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UNITED STATES DISTRICT COURT

FOR THE SOUTHERN DISTRICT OF CALIFORNIA

U-BLOX AG, U-BLOX SAN DIEGO, INC., AND U-BLOX AMERICA, INC.,

Plaintiffs,

v.

INTERDIGITAL, INC.; INTERDIGITAL COMMUNICATIONS, INC; INTERDIGITAL TECHNOLOGY CORPORATION; INTERDIGITAL PATENT HOLDINGS, INC.; INTERDIGITAL HOLDINGS, INC.; and IPR LICENSING, INC.,

Defendants.

Case No. 23-cv-00002-CAB-AHG

AMENDED COMPLAINT FOR:

(1) Breach Of Contract;
(2) Declaratory Judgment; and
(3) Declaratory Judgment of Non-Infringement of U.S. Patent No. 8,155,067.

JURY TRIAL DEMANDED

PUBLIC VERSION

Plaintiffs u-blox AG, u-blox San Diego, Inc., and u-blox America, Inc. (collectively, "u-blox" or "Plaintiffs"), by and through the undersigned counsel, file this Complaint against InterDigital, Inc., InterDigital Communications, Inc., InterDigital Technology Corporation, InterDigital Patent Holdings, Inc., InterDigital Holdings, Inc., and IPR Licensing, Inc. (collectively, "InterDigital" or "Defendants") as follows.

INTRODUCTION

1. u-blox, a leading fabless semiconductor provider of embedded positioning and wireless communication products, brings this lawsuit against InterDigital because of InterDigital's failure to license its alleged standard essential patents ("SEPs") on fair, reasonable, and non-discriminatory (also known as "FRAND") terms and conditions.

2. As explained herein, InterDigital has declared a number of its patents to be essential to the 3G and/or 4G cellular technology standards established by the European Telecommunications Standards Institute ("ETSI"), a standard setting organization ("SSO"). Indeed, InterDigital is a member of ETSI and has submitted over fifty (50) ETSI IPR Declaration forms declaring a large number of its United States and foreign patents and patent applications as essential to the standards for the 3G and 4G technologies.

3. As a condition of adopting and continuing to maintain proprietary technology, such as InterDigital's purported SEPs, ETSI first requires binding commitments from potential SEP holders to license their purported SEPs on fair, reasonable and non-discriminatory terms and conditions. Clause 6.1 of ETSI's Intellectual Policy Rights ("IPR") Policy states:

> When an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licenses on fair, reasonable and non- discriminatory ("FRAND") terms and conditions.

4. In addition, as an "Individual Member" of the 3rd Generation Partnership Project ("3GPP"), InterDigital is "bound by the IPR policy" of ETSI, the Organizational Partner through which InterDigital participated in 3GPP. To induce 3GPP to develop and

ETSI to adopt its technology into ETSI's standards, InterDigital made public and binding commitments to ETSI and all potential implementers of the standards, including u-blox, to license its declared patents on FRAND terms, declaring that it is "prepared to grant irrevocable licenses under . . . terms and conditions which are in accordance with Clause 6.1 of the ETSI IPR Policy." However, those promises were false and/or misleading because InterDigital never intended and continually failed to abide by its FRAND licensing promises.

5. InterDigital thus intentionally induced ETSI, 3GPP, their members and affiliates, and anyone implementing any of the standards, including u-blox, to rely on InterDigital's representation that it had granted and/or would grant licenses on FRAND terms and conditions to its declared SEPs that would be incorporated and adopted into the 3G and 4G standards.

6. These standards have been and are implemented worldwide, including in the United States and California, in a variety of wireless electronic devices.

7. Consistent with the intent of ETSI's IPR Policy, u-blox and other implementers of the technology standards relied on InterDigital's FRAND commitment and invested significant resources to develop products that practice the 3G and 4G standards.

8. u-blox has invested substantial resources in developing and marketing cellular modules that implement the 3G and 4G standards worldwide, including in the United States and California, relying on the assurances of participating IPR holders — including InterDigital — that any patents identified pursuant to ETSI's IPR Policy by such IPR holders would be licensed on FRAND terms to them, regardless of whether such IPR were, in fact, used in any particular implementation.

9. However, after intentionally locking in the industry, including implementers like u-blox, to practice it's SEP technology through the standard(s), InterDigital then breached its promises to ETSI, its members and affiliates, and implementers of the standard(s) such as u-blox, by refusing to agree to a patent license with a licensing rate that

is consistent with Clause 6 of ETSI's IPR Policy. Instead, InterDigital has demanded royalties that are discriminatory and far higher than FRAND rates.

10. Thus, it has become clear that, now that the cellular standards have been approved incorporating InterDigital's allegedly essential patented technology, and requiring all implementers of those portions of the standard to practice that technology and excluding alternative technologies, InterDigital's promises to license its allegedly essential patents on FRAND terms and conditions were false, and made only to obtain monopoly power from the inclusion of its technology into the standards.

11. u-blox is a ready and willing licensee seeking a license to InterDigital's alleged SEPs. Specifically, u-blox previously filed a lawsuit captioned *u-blox AG v. InterDigital, Inc.*, No. 3:19-cv-001-CAB-BLM (S.D. Cal. Jan. 1, 2019) (the "2019 Litigation") in an effort to obtain a license to InterDigital's alleged SEPs from InterDigital on FRAND terms and conditions. The 2019 Litigation was dismissed upon joint request by the parties after a license agreement was reached.

12. The 2019 Litigation ensued because InterDigital refused to negotiate in good faith with u-blox for a license on FRAND terms. Among other things, InterDigital intended to pressure u-blox into accepting a license that is not FRAND by interfering with u-blox's important customer relationships.

13. The patent license agreement that resulted in the dismissal of the 2019 Litigation expired on December 31, 2022 and u-blox has demonstrated to InterDigital that u-blox is ready and willing to enter into a FRAND license with InterDigital or a license on similar terms as the previous license, adjusting for patent expiration dates.

14. Unfortunately, however, InterDigital is again refusing to negotiate in good faith with u-blox for a license on FRAND terms. Among other things, InterDigital knows that a vital part of u-blox's business model, developed in reliance on InterDigital's FRAND commitment, is u-blox's ability to offer its customers products that include patent rights to InterDigital's portfolio of SEPs. InterDigital is using this knowledge as leverage

to pressure u-blox into a license that is not FRAND because, without a license, u-blox's important customer relationships will suffer severe disruptions.

15. InterDigital's royalty demands for a patent license plainly violate its FRAND commitments, including but not limited to:

- Demanding royalty rates that far exceed the fair and reasonable value of InterDigital's SEPs;
- Discriminating against u-blox and violating ETSI guidelines by demanding that u-blox pay higher royalty rates than other similarly-situated implementers, including free riders;
- Demanding that u-blox pay royalties for alleged SEPs covering portions of the standard not implemented by certain u-blox products;
- Demanding royalty rates that do not account for the expiration of InterDigital's alleged SEPs over the course of the license; and
- Demanding a licensing model that is based on the price of the end-user device and includes royalties that vary based on the cost of the end-user device even if the cost of the module the license covers stays the same.

16. Absent InterDigital's commitment to license on FRAND terms and conditions, u-blox would not have implemented the 3G and 4G technologies. But, based on InterDigital's commitment, u-blox implemented the 3G and 4G technologies rather than pursuing alternative technologies. However, after inducing ETSI to adopt its technology to the exclusion of alternatives with its false promises to ETSI, InterDigital is now attempting to exploit its resulting market position to demand unreasonably high and discriminatory licensing terms from u-blox.

17. As a result of the foregoing, u-blox has no choice but to turn to the Court to establish the FRAND rate, and enjoin InterDigital from engaging in anticompetitive conduct, including, but not limited to, stopping InterDigital from wrongfully interfering with u-blox's customers and downstream manufacturers.

THE PARTIES

A. u-blox

18. Plaintiff u-blox AG is a corporation organized and existing under the laws of Switzerland, having its principal place of business in Zürcherstrasse 68, 8800 Thalwil, Switzerland.

19. Plaintiff u-blox San Diego, Inc. is a wholly-owned subsidiary of u-blox AG. u-blox San Diego, Inc. is a corporation organized and existing under the laws of Delaware, having its principal place of business at 12626 High Bluff Drive #200, San Diego, California 92130.

20. Plaintiff u-blox America, Inc. is a wholly-owned subsidiary of u-blox AG. u-blox America, Inc. is a corporation organized and existing under the laws of Delaware, having its principal place of business at 1900 Campus Commons Drive Suite 401, Reston, Virginia 20191.

21. u-blox delivers leading wireless technology to reliably locate and connect people and devices. u-blox is a leading developer of global positioning technology, including products and services based on Global Navigation Satellite Systems (GNSS), including GPS and GALILEO, for the automotive, mobile communications, and infrastructure markets. u-blox develops cellular modules incorporating a variety of different cellular technologies, including GSM/GPRS, UMTS/HSPA(+), NB-IoT, and LTE Categories M1, 1, 4, and 6.

22. u-blox's wireless communications modules are capable of incorporating a wide variety of cellular technologies. Supported cellular technologies provide global geographic coverage and include 3G and 4G standards. Even within the 4G standard, u-blox offers a wide range of products practicing different iterations of the 4G standard designed for vastly different tasks, including NB-IoT (LTE Cat NB1), LTE Cat M1, LTE Cat 1, LTE Cat 4, and LTE Cat 6. These different cellular technologies offer different levels of performance and cost benefits. For example, u-blox's LTE Cat 1, LTE Cat M1, and NB-IoT modules are designed to support a wide range of IoT applications requiring

medium to very low data rates. This includes a broad spectrum of applications covering speeds high enough for voice and video streaming, as well as those that need optimized performance for ultra-low power consumption and extended in-building range. In contrast, u-blox's high speed LTE Cat 4 and LTE Cat 6 modules meet the needs of applications requiring high data rates, such as for HD video transmission and infotainment solutions. u-blox sells standard compatible products in California and around the world.

B. InterDigital

23. Upon information and belief, defendant InterDigital, Inc. ("IDI") is organized under the laws of Pennsylvania, with its principal place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809.

30. Upon information and belief, defendant InterDigital Communications, Inc. ("InterDigital Communications") is a Delaware corporation, with its principal place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809.

31. Upon information and belief, defendant InterDigital Technology Corporation ("InterDigital Technology") is a Delaware corporation, with its principal place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809.

32. Upon information and belief, defendant InterDigital Patent Holdings, Inc. ("InterDigital Patent Holdings") is a Delaware corporation, with its principal place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809.

33. Upon information and belief, defendant InterDigital Holdings, Inc. ("InterDigital Holdings") is a Delaware corporation, with its principal place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809.

34. Upon information and belief, defendant IPR Licensing, Inc. ("IPR Licensing") is a Delaware corporation, with its principal place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809.

35. Upon information and belief, InterDigital Communications, InterDigital Technology, InterDigital Holdings, InterDigital Patent Holdings, and IPR Licensing are wholly-owned direct or indirect subsidiaries of IDI. IDI, InterDigital Communications,

InterDigital Technology, InterDigital Holdings, InterDigital Patent Holdings, and IPR Licensing (collectively, "InterDigital") act as a common, unified economic enterprise.

36. Upon information and belief, IDI has and does dictate and control the actions of InterDigital Communications, InterDigital Technology, InterDigital Holdings, InterDigital Patent Holdings, and IPR Licensing, as described herein.

37. Upon information and belief, InterDigital has offices and employees in California and/or regularly conducts business in California, including an office located at 4410 El Camino Real, Suite 120, Los Altos, California 94022, which supports InterDigital's patent licensing business.

38. Upon information and belief, InterDigital derives revenues primarily from patent licensing and aggressively seeks to monetize its intellectual property portfolio—which includes patents declared essential to the 3G and 4G standards—by targeting companies like u-blox that sell standard-compliant products in California and around the world.

39. Upon information and belief, InterDigital purports to own approximately 2,400 U.S. patents and 11,500 non-U.S. patents, including 440 families of patents purportedly directed to the 4G/LTE technology, spanning multiple jurisdictions and telecommunication technologies. InterDigital claims that its patents "relate predominantly to digital wireless radiotelephony technology (including, without limitation, 3G, 4G and 5G technologies)."

JURISDICTION AND VENUE

40. u-blox brings this action for damages, declaratory relief, injunctive relief, costs of suit, and reasonable attorneys' fees arising under, inter alia, the patent laws of the United States, 35 U.S.C. § 1 et seq.; and the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202. Accordingly, this Court has jurisdiction to hear this case pursuant to 28 U.S.C. §§ 1331 and 1338.

41. This Court has subject matter jurisdiction over u-blox's pendent state law claim pursuant to 28 U.S.C. § 1367, because u-blox's state law claim arises from the same factual nucleus as its federal law claims.

42. This Court has personal jurisdiction over InterDigital pursuant to 15 U.S.C. § 22 based on InterDigital's national contacts. The Court also has personal jurisdiction over InterDigital because InterDigital regularly transacts business in this judicial district, directed its wrongful conduct described herein at and caused harm to u-blox in California, including, but not limited to, by intentionally directing negotiations and correspondence in connection with the license negotiations to u-blox entities in California and to u-blox's representative located in California. u-blox's claims arise from InterDigital's intentional conduct in this State and which threatens to harm u-blox's business in this State. Additionally, in the 2019 Litigation, InterDigital admitted that jurisdiction was proper over it in this same District. Because the present dispute involves substantially the same circumstances as the 2019 Litigation, personal jurisdiction is proper over InterDigital in the present dispute.

43. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391. Additionally, in the 2019 Litigation, InterDigital admitted that venue was proper in this District. Because the present dispute involves substantially the same circumstances as the 2019 Litigation, venue is proper in the present dispute.

FACTUAL ALLEGATIONS

44. As explained below, u-blox brings this action because of InterDigital's breach of its false commitments to ETSI, 3GPP, and their members and affiliates—including u-blox—to license patents it has asserted to be essential to cellular technologies known as third generation ("3G") and fourth generation ("4G") technologies under FRAND terms and conditions.

Standard Setting Organizations and Intellectual Property Rights Rules

45. SSOs, such as ETSI, are voluntary membership organizations whose participants engage in the development of industry standards for the benefit of their members and affiliates, third parties implementing the standards, and consumers.

46. SSOs and the standards they promulgate play an important role in the technology market by allowing companies to agree on common technology standards so that compliant products implementing the standards will work together. Standards also lower costs by increasing product manufacturing volume and inter-brand competition and by eliminating switching costs for consumers and/or manufacturers who want to switch from products, services, or components provided by one company to those provided by another company.

47. Compatibility standards are commonly adopted in industries in which complementary products or components, manufactured by different firms, must interoperate, interface, or communicate with each other. When many companies produce components that must interoperate in a complex system, the collaboration of industry participants is often the most efficient way to establish the requisite standards. This collaboration often takes place in the context of formal SSOs that promulgate standards and set participation rules for their members. The telecommunications industry has benefited from increased interoperability across devices and networks, and the 3G and 4G cellular communications standards at issue are examples of compatibility standards.

48. While standards deliver economic benefits to innovators, firms that implement the standards, and consumers, standards also have the potential to impose excessive and unfair costs on these same constituencies, some of which stem from opportunistic behavior by owners of patents that cover or are declared to cover various technologies necessary to practice a standard. As a result, SSOs have adopted IPR policies to reduce those costs. When adhered to, these IPR policies benefit all of the constituencies. Standard setting participants receive the opportunity to have their technology incorporated into the standard and to receive compensation for its use in a larger number of devices that

operate using the standard. As the standard becomes more widely adopted and used, patent holders receive greater total compensation. SSO participants also enjoy benefits independent of potential royalty income, including recognition of leadership in the technology, increased demand for participants' products, advantage flowing from familiarity with the contributed technology potentially leading to shorter development lead times, and improved product compatibility.

49. Firms that implement the standard receive assurance that they will always have access to the SEPs and will not be exploited by patent holders or disadvantaged relative to other implementers if they invest in implementing the standard or developing innovative products that may operate with the standard. Likewise, consumers and businesses benefit from continued innovation, reduced costs, and other efficiencies from widespread interoperability and economies of scale and scope enabled by the standard.

50. By contrast, IPR policy breaches can chill standard-setting efforts, thus denying to standard setting participants, implementers, and consumers the many benefits of standard setting.

51. In addition, while there are many benefits to collaborative standard setting, such efforts can also raise antitrust concerns, because, for example, collaborative standard-setting has the potential to empower any individual firm that has IPR over one or more technologies that are declared essential to the standard to block other firms from practicing the standard or to significantly raise their costs of doing so. Outside of the standard setting context, the extent to which a patent holder will be able to profit from an invention is limited by competition from alternative, non-infringing technologies or products. Thus, even though a patent gives its owner the right to exclude unauthorized users, it does not necessarily confer monopoly power because constraining, non-infringing alternatives may be available. However, incorporating patented technology into a standard artificially removes competition from those alternatives for as long as the standard remains in use and provides the patent owner with exclusionary market power it otherwise would not possess. This exclusionary market power is due to the elimination of alternatives once the patented

technologies are incorporated into the standard, not the inherent technical value of the patents (i.e., the contribution of the patented technology relative to the alternatives — the ex-ante value).

52. SEP owners gain the power to exclude or exploit because the process of standardization transforms what may have been only marginally valuable IP into essential IP needed by all firms that intend to manufacture, use, or sell standard-based products. The U.S. Department of Justice and Federal Trade Commission have recognized the potential for SEP owners to abuse the power gained through standardization. The effect is that the competitive constraints on the SEP owner's licensing behavior are eliminated after standardization. This elimination of alternatives confers market power on SEP owners relative to the pre-standard situation wherein alternatives (including the option of not including the relevant functionality at all) are potentially available in the technology market(s) and can constrain anticompetitive licensing behavior of the SEP owner.

53. Once a standard is set, and especially as manufacturers invest in and begin manufacturing products that can use or operate with the standard, it is often infeasible to revise the standard in order to avoid a SEP. Revising a standard can be very costly to the industry implementing that standard because it may involve breaking the compatibility and interoperability that the standard provides. Thus, changing a standard to eliminate a SEP whose owner attempts to unfairly exercise undue market power gained from standardization is generally not feasible. In sum, once an industry has adopted a particular standard, there are no alternative technologies that can implement a given functionality within the wording of the standard. The ex post relaxation of competitive constraints on the SEP owner through the elimination of alternatives, together with the ex post negotiation of licenses, can lead to some SEP owners to act opportunistically and "hold up" some or all standard implementers by extracting higher royalties ex post than they could have bargained for ex ante and in the absence of standardization.

54. To prevent the exploitation of the SEP owner's market power in this situation, there must be other constraints on the SEP owner's licensing behavior, such as

obligations to license on FRAND terms. To this end, SSOs typically impose IPR rules on their participants to protect against (or minimize the likelihood of) opportunistic, anticompetitive behavior by owners of standard-essential IP. Such opportunistic behaviors expropriate at least a portion of an implementer's returns from sunk investments in innovation. If an implementer or potential implementer anticipates that there is a material risk of opportunistic behavior, its incentives to engage in innovative activities will be reduced or potentially even eliminated, particularly when the opportunistic SEP holder seeks to hold up the implementer for all or a large part of the profits from the implementer's innovations, complementary products, or services. By protecting against opportunistic behavior, SSO rules pertaining to IPR are intended to provide an environment that promotes investment, innovation, and technological progress. These IPR rules typically call for SSO participants to identify through declaration any potential SEPs covering the proposed standard and agree to license all implementers of the standard on fair, reasonable, and non-discriminatory terms.

ETSI's IPR Policy

55. ETSI is an independent, non-profit SSO that is responsible for the standardization of information and communication technologies, including mobile cellular technologies, for the benefit of its members, affiliates and the public.

56. 3GPP is a collaborative partnership among a group of recognized SSOs in the information and communication industry, including ETSI.

57. ETSI, in partnership with 3GPP, has been involved in standardizing a number of 3G and 4G mobile cellular technologies.

58. The ETSI IPR Policy,[1] which is part of the ETSI Directives, requires members to disclose on a timely, bona fide basis all intellectual property rights that they are aware of and believe may be essential to a proposed ETSI standard. In particular, Clause 4.1 of the ETSI IPR Policy provides that: "each [ETSI] MEMBER shall use its

[1] Available at https://www.etsi.org/images/files/IPR/etsi-ipr-policy.pdf

reasonable endeavors, in particular during the development of a STANDARD or TECHNICAL SPECIFICATION where it participates, to inform ETSI of ESSENTIAL IPRs in a timely fashion." This obligation to disclose extends to members' affiliates as well.

59. ETSI's IPR Policy requires that participants disclose their relevant IPR during the development of a standard so that they may request that members owning patents potentially essential for the practice of a standard irrevocably commit to license those patents on FRAND terms and conditions to anyone practicing the standard. Specifically, clause 6 of ETSI's IPR Policy states:

> When an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licences on fair, reasonable and non-discriminatory [FRAND] terms and conditions under such IPR… The above undertaking may be made subject to the condition that those who seek licences agree to reciprocate.

ETSI IPR Policy, § 6.1.

60. Clause 6.1 lists "MANUFACTURE, including the right to make or have made customized components and sub-systems to the licensee's own design for use in MANUFACTURE," as among the rights for which SEP holders must make mandatory FRAND licensing commitments.

61. FRAND commitments, pursuant to Clause 6 of the ETSI IPR Policy, "shall be interpreted as encumbrances that bind all successors-in-interest."

62. ETSI defines "essential" as follows:

> "ESSENTIAL" as applied to IPR means that it is not possible on technical (but not commercial) grounds, taking into account normal technical practice and the state of the art generally available at the time of standardization, to make, sell, lease, otherwise dispose of, repair, use or operate EQUIPMENT or METHODS which comply with a STANDARD without infringing that IPR. For the avoidance of doubt in exceptional cases where a STANDARD can only be implemented by technical solutions, all of which are infringements of IPRs, all such IPRs shall be considered ESSENTIAL.

ETSI IPR Policy, §15.6.

63. Although ETSI defines what it means by "essential," it does not make any attempt (nor, in general, do any SSOs) to ascertain whether the patents declared as "essential" to a standard are valid and enforceable, or whether they are, in fact, technically essential. Which patents are deemed "essential" to a particular standard is self-proclaimed by the SSO member that declares its patents to be "essential" to the standard.

64. If the essential IPR owner refuses to undertake the requested commitment and informs ETSI of that decision, the ETSI General Assembly must "review the requirement for that STANDARD or TECHNICAL SPECIFICATION and satisfy itself that a viable alternative technology is available for the STANDARD or TECHNICAL SPECIFICATION" that is not blocked by that IPR and satisfies ETSI's requirements. ETSI IPR Policy, § 8.1.1. Absent such a viable alternative, the ETSI IPR Policy requires that "work on the STANDARD or TECHNICAL SPECIFICATION shall cease." Id., § 8.1.2. In other words, ETSI will not agree to incorporate a member's technology in a standard under consideration unless the member irrevocably binds itself to granting licenses on FRAND terms.

InterDigital's IPR Declarations

65. As a member of ETSI and a participant in 3GPP standardization, in conjunction with the adoption of the 3G and 4G standards, InterDigital made submissions to the technical bodies within ETSI and 3GPP, declaring that certain of its patents or patent applications may be or may become essential to the mobile device standards under consideration.[2] InterDigital also undertook a commitment to license any such essential patents it held on FRAND terms and conditions.

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[2] u-blox does not accept InterDigital's representation that each and every one of the patents identified as "essential" are, in fact, necessary for the compliant implementations of 3G and 4G technologies; nor does u-blox concede that the particular implementations of 3G and 4G technologies in its products practice each and every one of InterDigital's patents, including those identified by InterDigital in relation to these technologies. Nonetheless, u-blox has relied upon the IPR declarations of InterDigital, and other holders of declared-essential patents. u-blox reserves the right to dispute the essentiality of any particular InterDigital alleged standard essential patent (other than those identified below

66. Indeed, InterDigital entered into an irrevocable undertaking to grant licenses to the disclosed allegedly essential patents on FRAND terms and conditions, including submitting at least the following declarations to ETSI, true and correct copies of which are attached as Exhibits 1 through 70.

Date	InterDigital Entity	Signatory	Place Executed	Project(s) or Standard(s)	Exh.	ISLD
10/4/01	InterDigital Technology	H. Goldberg	Philadelphia, PA	UMTS	1	ISLD-200105-001
4/8/04	InterDigital Technology	D. Boles	Wilmington, DE	UMTS (TS41.101 Rel. 5)	2	ISLD-200407-004
3/21/07	InterDigital Technology	B. Bernstein	n/a	UMTS; E-UMTS	3	ISLD-200802-001
9/19/08	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	UMTS; E-UMTS;	4	ISLD-200811-003
9/19/08	InterDigital Technology	B. Ditty	Wilmington, DE	GSM; UMTS; E-UMTS; GERAN	5	ISLD-200901-001
9/14/09	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	UMTS; E-UMTS; GERAN	6	ISLD-200910-006
9/14/09	InterDigital Technology	B. Ditty	Wilmington, DE	GSM; UMTS; E-UMTS; GERAN	7	ISLD-200911-005
9/16/10	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	UMTS; LTE; GERAN	8	ISLD-201010-010
10/31/11	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	UMTS; LTE; RRS; M2M	9	ISLD-201109-010
10/31/11	InterDigital Technology	B. Ditty	Wilmington, DE	UMTS; LTE	10	ISLD-201109-021
11/30/12	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	UMTS; LTE; RRS; M2M	11	ISLD-201210-008
11/30/12	InterDigital Technology	B. Ditty	Wilmington, DE	UMTS; LTE	12	ISLD-201210-010
11/26/13	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	UMTS; LTE; RRS; M2M	13	ISLD-201311-007
11/26/13	InterDigital Technology	B. Ditty	Wilmington, DE	GSM; UMTS; LTE	14	ISLD-201311-008
9/16/2010	InterDigital Technology	B. Ditty	Wilmington, DE	LTE; UMTS; GSM; GERAN;	15	ISLD-201010-011
9/26/2014	InterDigital Technology	B. Ditty	Wilmington, DE	UMTS; LTE	16	ISLD-201409-035
9/26/2014	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	UMTS; LTE; RRS; M2M	17	ISLD-201409-028
9/26/2014	IPR Licensing	B. Ditty	Wilmington, DE	LTE	18	ISLD-201409-039
11/12/2015	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	LTE; UMTS; RRS; M2M	19	ISLD-201511-004
12/22/2016	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	LTE; UMTS; M2M; RRS	20	ISLD-201706-015
12/11/2015	InterDigital Technology	B. Ditty	Wilmington, DE	LTE; UMTS; GERAN	21	ISLD-201511-026
12/22/2016	InterDigital Technology	B. Ditty	Wilmington, DE	LTE; UMTS; GERAN;	22	ISLD-201706-014
9/19/2008	IPR Licensing	B. Ditty	Wilmington, DE	UMTS; GERAN	23	ISLD-200811-004
9/14/2009	IPR Licensing	B. Ditty	Wilmington, DE	UMTS; E-UMTS	24	ISLD-200909-004
9/16/2010	IPR Licensing	B. Ditty	Wilmington, DE	GERAN; LTE; UMTS	25	ISLD-201009-002
10/31/2011	IPR Licensing	B. Ditty	Wilmington, DE	UMTS; LTE	26	ISLD-201109-018
11/30/2012	IPR Licensing	B. Ditty	Wilmington, DE	LTE; UMTS	27	ISLD-201210-011
11/26/2013	IPR Licensing	B. Ditty	Wilmington, DE	LTE	28	ISLD-201311-006
11/12/2015	IPR Licensing	B. Ditty	Wilmington, DE	LTE; UMTS	29	ISLD-201511-027
12/22/2016	IPR Licensing	B. Ditty	Wilmington, DE	LTE; UMTS	30	ISLD-201706-011
12/22/2017	IPR Licensing	B. Ditty	Wilmington, DE	LTE	31	ISLD-201711-009
12/15/2021	InterDigital Holdings	B. Ditty	Wilmington, DE	LTE	32	ISLD-202112-078
09/10/2021	InterDigital Holdings	B. Ditty	Wilmington, DE	OneM2M	33	ISLD-202108-022
12/31/2019	InterDigital Holdings	B. Ditty	Wilmington, DE	LTE, 3GPP-Release-15	34	ISLD-201912-087
10/31/2019	InterDigital Holdings	B. Ditty	Wilmington, DE	LTE	35	ISLD-201909-015
11/30/2012	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	ETSI RRS, LTE, UMTS, ETSI M2M,	36	ISLD-201210-008
10/31/2011	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	LTE, UMTS, ETSI RRS, ETSI M2M	37	ISLD-201109-010
9/16/2010	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	UMTS, LTE, GERAN,	38	ISLD-201010-010

in paragraph 139) to the extent necessary to calculate FRAND terms and conditions for a license to InterDigital's 3G and 4G SEP portfolios.

9/14/2009	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	UMTS, GERAN, E-UMTS,	39	ISLD-200910-006
9/19/2008	InterDigital Patent Holdings	B. Ditty	Wilmington, DE	E-UMTS, GERAN, UMTS	40	ISLD-200811-003
12/22/2016	InterDigital Patent Holdings, Inc.	B. Ditty	Wilmington, DE	LTE, UMTS, ESTI M2M, RRS	41	ISLD-201706-015
11/12/2015	InterDigital Patent Holdings, Inc.	B. Ditty	Wilmington, DE	LTE, UMTS, ETSI RRS, OneM2M, ETSM2M	42	ISLD-201511-004
09/26/2014	InterDigital Patent Holdings, Inc.	B. Ditty	Wilmington, DE	LTE, UMTS, ETSI RRS, ETSI M2M	43	ISLD-201409-028
11/26/2013	InterDigital Patent Holdings, Inc.	B. Ditty	Wilmington, DE	UMTS, LTE, ETSI, M2M, ETSI M2M, ETSI RRS,	44	ISLD-201311-007
09/14/2009	InterDigital Technology Corp.	B. Ditty	Wilmington, DE	GSM, UMTS, GERAN, E-UMTS,	45	ISLD-200911-005
09/16/2010	InterDigital Technology Corp.	B. Ditty	Wilmington, DE	UMTS, LTE, GSM, GERAN	46	ISLD-201010-011
10/31/2011	InterDigital Technology Corp.	B. Ditty	Wilmington, DE	LTE, UMTS,	47	ISLD-201109-021
09/09/2008	InterDigital Technology Corp.	B. Ditty	Wilmington, DE	GSM, UMTS, GERAN, E-UMTS,	48	ISLD-200901-001
11/30/2012	InterDigital Technology Corp.	B. Ditty	Wilmington, DE	LTE, UMTS,	49	ISLD-201210-010
04/08/2004	InterDigital Technology Corp.	D. Boles	Wilmington, DE	UMTS	50	ISLD-200407-004
03/21/2007	InterDigital Technology Corp.	B. Bernstein	Wilmington, DE	UMTS, E-UMTS	51	ISLD-200802-001
10/04/2001	InterDigital Technology Corp.	H. Goldberg	Wilmington, DE	UMTS	52	ISLD-200105-001
12/22/2016	InterDigital Technology Corporation	B. Ditty	Wilmington, DE	LTE, GERAN, UMTS	53	ISLD-201706-014
11/12/2015	InterDigital Technology Corporation	B. Ditty	Wilmington, DE	LTE, UMTS, GERAN	54	ISLD-201511-026
11/26/2013	InterDigital Technology Corporation	B. Ditty	Wilmington, DE	GSM, LTE, UMTS,	55	ISLD-201311-008
11/30/2012	IPR Licensing Inc.	B. Ditty	Wilmington, DE	LTE, UMTS,	56	ISLD-201210-011
10/31/2011	IPR Licensing Inc.	B. Ditty	Wilmington, DE	UMTS, LTE	57	ISLD-201109-018
09/16/2010	IPR Licensing Inc.	B. Ditty	Wilmington, DE	GERAN, LTE, UMTS	58	ISLD-201009-002
09/14/2009	IPR Licensing Inc.	B. Ditty	Wilmington, DE	UMTS, E-UMTS	59	ISLD-200909-004
09/19/2008	IPR Licensing Inc.	B. Ditty	Wilmington, DE	UMTS, GERAN	60	ISLD-200811-004
04/08/2004	IPR Licensing Inc.	B. Ditty	Wilmington, DE	UMTS	61	ISLD-200407-006
12/22/2017	IPR Licensing, Inc.	B. Ditty	Wilmington, DE	LTE	62	ISLD-201711-009
12/22/2016	IPR Licensing, Inc.	B. Ditty	Wilmington, DE	LTE, UMTS	63	ISLD-201706-011
12/11/2015	IPR Licensing, Inc.	B. Ditty	Wilmington, DE	LTE, UMTS	64	ISLD-201511-027
09/26/2014	IPR Licensing, Inc.	B. Ditty	Wilmington, DE	LTE	65	ISLD-201409-039
11/26/2013	IPR Licensing, Inc.	B. Ditty	Wilmington, DE	LTE	66	ISLD-201311-006
12/22/2017	IDAC Holdings	B. Ditty	Wilmington, DE	3GPP-Release-15 (LTE-Advanced Pro, NR release 15)	67	ISLD-201712-041
12/22/2016	IDPA Holdings, Inc	B. Ditty	Wilmington, DE	LTE	68	ISLD-201706-010
12/22/2016	IDTP Holdings, Inc.	B. Ditty	Wilmington, DE	LTE	69	ISLD-201706-013
12/11/2015	IDTP Holdings, Inc.	B. Ditty	Wilmington, DE	UMTS, LTE,	70	ISLD-201511-028

67. InterDigital made these declarations to ensure that the 3G and 4G standards incorporated InterDigital's technologies to the exclusion of alternative technologies, and so that manufactures of standard-compliant devices would require a license to InterDigital's alleged SEPs.

68. While making the above declarations to ETSI, InterDigital concealed its intent to, among other things, charge supra-competitive royalty rates and demand discriminatory terms and conditions for a license to its alleged SEPs. The intent of this concealment was to deceive ETSI members so that technologies InterDigital claims to have patented were included in the standards. Pursuant to the ETSI IPR Policy, if InterDigital had been honest regarding its intent to refuse to license its alleged SEPs on FRAND terms and conditions, ETSI would have looked for alternative solutions to InterDigital's technology or omitted that particular portion of the standard. See ETSI IPR Policy, § 8.1.3. Thus, but for InterDigital's deceptive IPR declarations, alternative technologies would have been adopted into the standards by ETSI or no particular technology would have been specified.

Overview of Cellular Standards

69. InterDigital's unlawful and anticompetitive behavior pertains to patents that it claims are essential to the 3G and 4G cellular standards, which are described below.

The 3G Standard

70. In the mid to late 1990s, the cellular industry started a push towards a newer, more advanced system, able to support more users with improved reliability and better handling of data services.

71. Originally the hope was to adopt a single, global standard. However, over time, it became apparent that diverging regional interests would prevent a single system from being adopted. On the one hand, supporters of the GSM-based standards pushed to have a system based on the GSM core network, but with an enhanced Radio Access Network incorporating a new CDMA-based air interface known as Wideband CDMA ("WCDMA"). This standard is known as Universal Mobile Telecommunications System, or "UMTS." On the other hand, supporters of the IS-95 family of standards pushed to enhance the existing IS-95 core network and CDMA air interface, to develop a new standard known as CDMA2000.

72. The first UMTS standard developed by 3GPP was called Release 99, and was followed by a minor "cleanup" revision called Release 4. The first major upgrade came in 2002 with Release 5, including a new feature called High Speed Downlink Packet Access ("HSDPA"), which was followed by Release 6 in and around early 2005 that introduced High Speed Uplink Packet Access ("HSUPA"). Together HSDPA and HSUPA (collectively known as High Speed Packet Access or "HSPA") enhanced the download and upload speeds as compared to the original baseline specification. In 2007, Release 7 included an enhancement named High Speed Packet Access Evolution ("HSPA+"), which includes a number of technical modifications to support even higher data rates. More recent releases have further improved functionality.

73. UMTS, as improved through the various releases, remains in widespread use around the world today.

The 4G Standard

74. For the first time in the evolution of cellular standards, the global cellular industry converged to a single wireless standard for use worldwide in the late 2000s: Long Term Evolution ("LTE"). This standard was developed by 3GPP,and it provides a natural evolutionary path for both UMTS and CDMA2000 network operators and their customers. Similar to the earlier generations, LTE also continues to evolve, including advances such as LTE-Advanced.

75. Work began in earnest on developing LTE around 2006, under the leadership of 3GPP. The first technical specifications, known as Release 8, were published in 2008. Release 8 includes functionality that theoretically supports downlink data rates of about 300 Mbps and uplink data rates of about 75 Mbps.

76. In 2011, an upgrade to LTE was published, referred to as Release 10, incorporating many features of what was known as LTE-Advanced. This upgrade includes a number of major technical enhancements to considerably increase LTE functionality. Commercial deployments of LTE-Advanced are in progress today.

77. Development of the LTE standard continued beyond Release 10 with incremental improvements to the standard, including many relevant to u-blox's cellular modules.

78. In Release 12, 3GPP specified low-price machine-communication terminals as LTE terminal Category 0. These terminals feature a maximum data rate of 1Mbps, support for frequency division duplex and half duplex, and support for single antenna reception.

79. In Release 13, 3GPP defined two new terminal categories. Category M1 includes the features of Category 0, with the transceiver bandwidth limited to 1.08 MHz and support for coverage extension of approximately 15db. These limitations have cost reduction effects for chipsets compared to Category 0. Second, Release 13 defined the Narrowband IoT ("NB-IoT") category of devices. NB-IoT isa subset of the LTE standard focused on indoor coverage, low cost, long battery life, and high connection density. The NB-IoT category features transceiver bandwidth limited to 180kHz and support for coverage extension greater than 20db.

80. As of Release 13, the LTE standard defines 19 separate categories of user equipment ("UE"). These categories depend on maximum peak data rate and MIMO capabilities supported by the UE.

81. In Release 14, the LTE standard introduced improvements to its Cellular Internet of Things (CIoT) aspects, with 2G, 3G and 4G support of Machine-Type of Communications (MTC), support for Vehicle-to-Everything (V2X) communications, in particular Vehicle-to-Vehicle (V2V), along with other incremental improvements.

Hold-up and Royalty Stacking

82. Despite SSOs adopting IPR Policies incorporating FRAND commitments, some SEP owners have unfortunately attempted to exploit their monopoly power to extract supra-competitive royalty rates after implementers are locked into the standardized technology.

83. The exploitation of SEPs to extract unreasonable or discriminatory royalties is referred to as patent "hold-up." The cumulative royalty burden required to satisfy all SEP holders is referred to as royalty stacking.

84. Hold-up harms competition and impedes implementation of standards, diminishing any benefits that flow from widespread adoption of the standard. The anticompetitive effects of hold-up are magnified when the total aggregate royalty stack is analyzed. The total royalty stack must be reasonable when viewed in the aggregate. The demands of individual SEP owners must be assessed in light of the total number of SEPs included in the standard and their relative technical contributions.

85. A number of cases that have been litigated in U.S. courts demonstrate that patent hold-up is a widespread problem, with SEP owners violating their FRAND commitments by making royalty demands significantly above the adjudicated FRAND rates. *See, e.g.*, *TCL Commun. Tech. Holdings, LTD v. Telefonaktiebolaget LM Ericsson*, 2017 WL 6611635, at *51-52 (C.D. Cal. Dec. 21, 2017) (determining FRAND rates of 0.314%-0.45% for 4G, 0.224%-0.30% for 3G,and 0.09%-0.16% for 2G, as compared to Ericsson's demand of 1.5% for 4G, 1.2%for 3G, and 0.8%-1.0% for 2G); *In re Innovation IP Ventures, LLC Patent Litig.*,2013 WL 5593609, at *43 (N.D. Ill. Oct. 3, 2013) (for 19 asserted patents, assessing damages of $0.0956 per unit as compared to the proposed royalty of $16.17 per unit for tablet computers); *Microsoft Corp. v. Motorola, Inc.*, 2013 WL 2111217, at *100 (W.D. Wash. Apr. 25, 2013) (determining FRAND rate of $0.03471 per Microsoft's x Box unit, as compared to Motorola's initial demand of $6-$8 per x Box unit).

86. Courts, regulators, and economists have also made clear that to be effective, the FRAND commitments in ETSI's IPR policy should: (a) limit royalties to the value that the SEP(s) had prior to inclusion in the ETSI standard and in light of other patented and unpatented technology essential to the standard; (b) prohibit charging royalties that are higher based upon the technology being written into the standard or that capture the value

of the standard itself; and (c) require non-discriminatory treatment of licensees and potential licensees.

87. As explained below, and like the SEP owners from the aforementioned cases, an analysis of InterDigital's non-FRAND offers to u-blox for a new license demonstrates that InterDigital is attempting to abuse its monopoly power to extract the hold-up value of its alleged SEPs. InterDigital's offers to u-blox are completely untethered to the ex-ante value of InterDigital's alleged SEPs, and would create an unsustainable royalty stack. In light of InterDigital's continued unreasonable demands for a license and related conduct, u-blox had no choice but to seek a judicial determination of the terms for a fair, reasonable, and non-discriminatory license.

InterDigital's Refusal to Offer u-blox A New License on FRAND Terms

88. As explained above, InterDigital is required to license its declared essential patents consistent, in all respects, with its binding commitment to ETSI, 3GPP, and participants and implementers of the applicable standards. However, in disregard of its binding obligations, InterDigital is refusing to license its declared essential patents to u-blox on FRAND terms and conditions. Instead, InterDigital is attempting to exploit its market power gained as a result of its deceptive and intentionally false FRAND commitments to attempt to extract supra-competitive royalties from u-blox.

89. For example, in addition to its supra-competitive royalty demands, InterDigital is attempting to extract royalties from u-blox for patents that will expire during the course of the license. A number of W-CDMA and LTE patent families identified by InterDigital as exemplary SEPs will expire several years prior to the proposed expiration of the license agreement the parties are negotiating. Despite the expiration of its alleged SEPs, InterDigital is attempting—by using fixed rate royalties based on product sales for the duration of the license—to extract royalties after its technology enters the public domain.

90. InterDigital is demanding royalties from u-blox and/or it's customers for products which only practice a limited subset of the 4G standard—including certain

portions of the standard which InterDigital has not demonstrated its SEPs even cover. Most of the improvements to 4G have focused on expanding bandwidth and speed in broadband LTE categories. However, u-blox offers cellular modules incorporating low-power wide-area ("LPWA") LTE categories specifically developed for Internet of Things (IoT) and Machine-to-Machine (M2M) applications—including LTE Cat 1, LTE Cat M1 and LTE NB-IoT. These LTE iterations are designed with limited speed and functionality (for example, certain implementations do not support voice over LTE) in an effort to offer lower power consumption, less complexity and lower costs. InterDigital is attempting to extract its 4G royalty rates for these devices without even a bare showing that most of its patents cover the technology as implemented and/or without attempting to determine the value of its allegedly patented technology to u-blox's products.

91. InterDigital's current royalty demands are not consistent with its obligation to license its SEPs on fair and reasonable terms nor the parties previous 2019-2022 license. Rather, its demands can only be explained by InterDigital's attempt to exploit its undue market power to extract supra-competitive royalties that in no way reflect the value of the patented technology. As described, the inherent entry barriers imposed by standardization empower InterDigital to exploit its resulting market power to extract supra-competitive, and non-FRAND prices.

92. InterDigital also bases its royalty demand on the price of the end-user device that incorporates the 3G or 4G module for which the licensed SEPs would cover. InterDigital's royalty demand based on end-user devices is clearly an attempt to inflate the royalty rates to make them seem more reasonable given the significantly higher price of the end-user device than the 3G or 4G module incorporated therein.

93. Moreover, InterDigital's royalty demand for 4G modules increases with the price of the end-user device in which the 4G module is incorporated. This is yet another attempt by Interdigital to inflate its royalty demands by tying it to the value of end-user devices, which can vary based on a multitude of unrelated functionalities and features having nothing to do with InterDigital's purported SEP technologies, or even cellular

connectivity. The price of a given 4G module incorporated into various end-user devices remains consistent for that 4G module even if the price of one end-user device is higher than another end-user device into which such a module is incorporated. Specifically, InterDigital's royalty demand for a 4G module incorporated into the highest-priced end-user devices is nearly four times higher than its royalty demand for the same 4G module incorporated into the lowest-priced end-user devices. Thus, even if the same 4G module is used in each of these end-user devices, InterDigital's royalty model would result in royalties that take up four times more of the total royalty stack for all 4G SEPs simply because the price of the end-user device in which the 4G module is incorporated is higher. That InterDigital's overall percentage of the royalty stack can change so drastically across product offerings is a clear indication that its royalty demand is not consistent with its FRAND licensing obligations.

94. InterDigital's licensing offer to u-blox for a new license violates its commitment to ETSI and is entirely inconsistent with FRAND principles. Instead, InterDigital has negotiated in bad faith to exploit its monopoly power and attempted to maximize the hold-up value it can extract from u-blox.

95. Put simply, in breach of its FRAND commitment, InterDigital is attempting to exploit the monopoly power it gained from standardization to demand supra-competitive royalty rates which are grossly disproportionate to the value of the technical contribution of its small number of SEPs.

96. In addition, as explained below, InterDigital's conduct during negotiations with u-blox for a new license cannot be reconciled with its FRAND commitment.

InterDigital's Repeated and Unjustified Efforts to Interfere with u-blox's Customer Relationships to Coerce a Non-FRAND Agreement

97. On January 1, 2011, u-blox signed a Patent License Agreement with InterDigital (the "2011 PLA").

98. The terms of the PLA expired on December 31, 2016, but u-blox continued to pay royalties after expiration to InterDigital under the terms of the 2011 PLA while a new patent license agreement was pursued and a non-disclosure agreement was renewed.

99. u-blox also negotiated with InterDigital for a temporary written extension of the terms of the 2011 PLA to allow u-blox to continue to be licensed to InterDigital's cellular patent portfolio while the terms of a new patent license were finalized.

100. It is well known and reflected in the 2011 PLA that technology patent royalty rates decline year-to-year. As such, the 2011-2016 rates in the PLA that u-blox was paying in 2017 were not FRAND rates. Indeed, using the 2016 rates in 2017 represented a royalty rate overpayment on some u-blox products in excess of [redacted] for the product alone. Among other things, based on changing market conditions and technology, such a rate would not allow u-blox to make any profit on the sale of its products using cellular technology.

101. Therefore, because the rates that u-blox was paying were not FRAND rates, u-blox requested that InterDigital include in any written extension a provision whereby InterDigital would "true-up" u-blox's overpayments based on the FRAND rates in their new patent license agreement.

102. Such a true-up provision is commonly agreed to by patent owners' negotiating in good faith with licensees or potential licensees, in order to allow licensees to negotiate without the licensee being unfairly locked into paying non-FRAND rates without any chance to be made whole. Nonetheless, InterDigital refused to agree to any such true-up provision.

103. But, even more troubling, while the parties were still negotiating, InterDigital contacted u-blox's customers and downstream manufacturers, informing them that u-blox was no longer licensed by InterDigital and seeking to collect even higher patent royalties from them in a blatant attempt to coerce u-blox to agree to InterDigital's excessive non-FRAND rates.

104. InterDigital's conduct was unnecessarily destructive and outrageous because InterDigital knew that: (i) u-blox's customers and downstream manufacturers would not have to pay any patent royalties to InterDigital once u-blox was licensed by InterDigital, and (ii) u-blox was a ready and willing InterDigital licensee once the FRAND rate was determined. As such, there was no legitimate reason for InterDigital to reach out to u-blox's customers or downstream manufacturers.

105. In addition, InterDigital was and is well aware of the fact that: (i) u-blox entered into relationships with its customers in reliance on InterDigital's commitment to offer a license to its alleged SEPs on FRAND terms, and (ii) u-blox's customers and downstream manufacturers had relied on u-blox to enter into a FRAND license with InterDigital prior to designing and incorporating u-blox's technology into their products.

106. In sum, because u-blox was willing to enter into a FRAND license, there was no legitimate reason why InterDigital should have or needed to contact u-blox's customers and downstream manufacturers.

107. Because InterDigital's threats to u-blox's customers and their downstream manufacturers not only threatened to profoundly impact u-blox's critical customer relationships, but the very existence of u-blox, u-blox had no choice but to reluctantly sign a temporary patent license agreement that was not on FRAND terms.

Interdigital Is Again Refusing To Renew u-blox's License On FRAND Terms And Conditions

108. The term of the 2019 PLA expired on December 31, 2022. Therefore, prior to its expiration, u-blox reached out to InterDigital to discuss entering into a new patent license agreement.

109. Because the 2019 PLA was set to expire on December 31, 2022, and, given the history of negotiations regarding a license to InterDigital's alleged SEPs, it became reasonable to assume that the parties' negotiations would extend beyond that date, in order to allow the parties time to finalize the terms of a new license. On June 3, 2022, a u-blox representative raised initiating negotiations regarding a new license with an InterDigital

representative while the two were attending a conference in Chicago. InterDigital's representative said InterDigital would get back to u-blox once they returned to their headquarters.

110. Having received nothing further from InterDigital regarding license negotiations, u-blox contacted InterDigital on July 15, 2022 in another effort to initiate license negotiations. InterDigital responded that it would get back to u-blox in August.

111. After InterDigital failed to reach out by the end of August 2022, u-blox contacted InterDigital again on September 6, 2022 regarding a renewal to the license. Following that correspondence, u-blox was finally able to schedule a meeting with InterDigital for September 26, 2022 to discuss the renewal of u-blox's license to InterDigital's alleged SEPs.

112. On September 26, 2022, u-blox presented to InterDigital regarding u-blox's past, present, and future expected product offerings and the application areas in which u-blox is intending for its products to be used. [redacted]

113. u-blox and InterDigital met again to discuss licensing on October 12, 2022. At that meeting, InterDigital discussed a presentation it prepared, which included a slide noting what InterDigital understood to be u-blox's "Commercial Objectives for Licensing." These objectives include a business strategy of being able to "[o]ffer value to customers through 'premium offering'" and respond to "customer needs" by satisfying customers' "[i]ndemnity requirements." As InterDigital recognized during future correspondence, it understood u-blox's "premium offering" meant u-blox's ability to offer customers products that are licensed for the relevant SEPs.

114. Prior to a meeting scheduled for October 26, 2022, InterDigital asked u-blox for its sales numbers. On the October 26, 2022 meeting, u-blox provided InterDigital with

information regarding u-blox's sales and revenue numbers for its various 3G, LTE, and IoT, related product offerings.

118. On December 2, 2022, in an effort to reach a licensing agreement with InterDigital that was both consistent with prior licensing agreements and with u-blox's business objectives (of which InterDigital was aware), u-blox sent a proposed license agreement to InterDigital based on a lump-sum payment, similar to the 2019 PLA, but derived using the effective royalty rates under the 2019 PLA applied to u-blox's projected sales over the term of the proposed license. The valuation in u-blox's proposal was based

on previous patent lists provided by InterDigital, with expired patents being removed and pro-rated rates for patents expiring during the term of the new license.

119. On December 14, 2022, u-blox and InterDigital had a meeting wherein InterDigital rejected u-blox's December 2, 2022 offer and explained InterDigital's new licensing and patent valuation approach. [redacted]

120. u-blox is ready, willing, and able to enter into a license with InterDigital once the FRAND terms and conditions for a license to InterDigital's 3G and 4G SEPs are determined.

121. However, it has become clear that InterDigital has no intention of granting u-blox a license to its allegedly essential 3G and 4G patents on FRAND terms and conditions.

122. Given InterDigital's past practices of targeting u-blox's customers, u-blox believes that InterDigital will, again, begin targeting u-blox's customers when the 2019 PLA term ends.

123. In addition, InterDigital has no incentive to conclude negotiations for a license with u-blox on FRAND rates because, as explained above, once the 2019 PLA term ended, InterDigital could revert to its prior tactics of pressuring u-blox by targeting u-blox customers, which would, at that point, not have a license to InterDigital's patents. As such,

u-blox must make an entirely unfair Hobson's choice: refuse to capitulate to InterDigital's unfair demands and risk losing its customers and business or agree to a new license that is not on FRAND terms. Given these clear hold-up conditions, u-blox has no choice but to file this action.

The Irreparable Harm to u-blox

124. In justifiable reliance upon InterDigital's promises that it would license its SEP technology to u-blox and others on FRAND terms, u-blox has made significant monetary investments into the research, development, production, and marketing of its cellular modules.

125. However, InterDigital's wrongful non-FRAND demands of u-blox and wrongful interference with u-blox's current and potential future customer relationships will not only lead to a loss of business for u-blox, but InterDigital's threats to u-blox's customer relationships, and related loss of trust, reputation, and goodwill threatens the very existence of u-blox, including the layoff of all of the employees of u-blox San Diego, Inc., the entity primarily responsible for research and design of u-blox's cellular products.

126. Damages are not adequate to fully compensate and address u-blox's injuries, including, inter alia, its reputational harm and harm to its customer relationships.

127. Based on the foregoing, u-blox seeks, inter alia,: (i) a judicial declaration that InterDigital's promises to ETSI, 3GPP, and their respective members and affiliates constitute contractual obligations that are binding and enforceable by u-blox; (ii) a judicial declaration that InterDigital has breached these obligations by demanding excessive, unfair, unreasonable, and discriminatory royalties from u-blox; (iii) a judicial decree enjoining InterDigital from further demanding excessive royalties from u-blox and u-blox's customers that are not consistent with InterDigital's FRAND obligations; (iv) a judicial accounting of what constitutes a FRAND royalty rate in all respects consistent with InterDigital's commitment to license its patents identified as (or alleged to be) "essential" to the 3G and/or 4G standards; (v) a judicial determination that InterDigital's refusal to agree to a new license is a breach of InterDigital's commitments to ETSI; (vi) a

judicial determination that InterDigital's deceptive and deliberately false declarations to ETSI constitute violations of Section 2 of the Sherman Act; (vii) a judicial determination that InterDigital is liable for interference with contractual relations (viii) a jury trial on all issues so triable; and (ix) all other relief to which u-blox may be entitled.

CLAIMS FOR RELIEF
FIRST CAUSE OF ACTION
(Breach Of Contract)

128. u-blox re-alleges and incorporates by reference the allegations set for thin the foregoing paragraphs.

129. InterDigital entered into contractual commitments with ETSI, 3GPP and their respective members, participants, and implementers relating to the 3G and 4G standards. As a member of ETSI and to comply with ETSI's IPR Policy, InterDigital made a binding commitment to ETSI, ETSI members, and third-party implementers to grant irrevocable licenses to InterDigital's SEPs on FRAND terms and conditions.

130. InterDigital's ETSI membership and activities, including the declarations it made to comply with ETSI's IPR policy for InterDigital's SEPs, created an express and/or implied contract with ETSI and/or ETSI members, including an agreement that InterDigital would license those patents on FRAND terms and conditions. ETSI's IPR Policy does not limit the right to obtain a license on FRAND terms and conditions to ETSI members; third parties that are not ETSI members also have the right to be granted licenses under those patents on FRAND terms and conditions. Each and every party with products that implement the 3G and 4G standards promulgated by ETSI is an intended third-party beneficiary of InterDigital's contractual commitments, including u-blox, its suppliers, and its customers.

131. u-blox is an intended third-party beneficiary of InterDigital's contractual FRAND commitments under Section 6.1 of the ETSI IPR Policy by virtue of manufacturing customized components and subsystems which implement the 3G and 4G standards, selling products which fully conform to the practiced 3G and 4G standards and

which qualify as "EQUIPMENT" under the ETSI IPR Policy, using products which implement the 3G and 4G standards, and using methods related to implementing the 3G and 4G standards, including during the design and testing of u-blox's products. u-blox is therefore entitled to a license on FRAND terms and conditions to InterDigital's SEPs, including specifically for at least the following products ("Standard Compliant Products"):

u-blox Product Series	**Licensed Standard(s) Implemented**
SARA-U2	3G (HSPA)
LEXI-R422	4G (LTE-M/NB-IoT)
SARA-R500E	4G (LTE-M)
SARA-R510AWS	4G (LTE-M)
SARA-R5	4G (LTE-M/NB-IoT)
SARA-R540S	4G (LTE-M/NB-IoT)
UBX-R5	4G (LTE-M/NB-IoT)
SARA-N310	4G (LTE Cat NB2)
LARA-R6	4G (LTE Cat 1)
LENA-R8	4G (LTE Cat 1bis)
LARA-L6	4G (LTE Cat 4)

132. However, despite u-blox's good faith efforts to negotiate a license to InterDigital's alleged SEPs, InterDigital is refusing to offer u-blox a license on FRAND terms and conditions.

133. InterDigital has breached its FRAND obligations by refusing to agree to license its SEPs to u-blox at reasonable rates, with reasonable terms, and on a non-discriminatory basis.

134. As a result of InterDigital's contractual breach, u-blox has been injured in its business or property and is threatened by imminent loss of profits, loss of customers and potential customers, and loss of goodwill and product image.

135. u-blox has suffered and will continue to suffer irreparable injury by reason of the acts, practices, and conduct of InterDigital alleged above until and unless the Court enjoins such acts, practices, and conduct.

SECOND CAUSE OF ACTION
(Declaratory Judgment)

136. u-blox re-alleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

137. InterDigital is contractually obligated to license its 3G and 4G SEPs on FRAND terms and conditions.

138. InterDigital has alleged that u-blox's products infringe multiple InterDigital SEPs applicable to those technologies.

139. Specifically, InterDigital provided u-blox with claim charts alleging that the following patents are essential to portions of the 3G and 4G standards:

InterDigital Patents	Standard	Relevant Specification(s)
US 8,081,712	3G	3GPP TS 25.212, Rel. 7, RP-63, v7.12.0 (Available 2014-03-21) 3GPP TS 25.331, Rel. 7, RP-64, v7.25.0 (Available 2014-07-03) 3GPP TS 25.321, Rel. 7, RP-50, v7.19.0 (Available 2010-12-21)
US 8,107,991	3G	3GPP TS 25.133 V8.20.0 (2013-8) 3GPP TS 25.321 V8.17.0 (2013-1) 3GPP TS 25.331 V8.25.0 (2014-7) 3GPP TS 25.215 V8.4.0 (2009-9)
US 8,116,274	3G	TS 25.321 V8.12.0 (2010-12)
US 8,145,253	3G	3GPP TS 25.331 V8.25.0 (2014-06) 3GPP TS 25.321 V8.17.0 (2012-12) 3GPP TS 25.214 V8.13.0 (2012-03) 3GPP TS 25.319 V8.12.0 (2011-12)
US 8,400,934	3G	TS 25.331 (v. 8.25.0 2014-07-03)

US 8,014,361	4G	3GPP TS 36.213 V8.8.0 (2009-09) 3GPP TS 36.321 V8.9.0 (2010-06) 3GPP TS 36.300 V8.12.0 (2010-04) 3GPP TS 36.211 V8.9.0 (2009-12) 3GPP TS 36.212 V8.8.0 (2009-12)
US 8,509,836	4G	3GPP TS 36.213 V8.8.0 (2009-09) 3GPP TS 36.331 V8.20.0 (2013-06)
US 8,565,212	4G	3GPP TS 36.213 V8.8.0 (2009-09) 3GPP TS 36.321 V8.9.0 (2010-06) 3GPP TS 36.300 V8.12.0 (2010-03) 3GPP TS 36.211 V8.9.0 (2009-12) 3GPP TS 36.331 V8.14.0 (2011-06)
US 8,855,047	4G	TS 25.331 (v. 8.25.0 2014-07-03)

140. For purposes of this action, u-blox will not contest that the above patents appear to be essential to portions of the 3G and 4G standard that are implemented by u-blox products. u-blox therefor seeks a FRAND license to the above patents, along with any other 3G and 4G InterDigital patents that essential to the standards implemented by u-blox's Standard Compliant Products.

141. By virtue of InterDigital previously licensing u-blox under its 3G and 4G SEPs, and its history of asserting those same SEPs against u-blox's downstream customers on the basis of products incorporating u-blox's Standard Compliant Products, u-blox has a reasonable apprehension that InterDigital will assert one or more of the above patents against u-blox and/or its customers if u-blox is not granted a license on FRAND terms.

142. Therefore, u-blox is entitled to a license to the above and any other standard essential patents as part of a FRAND license and pursuant to the ETSI IPR policy.

143. u-blox is entitled to a license covering its use of InterDigital's SEPs, which covers both research and development, manufacturing activities, as well as the sale of

Standard Compliant Products, on FRAND terms for at least the InterDigital SEPs identified above.

144. InterDigital has a practice and policy of licensing its SEPs on a portfolio-wide basis. In view of InterDigital's practice of licensing its SEPs on a portfolio-wide basis to other implementers, rather than individually, u-blox is entitled to a license which covers InterDigital's 3G and 4G SEP portfolios.

145. There is a dispute between the parties concerning whether InterDigital has offered u-blox a license to its 3G and 4G SEPs on FRAND terms and conditions consistent with InterDigital's irrevocable commitments in its declarations to ETSI and the referenced policy of ETSI and 3GPP.

146. As a result of the acts described in the foregoing paragraphs, there exists a definite and concrete, real and substantial, justiciable controversy between u-blox and InterDigital regarding what constitutes FRAND terms and conditions fora license to InterDigital's 3G and 4G SEPs with respect to u-blox's products. This dispute is of sufficient immediacy and reality to warrant the issuance of a declaratory judgment.

147. U-blox is entitled to a declaratory judgment that InterDigital has not offered license terms to u-blox conforming to applicable legal requirements, including failing to offer u-blox a license to its 3G and 4G SEPs on FRAND terms and conditions. Moreover, u-blox is entitled to a declaratory judgment and specific performance that sets the FRAND terms and conditions, including but not limited to the FRAND royalty rate, for a license to InterDigital's 3G and 4G SEPs.

THIRD CAUSE OF ACTION[3]
(Declaratory Judgment of Non-Infringement of U.S. Patent No. 8,155,067)

148. u-blox re-alleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

[3] u-blox's Fourth Cause of Action in its original Complaint seeking declaratory judgment of non-infringement of the '067 Patent was dismissed *without prejudice* pursuant to the Court's August 8, 2023 Order Granting Defendants' Motion to Dismiss. u-blox realleges

149. U.S. Patent No. 8,155,067 ("'067 Patent"), attached hereto as Exhibit 71, entitled "METHOD AND APPARATUS FOR SIGNALING THE RELEASE OF A PERSISTENT RESOURCE," indicates that it issued on April 10, 2012. U.S. Patent and Trademark Office ("USPTO") records indicate that InterDigital is the assignee of the '067 Patent.

150. There is a dispute between the parties concerning whether certain u-blox products infringe one or more claims of the '067 Patent. During the course of licensing negotiations, InterDigital asserted that u-blox products infringe one or more of the '067 Patent claims by virtue of practicing the LTE standard. InterDigital provided u-blox with a claim chart alleging that at least claims 1 or the '067 Patent is essential to the LTE standard.

151. u-blox alleges that the '067 Patent is not essential to the LTE standard and, therefore, u-blox's products, which implement the LTE standard, do not practice one or more claims of the '067 Patent. By way of non-limiting example, the LTE standard does not require at least the claimed technique of releasing at least one persistent resource, including "determining whether to explicitly or implicitly acknowledge the persistent resource release based on whether the persistent resource release is applicable to the DL persistent resource of the UL persistent resource," wherein "DL" refers to downlink and "UL" refers to uplink.

152. No claim of the '067 Patent has been or is infringed, either directly, contributorily, or by inducement, literally or under the doctrine of equivalents, by u-blox or the purchasers of u-blox's products through the manufacture, use, importation, sale, and/or offer for sale of u-blox's products, at least because, by way of non-limiting example, u-blox's products do not satisfy the following claim limitation "determining whether to

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this cause of action in order to preserve the issue and potentially avoid waiver of this issue. *See Lacey v. Maricopa Cnty.*, 693 F.3d 896, 928 (9th Cir. 2012) (requiring repleading of claims dismissed without prejudice, holding the Court "will consider those claims to be waived if not repled."). u-blox has not repled the antitrust claim because it was dismissed with prejudice and therefor, does not need to be repled to be preserved on appeal. *Id*.

explicitly or implicitly acknowledge the persistent resource release based on whether the persistent resource release is applicable to the DL persistent resource of the UL persistent resource."

153. An actual and justiciable controversy exists between u-blox and InterDigital with respect to whether u-blox's products infringe one or more claims of the '067 Patent.

154. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. § 2201 et seq., u-blox requests the declaration of the Court that u-blox's products do not infringe one or more claims of the '067 Patent.

PRAYER FOR RELIEF

WHEREFORE, u-blox prays for relief as follows:

A. Adjudge and decree that InterDigital is liable for breach of its contractual commitments to ETSI;

B. Adjudge and decree that InterDigital has not offered u-blox a new license to its 3G and/or 4G SEPs under reasonable and non-discriminatory rates, with reasonable and non-discriminatory terms and conditions;

C. Adjudge, set, and decree the FRAND terms and conditions to which u-blox is entitled for a license to InterDigital's 3G and 4G SEPs;

D. Enjoin InterDigital from demanding excessive royalties from u-blox that are not consistent with InterDigital's FRAND obligations;

E. Adjudge and decree that u-blox is entitled to a license from InterDigital for any and all patents that InterDigital deems "essential" and/or has declared "essential" to the 3G and 4G standards under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination;

F. Enjoin InterDigital from enforcing its 3G and/or 4G SEPs against u-blox or any of its downstream manufactures or customers;

G. Enjoin InterDigital from forcing u-blox to take a bundled license to InterDigital's SEPs that are not implemented by the portions of the 3G and/or 4G standards practiced by u-blox's products;

H. Adjudge and decree that u-blox does not infringe the '067 Patent;

I. Enter judgment against InterDigital for the amount of damages that u-blox proves at trial, including, as appropriate, exemplary damages;

J. Enter a judgment awarding u-blox its expenses, costs, and attorneys' fees under applicable laws;

K. Award u-blox pre-judgment and post-judgment interest to the full extent allowed under the law, as well as its costs; and

L. For such other and further relief as the Court deems just and proper.

Dated: August 25, 2023

SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

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DEMAND FOR JURY TRIAL

PLEASE TAKE NOTICE that u-blox hereby demands a trial by jury.

Dated: August 25, 2023

SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

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