

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS**

In Re Innovatio IP Ventures, LLC, Patent
Litigation

Case No. 1:11-cv-09308

This Document Relates To:

Judge James F. Holderman
Magistrate Judge Sidney Schenkier

All Cases

[PUBLIC REDACTED VERSION]

DEFENDANTS' RESPONSES TO ESSENTIALITY BRIEF

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I. INTRODUCTION

Beginning nearly twenty years ago, the prior owners of the Patents-In-Suit—three in all—each independently and irrevocably pledged to license any patents essential to IEEE 802.11 standards on reasonable and non-discriminatory (RAND) terms by submitting numerous letters of assurance to the IEEE. As Judge James Robart recently acknowledged in the *Microsoft v. Motorola* case, such assurances are critical to protecting implementers of a standard against patent hold-up—where the owner of a patent that is subject to a RAND licensing commitment nevertheless demands unreasonably high royalties once the market is “locked in” to a standardized technology. On the basis of such RAND assurances, the IEEE adopted the 802.11 standards implemented by the allegedly infringing products at issue in this case.

Now, years after the standards were adopted, Innovatio attempts to avoid its RAND obligations by segregating from the more than four hundred claims asserted in this action over two hundred claims that Innovatio contends in its opening brief—without any explanation or technical support—are “non-essential.”¹ Innovatio’s suggestion that it need not abide by RAND obligations with respect to these claims, however, is not supported by Innovatio’s contentions: for most of the allegedly “non-essential” claims, Innovatio’s Final Infringement Contentions contradict Innovatio’s current assertions by relying exclusively on mandatory or optional features² of the 802.11 standards in an effort to show infringement. Although the parties are nearly two years into this litigation and Innovatio has taken voluminous discovery from Defendants, Innovatio provides no evidence or analysis concerning its assertion that the

¹ This brief refers to “essential” claims as those claims that Innovatio asserts against 802.11-essential features. Defendants do not admit that Innovatio’s assertions are correct, or that the asserted claims cover the accused instrumentalities or the 802.11 standards, as contended by Innovatio, and Defendants reserve all rights to contest infringement and validity.

² As discussed below, both mandatory and optional features of IEEE standards are “essential.” Ex. 3, IEEE-SA Standards Board Bylaws, at p. 17, § 6.1; *Microsoft Corp. v. Motorola, Inc., et al.*, No. 2:10-cv-01823, Dkt. No. 680, ¶ 24) (Apr. 25, 2013).

identified claims are, indeed, non-essential claims, or that it has asserted these claims against anything other than compliant implementations of the 802.11 standards.

For certain other claims that Innovatio contends are not essential, Innovatio suggests that merely adding a non-essential element to claims covering essential features makes the overall claim non-essential. No such loophole exists in the IEEE's patent policy. Rather, the additional claim elements on which Innovatio relies are directed to functions or components that are commercially or technically necessary to create an 802.11-compliant implementation—items which are explicitly included in the IEEE's definition of "essential claims."

Innovatio's attempt to segregate "non-essential" claims is especially problematic in view of its practices outside this litigation, where it offers licenses to the *very same patents and patent claims* to thousands of third parties exclusively on the basis of their use of products practicing the 802.11 standard. Innovatio continues to this day to attempt to negotiate licenses to these patents and claims on the basis that they are required to implement the 802.11 standard. Innovatio's attempt to reverse course in this case is an attempt to shirk the RAND obligations to which it is subject.

At bottom, the IEEE's patent policies aim to prevent precisely what Innovatio is attempting here—patent hold-up. Innovatio's purpose is to try to free itself of its RAND obligations in order to seek royalties that are orders of magnitude greater than the entire cost of the very 802.11 products they are trying to license (not to mention the components of those products that implement the 802.11 standard), and to deny Supplier Defendants a portfolio license altogether. As shown below, however, the IEEE's patent policy precludes Innovatio from avoiding its RAND obligations.

II. BACKGROUND

A. Essentiality In The IEEE

The determination of what constitutes an “essential” patent or claim in the IEEE is closely related to the principles underlying the IEEE’s patent policy. By instituting its patent policy requiring RAND licensing, the IEEE intended to prevent “patent-hold-up” where, after the patented technology is included in the standard and the standard is adopted, a patent owner demands unreasonably high royalties that are not based on the true, *ex ante* value of the patented technology at the time of standardization, but rather on the value associated with technology once the market is effectively “locked in” to the standardized technology. *Microsoft Corp. v. Motorola, Inc., et al.*, No. 2:10-cv-01823, Dkt. No. 680, ¶¶ 51-61) (Apr. 25, 2013) (“The ability of a holder of an SEP to demand more than the value of the standard itself is referred to as ‘patent hold-up.’”).³ Because the industry is effectively locked into the standard at that point and switching costs are prohibitively high, it creates the risk that the holder of an essential patent will make demands based on these costs.⁴ Such demands result in gross overcompensation to patentees and harm to consumers and manufacturers. *See Microsoft*, No. 2:10-cv-01823, Dkt. No. 680, ¶¶ 58-59 (“In addition to harming firms that are forced to pay higher royalties, hold-up also harms consumers to the extent those excess costs are passed off onto them.”).

In order to ensure the pro-competitive benefits of standards are enjoyed, the IEEE put in place policies requiring that, while the standard is being developed and before it is adopted,

³ *See also* Amicus Curiae Br. of the IEEE, *et al.*, In Support of Neither Party, *Apple, Inc. v. Motorola Mobility, Inc.*, Nos. 2012-1548, 2012-1549, at 15 (Fed. Cir. Dec. 19, 2012) (“IEEE Amicus Br. in Apple”).

⁴ *See, e.g.*, Mark A. Lemley and Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1993 (2007); Deanne E. Maynard, Sean P. Gates, John Thorne, Gail F. Levine, *Written Comments of Verizon Communications Inc. for Federal Trade Commission Workshop on Standard-Setting Issues, Patent Standards Workshop*, Project No. P11 1204, August 5, 2011, at 1, <http://www.ftc.gov/os/comments/patentstandardsworkshop/00051-80236.pdf>; *The Evolving IP Marketplace: Aligning Patent Notice and Remedies With Competition*, Federal Trade Commission, <http://www.ftc.gov/os/2011/03/110307patentreport.pdf>, at 5, 7, 22 (Mar. 7, 2011); Amicus Curiae Brief of the IEEE, *et al.*, In Support of Neither Party, *Apple, Inc. v. Motorola Mobility, Inc.*, Nos. 2012-1548, 2012-1549 (Fed. Cir. Dec. 19, 2012), at 15.

companies irrevocably commit to license all users or implementers of the standard on a RAND or royalty-free basis. *See, e.g.*, Ex. 3 (IEEE-SA Standards Board Bylaws, § 6). These commitments are ordinarily embodied in letters of assurance (or “LOAs”) submitted by the patent owner to the IEEE. According to the IEEE, “[p]atent commitments like the IEEE LOA protect implementers of a standard against patent hold-up.” Amicus Curiae Br. of the IEEE, *et al.*, In Support of Neither Party, *Apple, Inc. v. Motorola Mobility, Inc.*, Nos. 2012-1548, 2012-1549, at 15 (Fed. Cir. Dec. 19, 2012). Judge Robart recently analyzed this issue and recognized this point: “the RAND commitment and the whole apparatus exists [sic] to deal with hold-up.’ . . . ‘[t]he most common mechanism used by SSOs to attempt to prevent hold-up is the RAND commitment.’” *See Microsoft*, No. 2:10-cv-01823, Dkt. No. 680, ¶¶ 60-61 (quoting experts and the FTC in the Court’s findings of fact).

With these principles in mind, the IEEE’s patent policy requires holders of patents having “Essential Patent Claims” to submit a letter of assurance irrevocably offering to license those patents on reasonable and non-discriminatory (RAND) terms. *See generally* Ex. 3 (*IEEE-SA Standards Board Bylaws* § 6). “Essential Patent Claims,” in the current 802.11 standard, are defined as:

any Patent Claim the use of which was necessary to create a compliant implementation of either mandatory or optional portions of the normative clauses of the [Proposed] IEEE Standard when, at the time of the [Proposed] IEEE Standard's approval, there was no commercially and technically feasible non-infringing alternative. An Essential Patent Claim does not include any Patent Claim that was essential only for Enabling Technology or any claim other than that set forth above even if contained in the same patent as the Essential Patent Claim.

Ex. 3 (IEEE-SA Standards Board Bylaws, § 6.1). Accordingly, claims which are required to create a compliant implementation of mandatory or optional features in normative sections⁵ of the 802.11 standard are “essential” and deserving of RAND treatment. *See id.*; Ex. B (Shoemake Decl.) at 41–53. Claims which are directed *solely* to “Enabling Technology”—*i.e.*, technology that may be necessary to make or use any product or portion thereof that complies with the standard but is neither explicitly required by nor expressly set forth in the standard—are not essential. *See id.*; Shoemake Decl. at 48. However, claims which *combine* elements claiming mandatory or optional features of a standard with other elements claiming technologies that are “commercially or technically” necessary to create a compliant implementation of the standard are essential—and are entitled to licensing on RAND terms. *See id.*; Shoemake Decl. at 47. The inclusion of this point reflects a decision by the IEEE to prevent patent holders from avoiding RAND obligations merely by adding claim elements covering basic, underlying functions or features necessary to produce compliant products. *See* Shoemake Decl. at 47; *see generally* Ex. 3 (IEEE-SA Standards Board Bylaws, § 6).

B. Innovatio’s Obligations To License Essential Patents On RAND Terms

The Patents-In-Suit are subject to the RAND obligations discussed above. Three other companies held rights to the Innovatio patent portfolio before they were acquired by Innovatio: Norand Corporation, Intermec, and Broadcom Corporation. *See, e.g.*, Ex. 5 (USPTO Assignment Abstract of Title for U.S. Patent No. 6,714,559). All of these prior owners submitted binding “letters of assurance” to the standards-setting organization responsible for the 802.11 Wi-Fi standards (the IEEE), irrevocably promising that all the patents would be available

⁵ “Normative” material in an IEEE standard is required to implement the standard and is officially part of the standard. *See* Ex. 4 (IEEE Standards Board Operations Manual at § 6.4.1). “Informative” material is provided for information only and is not officially part of the standard. *See id.* The materials set forth in the 802.11 standards is “normative” except where expressly indicated to be “informative.” *See id.*; Shoemake Decl. at 45.

for license on RAND terms. *See* Exhs. 6-10 (letters of assurance). Although Innovatio now contends that it is entitled to split the claims in individual patents into “essential” claims that are subject to these RAND commitments and “non-essential” claims to which Innovatio contends it can avoid its RAND licensing obligation, Intermec and Broadcom both agreed in their LOAs to license entire patents—not just a subset of the claims that are “essential.” As reflected in Intermec’s blanket letter of assurance to 802.11, Intermec committed to license patents on the patent-level. *See* Ex. 6 (Intermec’s October 26, 1995 Letter of Assurance).⁶ Intermec later sold the patents to Broadcom, who also submitted a letter of assurance to the IEEE, committing to license any *patent*—not just patent claims—essential to create a compliant implementation of the 802.11n standard. *See* Ex. 7 (Broadcom’s October 17, 2006 Letter of Assurance). As discussed below, Innovatio is bound by these contractual commitments, which prohibit Innovatio’s attempt to segregate out non-essential claims within patents that it also contends contain standard essential claims.

C. Innovatio’s Patent Portfolio

Innovatio asserts twenty-three patents in this lawsuit.⁷ All of these patents claim to be related to a set of patents originated by Norand Corporation, which Innovatio contends relates to wireless devices. *See, e.g.,* Ex. 5 (USPTO Assignment Abstract of Title for U.S. Patent No. 6,714,559). Over the past 20 years, Innovatio’s predecessors prosecuted numerous continuations of the original applications, leading to the issuance of the Patents-In-Suit. These continuations

⁶ LOAs are irrevocable once made. Accordingly, the scope of the rights granted in any patent subject to the LOA cannot later be narrowed by a subsequent purchaser. However, the scope of those rights can be broadened. Here, for example, the original owner of some the patents in suit (or applications that lead to those patents), Norand, made a commitment to license essential claims on RAND terms. Norand was acquired by and merged into Intermec. Intermec by contrast agreed in its LOA to license all currently owned or later acquired **patents**, not just essential claims. The Norand patents constitute Intermec later-acquired patents so are subject to the broader Intermec LOA. *Cf.* Ex. 4 at § 6.3.4 (IEEE-SA Standards Board Operations Manual).

⁷ 5,295,154, 5,428,636, 5,504,746, 5,740,366, 5,844,893, 5,940,771, 6,374,311, 6,665,536, 6,697,415, 6,714,559, 6,826,165, 7,013,138, 7,107,052, 7,386,002, 7,457,646, 7,483,397, 7,535,921, 7,536,167, 7,548,553, 7,710,907, 7,710,935, 7,873,343, and 7,916,747 (“Patents-In-Suit”)

predominantly add to the earlier claims non-inventive, well-known elements that are unrelated to the alleged inventions of the patents, such as the use of a processor to implement the claimed subject matter or the use of a keyboard in connection with one of the claimed devices. *See, e.g.*, Ex. 11 (U.S. Patent No. 7,457,646 Cl. 30, 82, 100). A chart showing the relationships between the patents is attached as Exhibit 12 (chart of patent relationships).

D. The Accused 802.11 Technologies

Innovatio's infringement contentions in this case are directed exclusively to 802.11-compliant products. The specific 802.11 technologies that Innovatio contends infringes its patents are found in five different versions of the 802.11 standards—802.11a, 11b, 11g, 11n, and 11s. Within those standards, Innovatio's infringement contentions rely on three general categories of technologies with respect to the patents at issue in this briefing: (1) mandatory or optional features regarding 802.11's power saving capabilities; (2) mandatory or optional features regarding implementation of a wireless "mesh" network; and (3) mandatory or optional features regarding the use of multiple wireless transceivers and multiple wireless communication channels provided for by the 802.11 standard. *See* Ex. C (Wicker Decl.) at Section 4(a)-(c); *see generally* Ex. 29 (Plaintiff Innovatio's Final Infringement Contentions). Innovatio's allegations regarding every asserted claim are directed in whole or in part to these mandatory or optional features. *Id.* Although some of the asserted claims include elements that Innovatio claims are directed to functionalities and features not explicitly called for by the 802.11 standards, the additional elements are basic, underlying technologies which are necessary to create 802.11-compliant products. *See* Part III, below. As such, those elements do not render the claims non-essential and the claims containing those elements fall squarely within the IEEE's definition of essential patent claims. *See id.* In other words, the IEEE's rules prohibit precisely what Innovatio is attempting to do here: circumvent its LOA obligations by pointing to non-inventive

aspects of the claims that are necessary to create an 802.11-compliant device. As the Federal Trade Commission explained in a slightly different context:

Another artificial construct for identifying the base that courts should reject is always to equate it with the device recited in the infringed claim. In many cases, there will be an easy correspondence between the inventive feature, the device recited in the infringed claim, and the appropriate base. In other cases, the correspondence will not be so clear. For example, a software invention for rendering video images can be recited in a claim covering video software, or in a claim covering a standard personal computer running the video software. . . . *The real focus ought to be on the economic realities and not the vagaries of claim drafting, particularly because the way claims are drafted [is] . . . so manipulable.*⁸

III. ARGUMENT

A. According To Innovatio’s Final Infringement Contentions, The “Non-SEP” Claims Are Asserted Against Essential Features

As discussed in the subsections below, several bases exist for confirming that the alleged non-SEP claims are in fact asserted against essential 802.11 features, including:

- Innovatio’s contentions rely exclusively on references to the 802.11 standards (**section 1 below**)
- Even where Innovatio does not explicitly reference the 802.11 standards, Innovatio accuses features which are found within the 802.11 standards, frequently as confirmed by the fact that Innovatio identifies those features as standard essential with respect to other claims (**section 2 below**)
- The accused features are technically or commercially necessary to implement mandatory or optional aspects of 802.11 and are therefore essential (**section 3 below**)

Defendants attach as Exhibit A an index providing, for each allegedly “non-essential” claim element, an identification of the bases for essentiality that apply to that element, along with cross-references to the discussion of the elements in the report of Dr. Stephen Wicker.

⁸ FTC REPORT at 211 (emphasis added, internal quotations omitted), <http://www.ftc.gov/os/2011/03/110307patentreport.pdf>.

1. Innovatio Relies Exclusively On Essential Features In The 802.11 Standards For Many Of The Alleged “Non-SEP” Claims

For 154 of the 295 claims elements that Innovatio contends are not essential, Innovatio’s Final Infringement Contentions rely exclusively on references to essential features in the 802.11 standards documents to show infringement and accuse exclusively 802.11 devices in its Final Infringement Contentions’ claim charts. *See, e.g.*, Wicker Decl. at Section 4. For example, Innovatio contends that the element “... wherein the wireless receiver of the second terminal is powered down in the second state” in claim 47 of the ’311 patent is non-essential. *See* Innovatio’s Essentiality Briefing at Exh. C-5. Innovatio’s final infringement contentions for this element, however, exclusively rely on IEEE 802.11 standards. *See, e.g.*, Plaintiff’s Final Infringement Contentions, Ex. 8A at p. 57.⁹ The 802.11 sections referenced by Innovatio as allegedly meeting this claim element are normative, and the features identified in those sections are either mandatory or optional. *See, e.g.*, Wicker Decl. at Section 5(a)(iii); Shoemake Decl. at 45. In accordance with the IEEE’s definition for “essential” claims, this claim is essential. *See* IEEE-SA Patent Bylaws § 6.1.¹⁰

In some instances, Innovatio’s contentions, in addition to relying on the 802.11 standards, also include citations to product documents for some, but not all, of the accused products. In other words, for the vast majority of products accused of infringement in connection with these claims, Innovatio relies exclusively on compliance with the 802.11 standards to show

⁹ For all of the sleep mode patents, Innovatio’s contentions also include a boilerplate citation to their wireless “sniffing” data. However, the sniffing data does not change the analysis for many of the claims because, as Dr. Wicker explains in his declaration, the sniffing data does not provide any evidence of infringement for many of the elements of Innovatio’s sleep mode patents, including this one. *See* Wicker Decl. at Section 4(a).

¹⁰ Innovatio’s brief suggests that Defendants bear the burden of establishing that Innovatio’s patent claims are subject to its RAND obligations. *See* Innovatio’s Essentiality Brief at 4–5. To the contrary, Innovatio bears the burden on this issue: as the party bound by RAND, Innovatio bears the burden of establishing entitlement to carve out particular patents (or claims) from its RAND obligations. Moreover, Innovatio bears the burden of proof with respect to damages, including with respect to its effort to establish that it is entitled to non-RAND damages with respect to certain claims.

infringement, even though for a handful of the accused products Innovatio also cites additional documents. For example, in its infringement contentions for every asserted claim of the '397 and '893 patents, which Innovatio now contends are all non-essential, Innovatio relies solely on the 802.11 standards as support for its infringement claims against the majority of accused products. Although Innovatio supplements these citations to the 802.11 standards in a few instances with product literature for certain Cisco, Motorola, Hewlett-Packard, Netgear, and SonicWALL access points, Innovatio relies exclusively on the essential features in the 802.11 standards for every other accused terminal and access point product—for instance, all accused devices made by Lenovo, Apple, Samsung, HTC, and others; and all access points manufactured by Aruba Networks, Teledyne Controls, and Colubris, to name just a few. Thus, according to Innovatio's Final Infringement Contentions, compliance with essential features of the 802.11 standard are sufficient to establish infringement, making these claims allegedly "essential" under Innovatio's application of the claim. The fact that Innovatio has provided citations to supplemental product literature for a small subset of products does not turn essential 802.11 claims into non-essential claims, and certainly does not allow Innovatio to avoid its RAND commitments.

Even with respect to the few products and claim elements which include some limited citations to product literature, those are string cites that provide only a cursory and vague citation to hardware components necessarily found in any device implementing 802.11. *See, e.g.,* Plaintiff's Final Infringement Contentions, Ex. H - Netgear (identifying "motherboard processor, PCI interface to 2.4GHz and 5GHZ transceiver, DDR interface to memory, Ethernet interface."). All of those hardware components are commercially or technically necessary to create a compliant implementation of the 802.11 standards, and merely pointing out that a

particular standards-compliant product contains them does not render the claim non-essential.

See, e.g., Wicker Decl. at Section 4(b). Innovatio provides no explanation as to why citations to such items render the claims non-essential and, as explained below in Section III.B.3, they do not under the IEEE's policies.¹¹

2. Even Where Innovatio Does Not Explicitly Reference The 802.11 Standards, Innovatio Accuses Features Which Are Found Within The 802.11 Standards And Are Essential

For 113 of the 295 allegedly “non-SEP” claim elements, Innovatio’s contentions do not expressly reference the 802.11 standards for those elements, but nevertheless identify features that are expressly found within the 802.11 standards and are essential—frequently as confirmed by the fact that Innovatio itself alleges that the standard satisfies those elements in connection with other claims. For example, dependent claim 27 of the ’646 patent adds a requirement that the roaming wireless terminal node of the independent claim—which Innovatio agrees is essential—be a “hand-held terminal.” *See* Ex. 11 at Cl. 27 (U.S. Patent No. 7,457,646). Innovatio’s contentions on this point accuse defendants’ devices that are “hand held terminals,” but without specifically referencing the 802.11 standards in connection with this element:

The terminal, for example, a bar code reader, a pad computer, a notebook or laptop computer, a smart phone, etc., is a hand-held terminal.

¹¹ Innovatio contends that RAND should not apply to claims from four of its patents (See U.S. Patent Nos. 5,295,154, 5,428,636, 5,504,746, 6,826,165) because, according to Innovatio, those claims are asserted against Cisco and Motorola products that are not fully compliant with the 802.11 standard. *See* Innovatio’s Essentiality Briefing. However, Innovatio concedes that these four patents “are ‘essential’ for a compliant implementation of IEEE 802.11s.” Innovatio’s Essentiality Brief at 5. Moreover, Innovatio’s Final Infringement Contentions cite to the 802.11s standard for virtually all of the claim elements, and allege that any differences between Cisco and Motorola’s products, on the one hand, and the 802.11s standard, on the other, are inconsequential. *See, e.g.*, Ex.29 at Exhs. 20M, 21M, 22M, 23M (Innovatio’s Final Infringement Contentions). Although Innovatio now contends that there are differences between aspects of the standard and the accused Cisco and Motorola mesh products, Innovatio provides no explanation as to what those differences are or why they matter in connection with alleged infringement in this case. Moreover, Innovatio asserts the claims of these four patents against numerous other defendants based *solely* on standards evidence. Hence, Innovatio is bound to abide by its RAND obligations with respect to these claims, which are essential under Innovatio’s application of the claims.

Plaintiff's Final Infringement Contentions, Exh. 9 at 17. However, the normative portions of the 802.11 standards explicitly state that 802.11 devices (a "STA" or station) can optionally be a "hand-held" device:

1.2 Purpose

The purpose of this standard is to provide wireless connectivity to automatic machinery, equipment, or **STAs that require rapid deployment, which may be portable or hand-held**, or which may be mounted on moving vehicles within a local area.

802.11-2007 at p. 1. As discussed, although having the STA be hand-held is optional, it is "normative" and thus essential under the IEEE policy.

As another example, dependent claim 103 of the '167 patent adds a requirement to the independent claim—which Innovatio agrees is essential—that a transceiver on a terminal device stay awake for "at least an entire duration of a communication session." '167 Patent at Cl. 103. Innovatio's final infringement contentions do not specifically identify any 802.11 section as support for that element (or any other support), instead merely repeating the claim language and asserting that an 802.11 device "operates in an awake state for at least the duration of a communication session." Plaintiff's Final Infringement Contentions, Exh. 10 at 21. The normative portions of the 802.11 standards explicitly state, however, that the 802.11 terminal "shall remain awake" during an on-going reception:

A STA receiving broadcast/multicast MSDUs **shall remain awake** until the More Data field of the broadcast/multicast MSDUs indicates there are no further buffered broadcast/multicast MSDUs, or until a TIM is received indicating there are no more broadcast/multicast MSDUs buffered.

802.11-2007 at p. 432, section 11.2.1.8. As described in that section, the station ("STA") "shall remain awake" until it is told (either through the "More Data" field or by receiving a "TIM") that there are no further buffered MSDUs (802.11 data packets). *See id.* Hence, once again, although

Innovatio does not explicitly reference the 802.11 standards in its infringement contentions relating to this element, it cannot avoid the fact that the feature it accuses is found within the normative portions of the standards, thus making this claim “essential” under Innovatio’s assertions.

Indeed, although Innovatio does not explicitly cite to the 802.11 standards with respect to certain claim elements that it contends are not essential, Innovatio *does* cite to the standard for the same or similar claim elements in connection with other claims. For instance, for the “control circuit that communicatively couples the first and second wireless transceivers to one another” element of claim 15 of the ‘536 patent, Innovatio does not cite to the 802.11 standard. However, for the exact same element in claim 40 of the ‘907 patent (“control circuit that communicatively couples the first and second wireless transceivers to one another”), Innovatio does cite to the standard. *See* Wicker Decl. at Section 5(b)(iii). Hence, Innovatio’s failure to explicitly cite to the 802.11 standards with respect to these claim elements is inconsequential because Innovatio elsewhere applies the same or similar elements to 802.11-essential features.

3. The Accused Features Are Technically Or Commercially Necessary To Implement 802.11 And Are Therefore Essential

Innovatio suggests that “essential” claims are restricted only to those where each claim element is explicitly satisfied by mandatory or optional 802.11 features. Innovatio’s Brief in Support of Essentiality at 3–4. The definition of “essential” claims, however, is not so limited, and Innovatio’s position ignores an important aspect of the IEEE’s definition. The IEEE’s definition explicitly states that an “Essential Patent Claim” is one which was “necessary to create a compliant implementation” of mandatory or optional portions of the standard when, at the time of the standard’s approval, “there was no commercially and technically feasible non-infringing alternative” to using the claim. Ex. 3 (IEEE-SA Standards Board Bylaws, § 6.1). Thus,

“essential” claims are not just those where the claim elements actually cover only mandatory or optional 802.11 features, but also patent claims where the claim elements additionally cover items that are “commercially and technically” necessary for a compliant implementation of mandatory or optional 802.11 features. *Id.* While claims directed *only* to “Enabling Technologies”¹² are not essential, claims with elements directed to both mandatory/or optional features as well as elements that are commercially or technically necessary for a compliant implementation of those features are essential.¹³

Innovatio’s approach is not just inconsistent with the IEEE’s definition of “essential” claims, but with the IEEE’s patent policy as well. As discussed above, a primary goal of the patent policy is to prevent “patent-hold-up.”¹⁴ *See Microsoft*, No. 2:10-cv-01823, Dkt. No. 680, ¶¶ 51-61) (Apr. 25, 2013). RAND licensing commitments protect against such anticompetitive *ex-post* profit seekers.¹⁵ *See id.*, ¶¶ 60-61 (“the RAND commitment and the whole apparatus exists [sic] to deal with hold-up.’ . . . [t]he most common mechanism used by SSOs to attempt to prevent hold-up is the RAND commitment”) (quoting experts and the FTC in the Court’s findings of fact).

Allowing a patent holder to evade RAND by simply adding a “commercially” or “technically” necessary claim element to an otherwise essential claim would defeat the protections afforded by the IEEE’s RAND policies. *See, e.g.*, Shoemake Decl. at 47. On the

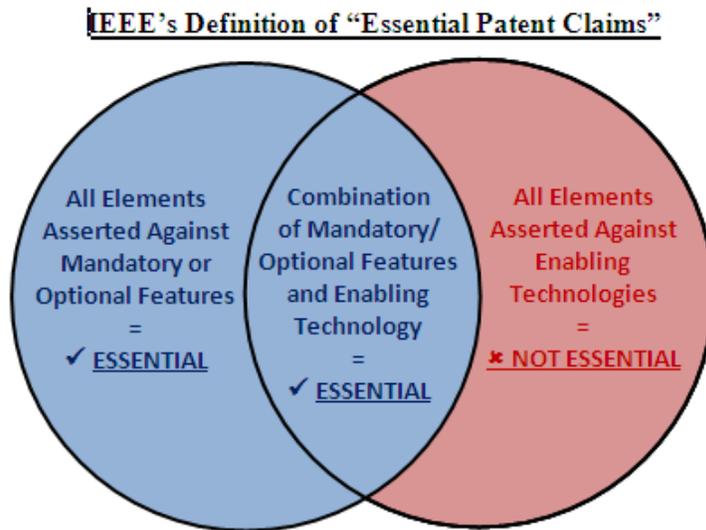
¹² According to the IEEE, “Enabling Technology” is defined as “any technology that may be necessary to make or use any product or portion thereof that complies with the [Proposed] IEEE Standard but is neither explicitly required by nor expressly set forth in the [Proposed] IEEE Standard (e.g., semiconductor manufacturing technology, compiler technology, object-oriented technology, basic operating system technology, and the like).” Ex. 3 (IEEE-SA Standards Board Bylaws § 6.1).

¹³ *Id.*

¹⁴ *Amicus Curiae Br. of the IEEE, et al., In Support of Neither Party, Apple, Inc. v. Motorola Mobility, Inc.*, Nos. 2012-1548, 2012-1549, at 15 (Fed. Cir. Dec. 19, 2012) (“IEEE Amicus Br. in Apple”); (“Hold-up can be defined as the ability of the owner of patented technology to extract higher royalties 'after its technology has been chosen by the SSO as a standard and others have incurred sunk costs which effectively increase the relative cost of switching to an alternative standard.’”).

¹⁵ Hold up was not the only concern behind the IEEE’s patent policies. Other issues, such as “royalty stacking” for standards-based patents, also drove the IEEE’s patent and licensing policies.

other hand, the IEEE’s definition confirms that if the elements of a claim are *only* applicable to “Enabling Technology,” the IEEE’s patent policy does not apply. *See id.*; IEEE SA Board Bylaws § 6.1. The following diagram illustrates the relationship between (1) claims where all the elements are applied to mandatory or optional 802.11 features (essential); (2) claims where all the elements are applied to “commercially or technically” necessary technologies (not essential); and (3) the intersection between (1) and (2), namely claims where the elements are applied to a combination of mandatory or optional features and commercially or technically necessary technologies (essential):



Here, many of the alleged “non-SEP” claims include a combination of elements that Innovatio has admittedly applied to mandatory or optional 802.11 features, along with additional elements that are commercially or technically necessary to create a compliant implementation. For example, several claims asserted against 802.11-essential power saving features include an additional element requiring the use of a “processor.” *See, e.g.*, U.S. Pat. No. 7,457,646 at Cl. 30; *see also* claim 100. Innovatio agrees that independent claim 15 of the ’646 patent is essential to the 802.11 standards, yet contends that the addition of this “processor” requirement in claim

30 renders the dependent claim non-essential. Innovatio's Brief in Support of Essentiality at 46; Dkt. 684 at Ex. A. However, use of a "processor" was commercially and technically necessary to implement the accused essential power saving features in connection with these claims at the time of each standards' approval (and still is today). As discussed by Drs. Wicker and Shoemake, the only commercially and technically feasible way to implement the accused power saving features is by using a processor. *See* Wicker Decl. at 5(a)(ii); Shoemake Decl. at 61. Thus, in accordance with the IEEE Standards Board Bylaws' definition of "Essential Patent Claims," these claims are essential despite adding the "processor" elements. Innovatio's attempt to use the mere addition of an element claiming a commercially and technically necessary component—in this case, a basic processor—to avoid its RAND obligations is inconsistent with the IEEE's policies. Innovatio's conduct is expressly prohibited by the IEEE's "essential" claims definition, and is precisely the type of opportunistic conduct IEEE's RAND policy was intended to safeguard against. *See* Part III.A, above.

As another example, Innovatio contends that claim 82 of the '646 patent, requiring the addition of a "keyboard" to the otherwise essential claim, is non-essential. U.S. Pat. No. 7,457,646 at Cl. 82. Again, Innovatio agrees that independent claim 15 is essential to the 802.11 standards, yet contends that the addition of a "keyboard" element renders claim 82 non-essential. Innovatio's Brief In Support of Essentiality at 45; Dkt 684 at Ex. A. A "keyboard," however, was commercially and technically necessary to implement the accused essential power saving features in connection with these claims at the time of each standards' approval date in many of the accused 802.11 devices, such as laptop computers, tablets, and cellular phones, to name a few. Indeed, as discussed by Dr. Wicker, the only commercially and technically feasible way to

implement accused power saving features in a laptop computer is by using a keyboard. *See* Wicker Decl. at Section 5(a)(xvi).

This is not just an issue for dependent claims. In some instances, one of the elements in an independent claim is applied to commercially and technically necessary technologies. For example, Innovatio contends that claim 1 of the '397 patent is not essential because, *inter alia*, it includes an element requiring a “central processing unit.” U.S. Patent No. 5,546,397 at Cl. 1. Innovatio agrees that nearly all the other elements of this claim are applied to essential features, but asserts that the addition of a “central processing unit” requirement renders the claim non-essential, freeing it (according to Innovatio) from its RAND obligations. *See* Innovatio’s Brief In Support of Essentiality at 49. A “central processing unit” for interfacing with a “network,” however, was commercially and technically necessary to implement a compliant 802.11 device in connection with these claims at the time of each standards’ approval (and still is). As discussed by Dr. Wicker, the only commercially and technically feasible way to implement a compliant 802.11 network in connection with these claims is by using a central processing unit.¹⁶ *See* Wicker Decl. at Section 5(b)(xviii).¹⁷

Innovatio’s approach is also inconsistent with principles of implied license. According to Innovatio, even if Defendants were to take a RAND license to Innovatio’s essential claims for

¹⁶ Notably, most of the alleged non-SEP claims are in continuations of the original patents issued years after the alleged inventions were made and include dozens upon dozens of dependent claims directed at common features that are unrelated to the actual inventions of the patents—*e.g.*, the use of keyboards with the accused features, using the features in a hand held, using a processor to implement the features, etc. *See, e.g.*, Ex. 11 (U.S. Patent No. 7,457,646). These features were well-known prior the patents, and do not permit a patent holder to avoid its RAND obligations. *See* Shoemake Decl. at 47; Wicker Decl. at Section 5(a)(xvi). Otherwise, a patent holder could too easily avoid its RAND obligations by simply prosecuting continuation patents with dependent and other claims on non-inventive features or functions that have nothing to do with the actual invention of the patent and which are necessary to create a compliant implementation.

¹⁷ As another example, Innovatio now contends that none of the patents asserted against 802.11 products having multiple wireless transceivers in them is standards essential. *See, e.g.*, Innovatio’s Brief Ex. A for 7,457,646 and 7,536,167. Innovatio’s Final Infringement Contentions for those patents, however, rely on the 802.11 standards to satisfy all of the claims. To the extent Innovatio relies on any items outside the standards, those items are commercially or technically necessary to create compliant implementations, and thus do not render the claims non-essential, as explained by Dr. Wicker. *See* Wicker Decl. at Section 5(b)(i).

802.11 products, Innovatio could still preclude Defendants from making, using or selling those same products based on the alleged non-essential claims—even though the alleged non-essential elements of those claims regard minor additions of non-inventive underlying functionality. This, however, would render Defendants’ RAND license meaningless. As the Federal Circuit held in *TransCore, LP v. Elec. Transaction Consultants Corp.*, 563 F.3d 1271, 1279 (Fed. Cir. 2009), when a patentee licenses a patent for practicing an activity and receives valuable consideration, that patentee is estopped from bringing an action against the licensee for infringement of other patents based on that same activity. *See TransCore*, 563 F.3d 1271, 1278-79 (citing in part *AMP Inc. v. United States*, 389 F.2d 448, 452 (Ct. Cl. 1968)); *cf. Jacobs v. Nintendo of Am., Inc.*, 370 F.3d 1097, 1101 (Fed. Cir. 2004) (“the right given to [Licensee] to sell its accelerometers for use in infringing tilt-sensitive control boxes would be meaningless if [Patentee] could effectively prevent [Licensee] from making any such sales by suing [Licensee]’s customers for putting the accelerometers into infringing control boxes and selling the resulting products. . . . That interpretation is in accordance with the basic contract law principle that a party may not assign a right, receive consideration for it, and then take steps that would render the right commercially worthless.”). Here, Innovatio’s attempt to segregate non-essential claims violates these principles and eviscerates the RAND license that Defendants are entitled to. *See id.*

B. Innovatio Is Contractually Obligated to License Essential Patents on RAND Terms, and Innovatio’s Attempt To Segregate “Non-SEP” Claims Is A Violation Of Its RAND Obligations

1. Innovatio’s Attempt To Segregate “Non-SEP” Claims Is Precluded By Its Prior Licensing Conduct

Contrary to Innovatio’s positions in this case, Innovatio offers the very same patents and claims that it now calls non-essential to licensees outside of this case on the basis of their use of 802.11-essential features. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Consistent with this policy, Innovatio sent claim charts to its targets that, for every claim element, uses mandatory or optional 802.11 standards to describe the infringement. *See, e.g., Ex. 15.* In these charts, the very same elements that Innovatio now contends for purposes of this litigation are non-essential are discussed with respect to no other evidence beyond the 802.11 standards. *See, e.g., Ex. 15* (claims 6, 12, 36, and 42 of claim chart for '343 patent). In other communications with prospective licensees, Innovatio consistently confirmed to its licensing targets outside the context of this case that it is not possible to use Wi-Fi technology without infringing the Innovatio Patents.¹⁸

After offering its entire portfolio for license on an essential-only basis, Innovatio cannot now take a different position here by contending that – for purposes of the parties to this case – only some, but not all, of its claims are essential and (consequentially) that it need not license those claims on RAND terms. For example, Innovatio licensed [REDACTED] [REDACTED] to all of its patents solely on the basis of essential features. *See Ex. 22* (sample license agreement). Consequently, Innovatio cannot refuse to license defendants in this case such as the [REDACTED] or [REDACTED] on the same terms.

¹⁸ [REDACTED]

Innovatio's attempts to segregate non-essential claims in this case is not only inconsistent with its actual licensing practices, it is also a violation of its RAND obligations. As Judge Robart recognized in *Microsoft*, RAND obligations carry with them a duty of good faith and fair dealing. *Microsoft*, No. 2:10-cv-01823, Dkt. No. 335 at 5, 29. Here, Innovatio is violating those duties, by attempting to deprive the defendants in this case of a RAND license to patents that Innovatio is and has been licensing solely on the basis of standards essential features.¹⁹

2. Innovatio's RAND Obligations Under the Letters of Assurance Require It To License the Essential Patents At The Patent Level, Not At The Claim Level

Innovatio cannot segregate out alleged non-essential claims for an additional reason. Innovatio's predecessors-in-interest made express, binding commitments in numerous LOAs to the IEEE that they would license the entirety of the patents, not just certain claims, on RAND terms. As the Court recognized in its Order on Innovatio's Motion to Dismiss, the LOAs submitted by Innovatio's predecessors to the IEEE form contracts. *See* Dkt. 565, Order on Motion to Dismiss at 29-30.²⁰ Innovatio's RAND obligations under these contracts, as described in the contracts, require it to license *patents*—not *patent claims*—on reasonable and non-discriminatory terms. *See, e.g.*, Ex. 6 (Intermec's October 26, 1995 Letter of Assurance, stating that Intermec will “grant a nonexclusive, nontransferable sole and personal license ***under any such issued patent***” on RAND terms); Ex. 7 (Broadcom's October 17, 2006 Letter of Assurance, declaring “its licensing position ***with respect to any patent(s) and/or patent application(s)*** that it

¹⁹ *See also, e.g., In the Matter of Negotiated Data Solutions LLC*, FTC Dkt. No. C-4234 (Sept. 22, 2008), <http://www.ftc.gov/os/caselist/0510094/080923ndscomplaint.pdf>; *see also* Herbert J. Hovenkamp, *Competition in Information Technologies: Standards-Essential Patents, Non-Practicing Entities and FRAND Bidding*, University of Iowa Legal Studies Research Paper, No. 12-32, November 2012, p. 8; Joseph F. Wayland, Dep't of Justice, *Antitrust Policy in the Information Age: Protecting Innovation and Competition* (Sept. 21, 2012), at *5–6, available at <http://www.justice.gov/atr/public/speeches/287215.pdf>; Shoemake Decl. at 41–53.

²⁰ As the Court noted, “multiple [other] courts have adopted this theory of liability,” citing as examples *Apple, Inc. v. Motorola Mobility, Inc.*, 11-CV-178, 2012 WL 3289835, at *17-23 (W.D. Wis. Aug. 10, 2012); Dkt. No. 66, *Microsoft Corp. v. Motorola, Inc.*, No. 10-cv-1823, at 4-5 (W.D. Wash. May 31, 2011); *Research In Motion Ltd. v. Motorola, Inc.*, 644 F. Supp. 2d 788, 797 (N.D. Tex. 2008).

may hold or control, the use of which would be essential to create a compliant implementation of either mandatory or optional portions” of 802.11); *see also* Shoemake Decl. at ¶¶ 43, 52. The plain language in each of these contractual commitments—to which Innovatio is bound—obligates the patent holder to license any *patent* that includes an alleged SEP. *See, e.g., Apple, Inc. v. Motorola Mobility, Inc.*, 886 F. Supp. 2d 1061, 1083–85 (W.D. Wisc. 2012); Dkt. No. 66, *Microsoft Corp. v. Motorola, Inc.*, No. 10-cv-1823, at 45 (W.D. Wash. May 31, 2011); *Research In Motion Ltd. v. Motorola, Inc.*, 644 F. Supp. 2d 788, 797 (N.D. Tex. 2008) ; *Microsoft Corp. v. Motorola, Inc.*, 2013 U.S. Dist. LEXIS 60233, *33-34 (W.D. Wash. Apr. 25, 2013).²¹ These contracts are applicable to Innovatio as a successor to the patents. *See, e.g.*, Order on Motion to Dismiss, Dkt. 565 at 29 (“Innovatio does not dispute that it is subject to the contractual obligations of its predecessors in ownership of the patents.”). Although some other letters of assurance offer to license patent claims, those letters cannot revoke or alter these independent commitments to license the Innovatio patents as a whole on reasonable and nondiscriminatory terms. *See* Ex. 4 at § 6.3.4 (IEEE-SA Operations Manual) (“***Each potential licensee may choose to invoke the terms of any applicable Letter of Assurance accepted by the IEEE***, with one exception [related to Letters of Assurance that identify specific claims].”) (emphasis added); *see also Understanding Patent Issues During IEEE Standards Development*, IEEE, at 10-12, <http://standards.ieee.org/faqs/patents.pdf> (last visited May 5, 2013).

Innovatio’s attempt to segregate “non-SEP” claims from patents containing claims that Innovatio admits are essential is inconsistent with its RAND obligations because its predecessors committed to license the entirety of the patents on RAND terms--because Innovatio admits that at least one claim in the patent is essential, it is bound by these LOAs to license *all* claims in the

²¹ In addition, although the IEEE bylaws have since been amended, the bylaws in effect at the time of these letters were submitted provided for letters of assurance at the patent-level. *See, e.g.*, Ex. 23 (February 2006 IEEE SA Standards Board Bylaws, § 6); Shoemake Decl. at 43, 52.

patent on a RAND basis. Likewise, so long as *any* claim in a patent is essential, Innovatio is bound to license *all* claims in that patent in manner consistent with RAND. Innovatio’s exclusive reliance on the definition of an “Essential Patent Claim” in support of its argument ignores these express contractual requirements imposed by the LOAs that bind it, which require that Innovatio license all of its patents on a RAND basis.²²

IV. CONCLUSION

For the foregoing reasons, the claims alleged by Innovatio to be non-essential should be found to be essential, and Innovatio should be precluded from segregating non-essential claims.

Dated: **May 10, 2013**

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²² Every one of the alleged non-SEP claims is affected by these obligations. For 77 of the 229 alleged non-SEP claims, Innovatio admits that other claims in the same patent are essential. See Innovatio’s Brief In Support of Essentiality, Exh. A (Innovatio confirming that U.S. Patent Nos. 5,740,366, 5,940,771, 6,734,311, 7,457,646, 7,536,167, 7,873,343 contain essential claims). For the remainder, as explained above, the alleged non-SEP claims are, in fact, asserted against 802.11-essential features thus entitling them to RAND treatment.

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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

In re Innovatio IP Ventures, LLC, Patent Litigation	Case No. 1:11-cv-09308
This Document Relates To:	Judge James F. Holderman Magistrate Judge Sidney Schenkier
All Cases	

EXHIBITS TO DEFENDANTS' RESPONSES TO ESSENTIALITY BRIEF

Exhibit A - Index providing, for each allegedly “non-essential” claim element, an identification of the bases for essentiality that apply to that element

Exhibit B - Declaration of Matthew B. Shoemake, Ph.D. [**Filed Under Seal**]

Exhibit B1 - Materials Considered by Matthew B. Shoemake, Ph.D.

Exhibit C - Declaration of Dr. Stephen B. Wicker, Ph.D. [**Filed Under Seal**]

Exhibit C1 - Materials Considered by Dr. Stephen B. Wicker, Ph.D.

Exhibit 1 - Curriculum Vitae of Matthew B. Shoemake, Ph.D. [**Filed Under Seal**]

Exhibit 2 - Curriculum Vitae of Dr. Stephen B. Wicker, Ph.D.

Exhibit 3 - IEEE-SA Standards Board Bylaws, December 2012

Exhibit 4 - IEEE Standards Board Operations Manual, December 2012

Exhibit 5 - USPTO Assignment Abstract of Title for U.S. Patent No. 6,714,559

Exhibit 6 - Intermec’s October 26, 1995 Letter of Assurance

Exhibit 7 - Broadcom’s October 17, 2006 Letter of Assurance

Exhibit 8 - Broadcom’s September 6, 2002 Letter of Assurance #1

Exhibit 9 - Broadcom’s September 6, 2002 Letter of Assurance #2

Exhibit 10 - Norand’s June 20, 1997 Letter of Assurance

Exhibit 11 - U.S. Patent No. 7,457,646

Exhibit 12 - Chart of patent relationships

Exhibit 13 - IEEE-SA Standards Board Bylaws, January 1998

Exhibit 14 - Samik Bhattacharyya Deposition Transcript Excerpts **[Filed Under Seal]**

Exhibit 15 - U.S. Patent No. 7,873,343 claim charts sent to licensing targets relying exclusively on IEEE 802.11 standards **[Filed Under Seal]**

Exhibit 16 - Dec. 20, 2012 letter from E. Ogawa to licensing target **[Filed Under Seal]**

Exhibit 17 - Dec. 14, 2012 letter from E. Ogawa to licensing target **[Filed Under Seal]**

Exhibit 18 - Nov. 6, 2012 letter from E. Ogawa to licensing target **[Filed Under Seal]**

Exhibit 19 - Sept. 27, 2012 email from E. Ogawa to licensing target **[Filed Under Seal]**

Exhibit 20 - Sept. 28, 2012 letter from E. Ogawa to licensing target **[Filed Under Seal]**

Exhibit 21 - Eric Ogawa Deposition Transcript Excerpts **[Filed Under Seal]**

Exhibit 22 - Sample license agreement **[Filed Under Seal]**

Exhibit 23 - IEEE-SA Standards Board Bylaws, February 2006

Exhibit 24 - Innovatio's First Revised List of Asserted Standard-Essential and Standard Non-Essential Claims

Exhibit 25 - U.S. Patent No. 4,449,248

Exhibit 26 - U.S. Patent No. 5,142,550

Exhibit 27 - "Special Components Simplify Interface to PCMCIA Cards," Legg, Gregory, June 10, 1993

Exhibit 28 - IEEE Standards Board Operations Manual, December 2005

Exhibit 28A - IEEE P802.11s/D4.0, December 2009

Exhibit 29 - Innovatio's Final Infringement Contentions **[Filed Under Seal]**

CERTIFICATE OF SERVICE

I hereby certify that on May 10, 2013 the foregoing document, **DEFENDANTS' RESPONSES TO ESSENTIALITY BRIEF**, was served via electronic mail on the Counsel of Record identified below. Pursuant to Northern District of Illinois Local Rule 5.5 (b), copies of documents required to be served by Fed.R.Civ.P. 5(a) have been served.

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