct of Intel foreseeably had immediate and substantial effect in the European Union. The criteria set by the Court can be summarized as follows: the assessment must be probable ("it is sufficient to take account of the probable effects of the conduct in competition" para. 51), and the conduct must be considered as a whole ("Intel's conduct vis-à-vis Lenovo formed part of an overall strategy intended to ensure that no Lenovo notebook equipped with [a competitor's] CPU would be available on the market, including in the EEA").

This approach merits two comments: one in support of the theoretical articulation of the qualified effects test, the other to ask for careful consideration in the practical application of the test in the light of comity principles of public international law.

As regards the enunciation of the qualified effects test, it is undisputed that Article 102 TFEU must avoid the artificial fragmentation (see para. 57) of anticompetitive conduct which is capable of affecting the internal EEA market so that individual forms of illicit behavior might not be caught by this provision. In paragraph 43, the Court draws a parallel with the case law applicable to territorial jurisdiction issues over Article 101 TFEU.

With regard to the application of the test in practice, the Commission (and the European Courts when deciding appeals) should be careful not to encroach on other countries' jurisdictions. International comity, by virtue of which one nation allows within its territory the judicial acts of another nation (in this case, the European Union), cannot be abused in the process of asserting jurisdiction even when at risk of not enforcing competition rules in its entirety. This was one of Intel's arguments against the qualified effects test, which would in the undertaking's opinion give rise to jurisdictional conflict with other competition authorities and create a risk of double jeopardy. Such a risk is, in our view, not implausible, and should be closely monitored from now on in order to avoid *de facto* assuming global jurisdiction.

IV. PROCEDURAL FAIRNESS AND RIGHTS OF DEFENSE

This is arguably the point of law where the Commission has suffered more clearly a defeat in the *Intel* case (at least so far), although such a defeat was not a sufficient basis for the annulment of the General Court's judgment.

As a brief background, during the administrative procedure the Commission held a meeting with an executive of Dell, a customer of Intel. The Commission did not place the indicative list of topics for the meeting on the case file and did not take minutes of it. A member of the team responsible for the file at the Commission drafted a note which was described as internal by the Commission concerning that meeting. Later on in the procedure, the Commission provided the applicant with a non-confidential version of that note.

Intel initially submitted that by merely drafting an internal note of the meeting, the Commission had infringed the requisites of Article 19 of Regulation No. 1/2003, read in conjunction with Article 3 of Regulation No. 773/2004 (which relate to the procedural treatment of the Commission's powers to take statements). In this regard, Intel relied on a decision of the European Ombudsman of July 14, 2009. In that decision, the Ombudsman concluded that the meeting with Dell's executive should have been classed as a meeting for the purposes of Article 19 of Regulation No. 1/2003, that it could not be excluded that it concerned potentially exculpatory evidence and that the failure to adequately record it constituted maladministration on the part of the Commission.

The General Court then drew a distinction between "formal" interviews and "informal" interviews, where only formal interviews would be subject to the abovementioned rules. Although it recognized that the subjects addressed at that meeting concerned questions bearing an objective link with the substance of the investigation, the General Court held that the meeting between the Commission and Dells' executive did not constitute formal questioning for the purposes of Article 19 of Regulation No. 1/2003 and Article 3 of Regulation No. 773/2004. Thus, the fact that Intel had only been provided with an internal note of the meeting (against the obligation to provide a record of the meetings as mandated by the aforementioned provisions) did not constitute a breach thereof.

The Court of Justice clearly states (i) that Article 19(1) of Regulation No. 1/2003 is intended to apply to any interview conducted for the purpose of collecting information relating to the subject matter of an investigation, and that there is nothing in the wording of that provision suggesting that it establishes a distinction between two categories of interview; and (ii) that the disclosure of the non-confidential version of the internal note drawn up by the Commission in relation to that meeting did not remedy the lack of a record of that meeting.

It is not our intention to discuss here the reasons why these errors have not led to the annulment of the General Court judgment. Rather, we simply posit that the findings of the Court of Justice may have deep implications for the way the Commission currently grants the rights of defense to respondents as regards one of its main investigation tools: interviews and meetings.

First, it cannot be discarded that the judgment has some relevant practical side-effects concerning the behavior of the Commission *vis-à-vis* interviews and meetings, especially in the context of infringement procedures. In this regard, it could be expected that the Commission will be more reluctant to hold meetings in general. This obviously does not have to do with the Commission being willing to deny or to hinder the exercise of the rights of defense of the parties. Rather, the fact that all interviews concerning questions bearing an objective link with the substance of the investigation (which ones do not?) must be recorded leads to a more complicated handling of meetings, not to mention the subsequent obligation to provide all the parties with a non-confidential version of the records.

Second, should the Commission decide to audio-record all meetings, it could be expected that both Commission officials and parties (lawyers and clients) will lose some degree of flexibility in their communications and may encourage that participants perform a previously well-prepared and rigid speech out of which there will be little if any room for constructive improvisation.

Third and last, the judgment may lead to an increase in the number of requests for testimony before the General Court of witnesses or other individuals interviewed by the Commission. Indeed, the Court faults Intel for not having Dell's executive be summoned before the General Court in order to obtain evidence that its submission to the Commission contained proof for its defense. It seems plausible that lawyers will not miss the opportunity to resort to such an – up to now – uncommon procedural tool and that the General Court will have less discretion to deny it, especially if the Commission does not adopt sufficiently sophisticated ways to handle interviews complying with Article 19 of Regulation No. 1/2003.

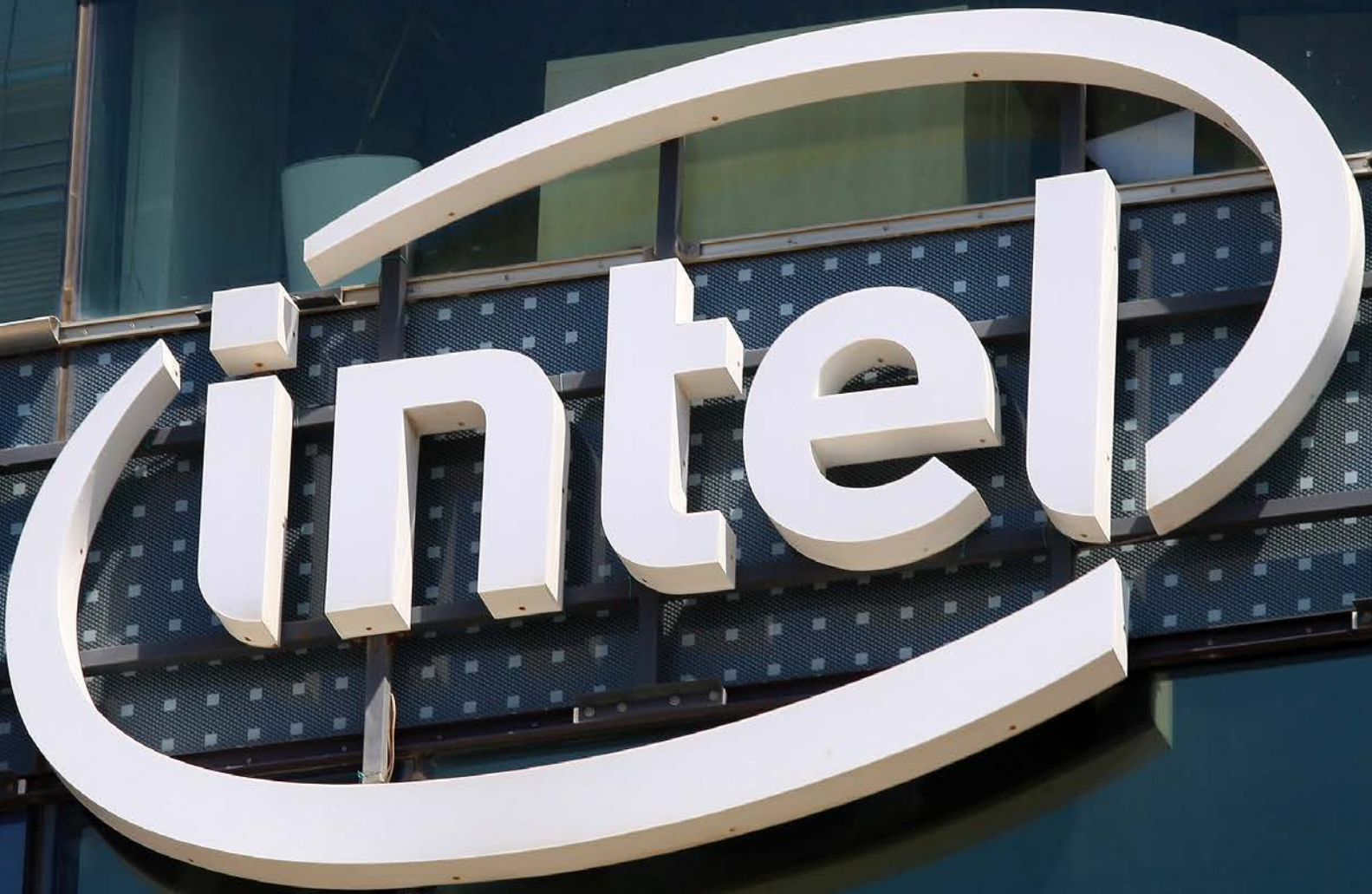
On another note, it is evident to us that the Court of Justice is hereby expanding the rights of defense of defendants in competition infringement procedures. It is unquestionable that the European Union procedural standard is being enhanced as greater transparency is required by the Court. This is not surprising. It is rather the natural evolution of competition procedural rules. We should remind ourselves that initially under Regulation 17 of 1962⁵ the rights of respondents were much more limited. Also, administrative practices were much less generous towards respondents in the 1960's than they are today under Regulation No. 1/2003.

Thus, we perceive a positive note in the *Intel* judgment as regards procedural fairness. It cannot be denied that this involves, to a certain degree, a reproach to the Commission, whose standards as a modern agency towards the rights of defense of respondents will be unequivocally improved. The Commission will merely read the judgment as a call to action but it is yet to be seen how it will deal with the practical downsides that have been mentioned above regarding the handling of meetings.



⁵ Council Regulation No 17 (EEC): First Regulation implementing Articles 85 and 86 of the Treaty (at present Articles 81 and 82) [OJ No. 013, 21.02.1962].

EUROPEAN COMPETITION LAW: ENFORCEMENT OR REGULATION AFTER *INTEL*?



BY D. DANIEL SOKOL ¹



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I. INTRODUCTION

The recent EUCJ *Intel*² decision is a reminder that European competition law looks different from that of the North American jurisdictions. There is no doubt in the United States and Canada that economic effects drive enforcement policy and that a tradition of due process and procedural fairness exists. *Intel* suggests limits to DG Competition's enforcement with regard to due process. In this sense, *Intel* is a wake-up call for DG Competition to reiterate its commitment more generally to procedural fairness.

Although there is some gap as between North American and European views on economic effects in cases, *Intel* suggests that this gap on effects-based analysis may be narrowing. *Intel* provides a roadmap for further reworking of European case law towards more of an effects based approach. Perhaps *Intel* offers European competition law a *GTE Sylvania*³-like moment with regard to an effects based approach to conduct, where cases had hereunto been form based "by object." *Intel* presents a similar opportunity going forward for DG Competition. The CJEU's judgment reinforces the internal DG Competition view that EC assessments should be effects based (as manifest by the decision itself which contained a detailed as-efficient competitor analysis).

II. PROCEDURAL ISSUES

Due process and procedural fairness are critical to a well-functioning competition policy system. The cornerstone of rule of law is procedural fairness. In Europe, Article 6 of the European Convention on Human Rights provides for due process. This concept also is enshrined in many other jurisdictions that respect the rule of law. When there is a lack of procedural fairness, the result is the impairment of the legitimacy of effective competition law and policy.

In *Intel*, the Commission withheld exculpatory evidence regarding an interview with a Dell executive by not recording the interview. The Commission argued that because this was an informal rather than formal meeting, the recording of the meeting and placing evidence of the meeting in the case file was unnecessary. In a rebuke to the Commission, the CJEU held that this was contrary to competition law, noting that:

there is nothing in the wording of [Article 19(1) of Regulation 1/2003] or in the objective that it pursues to suggest that the legislature intended to establish a distinction between two categories of interview relating to the subject matter of an investigation or to exclude certain of those interviews from the scope of that provision.⁴

Such language is a reminder that procedural fairness should be the cornerstone of all investigations. The EC was rightly held to a strict standard given the need to ensure fairness and objectivity in an administrative system.

The lack of procedural fairness makes it more difficult for businesses to plan effectively because of the risk involved in antitrust enforcement that is based not on the particular conduct in question but on the uncertainty due to uneven enforcement. The deleterious effects are more far reaching than any individually badly decided case as lack of procedural fairness threatens the legitimacy of the entire competition policy system.

III. SUBSTANTIVE CONCERNS

In the past, DG Competition actively has promoted economic effects as the basis for its competition policy. However, a prior lack of clarity in the courts has meant that DG Competition has not needed to back up such public talk with a legal standard in particular cases that required effects-based analysis akin to in the merger context.⁵ As a result, in a number of Article 101 and Article 102 settings, DG Competition has had victories that have not promoted increased consumer welfare.

Given this background, the *Intel* decision is important in narrowing the gap between effects based analysis in North American and Europe. The CJEU held that the General Court was incorrect in treating exclusivity rebates as akin to a *per se* abuse. The CJEU made clear that

² *Intel v. Commission*, Case C-413/14 P, JUDGMENT OF THE COURT (Grand Chamber), September 6, 2017.

³ *Continental Television v. GTE Sylvania*, 433 U.S. 36 (1977).

⁴ CJEU Judgment, para. 87.

⁵ See *Airtours plc v. Commission* (Airtours), Case T-342/99 EU:T:2002:146; *Schneider Electric v. Commission*, Case T-310/01 EU:T:2002:254; *Schneider Electric v. Commission*, Case T-77/02 EU:T:2002:255; *Tetra Laval B.V. v. Commission*, Case T-5/02 EU:T:2002:264; *Tetra Laval B.V. v. Commission*, Case T-80/02 EU:T:2002:265.

companies can dispute the anticompetitive effects of their conduct (even for exclusivity rebates). Further, the CJEU requires the EC to examine those arguments and show that the conduct is in fact capable of restricting competition. The result is that *Intel* actually aligns the law between the jurisdictions better than had been the case prior to the decision.⁶

The CJEU decision has significance beyond the particular doctrine in question of exclusivity rebates, much the way that *GTE Sylvania* stands for more than just a move to rule of reason for non-price territorial restrictions in U.S. jurisprudence. First, the CJEU confirms that the mere decline in fortunes of competitors – or even their exclusion – may result from competition on the merits. Thus, it cannot therefore be assumed that the decline of competitors is a function of abusive conduct. Second, the judgment establishes that if a dominant firm submits evidence that its conduct is not capable of restricting competition (even for conduct previously thought of as *per se* abusive), the EC must assess all the circumstances to decide whether the conduct is abusive.

IV. THE IMPORTANCE OF ECONOMIC EFFECTS

The singular focus on economic effects for competition law cases has improved consumer welfare from competition law. A focus on economic effects makes decisions more predictable and economically sound in a way that encourages investment and innovation in the economy.

Competition law across a number of jurisdictions has been immune from massive shifts in policy because, by making economic effects the sole factor for decision-making, the field has become technocratic. Nerds, the ultimate technocrats, are the champions of competition law and economics. In other areas of law and regulation, nerds (whether economists or lawyers) are bullied and marginalized, just like society at large.

The first jurisdiction to undertake an “antitrust revolution” based on economic analysis that led to a technocratic approach was the United States. Beginning in the 1970s, the United States transitioned from multiple goals in competition law to a singular goal based on economic effects. Yet, particular antitrust doctrines did not flip immediately starting with *Sylvania* towards an analysis based on effects. Rather, it was a gradual process that took a number of years across antitrust doctrines. Even in *Sylvania*, there is dicta that distinguishes non price vertical restraints from RPM, for which the Court was unwilling at that time to move to the rule of reason. It would take 30 years from *Sylvania* until *Leegin* to fix RPM case law and move minimum RPM from *per se* illegality to a rule of reason inquiry.⁷

At present, the U.S. Supreme Court treats competition law differently from other common law-like fields by ignoring *stare decisis* when economic thinking has changed. For example, the Court articulated in the recent *Kimble* case that “We have therefore felt relatively free to revise our legal analysis as economic understanding evolves and . . . to reverse antitrust precedents that misperceived a practice’s competitive consequences.”⁸ The end result of an effects-based approach to competition authority enforcement and case law is that enforcement (rather than regulation) is guided by the sole goal of economic efficiency.

The implication of a singular efficiency based goal in the United States has been dramatic. Economic growth and competition in the United States is more significant than in Europe. The major innovations for technology and entrepreneurship are occurring in Silicon Valley, San Francisco, Seattle, New York City, Boston and Boulder and not in Paris, Athens, Milan and Frankfurt.

Can Europe become more efficient via an effects based competition policy and compete globally? With regard to mergers, EC competition law looks quite similar in analysis to Canada, the United States and other jurisdictions that make economic effects the sole factor for competition analysis. Indeed, the European Merger Regulation make the goal of consumer welfare explicit.⁹ Speeches by prior Commissioners also show an express embrace of consumer welfare.¹⁰

⁶ For an overview, see GIFFORD & KUDRLE, *THE ATLANTIC DIVIDE IN ANTITRUST: AN EXAMINATION OF US AND EU COMPETITION POLICY* (2015).

⁷ *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007).

⁸ 135 S. Ct. 2401, 2412–13 (2015).

⁹ EUROPEAN COMM’N, *EU COMPETITION LAW: RULES APPLICABLE TO MERGER CONTROL* 184 (2010), available at: http://ec.europa.eu/competition/mergers/legislation/merger_compilation.pdf.

¹⁰ Neelie Kroes, European Comm’r for Competition, *European Competition Policy — Delivering Better Markets and Better Choices*, Speech at the European Consumer and Competition Day (Sept. 15, 2005), available at: http://europa.eu/rapid/press-release_SPEECH-05-512_en.pdf (“[A]im is simple: to protect competition in the market as a means of enhancing consumer welfare and ensuring an efficient allocation of resources.”) Mario Monti, *The Future for Competition Policy in the European Union*, Merchant Taylor’s Hall, London, 9 July 2001, available at: file:///C:/Users/ddsokol/Downloads/SPEECH-01-340_EN.pdf (“Actually, the goal of competition policy, in all its aspects, is to protect consumer welfare by maintaining a high degree of competition in the common

However, this may be contrasted to some Article 101 and Article 102 competition law cases in which DG Competition has been more interventionist than the United States. At times in such cases, DG Competition is more aggressive in its legal theories and less rigorous in its economic analysis. This has penalizing conduct that is in reality pro-competitive. The highly capable economics team at DG Competition seems to wield less influence internally relative to its counterparts at DOJ and FTC. Such a situation is unfortunate as law and economics professionals must play an equal role for effective enforcement. *Intel* offers hope that those forces within the Commission that take economic effects seriously will become further empowered to carefully work through complex cases to ensure that facts and economic analysis match up with legal theories to promote consumer welfare.

V. CONCLUSION

Better procedural fairness helps to reach the substantive goal of improved competition law enforcement. However, better procedural fairness also protects fundamental rights of parties and adds to the legitimacy of DG Competition. Without appropriate safeguards regarding transparency and due process, DG Competition risks its decision-making being perceived as illegitimate and part of the faceless bureaucracy for which there has been pushback across the continent.

On substantive law, *Intel* provides DG Competition an opportunity to move further in the direction of enforcement based on economic effects. Continental Europe (post Brexit) shows less innovation in terms of patenting or technology startup creation relative to other jurisdictions globally. This is due to a regulatory system that has multiple goals that discourages risk taking, entrepreneurship, innovation and economic growth. DG Competition can lead Europe in embracing competition and do what competition enforcers do best – step in when the market malfunctions. By following the principles in *Intel* and its own Guidance Paper, the EC can encourage innovation, competition, entrepreneurship and economic growth in Europe.

market. Competition should lead to lower prices, a wider choice of goods, and technological innovation, all in the interest of the consumer.”)

IP AND ANTITRUST: THE IMPORTANCE OF DUE PROCESS AND THE ICC BEST PRACTICES



The world business organization

BY PAUL LUGARD ¹



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I. INTRODUCTION

The need to implement effective procedural rights and guarantees to ensure the fair and proportionate exercise of competition agencies' enforcement powers has been a topical subject for many years.² However, in light of increased enforcement levels by an ever growing number of competition agencies, often with diverging procedural and substantive rules, and resulting heightened risks of inconsistent outcomes, due process requirements have never been more relevant. The growing cross-border dimension of antitrust investigations exacerbates this risk, particularly in IP-centric cases, where the potential impact of remedies may go well beyond the relevant domestic market(s) at issue.

The effective observance of due process principles across jurisdictions is therefore essential to ensure procedural fairness and transparent decision-making and to minimize the risk of ill-informed decisions.

This contribution discusses the relevance of procedural rights in antitrust enforcement in light of the Best Practices issued by the Competition Commission of the International Chambers of Commerce, the world's largest business organization (the "ICC Best Practices") and it highlights their crucial role in the context of IP-related cases.³ In addition, this paper examines a number of specific procedural safeguards which are not always guaranteed, are not uniformly available, or are not always effectively applied by competition agencies.

II. THE ROLE OF DUE PROCESS IN ANTITRUST ENFORCEMENT PROCEEDINGS

The fundamental aim of procedural safeguards in competition law enforcement proceedings is to ensure consistent, predictable and fair decision-making by competition enforcement agencies. Their effective and timely implementation during each step of the proceedings not only ensures procedural fairness for the parties under investigation and other interested parties, but also benefits competition enforcement agencies by enhancing their legitimacy, increasing efficiency and promoting accuracy and better informed decisions. Indeed, the credibility of competition agencies is closely tied to the integrity and public understanding and perception of the agencies' investigative process.

Unfortunately, due process shortcomings risk becoming increasingly problematic in light of competition agencies' growing tendency to intervene in fast-moving (e.g. online, digital and high-tech) markets. The time pressure resulting from the dynamic nature of these markets may in fact cause agencies to assess cases at a faster pace and potentially overlook strict compliance with procedural rights.

In order to bridge the gap between due process theory and practice, numerous multilateral efforts have been made to attempt to clarify the importance and application of due process rights, including by the Organization for Economic Cooperation and Development ("OECD"),⁴ the Business and industry Advisory Committee to the OECD ("BIAC"),⁵ the International Competition Network ("ICN"),⁶ the American Bar Association ("ABA")⁷ and by National Competition Authorities ("NCAs").

2 Lugard (2014), "Procedural Fairness and Transparency in Antitrust Cases: Work in Progress," *CPI*, Antitrust Chronicle, Summer 2014, Vol. 6, Number 1; Wils (2011), "EU Antitrust Enforcement Powers and Procedural Rights and Guarantees: The Interplay Between EU Law, National Law, the Charter of Fundamental Rights of the EU and the European Convention on Human Rights," *World Competition*, Vol. 34, No. 2; Forrester (2009), "Due Process in EC Competition Cases: A Distinguished Institution with Flawed Procedures," *E.L. Rev.*, December; Temple Lang (2013), "The strength and weakness of the DG Competition Manual of Procedure," 1 *J. of Antitrust Enforcement* 1. For a U.S. perspective on due process see Gingsburg & Owings (2015), "Due process in Competition Proceedings," *Competition Law International*, Vol. 11, No. 1.

3 ICC Commission on Competition, "Effective procedural safeguards in competition law enforcement proceedings" (225/765), published on July 7, 2017, available at: <https://cdn.iccwbo.org/content/uploads/sites/3/2017/07/ICC-Due-Process-Best-Practices-2017.pdf>. The International Chamber of Commerce ("ICC") is the largest business organisation in the world. It represents hundreds of thousands of member companies in over 130 countries.

4 See OECD Competition Committee, *Procedural Fairness and Transparency: Key Points* (Apr. 2012), available at: <http://www.oecd.org/daf/competition/mergers/50235955.pdf>.

5 See Summary of Discussion Points presented by BIAC to the OECD Competition Committee, June 2016, Roundtable on Commitment Decisions in Antitrust Cases, available at: <http://biac.org/wp-content/uploads/2015/06/2015-06-10-BIAC-Competition-Committee-Oligopoly-Markets1.pdf>.

6 See ICN Roundtable on Investigative Process, *Due Process in Competition Proceedings*, March 25, 2014, available at: <http://www.internationalcompetitionnetwork.org/uploads/library/doc958.pdf>.

7 See Hockett, "Antitrust and Due Process", *Antitrust*, Vol. 28, No. 2, Spring 2014. See also the Joint Comments of the American Bar Associations Section of Antitrust Law and Section of International Law And Practice on the Commissions Green Paper on the Review of Council Regulation (EEC) No 4064/89 (2007).

Due to the developments highlighted above, there is a need for further guidance on the implementation and application of procedural rights at this time. Accordingly, and building on previous efforts, the Competition Commission of the ICC has recently issued Best Practices on effective procedural safeguards in competition proceedings.⁸ The ICC Best Practices set out a number of fundamental overarching principles of due process that should apply in competition law enforcement proceedings, and provide specific standards that competition enforcement agencies should adopt to ensure their rules and procedures conform to due process norms.⁹

III. THE CRITICAL IMPORTANCE OF DUE PROCESS IN ANTITRUST CASES INVOLVING IPR

Procedural rights are of general application in antitrust proceedings. However, it is even more critical that competition authorities comply in an effective manner with due process requirements in antitrust cases involving intellectual property rights.

IP-related cases tend to raise technical and complex substantive issues that do not always arise in other, more conventional, antitrust cases and which, if not dealt with properly, may have very profound implications for the businesses involved. As explained in more detail below, the setting of (“FRAND”) licensing terms, the imposition of compulsory licensing and other, similar remedies by competition agencies, generally under the competition rules dealing with exclusionary conduct, are capable of irreparably undermining the business model of IP-centric businesses. Furthermore, improperly designed IP remedies may lead to profound changes in market conditions, which cannot simply be reversed by a successful appeal. Thus, while some of the risks being taken by today’s innovators are significant, they may rely on fragile rewards systems that could potentially be eliminated by overly extensive antitrust remedies. Moreover, even if competition agencies have correctly identified competitive harm and all the necessary elements for an actual antitrust violation, devising an appropriate remedy – such as a compulsory license or establishing appropriate licensing terms – is a difficult and technical task, for which some antitrust enforcers may not be well placed.

In order to avoid the hardship caused by the irreversible nature of remedies in IP-related antitrust cases, firms need to be able to seek the assistance of the courts to not only set aside incorrect agencies’ decisions, but also to stay their enforcement pending final determination. At the European level, the Rules of Procedure of the Court of Justice allow for the suspension of the operation of a contested decision of the European Commission.¹⁰ However, the case-law of the European Courts has established a very high threshold for the granting of a stay of enforcement. Specifically, measures of this nature cannot be considered unless the factual and legal grounds relied upon to obtain them establish a *prima facie* case for granting them. In addition, there must be urgency in the sense that it is necessary for the measures to take effect before the decision of the Court on the substance of the case in order to avoid serious and irreparable damage to the parties seeking them. Finally, they must be provisional in the sense that they do not prejudice the decision on the substance of the case.¹¹

Notwithstanding this high threshold, the courts of the European Union have recognized the far-reaching consequences of remedies in IP-related antitrust cases. In particular, they have previously held that a stay of enforcement was warranted and indeed necessary in the context of two European Commission decisions imposing compulsory licensing remedies.

In *Magill*,¹² the European Commission had issued a decision holding that broadcasters ITP, BBC and RTE had abused their dominant position by refusing to grant licenses for the use of copyrighted information concerning TV program timings. On appeal, the Court of Justice of the European Union (“CJEU”) granted a stay of enforcement of the decision, stressing that the compulsory licensing remedy imposed by the Commission “might [have led] to a new development on the market that would subsequently be very difficult, if not impossible, to reverse.”¹³ A similar position was adopted by the General Court of the European Union in *IMS Health*,¹⁴ where the European Commission also imposed a compulsory license remedy on IMS after finding that it had abused its dominant position by refusing to license the use of a copyrighted brick structure forming the basis of reporting data on sales of medicinal products. The General Court suspended the operation of the Commission decision on the basis that the likely market developments which would result from its immediate execution would be very difficult, if not

8 ICC Best Practices, supra note 3.

9 ICC Best Practices, page 1.

10 Rules of Procedure of the Court of Justice, Article 160.

11 See Case 114/83 R, *Société d’initiatives et de coopération agricole and Société interprofessionnelle des producteurs et expéditeurs de fruits et légumes v. Commission*, ECLI:EU:C:1983:203, para. 2.

12 Joined Cases 76, 77 and 91/89, *RTE v. Commission*.

13 *Ibid.* para. 18.

14 Case T-184/01 R, *IMS Health v. Commission* [2001] ECR II-3193.

impossible, to reverse if IMS were successful in its appeal.¹⁵

Magill and *IMS Health* well illustrate the high risk associated with the imposition of IP-related remedies in antitrust cases, and stress the irreversibility of market developments flowing from their execution. They acknowledge the particular sensitivity of IP-related cases and, importantly, point to an even greater need for strict due process compliance by competition authorities.

The concerns highlighted by the Courts in *Magill* and *IMS Health* are particularly relevant, as court procedures in antitrust cases in a number of jurisdictions do not seem to provide for an effective system to stay the imposition of antitrust remedies pending a judgment on the legality of the competition agency's decision. The ICC Best Practices stipulate that courts should have the power to order the suspension of an agency's decision under appeal, in whole or in part, if its enforcement would have severe consequences on the investigated party or would be against the public interest.

IV. DUE PROCESS RIGHTS AND THE ICC BEST PRACTICES

Due process rights in competition proceedings are generally considered – at least in the EU – to be composed of a variety of legal instruments.¹⁶ They include – but are not limited to – the right of access to file, the right to be heard (i.e. the right to respond to allegations of anti-competitive conduct), the right to have a decision within a reasonable time, the right of the addressees to obtain the reasons of the measure adopted, the right to confidential treatment of business secrets, the right of effective access to judicial review and the right to consistency and predictability in decision-making. The above key principles should be implemented and observed at all stages of the administrative procedure, and the ICC Best Practices provide guidance on how to achieve this effectively.

The following sub-sections focus on due process rights which antitrust agencies are known to sometimes fail to implement to a sufficiently fair, effective and transparent standard, including the right of access to file and the right to be heard. In addition, they comment on the exercise of a competition agencies' discretion to embark upon (as well as terminate) an antitrust investigation, and set out corresponding ICC Best Practices.

A. The Right of Access to the File and Confidentiality Claims

The right of access to file is a fundamental element of the rights of the defense. Undertakings under investigation must be given the opportunity to examine all documents collected by the agency, including both inculpatory and exculpatory documents. This is key to ensuring that the investigated party is on equal footing with the agency: a core element of due process. Importantly, competition agencies need to strike a fair balance between the right of access to file – which is not absolute – and the right of complainants and other interested parties to the confidential treatment of their business secrets.

Even at the EU level, where there have been established rules protecting investigated parties' access to file for many years, there are still cases where the Community Courts find that the European Commission has failed to grant the requisite access to undertakings before finding an infringement. For example, in *Dresdner Bank v. Commission*,¹⁷ the General Court held that the Commission could not rely on inculpatory evidence contained in the reply of one of the addressees of the statement of objections ("SO") because the applicant had been refused access to it in the course of the administrative procedure.¹⁸ As a result, the agency was unable to prove a price fixing agreement to the requisite legal standard and its decision was annulled. While this case is an example of effective judicial protection, a similar failure to grant access to file and resulting in the imposition of remedies in an IP-related case may, as explained above, have much more profound consequences that are often irreversible on appeal.

¹⁵ Ibid. para. 129.

¹⁶ Some are enshrined in statutory instruments: the founding Treaties (Treaty on the European Union and Treaty on the Functioning of the European Union), the Charter of Fundamental Rights of the EU, the European Convention on Human Rights and EU secondary legislation (in particular Regulation 1/2003 and the Implementing Regulation 773/2004). Others can be found in the case-law of the EU Courts and of the European Court of Human Rights. They often stem from general principles of law or from the legal traditions and case-law of the Member States. Finally, several important procedural rights originate from the EU Commission's administrative practice.

¹⁷ Case T-44/02 OP, *Dresdner Bank v. Commission*, ECLI:EU:T:2006:271.

¹⁸ Ibid. para. 160.

Therefore, it is essential that competition authorities do not accept over-inclusive confidentiality requests which unjustifiably encroach on the investigated party's ability to adequately prepare its defense. Accordingly, the ICC Best Practices provide that safeguards for confidential information must be "reasonable" and that confidentiality claims should be carefully balanced against due process rights and evaluated based on clear and transparent procedures.¹⁹ Moreover, satisfactory access to the file must be granted in sufficient time for the investigated parties to assess the information in preparation for their defense.²⁰ A failure to provide timely access to file may prevent investigated parties from presenting their observations on the complaints/objections raised against them before the final decision, and from effectively exercising their right to be heard.

B. The Right to be Heard

The right to be heard provides that any firm subject to antitrust proceedings must have the opportunity to present its views on the veracity of the objections raised against it, be it on factual or legal grounds. This includes a right to respond in writing and a right to an oral hearing. In order to effectively exercise their right to express, formulate or verbalize observations, investigated parties must not only be given timely access to the file, but also sufficient time to respond to allegations of misconduct.

In the context of administrative proceedings before the European Commission, investigated parties are generally made aware of the authority's allegation in a SO, and are given a set amount of time to reply in writing. Investigated parties may request an extension of the deadline to the Hearing Officer for competition, whose mandate is to ensure that their due process rights are respected. However, such procedural safeguards are not available in all jurisdictions. There are still instances where competition authorities consistently fail to communicate their objections to the investigated parties with sufficient notice before adopting a final decision. For example, there are new competition regimes outside of Europe, in particular in the Commonwealth of Independent States ("CIS") and Asia, in which agencies do not issue SOs, issue letters or similar documents and only inform the investigated parties of their concerns by sending them a draft decision shortly before publishing its official version.²¹ It is hard to imagine how, in such circumstances, investigated undertakings would have a meaningful opportunity to comment (either in writing or orally) on the agency's objections and effectively plan their defense.

In this regard, the ICC Best Practices state that competition enforcement agencies should provide investigated parties with a period no shorter than 60 days to prepare and present their response to allegations.

The need to provide investigated parties with sufficient time to respond to allegations also arises in the context of the oral hearing, where undertakings should have the opportunity to challenge the competition authority's objections. In particular, agencies are sometimes criticized for using the oral hearing to "ambush" investigated parties by confronting them with new, previously undisclosed, accusations. The ICC Best Practices recognize that in order to be able to prepare their defense and effectively respond to allegations, investigated parties should be properly informed prior to the hearing of any new allegations.

Ensuring a level playing field between the investigated parties and the authorities through the effective implementation of procedural rights is all the more important in cases where there is little opportunity for investigated parties to have meaningful engagement with the agency's officials. The mere fact of corresponding or meeting with the agency's case team does not guarantee a meaningful interaction or exchange concerning the nature of the complaints, the theory of harm and all the crucial elements that investigated parties need to be aware of in order to prepare their defense. Accordingly, the ICC Best Practices provide that there should be on-going and meaningful engagement between the case team and the investigated parties throughout the proceedings, which includes the opportunity to meet officials and higher-level decision-makers in the agency at critical stages.

C. The Right to Expedient Proceedings and the Decision to Open/Close an Investigation

Under EU law, investigated firms also have a right to expedient proceedings. This right applies to the period which starts with the adoption of a SO and ends with a final decision. Prior to this, the European Commission can in principle take as much time as it wants to investigate a case and gather evidence. The rationale behind this view is that an investigation is not *per se* capable of adversely affecting the rights of the defense, since the undertakings concerned are not subject of any formal accusation until they receive a SO.²² Notwithstanding this, the EU courts have

¹⁹ Best Practices, Section 3.5(2).

²⁰ *Ibid.*

²¹ The author is aware of one instance where the notice period was as short as four business days.

²² See Joined Cases T-5/00 and T-6/00, *Nederlandse Federatieve Vereniging voor de Groothandel op Elektrotechnisch Gebied and Technische Unie BV v. Commission*, [2003] ECR II-05761, paras. 77-80.

recognized that an excessively lengthy investigative phase may reduce the effectiveness of the rights of defense in the second phase. For example, if the investigation is protracted, the Commission may be able to adduce a rich body of inculpatory evidence. This in turn, elevates the burden of proof on the suspected firm at the post-SO stage, and its ability to defend itself within a strict timeframe. Furthermore, if the internal organization of the suspected firm changes over time, key individuals familiar with the case may no longer be present after the adoption of the SO.

Overall, excessively lengthy investigations leave investigated firms in a state of enduring legal uncertainty, which may unduly affect stakeholders' decision-making in terms of strategy and investment.²³ In the *Dutch Beer* cartel case,²⁴ the General Court of the EU found that the European Commission had infringed the firm's right to expedient proceedings by issuing an infringement decision more than seven years after the start of the investigation. The Court held that the duration of the administrative procedure was unreasonable, and it ordered a reduction of five percent of the amount of the fine. Whether the reduction was quantitatively appropriate is arguable. What is less arguable is the notion that, in reaching decisions and making judgment calls on how to instruct an investigation, antitrust agencies should take due account of the impact of the investigation on the companies' operations, resources and reputation and operations, as well as the legal expenses incurred by undertakings throughout the course of the procedure.

In light of the above, it is crucial that competition agencies are disciplined to critically assess whether they have sufficient information to objectively start an investigation. Investigations should only be embarked upon where genuinely motivated by objective consumer welfare concerns, rather than by a desire to protect domestic industries, pursue national industrial policies, or advance perceived national security interests. Moreover, competition agencies must not hesitate to end on-going investigations where there are no *prima facie* concerns after a certain period of time. The ICC Best Practices address this issue and provide that agencies should proactively and swiftly end proceedings where the allegations of anti-competitive conduct do not appear to have merit or where there is no clear discernible public interest in continuing to pursue an investigation.

V. CONCLUDING COMMENTS

Today, there are more than 130 competition and consumer protection authorities active worldwide.²⁵ As these agencies are increasingly engaged in competition enforcement, the international competition arena is being confronted with a complex challenge: how to ensure that antitrust proceedings remain fair and objective in light of the significant divergences in processes and standards being followed by enforcers around the world.

Meaningful procedural safeguards are essential to ensure fairness and objectivity of antitrust enforcement, in particular in the context of IP-related cases where remedies may have far-reaching consequences on business models and market developments.

Multilateral efforts by international organizations have already advanced an important global dialogue on due process and they need to continue. In this context, the ICC Best Practices provide a set of due process requirements aimed at facilitating the development of a more uniform standard across jurisdictions.

23 In some jurisdictions the right to expedient proceedings translates into an obligation on the competition agency to issue a decision within a set period (e.g. 10 months) of starting the investigation. While such a measure prevents excessively lengthy investigations, it may also have a negative effect: in particularly complex cases, the agency may lack sufficient resources to complete the analysis within the set timeframe, which may result in the issuing of a decision that is not well-reasoned.

24 T-240/07, *Heineken Nederland and Heineken v. Commission*, ECLI:EU:T:2011:284.

25 Federal Trade Commission, Competition & Consumer Protection Authorities Worldwide, available at: <https://www.ftc.gov/policy/international/competition-consumer-protection-authorities-worldwide>.

