IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS TYLER DIVISION

MEMORANDUM OPINION AND ORDER

Before the Court are Plaintiff Papst Licensing GmbH & Co., KG ("Papst") and Defendants Samsung Electronics Co., Ltd and Samsung Electronics America, Inc.'s (collectively, "Samsung") motions for post-trial relief. Having considered the parties' written submissions and the arguments at the July 11, 2019 hearing, the Court rules as follows:

- Samsung's Motion to Contact Jurors (Docket No. 319) is **DENIED**;
- Samsung's Renewed Motion for Judgment as a Matter of Law, or in the Alternative, for a New Trial on Issues Related to Liability (Docket No. 329) is **DENIED**;
- Samsung's Renewed Motion for Judgment as a Matter of Law, or in the Alternative, for a New Trial on Issues Related to Damages (Docket No. 330) is **DENIED**;
- Papst's Motion for Entry of Judgment (Docket No. 333) is **DENIED WITHOUT PREJUDICE**.

BACKGROUND

On November 30, 2015, Papst filed suits against Samsung (Case No. 6:15-cv-1102) and Lenovo (United States) Inc. and Motorola Mobility LLC (collectively, "Motorola") (Case No. 6:15-cv-1111) alleging infringement of U.S. Patent Nos. 6,470,399 ("the '399 patent"), 8,504,746

("the '746 patent"), 8,966,144 ("the '144 patent"), 9,189,437 ("the '437 patent") and. 6,895,449 ("the '449 patent"). These suits, along with suits filed against Defendants Huawei, LG and ZTE, were consolidated with the lead action against Apple, Inc. (Case No. 6:15-cv-1095) for pretrial purposes, except venue. See Case No. 6:15-cv-1095, Docket No. 47. Papst also asserted the '399 and '449 patents against several digital camera manufacturers in a Multi-District Litigation (MDL) currently pending in the District Court for the District of Columbia. In re Papst Licensing GmbH & Co. KG Patent Litigation, MDL No. 1880, Case No: 1:07-mc-793-RDM (D.D.C. 2018).

Between June 14, 2016 and December 29, 2017, a number of Defendants in this action and in the MDL filed a combined 37 petitions for inter partes review ("IPR"), including two IPR petitions against the '449 patent. The Patent Trial and Appeal Board ("PTAB") issued Final Written Decisions ("FWD") cancelling all instituted claims, including all asserted claims of the '399, '746, '144, and '437 patents. Conversely, all IPRs against the '449 patent terminated without any of the claims being cancelled. Two IPRs were denied institution and the petitioners of the instituted IPRs settled the dispute without a FWD. Because none of the IPRs concerning the '449 patent reached a FWD, there were no appeals pending on the asserted claims of the '449 patent. Accordingly, Papst agreed to stay the case pending appeals on the '399, '746, '144 and '437 patents, but disputed a stay as to the '449 patent. See Docket No. 1. Papst then stayed or settled its disputes with all defendants in the lead case, Case No. 6:15-cv-1095, except Samsung and Motorola related to the '449 patent. See id.

Samsung argued that the '449 patent substantially overlaps with claims found unpatentable by the PTAB and that many of the terms used in the '449 patent are identical to terms at issue in the pending IPR appeals. See Case No. 6:15-cv-1095, Docket No. 718 at 4. Samsung also argued

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¹ All docket entries, unless otherwise noted, refer to instant cause.

that the Federal Circuit's analysis of the scope and content of the identical prior art references would inform these proceedings. Id. The Court rejected Samsung's arguments, finding that the terms Samsung specifically identified, "customary" and "communication," were either not addressed in the Markman briefing or not at issue in the IPR appeals. See Docket No. 1 at 8. The Court also noted that the specific prior art combination used by the PTAB, the "Kawaguchi/Schmidt combination" was not elected by Samsung and that a stay would therefore not simplify the issues. Id.

Accordingly, claims 1 and 17 of the '449 patent were severed into a new cause of action, the present case, with a trial date of October 30, 2018. See id. On October 19, 2018, Papst and Motorola notified the Court that they had settled their dispute, leaving Samsung as the sole remaining defendant for trial on infringement of the '449 patent. See Docket Nos. 219, 226. The Court held a jury trial in this matter from October 30, 2018 to November 6, 2018. After the six-day trial, the jury reached a verdict, finding that the '449 patent was not invalid, that Samsung infringed claims 1 and 17 of the '449 patent and that Samsung's infringement was not willful. See Docket Nos. 294, 298. The jury awarded Papst \$5,924,374.00. See Docket No. 294.

Following the verdict, Samsung filed a renewed Motion for Judgment as a Matter of Law, or in the Alternative, for a New Trial on Issues Related to Liability (Docket No. 329) and a renewed Motion for Judgment as a Matter of Law, or in the Alternative, for a New Trial on Issues Related to Damages (Docket No. 330). Papst filed a Motion for Entry of Judgment seeking costs, interest, supplemental damages, and fees (Docket No. 333). Samsung also filed a Motion to Contact Jurors (Docket No. 319). The Court heard argument on these motions on July 11, 2019. See Docket No. 378. The Court addresses the motions below.

LEGAL STANDARD

Judgment as a matter of law is only appropriate when "a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue." FED. R. CIV. P. 50(a). "The grant or denial of a motion for judgment as a matter of law is a procedural issue not unique to patent law, reviewed under the law of the regional circuit in which the appeal from the district court would usually lie." Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1332 (Fed. Cir. 2008).

Under Fifth Circuit law, a court is to be "especially deferential" to a jury's verdict and must not reverse the jury's findings unless they are not supported by substantial evidence. Baisden v. *I'm Ready Prods.*, Inc., 693 F.3d 491, 499 (5th Cir. 2012). "Substantial evidence is defined as evidence of such quality and weight that reasonable and fair-minded men in the exercise of impartial judgment might reach different conclusions." Threlkeld v. Total Petroleum, Inc., 211 F.3d 887, 891 (5th Cir. 2000). The Court will "uphold a jury verdict unless the facts and inferences point so strongly and so overwhelmingly in favor of one party that reasonable men could not arrive at any verdict to the contrary." Cousin v. Trans Union Corp., 246 F.3d 359, 366 (5th Cir. 2001); *see also Int'l Ins. Co. v. RSR Corp.*, 426 F.3d 281, 296 (5th Cir. 2005). However, "[t]here must be more than a mere scintilla of evidence in the record to prevent judgment as a matter of law in favor of the movant." Arismendez v. Nightingale Home Health Care, Inc., 493 F.3d 602, 606 (5th Cir. 2007) (citing Laxton v. Gap, Inc., 333 F.3d 572, 577 (5th Cir. 2003)).

In evaluating a motion for judgment as a matter of law, a court must "draw all reasonable inferences in the light most favorable to the verdict and cannot substitute other inferences that [the court] might regard as more reasonable." E.E.O.C. v. Boh Bros. Const. Co., L.L.C., 731 F.3d 444, 451 (5th Cir. 2013). Although the court must review the record as a whole, it must disregard all evidence favorable to the moving party that the jury is not required to believe. Ellis v. Weasler

Eng'g Inc., 258 F.3d 326, 337 (5th Cir. 2001). However, a court may not make credibility determinations or weigh the evidence, as those are solely functions of the jury. See id. (citing Reeves v. Sanderson Plumbing Prods., Inc., 530 U.S. 133, 150–51 (2000)). The Court gives "credence to evidence supporting the moving party that is uncontradicted and unimpeached if that evidence comes from disinterested witnesses." Arismendez, 493 F.3d at 606.

Under Federal Rule of Civil Procedure 59(a), a new trial may be granted on any or all issues "for any reason for which a new trial has heretofore been granted in an action at law in federal court." FED. R. CIV. P 59(a)(1)(A). The Federal Circuit reviews the question of a new trial under the law of the regional circuit. Z4 Techs., Inc. v. Microsoft Corp., 507 F.3d 1340, 1347 (Fed. Cir. 2007). The court can grant a new trial "based on its appraisal of the fairness of the trial and the reliability of the jury's verdict." Smith v. Transworld Drilling Co., 773 F.2d 610, 612–13 (5th Cir. 1985). "Courts grant a new trial when it is reasonably clear that prejudicial error has crept into the record or that substantial justice has not been done, and the burden of showing harmful error rests on the party seeking the new trial." Sibley v. Lemaire, 184 F.3d 481, 487 (5th Cir. 1999) (quoting Del Rio Distributing, Inc. v. Adolph Coors Co., 589 F.2d 176, 179 n.3 (5th Cir. 1979)). "A new trial may be granted, for example, if the district court finds the verdict is against the weight of the evidence, the damages awarded are excessive, the trial was unfair, or prejudicial error was committed in its course." Smith, 773 F.2d at 612-13. The decision to grant or deny a new trial is committed to the sound discretion of the district court. See Allied Chem. Corp. v. Daiflon, Inc., 449 U.S. 33, 36 (1980). "[N]ew trials should not be granted on evidentiary grounds unless, at a minimum, the verdict is against the great not merely the greater weight of the evidence." Conway v. Chem. Leaman Tank Lines, Inc., 610 F.2d 360, 363 (5th Cir. 1980).

ANALYSIS

I. Samsung's Motion for Judgment as a Matter of Law, or in the Alternative, for a New Trial on Issues Related to Liability (Docket No. 329)

Samsung requests judgment as a matter of law of noninfringement and invalidity, or in the alternative, a new trial. See Docket No. 329.

A. Judgment as a Matter of Law on Direct Patent Infringement

Samsung moves for judgment as a matter of law that the Accused Products do not directly infringe claims 1 and 17 of the '449 patent because Papst failed to provide substantial evidence for a reasonable jury to conclude that the Accused Products infringe. See Docket No. 329 at 2. Samsung contends that its accused products: (1) do not send a signal identifying as a customary storage device, (2) do not have the capability to misidentify to a host, and (3) are not arranged for simulating a virtual file system to the host. See id. at 2–3.

1. Identifying as a customary storage device

Claims 1 and 17 of the '449 patent both require sending a signal "to the host device which signals to the host device that it is a storage device customary in a host device." Based, at least in part, on the Federal Circuit's claim construction in the MDL appeal, the Court construed "customary" to mean "normally part of commercially available computer systems at the time of the invention." See Case No. 6:15-cv-1095, Docket No. 275 at 28–29. The parties do not dispute that the time of invention is March 1997. See Docket No. 302 ("10/31/18 A.M. Tr.") at 15:13–14, 57:15–17; 64:20–65:5.

Samsung asserts that the accused products "identify themselves to a host device as a USB Mass Storage Class," which did not exist at the time of the invention. Docket No. 329 at 3. Samsung argues that a USB Mass Storage device, therefore, cannot be a storage device normally part of commercially available computer systems at the time of the invention. See id. Samsung

contends this issue is "undisputed" based on the testimony of Papst's infringement expert, Mr. Zeidman. See id. at 3–4. Samsung asserts Mr. Zeidman testified that the accused products comply with USB specification, act as a USB Mass Storage device and connect to host devices in USB Mass Storage mode. See id. (citing 10/31/18 A.M. Tr. at 40:3-4, 41:18-21, 42:3-8, 42:14-17, 44:5-6, 44:25, 45:9, 45:23-25, 53:11-13, 64:20-22; Docket No. 303 ("10/31/18 P.M. Tr.") at 6:8-12). Samsung also asserts that Mr. Zeidman explained that USB Mass Storage devices send an identifier, "bInterfaceClass 08h," to indicate to the host computer that the device is a USB Mass Storage device that uses the USB Mass Storage protocol. See id. at 4 (citing 10/31/18 P.M. Tr. 6:8–12). Samsung also points to evidence in the record that the identifier, "08h" did not correspond to disk drives in protocols that did exist at the time of invention, such as the SCSI protocol. See id. (citing DTX36 at 133 (Schmidt reference)). Samsung also argues that the "Windows operating system did not have a USB driver, so it did not support any USB devices." 10/31/18 P.M. Tr. at 9:22-10:4. Accordingly, Samsung argues that no reasonable jury could find that the accused products, identifying as USB Mass Storage Class devices, satisfy the limitation of signaling "to the host device that it is a storage device customary in a host device." See id.

Papst responds that Samsung's argument has already been rejected, both in the MDL and in this case. See Docket No. 339 at 3. Specifically, Papst contends that Samsung raised, and lost, its argument during summary judgment motions. Id. Papst points to the Court's Order, which states:

To the extent Defendants contend that the Accused Products do not meet the "customary" limitations present in claims 1 and 17 of the '449 patent because USB Mass Storage Devices or Mass Storage Class devices did not exist at the time of the invention, this argument turns on an underlying factual inquiry of whether these devices fall within the broad category of mass storage devices, or whether these devices are, in themselves, a new class of devices that did not exist at the time of the invention.

Id. (quoting Docket No. 201 at 5–6). Papst argues that there is substantial evidence in the record to support the jury's underlying factual finding that the accused devices fall within the claimed category of devices. See id. at 3–4. Papst points to testimony by Samsung's infringement expert, Dr. Wolfe, where he stated that a "[m]ass storage device is a category of things, and a hard drive is one thing that could be in that category." Id. (quoting Docket No. 305 ("11/1/18 P.M. Tr.") at 56:23–24; 125:18–126:3); Docket No. 346 at 1.

Papst also argues that it proved the accused products satisfy the "customary" limitation. See Docket No. 339 at 4. Papst does not dispute the evidence relied upon by Samsung regarding the accused products and USB protocols. See id. Instead, Papst argues that the USB identifier, bInterfaceClass 08h, is the claimed signal that "tells the computer that the newly-connected device is a mass storage device." Id. Papst points to Mr. Zeidman's testimony:

So, it's the signal that's critical here because the signal indicates it's a mass storage device. 08h is a mass storage device defined by the USB specification. And the customary talks about what was available at the time of the invention in 1997. So if you say a mass storage device that was available in 1997 and the signal indicates a mass storage device available in 1997, it indicates it was a hard disk. So it's a signal that's defining, you know, what the computer sees. From the point of view of the computer, it sees a hard disk, whether one is there or not.

10/31/18 A.M. Tr. at 64:20–65:5.24. Papst argues that the jury considered substantial evidence supporting its finding that the accused products identify as a customary storage device.

As Papst notes, Samsung previously raised similar arguments regarding the issue of "customary" as applied to USB devices. See Docket No. 201 at 5. The Court rejected Samsung's argument at the summary judgment stage because it turned on an underlying factual inquiry. See id. Further, Samsung's argument presented the Court with good cause to clarify its claim construction that the term "customary" only limits the storage device, not the driver. See id. at 7. The jury has now considered Samsung's argument and rejected it. Substantial evidence supports the jury's finding that USB Mass Storage devices fall within the broad category of mass storage

devices, as opposed to a new class of devices that were not customary at the time of invention. For example, Dr. Wolfe stated that "[m]ass storage device is a category of things, and a hard drive is one thing that could be in that category." 11/1/18 P.M. Tr. at 56:23–24; 125:18–126:3. Mr. Zeidman stated that "USB is not a type of mass storage. Mass storage devices, hard disks were, available and they had different interfaces. USB was one of the interfaces." 10/31/18 A.M. Tr. at 8:25–9:3.

Accordingly, Samsung's motion is **DENIED** on this basis.

2. Capability to misidentify to a host

Claims 1 and 17 of the '449 patent both require that the interface device send a signal, "regardless of the type of the data transmit/receive device attached to . . . the interface device, to the host device which signals to the host device that it is a storage device customary in a host device." The parties agree that this claim language requires that an interface device has the capability to send a signal to a connected host computer identifying the interface device as a customary device, regardless of the type of data transmit/receive device ("DTRD") attached to the interface device. See Docket No. 329 at 5–6; Docket No. 339 at 5. The parties refer to this limitation as "misidentification" or "misrepresentation." See id.

Samsung asserts that there is no dispute that its "devices truthfully comply with the relevant standards and cannot do otherwise." Docket No. 329 at 5–6. Samsung points to evidence and Dr. Wolfe's opinion for support that the accused devices follow USB protocols, which require the accused devices to identify themselves as phones with "the capabilities of the USB mass storage device with a memory card." See id. at 6 (quoting Docket No. 304 ("11/1/18 A.M. Tr.") (Wolfe) 123:11–22). Samsung dismisses Mr. Zeidman's opinion that the devices misidentify themselves as USB Mass Storage Class devices when they are actually phones, tablets or cameras. Id. at 6. Samsung analogizes the phones to a Swiss army knife, which is a single object that may truthfully

be recognized as different and distinct items. Id. Similarly, Samsung contends that the accused devices are phones and tablets that are also cameras and USB Mass Storage class devices. Id. Samsung argues that the accused devices are, therefore, not capable of misidentifying themselves as mass storage devices because they are truthfully mass storage devices.

Papst responds that Samsung improperly focuses on compliance with the USB standard rather than the claim language. Docket No. 339 at 5. Papst asserts that the proper analysis is whether the interface device "signals" to the host device that it is a storage device regardless of the type of DTRD attached to the interface device. Id. Papst contends that the DTRD is the CMOS array or the microphone. Id. (citing 10/31/18 A.M. Tr. (Zeidman) at 32:11–34:2, 38:11–14, 59:11–22; 11/1/18 P.M. Tr. (Wolfe) at 50:15–18). By contrast, Papst asserts that the interface device signals to the computer that it is connected to a hard drive regardless of what is actually attached to the interface device. Id. at 6; see 10/31/18 A.M. Tr. (Zeidman) at 59:22–60:1 ("T]he interface devices of all of the accused devices signal to the computer that it's a hard drive. It's not a hard drive, but it's signaling to the computer it is a hard drive so the computer will know how to talk to it."). Papst also points to Dr. Wolfe's testimony that the Accused Products use the 08h identifier to identify themselves as mass storage devices. Id.

In its Reply, Samsung asserts that Papst "incorrectly argues that the claims require an interface device that is capable of misidentifying what the DTRD is, rather than what the interface device is." Docket No. 343 at 2 (emphasis in original). Samsung argues that Papst's position on infringement is inconsistent with its invalidity position, where Papst argues that the interface device must be misidentified. Papst replies that Samsung misrepresents Papst's position and that it agrees with Samsung's construction, both for infringement and invalidity. Docket No. 346 at 2. Papst contends that the interface device must signal to the host computer that the host computer is

communicating with a hard drive, even though a CMOS array/microphone is attached to the interface device. Id.

Samsung's argument is unpersuasive, largely because it relies on the parties' shorthand description of this limitation as "misidentification" rather than on the claim language itself. The claim limitation recites:

the interface device, when receiving an inquiry from the host device as to **the type** of a device attached to the multi-purpose interface of the host device, sends a signal, regardless of the type of the data transmit/receive device attached to the second connecting device of the interface device, to the host device which signals to the host device that it is a storage device customary in a host device,

'449 patent at claim 1 (emphasis added). Samsung focuses on "misidentification" and whether the DTRD or interface device must be misidentified; however, the claim language does not explicitly require misidentification. Instead, the limitation recites that the signal to the host device identifies a particular device type without regard to the type of DRTD attached to the interface device. As Mr. Zeidman explained, "what that means is it doesn't matter . . . what's connected to the interface device. In our case it's a CMOS array, which is part of a camera, and a microphone. That regardless of that, it's telling the computer that it's a hard disk, which was available in 1997." 10/31/18 A.M. Tr. (Zeidman) at 59:4-8; 59:22-60:1; 60:13-61:7; see also 11/1/18 P.M. Tr. (Wolfe) at 51:8-11.

Both parties' experts explained to the jury that the Accused Products send an identifier, "bInterfaceClass 08h," to indicate to the host computer that the connected device is a USB Mass Storage device. See, e.g., 10/31/18 P.M. Tr. 6:8–12. On cross-examination, Samsung asked Mr. Zeidmam, if an accused device signals that "it's a mass storage device, if the phone does have a mass storage device, it's not miscommunicating, . . . it's telling the truth because it really does have mass storage. Will you agree with that?" Id. at 24:12–19. Mr. Zeidman responded, "No, because I don't see that it's saying, I have mass storage. It says, I am mass storage." Id. at 24:20–

21 (emphasis added). Dr. Wolfe also explained that an accused product "identifies itself with a USB message where it's saying, I am a USB mass storage class-capable device." 11/1/18 P.M. Tr. (Wolfe) at 11:1–2.

Substantial evidence supports the jury's finding that the accused interface device sends a signal, regardless of the type of the DTRD attached to the interface device, to the host device which signals to the host device that it is a storage device customary in a host device. As explained above, Mr. Zeidman testified that "the interface devices of all of the accused devices signal to the computer that it's a hard drive. It's not a hard drive, but it's signaling to the computer it is a hard drive so the computer will know how to talk to it." 10/31/18 A.M. Tr. (Zeidman) at 59:22–60:1; see also id. at 59:4-8; 59:22-60:1; 60:13-61:7; 11/1/18 P.M. Tr. (Wolfe) at 51:8-11. Although Dr. Wolfe disputes Mr. Zeidman's conclusion, he does not appear to dispute the factual bases for Mr. Zeidman's opinion. For example, Dr. Wolfe acknowledged that the accused products signal they are storage devices, that a CMOS array and microphone are attached to the interface device in the product and that the CMOS array and microphone are not storage devices. 11/1/2018 P.M. Tr. (Wolfe) at 50:15-21, 51:8-11, 53:6-10. The assignment of credibility or weight attributed between the experts is squarely within the province of the jury, and Samsung has not sufficiently shown why the jury's decision should be supplanted. See Ellis v. Weasler Eng'g Inc., 258 F.3d 326, 337 (5th Cir. 2001).

Accordingly, Samsung's motion is **DENIED** on this basis.

3. Simulating a virtual file system to the host

Claims 1 and 17 of the '449 patent both recite "wherein the interface device is arranged for simulating a virtual file system to the host." The Court construed "simulating a virtual file system to the host" to mean "presenting to the host device a file system that emulates the file system of the storage device customary in the host device, even though the emulated file system does not

actually exist on the interface device." See Case No. 6:15-cv-01095-RWS, Docket No. 275 at 38–39 ²

Samsung argues that there was no evidence to support a finding that the accused devices can or do emulate any file system that "does not actually exist on the interface device." Docket No. 329 at 7. Samsung asserts that Papst identified the file system on a removable SD card inserted into the Accused Products as the file system that is not on the interface device. See id. (citing 10/31/18 A.M. Tr. at 74:6–9). Samsung raises two disputes to Papst's theory. Id. First, Samsung argues that the file system on the SD card is not an emulated file system. Id. Second, Samsung argues that an installed SD card necessarily exists "on" the interface device. Id.

On the issue of an emulation, Samsung contends that Papst admits the SD cards have "real," not emulated, file systems. See id. (citing 10/31/18 P.M. Tr. at 15:21–25, 16:15–17). Samsung points to Dr. Wolfe and Mr. Jung's testimony that the accused devices have memory capable of storing image data captured by the device. See id. (citing 10/31/18 A.M. Tr. (Jung) at 8:8–16; 11/1/18 A.M. Tr. (Wolfe) at 127:5–21). Relying on Dr. Wolfe's testimony, Samsung asserts that the file systems of the onboard memory and the removable SD card of the Accused Products are presented separately to the PC. See id. (citing 11/1/18 P.M. Tr. (Wolfe) at 31:16–32:4). According to Samsung, this evidence supports that none of the file systems are emulated, but rather "real" file systems. See id.

On the issue of location, Samsung disputes Papst's theory that the removability of the SD card from the accused products satisfies the limitation that the emulated file system does not actually exist "on" the device. See id. Samsung argues that, "[t]he only way that the real file system on the SD card can be accessed is when the SD card is installed as part of the device." See

² The Court adopted Samsung's proposed construction. See Case No. 6:15-cv-1095, Docket No. 275 at 37.

id. (citing 10/31/18 P.M. Tr. (Zeidman) at 16:19–23). Samsung maintains that an installed SD card in an accused device must necessarily be "on" the interface device according to the claim construction. Id.

Papst responds that it proved each element in the limitation as construed by the Court. Docket No. 339 at 7. Papst's infringement expert, Mr. Zeidman, split the Court's construction into three sections: (a) presenting to the host device a file system; (b) that emulates the file system of the storage device customary in the host device; and (c) even though the emulated file system does not actually exist on the interface device. See 10/31/18 A.M. Tr. (Zeidman) at 74–76. Plaintiff asserts that Mr. Zeidman showed the interface device receives the file system of the SD card and presents it to the host computer. See id. at 74:6–9; 96:21–97:15. Plaintiff also asserts that this file system allows the computer to know where the files, directories, file names and which files are in which directories. See id. at 74:10–13.

For the second section, "emulation," Papst argues it proved that all the Accused Products have removeable SD cards and that, when an SD card is inserted into the Accused Products, the interface device displays a file system emulating the file system of a hard disk. Docket No. 339 at 7 (citing Id. at 75:11–19). Papst points to Mr. Zeidman's testimony that the file system on the SD cards emulates the file system of a hard drive by sending information concerning the physical moving parts of a hard drive despite the SD card not using that technology. Id. Mr. Zeidman explained:

A. So, what's happening is that the file system on these cards have information that point to sectors and blocks of data and have information even about how many heads, magnetic read heads.

This has not – this is just electronics. This is solid-state. There's no moving parts. There's no read head. That doesn't exist.

But the file systems that are used are file systems that talk about read heads. This has magnetic read heads. And it also has sectors physically on the disk. Inside it's

a spinning magnetic disk. And so even though - so, this gives that information because it was designed to look like one of these hard disks.

10/31/18 A.M. Tr. (Zeidman) at 96:22–97:15.

For the third section, Papst argues that it sufficiently proved to the jury that the interface device does not include a removeable SD card. Docket No. 339 at 8. Papst points to numerous statements by Mr. Zeidman asserting that the SD card, when installed, is not "on" the interface device. See 10/31/18 A.M. Tr. (Zeidman) at 74:6–7 ("So, the interface device does not include the SD card that you put in, the memory card."), 74:11–17, 76:1–6 ("the SD card is not part of the interface device . . . [the file system] exists on the SD card, which is not part of the interface device."), 76:9–11 ("the interface device of all the accused devices don't include the SD card. The user puts in the SD card. It's something separate."). Papst also challenges Dr. Wolfe's analysis, asserting that Dr. Wolfe acknowledged his interpretation was not based on the Court's construction. See Docket No. 339 at 9 (citing 11/1/18 PM (Wolfe) at 55:6–16, 56:1–4).

Samsung replies that Papst's infringement and invalidity positions for this limitation are inconsistent. Docket No. 343 at 2. Samsung contends that its prior art Coolpix camera identifies as a hard disk drive, despite containing solid-state flash memory, just as Papst alleges the Accused Products do. Id. at 2–3. Papst replies that its positions are consistent because the emulated file system in the Coolpix camera prior art is on the interface device, whereas the emulated file system of a removeable SD card is not on the accused interface devices. See Docket No. 346 at 3.

Substantial evidence supports the jury's finding that the accused interface device presents to the host device a file system that emulates the file system of the storage device customary in the host device, even though the emulated file system does not actually exist on the interface device. Both of Samsung's arguments, that the file system on the SD card is not an emulated file system

and an installed SD card necessarily exists "on" the interface device, are factual questions properly decided by the jury.

As explained above, Mr. Zeidman testified that the SD card file system includes information relevant to hard drives, such as sectors, blocks and magnetic read heads, despite that information not being relevant to a solid-state drive. See 10/31/18 A.M. Tr. (Zeidman) at 96:21–97:15. Mr. Zeidman concluded that the presented file system was emulating a hard drive because the presented file system was designed for a hard drive. See id. Dr. Wolfe described the emulation limitation as "talking about something that – that is pretending to be there but doesn't really exist." See 11/1/2018 A.M. Tr. (Wolfe) at 127:11–15. According to Dr. Wolfe, the Accused Products could not infringe because:

[they have] real file systems. They present those real file systems to the computer A real file gets created. It has the data from that photograph. It has a file name. It has an entry in the file allocation table, and it's not dependent on your phone. If we take that memory card out and we put it on another device, it's still there. It's completely real.

Id. at 128:9–18. Similarly, Mr. Zeidman testified that "the SD card is not part of the interface device" and that the "interface device is transmitting, it's presenting to the computer a file system that does not exist on the interface device. It exists on the SD card." 10/31/18 A.M. Tr. (Zeidman) at 76:1–6. Dr. Wolfe may disagree with Mr. Zeidman that the presented file system of the removeable SD cards emulates a hard drive and does not exist on the interface device, but the jury was presented with substantial evidence to support Mr. Zeidman's opinion. As the fact-finder, the assignment of credibility or weight attributed between the experts is squarely within the province of the jury, and Samsung has not sufficiently shown why the jury's decision should be supplanted. See Ellis, 258 F.3d at 337.

Accordingly, Samsung's motion is **DENIED** on this basis.

B. Judgment as a Matter of Law on Indirect Patent Infringement

Samsung moves for judgment as a matter of law that Accused Products do not indirectly infringe claims 1 and 17 of the '449 patent because Papst failed to provide substantial evidence for a reasonable jury to conclude that: "(1) Papst's theory of indirect infringement could stand in view of its direct infringement theory; (2) Samsung had the requisite intent to induce or contribute to another's infringement of the claims; (3) Samsung's customers directly infringe either claim; (4) Samsung's products have no substantial noninfringing uses; and (5) Samsung provides a component that is a material part of the invention." Docket No. 329 at 8.

1. Theory of Direct Infringement

Samsung contends that "Papst's theory of direct infringement and the Court's rulings preclude any finding of indirect infringement in this case." Docket No. 329 at 8. Samsung asserts that, because the Court rejected Samsung's argument that claims 1 and 17 require "the actual presence of a removable SD card in the interface device," any infringement would have already occurred at the point of sale regardless of a customer's later use. Id. (citing Docket No. 253 at 2; 10/31/18 A.M. Tr. (Zeidman) at 63:20–25, 64:3–9, 66:8–16, 72:9–13, 73:22–74:1). Thus, pursuant to the Court's order and Papst's theories, Samsung asserts any "theory of indirect infringement based on a user allegedly inserting an SD card has already been addressed by Papst's direct theory as to Samsung." Id. at 9. Samsung argues that "Papst would be fully compensated by any damages awarded based on the manufacture and sale of Samsung's accused products. Such an award would address any alleged damages resulting from any end user's use of the accused products." Id. (citing Glenayre Elec., Inc. v. Jackson, 443 F.3d 851, 860 (Fed. Cir. 2006)). Papst responds that Glenayre prevents double recovery for both direct infringement and indirect infringement. Docket No. 339 at 9. Papst asserts that, unlike in Glenayre, it has not yet collected damages for direct

infringement and therefore a JMOL of noninfringement on indirect infringement is inappropriate.

Id.

Samsung's argument is unpersuasive. As Papst notes, Glenayre involved a patent owner bringing a second suit for indirect infringement after having already collected damages on direct infringement in a first suit. See Glenayre, 443 F.3d at 864. If a patentee has collected actual damages from a manufacturer or seller, and those damages fully compensate the patentee for infringement by users, then the patentee cannot recover damages from users of an infringing product. See id. That is not the situation before the Court and Samsung does not explain why Glenayre supports its argument regarding liability, rather than damages. See Docket No. 343. Samsung fails to support why judgment as a matter of law of no indirect infringement on this basis is appropriate.

Accordingly, Samsung's motion is **DENIED** on this basis.

2. Intent

Samsung argues that Papst failed to prove that Samsung had the requisite intent for indirect infringement under either theory of induced or contributory infringement. See Docket No. 329 at 10. According to Samsung, indirect infringement requires a defendant to have "knowledge of the patent in suit and knowledge of patent infringement." See Commil USA, LLC v. Cisco Sys., Inc., 135 S. Ct. 1920, 1926 (2015). Samsung contends that the knowledge requirement can be met by a showing of either actual knowledge or willful blindness. See Global-Tech Appliances, Inc. v. SEB S.A., 563 U.S. 754, 766 (2011). Samsung argues, however, that the knowledge requirement cannot be met where a defendant forms a belief of noninfringement based upon a reasonable reading of the patent's claims. Docket No. 329 at 11 (citing Commil, 135 S. Ct. at 1928). Samsung asserts that the record "clearly establishes that Samsung had a good-faith belief that its products do not infringe claims 1 and 17." Id. Samsung asserts that no reasonable jury could ignore the

multiple, reasonable noninfringement positions upon which Samsung formed its belief. Id. (citing Docket No. 306 ("11/2/18 A.M. Tr.") (Ma) 24:3–25:8, 30:12–16). Samsung points to the jury's finding of no willful infringement as inconsistent with a finding of knowledge of patent infringement. Id. Samsung argues that the "jury's verdict of no willfulness was a rejection of the notion that Samsung's conduct was egregious or that it acted in disregard of the asserted patent." Id.

Samsung also asserts that Papst did not introduce evidence that Samsung Electronics America, Inc. ("SEA") knew about the '449 patent prior to 2014. Id. Samsung contends that, to the extent Samsung Electronics Co., Ltd.'s ("SEC") knowledge of the '449 patent may be imputed to SEA, then SEC's good-faith belief of noninfringement should also be imputed to SEA. Id.

For induced infringement, Samsung contends that Papst was required to prove that Samsung had "an affirmative intent to cause direct infringement." Id. at 12 (quoting DSU Med. Corp. v. JMS Co. Ltd., 471 F.3d 1293, 1306 (Fed. Cir. 2006)). Samsung argues that the mere description of an infringing mode in a user manual does not satisfy the showing of an affirmative intent to cause direct infringement. Id. (citing Takeda Pharms. U.S.A., Inc. v. West-Ward Pharm. Corp., 785 F.3d 625, 631 (Fed. Cir. 2015)). Samsung asserts that the evidence presented by Papst only relates to instructions found in Samsung's user manual on how to operate the Accused Products, with the allegedly infringing manner merely one of many options. Id. Samsung also asserts that Papst failed to present any evidence that Samsung touted or advertised the allegedly infringing features or benefits of the Accused Products. Id. at 14 (citing 11/1/18 A.M. Tr. (Repice) 72:22–74:8).

Papst responds that "a good faith belief presents a factual question." Docket No. 339 at 10 (quoting Smith & Nephew Inc. v. Arthrex Inc., 603 F. App'x 981, 990 (Fed. Cir. 2015)). Papst

argues that Mr. Ma's testimony regarding Samsung's good-faith belief was considered and properly rejected by the jury. Id. at 11. According to Papst, Mr. Ma failed to explain what analysis was done by Samsung, when Samsung adopted that analysis and who was involved in the process of reaching the noninfringement position, at the time of infringement. Id. Papst asserts that Mr. Ma explained he was, in 2015, the first person at Samsung to review the '449 patent despite Samsung receiving notice of the patent in 2010. Id. (citing 11/2/18 A.M. Tr. (Ma) at 24:3–25:5; PX48). Papst contends that the jury was free to reject Samsung's assertions of "good-faith belief" of noninfringement and did so. Id. Papst dismisses Samsung's argument concerning the inconsistency of the jury's finding of no willful infringement as inapposite to establish law. Id. 11–12 (citing Broadcom v. Qualcomm, 543 F.3d 683, 699 (Fed. Cir. 2008)).

Papst also asserts that substantial evidence supports the jury's finding of indirect infringement. Id. at 12. Papst contends that the record shows both SEA and SEC had knowledge of the Patent as of April 2010 when it received notice from Papst. Id. (citing 11/2/18 A.M. Tr. (Ma) at 24:3–25:5; 45:24–51:20; 52:11–16; 55:20–24; PX48; PX49). Papst argues that Samsung's corporate representative confirmed that Samsung knew, and specifically intended, for its customers to use the Accused Products in an infringing manner. Id. at 12–13 (citing 11/1/18 A.M. Tr. (Repice) at 31:12–17, 44:6–45:20, 46:13–17). Papst points to Samsung's user manuals as additional evidence that Samsung actively induces its customers to infringe. Id. at 13. Papst distinguishes Takeda as a situation where a drug label advised patients to consult a physician, who would then instruct an off-label use of the drug. Id. (citing Takeda, 785 F.3d at 632). Papst argues that, here, Samsung included express instructions in the user manuals and knew that those instructions would result in infringing use. Id. at 14. Lastly, Papst faults Samsung for failing to

obtain an opinion of counsel and asserts that is circumstantial evidence of intent to induce infringement. Id.

In its Reply, Samsung acknowledges that the "record contains some evidence that Samsung knew of the '449 patent and knew that some customers might use USB Mass Storage." Docket No. 343 at 4. Samsung argues, however, that "Papst presented no evidence that Samsung knew that using USB Mass Storage Class mode to transfer photos from a phone to a host computer infringed and presented no evidence that Samsung intended to cause infringement." Id. (emphasis in original). Samsung clarifies that the express jury verdict of nonwillfulness does not compel a finding of no scienter for indirect infringement, but that "the exculpatory verdict is sorely inconsistent with scienter." Id. Samsung also contends that failure to obtain counsel may not be used to prove induced infringement. Id. (citing 35 U.S.C. § 298 ("The failure of an infringer to obtain the advice of counsel . . . may not be used to prove that the accused infringer . . . intended to induce infringement of the patent.")).

Papst replies that Mr. Repice testified that Samsung customers "are instructed" to use and actually use the Accused Products in an infringing manner. Docket No. 346 at 3 (citing 11/1/18 A.M. Tr. (Repice) at 31:12–17; 44:6–45:20; 46:13–17). Papst also reiterates that "a good faith belief presents a factual question," and that Samsung asks the Court to reweigh the evidence on a fact issue. Id. at 4.

Samsung's arguments are unpersuasive. Samsung acknowledges that the "record contains some evidence that Samsung knew of the '449 patent and knew that some customers might use USB Mass Storage." Docket No. 343 at 4. Indeed, Mr. Ma testified that SEC had knowledge of the '449 patent as of April 2010 when it received notice from Papst. See 11/2/18 A.M. Tr. (Ma) at 24:3–25:5. Mr. Repice testified that customers are instructed about how to use USB Mass

Storage mode and that some customer use it. See 11/1/18 A.M. Tr. (Repice) at 31:12–17; 44:6–45:20; 46:13–17. Instead, Samsung contends that it had a good-faith belief of noninfringement and, therefore, did not know of, or intend to cause, infringement. See Docket No. 343 at 3.

The Federal Circuit has held that a dispute as to whether an accused infringer's belief was a good-faith belief presents a question of fact. See Fujitsu Ltd. v. Netgear Inc., 620 F.3d 1321, 1330 (Fed. Cir. 2010); Smith & Nephew Inc. v. Arthrex, Inc., 603 F. App'x 981, 990 (Fed. Cir. 2015); see also Vehicle IP, LLC v. AT&T Mobility LLC, 227 F. Supp. 3d 319, 330 (D. Del. 2016); cf. KangaROOS U.S.A., Inc. v. Caldor, Inc., 778 F.2d 1571, 1573 (Fed. Cir. 1985) ("Good faith, intent to deceive, scienter, [and] honest mistake are all questions of fact."). Therefore, whether Samsung had a good-faith belief of noninfringement is a fact question that was properly decided by the jury. Samsung relies on Mr. Ma's testimony, but Mr. Ma does not explain what analysis Samsung performed from the time it received notice in 2010 to Mr. Ma's evaluation in 2015. See 11/2/18 A.M. Tr. (Ma) at 24:3–25:5; PX48. Further, Mr. Ma confirmed that Samsung did not respond to Papst regarding the Papst's 2010 notice of infringement letter. See id. at 50:14–17.

There is sufficient evidence in the record that a reasonable jury could discount Samsung's assertions of a good-faith belief of noninfringement and conclude that Samsung had knowledge of infringement. See DSU Med., 471 F.3d at 1306. Similarly, based on that evidence and Samsung's admissions that it instructed customers to use USB Mass storage mode and expected some customers would do so (see 11/1/18 A.M. Tr. (Repice) at 31:12–17; 44:6–45:20; 46:13–17), a reasonable jury could find that Samsung had an affirmative intent to cause direct infringement. See DSU Med., 471 F.3d at 1306.

Accordingly, Samsung's motion is **DENIED** on this basis.

3. Direct Infringement by Any Customer

Samsung argues that substantial evidence does not support finding that any customer using the Accused Products in an infringing manner or that Samsung either induces or contributes that customer's direct infringement. Docket No. 329 at 14. Samsung contends that "instructions in a user manual that Papst may rely upon to prove that users are directly infringing are insufficient." Id. (citing Fujitsu, 620 F.3d at 1329). According to Samsung, the user manuals merely show that the Accused Products are capable of the alleged infringement, not evidence of direct infringement. Id.

Papst responds that Mr. Repice, Samsung's representative, testified that Samsung customers are instructed to use, and actually do use, the Accused Products in an infringing manner. See 11/1/18 A.M. Tr. (Repice) at 31:12–17; 44:6–45:20; 46:13–17. Papst contends that Mr. Repice's admission that some of Samsung's customers use USB Mass Storage mode is substantial evidence of direct infringement by Samsung's customers. Id. Papst points to additional evidence of sales and surveys of use of the infringing Accused Products as well as its damages expert, Mr. Benoit's, testimony regarding the sales and surveys. See Docket No. 339 at 15 (citing PX61, PX62, PX63, PX65, PX69, PX117; 10/31/18 P.M. Tr. (Benoit) at 67:6–110:22. For example, Mr. Benoit testified that he relied upon those surveys as "market studies that reflected that level of satisfaction and importance from use of the technology" and "to determine how much people enjoyed or were satisfied as a result of using the technology to transfer photos." See 10/31/18 P.M. Tr. (Benoit) at 88:9–13. Papst also notes that, unlike in Fujitsu, there is no evidence that the infringing mode in this case was disabled by default. See id.

Samsung replies that Papst failed to identify how many of the sales correspond to infringing use for purposes of damages, as many customers may never use USB or USB Mass Storage Class mode to transfer photos. Docket No. 343 at 4–5. Samsung contests that, over its objection, "the

jury was asked one question about both direct and indirect infringement—and awarded one lump sum for both." Id. at 5. Samsung contends that this failure of proof demonstrates the damages verdict for indirect infringement is not supported by substantial evidence. Id.

Papst replies that Samsung waived its apportionment argument by not including it in the opening JMOL. Docket No. 346 at 4. Papst also argues that "Samsung cites no cases requiring evidence of the percentage of the user base that allege[dly] infringes to support damages for indirect infringement of an apparatus claim requiring capability." Id. at 5. Papst asserts that Mr. Benoit's testimony nonetheless properly accounts for customer use to provide substantial evidence to support the damages verdict.

Substantial evidence, including Mr. Repice's admissions and Samsung's user manuals, support a finding of direct infringement by Samsung's customers. To the extent Papst may have failed to properly account for customer use in relation to damages, the Court appropriately addresses that issue in the damages section below.

Accordingly, Samsung's motion is **DENIED** on this basis.

4. Substantial Noninfringing Uses

Samsung argues that substantial evidence does not support a finding that the accused devices have no substantial noninfringing uses. Docket No. 329 at 15. Samsung asserts that the components involved in the alleged infringement in this case perform functions that are not infringing. See id. (citing In re Bill of Lading Transmission and Processing Sys. Patent Litig., 681 F.3d 1323, 1337 (Fed. Cir. 2012)). For example, the processor in each accused product "is involved with almost every action of the device not merely the accused file transfer." Id. (citing Docket No. 300 ("10/30/18 P.M. Tr.") (Tasler) 112:8–1; 10/31/18 A.M. Tr. (Jung) 10:3–13). Similarly, the memory can store more than just captured images. See 11/1/18 A.M. Tr. (Repice) 79:8–12. The USB port can be used for charging and for transferring non-image files such as

PDFs downloaded from the Internet. See 11/1/18 A.M. Tr. (Repice) 44:16–22; see, e.g., PX586 at 4. Further, the exact same components are used for noninfringing file transfer protocols, such as Still Image Class. See 11/1/18 P.M. Tr. (Wolfe) 43:13–44:12.

Papst responds that Samsung's argument is flawed because: "(1) it is restricted to the components separately rather a combination of components; and (2) it ignores the software components of the file transfer apparatus that use mass storage mode." See Docket No. 339 at 16 (citing Cross Med. Prods., v. Medtronic Sofamor Danek, Inc., 424 F.3d 1293, 1312 (Fed. Cir. 2005); i4i Ltd. Partnership v. Microsoft, 598 F.3d 831, 849 (Fed. Cir. 2010)). Papst asserts it provided substantial evidence that Samsung "knew that the combination for which its components were especially made was both patented and infringing and that Samsung's components have no substantial non-infringing uses." Id. (internal quotations removed). Papst points to Mr. Zeidman's testimony that the combination of components, including the software, did not have noninfringing uses. See id. (citing 10/31/18 A.M. Tr. (Zeidman) at 79:12–23). Papst dismisses Samsung's argument that the same components are used for noninfringing purposes, for instance Still Image Class transfers, as excluding software components that require the use of Mass Storage Class mode transfers if the feature is enabled. Id. at 17.

Samsung replies that the Still Image Class mode software component, which Papst asserts is different from the software used in the infringing USB Mass Storage Class mode, resides on the host computer. Docket No. 343 at 6. Samsung asserts that the software or drivers that control the transfer over USB resides on the host computer, which Samsung does not control or sell. Id. Samsung contends that such software cannot form the basis for contributory infringement by Samsung. Id. Papst replies that Samsung's assertion regarding the location of the software component is unsupported and uncited. Docket No. 346 at 6. Papst asserts that Mr. Zeidman's

testimony is that the relevant software resides on the interface device and that the testimony is unrebutted. Id. 6–7.

Substantial evidence in the record supports the jury's finding of contributory infringement. Mr. Zeidman presented testimony regarding lack of substantial noninfringing uses for the combination of hardware and software. See 10/31/18 A.M. Tr. (Zeidman) at 79:12–23 ("The question is the method that infringes, in this case, the CMOS array, the microphone, the connection to the processor, the software that's being [used] to control the transfer from the CMOS array over USB to the computer, that structure, can that do anything else. And that structure cannot do anything else. That structure is designed to transfer files to your computer in the way that's described by the patent."). Conversely, Samsung fails to show where the record supports its assertion that the relevant software, or at least the software Mr. Zeidman references, is not found in the Accused Products. Even otherwise, in Fujitsu, the Federal Circuit stated that, "[w]hether a user activates [infringing features] is relevant to the extent of direct infringement, but does not establish substantial noninfringing uses." Fujitsu, 620 F.3d at 1331.

Here, the testimony and evidence support that the Accused Products include a specific combination of hardware components and software components that cannot do anything other than practice the infringing USB Mass Storage Class transfer. Whether the Accused Products have substantial noninfringing uses is a fact question that was properly considered by the jury. Samsung arguments for disturbing the jury's factual findings are unpersuasive.

Accordingly, Samsung's motion is **DENIED** on this basis.

5. Identifying the Component

Samsung argues that Papst failed to identify the specific "component" relevant to contributory infringement. Docket No. 329 at 16. Samsung asserts that the Accused Products cannot be considered a component of the patented invention because Papst's theory is that the

Accused Products themselves directly infringe. Id. (citing HSM Portfolio LLC v. Fujitsu Ltd., No. 11-770-RGA, 2014 WL 4468088, at *1 (D. Del. Sept. 9, 2014). Papst responds that, as explained above, the combination of hardware and software components form the material part of the invention. Docket No. 339 at 17 (citing 10/31/18 A.M. Tr. (Zeidman) at 79:12–23).

Samsung's argument is unpersuasive. Substantial evidence supports Papst's identification of what it contends is the combination of components for purposes of contributory infringement.

Accordingly, Samsung's motion is **DENIED** on this basis.

C. Judgment as a Matter of Law on Invalidity

Samsung moves for judgment as a matter of law that the '449 patent is invalid because "(1) they are rendered obvious over the Kawaguchi/Schmidt/Murata prior art combination; and (2) they are both anticipated by and obvious over the Coolpix system." See Docket No. 329 at 16.

Anticipation under 35 U.S.C. § 102 is a factual question that requires "a prior art reference disclose every limitation of the claimed invention, either explicitly or inherently." Liebel-Flarsheim Co. v. Medrad, Inc., 481 F.3d 1371, 1381 (Fed. Cir. 2007). A patent is invalid for obviousness "if 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." Wyers v. Master Lock Co., 616 F.3d 1231, 1237 (Fed. Cir. 2010) (quoting 35 U.S.C. § 103(a)). Obviousness is a question of law based on underlying findings of fact," including: "(1) the scope and content of the prior art, (2) the differences between the prior art and the claims at issue, (3) the level of ordinary skill in the art, and (4) any relevant secondary considerations." Id. (citing Graham v. John Deere Co., 383 U.S. 1, 17–18 (1966)). "A party seeking to invalidate a patent on the basis of obviousness must demonstrate by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed

invention, and that the skilled artisan would have had a reasonable expectation of success in doing so." Kinetic Concepts, Inc. v. Smith & Nephew, Inc., 688 F.3d 1342, 1360 (Fed. Cir. 2012) (internal quotations omitted).

The burden on a defendant at this stage is "doubly high: it must show that no reasonable jury could have failed to conclude that [invalidity] had been established by clear and convincing evidence." Boehringer Ingelheim Vetmedica v. Shering-Plough, 320 F.3d 1339, 1353 (Fed. Cir. 2003). For the reasons explained below, Defendant's request is **DENIED**.

1. Kawaguchi/Schmidt/Murata

Samsung asserts that it presented substantial, clear and convincing evidence establishing that claims 1 and 17 are invalid as obvious over the combination of Kawaguchi, Schmidt and Murata ("Kawaguchi Combination"). See Docket No. 329 at 17 (citing 11/2/18 A.M. Tr. 120:11–130:18, 131:6–12; DTX21; DTX22; DTX19; DTX36). Samsung argues that evidence for this ground of invalidity stands unimpeached and unrebutted because Papst chose not to cross-examine Samsung's invalidity expert, Dr. Robins, or to present rebuttal testimony regarding this combination of prior art. See id. (citing Docket No. 307 ("11/2/18 P.M. Tr.") (Robins) 46:25–47:1, 47:14–16; 11/2/18 P.M. Tr. 72:15–73:14; 90:15–23). Samsung contends that substantial evidence does not support the jury's implied findings of fact or the conclusion of validity. Id. Samsung also contends that Papst failed to present evidence of secondary considerations of nonobviousness, and even if it had, that such evidence would not overcome the strong prima facie case that Samsung presented. Id. at 25.

Papst responds that, "[b]ecause 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." Docket No. 339 at 18 (quoting Core

Wireless Licensing S.A.R.L. v. LG Elecs., Inc., 880 F.3d 1356, 1364 (Fed. Cir. 2018) (internal quotations removed)). Papst argues that it was not required to present any affirmative rebuttal evidence because the jury was entitled to credit or reject Samsung's evidence. Id. at 19 (citing Core Wireless, 880 F.3d at 1364; St. Jude Med. v. Access Closure, 729 F.3d 1369, 1381–82 (Fed. Cir. 2013)). Papst also argues that, although it did not present affirmative rebuttal evidence, it did impeach the credibility and weight of Samsung's evidence. Id. at 19–20. For example, Papst points to the cross-examination of Dr. Robins where he purportedly failed to provide substantive answers to Papst's questions about the Court's claim construction. Id. at 20 (citing 11/02/18 A.M. Tr. (Robins) at 144:5–13).

Papst also submits at least three reasons the evidence supports the jury's conclusions. First, Papst argues that there was no clear and convincing evidence of motivation to combine because Dr. Robins's testimony failed to show that a POSITA would have combine the references, could have done so with reasonable success and would have been motivated to do so at the time of the invention. Id. at 27–31 (citing 11/02/18 A.M. Tr. (Robins) at 127:2–128:2, 129:15–130:1). Second, Papst contends there was no evidence that the combination presents an "emulated file system that does not exist on the interface device." Id. at 34–35. Third, Papst submits there was no evidence that the Kawaguchi combination sends a signal identifying the interface device as a customary storage device. Id. at 35–37.

Samsung replies that the inventor, Mr. Tasler, admitted to a motivation to combine because he testified to consulting Schmidt when developing the original invention. Docket No. 343 at 7 (citing 10/30/18 P.M. Tr. (Tasler) 81:19–82:6, 102:12–17). According to Samsung, that represents "a real-world example of an artisan near the time of the invention applying Schmidt's teachings as Samsung and Dr. Robins said that a POSITA would have." Id. Samsung also disputes Papst's

contention that Dr. Robins failed to apply the Court's claim construction because Dr. Robins testified the Court's claim construction language was "implicit in [his] stating . . . that the hard drive is being simulated or emulated" and "maybe even explicit in what [he] said earlier." Id. at 8 (citing 11/2/18 A.M. Tr. (Robins) 144:14–145:8).

Papst replies that Dr. Robins merely testified that a POSITA could combine Schmidt with Kawaguchi "if" she were motivated to do so, but the testimony supporting any motivation suffers from hindsight bias. Docket No. 346 at 8 (citing 11/2/18 A.M. Tr. (Robins) at 126:20–22, 129:13–14, 129:24–130:1, 130:12–18). Papst also argues that Samsung misrepresents Mr. Tasler's testimony. Id. at 9. Papst contends that Mr. Tasler explained he consulted Schmidt but found that, because following Schmidt led to failure, his invention was to do the opposite of what Schmidt disclosed. Id.; see 10/30/18 P.M. Tr. (Tasler) at 81:7–82:14, 82:20–83:10, 84:5–85:23.

A reasonable jury, based on the evidence in the record, could find that Samsung failed to establish by clear and convincing evidence that claims 1 and 17 of the '449 patent are invalid. Samsung's primary argument appears to be that it must have met its burden because Papst failed to cross-examine Dr. Robins specifically about the Kawaguchi combination or present its own rebuttal expert. That argument is unpersuasive, at least because Papst cross-examined Dr. Robins on the claim construction applied to the Kawaguchi combination and challenged his testimony regarding a motivation to combine the references. Based on the full evidence in the record, a reasonable jury could find that Samsung did not meet its burden.

Regarding claim construction, the Court does not find that Dr. Robins necessarily ignored the Court's construction of "simulating a virtual file system to the host" as "presenting to the host device a file system that emulates the file system of the storage device customary in the host device, even though the emulated file system does not actually exist on the interface device." Instead,

Papst has shown that Dr. Robins failed to present the Court's construction to the jury and, in response to Papst's cross-examination, exhibited some confusion over the Court's construction as compared to the claim language. See 11/02/18 A.M. Tr. (Robins) at 144:5–13. Specifically, the Court's construction includes the requirement, "even though the emulated file system does not actually exist on the interface device." During cross-examination, Papst introduced a line of questioning asking Dr. Robins if there was a significant difference between his presentation and the Court's construction, for example:

Q. But the biggest difference is that even under the construction, the FAT file system that's presented to the user on the host device can't also exist on the interface device of the COOLPIX camera. That's correct?

A. I guess I'll have to think about that one. But I think, again, the – the important part or the operative gist of this is that there is a virtual file system that's presented to the host and even though it's emulated and doesn't actually exist, the host believes it is from this emulation.

11/02/18 A.M. Tr. (Robins) at 144:5–9.³ As Samsung noted, Dr. Robins testified that he felt he "respected the Court's claim constructions" and that the Court's language was "implicit or maybe even explicit in what [he] said earlier." Id. at 144:14–145:8. The Court does not find that Dr. Robins ignored the Court's construction, but his presentation and answers during cross-examination present sufficient support that a jury could reasonably question his testimony under the clear and convincing standard.

Regarding motivation to combine, sufficient evidence in the record supports the jury's finding of no invalidity. Samsung points to Dr. Robins testimony that that a POSITA would have consulted a SCSI reference book, such as Schmidt, to learn more about SCSI. See 11/2/18 A.M. (Robins) at 122:6–12; 127:15–20. However, the context for Dr. Robins's statements raise

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³ Although this specific question related to the COOLPIX prior art, the general line of questioning concerned Dr. Robins' presentation, which also included the Kawaguchi combination.

concerns over hindsight bias. Dr. Robins was asked, "if a person of ordinary skill in the art was having a little bit of trouble here on this element, and they needed a little more information about SCSI, where would they go?" Id. at 127:15–18 (emphasis added). Dr. Robins answered that a POSITA "would go to a reference, such as this book that we talked about earlier, a dictionary for the SCSI language." Id. at 127:19–20. Similarly, for the Murata reference, Dr. Robins answered that "if a practitioner wanted to know more details about how you would fake the computer into believing you are a hard disk, it would go to another – yet another source that does that, and Murata would be exactly such a source." Id. at 129:17-23. Samsung's evidence of a motivation to combine, as presented to the jury, improperly framed the purported motivation through the elements of the claimed invention. See Arctic Cat Inc. v. Bombardier Recreational Products Inc., 876 F.3d 1350, 1359–1360 (Fed. Cir. 2017); In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006) ("In considering motivation in the obviousness analysis, the problem examined is not the specific problem solved by the invention but the general problem that confronted the inventor before the invention was made."); Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH, 139 F.3d 877, 881 (Fed. Cir. 1998) ("Defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness."). Dr. Robins explained why a POSITA could, and might, combine the references, but he did not establish by clear and convincing evidence that a POSITA would combine the references in light of the problem facing the inventor. See id.

Mr. Tasler's testimony also appears to challenge Dr. Robins's opinions. As an initial matter, the Court notes that Mr. Tasler was not presented at trial as an expert and did not present expert testimony. See Docket No. 378 at 43:4–9. Accordingly, Mr. Tasler's testimony should not be considered expert opinion on what a POSITA would have thought, but rather personal testimony regarding his experience in developing the invention underlying the '449 patent. See Docket No.

308 ("11/5/18 A.M. Tr.") 37:15–38:13 (removing secondary consideration instructions). To the extent Mr. Tasler's lay testimony is relevant to the question of motivation to combine, as Samsung submits, his testimony shows not only motivation to combine but suggests failure in doing so. Mr. Tasler testified that:

A. Well, I needed to learn first on how to formulate an answer, kind of get the spelling right. And once I had done this, this – once again, this DSP here just answered as was specified by the SCSI. I – I was using a book back then telling me about the SCSI protocol and all the SCSI definitions. And this book told me on how to – to allow the DSP to operate in a way that it was answering that question, what type of device are you. It answered: I am a processor device.

10/30/18 P.M. Tr. (Tasler) at 81:23–82:4 However, Mr. Tasler also testified that when he followed the protocol and definitions in the SCSI book:

It asked me, what type of device are you. I answered, I am a processor device. And that was basically it. It just ignored me from the time – from that point in time . . . So, I tried to push data in a different – many different ways towards the PC. But really, nothing happened.

Id. at 82:22–83:2. Proving obviousness includes showing that "the skilled artisan would have had a reasonable expectation of success in doing so." See Kinetic Concepts, 688 F.3d at 1360. If the jury may properly consider Mr. Tasler's testimony acknowledging a motivation to combine Kawaguchi with Schmidt, the jury may similarly examine his testimony describing his experience that such a combination failed. Whether a reasonable expectation of success exists is yet another factual question underlying the jury's verdict. PAR Pharm., Inc. v. TWI Pharm., Inc., 773 F.3d 1186, 1196 (Fed. Cir. 2014).

The jury, in this case, determined that Samsung failed to prove by clear and convincing evidence that the claims at issue would have been obvious to a skilled artisan. A reasonable jury could have found that a skilled artisan would not have been motivated to combine Kawaguchi with Schmidt and/or Murata. A reasonable jury could also have found that a POSITA would not have reasonable expectation of success in such a combination. Both factual findings are supported by

substantial evidence. Because substantial evidence supports the jury's factual findings, Samsung has failed to show it is entitled to judgment as a matter of law on invalidity over the Kawaguchi/Schmidt/Murata combination.

Accordingly, Samsung's motion is **DENIED** on this basis.

2. Coolpix System

Samsung asserts that it presented substantial, clear and convincing evidence establishing that claims 1 and 17 are invalid as anticipated by, and obvious over, the Coolpix E 100 camera system ("Coolpix"). See Docket No. 329 at 29. At trial, Samsung introduced physical samples of the Coolpix E 100 device, an explanatory brochure, a user's manual, and detailed testimony from Dr. Robins regarding the features and use of the Coolpix camera, including a live demonstration of the product. See id. Samsung argues that evidence stands unimpeached and unrebutted because Papst chose not to present rebuttal testimony with their own invalidity expert. See id. at 30–31 (citing evidence). Samsung contends that substantial evidence does not support the jury's implied findings of fact or the conclusion of validity because "although Papst cross-examined Dr. Robins regarding the operation of the processor of the Coolpix camera and its simulation of a virtual file system, that cross-examination failed to undermine the clear-and-convincing evidence that Coolpix anticipated the asserted claims." Id. at 32.

On obviousness, Samsung argues that "the jury's implied findings of fact on the Graham factors are not supported by substantial evidence." Id. at 33. Samsung asserts that the evidence showed the Coolpix system discloses every element of claims 1 and 17. See id. Samsung contends Dr. Robins explained a POSITA would have been motivated to fill any gaps needed to make Coolpix, which discloses using a standard hard disk driver to access a simulated hard drive, function as disclosed. See id. (citing DTX80-1; DTX84-1; DTX522-47; 11/2/18 A.M. Tr. (Robins) 118:16–20, 119:19–120:6). Samsung asserts that, to the extent the Coolpix system does

not expressly disclose how to simulate a virtual file system, it would have been obvious to a POSITA that simulating a virtual file system includes emulating a hard drive with a file allocation table and directory structure. See id. (citing same; KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 419 (2007).

Papst responds that Dr. Robins's direct testimony failed to show that the emulated file system presented to the host device by Coolpix "does not actually exist on the interface device," as required by the Court's construction. See Docket No. 339 at 21 (citing 11/02/18 A.M. Tr. (Robins) at 114:24–117:2, 118:10–119:15, 145:9–15). Papst asserts that on cross-examination, Dr. Robins admitted that the emulated file system presented by Coolpix does actually exist on the interface device. See id. According to Papst, Dr. Robins admitted that Coolpix (1) presents a FAT file system to the host device (11/02/18 A.M. Tr. (Robins) at 135:2–20); (2) stores photos taken by the camera in a FAT file system on the device's flash memory (11/02/18 A.M. Tr. (Robins) at 136:11–16, 137:8–23, 139:11–23, 140:1–20) and (3) includes flash memory as part of the interface device (11/02/18 A.M. Tr. (Robins) at 141:7–16). See id. Papst argues that Coolpix therefore cannot not satisfy at least the emulation element of claims 1 and 17 because the emulated file system presented to the host device (i.e. FAT file system) actually exists on the Coolpix's interface device. Id.

Papst also argues that Dr. Robins's testimony failed to demonstrate that Coolpix communicates with a host device by means of a driver for the storage device customary in a hard drive. Id. at 23. Papst challenges Dr. Robins's courtroom demonstration where apparently, in contrast to Dr. Robins's testimony that no driver installation was necessary, the Windows 95 software displayed a popup indicating it searched for, and found, an updated driver. See id. (citing 11/02/18 P.M. Tr. (Robins) at 64:15–2, 98:23–99:3, DTX79-020, DTX79-021). Papst also points

to the purported date of the driver, March 6, 1997, as two days after the time of invention. Accordingly, Papst argues that Dr. Robins failed to present evidence that the Coolpix was capable of using non-updated drivers at the time it was sold before the date of invention. See id. at 23–26. Regarding obviousness, Papst asserts that Dr. Robins's testimony regarding modifying the Coolpix in the manner claimed by the '449 patent is vague and conclusory. See id. at 25. Papst asserts that the evidence does not explain how or why a POSITA would be motivated to modify Coolpix to cure the deficiencies described by Papst. Papst also contends, as it did for the Kawaguchi combination, that Dr. Robins was sufficiently impeached for the jury to reject the credibility and weight of his testimony, particularly for his alleged failure to apply the Court's construction. See id. at 26 (citing 11/02/18 A.M. Tr. (Robins) at 144:5–13).

A reasonable jury, based on the evidence in the record, could find that Samsung failed to establish by clear and convincing evidence that claims 1 and 17 of the '449 patent are invalid. For example, the claims require communication between the host device and the interface device by means of the driver for the storage device customary in a host device. According to Dr. Robins, his trial demonstration demoed the Coolpix connecting to a PC without need to install a driver. See 11/02/18 A.M. Tr. (Robins) at 151:8–10. When challenged that the demo appeared to show installing a driver after Coolpix was plugged into a computer, Dr. Robins testified that, "[w]hichver driver it was, it was already part of the operating system, and it was there before we plugged in the camera, and so no driver had to be installed." Id. at 151:25–152:2. However, the attributed date for the driver used during the demonstration appears to be March 6, 1997, two days after the relevant priority date. See DTX79-029. The jury was entitled to credit or reject Dr. Robins's assertions that the Coolpix could communicate with a host computer using a driver for the storage device customary in the computer available before the date of invention. Also, for similar reasons

as explained above for the Kawaguchi combination, there is sufficient support that a jury could reasonably question the credibility or weight of Dr. Robins's testimony based on his testimony regarding claim construction.

Regarding obviousness, Dr. Robins presented limited testimony regarding motivation to combine. Dr. Robins testified that a POSITA would have been motivated to modify the Coolpix's interface device to emulate the file system of a hard disk as part of carrying out its "charade." 11/2/18 A.M. Tr. at 144:22–145:5. However, as explained above, the jury was free to credit or reject Dr. Robins's testimony. See supra Section I.C.1 That includes his summary opinions that a POSITA would have been motivated to modify Coolpix to satisfy any missing elements, particularly the customary driver and emulation elements. That also includes Dr. Robins's opinions that a POSITA could have reasonably expected success in doing so.

Therefore, based on the full evidence in the record, a reasonable jury could find that Samsung did not meet its burden to prove, by clear and convincing evidence, that claims 1 and 17 of the '449 patent are invalid. Accordingly, Samsung's motion is **DENIED** on this basis.

3. Collateral Estoppel

Samsung argues that collateral estoppel bars Papst's arguments regarding invalidity such that judgment as a matter of law should be granted that the '449 patent is invalid. See Docket No. 357 at 1. Samsung asserts that the PTAB's FWD in separate IPRs held claims of the '746 and '144 unpatentable as obvious over Kawaguchi. Id. at 2. Samsung argues that the PTAB rejected the invalidity arguments raised by Papst in the post-trial briefing. Id. Because Papst chose to dismiss its appeals, Samsung contends that the IPRs are final decisions that preclude Papst from raising any arguments it lost at the PTAB. Id.

Papst counters that Samsung chose not file an IPR against the '449 patent and rejected a pretrial stay request by Papst for the '449 patent. See Docket No. 359 at 1. Papst also argues that collateral estoppel should not apply because the PTAB applies a lower burden of proof for invalidity than in this case, collateral estoppel does not apply to issues developed through trial and decided by a jury, the Federal Circuit has already rejected estoppel against the '399 patent based on similar arguments from Samsung and Samsung has failed to demonstrate the legal requirements for applying collateral estoppel. See id.

In a patent case, the law of the regional circuit determines "the general procedural question of whether issue preclusion applies," whereas Federal Circuit precedent governs "questions involving substantive issues of patent law." Soverain Software LLC v. Victoria's Secret Direct Brand Mgmt., LLC, 778 F.3d 1311, 1314 (Fed. Cir. 2015). Under Fifth Circuit law, collateral estoppel requires that: (1) the issue in the current litigation is identical to the one in the prior action; (2) the issue was fully and vigorously litigated in the prior action; (3) the determination of the issue in the prior action was necessary to the judgment in that prior action and (4) there are no special circumstances that would render estoppel inappropriate or unfair. State Farm Mut. Auto. Ins. Co. v. Logisticare Solutions, 751 F.3d 684, 689 (5th Cir. 2014); see also Soverain, 778 F.3d at 1314.

The Federal Circuit has explained that "[c]omplete identity of claims is not required to satisfy the identity-of-issues requirement for claim preclusion." See Soverain, 778 F.3d at 1319; Ohio Willow Wood Co. v. Alps S., LLC, 735 F.3d 1333, 1342 (Fed. Cir. 2013) ("Our precedent does not limit collateral estoppel to patent claims that are identical. Rather, it is the identity of the issues that were litigated that determines whether collateral estoppel should apply."). Instead, "[i]f the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity, collateral estoppel applies." Ohio Willow Wood, 735

F.3d at 1342 (emphasis added); cf. MaxLinear, Inc. v. CF CRESPE LLC, 880 F.3d 1373, 1376 (Fed. Cir. 2018) (holding that the PTAB may apply collateral estoppel to unadjudicated dependent claims where the adjudicated independent claim was found unpatentable in a prior IPR proceeding). A final judgment from the PTAB on the invalidity of a patent claim has an issue-preclusive effect on any pending actions involving that patent. See XY, LLC v. Trans Ova Genetics, 890 F.3d 1282, 1294 (Fed. Cir. 2018); cf. B&B Hardware, Inc. v. Hargis Indus., Inc., 135 S. Ct. 1293, 1303 (2015); MaxLinear, 880 F.3d at 1373.

Samsung contends that PTAB decisions can have a preclusive effect in a district court on unadjudicated claims that do not "materially alter the question of invalidity," even considering the differing burdens of proof. See Docket No. 357 at 4–5. The Federal Circuit does not appear to have directly ruled on the specific circumstances in this case. When a claim is invalidated at the PTAB, and that decision is made final, the cancellation of the claim carries preclusive effect in a co-pending litigation because the cause of action is extinguished. See, e.g., Fresenius USA, Inc. v. Baxter Int'l, Inc., 721 F.3d 1330, 1344-45 (Fed. Cir. 2013); XY, LLC v. Trans Ova Genetics, 890 F.3d 1282, 1294 (Fed. Cir. 2018) ("[W]e need not address Trans Ova's invalidity arguments as to the Freezing Patent claims in view of our affirmance today in a separate appeal invalidating these same claims, which collaterally estops XY from asserting the patent in any further proceedings."). In the cases addressing the applicability of collateral estoppel to unadjudicated claims, the burden of proof has been the same. See, e.g, Ohio Willow Wood, 735 F.3d at 1341 (finding preclusive effect of summary judgment of invalidity in a later district court case); Soverain, 778 F.3d at 1313–14 (finding preclusive effect of jury verdict of invalidity in a later district court case); see also Blonder-Tongue Labs., Inc. v. Univ. of Illinois Found., 402 U.S. 313, 314 (1971); MaxLinear, 880 F.3d at 1373 (finding preclusive effect from an IPR FWD in another IPR); Papst Licensing GMBH & Co. KG v. Samsung Elecs. Am., Inc., 924 F.3d 1243, 1253 (Fed. Cir. 2019) (finding preclusive effect from voluntarily dismissed IPR appeals in co-pending IPR appeals).

The Court is not persuaded that issue preclusion should apply in this case. The parties do not present, and the Court has not found, any binding precedent addressing whether a finding of invalidity under the preponderance of the evidence standard in an IPR collaterally estops invalidity arguments for separate, unadjudicated claims under the clear and convincing standard in a district court. The Supreme Court in B&B Hardware noted that the Restatement standards allow for some "well-known" exceptions to issue preclusion. See 135 S. Ct. at 1303, 1309–10; see Papst, 924 F.3d at 1251 (explaining same). One such exception is when the party seeking preclusion "has a significantly heavier burden than he had in the first action." Restatement (Second) of Judgments § 28(4) (1982); see also 18 Charles Alan Wright & Arthur R. Miller, Federal Practice & Procedure § 4422 (3d ed. 1998) ("[A] party who has carried the burden of establishing an issue by a preponderance of the evidence is not entitled to assert preclusion in a later action that requires proof of the same issue by a higher standard."). But see Fellowes Inc. v. ACCO Brands Corp., 2019 WL 1762910, at *6 (N.D. Ill. Apr. 22, 2019) (finding opposite but for same claims); Intellectual Ventures Iv. Lenovo Grp., 370 F. Supp. 3d 251, 256 (D. Mass. Apr. 4, 2019) (applying findings of invalidity for independent claims to their dependent claims in the same patent).

Nonetheless, even accepting Samsung's argument that collateral estoppel could apply, Samsung has failed to show that it does apply and would require judgment as a matter of law of invalidity. The invalidity issues in this case are not identical and were not actually litigated in the '746 and '144 patents' FWDs. For example, Samsung relied on Murata for the emulated file system limitations at trial (see 11/2/18 A.M. (Robins) at 128:20–129:14), but Murata was not

before of the IPRs. See Finjan v. Sophos, 244 F. Supp.3d 1016, 1032 (N.D. Cal. 2017). Further, the portions of the IPRs Samsung references concern prior art other than Kawaguchi, thus cutting against Samsung's argument that the presence of Kawaguchi as a primary reference gives the IPRs carry preclusive effect m. See, e.g., Docket No. 357-4 at 52 (citing MS-DOS Encyclopedia); '746 FWD-1211 at 24 (same). Considering the different claim constructions and prior art combinations used, Samsung has not sufficiently established that the issues in this case were identical to, and actually litigated in, the '746 and '144 IPRs.

Accordingly, Samsung's motion is **DENIED** on this basis.

D. Motion for a New Trial

Samsung presents three primary arguments for a new trial on issues of liability. Docket No. 329 at 34–40. Regarding indirect infringement, Samsung argues that it should have been allowed to present evidence regarding the good-faith basis for its belief of noninfringement, including its favorable MDL litigation rulings. Docket No. 329 at 34. Regarding invalidity, Samsung asserts that Dr. Robins's testimony regarding the '449 patent specification was improperly excluded as a comparison of the preferred embodiment to the prior art as opposed to evidence of a POSITA's understanding in light of the specification. Id. at 38. Regarding jury instructions, Samsung argues that the Court erred in rejecting its proposed instructions concerning the claim constructions and the "capability" infringe. Id. at 40.

The Court finds that, to the extent any objections were not raised at trial, such objections are now waived, and where the Court addressed such objection, no prejudice ensued. Regarding indirect infringement, Samsung argued pretrial that the MDL claim constructions and rulings supported its motion for bifurcation and opposition to motion in limine No. 8. See Docket No. 161. The Court granted Samsung's request for bifurcation as to willfulness, but denied the request as to indirect infringement. See Docket No 231 at 2. The Court explained:

Samsung has not shown, however, why indirect infringement should also be bifurcated or explained how its reliance on the rulings from the MDL affects the scienter requirement for indirect infringement. Moreover, it is unclear to the Court how Samsung believes damages for indirect infringement would be determined by the jury if indirect infringement was bifurcated from the liability and damages phase of the trial.

Id. at 2–3. Samsung fails to raise any concerns that the Court had not considered when weighing the "probative value to Samsung of the rulings in the MDL in proving its good-faith belief of noninfringement and state-of-mind defense [to] the high risk of prejudice to Papst and confusion to the jury if evidence of the MDL was presented during the liability and damages phase." Id. at 2. Further, Samsung was not prevented from presenting evidence supporting the purported good-faith basis and belief of noninfringement, but rather, prevented from using any specific MDL order or testimony. Accordingly, Samsung has not shown sufficient prejudice or error warranting a new trial on this basis.

Regarding invalidity, the jury's verdict of no invalidity is not against the great weight of the evidence, as explained above. See supra Section I.C. Further, Samsung's proposed questioning of Dr. Robins was properly excluded for improperly comparing Coolpix to embodiments in the specification of the Patent. Samsung argues that the "line of questioning did not require Dr. Robins to compare the preferred embodiment to the prior art, as Papst argued, but instead related to a POSITA's understanding in light of the specification." Docket No. 329 at 38–39. However, Samsung's counsel explained during the sidebar that the questioning was to "talk about the specification and what it requires And then the final question would be so all of the parts of the specification for Mr. Tasler's device are on the device just like the COOLPIX I'm trying to tie in the fact that in this specification the virtual file system is on, and as it is with the COOLPIX." 11/2/18 A.M. Tr. (Robins) at 39:6–7, 39:13–15, 40:19–21. Based on Samsung's explanation regarding the specific line of questioning, Samsung has not demonstrated that how the

Court erred in excluding testimony intended to compare the prior art to a specific embodiment. To the extent Samsung's line of questioning related to claim construction, Samsung was not categorically excluded from eliciting testimony. See, e.g., supra Section I.C.1 (discussing claim construction for "simulating a virtual file system" and the relationship between the claim language and the Court's construction). Accordingly, Samsung has not shown sufficient prejudice or error warranting a new trial on this basis.

Regarding jury instructions, Samsung fails to show how the Court erred in in deciding jury instruction issues or how such errors prejudiced Samsung. See Docket No. 329 at 40. Samsung was provided a full opportunity to argue its claim construction positions, which the Court duly considered and ruled upon. See Case No. 6:15-cv-01095-RWS, Docket No. 275. Samsung fails to show how the jury instructions themselves, independent of the underlying claim constructions, were improper. Accordingly, Samsung has not shown sufficient prejudice or error warranting a new trial on this basis.

The Court finds that Papst presented evidence consistent with its infringement and invalidity positions. See supra Sections I.A and I.B. Samsung has not shown error in the Court's jury instructions. Accordingly, the Court finds that Samsung has not shown that the verdict is against the weight of the evidence, the trial was unfair or prejudicial error. Samsung's motion is **DENIED** as to a new trial on this basis.

II. Motion for Judgment as a Matter of Law, or in the Alternative, for a New Trial on Issues Related to Damages (Docket No. 330)

Upon a showing of infringement, a patentee is entitled to an award of damages "adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court." 35 U.S.C. § 284. However, "[t]he burden of proving damages falls on the patentee." Lucent Techs., Inc. v.

Gateway, Inc., 580 F.3d 1301, 1324 (Fed. Cir. 2009). There are two alternative categories of damages typically recovered in a patent case: the patentee's lost profits or the "reasonable royalty [the patentee] would have received through arms-length bargaining." Id. In this case, Papst sought a reasonable royalty.

An appropriate reasonable royalty is commonly determined by the hypothetical negotiation, or "willing licensor-willing licensee" model. Id. at 1324–25. The hypothetical negotiation "attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began" with the assumption that the patent is valid, enforceable, and infringed. Id.; see also Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1554 n.13 (Fed. Cir. 1995) (en banc); Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

The reasonable royalty analysis "necessarily involves an element of approximation and uncertainty." Unisplay, S.A. v. Am. Elec. Sign Co., 69 F.3d 512, 517 (Fed. Cir. 1995). However, the Court must ensure that substantial evidence supports the jury's damages award. Id. Generally, the Court should uphold a jury's damages award "unless 'grossly excessive or monstrous,' clearly not supported by the evidence, or based only on speculation or guesswork." Energy Transp. Group, Inc. v. William Demant Holding A/S, 697 F.3d 1342, 1356 (Fed. Cir. 2012) (quoting Oiness v. Walgreen Co., 88 F.3d 1025, 1031 (Fed. Cir. 1996)).

A. Judgment as a Matter of Law on Damages

Samsung argues a JMOL is warranted because the jury's damages award is not supported by competent evidence. Id. at 2. Samsung challenges both methodologies proffered by Papst's damages expert, Mr. Benoit, as unreliable, based on inadmissible evidence and incapable of supporting a competent damages award. Id. Samsung also argues that there is no legally sufficient

evidentiary basis for a reasonable juror to find a reasonable royalty because there is no evidence supporting a hypothetical negotiation on the proper hypothetical negotiation date. Id.

1. Income Approach Theory

Samsung argues that Mr. Benoit's "income approach" calculation of a reasonable royalty of \$10,054,667 is unsupported by competent and substantial trial evidence. See id. at 3 (citing PX61; 10/31/18 P.M. Tr. (Benoit) 74:24–75:4). Samsung asserts that Mr. Benoit's income approach improperly exceeds "the incremental value that the patented invention adds to the end product." Id. (quoting Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201, 1226 (Fed. Cir. 2014)). Samsung argues that the award "does not support compensation for infringement but punishes beyond the reach of the statute." Id. (quoting ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 869 (Fed. Cir. 2010)). Samsung presents two failures in Mr. Benoit's income approach: (a) his "benefit of reduced exposure to customer dissatisfaction" component purportedly violates the entire market value rule and misuses survey data that has no rational relation to the claimed invention and (b) his "increased price" component allegedly misuses the same survey data and is entirely speculative. Id. at 3–4.

a) Customer dissatisfaction component

Samsung argues that, in an attempt to capture sales from Samsung's use of the technology, "Mr. Benoit violated the entire market value rule and improperly relied on survey data that is irrelevant because it is not reasonably tied to the footprint of the invention or the facts of the case." Id. at 8. Samsung explains that Mr. Benoit improperly "calculate[d] revenue from sales of accused products that Samsung avoided losing due to the alleged 'benefit of reduced exposure to customer dissatisfaction.' "Id. at 4 (citing 10/31/18 P.M. Tr. (Benoit) 87:6–7). Samsung contends that using purported customer dissatisfaction in such a manner circumvents the entire market value rule's requirement for showing that demand for the patented technology drives the sales of accused

devices. Id. (citing Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1318 (Fed. Cir. 2011)). Samsung asserts that Papst conceded at trial that it was "not [Papst's] contention that the accused technology is what drives demand for any product." See 11/1/18 A.M. Tr. (Repice) 93:11–16. Samsung argues that the "benefit of reduced exposure to customer dissatisfaction" component of Mr. Benoit's income approach, however, considers average sales price of entire accused products that Samsung allegedly avoided losing due to Samsung's use of the patented feature. See Docket No. 330 at 4 (citing PX62). According to Samsung, this dissatisfaction component violates the entire market value rule because Mr. Benoit calculated potential lost revenue using the average sales price of the entire accused products, despite Papst's concession that the accused functionality does not drive demand for the sales of the accused devices. See id. (citing Uniloc, 632 F.3d at 1318).

Samsung also disputes Mr. Benoit's use of various surveys to apply multipliers to his calculation. For example, Samsung challenges Mr. Benoit's application of a Forrester Research survey of tablet owners to the determination of use of the invention by smartphone owners. Id. at 5. Similarly, Samsung challenges the use of a Pew Research survey asking whether feature phone users have taken a photo on their device as an inadequate proxy for the accused functionality. Id. at 5–6. Samsung faults Mr. Benoit's reliance on a J.D. Power and Associates survey directed to file transfer times for support regarding the satisfaction of users with various features of the accused products. Id. at 6. Samsung contends the statistic fails to account for the type of file transferred and method for transfer. Id.

Papst responds that "Mr. Benoit never directly compared the total sales price to the reasonable royalty," never "presented the reasonable royalty as a percentage of the average sales price" and "never reported Samsung's total revenues on accused products to the jury." Docket

No. 340 at 2–3. Papst asserts that Mr. Benoit relied upon methodology already ratified by the Federal Circuit in Summit 6. Id. (citing Summit 6, LLC v. Samsung Elecs. Co., 802 F.3d 1283, 1298 (Fed. Cir. 2015)). Papst also asserts that Mr. Benoit used survey data that can be reasonably extrapolated to provide reliable direction, particularly as Mr. Benoit's inferences and assumptions were further supported by Mr. Zeidman's testimony. Id. at 5–6 (citing 10/31/18 Tr. P.M. (Benoit) at 84:5–83:3).

Mr. Benoit's customer dissatisfaction analysis does not violate the entire market value rule and is supported by the evidence. To the extent Samsung argues Dr. Benoit's methodology itself is unreliable, such as his reliance on surveys, the Court already addressed those issues when denying Samsung's Daubert motion to exclude Mr. Benoit's testimony. See Docket No. 201 at 16–17 ("Papst has shown that Mr. Benoit's methodology closely ties to the footprint of the invention and that he apportions damages by relying on survey data."). Samsung's assertions concerning Mr. Benoit's credibility or the accuracy of the underlying facts were properly evaluated by the jury, which included Samsung's cross-examination and questioning of Mr. Benoit. See i4i, 598 F.3d at 852.

As to the entire market value rule, Mr. Benoit appears to have applied apportionments consistent with his calculations in Summit 6 using the same methodology. See Summit 6, 802 F.3d 1296–97. Specifically, Mr. Benoit multiplied the average sales price by apportionment factors specific to each of smartphones, feature phones and tablets, so that the per unit royalty rate reflects the patented inventions' footprint in the marketplace. See 10/31/18 P.M. Tr. (Benoit) at 86:20–89:6 (describing apportionment in four steps); PX62–PX63. Mr. Benoit's multi-step apportionment infers the percentage of Samsung customers who use the patented technology

(59%), estimates the percentage of those customers for whom the patented technology is actually important (2%) and then uses various multipliers to further adjust the calculation. See id.

Substantial evidence supports Mr. Benoit's customer dissatisfaction component, which does not violate the entire market value rule and properly relies on survey data. Accordingly, Samsung's arguments are unpersuasive for this component.

b) Increased price component

Samsung also disputes Mr. Benoit's "increased price" component, which purported to calculate revenue that Samsung could capture from customers who would have spent money on third-party driver support services, but did not need to do so because of the patented functionality. Docket No. 330 at 8; see 10/31/18 P.M. Tr (Benoit) at 98:21–100:21; PX63. Samsung argues that Mr. Benoit used unreliable data in a speculative manner and that there is no causal link justifying imputing such revenue to Samsung. See id. at 9–10. Samsung also asserts that this component doubles the considerations, and calculations, made in the customer dissatisfaction category. Id. at 8.

To the extent Samsung argues Dr. Benoit's methodology itself is unreliable, such as his reliance on surveys, the Court rejected similar arguments in the Daubert order. See Docket No. 201 at 17. Nor is this consideration duplicative of the dissatisfaction component. Mr. Benoit explains that the dissatisfaction analysis calculates the loss of sales from bad user experiences, whereas the increased price analysis captures the willingness of customers to pay a higher amount for a well-performing product. See 10/31/18 P.M. Tr. (Benoit) 86:24–87:5. As Mr. Benoit explains:

So, part of the research I had found was indicating that there are two issues that can occur. If you have poor customer satisfaction, you can lose a customer. . . . If you have a well-performing product, you can actually charge more for it. So, I sought to quantify both of those benefits

Id. Although related, Samsung has not sufficiently explained how these two considerations are improperly duplicative. Samsung's remaining arguments concern the weight, credibility or accuracy of the underlying facts, which Samsung addressed before the jury. Substantial evidence supports Mr. Benoit's increased price component, which considers demand among Samsung's users for technology that would obviate the need for updating proprietary drivers. Accordingly, Samsung's arguments are unpersuasive for this component.

As explained above, Samsung has not sufficiently demonstrated that Mr. Benoit's analysis failed to consider the incremental value that the patented invention adds to the accused products. Substantial evidence supports the jury's damages verdict. Accordingly, Samsung's motion is **DENIED** as to Mr. Benoit's Income Approach theory.

2. Market Approach Theory

Samsung argues that Mr. Benoit's alternative "Market Approach" theory is "based on inadmissible and unfairly prejudicial settlement agreements that are not comparable and should be excluded. Docket No. 330 at 10 (citing 10/31/18 P.M. Tr. (Benoit) at 107:6–108:13, 109:8–110:7). Samsung asserts that, out of six licenses, five were the result of litigation and settlement agreements entered into up to ten years after the hypothetical negotiation date. See id at 10–11. Samsung also asserts that Mr. Benoit incorrectly concluded that the parties would have agreed to an ongoing royalty, despite each licensing agreement using a lump-sum upfront payment for worldwide rights to the entire portfolio. See id. at 11

Samsung raises substantially identical arguments to those rejected by the Court in its pretrial Order. See Docket No. 244 at 3. For similar reasons, the Court finds that "Samsung's criticisms of the comparability of the four settlement licenses to the hypothetical license go the weight and not admissibility of the agreements." Id. Samsung claims that it was wrongly "precluded from introducing evidence about the underlying litigations that led to the settlement

agreements upon which Mr. Benoit relied." Docket No. 330 at 11. However, Mr. Benoit explained the context of litigation and how it affects the Market Approach as opposed to the Income Approach theory. See 10/31/18 P.M. Tr. (Benoit) at 109:21–110:3.

Substantial evidence, including properly included licenses, supports Mr. Benoit's Market Approach calculation. Samsung has not sufficiently demonstrated that Mr. Benoit's analysis failed to consider the incremental value that the patented invention adds to the accused products. Substantial evidence supports the jury's damages verdict. Accordingly, Samsung's motion is **DENIED** as to Mr. Benoit's Market Approach theory.

3. Hypothetical Negotiation

Samsung argues it is entitled to a JMOL of no damages for Papst's failure to establish at trial the correct date for the hypothetical negotiation. Samsung raises identical arguments in support of its request for a new trial. For the reasons explained below in the section on a new trial for damages, Samsung's motion is **DENIED** as to the date of the hypothetical negotiation. See infra Section II.B.

B. Motion for a New Trial

Samsung argues the verdict was contrary to the great weight of the evidence and that the Court erred as a matter of law and abused its discretion in excluding certain evidence. See Docket No. 330 at 12.

1. Hypothetical Negotiation Date

Samsung argues a new trial is necessary because the Court improperly struck Samsung's expert's opinion that the hypothetical date of negotiation was November 2005. Docket No. 330 at 12. Samsung asserts the hypothetical negotiation date is based on the first sales of products identified in Papst's notice letter sent to Samsung because Papst subsequently relied on this notice letter for its evidence regarding notice and willfulness. Id. Samsung's damages expert, Dr.

Stephen Becker, based his reasonable royalty analysis on a November 2005 hypothetical negotiation date. Id. (citing Docket No. 75 at 5; Docket No. 24-1 ¶¶ 14, 77–78, 245–48). Prior to trial, however, the Court granted Papst's motion to strike the portion of Dr. Becker's damages opinion based on the November 2005 hypothetical negotiation date. See Docket No. 230 at 1 ("Any reference to an alternate hypothetical negotiation date based on the SGH D820 or SGH T809 products in Dr. Becker's expert report shall be stricken."). The Court based its ruling on the fact that "the SGH D820 and SGH T809 products have never been asserted in Papst's infringement contentions throughout this litigation." Id. Samsung argues the exclusion was erroneous and unduly prejudicial, warranting a new trial on damages.

Samsung fails to raise any new argument the Court did not consider in its pretrial order rejecting the November 2005 date. See Docket No. 230 at 1. Samsung cites Applied Medical Sciences for support that "the date of first infringement also means that a prior sale of a product that involves the same infringement issues as a later accused product sets the hypothetical date." Docket No. 330 at 14 (citing Applied Med. Res. Corp. v. U.S. Surgical Corp., 435 F.3d 1356, 1364 (Fed. Cir. 2006). However, in that case, the Federal Circuit also explained that the "two infringements caused by Versaport I and Versaport II sales began at different times, and require two different hypothetical negotiation dates. . . . Because the determination of reasonable royalty damages is tied to the infringement being compensated for, reasonable royalties for a different infringement beginning at a different time may well be different from each other." Id. at 1363 (emphasis in original); see also id. at 1364 ("There is nothing to suggest that we should tie a hypothetical negotiation to a prior infringement no longer at issue. Here, the hypothetical negotiation date for infringing sales of Versaport II relates to the infringement caused by Versaport II sales beginning in 1997, not the past infringement caused by Versaport I sales beginning in

1994."); Fujifilm Corporation v. Motorola Mobility LLC, 2015 WL 1265009, *3–*5 (N.D. Cal. 2015); cf. LaserDynamics, Inc. v. Quanta Computer Inc., 694 F.3d 51, 75–76 (Fed. Cir. 2012). Samsung has not shown that the Court erred in striking the portions of Dr. Becker's expert report basing the hypothetical negotiation date on sales of products never accused in this case and that were sold at a substantially different time than the Accused Products.

Accordingly, Samsung's motion is **DENIED** as to a new trial on this basis.

2. Lump Sum

Samsung argues the Court improperly denied its proposal to include a "lump sum" damages interrogatory on the verdict form and to include language allowing the jury to compensate any future infringement. See Docket No. 330 at 18. The verdict form stated, "What sum of money, if any, paid now in cash, do you find by a preponderance of the evidence would fairly and reasonably compensate Papst for any past infringement by Samsung of the '449 patent?" Docket No. 194 at 4. Samsung contends that the verdict form deprived Samsung of the opportunity to have the jury award a lump sum that covers past infringement and any running royalty. See Docket No. 330 at 18–19 (citing Personal Audio, LLC v. Apple, Inc., No. 9:09-cv-111, 2011 WL 3269330, at *1 (E.D. Tex. July 29, 2011)). Samsung does not present authority showing that its requested verdict form was required or that a new trial on this ground is appropriate. See Telcordia Techs., Inc. v. Cisco Sys., Inc., 612 F.3d 1365, 1378 (Fed. Cir. 2010) (upholding use of verdict form even where "[t]he verdict form is unclear whether the jury compensated Telcordia only for Cisco's past infringement or for both past and ongoing infringement."). Accordingly, Samsung's motion is **DENIED** as to a new trial on this basis.

3. Exclusion of Evidence on Commercial Success

Samsung argues a new trial is warranted because the Court precluded Samsung from identifying companies that declined to license the '449 patent. Docket No. 330 at 19–20. Samsung

acknowledges that "the Court permitted a general question on the issue," but contends that the "excluded evidence would have allowed the jury to hear the full story—that while certain companies have taken licenses, numerous well-known companies have rejected and continue to reject Papst's demand to license its patents." Id. at 20.

Samsung's argument is unpersuasive. First, Samsung's expert, Dr. Robins identified at least a portion of the companies that he believed refused to license the '449 patent. See 11/02/18 P.M Tr. (Robins) at 52:19–55:10 ("So, several companies took issue with Papst's contentions that they infringe and did not elect to pay royalties or go into licensing agreements. One company was LG. Another was ZTE."). Second, Samsung presented no authority that preclusion from identifying companies specifically by name supports a new trial. Accordingly, Samsung's motion is **DENIED** as to a new trial on this basis.

4. Remittitur

Samsung asks for remittitur. Docket No. 330 at 19. Because the Court has not determined that the jury's damages award is against the weight of the evidence, see supra Section II.A, Samsung's request for remittitur is **DENIED**.

III. Motion to Contact Jurors (Docket No. 319)

Samsung requests leave to communicate with jurors regarding their "impressions of trial themes and attorney and witness performances, and will be designed to educate counsel in improving their advocacy in the future rather than seeking any information designed to upset the jury's verdict." Docket No. 319 at 1. In this case, the Court finds that any probative value for these interviews is strongly outweighed by "the jurors' interest in privacy and the public's interest in well-administered justice." *Haeberle v. Texas Int'l Airlines*, 739 F.2d 1019, 1022 (5th Cir. 1984) (affirming a District Court's denial of leave to interview jurors). Accordingly, Samsung's motion is **DENIED**.

IV. Motion for Entry of Judgment (Docket No. 333)

Since Papst filed its Motion for Entry of Judgment, Samsung has filed an opposed Motion

for Leave to File Supplemental Pleading of Inequitable Conduct (Docket No. 386). Samsung

alleges post-trial inequitable conduct by Papst that potentially renders the '449 patent

unenforceable. At this point, the Court finds that it would be appropriate to resolve at least the

motion for leave before ruling on the motion for entry of judgment. Further, a number of the

parties' disputes may be resolved by the Court's rulings in this Order.

Accordingly, Papst's Motion for Entry of Judgment is **DENIED WITHOUT**

PREJUDICE to refiling upon resolution of Samsung's Opposed Motion for Leave to File

Supplemental Pleading of Inequitable Conduct (Docket No. 386).

CONCLUSION

As set forth above, and for the reasons explained, the Court rules as follows:

• Samsung's Motion to Contact Jurors (Docket No. 319) is **DENIED**;

• Samsung's Renewed Motion for Judgment as a Matter of Law, or in the Alternative, for a

New Trial on Issues Related to Liability (Docket No. 329) is **DENIED**;

• Samsung's Renewed Motion for Judgment as a Matter of Law, or in the Alternative, for a

New Trial on Issues Related to Damages (Docket No. 330) is **DENIED**.

• Papst's Motion for Entry of Judgment is **DENIED WITHOUT PREJUDICE**.

SIGNED this 30th day of August, 2019.

ROBERT W. SCHROEDER III

UNITED STATES DISTRICT JUDGE

Robert W Filmoeden