

ACEA COMMENTS ON THE REVISED GUIDELINES FOR HORIZONTAL CO-OPERATION AGREEMENTS

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I. INTRODUCTION

1. The revision of the Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements (the “Horizontal Guidelines”) is an important step to adapt current rules on standardisation to the challenges brought by the uptake of the Internet of Things (the “IoT”).
2. Companies of the automotive sector are among the first IoT manufacturers to experience the anti-competitive effects of the current licensing practices for standard essential patents (“SEPs”) and are increasingly being exploited by patent holders.
3. The main concern is the lack of availability of SEP licences to any willing licensee, a necessary consequence under both Articles 101 and 102 TFEU following a FRAND commitment, which safeguards the pro-competitive character of a standardisation agreement between multiple market participants (at least where in practice that standard has a significant market impact).
4. The existing language in the Horizontal Guidelines – and the statements in the *Huawei*, *Samsung* and *Motorola* decisions¹ – accurately reflect the law but are often ignored and should therefore be clarified and strengthened.
5. This can be achieved in three ways:
 - a. By specifying that the FRAND commitment requires SEP holders to license their essential intellectual property rights (“IPR”) to all willing licensees, regardless of their position in the supply chain; recognising that refusal to provide a FRAND licence offer to anyone so requesting restricts access to the standard and is a violation of competition rules; and providing that the

¹ Judgment of the Court of 16 July 2015 in Case C-170/13, *Huawei v ZTE*, EU:C:2015:477 (“*Huawei*”); Case AT.39985 - *Motorola - Enforcement of GPRS standard essential patents*, 29 April 2014, C(2014) 2892 final (“*Motorola*”); Case AT.39939 — *Samsung — Enforcement of UMTS standard essential patents*, 29 April 2014, C(2014) 2891 final (“*Samsung*”).

- level of licensing should be determined individually by industries and supply chains (paras 482, 491-492 of the revised Horizontal Guidelines).²
- b. By specifying that royalties should not capture the value of downstream innovation and investment by other undertakings; emphasising the need to consider the market context in any competitive analysis; and increasing disclosure and transparency obligations of SEP holders (paras 484, 486 and 489 of the revised Horizontal Guidelines).
 - c. By providing a safe harbour for licensing negotiation groups (“LNGs”); not considering them as joint purchasing arrangements; and specifying that a threshold for the presumption of competition law compliance of joint purchasing agreements is not appropriate when implementers form joint actions for negotiating FRAND conditions for SEPs (paras 312 and 329 of the revised Horizontal Guidelines).

II. REVISED HORIZONTAL GUIDELINES

- 6. The proposed changes in the Horizontal Guidelines³ are a step in the right direction, improving transparency and efficiency of the process of standardisation, while clearly setting out potential risks to competition. Three main add-ons in the revised Horizontal Guidelines are especially welcome.
- 7. First, the revised Horizontal Guidelines accurately acknowledge that the risk of anti-competitive effects is particularly high if access to the standard is limited. Paragraph 491 notes that: *“competition is likewise likely to be restricted where the result of a standard is only accessible on discriminatory or excessive terms for members or third parties.”* Access to SEPs is special in that it is a gateway to downstream markets. Implementers cannot manufacture standard-compliant products without a licence. SEP licences are therefore a *sine qua non* condition for market access and warrant the attention of competition law enforcers.
- 8. Second, the revised Horizontal Guidelines correctly recognise that any competitive analysis should take into account *“the nature of the goods or services affected, the real conditions of the functioning and the structure of the markets in question”* and *“the characteristics of the sector and industry”* (paras 474 and 489 of the revised Horizontal Guidelines). Paragraph 464 elaborates that the markets concerned by standardisation agreements include the technology market and the markets for downstream standard-compliant products. The mention of downstream markets is remarkable given the fact that

² Annex to the Communication from the Commission, Approval of the content of a draft for a Commission Regulation on the application of Article 101(3) of the Treaty on the Functioning of the European Union to certain categories of specialisation agreements, 1.3.2022 C(2022) 1160 final.

³ *Id.*

SEPs are becoming an indispensable input for many manufacturers with the uptake of IoT.

9. Third, the revised Horizontal Guidelines rightly increase transparency of the standardisation system by setting out that “*the IPR disclosure should include at least the patent number or patent application number*” (para. 483 of the revised Horizontal Guidelines).
10. These are welcome developments. Yet, the Horizontal Guidelines should advance in ensuring a truly effective access to standardised technologies and remedying licensing practices that inhibit it.

III. HORIZONTAL GUIDELINES SHOULD REMEDY SELECTIVE LICENSING

11. Recently, some holders of cellular communications SEPs have been adopting a profit-maximising strategy of refusing to license many upstream automotive suppliers. They opt for end-product licencing to reap the profits benchmarked against the highest-value product in the supply chain (“selective licensing”).
12. Although SEP holders seek to portray end-product level licensing as a benign alternative to upstream licensing – an option among many – it remains but a strategy to inflate royalties. Upstream licensing has long been the default in the automotive industry for both standard and non-standard essential patents. End-product level licensing is a new trend in the automotive industry and so far remains an outlier.
13. The promotion of end-product level licensing started only recently in the automotive industry, with Nokia beginning to request licences for 3G/4G SEPs from automotive Original Equipment Manufacturers (“OEMs”). This was followed by the refusal to license most upstream suppliers. Albeit it is difficult to provide a precise estimation of the level of royalties and its changes (*i.e.*, because of cross-licensing, lump sum payments and varied enforcement of IPR), the licensing dynamics have clearly changed, leading to significantly higher royalties. In relation to earlier standards, some major component suppliers used to give a guarantee that their products are “*free of third party rights*” for a lower single-digit figure, but stopped offering it with 4G. At the same time, SEP holders have started to request individual remuneration from OEMs, individually and via Avanci. Avanci requests 9 USD per vehicle for 3G and 15 USD per vehicle for a 4G. This shows the degree of overcompensation for SEP holders that comes with increasing patent hold-up. While Avanci’s share of 4G

SEPs amounts to roughly 75%,⁴ its share of clients after six years in terms of end-product OEMs is only 20% of the market, showing that licensing terms are extraordinary for SEP implementers.

14. EU competition law should bring the practices based on refusal to license SEPs to an end. End-product level licensing is a competition problem because the purpose of ensuring effective access to the standard is not only about the result of having products incorporating the SEPs available on the market but also about the process of effective competition in implementing those SEPs, and in making innovative products. The obligation to offer licences to all willing licensees ensures the SEP holder cannot use its market power – created by the standardisation agreement – to dictate or influence that process. End-product level licensing is an example of an exercise of market power resulting from patents being (or claimed to be) standard-essential. Absent market power, patent owners are typically eager to license anyone who wants a licence.
15. The Court of Justice of the European Union (the “CJEU”) has already recognised the risks stemming from the standardisation process and the resulting market power, acknowledging the right of SEP implementers to be granted a licence offer. In *Huawei*, the CJEU concluded that “*having regard to the fact that an undertaking to grant licences on FRAND terms creates legitimate expectations on the part of third parties that the proprietor of the SEP will in fact grant licences on such terms, a refusal by the proprietor of the SEP to grant a licence on those terms may, in principle, constitute an abuse within the meaning of Article 102 TFEU*”.⁵ This holds true for all manufacturers of standard-compliant products, no matter their place in the supply chain. The FRAND commitment guarantees effective access to SEPs for all companies willing to use them, and the licensing obligation applies regardless of the licensee’s position in the supply chain (and regardless of any other feature of a licensee).

⁴ See https://azurewww.twobirds.com/~/_media/pdfs/news/articles/2020/avancis-share-of-mobile-seps-far-higher-than-previously-reported-iam466344231.pdf?la=en&hash=8198B0F3E415FF3F61680726216737EE3634717A&msclkid=4c2f990db41d11ecbb70c5765bbb0519.

⁵ In the same vein, the Commission concluded in *Samsung* that “*in view of the standardisation process that led to the adoption of the GPRS standard and Motorola’s voluntary commitment to license the Cudak SEP on FRAND terms and conditions, implementers of the GPRS standard have a legitimate expectation that Motorola will grant them a licence over that SEP, provided they are not unwilling to enter into a licence on FRAND terms and conditions*”.

16. Unfortunately, this precedent, similar statements in the *Samsung* and *Motorola* decisions and the existing language in the Horizontal Guidelines⁶ are often ignored. It is essential that the Horizontal Guidelines respond to the systemic challenges brought by the practices based on refusal to license SEPs and foster the safeguards for effective access to standardised technologies. Otherwise, upstream companies will continue battling to get access to connectivity patents and manufacturers of end-products will continue paying unfair and unreasonable royalties. The harm that is already sustained by the automotive industry today will likely spill over various European manufacturing industries and impact innovation, as 5G proliferates.

IV. SELECTIVE LICENSING LEADS TO ANTI-COMPETITIVE EFFECTS

A. Selective licensing restricts access to standards

Suggested amendment: *the Horizontal Guidelines should specify that the FRAND commitment requires SEP holders to license their IPR to all willing licensees regardless of their position in the supply chain; recognise that refusal to provide a FRAND licence offer to any willing licensee restricts access to the standard and is a violation of competition rules; and that the level of licensing should be determined individually by industries and supply chains (para. 482 of the revised Horizontal Guidelines).*

1. Market foreclosure

17. Licensing only end-product manufacturers excludes entire categories of upstream implementers from licensing and does not ensure “*effective access to the standard*” (para. 466 of the revised Horizontal Guidelines). Quite the contrary, it ensures access to the standard only to those with whom the SEP holder wants to contract. This inevitably leads to increasing barriers to enter markets for standard-compliant products and has similar effects to injunctions. As put by the CJEU, SEP holders have the ability “*to prevent products complying with the standard in question ... from appearing or remaining on the market*”.⁷

⁶ The current Horizontal Guidelines set out in paragraph 285 that “*Participants wishing to have their IPR included in the standard [should be required by SSOs] to provide an irrevocable commitment in writing to offer to license their essential IPR to all third parties on fair, reasonable and non-discriminatory terms (“FRAND commitment”).*”

⁷ *Huawei*, paras 52 and 73.

18. In the automotive industry, upstream suppliers are unable to bring their products, solutions and services to the market in compliance with the law if they are refused relevant licences. This is the very definition of a lack of effective access to the standard. Derivative rights, such as “have-made rights” – which are not generally recognised by EU Member States – can only offer an illusory market “access” and limited commercial opportunities. An upstream supplier would be allowed to manufacture components for a specific OEM only and under its direct specification.⁸

19. Market foreclosure would occur through three main channels:

- a. Without licences, automotive suppliers would face higher barriers to form new relationships with other OEMs. To start a new project with an alternative OEM, suppliers would need to develop products free of third-party rights.⁹
- b. The lack of licences would prevent automotive suppliers from selling products directly to end-customers or via traders and distributors. This would undermine their attempts at developing novel business strategies of offering products directly to end-customers - which has been a significant part of their market activity in recent years.¹⁰
- c. With licences granted at the end-product level, component manufacturers are unable to assess the cost of licences, which may lead to negative margins and endanger their financial viability. For instance, Continental reports that a royalty requested by Avanci (USD 15 per vehicle) amounts to a 20% effective royalty rate at the Telematics Control Unit (“TCU”) level (a TCU costs less than USD 100) and exceeds the entire profit margin on the TCU, let alone that of upstream components like the Network Access Device (“NAD”) (approx. price USD 40) or the baseband processor (approx. price USD 20).¹¹

20. There are some indications that suppliers already struggle to get a licence within the publicly available sources. For example, Continental filed suits to get a

⁸ Have-made rights would be rights granted by the licensee to “have third party components made” by engaging in any third party research, development, design or manufacture on part of the licensee. See A. L. Hatfield, “Patent Exhaustion, Implied Licenses, and Have-Made Rights: Gold Mines or Mine Fields?” (2000) 2000 Computer Law Review and Technology Journal 1, p. 1-60. For the “extended work bench” theory under German law, see C. Osterrieth, Patent Law, 5th ed. 2015, para. 695.

⁹ Suppliers are legally required to provide their components free of third-party rights and accordingly, indemnification clauses are usually contained in supply contracts within the automotive industry under which suppliers commit to provide their products “free of any third party rights”.

¹⁰ McKinsey & Company, “Connected Car, Automotive Value Chain Unbound” Report, September 2014, p. 16.

¹¹ *Continental Automotive Systems v Avanci LLC*, Complaint of 05.10.2019 in Case No. 19-cv-2520, para. 11.

licence from Nokia in the Delaware Court of Chancery seeking to hold Nokia to its promise to grant it a licence to cellular communications patents on FRAND terms.¹² Huawei brought an antitrust complaint against Nokia in German court to get an exhaustive module-level SEP licence.¹³ ACEA is also aware of a supplier of cellular components active in the automotive industry that intended to market its connectivity-related component for another IoT application. However, it was refused to be granted the licence and could not enter this market.

21. Due to a refusal to license upstream suppliers, the volume of standard-compliant products is reduced, resulting in an increased price per unit and hampering the competitiveness of a supplier. The degree of competition between various suppliers also decreases, hurting both inter-brand (because they are not able to conclude contracts with multiple OEMs) and intra-brand (because suppliers are not able to compete on the best output) competition.

2. Limitation of downstream production, investment, and innovation

22. Competition between upstream implementers is an important source of innovation and product differentiation. Refusing licences to upstream implementers limits this competition and discourages OEMs from investing on standard-compliant markets. As acknowledged by the European Commission (the “Commission”) in *Motorola*, “[b]y seeking or enforcing an injunction, a SEP holder may be able to exclude even the most innovative standard-compliant products from the market as, by definition, the patented technology cannot be worked around”.¹⁴
23. In the automotive industry, OEMs and their suppliers significantly invest in connectivity-related innovation. Smart cars are more than just having a mobile, or even a smart phone, in a car. They are an effect of work of hundreds of companies that develop various systems, products and services. For example, smart cars provide current traffic information, parking lot or garage assistance, vehicle or service reminders, remote operation, transfer of usage data, emergency braking, lane keeping, smartphone integration, multimedia info- and entertainment, driver assistance or even automated driving functionality. OEMs and their suppliers have put billions of euro into extending their business from hardware into the provision of software and digital services such as apps, voice

¹² *Continental Automotive Systems v Nokia Corporation*, Complaint of 25.01.2021 in Case No. C.A. No. 2021-0066-JRS. See also *Continental Automotive Systems v Avanci LLC*, Complaint of 05.10.2019 in Case No. 19-cv-2520.

¹³ *Huawei v Nokia*, Regional Court of Dusseldorf, Case ID: 4C O 53/20.

¹⁴ *Motorola*, para. 312.

assistants or media services. By way of an example, Volkswagen will have invested around EUR 27 billion “*in digitalization*” by 2025.¹⁵ Stellantis will have invested more than EUR 30 billion through 2025 to execute software and electrification transformation.¹⁶ Another OEM plans to invest more than EUR 2 billion for each of level 3, 4 and 5 of driving automation.

24. End-product level licensing undermines this investment. As demonstrated in the paper “Investment and Patent Licensing in the Value Chain” by former DG Competition Chief Economist, Professor Damien Neven and Doctor Gerard Llobet, in the industries with significant innovation added along the supply chain, end-product level licensing undermines the incentives for companies to innovate. This is because the SEP holder can tailor the royalty payment to the value of the product, which reduces the returns from the innovation that firms carry out. This effect has so far been overlooked by economic literature.
25. End-product level licensing puts the innovation by both OEMs and upstream suppliers at risk.
 - a. OEMs end up with a more limited budget for their own R&D programs. They are often the ones to bear the total cost of licenses, because they either cannot¹⁷ or have problems to enforce indemnification.
 - b. “Have-made rights” and other license “alternatives” do not cover independent innovation by upstream suppliers. They relate only to the products supplied for a specific OEM that is holding the license. The lack of a license exposes the suppliers to potentially massive criminal and civil liability, turning R&D into a high-risk undertaking. Uncertainty about license costs and their potentially overwhelming size (see para. 19(c), above) additionally amplifies the damage to innovation, as upstream suppliers would have less funds available for investment in new technologies.
26. The automotive industry can already confirm that the refusal to license SEPs upstream leads to market foreclosure and reduction of innovation. The number of potential TCU suppliers who bid for R&D programmes or for series production has decreased because suppliers are concerned about licensing of cellular communications SEPs. It also limits production and markets development. End-product level licensing forces OEMs to expand their activity and expertise into

¹⁵ See <https://enterpriseiotinsights.com/20210212/channels/news/volkswagen-reaches-for-cloud-with-microsoft/amp>.

¹⁶ See https://www.stellantis.com/content/dam/stellantis-corporate/news/press-releases/2021/december/07-12-2021/8-00/en/20211207_SWDay2021_Overview_EN.pdf.

¹⁷ There are often limitations to trigger indemnification clauses. For example and depending on the wording of a specific indemnification clause, some indemnification does not work if licenses are taken “voluntarily”, which includes a licence that is concluded as a part of settlement (and not litigation).

cellular communications, which is outside of their core competence, undermining the efficiency gains from specialisation and division of labour.

27. ACEA urges the Commission to clarify that the FRAND commitment obliges SEP holders to offer a FRAND licence to all willing licensees. To ensure that this right is effective, SEP implementers should have the right to be offered a global portfolio of SEPs and a licence including all requested exploitation fields. In addition, the revised Horizontal Guidelines should recognise that the refusal to provide a FRAND licence offer to any willing licensee restricts access to the standard and is a violation of competition rules. It should be clarified that the level of licensing (that is *any* single level of licensing) should be determined individually by industries and supply chains. The details of the anti-competitive harm leading to a lack of an effective access to the standard should be refined to take account the harm caused by such refusal.

B. Selective licensing leads to unfair and unreasonable royalties

Suggested amendment: the Horizontal Guidelines should specify that royalties should not capture the value of downstream innovation and investment by other undertakings (para. 486 of the revised Horizontal Guidelines). It should emphasise the need to consider the market context in any competitive analysis (para. 489 of the revised Horizontal Guidelines). It should also increase disclosure and transparency obligations of SEP holders (para. 484 of the revised Horizontal Guidelines).

1. Royalties based on end-products capture the value of downstream investment and innovation

28. End-product level licensing is often a pretext for SEP holders to determine the value of royalties based on end-products. In the automotive industry, such royalties are likely to be unfair and unreasonable, as they capture the value added by downstream suppliers, heavily investing in connectivity-related features. SEP holders are remunerated for innovation they do not carry out and products that they do not supply.
29. The holders of cellular communications patents prefer determining royalties based on end-products, whereas the value of connectivity SEPs only makes up a fraction of the value of vehicles. A small number of subcomponents in a car actually implement technologies covered by cellular communications SEPs. These are cellular communications chips contained in the NAD, a

subcomponent of the TCU, which – among other things – enables connectivity in a vehicle. TCUs are then only one of several thousands of parts in a car.

30. While connectivity SEPs enable smart vehicle functionality, they are only a gateway for a much broader environment of connectivity features and technologies. Customer interfaces and smart operating systems build the necessary backbone to enable a smart customer experience and smart services on vehicle-specific hardware. Displays, touchscreens, microphones, speakers and other gadgets provide the customer interface through which smart services are offered. Software end-applications address the specific customer needs. These technologies are a result of significant development and innovation efforts. The below examples describe just a fragment of the development activities undertaken by the automotive industry in relation to smart car functionalities:

- a. OEMs have put significant investment into extending their business from the vehicle hardware into the provision of software and digital services such as apps, voice assistants or media services.
- b. Automotive companies develop own connectivity systems with customer related adjustments, including a broad range of hardware and software tools, such as smart cockpits, intelligent tire and brake systems, parking services or infotainment suits.
- c. New players entered the field and existing companies expanded their business into the automotive sector. Digital software providers, for example, have developed services for car-specific customer needs, including specific infotainment, operating systems and software platforms or media-streaming services.

31. This multi-layered architecture of connectivity solutions illustrates that smart cars are enabled by a range of technological solutions, the connectivity SEPs representing just a fraction of a car. Further, connectivity SEPs enable other connectivity functions and services, and are a fraction of customer related connectivity. Nonetheless, SEP holders have sought to derive the value of connectivity SEPs at the end-product level. This valuation method is incorrect. The cost of TCU is a minor part of OEM's total cost of developing related connectivity items, let alone the value of developing, manufacturing, and marketing the whole car. According to a study conducted by one OEM, the cost of TCU is between 10-20 percent of the total cost of developing customer related connectivity. The value of connectivity SEPs is in reality even lower, as the study is based on the assumptions favourable to SEP holders, which are unlikely to be correct (the cost of TCU rather than NADs or chips, which already fully reflect the value of connectivity SEPs).

32. Case law recognises the risk of overcompensation flowing from determining royalties with reference to multi-component end-products.¹⁸ Patent laws also focus on the technology's own inventive merits, with patent registration procedure distilling the innovative contribution of the technology from existing technologies and state of art solutions.¹⁹ The Horizontal Guidelines should provide more details on the determination of royalties, so that it focuses on the value of the technology as such. In particular, the Horizontal Guidelines should specify that royalties should not capture the value of downstream innovation and investment by other undertakings.

2. Risk of hold-up increases with end-product level licensing

33. End-product level licensing leads to excessive royalties also because it puts OEMs into the role of licence negotiators. Injunctions imposed at the end-product level on OEMs or even their imminent threat weigh more heavily than they do upstream. In the automotive industry high values are at stake and just-in-time shipping makes the supply chain vulnerable to disruptions. Further, only a few actors in the supply chain have sufficient knowledge of connectivity standards to adequately assess their value. Those factors play into the cards of SEP holders who can use the industry vulnerability to their advantage.
34. The automotive industry is characterized by significant price differences throughout the supply chain: while an average priced TCU was generally worth a USD amount in the upper two-digit area in 2019 and the parts directly incorporating the standardised technology are likely to be significantly cheaper, the value of a whole car using standardised technologies often far exceeds USD 10.000. While only a minor subcomponent of a car implements standardised technologies, SEP holders gain leverage over the entire car through court injunctions. A production disruption caused by injunctions can cost a single OEM millions USD in a matter of days. SEP holders use that leverage in negotiations with OEMs to negotiate higher royalties. Any royalty negotiated with OEMs is likely to reflect the high risk imposed on OEMs and the value of the end-product that is at stake.

¹⁸ Most recently, in *Qualcomm* Judge Koh found that “OEMs add other value to handsets unrelated to modem chips” and “it makes little sense for Qualcomm to receive royalty revenue on the added value to which Qualcomm did not contribute.” See *Federal Trade Commission v Qualcomm Inc*, Case 5:17-cv-00220-LHK. See also *Federal Trade Commission v Qualcomm Inc*, Case 5:17-cv-00220-LHK, at 193. See also *Cornell University v Hewlett-Packard*, Judgment of the United States District Court, ND New York, 30.03.2009, 01-CV-1974, p. 288; *Laser Dynamics v Quanta Computer, Inc.*, Judgment of the United States Court of Appeals, Federal Circuit, 30.04.2012, 2011-1440, 2011-1470, p. 67.

¹⁹ See for, example, the Korean Intellectual Property Office's guidelines for applications relating to the field of autonomous driving technology of 17 March 2022, which identify the areas that would not be considered as innovative and therefore meriting patent protection.

35. SEP holders can negotiate higher royalties on the end-product level also because of information asymmetries in the automotive sector. Most suppliers consider the technical details of the provided technology as business secrets and refuse to lay open the “black box”.²⁰ Third parties are often bound by confidentiality obligations imposed by SEP holders and cannot disclose the fact of having concluded a licence and its scope. Because of both technical and legal obstacles, OEMs are not in a position to determine whether any SEP is implemented by their product, or whether the SEP in question is infringed or essential. OEMs are therefore unable to appropriately estimate the value of standardised technologies and to negotiate adequate FRAND royalties. For these reasons, OEMs typically source their components free from third-party rights and are not involved in any license negotiations. By preventing upstream implementers from using their industry knowledge to check both the likely validity of the patents and of their standard-essential nature, SEP holders can inflate royalties. Without access to necessary information to assess a given licence offer, OEMs are more likely than upstream suppliers to agree to exploitative terms.
36. This demonstrates that SEP holders can use various strategies, other than royalty-setting, to maximise their revenues. As a result, the Horizontal Guidelines must respond to various market practices. This can be achieved, for example, by putting more emphasis on the need to consider the specificities of a given market in the analysis of the effects of standardisation agreements. The list of factors that should be taken into account should in particular include market structure, supply chains, investment, innovation and information asymmetries. Another measure to decrease the risk of hold-up would be to improve transparency of standardisation and SEP licensing. For example, by providing an obligation for SEP holders to disclose how individual parts of the standard relate to declared patents, to update SEP disclosure, and to provide a base level information regarding the SEPs and FRAND license terms without an non-disclosure agreement (for more details on that see ACEA’s submission in response to the Call for Evidence regarding the New Framework for SEPs).

C. No efficiency defence

37. Selective licensing does not reduce transaction costs and neither enables an efficient one stop-shop at end-product level. Transaction costs grow with the number of potential licensees, as an increased number of licensees correlates

²⁰ Such facts have for example been confirmed in *Qualcomm v Apple*, where Apple was unable to argue that the chips produced by the company Qorvo used in its iPhones, did not infringe Qualcomm’s patents, because it was unable to explain the functioning of the chips given Qorvo’s secrecy interests involved. Instead, a reverse engineering process was used with a favourable conclusion reached for Qualcomm. See Regional Court (LG) Munich I in *Qualcomm v Apple* (Judgment of 20.12.2019 Az. 7 O 10495/17 and 7 O 10496/17).

with an increased number of licence transactions. With the uptake of the IoT, upstream licensing would be more efficient licensing model than end-product level licensing for connectivity SEPs:

- a. The markets for IoT end-products is highly fragmented. Product applications are diverse and include a broad range of goods such as cars, industrial machines, smart home appliances, farming, wearable devices, health, sensors, etc. An estimate for the number of firms manufacturing devices using connectivity SEPs is difficult to obtain, but most likely it is at least a five-digit number globally and the number is steadily growing.²¹
 - b. In contrast to that, industry concentration increases steeply from end-product level upwards to baseband chip makers. Current market studies mention six manufacturers of baseband chips for cellular communication: Qualcomm, MediaTek, Intel, Broadcom, Spreadtrum, and ST-Ericsson. Other industry players are HiSilicon, Icera, Marvell Technology Group, and Samsung LSI. While this list may not be exhaustive, the industry for baseband chips appears far more concentrated than on the end-product level. In line with that, an industry study put the market share of the top three firms in 2019 at 71 percent.²²
38. Further, upstream licensing is more efficient in light of information asymmetries in the supply chain. Manufacturers of broadband chips have the required technical knowledge to assess the essentiality and validity of connectivity SEPs. Downstream companies usually lack this knowledge. Similarly, upstream negotiations between SEP holders and suppliers of connectivity components are the only way to distinguish the value of connectivity from downstream innovation.

V. LICENSING NEGOTIATION GROUPS SHOULD FALL UNDER A SAFE HARBOUR

Suggested amendment: *The Horizontal Guidelines should provide a safe harbour for licensing negotiation groups and not consider them as joint purchasing agreements. It should be added that a threshold for the presumption of competition law compliance of joint purchasing agreements is not appropriate*

²¹ Joachim Henkel, “How to license SEPs to promote innovation and entrepreneurship in the IoT”, 23 March 2021, TUM School of Management, available at: <https://www.law.berkeley.edu/wp-content/uploads/2021/12/How-to-license-SEPs-to-promote-innovation-and-entrepreneurship-in-the-IoT.pdf>, p. 14.

²² See <https://news.strategyanalytics.com/press-releases/press-release-details/2020/Strategy-Analytics-2019-Cellular-Baseband-Market-Share-5G-Basebands-Capture-2-Percent-Unit-Share/default.aspx>.

when implementers form joint actions for negotiating FRAND conditions for SEPs (paras 312 and 329 of the revised Horizontal Guidelines).

39. Once at the negotiation table, companies of the automotive sector face a series of challenges to ensure that they are offered a FRAND licence. As the analysis above demonstrates, the existing asymmetries of information boost the bargaining power of SEP holders, which is further increased by the creation of patent pools. On the other hand, there is a lacuna with regard to LNGs. This has led to some uncertainty about the competition law compliance of LNGs, making some commentators allege that they are a buyer cartel. These doubts need to be dispelled in the Horizontal Guidelines. LNGs are nothing more than a “patent pool” on the demand side and should be treated equivalently.
40. The Horizontal Guidelines should recognise the pro-competitive effects of LNGs and provide a safe harbour for their operation in the context of SEPs. LNGs can reduce the existing asymmetries between OEMs and upstream suppliers. By combining their information on the features and economic value of SEPs, SEP implementers can obtain a better idea of the economic value of the licence offered by SEP holders. The cost of collecting and verifying such information would be reduced. Cooperation through LNGs would also reduce the imbalance of negotiating power created by patent pools. In a regime where only one side is allowed to collaborate, the negotiations are unbalanced and the *Huawei* principles never truly come into play. In addition, LNGs can have a positive impact on standard dissemination and IPR enforcement. LNGs would enable SEP holders to reach a larger pool of licensees at decreased costs.
41. LNGs should not be considered as joint purchasing arrangements in the context of SEPs in the Horizontal Guidelines but be analysed under broader competition rules. In relation to SEPs, implementers do not compete for licences in the “purchasing” market. There is no finite number of SEP licences that can be granted, and licensees do not compete for them. Rather, licence terms are intended to be set according to an objective standard, namely FRAND. Thus, cooperation between implementers does not lead to a reduction of price competition in the “purchasing market”.

VI. HARM LIKELY TO SPILL-OVER INTO THE BROADER IOT SECTOR

42. Companies of the automotive sector are among the first manufacturers to experience the shortcomings of the current licensing practices; they will be far from the last. With the uptake of IoT, all range of market actors in the EU across all industries - from SMEs to major European companies - will become increasingly dependent on effective access to 5G SEPs. The harm that is sustained by the automotive industry today will likely spill over the whole

European manufacturing. The lack of effective access to standardised technologies will materialise across all emerging markets.

43. 5G will be an important technology for the IoT and it will be implemented in a variety of applications and products, developed by a variety of companies, many with small revenues. While the bigger companies may avail themselves of the needed resources and partly mitigate harm stemming from refusal to license SEPs, chances are that it would be the European small and medium enterprises - representing 99% of all businesses in the EU²³ - that would suffer the most and would abstain from investing in the IoT.
44. The current framework is also likely to make European companies effectively dependent on the policies and market behaviour of foreign patent holders. The number of European SEP holders is decreasing year by year, and while Nokia and Ericson were important 3G and 4G innovators, their role is fading with 5G. In comparison, more than every third 5G declaration (32.97%) nowadays comes from a Chinese company. Korean companies with 27.07% are ahead of European companies with 16.98% and Japanese companies with 8.84%.²⁴ With the Chinese state's sustained policies to boost the role of Chinese actors in technology development, their leverage will only grow. In the mid- to long-term, the risk of European companies becoming effectively dependent on the SEP licensing policies of foreign companies becomes foreseeable. In addition, European companies could also be put at a disadvantage facing vertically integrated Asian companies who would be able to benefit from cheaper access to IPR thanks to cross-licensing. Europe must adopt measures to mitigate its weakening competitive position and the growing risks associated with losing its competitiveness.

VII. "ASKS"

45. For that to happen, it is essential that:

- a. the FRAND commitment requires that *all* SEP implementers should be able, upon request, to obtain a FRAND licence, *regardless of their position in the supply chain*, covering a global portfolio of SEPs and all requested exploitation fields; it is specified that the refusal to provide a FRAND licence offer to anyone so requesting restricts access to the standard and is violation of competition rules; the level of licensing should be determined individually by industries and supply chains (paras 482, 491-492 of the revised Horizontal Guidelines);

²³ See https://ec.europa.eu/growth/smes_en.

²⁴ T. Pohlmann, Fact Finding Study on Patents Declared to the 5G Standard, Technische Universitaet Berlin, January 2020, p. 11-12.

- b. the Horizontal Guidelines specify that royalties should not capture the value of downstream innovation and investment by other undertakings; they include a more comprehensive overview of the effects that refusal to license SEPs has on downstream companies producing standard-compliant products, including exploitative royalties, market foreclosure and limitation of production, investment and innovation; and they increase disclosure and transparency obligations of SEP holders (paras 484, 486 and 489 of the revised Horizontal Guidelines);
 - c. the Commission provides a safe harbour for licensing negotiation groups and does not consider them as joint purchasing arrangements; it adds that a threshold for the presumption of competition law compliance of joint purchasing agreements is not appropriate when implementers form joint actions for negotiating FRAND conditions for SEPs (paras 312 and 329 of the revised Horizontal Guidelines).
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