

# SEP Licensing in the United States

Understanding the impact on U.S. business

U.S. Business Survey

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Prepared for

ACT | The App Association

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## TABLE OF CONTENTS

|   |    |
|---|----|
| EXECUTIVE SUMMARY .....   | 1  |
| 1. INTRODUCTION AND OVERVIEW .....  | 3  |
| 2. SURVEY DESIGN .....  | 4  |
| 2.1. THE SAMPLE OF U.S. FIRMS .....   | 4  |
| 2.2. SURVEY DESIGN AND FIELDWORK .....  | 5  |
| 2.3. SAMPLE OVERVIEW .....  | 5  |
| 3. USE OF INJUNCTIONS AND HOLD-UP .....   | 9  |
| 3.1. WHAT CONSTITUTES HOLD-UP? .....  | 9  |
| 3.2. CONCERNS OVER HOLD-UP AND OPPORTUNISTIC BEHAVIOR .....   | 10 |
| 3.3. IMPACT OF OPPORTUNISTIC BEHAVIOR AND THE NEED FOR RESTRICTIONS .....                                   | 11 |
| 4. FRAND ROYALTIES AND THE OPTIMAL ROYALTY BASE .....   | 12 |
| 4.1. END-PRODUCT LEVEL LICENSING LEADS TO HIGHER ROYALTIES .....  | 12 |
| 4.2. COMPONENT SUPPLIERS SHOULD BE ABLE TO OBTAIN A FRAND LICENSE .....                                     | 13 |
| 4.3. COMPONENT LEVEL LICENSING LEADS TO LOWER TRANSACTION COSTS .....                                       | 14 |
| 4.4. END-PRODUCT LEVEL LICENSING PUTS SMALL FIRMS AT A COMPETITIVE DISADVANTAGE ...                         | 15 |
| 4.5. AVAILABILITY OF LICENSED COMPONENTS FROM MULTIPLE SUPPLIERS INCREASES SUPPLY<br>CHAIN RESILIENCY ..... | 15 |
| 5. WILLINGNESS TO TAKE A LICENSE .....  | 16 |
| 6. GLOBAL LICENSING DISPUTES .....  | 18 |
| 6.1. GLOBAL CONSISTENCY IN LICENSING DISPUTES .....   | 18 |
| 6.2. WORLDWIDE LICENSING .....  | 19 |
| 7. REFORM OF THE SEP LICENSING SYSTEM .....   | 20 |
| 8. CONCLUSIONS .....  | 21 |
| APPENDIX A – QUESTIONNAIRE .....  | 22 |
| A.1 INTRODUCTION .....  | 22 |
| A.2 SCREENING QUESTIONS .....   | 22 |
| A.3 EXPERIENCES AND VIEWS ON SEP LICENSING .....  | 24 |
| A.4 FURTHER COMPANY CHARACTERISTICS .....   | 32 |

## LIST OF FIGURES

|  |    |
|--|----|
| Figure 1: Size of firms in survey sample .....   | 6  |
| Figure 2: Sector of firms in survey sample .....   | 7  |
| Figure 3: Standardized technologies used by firms in survey sample .....   | 7  |
| Figure 4: What behavior of SEP holders constitutes hold-up? .....  | 10 |
| Figure 5: Charging of excessive royalties and imposing non-FRAND terms .....   | 11 |
| Figure 6: Need for more restrictions on use of injunctions .....   | 12 |
| Figure 7: Charging royalties on end-product level results in higher royalties .....  | 13 |
| Figure 8: Component suppliers should be able to obtain a FRAND license .....   | 14 |
| Figure 9: Component level licensing reduces transaction costs .....  | 14 |
| Figure 10: End-product level licensing puts start-ups and SMBs at a disadvantage in licensing negotiations.....  | 15 |
| Figure 11: Access to already licensed components from multiple suppliers increases supply chain resiliency .....   | 16 |
| Figure 12: Actions a potential licensee should be able to take without threat of injunction .....  | 17 |
| Figure 13: Potential licensees that clearly state their willingness to license or offer to take a license at FRAND terms should never have their products removed from the U.S. market ..... | 18 |
| Figure 14: Choice of jurisdiction impacts the outcome of a licensing dispute .....   | 19 |
| Figure 15: Global licensing concerns .....   | 20 |
| Figure 16: Reform of the SEP licensing system and the role of government .....   | 21 |

## EXECUTIVE SUMMARY

1. There is an ongoing debate in the United States about what intellectual property policies regarding technology standards will be most effective in promoting innovation and competition. In 2022, U.S. agencies withdrew the 2019 Policy Statement, which had marked a clear shift toward affording holders of standard-essential patents (SEPs) more latitude to pursue injunctive relief against users of standards, but the agencies did not re-adopt the earlier 2013 Policy Statement or issue new guidance on SEPs.<sup>1</sup> The U.S. Department of Justice (DOJ) announced in this context that it will scrutinize opportunistic conduct, with a particular focus on abusive practices that disproportionately affect small and medium-sized businesses (SMBs) or highly concentrated markets.
2. ACT | The App Association (the App Association), a global trade association for small and medium-sized technology businesses, seeks to contribute to this discussion with evidence that gives an objective assessment of the effectiveness of SEP licensing in the United States. The App Association has asked Charles River Associates (CRA) to undertake a survey of U.S. businesses that use technical standards in their products and so are currently or potentially affected by SEP licensing. This survey aims to summarize the views and experiences of U.S. businesses regarding SEP licensing and to understand any issues that U.S. businesses may face with SEP licensing.
3. By proactively seeking the views of firms, particularly SMBs that would not otherwise be visible in the public discussion, we aim to expand the information on SEP licensing available to U.S. policymakers. The experiences and issues raised by licensees are critical for considering how the policies for SEPs should be re-calibrated following the withdrawal of the 2019 Policy Statement.
4. The survey results reflect responses from 305 firms active in the United States and that use standardized technology. While the survey is not intended to be representative of all U.S. firms, it captures the views of more U.S. firms involved with SEP licensing than other research undertaken to date of which we are aware. Importantly, the results also capture the views of small businesses that may not be SEP licensees yet, but for which SEP licensing may still, either currently or in the future, affect their business.
5. The results show that respondents have significant concerns with opportunistic behavior by SEP licensors and the risk of injunctions in the current SEP licensing framework.
  - Despite a commitment by SEP holders to license on fair, reasonable, and non-discriminatory (FRAND) terms, **almost 70% of respondents are concerned that SEP holders may behave opportunistically to charge excessive royalties or impose non-FRAND terms.**
  - To avoid a court order banning their products from the U.S. market, **more than two-thirds of respondents would accept SEP license terms that they do not consider to be FRAND.**

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<sup>1</sup> For ease of discussion, the term “SEP” is used in this report to refer to standard-essential patents committed for licensing on FRAND terms. We use the terms RAND (“reasonable and non-discriminatory”) and FRAND (“fair, reasonable and non-discriminatory”) interchangeably throughout this report.

- **Firms overwhelmingly consider a wide range of potential conduct by SEP holders to be hold-up or opportunistic behavior.** In a standard-setting context, hold-up refers to the ability of a patentee to extract more favorable licensing terms after a standard is set. The survey supports the view that a broad range of such behavior can be enabled by the market power conferred by the standard. Specifically, at least 70% of respondents considered the following to be hold-up: seeking or threatening to seek injunctions (76%), requiring licensees to pay royalties for patents that are not essential (73%) or relevant to the licensees' specific products (70%), refusing to license a certain level in the value chain (71%), and basing royalty demands on prior licenses that are not reasonably comparable (70%).
  - The survey asked participants whether the current approach to injunctions should continue. **Two-thirds (67%) of respondents support more restrictions on SEP holders to prevent them from seeking injunctions** that ban products from the market. **Of firms experienced with SEP licensing, 73% of respondents thought more restrictions on the use of injunctions are required.**
6. There has been public debate as to whether SEP royalties should be calculated on the value of the end product sold to consumers (e.g., a smartphone) or on the component that provides standardized functionality (e.g., the chip). The survey results indicate that most firms consider that licensing at the end-device level may result in inflated royalties and risks disadvantaging start-ups and SMBs:
- **An overwhelming majority (79%) of respondents believe that royalties based on the end product's value will be higher** than if they are based on the component's value.
  - **An overwhelming majority (78%) of respondents state that component suppliers should have a right to obtain SEP licenses on FRAND terms.**
  - **The vast majority (69%) of respondents believe that component licensing results in fewer licensing negotiations and lower transaction costs along the value chain.**
  - **An overwhelming majority (77%) of respondents believe that start-ups and SMBs with limited resources and experiences with SEP licensing are disadvantaged if they must negotiate directly with SEP holders because they are unable to purchase licensed components.** With the Internet of Things (IoT) leading to many more start-ups and SMBs implementing standardized technologies, there is an increasing scope for such disparities between SEP holders and potential licensees, and a greater risk of abusive behavior by the SEP holder, including hold-up and litigation.
  - **An overwhelming majority (78%) of respondents believe that access to licensed components from multiple suppliers increases supply chain resiliency.**
7. Whether a potential licensee is deemed willing to agree to a license on FRAND terms can play an important role in court proceedings. Some SEP holders have argued that a wide variety of actions could show that a licensee is "unwilling" to license on FRAND terms. The survey sought to understand the different actions that firms believe a prospective licensee could take without bringing its willingness to take a license into question and resulting in SEP holders seeking to ban their products from the market.

- **Most respondents felt that a wide range of actions could be taken in good faith without calling into question willingness**, including, for example: initiating legal challenges to the enforceability, validity, or essentiality of the relevant SEPs (76% of respondents agreeing and 6% disagreeing); requesting clarifications or more information, such as claim charts, about the licensing offer (82% agreeing and 5% disagreeing); making a counteroffer that the firm has a reasonable basis to believe is FRAND (80% agreeing and 7% disagreeing); requesting to enter into a U.S.-only license agreement (76% agreeing and 9% disagreeing).
  - **Almost three-quarters (73%) of respondents agree that a potential licensee that clearly states its willingness to enter a FRAND license should never have its products banned from the U.S. market due to a SEP infringement.** Similarly, a significant majority (72%) of respondents felt that a potential licensee that offers to take a license on FRAND terms determined by a court or arbitrator should never have their products banned from the U.S. market due to a SEP infringement.
8. In the context of SEP licensing, litigation often occurs across several jurisdictions. Both SEP holders and licensees may pursue a legal dispute regarding SEPs in jurisdictions which may be more favorable to them.
- **Around three-quarters (74%) of respondents share the perception that the choice of jurisdiction has a significant impact on the outcome of the dispute.**
  - **Almost 80% of respondents are concerned by the prospect of having to pay for a worldwide patent portfolio on terms determined by a foreign court before a U.S. court has decided whether they use the U.S. patents in the portfolio and whether the patents are valid.**
9. The prevalence of SEP licensing issues and the strength of feeling amongst respondents meant that **73% of the respondents would support intervention by the U.S. government to ensure that SEP holders abide by the commitments to license their SEPs on FRAND terms and avoid anticompetitive behavior.** In this context, around three-quarters of respondents agree that the International Trade Commission (ITC) should not have the power to bar firms that are willing to take a license on FRAND terms from selling products in the U.S. market.

## 1. INTRODUCTION AND OVERVIEW

10. The development of technical standards ensures seamless integration and functionality among systems designed by different market participants. Market participants cooperate to ensure interoperability of the technology. Standard-essential patents (SEPs) protect some of the technology that underpins, and is incorporated into, technical standards.
11. A patent's inclusion in a standard generally increases a SEP holder's market power, potentially substantially. Before adoption of the standard, a SEP holder likely faces competition from alternative technologies. Once the standard is adopted, users of the standard become "locked in" to the technologies included in the standard, and the IP rights to use these technologies can become indispensable.
12. Many standard developing organizations (SDOs) therefore require that SEP holders who wish to have their technology incorporated into a standard agree to a series of obligations and commitments, including to license their SEPs on fair, reasonable, and non-

discriminatory (FRAND) terms and to make licenses available to all third parties. Effective functioning of the SEP system is reliant on these commitments being honored.

13. Legal challenges associated with these commitments have increased considerably over the last 10-15 years, with significant debate between SEP holders and potential licensees over the nature and extent of abuses. This has led to concerns that the overall SEP licensing system is ineffective.
14. An effective SEP licensing system is critical for investment and innovation in the U.S. economy. The impact of SEP licensing on the economy is set to hugely increase over the next 10 years as smart devices using the Internet of Things (IoT) are developed. Increased connectivity will increase the economy's reliance on SEPs, and the IoT is expected to introduce a large number of startups and SMBs to SEP implementation and licensing. The experiences and issues raised by these U.S. firms are highly relevant for government agencies, courts, and other institutions considering SEP policies following the withdrawal of the 2019 Policy Statement.
15. This report is organized into eight sections that provide a comprehensive analysis of the survey results. Section 2 provides an overview of the survey design and sample population. Section 3 examines firms' views on hold-up and the impact of injunctions. Section 4 reports respondents' views on the optimal royalty base for firms. Section 5 explores actions that a willing licensee might reasonably take without risking increased exposure to an injunction. Section 6 reviews firms' views on global licensing disputes, and Section 7 examines support for reform and government intervention. Section 8 concludes.

## 2. SURVEY DESIGN

### 2.1. The sample of U.S. firms

16. To ensure as large, broad, and relevant a sample as possible, we have built a unique database of firms that are active either as users of technical standards and/or as SEP licensors for the purpose of this research.
17. This database includes firms from publicly disclosed licensee lists, including patent pools<sup>2</sup> and SEP holders.<sup>3</sup> Together these lists provided roughly 2,400 licensees of various technical standards.<sup>4</sup> This list was expanded with additional U.S. firms with potential SEP licensing experience, obtained from a range of company databases, market reports and sectoral and industry reviews.<sup>5</sup>

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<sup>2</sup> For example, MPEG LA (AVC, HEVC, Qi Wireless, MPEG-4, see <https://www.mpegla.com/>), Access Advance (HEVC, see <https://accessadvance.com/licensing-programs/hevc-advance/>), and Avanci (see <https://www.avanci.com/>).

<sup>3</sup> For example, Qualcomm Technology Licensing (see <https://www.qualcomm.com/licensing>) and Interdigital (see <https://www.interdigital.com/licensing>).

<sup>4</sup> Licensee lists include worldwide licensees. The survey company identified and contacted only firms from those lists that are active in the US. In addition, firms that are not selling products in the United States were screened out in question 2 of the survey.

<sup>5</sup> For example, Crunchbase and Berg Insights' reports on the top 500 largest cellular IoT projects worldwide as well as on 300 emerging cellular IoT projects worldwide.



18. In identifying firms for inclusion in the database, we focused primarily on firms and sectors that use standards most relevant to anticipated future technology developments and specifically to connectivity (including the IoT space), namely: cellular standards (3G, 4G, 5G),<sup>6</sup> other wireless standards (Wi-Fi), Bluetooth, wireless charging, and playback of compressed video/audio files.
19. The final database includes around 11,500 firms. Firms in the database are predominantly users of standards but may also own SEPs.

## **2.2. Survey design and fieldwork**

20. The survey was carried out by an independent specialist survey company between November 2022 and December 2022.<sup>7</sup> A total of 1,837 firms that are users of standardized technology and are selling products in the United States were contacted and either answered their phone or received a link to the web-based survey.<sup>8</sup>
21. In total, 305 interviews were completed (248 telephone interviews and 57 web-based surveys), giving a response rate of around 17%.<sup>9</sup> While our preference was to interview in-house counsel or, where available, specialist IP counsel, due to the high proportion of small firms in the sample (see below), it was not possible to identify in-house counsel for many of the firms. As a result, around one-third of interviews were conducted with in-house/IP counsel or head of legal affairs. Around 31% were conducted with Founders, Chief Executives, Managing Directors, or CFOs, 22% were done with Directors, and 13% with others.
22. On average, the survey lasted around 20 minutes. All responses were coded and verified using the survey company's internal software. The survey company provided a raw data file with the survey results to CRA which undertook the data analysis presented in this report.

## **2.3. Sample overview**

23. The sample includes 305 firms active in the United States and actively using standardized technology. The firms are predominantly SMBs.<sup>10</sup> As Figure 1 shows, 24% of firms had an annual turnover of less than \$10 million, 26% of firms had an annual turnover between \$10 million and \$50 million, 26% of firms had an annual turnover of \$50 million to \$100 million,

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6 Cellular accounts for the majority of licensing royalty payments and bulk of legal disputes.

7 Ronin International (<https://www.ronin.com/>), in accordance with the European Society for Opinion and Marketing Research. Interviewers were trained following IQCS (Interviewer Quality Control Scheme) best practices.

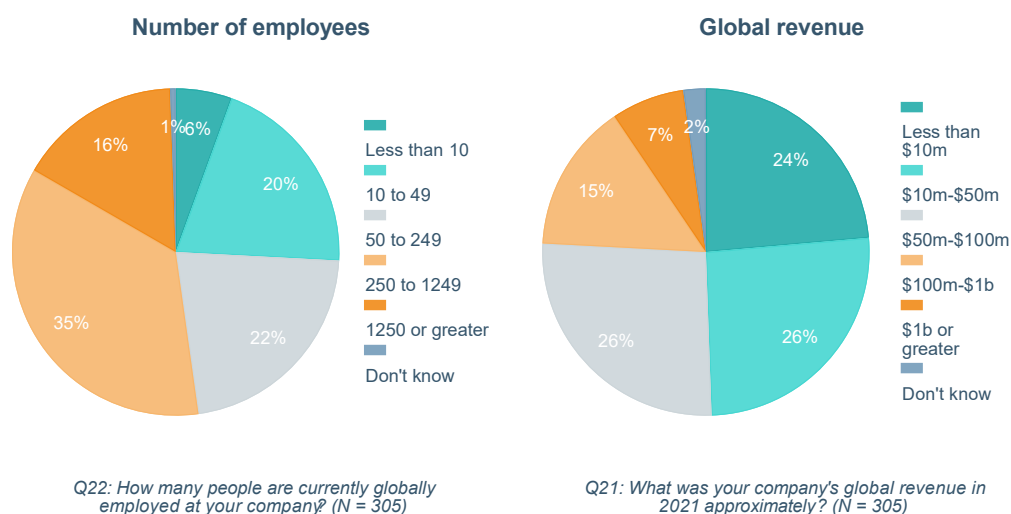
8 1,694 firms answered their phone, and 143 firms received a link to the web-based version of the survey.

9 Among the 1,694 firms that answered their phone, 248 completed the survey, giving a response rate of 15%. Among the 143 firms that received a link to the web-based survey, 40% completed the survey.

10 As a further quality check, Ronin has reviewed the list of participating firms upon completion of the survey and found only 6 firms in the final data for which the firm's webpage did not indicate that technology standards were used for its products or services. The corresponding entries were kept and excluding them would not have had any material impact on the results.

15% of firms had an annual turnover of \$100 million to \$1 billion. The sample also includes a small number of larger firms (7% of firms) with annual turnover of more than \$1 billion.<sup>11</sup>

**Figure 1: Size of firms in survey sample**



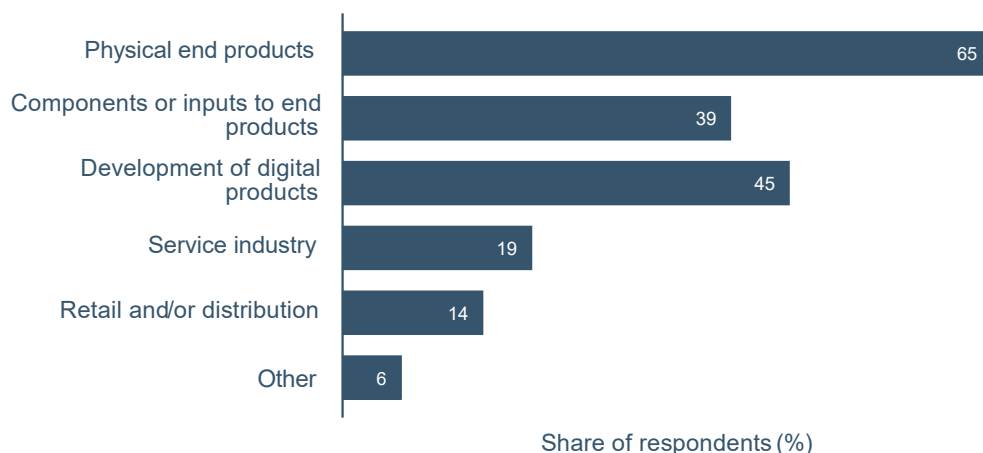
Source: U.S. SEP survey.

Note: Asked about the number of global employees, respondents could select among the following options: (i) "Less than 10," (ii) "10 to 49," (iii) "50 to 249," (iv) "250 to 1249," (v) "1250 or greater," and (vi) "Don't know". Asked about the global revenue, respondents could select among the following answer options: (i) "Less than 10 million USD," (ii) "10 million up to 50 million USD," (iii) "50 million up to 100 million USD," (iv) "100 million up to 1 billion USD," (v) "1 billion USD or greater," and (vi) "Don't know."

24. The firms in the sample are active across different sectors and levels of the supply chain. Rather than asking for a specific industrial sector, it was more useful – and straightforward – to understand if the firm was active in broad categories, including development and manufacturing (and within this whether end-product or component/inputs), development of digital services or software, service industry, retail / distribution, or other. Those selecting only either service industry or retail / distribution (or both) were screened out.

<sup>11</sup> Throughout this report, shares may not sum up to 100% due to rounding. Similarly, the sum or average of numbers presented in figures may not match the numbers mentioned in the text due to rounding.

**Figure 2: Sector of firms in survey sample**



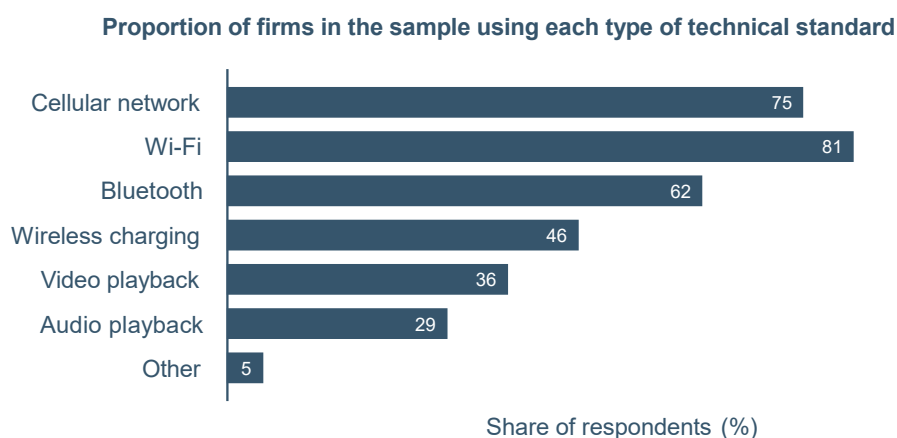
Q3: In which sector does your company operate? (N = 305)

Source: U.S. SEP survey.

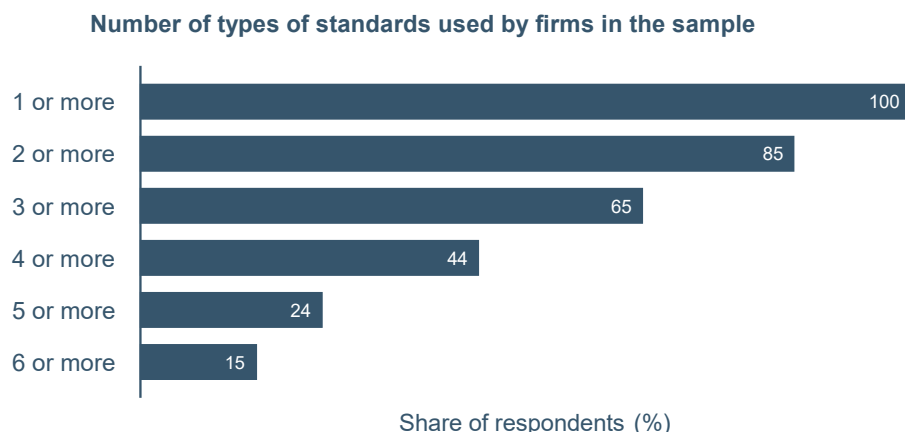
Note: Respondents could select multiple responses among the following response options: (i) "Manufacturing or developing physical end products," (ii) "Manufacturing or developing of components or inputs to end products made by other companies," (iii) "Development of digital products (including software)," (iv) "Service industry," (v) "Retail and/or distribution," and (vi) "Other (please specify)."

25. As outlined above, our aim was to achieve a sample of firms that use the technical standards most relevant for anticipated future technology developments and more specifically connectivity. The sample achieved this aim as it encompasses a broad range of standardized technologies, providing a balanced view of SEP licensing that avoids the risk of views reflecting possible issues in one standard that may not be shared by firms using different standards.
26. As Figure 3 shows, the most used type of standard was Wi-Fi (248 firms, 81% of firms in the sample, used this standard), followed by cellular (228 firms, 75%), Bluetooth (188 firms, 62%), wireless charging (139 firms, 46%) and playback of video (111 firms, 36%) and audio (87 firms, 29%) files.

**Figure 3: Standardized technologies used by firms in survey sample**



Q4: Do your products offer functionalities that use any standardized technologies? Specifically, do they have any of the following functionalities? (N = 305)



Source: U.S. SEP survey.

Note: Respondents could select multiple responses among the following response options: (i) "Cellular mobile network connectivity such as 3G, 4G or 5G," (ii) "Wireless connectivity such as Wi-Fi," (iii) "Bluetooth," (iv) "Wireless charging," (v) "Play back of compressed video files," (vi) "Play back of compressed audio files," and (vii) "Any other standard (please specify)." The category "Other" includes "Zigbee," "IEEE 2030.5," and "O-RAN," among others. In the bottom figure, the answer "Any other standard" is counted as one standard.

27. All of the firms in the sample use at least one type of technical standard and the vast majority (300) use those that were the focus of the survey. Many also used multiple types of standards with 259 firms (85% of firms) using more than one and two-thirds (65% of firms) using more than two. While in some cases this may reflect firms active in developing and selling multiple products based on different standards, in others it reflects the increasing use of multiple standardized technologies in the same product, as new products offer greater functionality and increased quality for consumers.
28. Finally, we also sought to determine the extent of familiarity with SEP licensing amongst firms in the sample. Just over three-quarters of the sample (233 firms) indicated some familiarity with SEP licensing,<sup>12</sup> either as an existing or prospective licensee or from other contexts.<sup>13</sup> This gives two possible sample bases to analyze the results: one sample with 233 firms that are "experienced with SEP licensing" and another sample with 305 firms that are "users of technical standards."<sup>14</sup> In general, we refer to the full sample of 305 respondents as this sample captures both existing and prospective licensees.

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<sup>12</sup> The question asked, "Do you or does your company have any views or experience related to the licensing of SEPs, or have you considered licensing SEPs from other companies?". Respondents could select among the following answer options: "Yes," "No," and "Don't know."

<sup>13</sup> The sample may also contain some SEP licensors. However, given the focus of the study on smaller firms, which tend to be predominately licensees or prospective licensees, there are likely not many SEP licensors in the sample.

<sup>14</sup> There are a number of reasons why a firm that uses standardized technologies may not have had actual SEP licensing experience. For example, the firm may source components that already have rights to SEPs, may not be aware of the need for a license to use the technology and have not yet been approached by SEP licensors, or may be aware without yet having concluded a license (e.g., due to a lack of knowledge about licensing and what agreements are needed or lack of resources necessary to engage in licensing negotiations). There is also a risk that responses to this question may be affected by the wide prevalence of NDAs that SEP holders require licensees to sign during the licensing process, meaning they are unable to discuss their licensing experience.

### 3. USE OF INJUNCTIONS AND HOLD-UP

29. If a standard becomes widely adopted, manufacturers of standard-compliant devices are typically “locked in” to the standard and its SEPs because there are no alternative ways to produce the product. Consequently, the elimination of competition during the standard-setting process can greatly improve SEP holders’ bargaining position. Concerns have been raised that SEP holders may abuse their enhanced market power by seeking excessive royalties or injunctions to ban the potential licensee’s products from the market (hold-up).
30. To address potential hold-up by SEP holders, SDOs have developed intellectual property rights (IPR) policies that ask patent holders to commit to license their SEPs on FRAND terms in exchange for inclusion in the standard.
31. SEP holders and potential licensees are usually able to reach licensing agreements through negotiation. However, increasingly over the last 10-15 years, disagreements have led to costly and protracted legal disputes. Potential licensees may believe that the licensing terms offered are not FRAND and that the SEP holders thus abuse their market power by seeking excessive royalties or injunctions to ban the potential licensee’s products from the market, or through other forms of hold-up and opportunistic behavior.<sup>15</sup> More than two-thirds of respondents would accept SEP license terms that they do not consider to be FRAND in order to avoid a court order banning their products from the U.S. market.<sup>16,17</sup>
32. In this context, the survey first sought to understand what firms considered to be hold-up by SEP holders (Section 3.1), before then considering the views of firms on hold-up (Section 3.2) and the need for restrictions to prevent such hold-up (Section 3.3).

#### 3.1. What constitutes hold-up?

33. Hold-up typically involves demand for excessive royalties (relative to the value of the technology) after firms that use standardized technology have made investments. Firms can be forced to accept such demands by the SEP holders given the already incurred sunk costs of the investment, the market power of the SEP holder, and the ability of the SEP holder to threaten the investing firm with an injunction that prevents it from selling its product altogether and achieving a return on its investment.
34. Hold-up or opportunistic behavior can take multiple forms.<sup>18</sup> The survey sought to identify these instances. 62% to 76% of respondents considered the tested behaviors by the SEP holder to be hold-up or opportunistic. Across all stated conducts, on average 2.8 times as many respondents found the tested behavior to be hold-up or opportunistic behavior than

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15 Patentees sometimes seek injunctions based on patents that are not essential or valid. When tested in court, only a small percentage of SEPs asserted turn out to be essential and valid.

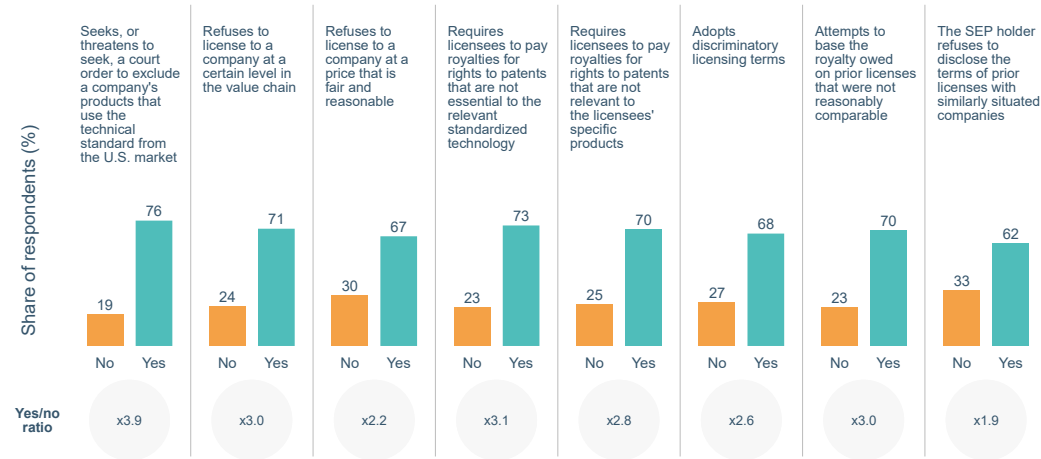
16 The questions asked: “To avoid a court order banning your products from the U.S. market, would your company accept SEP license terms that you do not consider to be FRAND?” Respondents could select among the following answer options: (i) “Definitely yes,” (ii) “Likely yes,” (iii) “Likely not,” (iv) “Definitely not,” and (v) “Don’t know.”

17 Among firms with SEP licensing experience, 75% of firms would accept such license terms and only 21% would not.

18 See also Love, Brian J. and Lefouili, Yassine and Helmers, Christian, *Do Standard-Essential Patent Owners Behave Opportunistically?* Evidence from U.S. District Court Dockets (November 8, 2020), 17, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3727085](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3727085).

did not, indicating a consensus that a wide range of conducts is considered hold-up.<sup>19</sup> Seeking or threatening to seek injunctions was the conduct that the highest proportion of respondents considered to be hold-up or opportunistic.

Figure 4: What behavior of SEP holders constitutes hold-up?



Q9: Do you consider the following to be hold-up or opportunistic behavior by a SEP holder? (N = 305)

Source: U.S. SEP survey.

Note: Respondents could select among the following answer options: (i) "Yes," (ii) "No," (iii) "Don't know." For ease of exposition, the figure does not show the share of "Don't know" responses ranging from 3% to 7%.

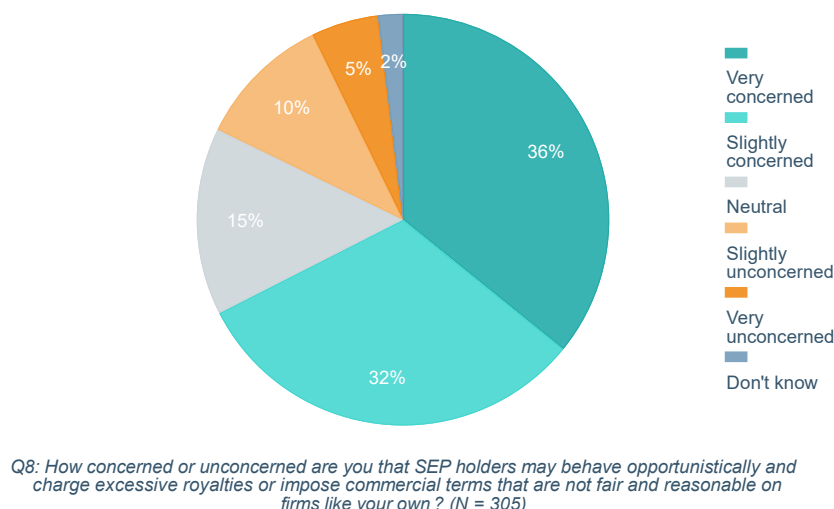
3.2. Concerns over hold-up and opportunistic behavior

- 35. SEP holders typically commit to license their SEPs either royalty-free or on FRAND terms. Despite this commitment, the survey points to significant concern amongst firms that SEP holders may behave opportunistically through charging excessive royalties or imposing commercial terms that are not fair or reasonable.
- 36. Specifically, more than two-thirds of firms were concerned (of which more than half were very concerned) that SEP holders may charge excessive royalties.<sup>20</sup> Below we discuss that for most of the firms surveyed here the threat of an injunction alone may be enough for non-FRAND terms to be accepted.

<sup>19</sup> A similar picture emerged among firms with SEP licensing experience.

<sup>20</sup> Among firms with SEP licensing experience, 72% of firms were concerned and 15% were unconcerned.

**Figure 5: Charging of excessive royalties and imposing non-FRAND terms**



Source: U.S. SEP survey.

Note: Respondents could select among the following answer options: (i) "Very concerned," (ii) "Slightly concerned," (iii) "Neutral," (iv) "Slightly unconcerned," (v) "Very unconcerned," and (vi) "Don't know."

### 3.3. Impact of opportunistic behavior and the need for restrictions

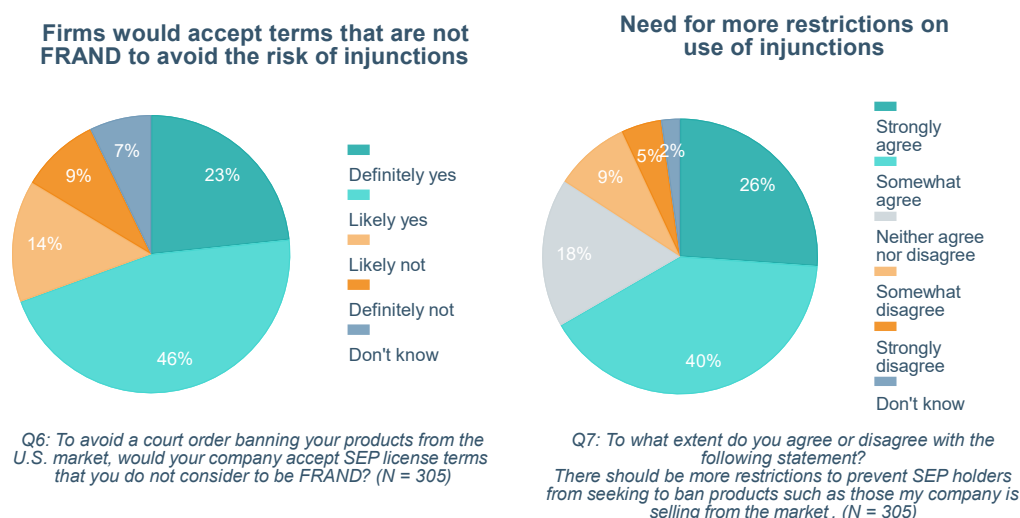
37. When SEP holders believe their IP rights are infringed, they may currently under certain circumstances in the United States seek a court order to remove the infringing products from the U.S. market. Some SEP holders believe such injunctions are a necessary tool to enforce their IP rights, while some prospective licensees believe they are used by SEP holders in an opportunistic fashion to extract excessive royalties, leading to higher consumer prices and reduced incentives to invest.
38. The survey sought views on the extent to which firms would accept terms that are not FRAND to avoid injunctions.<sup>21</sup> Nearly three-quarters of firms (70%) indicated that they would accept non-FRAND terms to avoid the risk and impact of injunctions.<sup>22</sup> Given the wide prevalence of concerns about the threat of injunctions, we understand the use of injunctions to be a tool to significantly enhance the bargaining power and negotiating strength of SEP holders in licensing negotiations.
39. Finally, the survey asked for the respondents' views on whether the current approach to injunctions should remain in place. Around two-thirds (67%) of firms believed there should be more restrictions that prevent SEP holders from using injunctions to ban products

<sup>21</sup> The survey also sought to understand the impact of injunctions on the investment decisions of firms, but no clear picture was revealed. 31% of the respondents indicated that the risk of injunctions decreases their incentive to develop new products. Another 30% of firms felt that the risk of injunctions would neither increase nor decrease investment incentives. Another 37% of respondents stated that potential royalty claims and injunctions would give rise to an increase in their investments. One reason for increasing investments might be the decision to develop products that involve non-standardized technologies or potentially less well suited standards.

<sup>22</sup> Among firms with SEP licensing experience, 75% of firms said they would accept SEP license terms that they do not consider to be FRAND and only 21% would not accept such terms.

following disagreements over licensing terms. Only 13% of firms disagreed with the statement.<sup>23</sup>

**Figure 6: Need for more restrictions on use of injunctions**



Source: U.S. SEP survey.

Note: In response to question 6, respondents could select among the following options: (i) "Definitely yes," (ii) "Likely yes," (iii) "Likely not," (iv) "Definitely not," and (vi) "Don't know." In response to question 7, respondents could select among the following options: (i) "Strongly agree," (ii) "Somewhat agree," (iii) "Neither agree nor disagree," (iv) "Somewhat disagree," (v) "Strongly disagree," and (vi) "Don't know."

## 4. FRAND ROYALTIES AND THE OPTIMAL ROYALTY BASE

40. There has been significant debate over where in the product value chain SEP royalties should be levied. Some SEP holders seek to license only end-products, claiming that licensees should have to pay for the complementary value from using the component's patented technology in the end-product.
41. At the same time, some companies have claimed that the royalty base for SEPs should be the component that provides all or substantially all of the patented standardized technologies. They argue that this avoids including in the royalty base value attributable to other innovations and features of the product that are not part of the standard and do not utilize the SEPs. This debate has intensified recently with the advent of the IoT, as many product manufacturers will need to license SEPs for the first time.
42. In this context, the survey sought to better understand the optimal licensing arrangements for firms. The results highlight the risks of a FRAND royalty base that is not apportioned to isolate the SEP value separate from the contributions and innovations of others.

### 4.1. End-product level licensing leads to higher royalties

43. Close to 80% of respondents believe that charging royalties based on the end-product value results in higher royalties than when based on the value of the component. As can

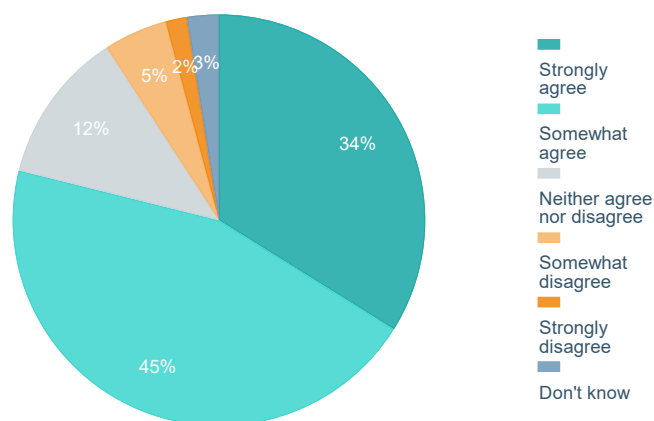
<sup>23</sup>

Among firms with SEP licensing experience, 73% of firms agreed and only 12% disagreed with the statement.



be seen in Figure 7, only 7% of firms felt that royalty rates would be higher if based on the component value.<sup>24</sup> The results are similar among firms with SEP licensing experience. Due to a high degree of expected pass through from running royalties to product prices, higher royalty rates are highly likely to result in higher consumer prices.<sup>25</sup>

**Figure 7: Charging royalties on end-product level results in higher royalties**



*Q12: Please indicate to what extent you agree or disagree with the following statement: Charging royalties based on the end-product value generally results in higher royalties than basing them on the value of components implementing the standard. (N = 305)*

Source: U.S. SEP survey.

Note: Respondents could select among the following options: (i) "Strongly agree," (ii) "Somewhat agree," (iii) "Neither agree nor disagree," (iv) "Somewhat disagree," (v) "Strongly disagree," and (vi) "Don't know."

## 4.2. Component suppliers should be able to obtain a FRAND license

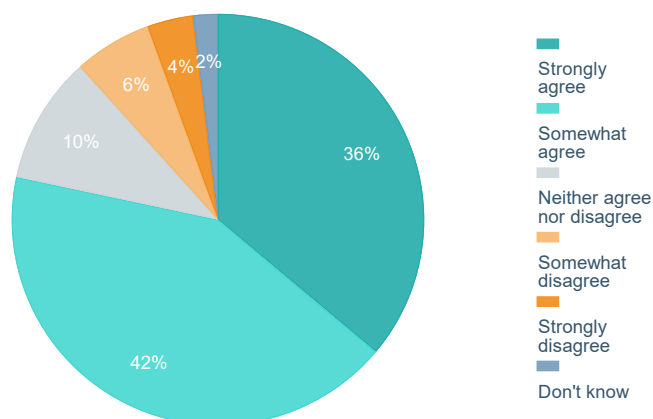
44. The survey directly asked firms if component suppliers should have a right to obtain an SEP license on FRAND terms. Figure 8 shows that close to 80% of firms agreed this should be the case, with only 10% disagreeing.<sup>26</sup>

<sup>24</sup> Among firms with SEP licensing experience, 81% of firms agreed that charging royalties based on the end-product value generally results in higher royalties than basing them on the value of components implementing the standard. Only 6% disagreed with the statement.

<sup>25</sup> The survey did not seek to determine the extent to which firms expected that the component supplier would pass through royalties, but variable costs, including running royalties, are likely to be passed on in the form of higher product prices.

<sup>26</sup> Among firms with SEP licensing experience, 80% of firms agreed and only 8% disagreed with the statement.

**Figure 8: Component suppliers should be able to obtain a FRAND license**



Q11: To what extent do you agree or disagree with the following statements ?  
 Component suppliers should have a right to obtain an SEP license on FRAND terms. (N = 305)

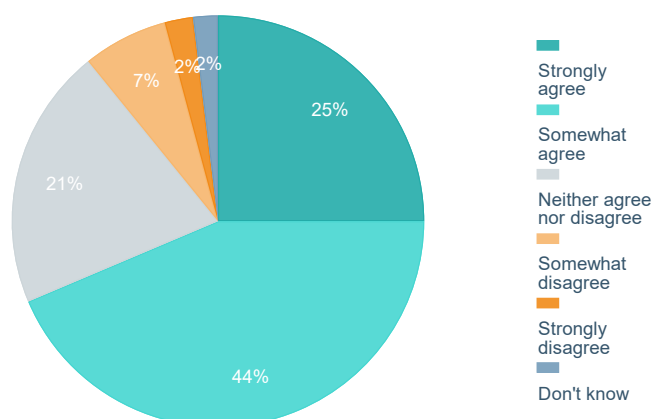
Source: U.S. SEP survey.

Note: Respondents could select among the following options: (i) "Strongly agree," (ii) "Somewhat agree," (iii) "Neither agree nor disagree," (iv) "Somewhat disagree," (v) "Strongly disagree," and (vi) "Don't know."

### 4.3. Component level licensing leads to lower transaction costs

45. Firms were asked whether they believed SEP licensing to component suppliers would lead to a decrease in the number of licensing negotiations and a decrease in transaction costs along the supply chain. The vast majority (69%) of firms agreed component level licensing would lead to fewer licensing negotiations and reduced transaction costs.<sup>27</sup>

**Figure 9: Component level licensing reduces transaction costs**



Q11: To what extent do you agree or disagree with the following statements ?  
 SEP licensing to component suppliers who can sell licensed components to their customers, results in fewer licensing negotiations and lower transaction costs along the value chain (N = 305)

Source: U.S. SEP survey.

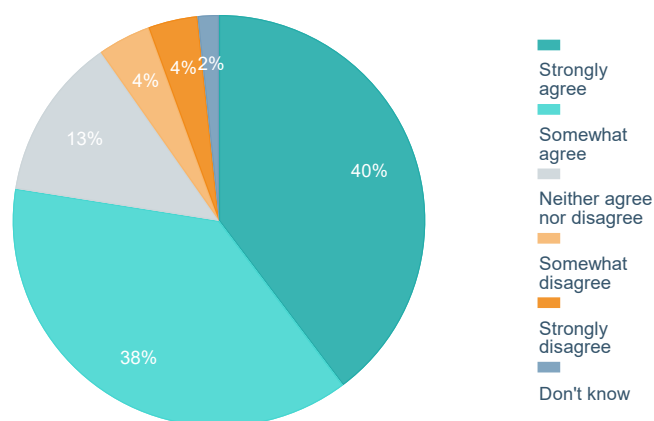
Note: Respondents could select among the following options: (i) "Strongly agree," (ii) "Somewhat agree," (iii) "Neither agree nor disagree," (iv) "Somewhat disagree," (v) "Strongly disagree," and (vi) "Don't know."

<sup>27</sup> Among firms with SEP licensing experience, 71% of firms agreed and only 9% disagreed with the statement.

#### 4.4. End-product level licensing puts small firms at a competitive disadvantage

46. The increased use of smart devices and connected technology is expected to significantly increase the number of firms that are implementing cellular, Wi-Fi, Bluetooth, and other connectivity standards, thus increasing the number of prospective licensees. Many of these firms will be start-ups and SMBs. The level of the value chain in which licensing negotiations take place will therefore be important in dictating the scale of transaction costs and the risk for abusive behavior by well-resourced and experienced SEP licensors.
47. Respondents were asked whether they felt start-ups and SMBs would be disadvantaged if they had to negotiate licensing agreements directly with SEP licensors rather than purchasing licensed components. As Figure 10 illustrates, the vast majority of firms (77%) agreed that start-ups and SMBs would be disadvantaged if they had to directly negotiate licensing agreements, with 40% of all firms strongly agreeing.<sup>28</sup>

**Figure 10: End-product level licensing puts start-ups and SMBs at a disadvantage in licensing negotiations**



Q11: To what extent do you agree or disagree with the following statements ?  
 Start-ups and small businesses with limited resources and experiences of SEP licensing are disadvantaged if they have to negotiate directly with SEP holders rather than purchasing already licensed components . (N = 305)

Source: U.S. SEP survey.

Note: Respondents could select among the following options: (i) "Strongly agree," (ii) "Somewhat agree," (iii) "Neither agree nor disagree," (iv) "Somewhat disagree," (v) "Strongly disagree," and (vi) "Don't know."

#### 4.5. Availability of licensed components from multiple suppliers increases supply chain resiliency

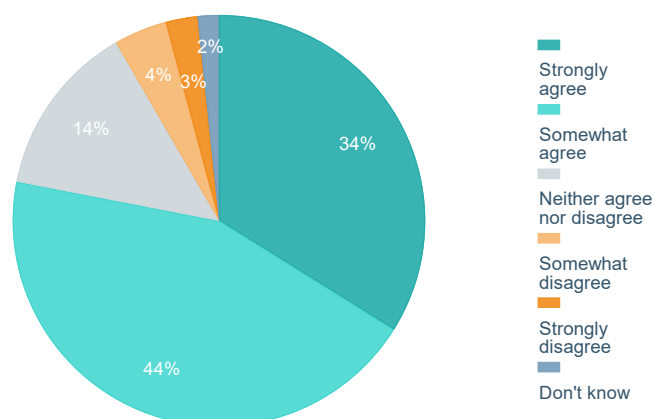
48. The Covid-19 pandemic has disrupted global supply chains. In response to the global supply chain challenges, a 2020 survey found that 93% of senior supply-chain executives intended to make their supply chains more flexible, agile, and resilient.<sup>29</sup>
49. For firms that rely on third-party components to implement standardized technologies, increasing supply chain resiliency is challenging as SEP holders frequently refuse to license

<sup>28</sup> Among firms with SEP licensing experience, 78% of firms agreed with the statement, whilst only 7% disagreed.

<sup>29</sup> McKinsey, *How COVID-19 is reshaping supply chain* (November 23, 2021), available at <https://www.mckinsey.com/capabilities/operations/our-insights/how-covid-19-is-reshaping-supply-chains>.

their technology to component manufacturers. When firms were asked if access to licensed components from multiple suppliers would increase supply chain resiliency, almost 80% of firms agreed and only 7% of firms disagreed.<sup>30</sup>

**Figure 11: Access to already licensed components from multiple suppliers increases supply chain resiliency**



Q11: To what extent do you agree or disagree with the following statements ?  
 Access to already licensed components from multiple suppliers increases supply chain resiliency. (N = 305)

Source: U.S. SEP survey.

Note: Respondents could select among the following options: (i) "Strongly agree," (ii) "Somewhat agree," (iii) "Neither agree nor disagree," (iv) "Somewhat disagree," (v) "Strongly disagree," and (vi) "Don't know."

## 5. WILLINGNESS TO TAKE A LICENSE

50. It has been argued that SEP holders should offer licenses to any firms that make clear they are "willing" to license on fair and reasonable terms. However, we understand there is a debate as to whether injunctions should be available against infringers that have been proven "unwilling" to take a license.<sup>31</sup> Some SEP holders have argued that a wide variety of actions could show that a licensee is not "willing." Many licensees argue that many of these actions can be taken in good faith while still being willing to license.
51. Against this background, we asked firms whether a potential licensee should be able to undertake the following actions without the threat of SEP holders seeking to ban their products from the market.
52. All actions outlined have a significantly higher rate of agreement than disagreement amongst respondents, with a significant majority of firms believing that *"offering to participate in non-binding mediation over licensing terms," "initiating legal challenges to the enforceability, validity or essentiality of the relevant SEPs," "requiring the inclusion of suppliers in licensing negotiations where SEPs are implemented in suppliers' components," "seeking judicial determination that the SEP license offer is inconsistent with FRAND,"*

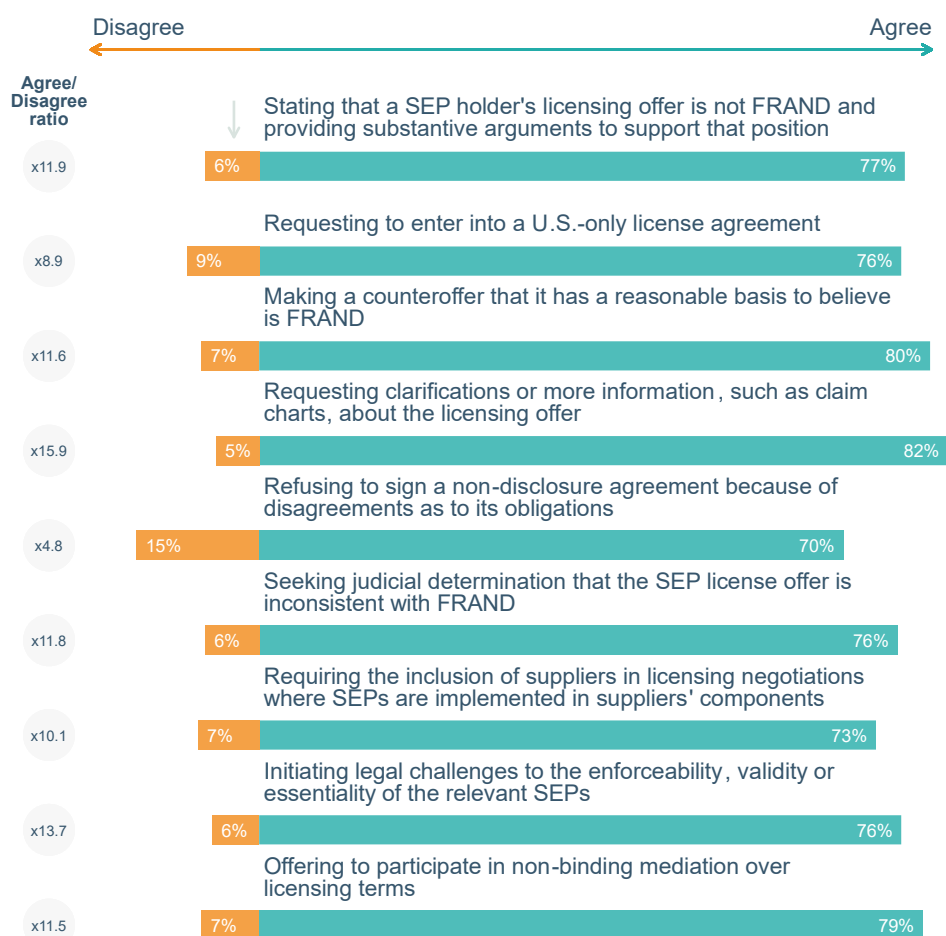
<sup>30</sup> Among firms with SEP licensing experience, 76% of firms agreed and only 7% disagreed with the statement.

<sup>31</sup> Global Competition Review, *United States: SEPs and FRAND – litigation, policy and latest developments* (December 2, 2022), available at <https://globalcompetitionreview.com/hub/sepfrand-hub/2022/article/united-states-seps-and-frand-litigation-policy-and-latest-developments>.

*“refusing to sign a non-disclosure agreement because of disagreements as to its obligations,” “requesting clarifications or more information, such as claim charts, about the licensing offer,” “making a counteroffer that it has a reasonable basis to believe is FRAND,” “requesting to enter into a U.S.-only license agreement,” and “stating that a SEP holder’s licensing offer is not FRAND and providing substantive arguments to support that position” are actions a potential licensee should be able to take without the threat of their products being banned from the U.S. market.*

53. Across all actions listed, the average agree-to-disagree response ratio is 11:1, indicating a consensus that a willing licensee should be able to take all the actions outlined below without fear of repercussion in the form of possible market bans for the relevant products.

**Figure 12: Actions a potential licensee should be able to take without threat of injunction**



Q17: Do you agree or disagree that potential licensees should be able to take the following actions without the threat of their products being banned from the U.S. market? (N = 233)

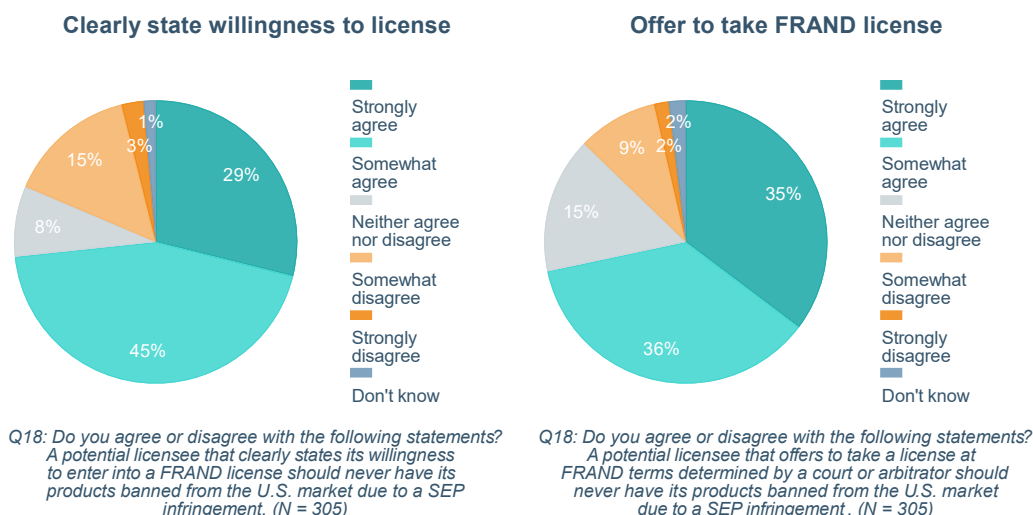
Source: U.S. SEP survey.

Note: Respondents with SEP licensing experience could select among the following options: (i) “Strongly agree,” (ii) “Somewhat agree,” (iii) “Neither agree nor disagree,” (iv) “Somewhat disagree,” (v) “Strongly disagree,” and (vi) “Don’t know.” The question was only asked to those with SEP licensing experience (i.e., those that answered “Yes” in question 5). In the figure, responses for “Strongly agree” and “Somewhat agree” are labelled with “Agree,” and responses for “Strongly disagree” and “Somewhat disagree” are labelled with “Disagree.” The figure excludes between 27 and 43 responses for “Neither agree nor disagree” and between 2 and 3 responses for “Don’t know.”

54. There is also a broad consensus that a potential licensee that clearly states its willingness to enter a FRAND license should never have its products banned from the U.S. market due

to a SEP infringement (73% of respondents agree).<sup>32</sup> Similarly, 72% of respondents agree that a potential licensee that offers to take a license at FRAND terms determined by a court or arbitrator should never have its products banned from the U.S. market due to a SEP infringement.<sup>33</sup>

**Figure 13: Potential licensees that clearly state their willingness to license or offer to take a license at FRAND terms should never have their products removed from the U.S. market**



Source: U.S. SEP survey.

Note: Respondents could select among the following options: (i) "Strongly agree," (ii) "Somewhat agree," (iii) "Neither agree nor disagree," (iv) "Somewhat disagree," (v) "Strongly disagree," and (vi) "Don't know."

## 6. GLOBAL LICENSING DISPUTES

### 6.1. Global consistency in licensing disputes

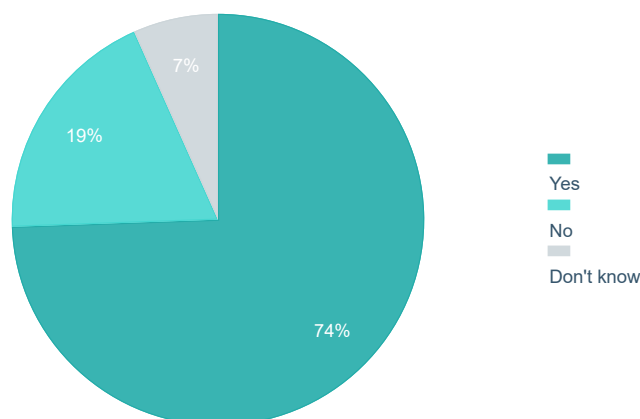
55. Patent law is set and enforced at a national or territorial level. As a result, litigation often occurs across several jurisdictions (typically major markets for sales of standard-compliant products such as the U.S., UK, Germany, or China). Forum shopping appears to occur with certain jurisdictions more beneficial for SEP holders and others more beneficial for licensees.
56. The survey confirms a strong perception that the choice of jurisdiction in which to pursue a legal dispute regarding SEPs has an impact on the outcome: 74% of firms considered this to be the case while only 19% thought this is not the case.<sup>34</sup>

<sup>32</sup> Among firms with SEP licensing experience, 78% of firms agreed and only 15% disagreed with the statement.

<sup>33</sup> Among firms with SEP licensing experience, 76% of firms agreed and only 9% disagreed with the statement.

<sup>34</sup> Among firms with SEP licensing experience, 78% of firms agreed and only 16% disagreed with the statement.

**Figure 14: Choice of jurisdiction impacts the outcome of a licensing dispute**



*Q15: Does the choice of the jurisdiction (e.g., the U.S., UK, Germany, China etc.) in which to pursue a legal dispute regarding SEPs have a significant impact on the outcome of the dispute? (N = 305)*

Source: U.S. SEP survey.

Note: Respondents could select among the following options: (i) "Yes," (ii) "No," and (iii) "Don't know".

## 6.2. Worldwide licensing

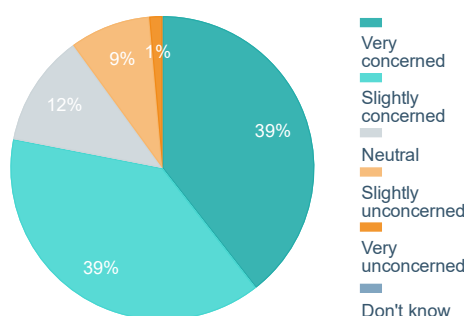
57. Courts have traditionally been reluctant to go beyond the scope of their jurisdiction, mindful of national patent law and territorial enforcement of patent rights. This respect for comity has recently changed dramatically. In its *Unwired Planet v. Huawei* judgement,<sup>35</sup> the UK Supreme Court ruled that an English court can set the FRAND licensing terms of a worldwide patent portfolio. In the context of a national patent infringement dispute, this means that English courts can set global licensing terms (including in relation to non-UK patents). In such circumstances, potential licensees would have to accept those worldwide license terms or else face an injunction in the UK imposed by the court.
58. In this context, the survey sought to examine views of U.S. firms on this issue. Among firms with SEP licensing experience, the results highlight considerable concern (78%) among U.S. firms about having to pay for a worldwide patent portfolio on terms determined by a foreign court before a U.S. court has decided whether they use the U.S. patents in the portfolio and whether the U.S. patents are valid.
59. Similarly, a very high proportion of firms (75%) are concerned about having to enter a worldwide portfolio license requiring them to pay for foreign patents that they may not need to license because, for example, they do not use the patents, the patents are not valid, or they don't sell products in those countries.<sup>36</sup>

<sup>35</sup> *Unwired Planet v. Huawei*, [2020] UKSC 37, 26 August 2020, on appeals from: [2018] EWCA Civ 2344 and [2019] EWCA Civ 38.

<sup>36</sup> Among firms with SEP licensing experience, 77% of firms are concerned and only 9% are unconcerned.

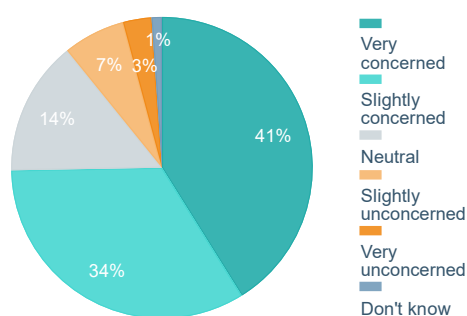
**Figure 15: Global licensing concerns**

**Views on having to pay for a worldwide patent portfolio on terms determined by a foreign court**



Q13: How concerned or unconcerned would you be if you had to pay for a worldwide patent portfolio on terms determined by a foreign court before a U.S. court has decided whether you actually use the U.S. patents in the portfolio and whether they are valid? (N = 233)

**Views on having to pay for foreign patents that may not need to license because patents not needed or invalid**



Q14: How concerned or unconcerned would you be about having to enter into a worldwide portfolio license requiring you to pay for foreign patents that you actually may not need to license because, for example, you don't use the patents, the patents are not valid or you don't sell products in those countries? (N = 305)

Source: U.S. SEP survey.

Note: Respondents could select among the following options: (i) "Very concerned," (ii) "Slightly concerned," (iii) "Neutral," (iv) "Slightly unconcerned," (v) "Very unconcerned," and (vi) "Don't know."

## 7. REFORM OF THE SEP LICENSING SYSTEM

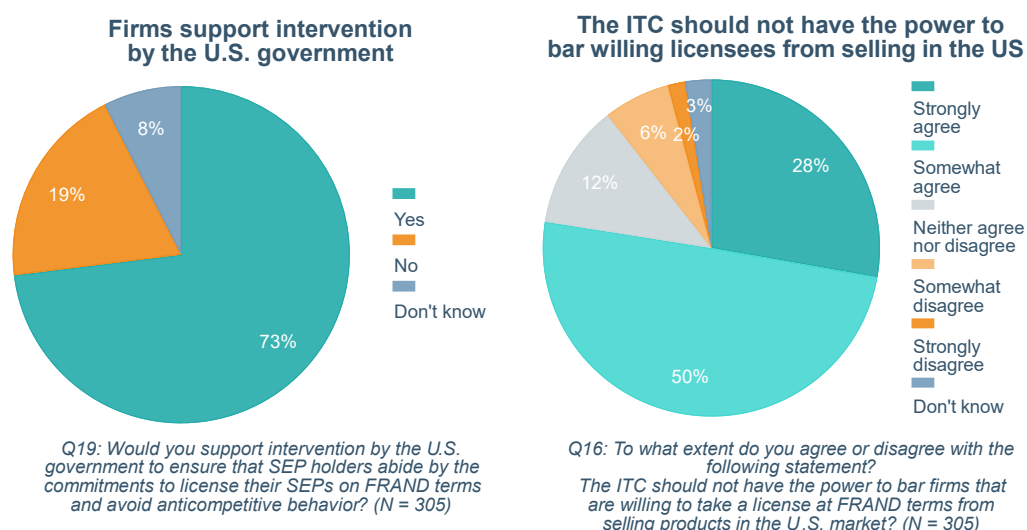
60. In light of the concerns with SEP licensing highlighted by the surveyed firms, the scope for abuses, and the potential impact on investment, innovation and consumers, the survey sought views of whether the system should be reformed and on the support for the role of government intervention to drive these reforms.
61. The severity of the problem – and the need for change – is overwhelmingly supported by the surveyed firms. The majority of firms (73%) believe that the current SEP licensing system in the United States should be reformed (with only 19% believing it should not be reformed). Broadly similar results were found amongst firms with SEP licensing experience (77% supporting reform and 16% not).
62. In the United States, a holder of a valid and enforceable U.S. SEP who has suffered infringement may seek redress for patent infringement from the International Trade Commission (ITC). If the ITC finds a violation, it may prevent the importation of infringing products into the United States. ITC actions therefore provide an alternative forum to federal courts for complainants to seek relief for patent infringement in the United States.
63. A recent case before the ITC reignited a debate as to the powers of the ITC in disputes involving SEPs.<sup>37</sup> The survey therefore asked firms whether the ITC should have the power to bar firms that are willing to take a license at FRAND terms from selling products in the

<sup>37</sup> Lina M. Khan and Rebecca Kelly Slaughter, *Written Submission on the Public Interest of Federal Trade Commission Chair Lina M. Khan and Commissioner Rebecca Kelly Slaughter* (May 16, 2022), at fn. 1, in the Matter of: *Certain UMTS and LTE Cellular Communication Modules and Products Containing the Same*, Inv. No. 337-TA-1240.



U.S. market. As Figure 16 shows, around 77% of firms agree that the ITC should not have such powers.<sup>38</sup>

**Figure 16: Reform of the SEP licensing system and the role of government**



Source: U.S. SEP survey.

Note: In response to question 16, respondents could select among the following options: (i) "Strongly agree," (ii) "Somewhat agree," (iii) "Neither agree nor disagree," (iv) "Somewhat disagree," (v) "Strongly disagree," and (vi) "Don't know." In response to question 19, respondents could select among the following answer options: (i) "Yes," (ii) "No," and (iii) "Don't know."

## 8. CONCLUSIONS

64. There are concerns that SEP licensing is subject to hold-up and opportunistic behavior by SEP holders. The survey confirms that U.S. firms have serious concerns about hold-up and opportunistic behavior. Firms overwhelmingly agree that more restrictions should be in place to prevent SEP holders seeking to ban products from the market.
65. There is also a public debate about the refusal of some SEP holders to license at a certain level in the value chain (such as the component level). A large majority of firms believe component suppliers should be able to obtain a license on FRAND terms, and in doing so, this would reduce the number of licensing negotiations and transaction costs along the value chain whilst protecting start-ups and SMBs from potential opportunistic behavior.
66. Whether a potential licensee is deemed to be willing to accept a license on FRAND terms is an important component of many court-decided outcomes. Whilst some SEP holders have argued that a wide variety of actions would show that a licensee is "unwilling," the surveyed firms conversely believe a willing licensee should be able to undertake a variety of actions in negotiating a licensing agreement.

<sup>38</sup> Among firms with SEP licensing experience, 82% of firms agreed and only 7% disagreed with the statement.

## Appendix A – Questionnaire

### A.1 Introduction

Good morning/afternoon/evening. My name is {{INTERVIEWER'S NAME}} calling from RONIN International, an independent research agency.

We are undertaking a research study to understand firms' experiences with patent licensing, more specifically regarding the licensing of standard-essential patents (SEPs). The research is intended to highlight issues that companies might be facing regarding the licensing of SEPs and directly inform U.S. policymakers. It will give your business an opportunity to potentially influence policy development.

The research is being commissioned by a global economic consultancy, Charles River Associates. A summary of the main results can be provided at your request.

It will take around 10-20 minutes of your time depending on your responses.

Is now a good time? You can of course refuse to answer questions or withdraw at any time.

#### *If asked:*

We found your company details online and you seemed to fit the profile of companies that might be interested in this topic.

Before we start, I would like to reassure you that any information you provide us with will be treated as confidential and you will remain anonymous unless you agree to being identified, and we will always hold the information you give us securely and delete it once no longer needed.

We conduct all studies in accordance with the Market Research Society Code of Conduct and you can read our privacy notice at [ronin.com/privacy](https://ronin.com/privacy).

For quality and training purposes, all calls are recorded.

We'll start with a few short questions. Can I proceed?

#### *If refused:*

I understand. Thank you for your time in any event. Goodbye.

1: (Continue) → continue

2: (Refused) → terminate sample immediately as "Refusal to continue"

### A.2 Screening questions

I would like to start by asking some general questions about you and your company.

*{ASK ALL}*

*{Do not read out answer options – Record and code}*

#### **Q1. Can you confirm your job title please?**

- a. Founder / Chief Executive / Managing Director
- b. Legal Counsel
- c. Head of legal affairs
- d. Intellectual Property Counsel / Head of intellectual property

- e. CFO (Chief Financial Officer) / Head of Finance
- f. Director
- g. Other (please specify)

**{ASK ALL}**

***{Do not read out answer options – Single choice}***

**Q2. Thank you. Does your company sell its products or services in the U.S.?**

- a. Yes
- b. No {→ CLOSE}

**{ASK ALL}**

***{Read out answer options – Multiple choice}***

**Q3. And in which sector does your company operate? Can I briefly read out a few options and you select those that fit best?**

- a. Manufacturing or developing physical end products
- b. Manufacturing or developing of components or inputs to end products made by other companies
- c. Development of digital products (including software)
- d. Service industry
- e. Retail and/or distribution
- f. Other (please specify)

**{if none of a – c or f are selected → CLOSE}**

\*\*\*\*\*

***{READ OUT}***

Thank you.

The following questions in the survey focus on standardized technologies. These are a set of technical specifications that a product may need to comply with, for instance, to establish a wireless connection from one device to the other or a mobile network.

\*\*\*\*\*

**{ASK ALL}**

***{Read out answer options – Multiple choice}***

**Q4. Do your products offer functionalities that use any standardized technologies? Specifically, do they have any of the following functionalities?**

- a. Cellular mobile network connectivity such as 3G, 4G or 5G
- b. Wireless connectivity such as Wi-Fi
- c. Bluetooth
- d. Wireless charging

- e. Play back of compressed video files
- f. Play back of compressed audio files
- g. Any other standard (please specify)
- h. None (DNR anchor) -mutually exclusive

**{if none is selected → CLOSE}**

***{READ OUT}***

As you might be aware, technical standards often use technologies that are patented. These patents are commonly referred to as Standard Essential Patents or SEPs.

For example, to enable their product to connect to 5G or WiFi, manufacturers may need to license the SEPs directly, or use components that are already licensed.

***{ASK ALL}***

***{Do not read out answer options – Single choice}***

**Q5. Do you or does your company have any views or experience related to the licensing of SEPs, or have you considered licensing SEPs from other companies?**

- a. Yes.
- b. No.
- c. Don't know. **{→Skip to Q27 }**

### **A.3 Experiences and views on SEP licensing**

***{READ OUT – if Q5 = No}***

Normally, the owners of SEPs commit during the standardization process to license their technology under terms that are fair, reasonable, and non-discriminatory (FRAND) - this is sometimes known as the "FRAND commitment."

***{READ OUT – if Q5 = Yes or No}***

Some manufacturers have publicly expressed concerns that SEP holders try to extract excessive fees from businesses that want to license their technology.

There have been multiple antitrust enforcement actions against SEP holders by authorities and disputes in court over the licensing terms of SEPs.

***{READ OUT – if Q5 = Yes or No}***

If no agreement on the SEP licensing terms is reached, legal disputes may occur. A SEP holder may seek to ban a manufacturer's products from the U.S. market that are alleged to be infringing its patents through an injunction issued by a federal district court or through an import ban issued by the U.S. International Trade Commission.

*{ASK IF Q5 = Yes or No}*

*{Do not read out – allow free response and clarify: e.g. If respondent says “no” interviewer clarifies “Can I check, would that be a definite no or likely no?”}*

**Q6. To avoid a court order banning your products from the U.S. market, would your company accept SEP license terms that you do not consider to be FRAND?**

- a. Definitely not
- b. Likely not
- c. Likely yes
- d. Definitely yes
- e. Don't know

*ASK IF Q5 = Yes or No*

**Q7. To what extent do you agree or disagree with the following statement: “There should be more restrictions to prevent SEP holders from seeking to ban products such as those my company is selling from the market.”**

*Read out – Single Choice*

*Randomize between two fixed orders: (a) to (e) and (e) to (a). (f) is fixed.*

- a. Strongly agree
- b. Somewhat agree
- c. Neither agree nor disagree
- d. Somewhat disagree
- e. Strongly disagree
- f. Don't know

*READ OUT IF Q5 = Yes or No*

SEP holders typically have a dominant position in licensing technology critical for use of standards. SEP holders might abuse this dominant position by charging excessive royalties or imposing licensing terms on firms that are not fair and reasonable. Opportunistic behavior like this is often referred to as “hold up”.

*ASK IF Q5 = Yes or No*

**Q8. How concerned or unconcerned are you that SEP holders may behave opportunistically and charge excessive royalties or impose commercial terms that are not fair and reasonable on firms like your own?**

*Do not Read out – allow free response and clarify: e.g. If respondent says “concerned” interviewer clarifies “Can I check, would that be slightly concerned or very concerned?”*

- a. Very concerned
- b. Slightly concerned
- c. Neutral

- d. Slightly unconcerned
- e. Very unconcerned
- f. Don't know

**Q9. Do you consider the following to be hold-up or opportunistic behavior by a SEP holder?**

*Read out each of items (a) to (h) with response options:*

- a. Yes
- b. No
- c. Don't know

*Read out response options only for first item. Afterwards read out response options only if prompted by respondent– Single choice*

- The SEP holder seeks, or threatens to seek, a court order to exclude a company's products that use the technical standard from the U.S. market
- The SEP holder refuses to license to a company at a certain level in the value chain
- The SEP holder refuses to license to a company at a price that is fair and reasonable
- The SEP holder requires licensees to pay royalties for rights to patents that are not essential to the relevant standardized technology
- The SEP holder requires licensees to pay royalties for rights to patents that are not relevant to the licensees' specific products
- The SEP holder adopts discriminatory licensing terms
- The SEP holder attempts to base the royalty owed on prior licenses that were not reasonably comparable (due to differences in patents, duration, geographic scope, licensee, etc).
- The SEP holder refuses to disclose the terms of prior licenses with similarly situated companies

**READ OUT IF Q5 = Yes or No**

If SEP holders charge excessive royalties or refuse to license to certain firms, it can affect a firm's incentives to invest and its decisions to develop new products that use the standard.

**ASK IF Q5 =Yes or No**

**Q10. How do potential SEP royalty claims against your firm, including the risk of court orders removing your products from the market due to an alleged claim of SEP infringement, affect your decision to develop new products involving standardized technologies?**

*Read out – Single choice*

*Randomize between two fixed orders: (a) to (e) and (e) to (a). (f) is fixed.*

- a. Strongly decrease incentives to develop products
- b. Somewhat decrease

- c. Neutral
- d. Somewhat increase
- e. Strongly increase incentives to develop products
- f. Don't know

***Read out IF Q5 =Yes or No.***

In light of concerns over supply chain diversity and stability, there is a debate as to whether SEP holders' FRAND commitment means they must license on fair and reasonable terms to *any* firm requesting a license, including component suppliers, or whether they can choose at which level in the value chain they want to license. Some SEP holders insist on licensing exclusively to end-product manufacturers and refuse to offer SEP licenses to component suppliers. Some end-product manufacturers have argued that their component suppliers are more familiar with the relevant technologies in those components and thus better able to negotiate FRAND licenses for them, while end-product manufacturers are often at a disadvantage when they negotiate directly with SEP holders.

***ASK IF Q5 = Yes or No***

**Q11. To what extent do you agree or disagree with the following statements?**

***For each of (1) to (4) read out topic and record response;***

- a. Strongly agree
- b. Somewhat agree
- c. Neither agree nor disagree
- d. Somewhat disagree
- e. Strongly disagree
- f. Don't know

***Do not read out response options unless prompted – allow free response and clarify; e.g. If respondent says “agreed” interviewer clarifies “Can I check, would that be a strongly agree or somewhat agree?” – Single Choice***

- Component suppliers should have a right to obtain an SEP license on FRAND terms.
- SEP licensing to component suppliers, who can sell licensed components to their customers, results in fewer licensing negotiations and lower transaction costs along the value chain.
- Start-ups and small businesses with limited resources and experiences of SEP licensing are disadvantaged if they have to negotiate directly with SEP holders rather than purchasing already licensed components.
- Access to already licensed components from multiple suppliers increases supply chain resiliency.

\*\*\*\*\*

***{READ OUT IF Q5 =YES OR No}***

Thank you. Under U.S. law, SEP royalties should not include value that is not attributable to the SEP itself, for example, from other inventions or components unrelated to the SEP.

There is a debate whether SEP royalties should be based on the end-product value or based on the component where all or almost all the patented technologies are used. Some SEP holders seek to charge royalties based on the end-product value, claiming that licensees should have to pay for any value from using the component's patented technology in the end-product. Some companies that support standards have claimed that the base for determining SEP royalties should be the component where all or substantially all the patented technologies are implemented, not the end-product, to avoid improperly capturing other value in the end-product, including other innovations, non-patented features, and the value of standardization itself.

\*\*\*\*\*

***ASK IF Q5 =Yes OR No***

**Q12. Please indicate to what extent you agree or disagree with the following statement: "Charging royalties based on the end-product value generally results in higher royalties than basing them on the value of components implementing the standard".**

*Do not read out unless prompted – allow free response and clarify: e.g. If respondent says "agreed" interviewer clarifies "Can I check, would that be a strongly agree or somewhat agree?" – Single Choice*

- a. Strongly agree
- b. Somewhat agree
- c. Neither agree nor disagree
- d. Somewhat disagree
- e. Strongly disagree
- f. Don't know

\*\*\*\*\*

***{READ OUT IF Q5 =YES}***

It has been argued that SEP holders should offer to license to any firms that make clear they are "willing" to license on fair and reasonable terms. Some SEP holders have sought to ban products of firms that they contend are unwilling to take a license on fair and reasonable terms. These SEP holders have argued that a wide variety of actions would show that a licensee is not "willing" to license such that their products should be banned from being sold in the market. We would like to ask you about some of these actions.

***Read out IF Q5 =Yes OR No***

Patents are national in scope. The court of the country that issues a patent typically decides whether the patent is valid and infringed. In some key markets outside the United States, including the United Kingdom, Germany, and China, courts have signaled that they can ban a product from their market if the party accused of SEP infringement does not agree to worldwide/global licensing terms, including royalty rates. In some cases, this decision can even be made before patent validity and infringement have been proven.

The following questions aim at understanding your views about these issues.



**ASK IF Q5 = Yes**

**Q13. How concerned or unconcerned would you be if you had to pay for a worldwide patent portfolio on terms determined by a foreign court before a U.S. court has decided whether you actually use the U.S. patents in the portfolio and whether they are valid?**

*Do not Read out – Allow free response and clarify: e.g. If respondent says “concerned” interviewer clarifies “Can I check, would that be slightly concerned or very concerned?”*

- a. Very concerned
- b. Slightly concerned
- c. Neutral
- d. Slightly unconcerned
- e. Very unconcerned
- f. Don't know

**ASK IF Q5=Yes OR No**

**Q14. How concerned or unconcerned would you be about having to enter into a worldwide portfolio license requiring you to pay for foreign patents that you actually may not need to license because, for example, you don't use the patents, the patents are not valid, or you don't sell products in those countries?**

*Do not Read out – allow free response and clarify: e.g. If respondent says “concerned” interviewer clarifies “Can I check, would that be slightly concerned or very concerned?”*

- a. Very concerned
- b. Slightly concerned
- c. Neutral
- d. Slightly unconcerned
- e. Very unconcerned
- f. Don't know

**ASK IF Q5 =Yes OR No**

**Q15. Does the choice of the jurisdiction (e.g., the U.S., UK, Germany, China etc.) in which to pursue a legal dispute regarding SEPs have a significant impact on the outcome of the dispute?**

*Do not read out – But guide answer, if respondent says “I agree” or “that would have a significant impact” guide them by saying “so you would say yes, choice of jurisdiction matters?”*

- a. Yes
- b. No
- c. Don't know

***Read out IF Q5 = Yes OR No***

A patent holder whose U.S. patents have been infringed may seek redress for patent infringement not only in court, but also from the U.S. International Trade Commission (ITC). The ITC can, among other things, bar from entry into the United States products that infringe a valid and enforceable U.S. patent. Two FTC Commissioners have recently stated that it can be against the public interest to bar the products of willing licensees of SEPs from the U.S. market.

***ASK IF Q5 =Yes OR No***

**Q16. To what extent do you agree or disagree with the following statement: “The ITC should not have the power to bar firms that are willing to take a license at FRAND terms from selling products in the U.S. market?”**

*Do not read out unless prompted – allow free response and clarify: e.g. If respondent says “agreed” interviewer clarifies “Can I check, would that be a strongly agree or somewhat agree?” – Single Choice*

- a. Strongly agree
- b. Somewhat agree
- c. Neither agree nor disagree
- d. Somewhat disagree
- e. Strongly disagree
- f. Don't know

***ASK IF Q5 = Yes***

**Q17. Do you agree or disagree that potential licensees should be able to take the following actions without the threat of their products being banned from the U.S. market:**

*For each of (1) to (8) read out topic and record response;*

- a. Strongly agree
- b. Somewhat agree
- c. Neither agree nor disagree
- d. Somewhat disagree
- e. Strongly disagree
- f. Don't know

*Only read out response options for first item. Randomize between two fixed orders: (a) to (e) and (e) to (a). (f) is fixed. For further items, do not read out responses unless prompted – allow free response and clarify: e.g. If respondent says “agreed,” interviewer clarifies “Can I check, would that be a strongly agree or somewhat agree?”*

***– Single Choice***

- Offering to participate in non-binding mediation over licensing terms.

- Initiating legal challenges to the enforceability, validity or essentiality of the relevant SEPs.
- Requiring the inclusion of suppliers in licensing negotiations where SEPs are implemented in suppliers' components.
- Seeking judicial determination that the SEP license offer is inconsistent with FRAND.
- Refusing to sign a non-disclosure agreement because of disagreements as to its obligations.
- Requesting clarifications or more information, such as claim charts, about the licensing offer.
- Making a counteroffer that it has a reasonable basis to believe is FRAND.
- Requesting to enter into a U.S.-only license agreement.
- Stating that a SEP holder's licensing offer is not FRAND and providing substantive arguments to support that position.

**ASK IF Q5 =Yes OR No**

**Q18. Do you agree or disagree with the following statements?**

*For each of (1) to (2) read out topic and record response;*

- a. Strongly disagree
- b. Somewhat disagree
- c. Neither agree nor disagree
- d. Somewhat agree
- e. Strongly agree
- f. Don't know

*Do not read out responses unless prompted – allow free response and clarify: e.g. If respondent says “agreed” interviewer clarifies “Can I check, would that be a strongly agree or somewhat agree?”*

- A potential licensee that *clearly states its willingness to enter into a FRAND license* should never have its products banned from the U.S. market due to a SEP infringement.
- A potential licensee that *offers to take a license at FRAND terms determined by a court or arbitrator* should never have its products banned from the U.S. market due to a SEP infringement.

**ASK ALL**

**Q19. Would you support intervention by the U.S. government to ensure that SEP holders abide by the commitments to license their SEPs on FRAND terms and avoid anticompetitive behavior?**

*Do not read out – Single Choice*

- a. Yes
- b. No

- c. Don't know

#### **A.4 Further company characteristics**

*{READ OUT}*

To conclude, we would like to briefly discuss some characteristics of your firm.

**ASK IF Q5 = YES or NO**

**Q20. Does your company have a sales office or production facility in the U.S.?**

*Do not read out – Single choice (Probe if answer is just yes – “sales or production?”)*

- a. Yes, we have a sales office in the U.S.
- b. Yes, we have a production facility in the U.S.
- c. Yes, both sales and production facilities
- d. No.
- e. Don't know.

**ASK IF Q5 = YES or NO**

**Q21. What was your company's global revenue in 2021 approximately?**

*Choose category in line with confirmed 2021 revenue; only Read out categories if no revenue figure confirmed – Single Choice*

- a. Less than 10 million USD
- b. 10 million up to 50 million USD
- c. 50 million up to 100 million USD
- d. 100 million up to 1 billion USD
- e. 1 billion USD or greater
- f. Don't know.

**ASK IF Q5 = YES or NO**

**Q22. And roughly how many people are currently globally employed at your company?**

*Choose category in line with stated number of employees; only read out categories if no number mentioned– Single Choice*

- a. Less than 10.
- b. 10 to 49.
- c. 50 to 249.
- d. 250 to 1249
- e. 1250 or greater.
- f. Don't know.

**ASK IF Q5 = YES or NO Read out – probe**

**Q23. Do you have any other comments related to the topics of this survey?**

**{TEXT BOX}**

**If asked:**

- We found your company details online and you seemed to fit the profile of firm we are currently looking for.
- **[Only if pushed]** The research is being undertaken by a global economic consultancy, Charles River Associates, with the aim of understanding the views of businesses on patent licensing.
- **[Only if pushed on CRA]** Charles River Associates is an economic consultancy that specializes in this area and is seeking to understand more about patent licensing to help influence government policy.
- **[Only if asked whether results will be available]** A summary of the main results can certainly be provided at your request.

**ASK IF Q5 = YES or NO**

**Q24. Would you be fine with your company name being included in a list of participating companies alongside the anonymized research findings? Your responses could of course not be linked to your company.**

**Do not read out – Single Choice**

- a. Yes.
- b. No.

**ASK IF Q5 = YES**

**Q25. In order to better understand some of your experiences to date, would you be available for a follow-up interview with Charles River Associates in order to discuss some of the survey's topics in more detail?**

**Do not read out – Single Choice**

- a. Yes.
- b. No.

**ASK IF Q5 = YES or NO**

**Q26. Thank you. Although your feedback will be completely confidential, would you be happy to disclose your responses to Charles River Associates? This is not mandatory and any views you share will be taken as your personal views not representative of your business.**

**Do not read out – Single Choice**

- a. Yes.
- b. No.

*Ask if Q5 = Don't Know*

**Q27. Is there someone else at your firm that would be better placed to answer questions on patent licensing and SEPs?**

- a. Yes {Collect contact details – contact alternative}
- b. No {Close}

*ASK IF Q25 = YES*

**Q28. Thank you. Could you please confirm your email address through which Charles River Associates could potentially contact you for a follow-up interview?**

*{TEXT BOX}*

*Read out Closer*

Thank you for your time and help today. Before I go, may I confirm that my name is {Interviewer Name} calling from RONIN International. All your replies will be treated in the strictest of confidence and in accordance with the MRS and ESOMAR Codes of Conduct.

You can visit our website at [www.ronin.com](http://www.ronin.com) to view our privacy notice, contact our data protection officer or exercise your data rights

Thank you very much for your help. Goodbye.