

PRIVATE AND CONFIDENTIAL

QUALCOMM INCORPORATED'S RESPONSE TO THE COMPETITION AND MARKET
AUTHORITY'S PUBLIC CONSULTATION ON RETAINING THE EU HORIZONTAL BLOCK
EXEMPTION REGULATIONS

January 11, 2022

PART A: ABOUT QUALCOMM

Qualcomm Incorporated submits this Response to the Competition and Markets Authority's (CMA's) public Consultation to assess whether to retain the Horizontal Block Exemption Regulations (HBERs) following the UK's exit from the EU. As the UK looks to explore its newfound post-Brexit freedoms, Qualcomm commends the CMA for engaging in this Consultation and seeking stakeholder input. This response focuses on the Consultation's inquiries with respect to standardisation agreements (Q HGL7) and areas within that section of the existing HBERs (as adopted by the EU) that provide the CMA with the opportunity to clarify and better promote competition within the UK.

This response is based on Qualcomm's considerable experience in developing and licensing foundational wireless communications technology over the last 30-plus years; its lengthy and extensive participation in wireless communications standards-development organisations (SDOs), including the European Telecommunications Standards Institute (ETSI) and the Third Generation Partnership Project (3GPP); and its expertise in antitrust law and economics.

For context, Qualcomm is both a research and development (R&D) and a product-development company. It is an innovator and leading developer of end-to-end design of wireless communications systems, having pioneered foundational aspects of 2G; 3G; and 4G wireless systems and technologies. It is a leader in 5G design and development. Since its inception in 1985, Qualcomm has spent over \$73 billion on R&D, and on average has reinvested over 20 percent of its annual revenue in foundational R&D for enabling the entire wireless ecosystem.

These innovations are driven in close collaboration with our UK offices in London, Belfast, Bristol, Farnborough and Cambridge, which specialise in design, research and development.

Qualcomm has made considerable contributions to cellular standards, including via ETSI and the 3GPP. A large number of foundational technologies used in ETSI/3GPP standards have been developed based on Qualcomm's proposals and Qualcomm has contributed to numerous technical standards papers. Qualcomm's worldwide patent portfolio consists of over 140,000 patents and patent applications, of which almost 65,000 are disclosed cellular standard-essential patents and patent applications (SEPs). With this context, Qualcomm submits this Response to the CMA to discuss the benefits of largely retaining the HBERs. However, there is also an opportunity for the CMA to take advantage of the lessons learned since the EU adopted the Guidelines on Horizontal Co-Operation Agreements (the Horizontal Guidelines) along with the HBERs in 2011, as well as the UK's newfound ability to diverge from the Regulations, by improving upon the language pertaining to standardisation so as to better promote competition within the UK.



PART B: GENERAL IMPACT ASSESSMENT QUESTIONS FOR ALL RESPONDENT TO COMPLETE

IA1: Please confirm which of the following industries you operate in, or, if you are submitting a response to this Call for Input as an adviser or other third party, which of the following industries you consider are particularly relevant to this Call for Input.

61200 - Wireless telecommunications activities.

IA2: Whether you are making a submission as a business in industry, an adviser, or otherwise, please provide any observations you have on the industry or industries that you consider each of the HBERs and the relevant portions of the Horizontal Guidelines to be particularly relevant to, including how widespread relevant agreements are within each such industry.

Our response reflects Qualcomm's extensive contribution to open standards development, in particular the cellular standard, which underpins modern connectivity. As such, Section 7 of the Horizontal Guidelines are of particular relevance.

IA3: Please provide an indication of whether you are a small (<50 employees), or medium (50 to 249 employees) or large (250+ employees) business (and if the latter, give a broad indication of the number of employees you employ).

Qualcomm Incorporated is a large business with approximately 45,000 global employees.

IA4: Whether you are making a submission as a business in industry, an adviser, or otherwise, please provide any observations you have on the size of business that, in your experience, typically makes use of each of the HBERs (distinguishing between the Specialisation BER and the R&D BER) and the relevant sections of the Horizontal Guidelines.

The Horizontal Guidelines section on Standardisation agreements is relevant to businesses and institutions of all sizes because the open nature of the standard development allows anyone to participate.

PART C: CONSULTATION ON RETAINING THE EU HORIZONTAL BLOCK EXEMPTION REGULATIONS

Benefits of Retaining the HBERs

The CMA seeks guidance as to how easily the Horizontal Guidelines (Guidelines or HGLs) can be applied and how well the Guidelines describe the role of FRAND terms in licensing negotiations. Qualcomm is generally supportive of the Guidelines, and Section 7 on standardisation. The HGLs are an important tool to ensure the continuing function of the standards development system and to provide legal certainty by balancing the needs of SDOs with antitrust authorities. This clarity allows SDOs to operate, and their members to contribute to the respective standards, with confidence that they may continue to collaboratively innovate without running afoul of competition laws. The UK Government has already acknowledged the

importance of this open and global standards development, particularly in the communication space.¹

At the time of its adoption, the Guidelines recognised the diversity within SDOs while providing guidance for how to conduct self-assessment for the purpose of ensuring compliance with European antitrust rules. As the Guidelines state: “there exist different models for standard-setting and [] competition within and between those models is a positive aspect of market economy. Therefore, standard-setting organisations remain entirely free to put in place rules and procedures that do not violate competition rules.”² This freedom for SDOs to determine their IPR governance, particularly with respect to level of licensing approach, is essential.

Therefore, under the HGLs, SDOs are free to define the scope of their licensing commitment, including by allowing firms to freely select the level within the value chain at which to license its patents.³ This is consistent with the approach taken by other mainstream competition enforcers.⁴ Indeed, to the best of our knowledge, the EC has not initiated an investigation challenging SDO’s self-assessment on this point in the last decade.

Standardisation language the CMA should clarify

There are, however, aspects of the HGLs that could be improved. In that respect, the UK post-Brexit has the unique opportunity to clarify language in the HGLs that has long been misconstrued and abused by some, to the detriment of license negotiations generally. This will help the UK to maintain its position as a thought leader in global standards setting. Recently, certain industry members⁵ have spread fear and legal uncertainty by misinterpreting Section 7 of the HGLs as a strict requirement for SDOs to “license to all.” This is a term used by those that argue that a FRAND commitment requires patent holders to offer a license to any company at any level within the value chain. As discussed below, this interpretation has no bearing in fact or practice. The CMA should take this opportunity to clarify the HGLs by removing the “to all third

¹ Global Britain in a Competitive Age: the Integrated Review of Security, Defence, Development and Foreign Policy - GOV.UK (www.gov.uk) recognised the importance of a strong and vibrant standards development system. “To ensure that transparency and accountability are embedded from the outset in the design and deployment of new technologies. The UK will work with industry, the British Standards Institution and other countries to influence new technical standards and develop new public policy approaches to technology which encourage innovation and interoperability, while protecting rights and freedoms. (p56)”. Standards for the Fourth Industrial Revolution stated that engagement in international standardisation can “project UK thought leadership and protect the interests of British consumers and businesses by ensuring British interests are directly represented in the agreement of international standards” and that Standards facilitate “knowledge transfer to leverage R&D outputs and ensure interoperability, facilitating widespread adoption and deployment of new technologies.”

² European Commission, Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal cooperation agreements, 2011/C11/01, 14/01/2011, OJ 11/1 (HGL), para. 279.

³ Id., para. 279 (SDOs are “free to put in place rules and procedures that do not violate competition rules whilst being different to those described in paragraphs 280 to 186”); cf. id. at 285 (specifying licensing to “all third parties”).

⁴ See, e.g., Makan Delrahim, Assistant Attorney Gen., U.S. Dep’t of Justice, Antitrust Div., The “New Madison” Approach to Antitrust and Intellectual Property Law, Remarks Before the University of Pennsylvania Law School 11 (Mar. 16, 2018), <https://www.justice.gov/opa/speech/file/1044316/download> (“[a]s enforcers, we have only limited insight into the patent policies of various standard-setting organizations, and we do not seek to impose a top-down mandate to skew the playing field clearly in the direction of innovators or implementers.”); Intellectual Property Enforcement Guidelines, Competition Bureau Canada, ¶ 200 (Mar. 2019) (listing provisions that SDOs may adopt to mitigate the risk of opportunism).

⁵ Comments of ACT - The App Association to the European Commission’s Directorate-General for Competition on its Roadmap, Evaluation of the two Block Exemption Regulations for horizontal co-operation agreements, Appendix 2 Core Principles and Approaches for Licensing of Standard Essential Patents (Oct. 3, 2019). Available at: <https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2019-4715393/feedback/F473574.en?p.id=5763121>. It is widely known that ACT is funded by and operates at the behest of Apple.



parties” language from paragraph 285 and eliminate the possibility of such misinterpretation altogether.

As a foundational matter, creating an obligation to “license to all” would radically change the longstanding industry practice of end-device licensing.⁶ In this regard, it is important to bear in mind that, for cellular standards, the 5G value chain is complex and multilateral, and this is true whether in the mobile, auto, IoT segments, or elsewhere. This chain consists of complimentary layers of technology. For instance, the wireless communication systems design and standards (e.g., 5G technology standards) form the fundamental foundation of the entire supply chain, over which other product pillars are supported, such as component and chips, mobile devices, infrastructure, network operators and, increasingly, other industries that will utilize 5G technologies.⁷

Given that the layers are complimentary, there are strong interdependencies among them such that the value generated by the entire vertical, for instance in IoT, depends on the success of each individual layer. And the conditions for success are clear. First, all layers must invest: they must find it optimal to invest and have both the ability and incentive to invest. Second, at each layer the most efficient technologies must be selected. And, the overall price, or total cost of ownership, needs to be sufficiently modest to enable high market penetration.

A compulsory “license to all” policy would result in a shift from efficient single-point licensing to inefficient multi-level licensing including component-level licensing. Such a shift would harm consumer welfare and inhibit the goal of enhancing access to standards.⁸

First, economic modelling has shown that, as compared to the existing industry practice of end-device level licensing, compulsory component-level licensing would result in higher prices for end-consumers and likely reduce innovation.⁹

Second, multi-level licensing would materially increase transaction costs in at least three ways: (1) the complexity of negotiating each license agreement; (2) the number and frequency of license negotiations and agreements that will be needed; and (3) the difficulty of monitoring compliance with license agreements. These elements would negatively impact the entire industry, adding costs to both licensors and licensees at each the device and component level. These increased costs strongly militate against requiring multi-level licensing.

In a world of multi-level licensing, both the portfolio and the royalties would have to be split among the makers of each licensed component and the maker of the complete licensed device. At a minimum, and even making the simplifying assumption that the only licensed components

⁶ See, e.g., Marvin Blecker, Tom Sanchez & Eric Stasik, *An Experience-Based Look At The Licensing Practices That Drive The Cellular Communications Industry: Whole Portfolio/Whole Device Licensing*, LI (4) LES NOUVELLES 221 (2016).

⁷ See Presentation by Dr. Jorge Padilla, *International IP and Antitrust Policies for Innovation and the Race to 5G, LeadershipIP* (2018), at 6:25-15:50, <http://www.ipleadership.org/videos/international-ip-and-antitrust-policies-innovation-and-race-5g>.

⁸ The U.S. Court of Appeals for the Ninth Circuit recently confirmed that licensors have no antitrust duty to “license to all” and cautioned against “using the antitrust laws to remedy what are essentially contractual disputes between private parties engaged in the pursuit of technological innovation.” See *FTC v. Qualcomm Inc.*, 969 F. 3d 974, 995-97 (9th Cir. 2020).

⁹ Gerard Llobet & Jorge Padilla, *The Optimal Scope of the Royalty Base in Patent Licensing*, 59 J.L. & ECON. 45, 47 (2016) [hereinafter “Llobet & Padilla”]. Conservative estimates show that for Qualcomm alone, compulsory component-level licensing would result in \$2.54 billion a year in worldwide higher prices to consumers due to greater double-marginalization and increased incentives for pass-through. For a detailed explanation of the welfare effects, see Note by Koren W. Wong-Ervin, OECD Competition Committee, Roundtable on “Licensing of IP Rights and Competition Law” 3-4 (June 6, 2019), available at http://www.oecd.org/daf/competition/Wong-Ervin%20OECD%20Paper_5-13-19.pdf.



would be modem chips, this would require negotiations over which portion of royalties should come from the baseband chipset supplier and which portion should come from the original equipment manufacturer (OEM). Both the baseband chipset supplier and the OEM would have a strong incentive to shift royalty burden onto each other, and to argue that more of the value from the SEP holders' innovations is reflected in the other's product. To support their respective positions, each would argue that more of the tens of thousands of cellular SEPs (and the even greater number of patent claims in those SEPs) were practiced by the other's product. And, to further increase complexity, the negotiations with the baseband chipset supplier and the OEM would likely happen independently from one another.

Even if all parties were operating in the utmost good faith to reach the "correct" allocation of value between chipset supplier and OEM, this process would still be far more complicated and costly than current negotiations at the end-device level. But, it is unrealistic to assume that all licensees would, in all instances, work cooperatively to reach the "correct" result. Rather, multi-level licensing would lead to endless disputes over these very issues. These disputes would likely involve detailed technical discussions about the scope of tens of thousands of SEPs and at which level they are practiced, all of which leads to substantial uncertainty and debate. These purely commercial disputes over the level at which the value resides would also result in the exercise of bargaining leverage derived from other factors.

Ultimately, and perhaps most troubling, chipset suppliers and device makers would have ample incentive and ability to engage in "hold-out" to delay or avoid altogether paying any royalties until these disputes are resolved, even if brought for pretextual reasons and/or in bad faith. "Hold-out" refers to when an SEP-user refuses to take a FRAND offer to enter into a patent licensing arrangement, electing instead to draw out negotiations indefinitely in an attempt to extract sub-FRAND terms. It is often discussed in tandem with the concept of "hold-up," the theory that, when a patented technology becomes essential to practicing a standard, the patent holder could exercise supposed market power as leverage over implementers to negotiate supra-FRAND royalties by threatening to "withhold" patented technology altogether. As discussed later in this Response, Qualcomm urges the CMA to use this opportunity to adopt a more balanced approach to patent license negotiations, recognizing that FRAND discussions are a two-way street and that, while hold-up is a theoretical concern, hold-out presents a much more significant problem for which exclusionary relief should be available to patent holders.

Regarding the broader issue of multi-level licensing, with respect to increased monitoring costs, under the current practice of end-device level licensing, SEP holders receive royalties only from end-device makers, and those royalties do not vary depending on which firm supplied the baseband chipset in the device. SEP holders therefore do not need to know the identity of the chipset supplier. But, in a world of multi-level licensing, SEP holders would likely need to have their device maker licensees report which baseband chipset is in each device sold, so that they could ensure they were paid in full on each device (both the royalty from the device maker and the royalty from the baseband supplier). Royalties due from the device maker could vary depending on which components are in the device, whether they are licensed and, if so, what royalties are due. Monitoring compliance, even if all parties acted in good faith, would be extremely complicated and costly. And, in the real world in which licensees actively seek to reduce their royalty payments through non-compliance, monitoring costs would go up even higher.

Third, multi-level licensing would lead to material disruption and transition. The equilibrium developed in the industry decades ago, and the pricing of various inputs, including baseband chipsets, is based on this stable structure. Mandating a change would cause massive disruption. No baseband chipset supplier would want to be the first to take a license because the license would increase its costs relative to its competitors. On the other hand, existing OEM licensees would likely seek to renegotiate their agreements to reduce their royalties in light of the expectation that the baseband chipset supplier would begin to bear some portion of the royalty expense. There would be immense opportunity for cheating and gamesmanship during the transition from the current licensing structure to multi-level licensing.

To the extent advocates for multi-level licensing raise antitrust concerns, the central question from the competition law perspective is whether competition in the markets for the products implementing the standards, including the markets for inputs into those products, is restricted. Accordingly, any patent licensing commitment to an SDO that ensures access to the standard for any implementer seeking to enter into a licensing arrangement is sufficient to alleviate competition law concerns in this area. Such access does not require a patent holder to be compelled to grant a license on demand to anyone in the value chain, and in at least one jurisdiction dispute(s) about the license terms are commercial disputes that do not give rise to competition law concerns.¹⁰

It is therefore inappropriate, and disproportionate, for the UK to adopt the HGL, which specify safe harbours to enhance legal certainty, and suggest that the only way SDOs may comply with the relevant competition laws is to adopt a “licensing to all” policy. This approach, in Qualcomm’s view, would effectively substitute the views of private SDOs and their members, based on the incentives they need to create for successful participation, with a central planner’s view on how to license patents contributed to a standard, and disrupt the carefully balanced decisions of SDOs by putting a thumb on the scale in favour of implementors over innovators. It would also be contrary to the decisions of various SDOs that have explicitly considered and rejected such an approach,¹¹ as well as to what is required under SDO policies such as ETSI’s.¹²

Finally, competition law concerns with SEP licensing often include the debate over the theoretical “hold-up” versus the much more real concern of “hold-out”. While the HGLs are, and should be, geared towards horizontal agreement patterns only, they do nonetheless make explicit reference to “hold-up”.¹³ This theoretical concern has not born out in practice, and the

¹⁰ See *FTC v. Qualcomm Inc.*, 969 F. 3d 974, 995-97 (9th Cir. 2020).

¹¹ See, e.g., CEN & CENELEC, CEN and CENELEC Position on: Standard Essential Patents and Fair, Reasonable And Non-Discriminatory (FRAND) Commitments 13-14 (Sept. 2016), <https://www.cencenelec.eu/News/Policy.Opinions/PolicyOpinions/EssentialPatents.pdf> (emphasis added; internal citations omitted). See also Scott Bradner & Jorge Contreras, *Intellectual Property Rights in IETF Technology* (IETF Network Working Group, Working Paper, 2012) https://datatracker.ietf.org/doc/draft-bradner-rfc3979bis/00/?include_text=1 (noting that the Internet Engineering Task Force considered and abandoned a proposal to adopt language that would require component- or multi-level licensing (“license is available to all implementers”)).

¹² ETSI Intellectual Property Rights Policy §§ 6.1, 15.4, 15.8 (Apr. 9, 2019) <http://www.etsi.org/images/files/ipr/etsi-ipr-policy.pdf> (emphasis added). See also Jorge Padilla & Koren W. Wong-Ervin, *Portfolio Licensing to Makers of Downstream End-User Devices: Analyzing Refusals to License FRAND-Assured Standard-Essential Patents at the Component Level*, 62(3) ANTITRUST BULL. 494, 500 (2017) (explaining what ETSI’s policy requires in terms of level of licensing).

¹³ Guidelines at paragraph 269.

CMA should either remove such reference altogether or recognize hold-out as the more likely problem preventing licensing negotiations from successfully concluding.

As noted above, under a hold-up theory, a patent holder theoretically has the ability to “hold up” the users of its technology by threatening to destroy the implementers’ business if they do not agree to supra-FRAND rates. In reality, a patent holder has no ability to enact such a scheme unilaterally. Because securing a patent requires disclosing one’s inventions, there is nothing the patent holder can do on its own to prevent an implementer from incorporating the standard or patented technology into its product. The patent holder must go to a court or the ITC to seek exclusionary or injunctive relief to stop the implementer. Thus, a demand for excessive royalties is not actionable by the patent holder alone. Hold-up can only credibly extract excessive royalties if a court will back it up by issuing an injunction or other exclusionary order. But, case law around the world has limited patent holders’ ability to obtain such relief to the very limited, narrow circumstance of demonstrating an unwilling licensee. As discussed below, the difficulties with such an affirmative showing render convincing a court to confer excessively high royalties near impossible.

In contrast, “hold-out” (sometimes referred to as “efficient infringement”) occurs when implementers use a patent holders’ standardized technologies for as long as possible without a license to do so.¹⁴ In stark contrast to hold-up, which requires duping a court to effectuate, hold-out very much can be achieved by the implementer acting entirely alone. Indeed, there are a myriad of tactics an implementer can take on its own to efficiently infringe upon a patent holders’ technology, whether it be delaying licensing negotiations, insisting on patent-by-patent, jurisdiction-by-jurisdiction litigation, demanding protracted technical discussions, or simply ignoring FRAND offers altogether.¹⁵ As two prominent scholars explained, hold-out is effective for implementers because it “forces the innovator to either undertake significant litigation costs and time delays to extract a licensing payment through a court order, or else to simply drop the matter because the licensing game is no longer worth the candle.”¹⁶

The UK court system and other jurisdictions have already begun to recognise the very real harm hold-out is causing to licensing negotiations in technology markets.¹⁷ The UK now has the

Intellectual property laws and competition laws share the same objectives (106) of promoting innovation and enhancing consumer welfare. IPR promote dynamic competition by encouraging undertakings to invest in developing new or improved products and processes. IPR are therefore in general pro-competitive. However, by virtue of its IPR, a participant holding IPR essential for implementing the standard, could, in the specific context of standard-setting, also acquire control over the use of a standard. When the standard constitutes a barrier to entry, the company could thereby control the product or service market to which the standard relates. This in turn could allow companies to behave in anti-competitive ways, for example by ‘holding-up’ users after the adoption of the standard either by refusing to license the necessary IPR or by extracting excess rents by way of excessive (107) royalty fees thereby preventing effective access to the standard. However, even if the establishment of a standard can create or increase the market power of IPR holders possessing IPR essential to the standard, there is no presumption that holding or exercising IPR essential to a standard equates to the possession or exercise of market power. The question of market power can only be assessed on a case by case basis.

¹⁴ “Unwilling SEP Licensees: A Taxonomy of Hold-Out Strategies,” IP Europe (May 26, 2021), <https://ipeurope.oldcotest.eu/wp-content/uploads/2021/05/210526-Taxonomy-of-hold-out-strategies-with-annex.final.pdf>.

¹⁵ See *id.* (discussing several common hold-out strategies employed by implementers).

¹⁶ Richard A. Epstein & Kayvan B. Noroozi, *Why Incentives for “Patent Holdout” Threaten to dismantle FRAND, and Why it Matters*, 32 Berkeley Tech. L.J. 1381, 1384 (2017).

¹⁷ See *Unwired Planet Int’l v. Huawei Technologies Ltd.*, [2020] UKSC [164-69]. See also Communication from the European Commission, *Setting out the EU Approach to Standard Essential Patents*, at 9-10 COM (2017) 712 final (Nov. 29, 2017) (advocating for a “balanced and predictable enforcement environment” for SEPs that not only provide safeguards against hold-up but also “protect[s] SEP holders against infringers unwilling to conclude a license on FRAND terms.”).

opportunity to be a leading voice in restoring balance to license negotiations by explicitly condemning such behaviour in its adoptions of the HGLs.¹⁸

To conclude, there is simply no evidence supporting the contention that continuing to allow SDOs to require access to all (as opposed to “license to all”) is harmful to or degrades consumer welfare. While the HGLs as adopted by the EU strike a good balance of block exempting licensing to all while allowing self-assessment for those SDOs that require simply access to all, there is a genuine concern that fear spread by some industry members may cause SDOs to amend their internal rules. For the sake of legal certainty, the CMA should take this moment and update the HGLs it adopts to enhance clarity and expressly recognize that SDOs that require access to all are not in violation of UK competition laws.

Looking Forward

In 2019 and 2021, the EU engaged in a similar consultation process inquiring into the efficacy of the HBER and HGLs, and their guidance on standardisation specifically. During the course of that Consultation, certain groups advocated for enhanced disclosure practices and increased transparency, along with the recognition of License Negotiating Groups (LNGs) as lawful entities. They also voiced concerns about the impact of SEP licensing in emerging industries such as IoT, particularly on small- to medium-sized enterprises. As discussed below, these concerns are unfounded.

The existing language in the retained Guidelines strikes the right balance on SDO disclosure policies by encouraging disclosure while at the same time balancing the burden on organizations contributing their technology. To illustrate this, paragraph 286 states that “... the [SDO] IPR policy would need to require good faith disclosure, by participants, of their IPR that might be essential for the implementation of the standard under development.” It then continues on to state that: “It is also sufficient if the participant declares that it is likely to have IPR claims over a particular technology (without identifying specific IPR claims or applications for IPR.” Although hundreds of companies voluntarily participate in the process of generating technical standards, there are only a handful that are holders and licensors of major SEP portfolios. It is in the interest of these licensors to enable greater transparency and clarity about the respective positions of various patent portfolios, which helps in facilitating licensing negotiations. It should be noted, however, that greater transparency does not solve the current concerns vis-à-vis hold-out, delayed negotiations, and litigation between large companies. Any calls by certain entities for the retained Guidelines to be updated to require standards contributors to identify specific patent claims and applications in SDO disclosures risk upsetting the balance by increasing the cost burden on the contributors as well limiting the ability of SDOs to be able to craft IPR policies that are “adapted to a particular industry”.

Nor should the CMA give any credence to the concept of LNGs. At its core, an LNG is a group of purchasers getting together to negotiate below-market rates; in other words, a group of

¹⁸ If the CMA is inclined to modify the HGLs to renounce hold-up, then it should also address the concepts of “willing” and “unwilling” licensees. For instance, the CMA could articulate that, while a “willing licensee” is safe from exclusionary orders or injunctive relief, such relief remains available and should be enforced against an “unwilling licensee.” Fundamentally, a “willing licensee” is a licensee willing to accept a license on FRAND terms, whatever those terms may be. The concept of “unwilling licensee” is a bit more amorphous given the deceptive behaviour in which an implementer can engage, but should include factors such as whether the implementer is willing to submit to a binding and non-contingent third-party determination of a FRAND rate; their willingness to pay a reasonable measure of royalties into escrow during the resolution of any dispute; responsiveness during negotiations; and/or any unreasonable or unnecessary delays during negotiations. Ultimately, a balanced approach to defining a licensee as either willing or unwilling treats this issue as highly case and fact specific.



horizontal competitors gathering together to engage in either a group boycott or price-fixing behaviour. Such conduct is recognized around the world as unlawful behaviour violative of jurisdictions' antitrust laws. Licensees who are competing downstream inherently have less incentive to cooperate in licensing because their economic incentive should be to try to obtain the best terms possible – terms better than their competitors. If implementers have decided to negotiate jointly, then they are likely to have concluded that through joint action they can lower their absolute licensing costs to below-market rates. The anticompetitive effects of such actions are well known and understood. In the SEP licensing market specifically, allowing implementers to extract artificially low prices for SEPs would, in turn, reduce choice in the short term for technologies that are contributed to standards and reduce innovation in the long term. In short, innovators would no longer be willing to commit considerable funding to R&D because they would no longer be able to recoup their investment.

If these core UK, European and US innovators leave the market, control of the 5G and 6G technology roadmap will fall to others. Companies that are likely to be either very large, wealthy, and vertically integrated, or those that enjoy significant state funding. Either of which are likely to turn the cellular roadmap to their own self-interest. Unlike companies with a licensing model, these other companies may have a profit motive that is incompatible with efforts to rapidly drive 5G or 6G roadmaps or expand the technology into other verticals outside of the traditional cellular industry. Ceding the leadership in development of 5G & 6G to them would have a long-term negative impact on the UK's digital ambitions and the wider western world's interests.

Advocates in favour of recognizing LNGs as lawful often raise the argument that such groups are necessary – not to protect the large implementer incumbents, but to protect small- to medium-sized enterprises in emerging technologies such as IoT. This argument has no merit. Qualcomm has been licensing in the IoT space for many years, and the emergence of 5G has not changed how license negotiations are concluded in this space. IoT licensing typically does not involve small companies. Rather, licensing occurs at the module level, to large module makers well-versed in patent licensing negotiations and, often, existing licensees. It is in patent holders' economic interest to license at this level, where there is some degree of certainty in establishing successful commercial relationships, as opposed to licensing small companies with a high degree of fragmentation and risk of exiting the segment, particularly in nascent technologies.

The UK therefore stands at an important crossroads in how it approaches innovation in the technology space. Given the challenges posed by certain actors to the rights and freedoms-based values the UK wants to see embedded in global technical standards, it is of vital importance that we get this right. The CMA and the UK Government should take the opportunity provided by this review and the ability to diverge from EU regulation to assume a thought leadership position in this space – clarifying the guidance around standardisation and becoming a leading voice in support of both restoring balance to license negotiations and bolstering the system of international standards setting which has underpinned decades of rapid technological innovation.