

# EXHIBIT H

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

CORE WIRELESS LICENSING S.A.R.L.,

Plaintiff,

vs.

LG ELECTRONICS, INC. & LG  
ELECTRONICS MOBILECOMM U.S.A.,  
INC.,

Defendants.

Case No. 2:14-cv-912-JRG-RSP

**JURY TRIAL DEMANDED**

**AMENDED JOINT PROPOSED FINAL JURY INSTRUCTIONS  
(supersedes ECF No. 491)**

[Note: Where the parties do not agree, Core's proposals are in **pink**, and LG's proposals are in **blue**.]

## I. INTRODUCTION<sup>1</sup>

Members of the Jury:

You have now heard the evidence in this case. I will now instruct you on the law that you must apply to that evidence. It is your duty to follow the law as I give it to you. However, as I have said previously, you, the jury, are the judges of the facts. Do not consider any statement that I have made during the trial or make in these instructions as an indication that I have any opinion about the facts of this case.

After I give you these instructions, the attorneys will make their closing arguments. Statements and arguments of the attorneys are not evidence and are not instructions on the law. They are intended only to assist you in recalling and understanding the evidence and the parties' contentions.

A verdict form has been prepared for you. You will take this form to the jury room and when you have reached unanimous agreement as to your verdict, you will have your foreperson fill in the blanks in that form, date it and sign it. Answer each question in the verdict form from the facts as you find them. Do not decide who you think should win and then answer the questions to reach that result. Your answers and your verdict must be unanimous.

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<sup>1</sup> *Core Wireless Licensing S.a.r.l. v. Apple Inc.*, Case No. 6:12-cv-100 (E.D. Tex.) (Dkt. No. 428); *DDR Holdings, LLC v. Digital River, Inc.*, Case No. 2:06-CV-42-JRG (E.D. Tex.), (Dkt. No. 519); *SSL Services, LLC v. Citrix Systems, Inc.*, Case No. 2:08-CV-158-JRG (E.D. Tex.) (Dkt. No. 256).

## **II. CONSIDERING WITNESS TESTIMONY<sup>2</sup>**

In determining whether any fact has been proved in this case, you may, unless otherwise instructed, consider the testimony of all witnesses, regardless of who may have called them, and all exhibits received in evidence, regardless of who may have produced or introduced them.

You, the jurors, are the sole judges of the credibility of all witnesses and the weight and effect of all evidence. By the Court allowing testimony or other evidence to be introduced over the objection of an attorney, the Court did not indicate any opinion as to the weight or effect of such evidence.

Attorneys representing clients in Courts such as this one have an obligation in the course of trial to assert objections when they believe testimony or evidence is being offered that is contrary to the rules of evidence. When the Court sustained an objection to a question addressed to a witness, you must disregard the question entirely, and may draw no inference from its wording or speculate about what the witness would have said if he or she had been permitted to answer. If the objection was overruled, then you may treat the answer to that question just as you would treat the answer to any other question.

At times during the trial it was necessary for the Court to talk with the lawyers here at the bench out of your hearing, or by calling a recess and talking to them when you were out of the courtroom. This happened because often during a trial, something comes up that does not involve the jury. You should not speculate on what was said during such discussions that took place outside of your presence.

## **III. DIRECT AND CIRCUMSTANTIAL EVIDENCE<sup>3</sup>**

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<sup>2</sup> *Core Wireless Licensing S.a.r.l. v. Apple Inc.*, Case No. 6:12-cv-100 (E.D. Tex.) (Dkt. No. 428); *DDR Holdings, LLC v. Digital River, Inc.*, Case No. 2:06-CV-42-JRG (E.D. Tex.), (Dkt. No. 519); *SSL Services, LLC v. Citrix Systems, Inc.*, Case No. 2:08-CV-158-JRG (E.D. Tex.) (Dkt. No. 256).

There are two types of evidence that you may consider in properly finding the truth as to the facts in this case. One is direct evidence such as testimony of an eyewitness. The other is indirect or circumstantial evidence, that is, the proof of a chain of circumstances that indicates the existence or nonexistence of certain other facts. As a general rule, the law makes no distinction between direct or circumstantial evidence, but simply requires that you find the facts based on the evidence presented, both direct and circumstantial. The parties have stipulated, or agreed, to some facts in this case. When the lawyers on both sides stipulate to the existence of a fact, you must, unless otherwise instructed, accept the stipulation as evidence, and regard the fact as proved.

#### **IV. HOW TO EXAMINE THE EVIDENCE<sup>4</sup>**

Certain testimony in this case has been presented to you through depositions. A deposition is the sworn, recorded answers to questions asked to a witness in advance of the trial. Under some circumstances, if a witness cannot be present to testify in person from the witness stand, the witness's testimony may be presented, under oath, in the form of a deposition. Before this trial, attorneys representing the parties in this case questioned these deposition witnesses under oath. A court reporter was present and recorded the testimony. Deposition testimony is entitled to the same consideration as testimony given by a witness in person from the witness stand. Accordingly, you should determine the credibility and importance of deposition testimony, to the best of your ability, just as if the witness had testified in court in person.

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<sup>3</sup> *Core Wireless Licensing S.a.r.l. v. Apple Inc.*, Case No. 6:12-cv-100 (E.D. Tex.) (Dkt. No. 428); *DDR Holdings, LLC v. Digital River, Inc.*, Case No. 2:06-CV-42-JRG (E.D. Tex.), (Dkt. No. 519); *SSL Services, LLC v. Citrix Systems, Inc.*, Case No. 2:08-CV-158-JRG (E.D. Tex.) (Dkt. No. 256).

<sup>4</sup> *Core Wireless Licensing S.a.r.l. v. Apple Inc.*, Case No. 6:12-cv-100 (E.D. Tex.) (Dkt. No. 428); *DDR Holdings, LLC v. Digital River, Inc.*, Case No. 2:06-CV-42-JRG (E.D. Tex.), (Dkt. No. 519); *SSL Services, LLC v. Citrix Systems, Inc.*, Case No. 2:08-CV-158-JRG (E.D. Tex.) (Dkt. No. 256).

While you should consider only the evidence in this case, you are permitted to draw such reasonable inferences from the testimony and exhibits as you feel are justified in the light of common experience. In other words, you may make deductions and reach conclusions that reason and common sense lead you to draw from the facts that have been established by the testimony and evidence in the case.

Unless I instruct you otherwise, you may properly determine that the testimony of a single witness may be sufficient to prove any fact, even if a greater number of witnesses may have testified to the contrary, if after considering all the other evidence, you believe that single witness.

#### **V. EXPERT WITNESS<sup>5</sup>**

When knowledge of technical subject matters may be helpful to the jury, a person who has special training or experience in that technical field—called an “expert witness”—is permitted to state his or her opinion on those technical matters. However, you are not required to accept that opinion. As with any other witness, it is solely up to you to decide whether to rely upon it or not.

#### **VI. BURDENS OF PROOF**

In any legal action, facts must be proved by a required amount of evidence known as the “burden of proof.” The burden of proof in this case is on Core Wireless for some issues and on LG for other issues.

The Plaintiff, Core Wireless, has the burden of proving patent infringement by a preponderance of the evidence. **[Core Wireless Proposes: The Plaintiff, Core Wireless, also has**

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<sup>5</sup> *Core Wireless Licensing S.a.r.l. v. Apple Inc.*, Case No. 6:12-cv-100 (E.D. Tex.) (Dkt. No. 428); *DDR Holdings, LLC v. Digital River, Inc.*, Case No. 2:06-CV-42-JRG (E.D. Tex.), (Dkt. No. 519); *SSL Services, LLC v. Citrix Systems, Inc.*, Case No. 2:08-CV-158-JRG (E.D. Tex.) (Dkt. No. 256).

the burden of proving willful patent infringement by a preponderance of the evidence.]<sup>6</sup> The Plaintiff, Core Wireless, also has the burden of proving damages for patent infringement by a preponderance of the evidence. A preponderance of the evidence means evidence that persuades you that a claim is more probably true than not true. Sometimes this is talked about as being the greater weight and degree of credible testimony.

The LG Defendants have the burden of proving patent invalidity by clear and convincing evidence. Clear and convincing evidence means evidence that produces in your mind an abiding conviction that the truth of the party's factual contentions are highly probable. Although proof to an absolute certainty is not required, the clear and convincing evidence standard requires a greater degree of persuasion than is necessary for the preponderance of the evidence standard. If proof establishes in your mind an abiding conviction in the truth of the matter, then the clear and convincing standard has been met.

These standards are different from what you may have heard about in criminal proceedings where a fact must be proven beyond a reasonable doubt. On a scale of these various standards of proof, as you move from preponderance of the evidence, where the proof need only be sufficient to tip the scale in favor of the party proving the fact, to beyond a reasonable doubt, where the fact must be proven to a very high degree of certainty, you may think of clear and convincing evidence as being between the two standards.

In determining whether any fact has been proved by the preponderance of the evidence or by clear and convincing evidence, you may, unless otherwise instructed, consider the

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<sup>6</sup> As set forth more fully in footnote 23 on page 18, LG objects to any instructions on willful infringement as inappropriate on the facts of this case based on Core Wireless's allegation that LG is practicing standard technology.

stipulations, the testimony of all witnesses, regardless of who may have called them, and all exhibits received in evidence, regardless of who may have produced them.

## **VII. THE PARTIES AND THEIR CONTENTIONS**

As I did at the start of the case, I will first give you a summary of each side's contentions in this case. I'll then provide you with detailed instructions on what each side must prove to win on each of its contentions.

As I previously advised you, this case concerns two United States patents:

- Patent No. 6,633,536, referred to as the '5-3-6 patent or the '536 patent;
- Patent No. 7,804,850, referred to as the '8-5-0 patent or the '850 patent.

I will collectively refer to these patents as the "patents-in-suit" or as the "asserted patents." The Plaintiff, Core Wireless, seeks money damages from the Defendant, LG, for allegedly infringing the patents-in-suit by making, using, selling, offering for sale, or importing into the United States certain mobile phones and tablets.

Core Wireless contends<sup>7</sup> that the LG accused products infringe the following claims:

- Claim 19 of the '536 patent, and
- Claim 21 of the '850 patent.

All of these claims are sometimes referred to as the "asserted claims." Core Wireless has accused certain LG mobile phones and tablets of infringing the asserted claims. Collectively, these products are referred to as the "LG Accused Products."

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<sup>7</sup> LG Notes that Core Wireless previously contended, in its initial pretrial order filing, that "Core Wireless contends that LG made, used, offered to sell, or sold within the United States or imported into the United States products that operate according to the GSM, UMTS, LTE, and MMS standards." (Dkt. No. 491-8 at 8). To the extent Core Wireless's deletion of that contention suggests that Core Wireless is trying to change or expand its list of accused products, LG objects.

**[Core Wireless Proposes:** Core Wireless also contends that LG's infringement has been willful.]<sup>8</sup> Core Wireless is seeking damages for the alleged infringement by LG.

LG denies that it has infringed any asserted claim of the asserted patents. LG contends that during the term of these patents LG did not make, use, sell, offer for sale, or import any products and/or systems that infringe any of the asserted claims of the asserted patents.

Separately, LG also contends that the asserted claims of Core Wireless's patents are invalid. LG contends that the asserted claims of the '536 and '850 patents are anticipated by prior art that existed before Core Wireless's alleged invention and therefore the '536 and '850 asserted claims are invalid. LG further contends that all asserted claims are obvious in view of prior art that existed before Core Wireless's alleged inventions and therefore that Core Wireless's asserted claims are invalid. Invalidity is a defense to infringement. Invalidity and infringement are separate and distinct issues that must be separately decided by you, the jury.

Your job is to decide whether the asserted claims of the asserted patents have been infringed and whether any of the asserted claims of those patents are invalid. If you decide that any claim of a patent has been infringed, and is not invalid, you will then need to decide **[Core Wireless Proposes:** whether LG's infringement has been willful and]<sup>9</sup> the amount of **[LG Proposes:** any] **[Core Wireless Proposes:** the] money damages to be awarded to Core Wireless as compensation for the infringement.

## VIII. CLAIM INTERPRETATION<sup>10</sup>

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<sup>8</sup> As set forth more fully in footnote 23 on page 18, LG objects to any instructions on willful infringement as inappropriate on the facts of this case based on Core Wireless's allegation that LG is practicing standard technology.

<sup>9</sup> As set forth more fully in footnote 23 on page 18, LG objects to any instructions on willful infringement as inappropriate on the facts of this case based on Core Wireless's allegation that LG is practicing standard technology.

<sup>10</sup> *Core Wireless Licensing S.a.r.l. v. Apple Inc.*, Case No. 6:12-cv-100 (E.D. Tex.) (Dkt. No.

Before you can decide many of the issues in this case, you will need to understand the role of patent “claims.” The patent claims are the numbered sentences at the end of each patent. The claims are important because it is the words of the claims themselves that define what a patent covers. The figures and text in the rest of the patent provide a description and/or examples of the invention and provide a context for the claims, but it is the claims that define the breadth of the patent’s coverage. Each claim is effectively treated as if it were a separate patent, and each claim may cover more or less than another claim. Therefore, what a patent covers collectively depends on what each of its claims covers.

Claims may describe apparatuses, devices, or products, such as machines. I will call such claims “apparatus” claims.

You need first to understand what each claim covers in order to decide whether or not there is infringement of the claim and to decide whether or not the claim is invalid. The law says that it is my role to define the terms of the claims, and it is your role to apply my definitions to the issues that you are asked to decide in this case. Therefore, as I explained to you at the start of the case, I have determined the meaning of the claims, and I have provided to you my definitions of certain claim terms. These are in your juror notebooks. You must accept my definitions of these words in the claims as being correct. It is your job to take these definitions that I have supplied and apply them to the issues that you are asked to decide, including the issues of infringement and invalidity. For any words in the claim for which I have not provided you with a definition, you should apply their common meaning. The meaning of the words of the patents claims must be the same when deciding both infringement and validity.

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428); *DDR Holdings, LLC v. Digital River, Inc.*, Case No. 2:06-CV-42-JRG (E.D. Tex.), (Dkt. No. 519); *SSL Services, LLC v. Citrix Systems, Inc.*, Case No. 2:08-CV-158-JRG (E.D. Tex.), (Dkt. No. 256).

You have been provided with copies of the patents-in-suit and copies of the claim term definitions in your juror notebooks, and you may use them in your deliberations. Rather than take the time to read each definition out loud at this time, I'll again point you to the claim term definitions in your juror notebooks.

## **IX. WHAT A CLAIM COVERS<sup>11</sup>**

I will now explain how a claim defines what it covers.

A claim sets forth, in words, a set of requirements. Each claim sets forth its requirements in a single sentence. If a device or method satisfies each of these requirements in that sentence, then it is covered by and infringes the claim.

There can be several claims in a patent. A claim may be narrower or broader than another claim by setting forth more or fewer requirements. The coverage of a patent is assessed on a claim-by-claim basis. In patent law, the requirements of a claim are often referred to as the "claim elements" or "claim limitations." When a product meets all of the requirements of a claim, the claim is said to "cover" that product, and that product is said to "fall" within the scope of that claim. In other words, a claim covers a product where each of the claim elements or limitations is present in that product. If a product is missing even one limitation or element of a claim, the product is not covered by the claim. If the product is not covered by the claim, that product does not infringe that claim.

## **X. OPEN-ENDED OR "COMPRISING" CLAIMS<sup>12</sup>**

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<sup>11</sup> *Core Wireless Licensing S.a.r.l. v. Apple Inc.*, Case No. 6:12-cv-100 (E.D. Tex.) (Dkt. No. 428); *DDR Holdings, LLC v. Digital River, Inc.*, Case No. 2:06-CV-42-JRG (E.D. Tex.), (Dkt. No. 519); *SSL Services, LLC v. Citrix Systems, Inc.*, Case No. 2:08-CV-158-JRG (E.D. Tex.), (Dkt. No. 256).

<sup>12</sup> *Core Wireless Licensing S.a.r.l. v. Apple Inc.*, Case No. 6:12-cv-100 (E.D. Tex.) (Dkt. No. 428).

The beginning portion, or preamble, of a claim often uses the word “comprising.” The word “comprising,” when used in the preamble, means “including but not limited to” or “containing but not limited to.” When “comprising” is used in the preamble, if you decide that an accused product includes all of the requirements of that claim, the claim is infringed. This is true even if the accused instrumentality contains additional elements.

For example, a claim to a table comprising a tabletop, legs, and glue would be infringed by a table that includes a tabletop, legs, and glue, even if the table also includes wheels on the table’s legs.

## **XI. INFRINGEMENT GENERALLY**

A patent owner has the right to stop others from using the invention covered by its patent claims in the United States during the life of the patent. If any person makes, uses, sells or offers to sell within the United States or imports into the United States what is covered by the patent claims without the patent owner’s permission, that person is said to infringe the patent.

In reaching your decision on infringement, keep in mind that only the claims of a patent can be infringed. You must compare the asserted patent claims, as I have defined each of them, to the accused products, and determine whether or not there is infringement. You should not compare the accused products with any specific example set out in the patent or with the patent holder’s commercial products or with the prior art in reaching your decision on infringement. The only correct comparison is with the language of the claim itself, as I have explained its meaning to you.

You must reach your decision as to each assertion of infringement based on my instructions about the meaning and scope of the claims, the legal requirements for infringement, and the evidence presented to you by the parties.

## **XII. DIRECT INFRINGEMENT<sup>13</sup>**

In order to prove direct infringement of a patent claim, Core Wireless must show by a preponderance of the evidence that the accused product includes each and every requirement or limitation of the claim. In determining whether an accused product directly infringes a patent claim in this case, you must compare the accused product with each and every one of the requirements or limitations of that claim to determine whether the accused product contains each and every requirement or limitation recited in the claim. A claim requirement is present if it exists in an accused product just as it is described in the claim language, either as I have explained the language to you or, if I did not explain it, according to the plain and ordinary meaning of the claim language. If an accused product omits any requirement recited in a claim, then you must find that that particular product does not infringe that claim.

A patent can be directly infringed even if the alleged infringer did not have knowledge of the patent and without the infringer knowing that what it was doing is infringement of the claim. A patent may also be directly infringed even though the accused infringer believes in good faith that what it is doing is not an infringement of the patent.

## **XIII. INTERPRETATION OF MEANS-PLUS-FUNCTION CLAIMS**

Certain elements in Claim 19 of the '536 patent are in a special form called a "means-plus-function" format. These elements require a special interpretation. Those words do not cover all means that perform the recited functions but cover only the described structures in the patent specification and drawings that perform the functions, or an equivalent of those structures.

The table in Tab 1 of your Juror Notebook lists the recited functions, and structures in the patent specification that performs those functions, as interpreted by the Court. You must use my

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<sup>13</sup> *Core Wireless Licensing S.a.r.l. v. Apple Inc.*, Case No. 6:12-cv-100 (E.D. Tex.) (Dkt. No. 428).

interpretation of the means-plus-function elements in your deliberations regarding infringement and validity, as further discussed below.

#### **XIV. LITERAL INFRINGEMENT OF MEANS-PLUS-FUNCTION**

The Court has instructed you that claim 19 of the '536 patent contains means-plus-function elements. To show infringement, Core Wireless must prove that it is more likely than not that the structures in each LG Accused Product that Plaintiff alleges perform the functions listed in the table in Tab 1 are identical to, or equivalent to, the structures described in the specification for performing the identical function. Those structures from the specification are also listed in the table at Tab 1.

In deciding whether Core Wireless has proven that an LG Accused Product includes structures covered by a means-plus-function requirement, you must first decide whether the LG Accused Product has any structures that perform the functions listed in the table at Tab 1 of your Juror Notebook. If not, the claim containing that specific means-plus-function requirement is not infringed.

If you find that the LG Accused Product performs the claimed functions, you must next identify the structures in the LG Accused Product that perform these functions. After identifying those structures you must then determine whether Core Wireless has shown that those structures are either identical to, or equivalent to, structures of the means-plus-function limitations, which the Court determined as part of the claim construction and are listed in the table at Tab 1 of your Juror Notebook. If the structures in the LG Accused Product are the same or equivalent to the structures I identified, that LG Accused Product meets the requirements of that limitation.

Whether the structures of the LG Accused Product are equivalent to structures described in the patent specification is decided from the perspective of a person of ordinary skill in the art.

**[Core Wireless Proposes:** If a person of ordinary skill in the art would consider the differences

between the structures found in the LG Accused Products and structures described in the patent specification to be insubstantial, the structures are equivalent.] [LG Proposes: The fact that a structure is known now and is “equivalent” is not enough. The structure must also have been available at the time the patent issued.<sup>14</sup>]<sup>15</sup>

## XV. APPARATUS CLAIMS THAT RECITE CAPACITY<sup>16</sup>

[Core Wireless Proposes: With respect to both asserted claims, Core Wireless alleges that the claim language recites the capability to perform a function.

To infringe a claim that recites the capability to perform a function, an apparatus needs only to have the recited capability to perform that function. An apparatus that is demonstrated to be capable of performing the recited function is infringing even if there is no evidence that that function has ever been used or operated within the apparatus. Evidence that the apparatus is reasonably capable of satisfying the claim limitation is sufficient to find the limitation is met,

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<sup>14</sup> LG’s proposed language is taken verbatim from the January 2016 Federal Circuit Bar Association Model Jury Instructions, <<https://fedcirbar.org/Resources/Other-Materials/Model-Patent-Jury-Instructions>>. LG objects to Core’s proposed language because it could be understood to misstate the law. *See, e.g., Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 1320 (Fed. Cir. 1999) (holding that an equivalent structure or act under § 112 cannot embrace technology developed after the patent issued because the literal meaning of a claim is fixed upon issuance).

<sup>15</sup> LG’s instruction is wrong and, further, LG has no argument or evidence that any such equivalent structure is only available now and not available at the time the patent issued. Simply put, this is not a real dispute in this case.

<sup>16</sup> LG objects to the proposed instruction on “Apparatus Claims that Recite Capacity.” First, Core is essentially making an untimely claim construction argument in an attempt to vitiate the limitations actually imposed by the Court’s Markman Claim Construction Order and replace them with the mere “capability” that the device could be programmed or used in the claimed manner (without evidence anyone has actually done so). Second, Core’s argument is legally incorrect. *See, e.g., SIPCO, LLC v. Abb, Inc.*, No. 11-48, 2012 WL 3112302, at \*10–11 (E.D. Tex. July 30, 2012) (“Interpreting ‘configured to’ as requiring only mere capability would eliminate any meaningful limits to the claims. Accordingly, the Court finds that ‘configured to’ means ‘actually programmed or equipped with hardware or software to.’”).

even though it may also be capable of non-infringing modes of operation. Language claiming capability includes “Adapted to,” “Configured to,” and “means for.”

## **XVI. DOCTRINE OF EQUIVALENTS**

**[Core Wireless Proposes:** With respect to certain claim limitations of the patents-in-suit, Core Wireless contends LG’s accused products infringe either literally or under a legal theory called the Doctrine of Equivalents. Those claims include:

- Claim 19 of the ’536 patent; and
- Claim 21 of the ’850 patent.

I will now instruct you on the doctrine of equivalents to use in assessing direct infringement for these issues. For your deliberations on all other infringement issues, you should consider only literal infringement.

If you decide that an accused product or method does not literally infringe an asserted patent claim, you must then decide whether it is more probable than not that such product or method infringes the asserted claim under what is called the “doctrine of equivalents.” Under the doctrine of equivalents, the product or method can infringe an asserted patent claim if it includes parts or steps that are equivalent to those requirements of the claim even if those requirements are not literally present in the product or method. If the product or method is missing an equivalent part or step to even one part or step of the asserted patent claim, the product or method cannot infringe the claim under the doctrine of equivalents. Thus, in making your decision under the doctrine of equivalents, you must look at each individual requirement of the asserted patent claim and decide whether the product or method has an equivalent part or step to that individual claim requirement that is otherwise not literally present in the product or method.

A part or step of a product or method is equivalent to a requirement of an asserted claim if a person of ordinary skill in the field would think that the differences between the part or step and the requirement were not substantial as of the time of the alleged infringement. One way to decide whether any difference between a requirement of an asserted claim and a part or step of the product or method is not substantial is to consider whether, as of the time of the alleged infringement, the part or step of the product or method performed substantially the same function, in substantially the same way, to achieve substantially the same result as the requirement in the patent claim.

In deciding whether any difference between a claim requirement and the product or method is not substantial, you may consider whether, at the time of the alleged infringement, persons of ordinary skill in the field would have known of the interchangeability of the part or step with the claimed requirement. However, the known interchangeability between the claim requirement and the part or step of the product or method is not necessary to find infringement under the doctrine of equivalents. Further, the same element or method step of an accused product or method may satisfy more than one element of a claim.]<sup>17</sup>

**[LG Proposes:<sup>18</sup>** If a person makes, uses, sells, or offers to sell within the United States a product, or practices a method that does not meet all of the requirements of a claim and thus

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<sup>17</sup> Core Wireless has preserved sufficiently detailed opinions and evidence regarding the doctrine of equivalence, as LG's own alternative construction makes clear. Further, Core Wireless will provide sufficiently detailed proofs on this doctrine at trial, if necessary.

<sup>18</sup> LG objects to Core Wireless's proposal and contends that no instruction is appropriate for the doctrine of equivalents. LG contends that Core has only generic expert opinions under the doctrine of equivalents and, therefore, Core cannot present any particularized testimony and linking argument as to the insubstantiality of the differences between the claims and the accused devices, or with respect to the function, way, and result test. *See Mirror Worlds, LLC v. Apple, Inc.*, 784 F.Supp.2d 703, 716 (E.D. Tex. 2011). LG further contends that an instruction on the doctrine of equivalents would be confusing to the jury unless Core specifically identifies which

does not literally infringe that claim, there can still be direct infringement if that product or method satisfies that claim under the doctrine of equivalents.

Under the doctrine of equivalents, a product or method infringes a claim if the accused product or method performs steps or contains elements corresponding to each and every requirement of the claim that is equivalent to, even though not literally met by, the accused product or method. You may find that a step or element is equivalent to a requirement of a claim that is not met literally if a person having ordinary skill in the field of technology of the patent would have considered the differences between them to be “insubstantial” or would have found that LG’s action or structure: (1) performs substantially the same function; (2) in substantially the same way; (3) to achieve substantially the same result as the requirement of the claim. In order for the structure or action to be considered interchangeable, the structure or action must have been known at the time of the alleged infringement to a person having ordinary skill in the field of technology of the patent. Interchangeability at the present time is not sufficient. In order to prove infringement by “equivalents,” Core Wireless must prove the equivalency to a claim element by a preponderance of the evidence.

In this case, Plaintiff’s assertion that the doctrine of equivalents applies is only applicable to the following claim limitations:

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elements of which claims are asserted to be infringed under the doctrine of equivalents, and the alleged equivalents of those elements. *See Core Wireless Licensing S.a.r.l. v. Apple Inc.*, Case No. 6:12-cv-100 (E.D. Tex.) (Dkt. No. 428). Finally, LG contends that the doctrine of equivalents is precluded as a matter of law under the doctrines that an equivalent cannot ensnare the prior art, an equivalent cannot vitiate claim limitations, and prosecution history estoppel. Notwithstanding LG’s objection, should any instruction on doctrine of equivalents be given, LG has proposed language consistent with the instruction given in *ContentGuard Holdings, Inc. v. Apple Inc.*, No. 2:13-CV-1112-JRG (E.D. Tex. Nov. 20, 2015), including (as in the instructions given in that case) an instruction on the specific claim limitations to which the doctrine allegedly applies.

'850 Patent Claim 21:

- a memory adapted to store computer program instructions and a virtual transmission time interval;<sup>19</sup>
- check to determine whether the apparatus is transmitting data packets in a current air interface transmission time interval; and<sup>20</sup>
- for the case where it is determined that the apparatus is not transmitting in the current air interface transmission time interval to cause the transmitter to transmit a next data packet after a predetermined period associated with the virtual transmission time interval has elapsed<sup>21</sup>

'536 Patent Claim 19:

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<sup>19</sup> See Expert Report of Dr. Charles L. Jackson Regarding Infringement of United States Patents Nos. 6,266,321 and 7,804,850 at ¶ 364: “The function, data storage, is performed. It is performed in the same way—using electronic subsystems to store data, and the quantity stored has the attributes of a virtual TTI.” LG objects and contends that this generic doctrine of equivalents argument is legally insufficient and precluded for at least the reasons discussed above, *see supra* note 18 on page 15.

<sup>20</sup> *Id.* at ¶ 369: “The function, determining whether the apparatus is transmitting data packets in a current air interface transmission time interval, is performed. It is performed in the same way—by a processor, and the result, a yes/no output, is the same.” LG objects and contends that this generic doctrine of equivalents argument is legally insufficient and precluded for at least the reasons discussed above, *see supra* note 18 on page 15.

<sup>21</sup> *Id.* at ¶ 380: “The function, for the case where it is determined that the apparatus is not transmitting in the current air interface transmission time interval to cause the transmitter to transmit a next data packet after a predetermined period associated with the virtual transmission time interval has elapsed, is performed. It is performed in the same way—by a processor, and the result, a transmission at the proper time, is the same.” LG objects and contends that this generic doctrine of equivalents argument is legally insufficient and precluded for at least the reasons discussed above, *see supra* note 18 on page 15.

- which additionally contains a bit pattern which deviates from a bit pattern corresponding to a message at most by a predetermined threshold value<sup>22</sup>

## **XVII. WILLFUL INFRINGEMENT**<sup>23</sup>

In this case, Core Wireless also contends that LG has **[LG Proposes: infringed Core Wireless's patents and further, that LG infringed]**<sup>24</sup> willfully **[Core Wireless Proposes: infringed its patents]**. If you decide that LG has infringed, you must address the additional issue of whether or not that infringement was willful.

**[LG Proposes: Patent lawsuits are common. However, to prove willful infringement, Core Wireless must prove that this is not a typical, garden-variety patent infringement case. Rather, Core Wireless must prove that this is a case of egregious, shocking, bad-faith, consciously-wrongful, and flagrant misconduct beyond typical infringement.]**<sup>25</sup>

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<sup>22</sup> See [Corrected] Expert Report of Dr. Richard D. Wesel Regarding Infringement of U.S. Patent No. 6,633,536 at ¶ 200: “The CRC check performed by the Accused Devices after Viterbi decoding is insubstantially different from the claim language. The CRC-check will fail if the message deviates by even single bit. Because the Accused Devices perform the same function (They only detect messages that are close enough in a predetermined way to the original message) in the same way (by performing a threshold comparison) to achieve the same result (bit patterns that are not close enough are not detected as messages).” LG objects and contends that this generic doctrine of equivalents argument is legally insufficient and precluded for at least the reasons discussed above, *see supra* note 18 on page 15.

<sup>23</sup> LG objects to any instructions on willful infringement as inappropriate on the facts of this case based on Core Wireless's allegation that LG is practicing standard technology, for the reasons set forth in LG's motion for summary judgment of no willful infringement, Dkt. 538, filed Aug. 12, 2016.

<sup>24</sup> *ContentGuard Holdings, Inc. v. Apple Inc.*, No. 2:13-CV-1112-JRG (E.D. Tex. Nov. 20, 2015).

<sup>25</sup> *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1932 (U.S. 2016) (“The sort of conduct warranting enhanced damages has been variously described in our cases as willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, or—indeed—characteristic of a pirate.”); *id.* (“enhanced damages are generally appropriate under § 284 only in egregious cases”).

**[Core Wireless Proposes:** Willfulness requires you to find, by a preponderance of the evidence, that LG's infringement was intentional or knowing, *i.e.*, that LG undertook its infringing actions despite a risk of infringement that was either known to LG or so obvious that it should have been known to LG.

To determine whether LG had this state of mind, you may only consider what LG knew or should have known prior to the filing of this lawsuit on September 26, 2014. You may not consider LG's post-filing litigation defenses and theories, or any facts that LG neither knew nor had reason to know at the time it began its infringement. The factors you may consider include but are not limited to:

(1) Whether or not LG had pre-suit knowledge of the patents in suit and was aware of the basis for Core Wireless's infringement allegations;

(2) Whether or not LG had a reasonable basis to believe it did not infringe or had a reasonable defense to infringement;<sup>26</sup>

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<sup>26</sup> LG submits that even if any instruction on willfulness is given over LG's objection, this specific portion of the instruction is additionally and particularly inappropriate given Core Wireless's allegations that LG infringes because it practices standard technology, and the Court's ruling on Core Wireless's Motion in Limine #1. If the jury is instructed that it should consider whether LG had a reasonable basis to believe it did not infringe, LG should be permitted to tell the jury that not only did LG believe Core Wireless's patents were not standard essential, LG's belief was proven correct, twice over—first when the *Apple* jury determined that Apple's standard-compliant products (which use Qualcomm chipsets just like those used in LG's products) did not infringe Core Wireless's alleged standard-essential patents, and second when the French court determined that Core Wireless's patents asserted against LG were not standard-essential. It would be fundamentally unfair and deeply prejudicial to LG to permit this instruction on willfulness, but to prevent LG from explaining to the jury that LG's belief that Core Wireless's patents are not standard-essential was twice confirmed by independent adjudications. [Core Wireless disagrees with LG's position for the reasons set forth in its Opposition to LG's Objection to Judge Payne's ruling on CW's MIL #1 [Dkt. 533] and its Opposition to LG's MSJ of No Willfulness [Dkt. 556]. For instance, LG did not assert non-essentiality of the '850 and '536 patents pre-suit, and the post-suit outcome of the *Apple I* case (which did not include any determination of non-essentiality) is irrelevant to LG's willfulness.

(3) whether or not LG tried to cover up its infringement;<sup>27</sup>

(4) whether or not LG's pre-suit negotiations with, and representations to, Core Wireless were in bad faith.<sup>28</sup>

No one factor alone is necessary or determinative, and this list of factors is not an exhaustive list of things that you should consider.<sup>29</sup> Your determination of willfulness should incorporate the totality of the circumstances based on the evidence presented during this trial.

**[LG Proposes:** If you decide that any infringement was willful, that decision should not affect any damage award you give. I will take willfulness into account later.]<sup>30</sup>

Core Wireless has the burden of proving willfulness by a preponderance of the evidence.

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*See Halo*, 136 S. Ct. at 1933 (rejecting the argument that courts “should look to facts that the defendant neither knew nor had reason to know at the time he acted.”)].

<sup>27</sup> LG submits that even if any instruction on willfulness is given over LG's objection, this specific portion of the instruction is additionally and particularly inappropriate given Core Wireless's allegations that LG infringes because it practices standard technology. As set out more fully in LG's above objection to a willfulness instruction, and as explained by Core Wireless's counsel Prof. Lichtman, concerns about undetected or concealed infringement are irrelevant in the RAND context and cannot justify a finding of willful infringement. Further, Core Wireless did not disclose in its interrogatory response any allegation that LG had concealed its infringement, so there is nothing for the jury to determine under this factor. [CW disagrees with LG's position. LG has no legal authority to support its theory that willfulness should not apply to SEPs, and both CW's briefing [Dkt. 556] and the Court's denial of LG's MSJ [Dkt. 560] have rejected the contentions LG presents in this footnote.]

<sup>28</sup> LG further objects to this factor because even Core Wireless's untimely August 31, 2016 Supplemental Response to LG's Interrogatory on the factual basis for Core's willfulness allegation does not even use the term “bad faith,” much less does it allege that any specific LG action was taken in bad faith.

<sup>29</sup> LG further objects to Core Wireless's elimination of factors for willfulness that it previously proposed, consideration of which would only confirm that any alleged infringement was not willful. In particular, Core Wireless removed its previously proposed factor “Whether or not LG acted in accordance with the standards of commerce for its industry.” (Dkt. 491-8 at 24.) Core does not and could not allege LG's conduct is outside the standards of commerce for the industry. SSOs and participants like Nokia know and expect that any truly standard-essential patents will be used by implementers in advance of any negotiation over RAND licenses. Notably, no other cell phone manufacturer has taken a license from Core to the asserted patents.

<sup>30</sup> *ContentGuard Holdings, Inc. v. Apple Inc.*, No. 2:13-CV-1112-JRG (E.D. Tex. Nov. 20, 2015).

## **XVIII. INVALIDITY - GENERALLY**

I'll now instruct you on the rules that you must follow in deciding whether or not LG has proven that the asserted claims of the patents-in-suit are invalid.

An issued patent is accorded a presumption of validity based on the presumption that the United States Patent and Trademark Office, which you've often heard referred to simply as the PTO, acted correctly in issuing the patent. This presumption of validity extends to all issued patents, including those that claim the benefit of an earlier filed patent application, such as so-called "continuations" or "continuations-in-part."

To prove that any claim of a patent is invalid, LG must persuade you by clear and convincing evidence that the claim is invalid. Like infringement, validity is determined on a claim-by-claim basis. You must determine separately for each claim whether that claim is invalid. If one claim of a patent is invalid, this does not mean that any other claim is necessarily invalid. Claims are construed the same way for determining infringement as for determining invalidity.

**[LG Proposes:** Keep in mind that everyone has the right to use existing knowledge and principles. A patent cannot remove from the public the ability to use what was known or obvious before the invention was made or patent protection was sought.<sup>31</sup>]

In evaluating the prior art to determine whether an invalidity defense has been proved by clear and convincing evidence, you must consider whether that prior art is materially new, that is, different from the prior art considered by the Patent Office. Prior art differing from the prior art considered by the Patent Office may, but does not always, carry more weight than the prior art

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<sup>31</sup> *Eolas Techs. Inc. v. Adobe Systems Inc.*, No. 6:09-cv-00446 (E.D. Tex. Feb 6, 2012) (Dkt. No. 1374 at 23:7-11). Core Wireless objects to LG's addition as confusing and not consistent with the parties' contentions. For example, "existing knowledge and principles" could cause jury confusion in view of the agreed upon jury instructions regarding anticipation and obviousness.

that was considered by the Patent Office.<sup>32</sup> [LG Proposes: The ultimate responsibility for deciding whether the claims of the patent are valid is up to you, the members of the jury, not the Patent Office.]<sup>33</sup>

In making your determination as to invalidity, you should consider each claim separately.

**A. Invalidity: Anticipation**

LG contends that the asserted claims of the patents-in-suit are invalid for being anticipated by prior art. LG bears the burden of establishing anticipation by clear and convincing evidence.

A patent claim is invalid if it is not new. For a claim to be invalid because it is not new, all of its requirements must have existed in a single device or method that predates the patent, or must have been described in a single previous publication or patent that predates the patent. In patent law, a previous device, publication or patent that predated the claimed invention is called a “prior art reference.” If a patent claim is not new we say it is “anticipated” by a prior art reference. Anticipation requires that a single reference not only disclose all elements of the claim

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<sup>32</sup> *Microsoft Corp. v. i4i Ltd. Partnership*, 131 S.Ct. 2238, 2251 (2011) (“[N]ew evidence supporting an invalidity defense may carry more weight in an infringement action than evidence previously considered by the PTO. . . . [A] jury instruction on the effect of new evidence can, and when requested, most often should be given. . . . When it is disputed whether the evidence presented to the jury differs from that evaluated by the PTO, the jury may be instructed to consider that question. In either case, the jury may be instructed to evaluate whether the evidence before it is materially new, and if so, to consider that fact when determining whether an invalidity defense has been proved by clear and convincing evidence.”); *DDR Holdings, LLC v. Digital River, Inc.*, Case No. 2:06-CV-42-JRG (E.D. Tex.) (Dkt. 519 at 16) (“You must consider whether that evidence is materially new, and if so, consider that fact when determining whether an invalidity defense has been proven by clear and convincing evidence. Prior art differing from the prior art considered by the Patent Office may, but does not always, carry more weight than the prior art that was considered by the Patent Office.”).

<sup>33</sup> Core Wireless objects to this proposed additional instruction as confusing and unsupported by any caselaw or model instructions. Further, LG’s suggestion that “whether the claims of the patent are valid is . . . not [up] to the Patent Office” it is inconsistent with the presumption of validity afforded to issued patents.

within the four corners of the document, but that it must also disclose those elements arranged or combined in the same way as in the claim as that claim has been construed, or interpreted, by the Court.<sup>34</sup> LG must prove with clear and convincing evidence that an asserted patent claim was anticipated by the prior art reference.

In determining whether or not the invention is valid, you must determine the scope and content of the prior art at the time the invention was made. For prior art to anticipate a claim of a patent, the disclosure in the prior art reference does not have to be in the same words as the claim, but all of the elements of the claim must be there, either stated or necessarily implied, so that someone of ordinary skill in the field of the invention looking at that one reference would be able to make and use at least one embodiment of the claimed invention. Anticipation can also occur when the claimed invention inherently and necessarily results from practice of what is disclosed in the written reference, even if the inherent disclosure was unrecognized or unappreciated by one of ordinary skill in the field of the invention.

**[LG Proposes:** Additionally, if you find that Core Wireless accuses features of infringement that existed prior to the filing of the patent, then the patent is invalid.]<sup>3536</sup>

If you find that a patent claim is not new as explained above, you should find that claim invalid.

## **B. Invalidity: Obviousness**

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<sup>34</sup> *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008) (“We thus hold that unless a reference disclosed within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102.”).

<sup>35</sup> *Peters v. Active Mfg. Co.*, 129 U.S. 530, 537, 9 S.Ct. 389, 32 L.Ed. 738 (1889) (“That which infringes, if later, would anticipate, if earlier.”).

<sup>36</sup> Core Wireless objects to this proposal as it misstates the law.

LG also contends that all asserted claims of the patents-in-suit are invalid as obvious. Even though an invention may not have been identically disclosed or described in a single prior art reference before it was made by an inventor, the invention may have been obvious to a person of ordinary skill in the field of technology of the patent at the time the invention was made. LG bears the burden of establishing obviousness by clear and convincing evidence.

In determining whether a claimed invention is obvious, you, the jury, must consider the level of ordinary skill in the field of technology of the patent that someone would have had at the time the claimed invention was made, the scope and content of the prior art, any differences between the prior art and the claimed invention, as well as the ordinary knowledge of the person of ordinary skill at the time of the invention.

The skill of the actual inventor is not necessarily relevant because inventors may possess something that distinguishes them from workers of ordinary skill in the art. Keep in mind that the existence of each and every element of the claimed invention in various prior art does not necessarily prove obviousness. Most, if not all inventions, rely on building blocks of prior art.

In considering whether a claimed invention is obvious, you should consider whether, as of the priority date of the patents-in-suit, there was a reason that would have prompted a person of ordinary skill in the field to combine known elements in a way that the claimed invention does, taking into account such facts as:

1. Whether the claimed invention was merely the predictable result of using prior art elements according to their known function;
2. Whether the claimed invention provides an obvious solution to a known problem in the relevant field;

3. Whether the prior art teaches or suggests the desirability of combining elements in the manner of the claimed inventions;
4. Whether the prior art teaches away from combining elements in the manner of the claimed invention;
5. Whether it would have been obvious to try the particular combination of elements in the claimed invention, such as when there is a design need or market pressure to solve a problem, and there are a finite number of identified, predictable solutions; and
6. Whether the change resulted more from design incentives or other market forces.

In determining whether the claimed invention was obvious, consider each claim separately, and consider only what was known at the time of the invention.

In making these assessments, Ladies and Gentlemen, you should take into account any objective evidence (sometimes called "secondary considerations") that may have existed at the time of the invention, and afterwards, that may shed light on non-obviousness, such as:

1. Whether the invention was commercially successful as a result of the merits of the claimed inventions (rather than the result of design needs or market pressure, advertising, or similar activities);
2. Whether the invention satisfied a long-felt need;
3. Whether others had tried and failed to make the invention;
4. Whether others copied the invention, with the understanding that there is no contention in this case that LG copied the patented technology;
5. Whether there were changes or related technologies or market needs contemporaneous with the invention;

6. Whether the invention achieved unexpected results;
7. Whether others in the field praised the invention;
8. Whether persons having ordinary skill in the art of the invention expressed surprise or disbelief regarding the invention;
9. Whether others sought or obtained rights to the patent from the patent-holder; and
10. Whether the inventor proceeded contrary to accepted wisdom in the field.

In support of obviousness, you may also consider whether others independently invented the claimed invention before or at about the same time as the named inventor thought of it. If you find that LG has proved the obviousness of a claim by clear and convincing evidence, then you must find that that claim is invalid.

### **C. Invalidity: Written Description**

LG contends that claim 21 of the '850 patent is invalid for failure to satisfy the written description requirement. LG bears the burden of establishing a lack of written description by clear and convincing evidence.

A patent must contain a written description of the product claimed in the patent. The written description requirement helps to ensure that the patent applicant actually invented the claimed subject matter. To satisfy the written description requirement, the patent specification must describe each and every limitation of a patent claim, in sufficient detail, although the exact words found in the claim need not be used. When determining whether the specification discloses the invention, the claim must be viewed as a whole.

[**Core Wireless Proposes:** The written description requirement is satisfied if persons of ordinary skill in the field of the invention would recognize, from reading the patent specification, that the inventor possessed the subject matter finally claimed in the patent.] [**LG Proposes:** The written description requirement is satisfied if a person having ordinary skill reading the original

patent application would have recognized that it describes the full scope of the claimed invention as it is finally claimed in the issued patent and that the inventor actually possessed that full scope by the filing date of the original application.<sup>37]</sup> The written description requirement is satisfied if the specification shows that the inventor possessed his or her invention as of the date the patent application was filed, even though the claims themselves may have been changed or new claims added since that time.

It is unnecessary to spell out every detail of the invention in the specification, and specific examples are not required; only enough must be included in the specification to convince persons of ordinary skill in the art that the inventor possessed the full scope of the invention. [CW Proposes: For instance, the specification need not demonstrate that the applicant possessed inoperative embodiments also captured within the scope of the claims. Moreover, although an inoperable invention is not enabled, the party asserting inoperability must show that all disclosed alternatives are inoperative.]<sup>3839</sup> In evaluating whether the specification has provided an adequate written description, you may take into account such factors as:

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<sup>37</sup> LG's proposed language is taken verbatim from the January 2016 Federal Circuit Bar Association Model Jury Instructions, <<https://fedcirbar.org/Resources/Other-Materials/Model-Patent-Jury-Instructions>>. LG objects to Core's proposed language because it omits the critical fact that the written description requirement is judged as of the date of the original patent application.

<sup>38</sup> This language is drawn from the Court's denial of LG's §112 MSJ. Dkt. 532.

<sup>39</sup> LG objects to this instruction. It is not based on any model jury instruction language and it is legally incorrect: Inoperability under § 101 and lack of written description under § 112 are not co-extensive: a claim that is totally inoperable under § 101 will also, by definition, lack written description under § 112; but proof that a claim is operable in some circumstances is not legally relevant to whether that same claim is supported by a written description in the specification across its full breadth. As the Federal Circuit has explained, "suppose that an inventor created a particular fuel-efficient automobile engine and described the engine in such detail in the specification that a person of ordinary skill in the art would be able to build the engine. Although the specification would meet the requirements of section 112 with respect to a claim directed to that particular engine, it would not necessarily support a broad claim to every possible type of

1. the nature and scope of the patent claims;
2. the complexity, predictability, and maturity of the technology at issue;
3. the existing knowledge in the relevant field; and
4. the scope and content of the prior art.

The issue of written description is decided on a claim-by-claim basis, not as to the entire patent or groups of claims.

If you find that LG has proven by clear and convincing evidence that the '850 patent does not contain a complete written description for claim 21 of the '850 patent, then you must find that claim invalid.

**D. Invalidity: Enablement**

LG contends that claim 21 of the '850 patent is invalid for a lack of enablement. LG bears the burden of establishing lack of enablement by clear and convincing evidence.

A patent must disclose sufficient information to enable or teach persons of ordinary skill in the field of the invention, at the time the patent application was filed, to make and use the full scope of the claimed invention without undue experimentation. This requirement is known as the enablement requirement. If a patent claim is not enabled, it is invalid.

In considering whether a patent complies with the enablement requirement, you must keep in mind that patents are written for persons of ordinary skill in the field of the invention. Thus, a patent need not expressly state information that persons of ordinary skill would be likely to know or could obtain without undue experimentation. [CW Proposes: For instance, although

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fuel-efficient engine.” *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005) (affirming judgment of no written description under § 112 where the claim tried to cover two embodiments but the specification only described one of them); *see also, e.g., EMI Grp. North Am. v. Cypress Semiconductor*, 268 F.3d 1342, 1348–49 (Fed. Cir. 2001) (addressing only inoperability with respect to 35 U.S.C § 101).

claims may read on some inoperative embodiments, this does not necessarily invalidate the claim if the necessary information to limit the claims to operative embodiments is known to a person of ordinary skill in the art.]<sup>40 41</sup>

Factors that you may consider in determining whether persons of ordinary skill in the field of the invention would require undue experimentation to make and use the full scope of the claimed invention include:

1. the quantity of experimentation necessary and whether that experimentation involves only known or commonly used techniques. The question of undue experimentation is a matter of degree. Even extensive experimentation does not necessarily make the experiments unduly extensive where the experiments are routine, such as repetition of known or commonly used techniques. But permissible experimentation is not without bounds.
2. the amount of direction or guidance disclosed in the patent;
3. the presence or absence of working examples in the patent;
4. the nature of the invention;
5. the state of the prior art;

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<sup>40</sup> This language was quoted in the Court's denial of LG's § 112 MSJ. Dkt. 532.

<sup>41</sup> LG objects to this instruction. It is not based on any model jury instruction language and it is legally incorrect: Inoperability under § 101 and lack of enablement under § 112 are not co-extensive: a claim that is totally inoperable under § 101 will also, by definition, lack enablement under § 112; but proof that a claim is operable in some circumstances is not legally relevant to whether that same claim is enabled across its full breadth. As the Federal Circuit has held, § 112 requires "the inventor [to] enable one of skill in the art to make and use the full scope of the claimed invention." *CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1338 (Fed. Cir. 2003); *see also, e.g., AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1245 (Fed. Cir. 2003) (affirming judgment of no enablement under § 112 where "the specification does not enable a significant portion of the subject matter encompassed by the contested claims"); *EMI Grp. North Am. v. Cypress Semiconductor*, 268 F.3d 1342, 1348–49 (Fed. Cir. 2001) (addressing only inoperability with respect to 35 U.S.C § 101).

6. the relative skill of those in the art;
7. the predictability of the art; and
8. the breadth of the claims.

You, the jury, will determine if undue experimentation is required for a person of ordinary skill in the art to practice the full scope of claim 21 of the '850 patent. I will make the ultimate legal determination of whether or not that claim complies with the enablement requirement.

### **XIX. LEVEL OF ORDINARY SKILL IN THE ART**

Several times in my instructions I have referred to a person of ordinary skill in the field of the invention. It is up to you to decide the level of ordinary skill in the field of the invention. You should consider all of the evidence introduced at trial in making this decision, including:

1. the levels of education and experience of persons working in the field;
2. the types of problems encountered in the field;
3. prior art solutions to those problems;
4. rapidity with which innovations are made; and
5. the sophistication of the technology.

A "person of ordinary skill in the art" is a hypothetical person who is presumed to have known of all of the relevant prior art at the time of the claimed invention.

### **XX. PATENT INFRINGEMENT DAMAGES**

#### **A. Introduction**

If you find that LG has infringed any valid claim of Core Wireless's patents-in-suit, you must then consider what amount of damages to award to Core Wireless. I'll now instruct you about the measure of damages. By instructing you on damages, I'm not suggesting which party should win this case on any issue.

The damages you award must be adequate to compensate Core Wireless for any infringement you may find. You must not award Core Wireless more damages than are adequate to compensate for the infringement, nor should you include any additional amount for the purpose of punishing LG or setting an example. Core Wireless has the burden to establish the amount of its damages by a preponderance of the evidence. The patent owner is not entitled to damages that are remote or speculative.

Core Wireless seeks damages in the form of a FRAND royalty, which is further described below. The determination of a damage award is not an exact science, and the amount need not be proven with unerring precision. You may approximate, if necessary, the amount to which the patent owner is entitled.

Damages may not be determined by mere speculation or guess. It may be proper to award a damages amount if the evidence shows the extent of the damages as a matter of just and reasonable inference.

I'll give more detailed instructions regarding damages shortly. Note, however, that under the patent laws, if infringement of a patent not determined to be invalid is found, Core Wireless is entitled to recover no less than a reasonable royalty for each infringing sale or use of its inventions. A royalty is a payment to a patent holder in exchange for the right to make, use, sell, or import the claimed invention. A reasonable royalty is the amount of money to be paid for a license to make, use, or sell the invention that a willing patent owner and a willing prospective licensee would have agreed to immediately before the infringement began as the part of a hypothetical negotiation.

In considering this hypothetical negotiation, you should focus on what the expectations of the patent-holder and the infringer would have been had they entered into an agreement at that

time and had they acted reasonably in their negotiations. In determining this, you must assume that both parties believed the patent was valid and infringed and the patent-holder and infringer were willing to enter into an agreement.

The reasonable royalty you determine must be a FRAND royalty that would have resulted from this hypothetical negotiation and not simply a royalty either party would have preferred. Evidence of things that happened after infringement first began may be considered in evaluating the reasonable royalty only to the extent that the evidence aids in assessing what royalty would have resulted from a hypothetical negotiation.

### **B. Patent Damages - Burden of Proof**

Where the parties dispute a matter concerning damages for infringement, it is Core Wireless's burden to prove that it is more probable than not that Core Wireless's version is correct. Core Wireless must prove the amount of damages with reasonable certainty, but need not prove the amount of damages with mathematical precision. Core Wireless is not entitled to damages that are remote or speculative.

### **C. When Patent Infringement Damages Begin<sup>42</sup>**

[**Core Wireless Proposes:** Damages that Core Wireless may be awarded by you commence on the date that LG first infringed the patents.<sup>43</sup> That date is:

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<sup>42</sup> See, e.g., *Wine Ry. Appliance Co. v. Enter. Ry. Equip. Co.*, 297 U.S. 387, 396–97 (1936); *Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1219–20 (Fed. Cir. 2002); *Inline Connection Corp. v. AOL Time Warner Inc.*, 465 F. Supp. 2d 312, 317 n.12 (D. Del. 2006); *Tulip Computers Int'l B.V. v. Dell Computer Corp.*, No. CIV.A.00-981-KAJ, 2003 WL 1606081, at \*12–\*16 (D. Del. Feb. 4, 2003) report and recommendation adopted, No. CIV.A. 00-981-KAJ, 2003 WL 21011157 (D. Del. May 1, 2003); The Federal Circuit Bar Ass'n Model Patent Jury Inst. at § 6.8 (Feb. 2013); Model Patent Jury Instructions for the Northern District of California at § 5.8 (July 16, 2015)

<sup>43</sup> LG objects and notes that Core Wireless previously proposed the language “Damages that Core Wireless may be awarded by you commence on the date *that LG has both infringed and been notified of the patents.*” (Dkt. 491-8 at 37, emphasis added).

If the patents were granted before the infringing activity began, damages should be calculated as of the date you determine that the infringement began; or

If the patents were granted after the infringing activity began as determined by you, damages should be calculated as of the dates the patents issued.

In either event, damages cannot be calculated for any period extending more than six years before the date this action commenced.

- In this case, for the '850 patent, the damages should be calculated as of the date the United States Patent Office issued the patent: September 28, 2010
- In this case, for the '536 patent, the damages should be calculated as of six years before the date this action was commenced: September 26, 2008]

**[LG Proposes:** The amount of damages Core Wireless can recover for patent infringement is limited to those acts of infringement that occurred after LG received actual notice that it infringed. Actual notice means that the Core Wireless asserted to LG a specific charge of infringement of each of the patents by a specific accused product or device. In this case, that date is September 26, 2014.]

**[Core Wireless Proposes:**

**D. Georgia-Pacific Approach**

In determining the reasonable royalty, you should consider all the facts known and available to the parties at the time the infringement began. Some of the kinds of factors that you should consider in making your determination are:

1. The royalties received by the patentee for licensing of the patents-in-suit proving or tending to prove an established royalty;
2. The rates paid by the licensee for the use of other patents comparable to the patents-in-suit;

3. The nature and scope of the license as exclusive or non-exclusive or as restricted or non-restricted in terms of territory or with respect to the parties to whom the manufactured products may be sold;
6. The effect of selling the patented specialty in promoting sales of other products of the licensee, the existing value of the invention to the licensor as a generator of sales of his non-patented items, and the extent of such derivative or conveyed sales;
7. The duration of the patent and the term of the license;
8. The established profitability of the product made under patents and its commercial success;
9. Disregarding any necessity to use the patented invention due to any essentiality, the utility and advantages of the patented invention over the old modes or devices, if any, that had been used for achieving similar results;
10. The nature of the patented invention and the benefits to those who have used the invention;
11. The extent to which the infringer has made use of the invention and any evidence probative of the value of that use;
12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions;
13. The portion of the realizable profits that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer;

14. The opinion and testimony of qualified experts; and

15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon at the time the infringement began if both sides had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable to a prudent patentee who was willing to grant a license.<sup>44</sup>

No one factor is dispositive, Ladies and Gentlemen, and you can and you should consider the evidence that's been presented to you in this case on each of these factors.

You may also consider any other factors which in your minds would have increased or decreased the royalty the infringer would have been willing to pay and the patent owner would have been willing to accept, acting as normally prudent business people.]

**[LG Proposes (and proposes moving this section later in the instructions, to just before “Form of Royalty”):**

**E. Relevant Factors to Consider for a FRAND Royalty**

In deciding what amount is a FRAND royalty, you may consider any evidence of hold up or royalty stacking.

“Hold Up”<sup>4546</sup> refers to the ability of an owner of even just one standard-essential patent to demand more than the value of its patented technology from those who invest in implementing

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<sup>44</sup> *Ericsson, Inc. v. D-Link Sys.*, 773 F.3d 1201 (Fed. Cir. 2014).

<sup>45</sup> Core Wireless objects to the inclusion of this evidence under the Federal Circuit’s guidance in *Ericsson, Inc. v. D-Link Sys.*, 773 F.3d 1201, at 1234 (Fed. Cir. 2014). The court in *Ericsson*

the standard, and to attempt to extract licensing royalties that reflect the value of the standard itself. The threat of hold-up increases as a standard becomes popular. A FRAND royalty should not reflect any hold-up value.<sup>47</sup>

“Royalty stacking” refers to the total payment of royalties to many different holders of patents that have been declared standard-essential. A FRAND royalty should ensure that the totality of royalties associated with a standard are reasonable.<sup>48</sup>

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“emphasize[d] that the district court must consider the evidence on the record before it” regarding alleged “patent hold-up” and “royalty stacking.” *Id.* District courts should not issue instructions on either hold-up or royalty stacking unless the alleged infringer presents particularized evidence on each issue, “sufficient to warrant a jury instruction.”

<sup>46</sup> LG responds that under the law *Core Wireless* cites the propriety of instructions on hold up and stacking should be evaluated in light of the record evidence presented at trial.

<sup>47</sup> *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1031 (9th Cir. 2015) (“[O]nce a standard becomes widely adopted, SEP holders obtain substantial leverage over new product developers, who have little choice but to incorporate SEP technologies into their products. Using that standard-development leverage, the SEP holders are in a position to demand more for a license than the patented technology, had it not been adopted by the SSO, would be worth. The tactic of withholding a license unless and until a manufacturer agrees to pay an unduly high royalty rate for an SEP is referred to as “hold-up.”); *id.* at 1052 (“The very purpose of the RAND agreement is to promote adoption of a standard by decreasing the risk of hold-up.”); *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823-JLR, 2013 U.S. Dist. LEXIS 60233, at \*37-38, \*43 (W.D. Wash. Apr. 25, 2013) (“The ability of a holder of an SEP to demand more than the value of its patented technology and to attempt to capture the value of the standard itself is referred to as patent ‘hold-up.’... The threat of hold-up increases as the standard becomes more widely implemented and firms make sunk cost investments that cannot be recovered if they are forced to forego implementation of the standard or the standard is changed....[A] proper methodology used to determine a RAND royalty should therefore recognize and seek to mitigate the risk of patent hold-up that RAND commitments are intended to avoid.”).

<sup>48</sup> *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1031 (9th Cir. 2015) (“‘Royalty stacking’ refers to the risk that many holders of SEPs will engage in this [hold up] behavior, resulting in excessive royalty payments such that (1) the cumulative royalties paid for patents incorporated into a standard exceed the value of the feature implementing the standard, and (2) the aggregate royalties obtained for the various features of a product exceed the value of the product itself.”); *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823-JLR, 2013 U.S. Dist. LEXIS 60233, at \*40, \*43 (W.D. Wash. Apr. 25, 2013) (“The payment of excessive royalties to many different holders of SEPs is referred to as ‘royalty stacking.’... a proper methodology for determining a RAND royalty should address the risk of royalty stacking by considering the aggregate royalties that would apply if other SEP holders made royalty demands of the implementer.”).

Some of the other factors that you may consider in making your determination are:<sup>49</sup>

1. The royalties received by the patentee for licensing of the patents-in-suit proving or tending to prove an established royalty;
2. The rates paid by LG for the use of other patents comparable to the patents-in-suit;
3. The utility and advantages of the patented invention over the old modes or devices, if any, that had been used for achieving similar results, keeping in mind that if the patented invention is incorporated in the standard, it is used because it is essential, not necessarily because it is an improvement over the prior art;<sup>50</sup> and
4. The value to the accused products that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by LG.]

#### **F. FRAND Royalty: Generally**

I will provide you with additional instructions on how the FRAND commitment for the asserted patents affects your determination of a reasonable royalty.

A reasonable royalty must reflect that Core Wireless declared the asserted patents to be essential to cellular standards and committed to the European Telecommunications Standards Institute (“ETSI”) to license the patents on “fair, reasonable, and non-discriminatory” or FRAND terms. Because of this declaration of essentiality and FRAND commitment, I will refer at times in my instructions to “standard essential patents.” By referring to standard essential patents, I am

<sup>49</sup> *Ericsson v. D-Link*, 773 F.3d 1201, 1231 (Fed. Cir. 2014) (“In a case involving RAND-encumbered patents, many of the *Georgia-Pacific* factors simply are not relevant; many are even contrary to RAND principles.”).

<sup>50</sup> *Ericsson v. D-Link*, 773 F.3d 1201, 1231 (Fed. Cir. 2014) (“Several other *Georgia-Pacific* factors would at least need to be adjusted for RAND-encumbered patents—indeed, for SEP patents generally. For example, ...[f]actor 9—“utility and advantages of the patented invention over the old modes or devices,” J.A. 225—is also skewed for SEPs because the technology is used because it is essential, not necessarily because it is an improvement over the prior art.”).

not instructing you that the asserted patents are actually essential to any standard [CW Proposes: . Note that you are not being asked in this case to determine whether the Patents in Suit are in fact essential and the issue of essentiality is irrelevant to your finding as to damages. Core Wireless has agreed that the FRAND commitment applies to its damages regardless of essentiality.] [LG Proposes:—again, it is up to you to decide whether Core Wireless has proven the patents are standard essential and infringed.]<sup>51</sup>

Both Nokia, the prior owner of the patents, and Core Wireless submitted a written commitment to ETSI covering each of the patents-in-suit, which reads in part as follows:

IPR Licensing Declaration: To the extent that the IPRs [intellectual property rights] disclosed in the attached IPR Information Statement Annex are or become, and remain ESSENTIAL in respect of the ETSI Work Item, STANDARD and/or TECHNICAL SPECIFICATION identified in the attached IPR Information Statement Annex, [Core Wireless] and/or its AFFILIATES are (1) prepared to grant licenses under these IPRs on terms and conditions which are in accordance with Clause 6.1 of the ETSI IPR Policy (20 March 2013); and (2) will comply with Clause 6.1 of the ETSI IPR Policy.

If a patent owner gives a written undertaking under Clause 6.1 of the ETSI IPR Policy, as Core Wireless did for the asserted patents, it commits to “be prepared to grant irrevocable licenses on fair, reasonable and non-discriminatory terms and conditions.” You must make sure that any reasonable royalty determination takes into account Core Wireless’s FRAND obligations, as I have just read them to you. A reasonable royalty in this case cannot exceed the amounts permitted under Core Wireless’s FRAND obligations.

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<sup>51</sup> LG notes that Core Wireless agreed to this language in the previous pretrial order filing. (See Dkt. 491-8 at 42.)

**F. Apportionment [LG Proposes: and FRAND]**

[LG Proposes: The law requires that any damages awarded to Core Wireless correspond to the value of the alleged inventions, not to the value of features of LG's products that are not covered by Core Wireless's asserted patent claims. This is particularly true where the accused products have multiple features and multiple components, and when the patents are alleged to be standard-essential, as in this case.

Core Wireless bears the burden to establish the amounts attributable to the patented feature. That is, Core Wireless must give evidence tending to separate or apportion between the patented features and the unpatented features, and such evidence must be reliable and tangible and not conjectural or speculative.<sup>52</sup>

Accordingly, any FRAND royalty award must be based only on the incremental value that the alleged patented inventions add to LG's accused products.]<sup>53</sup>

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<sup>52</sup> See August 23, 2016 Mem. Op. and Order, Dkt. No. 547 in *Core Wireless Licensing S.a.r.l. v. LG Elecs., Inc.*, No. 2:14-cv-911-JRG, at 26-29.

<sup>53</sup> *Ericsson v. D-Link*, 773 F.3d 1201, 1232-33 (Fed. Cir. 2014) (“As with all patents, the royalty rate for SEPs must be apportioned to the value of the patented invention. ... When dealing with SEPs, there are two special apportionment issues that arise. First, the patented feature must be apportioned from all of the unpatented features reflected in the standard. Second, the patentee's royalty must be premised on the value of the patented feature, not any value added by the standard's adoption of the patented technology. These steps are necessary to ensure that the royalty award is based on the incremental value that the patented invention adds to the product, not any value added by the standardization of that technology. Just like modern electronic devices, technological standards include multiple technologies. We know that patents often claim only small portions of multi-component products and we have precedent which covers apportionment of damages in those situations. ... Similarly, SEPs can, and, often do, claim only limited aspects of the overall standard. ... Just as we apportion damages for a patent that covers a small part of a device, we must also apportion damages for SEPs that cover only a small part of a standard. In other words, a royalty award for a SEP must be apportioned to the value of the patented invention (or at least to the approximate value thereof), not the value of the standard as a whole. A jury must be instructed accordingly. ... Turning to the value of a patent's standardization, we conclude that Supreme Court precedent also requires apportionment of the value of the patented technology from the value of its standardization. In other words, the patent holder should only be compensated for the approximate incremental benefit derived from his

**[Core Wireless Proposes:** There are two special apportionment issues that arise in considering damages.

First, the patented feature must be apportioned from all of the other, unpatented features reflected in the accused product. Second, the patentee's royalty to be paid, if any, must be based on the value of the patented feature, excluding the value added by standardization, if any. ]<sup>54</sup>

**[LG Proposes:** To ensure that a FRAND royalty rate reflects the incremental value of the patented technology, you must consider the following two factors in setting a FRAND royalty rate:<sup>55</sup>

- The value of the patented feature must be apportioned or separated out from all of the other features reflected in the standard, and the value of the standard as a whole.
- The FRAND royalty must be premised on the value of the patented invention, not any value added by the standard's adoption of the patented technology.

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invention. This is particularly true for SEPs. When a technology is incorporated into a standard, it is typically chosen from among different options. Once incorporated and widely adopted, that technology is not always used because it is the best or the only option; it is used because its use is necessary to comply with the standard. In other words, widespread adoption of standard essential technology is not entirely indicative of the added usefulness of an innovation over the prior art. ... We merely hold that the royalty for SEPs should reflect the approximate value of that technological contribution, not the value of its widespread adoption due to standardization. Because SEP holders should only be compensated for the added benefit of their inventions, the jury must be told to differentiate the added benefit from any value the innovation gains because it has become standard essential. Although the jury, as the fact finder, should determine the appropriate value for that added benefit and may do so with some level of imprecision, we conclude that they must be told to consider the difference between the added value of the technological invention and the added value of that invention's standardization.”)

<sup>54</sup> LG notes that Core Wireless previously proposed the additional language, “These considerations are necessary to ensure that the royalty award is based on the incremental value that the patented invention adds to the product, not any value added by the standardization of that technology.” (See Dkt. 491-8 at 45).

<sup>55</sup> LG notes that Core Wireless agreed to this language in the previous pretrial order filing. (See Dkt. 491-8 at 45.)

These steps are necessary to ensure that the royalty award is based on any incremental value that the patented invention adds to the product, not the value added by the standardization of that technology. This is particularly true for standard essential patents. When a technology is incorporated into a standard, it is typically chosen from among different options. Once incorporated and widely adopted, that technology is not always used because it is the best or the only option; it is used because its use is necessary to comply with the standard.<sup>56</sup><sup>57</sup>

**[LG’s proposed “Relevant Factors to Consider for a FRAND Royalty,” shown above in section E starting on page 35, would go here]**

### **G. Calculating Royalties**

[Core Wireless Contends an instruction on this topic is unnecessary. If the Court is inclined to issue such an instruction, it should be as follows:] **[Core Wireless Proposes:** There are two ways to calculate a royalty. ]<sup>58</sup> One way to calculate a royalty is to determine a one-time lump sum payment that the infringer would have paid at the time of the hypothetical negotiation for a license covering all sales of the licensed product **[LG Proposes:, both past and future. ]** **[Core Wireless Proposes:** up until the first day of trial, September 12, 2016.]<sup>59</sup> Another way to calculate a royalty is to determine an ongoing or “running” royalty where a royalty rate is applied

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<sup>56</sup> *Ericsson v. D-Link*, 773 F.3d 1201, 1232-33 (Fed. Cir. 2014).

<sup>57</sup> LG notes that Core Wireless has deleted its own previous proposed language for these two factors relevant to a FRAND rate:

**Core Wireless Proposes:**

1. Any royalty for the patented technology must be apportioned from the value of the standard as a whole; and
2. The FRAND royalty rate must be based on the value of the invention, not any value added by the standardization of that invention.

(Dkt. 491-8 at 45.)

<sup>58</sup> LG objects to the statement “There are two ways to calculate a royalty” as misleading and an inaccurate statement of the law.

<sup>59</sup> LG objects to Core Wireless’s proposal as misleading and an inaccurate statement of the law as to lump sum royalties.

against [Core Wireless Proposes: future]<sup>60</sup> sales as they occur. When a running royalty is paid, the patent owner collects on-going payments over a period of time. It is up to you, based on the evidence, to decide what type of royalty (if any) is appropriate in this case.

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With those instructions, Ladies and Gentlemen, you will now hear closing arguments from counsel from each of the parties.

#### **XXI. REMARKS FOLLOWING CLOSING ARGUMENTS (AGREED)**

I would now like to provide you with a few final instructions before you begin your deliberations. You must perform your duties as jurors without bias or prejudice as to any party. The law does not permit you to be controlled by sympathy, prejudice, or public opinion. All parties expect that you will carefully and impartially consider all the evidence, follow the law as I have given it to you, and reach a just verdict, regardless of the consequences.

Answer each question from the facts as you find them. Do not decide who you think should win and then answer the questions accordingly. Your answers and your verdict must be unanimous.

You should consider and decide this case as a dispute between persons of equal standing in the community, of equal worth, and holding the same or similar stations in life. This is true in patent cases between corporations, partnerships, or individuals. A patent owner is entitled to protect its patent rights under the United States Constitution. This includes bringing suit in a United States District Court for money damages for infringement. The law recognizes no

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<sup>60</sup> LG objects to Core Wireless's proposal as misleading and an inaccurate statement of the law as to running royalties.

distinction among types of parties. All corporations, partnerships and other organizations stand equal before the law, regardless of size or who owns them, and are to be treated as equals.

When you retire to the jury room to deliberate on your verdict, you will each have a copy of this charge to take with you. If you desire to review any of the exhibits which the Court has admitted into evidence, you should advise me by a written note delivered to the Court Security Officer, and I will send that exhibit or exhibits to you. Once you retire, you should select your Foreperson and conduct your deliberations. If you recess during your deliberations, follow all of the instructions that the Court has given you about your conduct during the trial. After you have reached your verdict, your Foreperson is to fill in on the verdict form which reflects your answers to the questions. Do not reveal your answers until such time as you are discharged, unless otherwise directed by me. You must never disclose to anyone, not even to me, your numerical division on any question.

Any notes that you have taken during this trial are only aids to memory. If your memory should differ from your notes, then you should rely on your memory and not on the notes. The notes are not evidence. A juror who has not taken notes should rely on his or her independent recollection of the evidence and should not be unduly influenced by the notes of other jurors. Notes are not entitled to any greater weight than the recollection or impression of each juror about the testimony.

If you want to communicate with me at any time, please give a written message or question to the Court Security Officer, who will bring it to me. I will then respond as promptly as possible either in writing or by having you brought into the courtroom so that I can address you orally. I will always first disclose to the attorneys your question and my response before I answer your question.

After you have reached a verdict and I have discharged you, you are not required to talk with anyone about the case unless the Court orders otherwise.

You may now retire to the jury room to deliberate.