

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

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**INTELLECTUAL VENTURES I LLC,  
INTELLECTUAL VENTURES II LLC,**  
*Plaintiffs-Appellees*

v.

**MOTOROLA MOBILITY LLC, FKA MOTOROLA  
MOBILITY, INC.,**  
*Defendant-Appellant*

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2016-1795

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Appeal from the United States District Court for the  
District of Delaware in No. 1:11-cv-00908-SLR-MPT,  
Judge Sue L. Robinson.

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Decided: September 13, 2017

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Before NEWMAN, DYK, and TARANTO, *Circuit Judges*.

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

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

DYK, *Circuit Judge*.

Intellectual Ventures I LLC and Intellectual Ventures II LLC (collectively “IV”) brought suit against Motorola Mobility LLC (“Motorola”) in the United States District Court for the District of Delaware alleging infringement of claim 41 of U.S. Patent No. 7,810,144 (“the ’144 patent”) and claims 1, 10, 11, and 13 of U.S. Patent No. 7,120,462 (“the ’462 patent”). A jury found the asserted claims infringed and not invalid. The district court denied Motorola’s motion for judgment as a matter of law. Motorola appeals.

We hold that substantial evidence supports the jury’s verdict regarding the validity of claim 41 of the ’144 patent and claims 1, 10, 11, and 13 of the ’462 patent, but conclude that substantial evidence does not support the jury’s verdict of direct infringement of claim 41 of the ’144 patent. Since a finding of direct infringement is a predicate to any finding of indirect infringement, we reverse all of the infringement findings with respect to the ’144 patent. We therefore affirm the district court’s judgment in part, reverse in part, and remand for further proceedings on the asserted claims of the ’462 patent.

## BACKGROUND

### I

The ’144 patent was issued on October 5, 2010, from a series of continuing applications first filed in 1997. *See*

'144 patent, col. 1 ll. 8–35 (claiming benefit to a U.S. provisional application filed on November 13, 1997). The patent is titled “File Transfer System for Direct Transfer Between Computers” and broadly “relates to transferring computer files electronically from one location to another, and more particularly to electronic transfer of computer files directly between two or more computers or computing devices.” *Id.* col. 2 ll. 4–7.

Asserted claim 41 of the '144 patent recites:

41. A communications device, comprising:

a processor; and

a memory that stores at least one program usable to control the communications device,

wherein the communications device is configured to:

display a collection of file identifiers, wherein each file identifier represents a selectable file;

receive a user selection of at least one file identifier representing a file selected to be transferred to a second device;

display a collection of destinations identifiers, wherein each destination identifier represents a remote device having a numbered destination address on a circuit switched or packet switched network;

receive a user selection of at least one destination identifier as selection of the second device;

display a data entry field in which a text message can be entered;

receiving the text message;

encapsulate the text message with the selected file into a single combined file;

generate a unique transaction identifier that identifies a transfer of the single combined file; and

send the single combined file to the second device at its numbered destination address, the second device being configured to:

receive the single combined file irrespective of user action at the second device;

generate a delivery confirmation message confirming reception of the single combined file;

transmit to an authenticating device of the communications network, the delivery confirmation message;

provide an alert indicating reception of the single combined file;

display an identification of the communications device in relation to at least one of the selected file or the associated text file, wherein the identification includes at least one of a communications address of the communications device, a name of the communications device, or a username associated with the communications device; and

display at least a portion of content of the selected file or the text message, wherein the authenticating device is configured to:

generate a delivery report that indicates a delivery event and a time of the delivery event.

'144 patent, col. 44 l. 60–col. 46 l. 17.

The '462 patent is titled “Portable Computing, Communication and Entertainment Device with Central Processor Carried in a Detachable Handset.” In general terms, the invention of the '462 patent is a laptop computer formed by docking a smartphone into a “shell” having a larger display and keyboard.

Representative claim 1 of the '462 patent recites:

1. A portable processing device comprising:

a detachable handset unit sized for handheld grasping and including a central processor and a plurality of first circuits, said processor controlling the operation of said first circuits, and said first circuits including at least a video interface, a communication interface and a data input interface;

a portable docking display unit dimensioned substantially larger than said detachable handset unit, said portable docking display unit including a first display and a plurality of second circuits, said plurality of second circuits not including a central processor and including a video interface, and a data input interface, and wherein said central processor controls the operation of at least one of said second circuits and said first display when said detachable handset unit is docked with said docking display unit;

and the docking display unit is fully operable only when the detachable handset is docked thereto.

'462 patent, col. 6 ll. 2–20.

## II

IV filed suit for infringement of the '144 and '462 patents in the District of Delaware. Motorola defended on the grounds of no infringement and invalidity. The district court bifurcated the determination of willful infringement and calculation of damages for separate trial. *See* Scheduling Order, *Intellectual Ventures I LLC v. Motorola Mobility LLC*, No. 1:11-cv-00908-SLR-MPT (D. Del. Jan. 13, 2012), ECF No. 16.

The district court conducted a first jury trial with respect to claims 1, 8, 10, 11, and 13 of the '462 patent that ended in a mistrial. *See Intellectual Ventures I, LLC v. Motorola Mobility LLC*, 72 F. Supp. 3d 496, 501 (D. Del. 2014). Post-trial, the court denied Motorola's motion for judgment as a matter of law that the asserted claims were invalid as obvious. *See id.* at 513.

The district court conducted a second trial, this time regarding infringement and validity of claim 41 of the '144 patent. A jury found that Motorola had directly and indirectly infringed claim 41 and had failed to prove obviousness of the asserted claim. The jury also found that Motorola had failed to prove claim 41 invalid for lack of written description.

The parties retried infringement and validity of the '462 patent in yet a third trial, this time with respect to claims 1, 10, 11, and 13. The jury found that Motorola had infringed the asserted claims and that Motorola had failed to prove the asserted claims invalid as obvious.

Motorola moved for judgment as a matter of law in both the second and third trials, challenging the jury verdicts of infringement and no invalidity. The district court denied Motorola's motions. *See Intellectual Ventures I, LLC v. Motorola Mobility LLC*, 176 F. Supp. 3d 405, 444 (D. Del. 2016). Motorola appeals. We have jurisdiction under 28 U.S.C. § 1292(c)(2).

## DISCUSSION

We review the district court’s denial of a motion for judgment as matter of law *de novo*. See *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1202 (Fed. Cir. 2010) (citing *McKenna v. City of Philadelphia*, 582 F.3d 447, 460 (3d Cir. 2009)).

## I

Motorola argues that the district court erred in denying judgment as a matter of law that claim 41 of the ’144 patent is invalid for lack of written description. Whether a patent claim is adequately supported by the written description under 35 U.S.C. § 112 is a question of fact that we review for substantial evidence following a jury trial. See, e.g., *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1355 (Fed. Cir. 2010) (en banc). To the extent that the issue of written description turns on claim construction based solely on intrinsic evidence, however, it is a legal question subject to *de novo* review. See, e.g., *Atl. Research Mktg. Sys., Inc. v. Troy*, 659 F.3d 1345, 1353–54 (Fed. Cir. 2011).

Motorola contends that the specification of the ’144 patent excludes “long-term” or “permanent” storage of the data being transmitted on an intervening computing device. Despite this exclusion, Motorola argues that the scope of claim 41 covers embodiments that nevertheless use such long-term or permanent storage, in violation of the written description requirement.

The words “long-term” and “permanent” do not appear in the ’144 patent. Instead, the specification of the ’144 patent describes that “electronic transfer mechanisms” over “interconnected networks of computers and telecommunications equipment . . . generally employ intermediary computers in the form of e-mail servers, FTP servers, or Web servers.” ’144 patent, col. 2 l. 31–col. 3 l. 4. The specification further explains that “[t]hese intermediary

computers” come with several drawbacks because they: (1) “reduce the relative security and timeliness of the transfers effected because neither the sender nor the recipient controls the intermediary server”; (2) “require significant administration and usually require login procedures and passwords in an attempt to overcome security issues, albeit at the expense of user convenience and system complexity”; and (3) “represent concentrated points of possible failure, as well as communication ‘bottlenecks’ that set capacity limits for the collective number and size of files transferred.” *Id.* col. 3 ll. 4–15.

To overcome these drawbacks, the invention of the ’144 patent is a “file transfer system” that “enables direct transfer of electronic files between . . . interconnected [personal computers] . . . and without intermediate storage of files on an intervening computer.” ’144 patent, col. 10 l. 63–col. 11 l. 1. Motorola principally relies on this portion of the specification to argue that the invention of the ’144 patent does not employ “long-term” or “permanent storage” because it excludes intermediate storage, and that, consequently, claim 41 lacks written description support because the claim nonetheless covers embodiments that use long-term or permanent storage.

While there is some dispute as to whether Motorola preserved this precise issue for appellate review, we agree with the district court that under the proper claim construction, “claim 41 does not cover file transfers that involve long-term or permanent storage.” *Intellectual Ventures*, 176 F. Supp. 3d at 426. The relevant limitations of claim 41 recite “send[ing] the single combined file to the second device” and “receiv[ing] the single combined file . . . at the second device.” ’144 patent, col. 45 ll. 17–22. This language neither plainly includes nor plainly excludes long-term or permanent storage. The limitations must be construed “in view of the specification.” *Trustees of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1362 (Fed. Cir. 2016) (quoting *Phillips v. AWH Corp.*, 415 F.3d



1303, 1315 (Fed. Cir. 2005) (en banc)). The portions of the specification that Motorola relies on, excerpted above, demonstrate that storing files “indefinitely” on an intervening computer is not part of the claimed invention. Paradoxically, Motorola contends that these portions of the specification exclude long-term or permanent storage from the scope of the invention, while simultaneously arguing that claim 41 should be read to cover such storage. The proper result is not that claim 41 fails for lack of written description but that it should be construed “in view of the specification” to be limited. *Id.* at 1362; *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 1360 (Fed. Cir. 1998) (“[I]t is incorrect to construe the claims contrary to the specification, and then to hold the claims invalid because they are contrary to the specification.”). Thus, the “send[ing]” and “receiv[ing]” limitations of claim 41 should be construed to exclude long-term or permanent storage.

Motorola argues that other claims of the ’144 patent recite limitations regarding storage of the file being transferred, which—according to Motorola—suggests that claim 41’s silence broadens the claim to cover all forms of storage, including long-term or permanent storage. Claim 26, for example, recites “transmit[ting] the selected file . . . absent *non-transient intermediate storage* of the selected file on an intervening communications device of the communications network, to the second device.” ’144 patent, col. 41 l. 66–col. 42 l. 2 (emphasis added). We do not agree. The fact that other claims expressly limit the type of storage does not mean that claim 41 extends to long-term or permanent storage. We also disagree with Motorola that the doctrine of claim differentiation militates in Motorola’s favor, because that “doctrine . . . does not serve to broaden claims beyond their meaning in light

of the specification.” *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1302 (Fed. Cir. 1999).<sup>1</sup>

Since the asserted claim does not cover long-term or permanent storage, the failure of the specification to describe such an embodiment presents no written description problem. The district court did not err in denying Motorola’s motion for judgment as a matter of law for lack of written description as to claim 41 of the ’144 patent.

## II

Motorola next argues that it was entitled to judgment as a matter of law that claim 41 of the ’144 patent is invalid as obvious over the teachings of U.S. Patent No. 5,379,340 (“Overend”) and U.S. Patent No. 5,553,145 (“Micali”). The ultimate determination of obviousness presents a legal question subject to *de novo* review, but “explicit and implicit” subsidiary factual determinations made by the jury—including the scope and content of the prior art—are reviewed for substantial evidence. *See, e.g., Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012).

Claim 41 recites, *inter alia*, a “second device . . . configured to . . . receive the single combined file irrespective of user action at the second device.” ’144 patent, col. 45 ll.

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<sup>1</sup> Motorola further argues that IV’s expert testified that claim 41 covers long-term or permanent storage. Assuming that this characterization of the expert’s testimony is accurate, it is irrelevant because the question of claim construction here is resolved by intrinsic evidence. *See Phillips*, 415 F.3d at 1318 (“[A] court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.” (internal quotation marks omitted)).

20–21. Before the jury, Motorola argued that claim 41 would have been obvious over a combination of Overend and Micali. Motorola’s obviousness case depended in part on its argument that the “irrespective of user action” limitation was taught by Overend’s disclosure of a “secure file transfer interface program” having a “Receive Mode” capable of receiving files “without any intervention by [the user].” Overend col. 20 ll. 67–68. The parties did not seek a construction of the “irrespective of user action” limitation from the district court, and neither party objected to the district court’s instruction to the jury that the limitation was to be given its “ordinary meaning.” Final Jury Instructions 20, *Intellectual Ventures I LLC v. Motorola Mobility LLC*, No. 1:11-cv-00908-SLR-MPT (D. Del. Mar. 24, 2015), ECF No. 407.

In this situation, the dispositive question on appeal is “whether substantial evidence supported the verdict under the agreed instruction.” *Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1320 (Fed. Cir. 2003); *see also id.* at 1321 (“The verdict must be tested by the charge actually given and by giving the ordinary meaning of the language of the jury instruction.”). The district court denied judgement as a matter of law on this question, stating that “[t]he ‘Receive’ mode disclosed in Overend and the ‘irrespective of user action’ limitation are not the same because Overend specifies that the device be unattended in ‘Receive’ mode.” 176 F. Supp. 3d at 427. Based on our review of the trial record, we conclude that there was substantial evidence for the jury to find that Overend’s “Receive Mode” did not satisfy the “irrespective of user action” limitation of claim 41.

To be sure, Motorola’s expert testified that the “Receive Mode” of Overend’s software allowed a user to receive files without having to “log in” or “download” files. *See* J.A. 739 (“The basic idea here in the Overend patent is, you turn on the machine. . . . You walk away and it sits there and takes all the messages coming through it.”). But

IV's expert explained that this functionality of "Receive Mode" was not equivalent to receiving files "irrespective of user action" because "[i]f you're in any other mode or doing any other thing on this machine, you cannot receive messages." J.A. 827. According to IV's expert:

So only if you're in . . . receive mode . . . will you be able to receive messages. If you select any of the other menu options . . . you will not be in receive mode. So, for example, [if] I want to send you a message . . . while I'm ty[p]ing that message in, I can't receive any messages. And so going back to that irrespective of user action does not meet what's happening here in [Overend].

J.A. 827–28.

There is no dispute that Overend's software must be in "Receive Mode" to receive files and that "Receive Mode" precludes a user from using the prior art software for other purposes. *See* Overend, col. 39 ll. 14–15 ("To be able to receive documents, LIX must be in Receive Mode."). Thus, faced with competing expert testimony on the question of whether Overend's software satisfied the "irrespective of user action" limitation, "the jury was free to disbelieve [Motorola's] expert and credit [IV's] expert." *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 850 (Fed. Cir. 2010); *see also* *Edwards Lifesciences AG v. CoreValve, Inc.*, 699 F.3d 1305, 1313 (Fed. Cir. 2012) (noting that when "testimony at trial [is] in direct conflict, . . . the court may not weigh the evidence, determine the credibility of witnesses, or substitute its version of the facts for the jury's version"). The testimony of IV's expert and the teachings of Overend itself constituted substantial evidence supporting the jury's conclusion that the prior art did not "receive . . . files irrespective of user action."

Thus, because substantial evidence supports the jury's verdict finding claim 41 of the '144 patent nonobvious,

the district court correctly denied Motorola judgment as a matter of law.<sup>2</sup>

### III

Having concluded that substantial evidence supports the jury's verdict of no invalidity with respect to claim 41 of the '144 patent, we turn to the question of whether there was substantial evidence of direct infringement under 35 U.S.C. § 271(a).

The parties have treated claim 41 as a system claim with limitations directed to a "communications device," a "second device," and an "authenticating device configured to . . . generate a delivery report." At trial, IV argued that Motorola's customers directly infringed claim 41 by using the accused system to send text-plus-photo messages using a Multimedia Messaging Service ("MMS"), and that Motorola itself directly infringed claim 41 by testing the accused phones' MMS functionality. *See Intellectual Ventures*, 176 F. Supp. 3d at 421–23. As evidence, IV presented consumer surveys showing that Motorola's customers sent MMS messages using the accused phones, and "numerous compliance and testing documents" from Motorola demonstrating "that sending and receiving of MMS messages was tested on the various carrier net-

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<sup>2</sup> In light of our disposition, we need not address whether substantial evidence supported IV's alternative argument to the jury that Overend and Micali failed to teach or render obvious "an authenticating device . . . configured to . . . generate a delivery report that indicates a delivery event and a time of the delivery event." '144 patent, col. 46 ll. 1–17. *See Beckman Instruments, Inc. v. LKB Produkter AB*, 892 F.2d 1547, 1550–51 (Fed. Cir. 1989); *see also, e.g., Gillespie v. Sears, Roebuck & Co.*, 386 F.3d 21, 29 (1st Cir. 2004); *E. Trading Co. v. Refco, Inc.*, 229 F.3d 617, 621 (7th Cir. 2000).

works.” *Id.* at 423. Under these theories, when accused Motorola phones were used to send and receive text-plus-photo MMS messages, the devices met the limitations of the “communications device” and the “second device” of the asserted claim.

Motorola does not dispute that the accused phones meet the limitations of the “communications device” and the “second device.” Instead, Motorola contends that IV failed to offer evidence of a directly infringing “use” of the claimed system because none of the accused direct infringers “used” the “authenticating device configured to . . . generate a delivery report.”

#### A

We first address the applicable standard under *Centillion Data Systems, LLC v. Qwest Communications International, Inc.*, 631 F.3d 1279 (Fed. Cir. 2011). Claim 41 is written to claim a “device configured” to perform certain operations, some of which involve communications with other devices having certain functionality. But the parties have treated *Centillion*, which addressed claims to “systems comprising” certain elements, as the governing one in this case, and for that reason we limit our consideration to what *Centillion* means for this case. We do not decide what standards would govern here if claim 41 were not treated as a system claim under *Centillion*.

In *NTP, Inc. v. Research in Motion, Ltd.*, in addressing the question of “where” an infringing use of a claimed system occurs, we held that “[t]he use of a claimed system under section 271(a) is the place at which the system as a whole is put into service, *i.e.*, the place where control of the system is exercised and beneficial use of the system obtained.” 418 F.3d 1282, 1317 (Fed. Cir. 2005). Subsequently, in *Centillion*, we applied *NTP*’s situs-of-infringement holding to resolve infringement of “system comprising” claims where components of the claimed system were “in the possession of more than one actor.”

631 F.3d at 1279. We concluded that “to ‘use’ a system for purposes of infringement, a party must put the invention into service, *i.e.*, control the system as a whole and obtain benefit from it.” *Id.* at 1284. Thus, under *NTP* and *Centillion*, to prove an infringing “use” of a system under § 271(a), a patentee must demonstrate “use”—that is, “control” and “benefit”—of the claimed system by an accused direct infringer.

The district court held (and IV argues on appeal) that *Centillion* requires only that the infringer benefit from the “system as a whole,” such that a benefit derived from any claimed component of the claimed system would suffice to demonstrate an infringing “use.” The district court concluded: “*Centillion* did not hold that the infringer [must] ‘benefit’ from every single limitation. Rather *Centillion* held that the user must ‘obtain benefit’ from the ‘system as a whole’ and its analysis of . . . benefit was not on a limitation-by-limitation basis.” *Intellectual Ventures*, 176 F. Supp. 3d at 422.

We disagree. *Centillion* and *NTP* held that to “use” something is to put it into service, which means to control and benefit from it. And *Centillion* explicitly added that, to use a claimed system, what must be “used” is each element. *Centillion*, 631 F.3d at 1284 (“We agree that direct infringement by ‘use’ of a system claim ‘requires a party . . . to use each and every . . . element of a claim [system].’ In order to ‘put the system into service,’ the end user must be using all portions of the claimed invention.” (alterations in original)). From those two propositions, it follows that, to use a system, a person must control (even if indirectly) and benefit from each claimed component.

*NTP* and *Centillion* both found control of and benefit from every element on their particular facts. In *NTP*, customers of the accused infringer, by exchanging messages over the allegedly infringing system, controlled and benefitted from the claim-required relay equipment at

issue, which was part of what made the message exchanges work. *See NTP*, 418 F.3d at 1317. In *Centillion*, the customers found to be direct infringers controlled and benefitted from back-end processing equipment over which they exercised no physical control by requesting service and requesting particular reports, and because their requests produced response from the back-end equipment on a “one request/one response basis. *Centillion*, 631 F.3d at 1285–86.

We therefore reject IV’s reading of *Centillion*. In an analysis of a system claim under *Centillion*, proof of an infringing “use” of the claimed system under § 271(a) requires the patentee to demonstrate that the direct infringer obtained “benefit” from each and every element of the claimed system. *See Centillion*, 631 F.3d at 1284. In addition, the direct or indirect control required “is the ability to place the system as a whole into service.” *Id.*

## B

Under *Centillion*, the critical question here is whether there was substantial evidence that Motorola’s customers obtained a “benefit” from the generation of delivery reports. Neither of IV’s direct infringement theories purported to explain how Motorola’s customers satisfied this claim limitation by using the accused phones. Indeed, there is no evidence that the customers ever “generate[d] a delivery report.” Instead, IV relied on testimony and evidence that the delivery reports were generated by Multimedia Messaging Service Centers (“MMSC”) maintained or operated by the customers’ wireless service carriers when the customers used the accused phones.

IV’s main argument is that *Centillion* does not require that Motorola’s customer benefit from the MMSCs’ generation of delivery reports. We have rejected that reading of *Centillion*. But IV also asserts, almost in passing, that Motorola’s customers directly benefitted from the delivery reports because “the user sending the MMS does benefit



... from the MMSC authenticating the transfer with a delivery report noting the date and time when it is delivered.” Here, IV’s sole record citation contains just one sentence about the delivery report, and that sentence says nothing about benefits flowing from the delivery reports *to the customer* sending the message. *See* J.A. 618.

In the ’144 patent, the only benefits identified as flowing from the delivery reports rest on the sending device’s ability to receive or retrieve the delivery reports from the third-party authenticating device. *See, e.g.*, ’144 patent, col. 6 ll. 38–41 (providing that “after authentication by the third party authenticator . . . at least one file authentication is *received* from the third party” (emphasis added)); *id.* col. 19 ll. 4–9 (“The receipt file is *returned from the recipient to the sender* directly or through a third party . . . The sender may designate whether confirmation is by direct return or through a third party . . . common to all users.” (emphasis added)). But the evidence does not support an inference that Motorola’s customers ever received the delivery reports.

IV provided expert testimony that the accused Motorola phones were capable of sending and receiving MMS messages, and that the sending phone could display a confirmation that the MMS message was received.<sup>3</sup> IV’s expert conceded, however, that all but one of the MMSCs discussed at trial had been rendered technologically incapable of transmitting delivery reports to the sending phone (*i.e.*, to Motorola’s customers). With respect to these MMSCs, the expert testified that the delivery reports were generated and stored on the MMSCs themselves. But the mere fact that the reports were stored on the MMSCs does not show that Motorola’s customers could

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<sup>3</sup> *See* J.A. 620 (“[I]f you look also at the first phone, it actually just told me that [the] message . . . had been received.”).

have received or, in fact, actually received delivery reports. Thus, with respect to the MMSCs that were incapable of transmitting or otherwise providing delivery reports to the sending phone, the benefits identified by the '144 patent from receiving a delivery report never materialized. With respect to the final carrier (which could transmit delivery reports to the sending phone), IV's evidence further demonstrated that by default, the accused Motorola phones were configured *not* to request delivery reports from the MMSCs. As a consequence, unless a customer affirmatively took steps to alter the default configuration of his or her phone, the benefit of confirming receipt could not have been realized. Here, IV did not produce evidence that any customers actually altered their phones to receive delivery reports. Moreover, there is no evidence in the record demonstrating that customers even knew that the delivery reports existed or could be obtained.<sup>4</sup>

In the record below and at oral argument in this court, IV's counsel asserted two additional theories for how Motorola's customers indirectly benefitted from delivery reports generated by the MMSCs. First, IV's counsel told the jury in opening argument that the delivery reports were used by the carriers to bill customers for sending MMS messages. *See* J.A. 578 ("That device, the [authentication] device, validates the delivery of the messages and can be used for billing."). Second, IV's counsel told this court at oral argument that the delivery reports could be used as an antifraud measure. *See* Oral Argument at 24:01, *Intellectual Ventures I LLC v. Motorola Mobility LLC*, No. 16-1795 (Fed. Cir. Mar. 7, 2017). But IV has not pointed to any trial evidence relying

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<sup>4</sup> This case does not involve a situation where a customer simply elects not to take advantage of a known and available functionality.

on either theory as a basis for inferring a customer benefit, and the specification of the '144 patent provides no suggestion that the delivery reports are used in these manners. Thus, these theories of indirect benefit amount to mere speculation or attorney argument and do not provide substantial evidence supporting the jury's verdict of direct infringement. Thus, judgment as a matter of law should have been granted that Motorola's customers did not infringe claim 41.

### C

IV's brief notably does not address the patentee's direct infringement theory that Motorola itself—as opposed to Motorola's customers—directly infringed claim 41 by testing the accused phones on various carrier networks. In fact, both in this court and before the district court, IV has never identified any benefit flowing to Motorola above and beyond that which would flow to its customers due to the manufacturer's testing. *See Intellectual Ventures*, 176 F. Supp. 3d at 423. Having rejected as unsupported by substantial evidence IV's argument that Motorola's customers benefitted from the delivery reports generated by the MMSCs, the same non-infringement finding is necessary as to Motorola itself.

In sum, IV failed to present substantial evidence that the parties accused of direct infringement in this case benefitted from the limitation of “generat[ing] a delivery report” of the claimed system. As such, IV failed to prove a directly infringing “use” under § 271(a). And, because a finding of direct infringement is predicate to any finding of indirect infringement, none of the jury's verdicts with respect to infringement of claim 41 of the '144 of the patent is supported by substantial evidence. *See Lime-light Networks, Inc. v. Akamai Techs., Inc.*, 134 S. Ct. 2111, 2117 (2014). Accordingly, Motorola was entitled to judgment as a matter of law regarding non-infringement of claim 41 of the '144 patent.

## III

We finally address Motorola’s argument that the district court erred in denying judgment as a matter of law with respect to claims 1, 10, 11, and 13 of the ’462 patent. Motorola contends that it was entitled to judgment as a matter of law that the asserted claims were obvious over a combination of references, U.S. Patent No. 5,436,857 (“Nelson”) and U.S. Patent No. 7,549,007 (“Smith”).<sup>5</sup>

The asserted claims of the ’462 patent are directed to a “portable processing device” comprising a “detachable handset unit” and a “portable docking display unit” that is “fully operable only when the detachable handset is docked thereto.” ’462 patent, col. 6 ll. 2–20. In other words, the device claimed by the ’462 patent is formed by docking a smartphone into a “shell” comprising a display and keyboard, where the overall computing power of the device resides in the smartphone. “When mated with [the] docking display unit, the detachable handset becomes the controller for the entire . . . device.” *Id.* col. 5 ll. 16–20. When separated, the “detachable handset unit” functions independently with its own “video interface” (display) and “data input interface” (keyboard). *Id.* col. 6 ll. 14.

Nelson teaches a “module” and a “base unit,” where “the customary functional components of a [personal computer] are divided between the module and the base unit.” Nelson col. 2 ll. 22–24 (figure numbers omitted). In an embodiment of Nelson, the processing power of the personal computer is allocated to the module, while the display and keyboard are allocated to the base unit. *See id.* col. 2 ll. 24–50. In Nelson’s configuration, “[t]he module can be plugged into a base unit, and then removed to

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<sup>5</sup> With respect to claim 10 only, Motorola relied on the combination of Nelson, Smith, with yet a third reference, U.S. Patent No. 5,798,733 (“Ethridge”).

relocate, store securely, or plug into a different base unit. But the module is not functional as a standalone unit.” *Intellectual Ventures*, 176 F. Supp. 3d at 437. Nelson does not disclose use of a cellular phone’s processing power to operate a computer.

Smith teaches a “portable computer having an interface for direct connection to a portable telephone,” such that when “[p]hysically and electrically connect[ed] . . . the portable telephone serves as the portable computer’s modem.” Smith, col. 11 ll. 48–67. But “[t]he telephone in Smith has no control over the portable computer and no way to present anything on the display of the portable computer.” *Intellectual Ventures*, 176 F. Supp. 3d at 437.

This much of the prior art is largely undisputed. What the parties dispute is whether there was sufficient motivation to modify the “portable telephone” in Smith to control Nelson’s “base unit”—that is, whether “a person of ordinary skill in the art at the time of the ’462 patent would have been motivated to use Smith’s detachable handset with Nelson’s docking display unit.” *Id.* In this scenario, the “detachable handset unit” recited in the asserted claims would correspond to Smith’s “portable telephone,” while Nelson’s “base unit” would correspond to the “portable docking display unit.”

Motorola’s expert testified that there *was* such motivation because Nelson “has only a single central processor . . . and as a consequence it is less expensive, it weighs less, and it consumes less power,” but “you can’t use the portable module to do anything unless it’s docked with something,” while with Smith, on the other hand, “you have laptop functionality and cellphone functionality, but you’re paying for two central processors, and that means you dissipate more power, the system overall is heavier, and it’s more expensive. So the combination of Nelson and Smith has all of these advantages without a shortcoming.” J.A. 1025. In opposition, IV’s expert testified that there

was *no* motivation because—mirroring Motorola’s expert—there was “[t]he extra cost from duplicating resources, the keyboard [or] the display,” and that the combination would be “suboptimal.” J.A. 1043.

The jury apparently credited the testimony of IV’s expert over Motorola’s. And, in denying Motorola’s motion for judgment as a matter of law, the district court observed that the jury reasonably did so because Motorola’s expert “admitted he spent little time preparing his report, was not familiar with the accused products, and gave arguably conflicting and unclear testimony.” *Intellectual Ventures*, 176 F. Supp. 3d at 439; J.A. 1029. Thus, because substantial evidence supports the finding that there was no motivation to combine Nelson and Smith, the district court correctly denied Motorola’s motion with respect to invalidity of the ’462 patent.

#### CONCLUSION

For the reasons stated, we affirm the district court’s denial of Motorola’s motion for judgment as a matter of law with respect to invalidity of the asserted claims of ’144 and ’462 patents, and reverse its denial with respect to infringement of the ’144 patent. Motorola did not challenge on appeal infringement of the ’462 patent. The case is remanded to the district court for further proceedings on the ’462 patent with respect to damages.

#### **AFFIRMED IN PART AND REVERSED IN PART**

#### COSTS

Costs to neither party.

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

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**INTELLECTUAL VENTURES I LLC,  
INTELLECTUAL VENTURES II LLC,**  
*Plaintiffs-Appellees*

v.

**MOTOROLA MOBILITY LLC, FKA MOTOROLA  
MOBILITY, INC.,**  
*Defendant-Appellant*

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2016-1795

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Appeal from the United States District Court for the District of Delaware in No. 1:11-cv-00908-SLR-MPT, Judge Sue L. Robinson.

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Newman, *Circuit Judge*, concurring-in-part, dissenting-in-part.

I agree with the holding of non-infringement of the '144 patent, and join the judgment of reversal of the district court's judgment of liability with respect to that patent.<sup>1</sup> I respectfully dissent from my colleagues' sustaining the validity of the '144 and '462 patents, for I believe that the claims in suit would have been obvious to a person of ordinary skill in the field of the invention.

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<sup>1</sup> *Intellectual Ventures I, LLC v. Motorola Mobility LLC*, 176 F. Supp. 3d 405 (D. Del. 2016) ("Dist. Ct. Op.").

## THE '144 PATENT

**A. Infringement of claim 41**

I agree that infringement of claim 41 of the '144 patent was not established, in general for the reasons that the majority explains. Thus I join the holding of non-infringement of claim 41, for I agree that substantial evidence did not support the jury's verdict. I write separately, however, to clarify the holding of *Centillion Data Systems, LLC v. Quest Communications International, Inc.*, 631 F.3d 1279 (Fed. Cir. 2011).

The district court correctly stated: "*Centillion* did not hold that the infringer 'benefit' from every single limitation. Rather *Centillion* held that the user must 'obtain benefit' from the 'system as a whole' and its analysis of (and finding of) benefit was not on a limitation-by-limitation basis." Dist. Ct. Op. at 422. My colleagues "disagree," Maj. Op. 15, stating that:

*Centillion* and *NTP* held that to "use" something is to put it into service, which means to control and benefit from it. And *Centillion* explicitly added that, to use a claimed system, what must be "used" is each element. From those two propositions, it follows that, to use a system, a person must control (even if indirectly) and benefit from each claimed component.

*Id.* (citations and parenthetical omitted).

With respect, my colleagues are incorrect. *Centillion* does not stand for the proposition that they expound; the district court's statement of *Centillion* was not in error. *Centillion* did not establish a new requirement for infringement whereby a user must benefit from every element of the system. *Centillion* held that "[b]y causing the system as a whole to perform this processing and obtaining the benefit of the result, the customer has 'used' the system under § 271(a)." 631 F.3d at 1285.



To infringe a claim, every element of the claim (or its equivalent) must be practiced; but the benefit a user receives flows from the claimed system as a whole. It is not a necessary element of proof of infringement, to require proof of benefit from each element and limitation of the claim. The district court correctly so recognized.

It is of course required that for infringement every element of the claim must be practiced. However, *Centillion* does not require a showing of individual benefit from every separate element that is included in a claim. See *Centillion*, 631 F.3d at 1285 (“By causing the system as a whole to perform this processing and obtaining the benefit of the result, the customer has ‘used’ the system under § 271(a).”).

This definition of “use” properly captures the scope of infringement for which *Centillion* stands. It cannot be that a person might be found liable for infringement when the last element of the claimed system does not accomplish the primary purpose of the invention, that is, sending a multimedia text to another. Under *Centillion*, “use” by a party is properly defined as occurring when “but for the customer’s actions, the entire system would never have been put into service,” and each claimed component is placed in service on the party’s behalf. *Id.*

*Centillion* conforms to precedent; the change imposed by my colleagues is unsupported by law. Infringement in this case is a simple determination of whether the Motorola system practices all of the elements of claim 41, not whether the user obtains a benefit from each of the elements of claim 41. The discussion of whether the user benefits from the system’s “generat[ing] a delivery report,” as claim 41 requires, is not the reason infringement is not present. The proper analysis is whether the system is acting at the behest or control of Motorola if a delivery report is generated.

It is not disputed that all elements of the claim are not used by or attributable to Motorola. There was not substantial evidence that Motorola intended the generation of the delivery report to occur, nor was there substantial evidence Motorola received a benefit from the report's generation. Thus I concur in the holding of non-infringement of claim 41, for it was not shown that Motorola's "use" of the accused system practiced every element of claim 41.

### **B. Validity of claim 41**

At the trial Motorola argued that claim 41 was invalid for obviousness in view of the Overend reference taken with the Micali reference.

The panel majority states that substantial evidence supports the finding "that Overend's 'Receive Mode' did not satisfy the 'irrespective of user action' limitation of claim 41." Maj. Op. 11. However, the district court correctly construed the claims to require that a file is received "irrespective of user action," as long as "the user need not log-in to a server and download the selected file." J.A. 379. As the majority notes, "Motorola's expert testified that the 'Receive Mode' of Overend's software allowed a user to receive files without having to 'log in' or 'download' files." Maj. Op. 11. There is no indication that IV's expert testified to the contrary, although IV's expert offered the opinion that "'Receive Mode' was not equivalent to receiving files 'irrespective of user action.'" *Id.*

IV's argument regarding "Receive Mode" is flawed, for claim 41 does not require the receipt of files to be instantaneous or as they are sent; nor does the claim exclude queuing files in the network for later delivery. The claim limits precisely what the district court construed the claim to limit: a "user need not log-in to a server and download the selected file." It is this user action that is not permitted to be read into the claim. Allowing the device to receive any queued or subsequent real-time

messages is precisely within the scope of receiving files “irrespective of user action.”

The Overend reference meets the “irrespective of user action” limitation. Thus all of the elements of claim 41 are shown in Overend, with the exception of the authenticating step. But Micali teaches the authenticating step, describing “an electronic communications method between a first and second party, with assistance from at least a trusted party . . . in which the first party has a message for the second party.” Micali, col. 3 ll. 54–58.

Micali further teaches embodiments in which the second party sends a “receipt” to the trusted party, and where the trusted party sends a receipt to the first party. *Id.* col. 7 ll. 4–16; col. 12 ll. 5–32. Based on these teachings, Motorola’s expert testified that Micali’s trusted party and exchanging of receipts satisfied the “authenticating device” limitations of claim 41. The combination of Overend and Micali shows all of the elements of claim. A person of skill in the field of the invention would have found the combination obvious.

Although my colleagues state that “the jury was free to disbelieve [Motorola’s] expert and credit [IV’s] expert,” Maj. Op. at 12 (alterations in original), the court’s obligation is to assure that questions of law are correctly decided, and that for factual disputes, substantial evidence on the record as a whole supports the legal conclusion. The question of law is whether a person of ordinary skill in this art would deem it obvious to combine an authenticating step as in Micali, with the process of Overend. *See* 35 U.S.C. § 103 (whether “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”).

Obviousness is determined based on the teachings in the prior art, and whether it would have been obvious to select and combine these teachings. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (“Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.”); *In re Mouttet*, 686 F.3d 1322, 1333 (Fed. Cir. 2012) (“[T]he test for obviousness is what the combined teachings of the references would have suggested to those having ordinary skill in the art.”).

Overend shows “transmit[ing] to an authenticating device of the communications network, the delivery confirmation message.” ’144 patent, col. 46 ll. 1–2 (claim 41); *see* Overend, col. 5 ll. 42–47. Micali shows the “authenticating device of the communications network.” ’144 patent, col. 46 ll. 1–2 (claim 41); *see* Micali, col. 3 ll. 54–58 (providing for “an electronic communications method between a first and second party, with assistance from at least a trusted party . . . in which the first party has a message for the second party”); *see also* Smith cross-examination, J.A. 838, 1180:17–20 (“Q. And you agree that the Micali reference shows a messaging system where the desire is to authenticate messages between parties that maybe don’t trust each other; right? A. Yes.”).

Overend similarly teaches “wherein the authenticating device is configured to: generate a delivery report that indicates a delivery event and a time of the delivery event,” with Micali teaching the authenticating device in the claim element. ’144 patent, col. 46 ll. 13–16; *see* Overend, col. 5 ll. 42–47; Micali, col. 3 ll. 54–58; *see also* J.A. 1219, Fig. 7b (Overend teaching a “transfer log” with date/time stamps of transmission and receipt of a file); J.A. 741, 796:9–797:4 (Overend also teaching a “delivery report[,] the delivery event[,] and the time of the delivery event”). The testimony of Dr. Martin Rinard, that “the only limitation that Overend does not disclose is the

third-party authenticating device,” and that “Micali discloses the third-party authenticating device missing from Overend” remains undisputed. Dist. Ct. Op. at 429 (characterizing Rinard’s testimony).

Applying law and precedent, the combination of Overend and Micali renders claim 41 obvious. First, “when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). And second, “[w]hen a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious.” *Id.* at 417 (internal quotation marks and citation omitted). The Court explained that “a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

In light of the evidence, no reasonable jury could have found claim 41 to be nonobvious. There is not substantial evidence that a receipt confirming delivery is not a delivery confirmation message as in the prior art, especially given the express teachings of Micali’s authenticating device. A “patent for a combination which only unites old elements with no change in their respective functions . . . obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men.” *Id.* at 415–16 (quoting *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 152-153 (1950)).

Thus I must, respectfully, dissent from my colleagues’ ruling sustaining the validity of claim 41.

## THE '462 PATENT

On the evidence presented, no reasonable jury should have found the claimed subject matter of the '462 patent nonobvious. The claims are for a portable telephone handset combined with a docking station, for which the computer functions are provided by the handset. My colleagues agree that the issue is “whether a person of ordinary skill in the art at the time of the '462 patent would have been motivated to use Smith’s detachable handset with Nelson’s docking display unit.” Maj. Op. 21. This motivation is provided in the cited references themselves.

The '462 patent explains that its inventors did not invent portable telephone handsets, did not invent computerized portable telephone handsets, and did not invent docking stations for computer-bearing or computer-directed modules. *See* '462 patent, col. 1 l. 40–col. 2 l. 8. The '462 patent further states that “components used in device 10 can be similar to those employed by traditional computing devices, communication devices, and entertainment devices.” *See* '462 patent, col. 5 ll. 38–40.

The combination of a portable telephone with a dock is shown by Smith, and the combination of a dock with a computer module is shown by Nelson. The combination that is described and claimed in the '462 patent is a portable telephone having a computer, and when docked, the docking station uses the telephone’s computer. Nelson shows a portable computer, and a docking station that uses the PC’s computer. Smith shows a portable telephone that docks with a docking station that provides the computer module. The '462 patent shows a portable telephone having a computer, that docks with a docking station that uses the telephone’s computer.

As computer-fitted telephones became available, it was obvious to combine that telephone with the dock of Nelson, recognizing Smith’s combination of telephone and

dock. Nelson discusses the “certain advantages over the other” of portable and desktop PCs, “past” “attempts to combine the functions” of both, and states the “need for a system which provides the advantages of both portable PCs and desktop PCs.” Col. 1 ll. 5–35. Smith remarks that “[t]he demands of modern life require . . . people to carry at least one electronic device to perform their daily work.” Col. 2 ll. 15–18. Smith refers to the “dual problems of mobility and portability associated with using a portable telephone in combination with a portable computer.” Abstract.

The ’462 patent, benefitting from the discovery by others of a telephone that is also a portable computer, simply combines this device with a docking station, as shown by Nelson for docking a computer module. The ’462 combination of a portable telephone/computer with a docking station is the obvious combination of known devices for their known purposes. *See, e.g.,* J.A. 1025 (Motorola’s expert discussing the advantages and disadvantages of Nelson and Smith, individually, and concluding that “the combination of Nelson and Smith has all of these advantages without a shortcoming”).

The majority observes that the parties’ expert witnesses offered conflicting opinions as to what was obvious, and the majority states that “[t]he jury apparently credited the testimony of IV’s expert over Motorola’s.” Maj. Op. 22. Perhaps so. However, the issue is not credibility of witnesses; the issue is whether substantial evidence supports the jury’s decision, taking into account the entirety of the record, and evidence that both supports and detracts from the decision. *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 487–88 (1951).

The question of obviousness is “whether a person of ordinary skill in the art at the time of the ’462 patent would have been motivated to use Smith’s detachable handset with Nelson’s docking display unit.” Maj. Op. 21

(internal quotation marks omitted). This ultimate inquiry is a question of law, and requires objective determination.

The record does not contain substantial evidence supporting the majority's conclusion that it would not have been obvious to use the known computerized handset in the known docking station. The combination of the Nelson and Smith references shows every element of the claims at issue in the '462 patent, used in the same manner, for the same purpose, as in the '462 patent. *See In re Mouttet*, 686 F.3d at 1333 (“[T]he test for obviousness is what the combined teachings of the references would have suggested to those having ordinary skill in the art.”). The motivation to combine the known portable computerized telephone with the known docking station is provided by the references themselves, as discussed above. The court's contrary conclusion is not supported by evidence.

Thus I respectfully dissent from the ruling that the '462 patent is not invalid on the ground of obviousness.