

**United States Court of Appeals  
for the Federal Circuit**

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**CORE WIRELESS LICENSING S.A.R.L.,**  
*Plaintiff-Appellee*

v.

**LG ELECTRONICS, INC., LG ELECTRONICS  
MOBILECOMM U.S.A., INC.,**  
*Defendants-Appellants*

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2016-2684, 2017-1922

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Appeals from the United States District Court for the Eastern District of Texas in Nos. 2:14-cv-00911-JRG-RSP, 2:14-cv-00912-JRG-SP, Judge J. Rodney Gilstrap.

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Decided: January 25, 2018

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BENJAMIN T. WANG, Russ August & Kabat, Los Angeles, CA, argued for plaintiff-appellee. Also represented by MARC AARON FENSTER, ADAM S. HOFFMAN, REZA MIRZAIIE; KAYVAN B. NOROOZI, Noroozi PC, Santa Monica, CA.

CARTER GLASGOW PHILLIPS, Sidley Austin LLP, Washington, DC, argued for defendants-appellants. Also represented by DANIEL HAY, RYAN C. MORRIS, ANNA MAYERGOYZ WEINBERG; PETER H. KANG, Palo Alto, CA; JAMES SUH, LG Electronics Inc., Seoul, Korea.

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Before MOORE, O'MALLEY, and WALLACH, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* MOORE.

Opinion concurring-in-part and dissenting-in-part filed by  
*Circuit Judge* WALLACH.

MOORE, *Circuit Judge*.

LG Electronics, Inc. (“LG”) appeals the United States District Court for the Eastern District of Texas’ decisions (1) denying summary judgment that claims 8 and 9 of U.S. Patent No. 8,713,476 (“476 patent”) and claims 11 and 13 of U.S. Patent No. 8,434,020 (“020 patent”) are directed to patent ineligible subject matter under 35 U.S.C. § 101; (2) denying judgment as matter of law that U.S. Patent No. 6,415,164 (“Blanchard”) anticipates the asserted claims under 35 U.S.C. § 102; and (3) denying judgment as a matter of law that the claims are not infringed. For the reasons discussed below, we affirm.

#### BACKGROUND

The ’476 and ’020 patents disclose improved display interfaces, particularly for electronic devices with small screens like mobile telephones. ’020 patent<sup>1</sup> at 1:14–24. The improved interfaces allow a user to more quickly access desired data stored in, and functions of applications included in, the electronic devices. *Id.* at 2:20–44. An application summary window displays “a limited list of common functions and commonly accessed stored data which itself can be reached directly from the main menu listing some or all applications.” *Id.* at 2:55–59. The application summary window can be reached in two steps: “first, launch a main view which shows various applica-

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<sup>1</sup> The ’476 and ’020 patent specifications are effectively identical. Unless otherwise specified, citations to the ’020 patent refer to disclosures in both patents.

tions; then, launch the appropriate summary window for the application of interest.” *Id.* at 2:61–64. The patents explain that the disclosed application summary window “is far faster and easier than conventional navigation approaches,” particularly for devices with small screens. *Id.* at 2:64–65.

Core Wireless Licensing S.A.R.L. (“Core Wireless”) sued LG, alleging LG infringed dependent claims 8 and 9 of the ’476 patent and dependent claims 11 and 13 of the ’020 patent. Claims 8 and 9 of the ’476 patent depend from claim 1, which recites (emphases added):

1. A computing device comprising a display screen, the computing device being configured to display on the screen a menu listing one or more applications, and additionally being configured to display on the screen an application summary that can be *reached directly* from the menu, wherein the application summary displays a limited list of data offered within the one or more applications, each of the data in the list being selectable to launch the respective application and enable the selected data to be seen within the respective application, and wherein the application summary is displayed while the one or more applications are in an *un-launched state*.

Claims 11 and 13 of the ’020 patent depend from claim 1, which recites (emphases added):

1. A computing device comprising a display screen, the computing device being configured to display on the screen a main menu listing at least a first application, and additionally being configured to display on the screen an application summary window that can be *reached directly* from the main menu, wherein the application summary window displays a limited list of at least one function offered within the first application, each func-

tion in the list being selectable to launch the first application and initiate the selected function, and wherein the application summary window is displayed while the application is in an *un-launched state*.

LG moved for summary judgment of invalidity of the asserted claims under 35 U.S.C. § 101, which the court denied. The district court found claim 1 of the '476 patent representative for the purposes of evaluating patent eligibility. It held that the claims are not directed to an abstract idea because, even crediting LG's characterization of the claims as directed to "displaying an application summary window while the application is in an un-launched state," the concepts of "application," "summary window," and "unlaunched state" are specific to devices like computers and cell phones. J.A. 9561. The court explained "LG identifie[d] no analog to these concepts outside the context of such devices." *Id.* It further noted even "if claim 1 were directed to an abstract idea, it would still be patent eligible at least because it passes the machine-or-transformation test." J.A. 9562.

The case proceeded to trial, and the district court, after hearing initial testimony, determined "an *O2 Micro* situation" existed with respect to the claim terms "un-launched state" and "reached directly," and afforded both sides an opportunity to argue constructions of these terms. J.A. 10277–78; *see O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) ("When the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it."). The district court ruled that "un-launched state" means "not displayed" and "reached directly" means "reached without an intervening step."

The jury found all asserted claims infringed and not invalid. LG moved for judgment as matter of law of noninfringement, arguing in part that a correct construc-

tion of “un-launched state” means “not running” and that under this construction, no reasonable jury could have found infringement. LG also argued that the “reached directly” limitation required user interaction with the main menu, and no reasonable jury could have found infringement under such a construction. The district court declined to revisit claim construction, noting LG did not preserve its claim construction arguments in a Rule 50(a) motion. The district court further denied LG’s motion for judgment as a matter of law of noninfringement based on the court’s adopted constructions because evidence was presented at trial from which the jury reasonably could have found that the application summary window in the accused devices could be reached directly from the main menu.

The district court also denied LG’s motion for judgment of a matter of law of anticipation by Blanchard. Although Core Wireless elected not to call an expert to testify in rebuttal to LG’s validity expert, the district court noted that the jury was not required to credit LG’s expert testimony and concluded “LG failed to overcome the presumption of validity accorded to the ’476 and ’020 Patents by clear and convincing evidence.” J.A. 18.

LG timely appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).<sup>2</sup>

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<sup>2</sup> Concern remains regarding whether we have jurisdiction to review the appeal of validity and infringement determinations while damages remains unresolved and will be the subject of a future jury trial. This is particularly true where, as here, no judgment under Rule 54(b) or otherwise has ever been entered. This panel, however, is bound by the determination in *Robert Bosch, LLC v. Pylon Manufacturing Corp.*, 719 F.3d 1305, 1320 (Fed. Cir. 2013) (en banc) (holding that we retain jurisdic-

## DISCUSSION

For patent appeals, we apply the law of the regional circuit, here the Fifth Circuit, to issues not specific to patent law. *LaserDynamics, Inc. v. Quanta Comput., Inc.*, 694 F.3d 51, 66 (Fed. Cir. 2012). The Fifth Circuit reviews motions for summary judgment and motions for judgment as matter of law de novo. *Id.* The Fifth Circuit views all evidence in a light most favorable to the verdict and will reverse a jury’s verdict only if the evidence points so overwhelmingly in favor of one party that reasonable jurors could not arrive at any contrary conclusion. *Bagby Elevator Co. v. Schindler Elevator Corp.*, 609 F.3d 768, 773 (5th Cir. 2010). The ultimate determination of patent eligibility under 35 U.S.C. § 101 is an issue of law we review de novo. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1338 (Fed. Cir. 2017). Anticipation and infringement are both questions of fact reviewed for substantial evidence when tried to a jury. *Wi-Lan, Inc. v. Apple Inc.*, 811 F.3d 455, 461 (Fed. Cir. 2016).

### I. Patent Eligibility

Anyone who “invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof” may obtain a patent. 35 U.S.C. § 101. Because patent protection does not extend to claims that monopolize the “building blocks of human ingenuity,” claims directed to laws of nature, natural phenomena, and abstract ideas are not patent eligible. *Alice Corp. Pty. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014). The Supreme Court instructs courts to distinguish between claims that claim patent ineligible

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tion “to entertain appeals from patent infringement liability determinations when a trial on damages has not yet occurred”).

subject matter and those that “integrate the building blocks into something more.” *Id.* First, we “determine whether the claims at issue are directed to a patent-ineligible concept.” *Id.* at 2355. If so, we “examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Id.* at 2357 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72, 79 (2012)). If the claims are directed to a patent-eligible concept, the claims satisfy § 101 and we need not proceed to the second step. *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1262 (Fed. Cir. 2017).

At step one, we must “articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful.” *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1347 (Fed. Cir. 2017). Although there is “difficulty inherent in delineating the contours of an abstract idea,” *Visual Memory*, 867 F.3d at 1259, we must be mindful that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. We also ask whether the claims are directed to a specific improvement in the capabilities of computing devices, or, instead, “a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

We previously have held claims focused on various improvements of systems directed to patent eligible subject matter under § 101. For example, in *Enfish*, we held claims reciting a self-referential table for a computer database eligible under step one because the claims were directed to a particular improvement in the computer’s functionality. 822 F.3d at 1336. That the invention ran on a general-purpose computer did not doom the claims because unlike claims that merely “add[] conventional

computer components to well-known business practices,” the claimed self-referential table was “a specific type of data structure designed to improve the way a computer stores and retrieves data in memory.” *Id.* at 1338–39. In *Thales*, we held claims reciting an improved method of utilizing inertial sensors to determine position and orientation of an object on a moving platform not directed to an abstract idea or law of nature. 850 F.3d at 1349. We noted that even though the system used conventional sensors and a mathematical equation, the claims specified a particular configuration of the sensors and a particular method of utilizing the raw data that eliminated many of the complications inherent in conventional methods. *Id.* at 1348–49. In *Visual Memory*, we held claims directed to an improved computer memory system with programmable operational characteristics defined by the processor directed to patent-eligible subject matter. 867 F.3d at 1259. The claimed invention provided flexibility that prior art processors did not possess, and obviated the need to design a separate memory system for each type of processor. *Id.* And most recently, in *Finjan, Inc. v. Blue Coat Systems, Inc.*, we held claims directed to a behavior-based virus scanning method directed to patent eligible subject matter because they “employ[] a new kind of file that enables a computer security system to do things it could not do before,” including “accumulat[ing] and utiliz[ing] newly available, behavior-based information about potential threats.” 2018 WL 341882 (Fed. Cir. Jan. 10, 2018). The claimed behavior-based scans, in contrast to prior art systems which searched for matching code, enabled more “nuanced virus filtering” in analyzing whether “a downloadable’s code . . . performs potentially dangerous or unwanted operations.” *Id.* at 6–7. We held the claims “therefore directed to a non-abstract improvement in functionality, rather than the abstract idea of computer security writ large.” *Id.* at 8.

The asserted claims in this case are directed to an improved user interface for computing devices, not to the abstract idea of an index, as argued by LG on appeal.<sup>3</sup> Although the generic idea of summarizing information certainly existed prior to the invention, these claims are directed to a particular manner of summarizing and presenting information in electronic devices. Claim 1 of the '476 patent requires “an application summary that can be reached directly from the menu,” specifying a particular manner by which the summary window must be accessed. The claim further requires the application summary window list a limited set of data, “each of the data in the list being selectable to launch the respective application and enable the selected data to be seen within the respective application.” This claim limitation restrains the type of data that can be displayed in the summary window. Finally, the claim recites that the summary window “is displayed while the one or more applications are in an un-launched state,” a requirement that the device applications exist in a particular state. These limitations disclose a specific manner of displaying a limited set of information to the user, rather than using conventional user interface methods to display a generic index on a computer. Like the improved systems claimed in *Enfish*, *Thales*, *Visual Memory*, and *Finjan*, these claims recite a specific improvement over prior systems, resulting in an improved user interface for electronic devices.

The specification confirms that these claims disclose an improved user interface for electronic devices, particu-

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<sup>3</sup> This articulation of the purported abstract idea was advanced for the first time on appeal. Because we do not find this theory or the theory offered below to be well-taken, we do not decide whether the argument was waived, as Core Wireless argues.

larly those with small screens. It teaches that the prior art interfaces had many deficits relating to the efficient functioning of the computer, requiring a user “to scroll around and switch views many times to find the right data/functionality.” ’020 patent at 1:47–49. Because small screens “tend to need data and functionality divided into many layers or views,” *id.* at 1:29–30, prior art interfaces required users to drill down through many layers to get to desired data or functionality. *Id.* at 1:29–37. That process could “seem slow, complex and difficult to learn, particularly to novice users.” *Id.* at 1:45–46.

The disclosed invention improves the efficiency of using the electronic device by bringing together “a limited list of common functions and commonly accessed stored data,” which can be accessed directly from the main menu. *Id.* at 2:55–59. Displaying selected data or functions of interest in the summary window allows the user to see the most relevant data or functions “without actually opening the application up.” *Id.* at 3:53–55. The speed of a user’s navigation through various views and windows can be improved because it “saves the user from navigating to the required application, opening it up, and then navigating within that application to enable the data of interest to be seen or a function of interest to be activated.” *Id.* at 2:35–39. Rather than paging through multiple screens of options, “only three steps may be needed from start up to reaching the required data/functionality.” *Id.* at 3:2–3. This language clearly indicates that the claims are directed to an improvement in the functioning of computers, particularly those with small screens.

Because we hold that the asserted claims are not directed to an abstract idea, we do not proceed to the second step of the inquiry. The claims are patent eligible under § 101.

## II. Anticipation

The Blanchard reference teaches a display screen for mobile phones that “provides an arrangement for dynamically varying how space on a small display is allocated for presentation of various types of user information.” J.A. 13097 at 1:53–57. It discloses hierarchical menu screens displaying a series of selectable sub-level menu choices through which a user can cycle. The display changes dynamically as the user makes selections; for example, selecting a function, such as “phone book,” will display options related to that function, such as “add entry.”

LG argues it established by clear and convincing evidence that Blanchard discloses each element of the asserted claims. It first submits that Core Wireless based its arguments distinguishing the asserted claims from Blanchard during closing argument and post-trial briefing on elements not recited by the asserted claims. It further submits that, because it presented a prima facie case of anticipation and Core Wireless failed to present any affirmative evidence in rebuttal, it is entitled to judgment as a matter of law that Blanchard anticipates the asserted claims. We disagree.

A patent is presumed valid, and the burden of establishing invalidity of a claim rests on the party asserting invalidity by clear and convincing evidence. 35 U.S.C. § 282; *Microsoft Corp. v. i4i Ltd. P’ship*, 564 U.S. 91, 95 (2011). An alleged infringer asserting a defense of invalidity also has “the initial burden of going forward with evidence to support its invalidity allegation.” *Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1376 (Fed. Cir. 2009). Once that evidence has been presented, the “burden of going forward shifts to the patentee to present contrary evidence and argument.” *Id.* at 1376–77. Ultimately, however, the outcome of an alleged infringer’s invalidity defense at trial depends on whether the alleged

infringer “has carried its burden of persuasion to prove by clear and convincing evidence that the patent is invalid.” *Id.* at 1377. Because the burden rests with the alleged infringer to present clear and convincing evidence supporting a finding of invalidity, granting judgment as a matter of law for the party carrying the burden of proof is generally “reserved for extreme cases,” such as when the opposing party’s witness makes a key admission. 9B Fed. Prac. & Proc. Civ. § 2535 (3d ed.); see *Grey v. First Nat’l Bank in Dall.*, 393 F.2d 371, 380 (5th Cir. 1968) (“[W]hen the party moving for a directed verdict has such a burden, the evidence to support the granting of the motion must be so one-sided as to be of over-whelming effect.”).

This is not one such extreme case. While LG presented the testimony of Dr. Rhyne, the only expert who testified regarding anticipation, Core Wireless cross-examined Dr. Rhyne, illuminating for the jury reasons why Dr. Rhyne’s opinion was incorrect. For example, Dr. Rhyne testified that Blanchard discloses the “limited list” of data and functions recited in the asserted claims because Blanchard Figure 3 displays only three of the five functions of the phone book application. But on cross-examination, when asked if all five functions were “available through this menu,” Dr. Rhyne admitted that all five functions of the phone book application were available through Blanchard’s disclosed menus: “You can reach all of them—you can bring them all to the face of the screen, if that’s what you mean.” J.A. 10741. Viewing the evidence in the light most favorable to the verdict, we cannot say that this is a case in which the evidence points so strongly and overwhelming in favor of LG that reasonable jurors could not arrive at any contrary conclusion. A reasonable jury could have heard the cross-examination of Dr. Rhyne and concluded Blanchard did not disclose the “limited list” limitation in the claims because a user could access the additional functions in Blanchard by keying down within the summary display window. Core Wireless

had the right to choose to use its limited trial clock for other purposes where it believed—perhaps at its own risk—that LG’s evidence had been adequately impeached. And the jury was entitled to evaluate Dr. Rhyne’s testimony and determine whether LG clearly and convincingly established that Blanchard anticipates the claims.

The district court, in denying LG’s motion for judgment as a matter of law, did not hold that the presumption of validity “saved” the claims in the face of unrebutted evidence. The court merely made the unremarkable observation that the jury was not required “to give full credit and acceptance to the testimony of Dr. Rhyne.” J.A. 17. We agree with the district court and affirm its denial of LG’s motion for judgment as a matter of law of anticipation.

### III. Infringement

LG presents two noninfringement arguments on appeal. First, LG argues the correct construction of “un-launched state” is “not running,” rather than “not displayed” as the district court held, and the accused devices do not infringe under its proposed construction.<sup>4</sup> Second, LG argues that no reasonable jury could find that the accused devices satisfy the “reached directly from the [main] menu” limitations in the claims because the accused application summary window is reached from the status bar, which is not part of the menu. We reject both arguments.

“[T]he ultimate issue of the proper construction of a claim should be treated as a question of law,” which we review de novo. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*,

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<sup>4</sup> On appeal, LG does not dispute that under the court’s construction of “un-launched state,” substantial evidence supports the jury’s verdict that the accused devices meet this limitation.

135 S. Ct. 831, 838 (2015). Any subsidiary factual findings related to claim construction are reviewed under the clearly erroneous standard. *Id.* In construing the claims, we consider “the words of the claims themselves, the specification, the prosecution history, and if necessary, any relevant extrinsic evidence.” *Advanced Steel Recovery, LLC v. X-Body Equip., Inc.*, 808 F.3d 1313, 1317 (Fed. Cir. 2015). “[W]hen the district court reviews only evidence intrinsic to the patent (the patent claims and specifications, along with the patent’s prosecution history), the judge’s determination will amount solely to a determination of law.” *Teva Pharm. USA, Inc.*, 135 S. Ct. at 841.

First, we consider the construction of “un-launched state.” While this is a close case for which the intrinsic evidence could plausibly be read to support either party, we see no error in the district court’s construction of “un-launched state” to mean “not displayed.” Such a construction encompasses both applications that are not running at all and applications that are running, at least to some extent, in the background of the electronic device. *See* J.A. 10283 (Core Wireless’ expert testifying that an un-launched application is “either not executing code or not visible to the user”).

The stated focus of the invention is to “allow the user to navigate quickly and efficiently to access data and activate a desired function” on devices with small screens. ’020 patent at 1:26–29. The invention identifies as problematic the conventional user interfaces in which “a user may need to scroll around and switch views many times to find the right data/functionality.” *Id.* at 1:47–49. For instance, the specification does not identify the memory drain that running applications may have on the system as a problem it aims to solve—it only concerns itself with maximizing the benefit of the “common functions and commonly accessed data” actually displayed to the user. *Id.* at 2:26–30; *see id.* at 4:36–39 (“The mobile telephone

may be able to learn what functionality and/or stored data types are most likely to be of interest to a given user and which should therefore be included in a summary view to any given user.”).

The terms “display” and “launch” are used throughout the specification to convey that a particular view is displayed to the user. The specification states the following when describing the advantages in user navigation achieved by the invention:

[A] user can get to the summary window in just two steps—first, *launch a main view* which shows various applications; then, *launch the appropriate summary window* for the application of interest. This is far faster and easier than conventional navigation approaches. *Once the summary window is launched, core data/functionality is displayed* and can be accessed in more detail can typically be reached simply by selecting that data/functionality.

*Id.* at 2:59–3:2 (emphases added). In this passage, “launch” is used to describe what is displayed to the user when they select various menu options, not to indicate that an application is running.

This understanding is confirmed by the patents’ use of the word “running.” While the specification uses the term “display” throughout, it only uses the term “running” (or any modification of the term) one time: “there is a computer program which when running on a computing device (such as a mobile telephone), enables the device to operate in accordance with the above aspects of the invention. The program may be an operating system.” *Id.* at 2:40–44. Therefore, when the patent teaches that a user “launch[es] a main view” or “launch[es] the appropriate summary window,” the computer program or operating system implementing the summary program is already running. *Id.* at 2:59–3:2. Similarly, each patent only has

one independent claim which uses the term “running,” and it is used to describe the overall “computer program product” that implements the claimed functionality, not a device application. ’020 patent at 6:20–32 (claim 16); ’476 patent at 6:30–43 (claim 11). These claims further recite an application “in an unlaunched state.” If the patentee intended “unlaunched” to mean “not running,” it knew how to express as much.

Figure 3, which is identical for both patents, further confirms this construction of “un-launched state.” In Figure 3, the summary window indicates that under the “Messages” application there are “3 unread emails,” “2 new SMS” messages, and “1 Chat *ongoing*.” ’020 patent at Fig. 3 (emphasis added). The use of the word “ongoing” (as opposed to a word like “received”) indicates that, in at least some embodiments of the invention, at least some subset of processes of the Messages application are already running. The specification confirms that the application summary window reflects information that is something more than mere notifications from an application: “App Snapshots are not intended to replace notifications, but to complement them by providing non-intrusive reminders for the user, as well as rapid shortcuts to key application functionality.” *Id.* at 4:32–35.

The specification also describes a preferred embodiment in which “the constituency of the App Snapshot may *vary with the environment* in which the mobile telephone finds itself.” *Id.* at 4:47–49 (emphasis added). It explains “if the telephone is Bluetooth enabled, then there may be a Bluetooth application which has associated with it a summary window which lists the other Bluetooth devices in the vicinity.” *Id.* at 4:49–52. Moreover, claim 6 of the ’020 patent and claim 5 of the ’476 patent both require that the data or functionality displayed “varies with the environment of the device.” LG has not articulated how an application with data in the application summary window that *varies* as the location of the device changes

can operate without having the application “running” in some manner. While the full Bluetooth application may not be “running,” at least some subset of that application’s processes must be running in order to update the available devices in the application summary window.

The Bluetooth embodiment and the Messages embodiment displayed in Figure 3 are consistent with Core Wireless’ argument during the *O2 Micro* hearing that a launched application is executing code *and* visible to the user. An unlaunched application, therefore, is “*either* not executing code *or* not visible to the user.” J.A. 10283 (emphases added). The specification does not teach that the application summary window performs limited processes on behalf of the unlaunched applications. LG’s proposed construction of “un-launched” as “not running” would impermissibly read these preferred embodiments out of the claims.

LG argues that the specification uses “launch” and “display” to express different ideas. For example, the specification explains: “The App Snapshot can therefore *display* data from an application and functions of that application *without actually opening the application up*: only once a user has selected an item in the App Snapshot associated with a given application does that application have to be opened.” ’020 patent at 3:53–58 (emphases added). This passage does not contradict the district court’s construction. The passage does not state that the application summary window displays the *application* without actually opening the application up. The specification’s statement that the App Snapshot “display[s]” *data* without the selected application being “opened” does not, without more, indicate that a previously unopened application was not running at least some subset of processes. Similarly, the dissent’s interpretation assumes that displaying an application necessarily requires display of particular data. Wallach Op. at 3–5. The specification demonstrates this not to be true. When a user

selects data from the summary window, e.g., a commonly emailed contact, “the display then changes to a new email form seeded with [the] email address and all the user need do is input some body text and hit a ‘Do It’ button.” ’020 patent at 5:5–19. This is different from displaying an email application without this pre-loaded data, which does not “enable the selected data to be seen within the respective application.” ’476 patent claim 1.

The patentee did not clearly and unmistakably disclaim or limit the construction of “un-launched state” during prosecution, as LG argues. The doctrine of prosecution disclaimer precludes patentees from recapturing the full scope of a claim term only when the patentee clearly and unmistakably disavows a certain meaning in order to obtain the patent. *Mass. Inst. of Tech. v. Shire Pharm., Inc.*, 839 F.3d 1111, 1119 (Fed. Cir. 2016). When the alleged disclaimer is ambiguous or amenable to multiple reasonable interpretations, we decline to find prosecution disclaimer. *Id.*

The patentee’s statements during prosecution do not amount to a clear and unmistakable disclaimer restricting the meaning of “un-launched state” only to those applications that are not running any processes. During prosecution, the patentee distinguished the claims from prior art U.S. Patent No. 6,781,611 (“Richard”). Richard teaches a method “for switching between multiple open windows in multiple applications on a computer desktop.” J.A. 14461 at 1:38–40. The examiner pointed to Richard Figure 6, in which “the user has two applications, AppA and AppB . . . open on a desktop,” the top window being AppA. J.A. 14459, 14462 at 3:20–26. A plurality of windows are open within AppB, and when the user clicks and holds the arrow on the application button for AppB on the taskbar, a pop-up menu appears, displaying the three open windows within AppB. In distinguishing the invention from Richard, the patentee stated that the main menu of Richard is “a menu of *open* windows within a

single application, i.e., a launched application. It follows from the fact the windows are open within the application that the application must be running and therefore has been launched.” J.A. 12764 (emphases in original). This statement is consistent with the district court’s construction. Both AppA and AppB in Richard Figure 6 are displayed to the user. While AppA takes up most of the display area in this figure, AppB is also displayed to the user in the form of the application button on the taskbar. Indeed, Richard specifically teaches that the arrow on the application button for AppB “serves as a *visual indicator* that there are a plurality of windows open in AppB.” J.A. 14462 at 3:35–37 (emphasis added). Core Wireless admits that an application that is displayed must be running. Oral Arg. at 20:32–40. Because AppB in Richard Figure 6 is displayed and running, the patentee’s statement during prosecution that AppB must be “launched” is fully consistent with the construction that “un-launched state” means “not displayed.”

Because the claim language, specification, and prosecution history all support the district court’s construction, we agree with the district court that the correct construction of “un-launched state” is “not displayed.”

Second, substantial evidence supports the jury’s verdict of infringement based on the “reached directly from the [main] menu” claim limitation. LG argues no reasonable jury could find the accused devices satisfy this limitation because the evidence at trial established that the status bar was distinct from a “main menu.” We do not agree.

There is no dispute on appeal how the accused devices work. The devices have a primary home screen display, comprising a series of icons along the bottom of the display, corresponding to applications like Gmail and Phone. The entire home screen display is the accused “main menu.” Along the top of the home screen display, a status

bar displays the time, battery status, signal strength, and other data. The accused application summary window is the LG devices' notification shade, which the user accesses by swiping down from the status bar.

The jury heard conflicting evidence regarding whether the status bar is part of the accused "home screen." Dr. Rhyne testified that the status bar is "not part of the home screen" because the home screen is the part of the screen between the status bar at the top and the navigation bar at the bottom of the display. J.A. 10603–04. He further testified that the user "can open [the notification shade] up in almost any application," not just the main home screen view. J.A. 10604–05. Core Wireless' infringement expert agreed that a user can reach the notification shade from the status bar while any application is displayed in the central view. Core Wireless presented evidence, however, that the status bar is part of the home screen. Core Wireless' expert, Dr. Zeger, acknowledged that when an application is open and displayed, the user does not reach the notification shade directly from the main menu "because there was an intervening step" of opening up the application from the main menu. J.A. 10315. But he testified that when the main menu is displayed and the user pulls down the notification shade, the user reaches the accused application summary window directly from the main menu. Core Wireless also presented LG's user manual to the jury, which expressly identifies the status bar as part of the home screen.

The parties' dispute boils down to whether the status bar is part of the accused "home screen." This is a fact question that we presume the jury resolved in favor of Core Wireless, and substantial evidence supports the jury's finding. In the LG user manual, the status bar is the first section of the view identified as the home screen. The jury was also entitled to credit Dr. Zeger's testimony on this issue. Indeed, Dr. Rhyne admitted that if the status bar is part of the home screen, the user can reach

the accused application summary window directly from the main menu. We conclude that substantial evidence supports the jury's finding of infringement.

#### CONCLUSION

For the foregoing reasons, we affirm the district court's denial of summary judgment that the claims are ineligible under 35 U.S.C. § 101. We also affirm the district court's denial of judgment as a matter of law that the claims are anticipated by Blanchard and the claims are not infringed.

**AFFIRMED**

# United States Court of Appeals for the Federal Circuit

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**CORE WIRELESS LICENSING S.A.R.L.,**  
*Plaintiff-Appellee*

v.

**LG ELECTRONICS, INC., LG ELECTRONICS  
MOBILECOMM U.S.A., INC.,**  
*Defendants-Appellants*

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2016-2684, 2017-1922

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Appeals from the United States District Court for the Eastern District of Texas in Nos. 2:14-cv-00911-JRG-RSP, 2:14-cv-00912-JRG-RSP, Judge J. Rodney Gilstrap.

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WALLACH, *Circuit Judge*, concurring-in-part and dissenting-in-part.

I agree with the majority that the U.S. District Court for the Eastern District of Texas (“District Court”) did not err either in determining that claims 11 and 13 of U.S. Patent No. 8,434,020 (“the ’020 patent”) and claims 8–9 of U.S. Patent No. 8,713,476 (“the ’476 patent”) (collectively, the “Asserted Claims”) (together, the “Patents-in-Suit”) are patent eligible or in construing the “reached directly” claim limitation for purposes of its infringement and anticipation analyses. *See Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, No. 2:14-cv-911-JRG, 2016 WL 4440255, at \*1 (E.D. Tex. Aug. 23, 2016) (ruling on anticipation and infringement); *Core Wireless Licensing*

*S.A.R.L. v. LG Elecs., Inc.*, No. 2:14-cv-911-JRG-RSP (E.D. Tex. Mar. 20, 2016) (J.A. 9555–62) (ruling on eligibility). I disagree, however, with the majority’s ruling affirming the District Court’s construction of the “unlaunched state” limitation. *See* ’476 patent col. 6 ll. 2–3; ’020 patent col. 5 l. 43. I would find the term “unlaunched state” to mean “not running,” as proposed by Appellant LG Electronics, Inc. (“LG”), and remand the case to the District Court for review of whether this construction alters its findings on infringement and anticipation.<sup>1</sup> I therefore respectfully dissent-in-part from today’s judgment. I review the legal standard for claim construction and then turn to my analysis.

### I. Legal Standard

Claim construction focuses on the wording of the claims, “read in view of the specification, of which they are a part.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc) (internal quotation marks and citation omitted). Prosecution history may also be examined to supply additional context to support a claim term’s intended meaning. *See Home Diagnostics, Inc. v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004). While courts may consider extrinsic evidence in claim construction, “such evidence is generally of less significance than the intrinsic record.” *Wi-LAN, Inc. v. Apple Inc.*, 811 F.3d 455, 462 (Fed. Cir. 2016) (citation omitted). Extrinsic evidence may not be used “to contradict claim meaning that is unambiguous in light of the intrinsic evidence.” *Phillips*, 415 F.3d at 1324 (citation omitted). The District Court did not analyze extrinsic evidence in making its determination. *See* J.A. 10277–97. When the district court reviews only evidence intrinsic to the pa-

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<sup>1</sup> Neither party argued that a different claim construction would affect our analysis of eligibility. *See generally* Appellant’s Br.; Appellee’s Br.

tent, that determination will amount solely to a determination of law that we review de novo. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

## II. The District Court Erred in Its Claim Construction of “Un-Launched State”

The District Court construed the term “un-launched state” during a pretrial conference to mean “not displayed” and maintained that construction in its post-trial denial of judgment as a matter of law. *See Core Wireless*, 2016 WL 4440255, at \*4–5; J.A. 10297. LG argues that the term “un-launched state” should mean “not running.” Appellant’s Br. 30; *see id.* at 30–48. I agree with LG. Consistent with claim construction principles, I look first to the language of the claims, followed by the remainder of the specification’s language and prosecution history. *See Phillips*, 415 F.3d at 1315.

First, the claims state in part that: an application summary “displays” certain data offered in applications; each of the data is “selectable to launch the respective application and enable the selected data to be seen”; *and* the application summary is “displayed while the one or more applications are in an un-launched state.” ’476 patent col. 5 l. 60–col. 6 l. 3 (claim 1).<sup>2</sup> “Display” is used differently and independently from “launch” in the claims, which indicates these terms have different meanings. In addition, by separating “launch” and “enable the selected data to be seen,” the claims contemplate a difference between launching and displaying data. *See Chi. Bd. Options Exch., Inc. v. Int’l Sec. Exch., LLC*, 677 F.3d 1361, 1369 (Fed. Cir. 2012) (applying a “general presumption

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<sup>2</sup> Claim 1 of the ’020 patent is substantively similar to the relevant portions of the ’476 patent and the specifications are effectively identical, so I refer only to claim 1 of the ’476 patent for ease of reference.

that different [claim] terms have different meanings”). Further, the claim language distinguishes between “launch[ing] the respective application” itself, and “enab[ling] the selected data . . . *within*” the application to be seen. ’476 patent col. 5 l. 66–col. 6 l. 1 (emphasis added). Such a distinction would be rendered meaningless if launch were construed to mean “display.” See *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.” (citation omitted)). Moreover, I do not understand what “displaying” the application itself would mean in this context, where the claim language more specifically directs the invention to enable only certain “data” previewed in the application summary to be seen. See *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1119 (Fed. Cir. 2004) (“[W]hen an applicant uses different terms in a claim it is permissible to infer that he intended his choice of different terms to reflect a differentiation in meaning of those terms.”).

Second, the specification uses the terms “launch” and “display” distinctly. See ’476 patent col. 3 ll. 10–11 (“Once the summary window is launched, core data/functionality is displayed.”). This could either mean the terms are distinct, or, as the majority finds, that launch is synonymous with display. See *Maj. Op.* at 14–17. As stated previously, based on claim differentiation principles, I find it more likely that “launch” is a first step of independent meaning, and “display” is a step that comes second, after the “summary window” has been launched. Appellee Core Wireless Licensing S.A.R.L. (“Core Wireless”) contends that the statement “a user can . . . launch a main view which shows various applications,” ’476 patent col. 3 ll. 5–7, supports its argument that “launch” refers to granting “visual access,” because the language of the specification uses the term “view,” Appellee’s Br. 21. However, the term “main view” refers to and is synony-

mous with the summary application window. *See* '476 patent col. 3 ll. 5–7, 17–33; *id.* figs.1–3. Referring to this particular page using the term “view” does not confer additional meaning on the verb “launch.”

Additional language in the specification in support of LG’s construction states that previously, users would “locate,” “then start/open the required application,” “*and then* may need to . . . cause the required stored data . . . to be displayed.” *Id.* col. 1 ll. 51–55 (emphasis added). Again, the specification contemplates display and opening as two separate steps in the user’s process, which leads me to the conclusion that “display” and “open” are not synonymous, and that the drafters of the Patents-in-Suit knew how to use the term “display” when conveying visual access to an application’s contents.<sup>3</sup> I also note that the specification explicitly defines the term “idle screen” as “a display which is shown when the mobile telephone is switched on but not in use,” *id.* col. 2 ll. 10–12, which indicates the drafters of the Patents-in-Suit knew how to define a single term that contained two separate meanings (here, one related to display, and one related to operation), and believed such an explanation would be necessary for terms that on their face did not contain a dual meaning. For that reason, I am skeptical of the majority’s understanding that the term “unlaunched” “encompasses both applications that are not running at all and applications that are running, at least

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<sup>3</sup> For the same reason, I do not agree with the majority’s conclusion that certain passages in the specification use “launch” to describe “what is displayed to the user when they select various menu options.” *Maj. Op.* at 15 (citing '020 patent col. 2 l. 59–col. 3 l. 2).

to some extent, in the background of the electronic device.”<sup>4</sup> Maj. Op. at 14.

I also agree with LG’s contention that the specification teaches the invention was directed to a problem in line with its construction of the term “un-launched state,” or, at least, that the problems in the field are inconclusive to weigh in favor of either party’s proposed construction. LG asserts that the invention is directed to saving “the user from navigating to the required application, opening it up, and then navigating within that application.” Appellant’s Br. 32 (quoting ’476 patent col. 2 ll. 46–50). Again, construction hinges on our understanding of the term “open” in this phrase and whether it refers to running or displaying an application. No matter the construction of launch though, the claimed invention seeks to improve access to the large amount of information stored in small computing devices. *See, e.g.*, ’476 patent col. 2 l. 66–col. 3 l. 6 (discussing invention’s “advantages in ease and speed of navigation, particularly on small screen devices”). It seems to me that the default state of the applications storing this information when a user navigates through the claimed summary application menu does not affect the utility of the claimed invention.

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<sup>4</sup> While the majority additionally supports its argument by referring to the single use of the term “running” in the specification, *see* Maj. Op. at 15–16 (quoting ’020 patent col. 2 ll. 40–44 (“[T]here is a computer program which when running on a computing device . . .”)), I note that neither party made arguments with respect to this language, and it is not clear to me from the record that “running” when referring to the computer program itself equates to use of the term as applied to applications within the device.

The majority identifies the stated focus of the inventions as to “allow the user to navigate quickly and efficiently to access data and activate a desired function” on small screens. Maj. Op. at 14 (quoting ’020 patent col. 1 ll. 26–29). Therefore, it finds the absence of an explicitly stated goal such as “memory drain,” a problem which appears to be of the majority’s own creation, to be instructive in its construction of the term “un-launched,” because the invention “only concerns itself with maximizing the benefit of the ‘common functions and commonly accessed data’ actually displayed to the user.” *Id.* at 15 (quoting ’020 patent col. 4 ll. 36–39). In our claim construction analysis, we look not to what is absent from the specification or what could have been written, but rather to what is included. *See Merck & Co. v. Teva Pharm. USA, Inc.*, 347 F.3d 1367, 1371 (Fed. Cir. 2003) (“A fundamental rule of claim construction is that the terms in a patent document are construed with the meaning with which they are presented *in the patent document*. Thus claims must be construed so as to be consistent with the specification . . . .” (emphasis added) (citations omitted)). Here, as mentioned above, the focus of the invention identified by the majority can support either party’s construction of the disputed term. The use of an application summary menu to congregate data from myriad applications on a small screen computing device benefits users in the manner stated, regardless of whether the applications are running in the background. Moreover, in other parts of the specification, the invention is directed towards “effectively enabling the user to understand th[e device’s] changing internal state” through offering on the application menu page a list of “common functions offered within an application and/or . . . data stored in that application.” ’476 patent col. 2 ll. 22–24, 34–36. Here again, enabling a user to better understand options offered by applications and data *stored* within them are goals that are successfully

achieved with applications that are not running until selected from the main menu.

Third, the prosecution history further supports LG's proffered construction. Even if Core Wireless did not disclaim its professed interpretation that "launch" means "display,"<sup>5</sup> I would nevertheless find LG's interpretation of "un-launched" comports more closely with the overall language of the Patents-in-Suit and prosecution history. See *Phillips*, 415 F.3d at 1316. Indeed, during prosecution, Core Wireless distinguished the Asserted Claims from those in the prior art because, unlike the prior art, its claims did not "only ever display[]" the summary application menu "within a running instance of the program, i.e., only when the program is in a *launched* state." J.A. 12764 (emphasis added). Thus, Core Wireless used the term "launch" to mean running, not merely displayed. See J.A. 12765 (stating, in another portion of Core Wireless's amendment, that 1) the "underlying purpose" of the claimed invention is that it overcomes the prior art in which information about applications in the summary application menu "is not displayed until after the application is already running" and 2) the prior art "*relate[s] to running applications* and combining them does nothing to satisfy the requirement of the present claims that the application summary window is displayed without launching the application" (emphasis added)).

The majority adopts Core Wireless's argument that construing "un-launched" to mean "not running" would

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<sup>5</sup> Both the majority and the District Court interpret LG's arguments as prosecution disclaimer arguments and determine that LG does not meet the high bar to prove that Core Wireless "clearly disavowed claim scope during prosecution." *Core Wireless*, 2016 WL 4440255, at \*4; see Maj. Op. at 18–19.

exclude certain preferred embodiments in the specification, *see* Maj. Op. at 16–17; *see also* Appellee’s Br. 28–29, contrary to our court’s instruction that a construction “that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct,” *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1333 (Fed. Cir. 2007) (internal quotation marks and citation omitted). Specifically, Figure 3 illustrates an application window that indicates there is an ongoing chat not seen on the screen. *See* ’020 patent fig.3; ’476 patent fig.3. The majority states that “use of the word ‘ongoing’ (as opposed to a word like ‘received’) indicates that, in at least some embodiments of the invention, at least some subset of processes of the Messages application are already running.” Maj. Op. at 16. Yet Core Wireless has not presented evidence, in the form of expert testimony or otherwise, to suggest that the display in the application menu of new messages or the use of the term ongoing in the summary menu would be understood by a person having ordinary skill in the art to indicate the underlying application is running. Core Wireless presents only attorney argument, not evidence. *See Gemtron Corp. v. Saint-Gobain Corp.*, 572 F.3d 1371, 1380 (Fed. Cir. 2009) (“[U]nsworn attorney argument . . . is not evidence and cannot rebut . . . admitted evidence.” (citation omitted)); Appellee’s Br. 28–29. Moreover, I do not believe construing “un-launched” to mean “not running” would be inconsistent with this preferred embodiment, since the requirements of claim 1 only state that “one or more applications” are in an un-launched state. ’476 patent col. 6 ll. 2–3; *see* ’020 patent col. 5 ll. 35, 43 (requiring “at least a first application” that is “in an un-launched state”). Therefore, even if “ongoing” were to imply a running application, the application menu display of messages from a non-running

message application would still satisfy the requirements of claim 1 of the Patents-in-Suit.<sup>6</sup>

Accordingly, I would reverse the District Court's claim construction of "un-launched state" and construe the term to mean "not running." Given this claim construction, I would remand for further findings on infringement and anticipation. I respectfully dissent.

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<sup>6</sup> I would not read lines in the specification stating that "App Snapshots are not intended to replace notifications, but to complement them by providing non-intrusive reminders for the user" to support "launch" meaning "display," as the majority contends. *See* Maj. Op. at 16; '476 patent col. 4 ll. 43-46; '020 patent col. 4 ll. 32-35. Such language could just as easily be understood to refer to a summary application menu's presentation of information from applications that are not currently running.