IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
WESTERN DIVISION

No. 5:23-CV-493-FL

INTERDIGITAL, INC.; INTERDIGITAL VC HOLDINGS, INC.; INTERDIGITAL PATENT HOLDINGS, INC.; INTERDIGITAL MADISON PATENT HOLDINGS SAS,	)	
Plaintiffs,	)	
v.	)	ORDER
LENOVO (UNITED STATES) INC.; MOTOROLA MOBILITY LLC; and LENOVO PC HK LIMITED,	)	
Defendants.	)	

This matter is before the court upon motion by defendants (collectively, "Lenovo") for judgment on the pleadings. (DE 69, DE 90).[1] Also pending is motion by plaintiffs (collectively, "InterDigital") for leave to file surreply. (DE 87). The motions have been briefed fully, and in this posture the issues raised are ripe for ruling.[2] For the following reasons, Lenovo's motion for

[1] As explained further herein, the two motions for judgment on the pleadings are identical, except the first was filed initially only by Lenovo PC HK Limited, and later joined, and refiled, by Lenovo (United States) Inc. and Motorola Mobility LLC. Accordingly, the court references them herein as a single motion lodged at two different entries on the docket.

[2] Also pending are a motion to compel by Lenovo, filed May 17, 2024, (DE 106), a consent motion to seal documents filed in support of Lenovo's motion to compel, filed June 5, 2024, (DE 117), and a motion to strike portions of Lenovo's responsive claim construction brief by InterDigital, filed June 7, 2024, (DE 119). Each will be addressed by separate order. Likewise pending, but not yet ripe, are a motion for partial summary judgment (DE 125) and a related motion to seal by InterDigital (DE 129).

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judgment on the pleadings is granted in part and denied in part and InterDigital's motion for leave to file surreply is denied.

STATEMENT OF THE CASE

InterDigital commenced this patent infringement action September 1, 2023, and filed the operative second amended complaint February 16, 2024,[3] asserting that Lenovo is infringing InterDigital's patents, which "generally relate to video encoding/decoding ('CODEC') technology, which helps facilitate the transfer of video media to and from electronic devices," and file-sharing "technology that allows mobile device users to transfer data between devices without using pre-existing cellular or network infrastructure." (Compl. (DE 64) ¶ 33). Claims in the instant case are based upon United States Patent Nos. 10,250,877, (the "'877 patent"), 8,674,859 (the "'859 patent"), 9,674,556 (the "'556 patent"), 9,173,054 (the "'054 patent"), and 8,737,933 (the "'933 patent") (collectively, the "asserted patents" or "InterDigital's patents"). InterDigital alleges that Lenovo produces "smartphones, computers, and tablet computers" that use the "technology covered in InterDigital's patents." (Id. ¶ 58). InterDigital seeks judgment of infringement, compensatory damages, enhanced damages for willful infringement, permanent injunction, attorneys' fees, costs, and expenses.

On February 23, 2024, Lenovo filed the instant motion for judgment on the pleadings, pursuant to Federal Rule of Civil Procedure 12(c), arguing that the '054 patent, the '933 patent, and the '877 patent (collectively, the "challenged patents") are directed to patent-ineligible subject

[3] Hereinafter, all references to the complaint in the text, or "compl." in citations, are to the operative second amended complaint (DE 64), unless otherwise specified.

matter under 35 U.S.C. § 101.[4] Lenovo seeks a judgment that the challenged patents are invalid. In support of the motion, Lenovo relies upon the following materials attached to the complaint: 1) the asserted patents, 2) alleged infringement claim charts for each of the asserted patents, 3) marketing materials related to Lenovo's products, 4) websites purporting to show similar file sharing technologies associated with other companies; as well as 5) the following prior art references including United States Patent Nos. 0,011,335 (the "Burns patent"), 0,135,046 (the "Kapur patent"), 0,152,263 (the "Harrison patent"), 0,065,868 (the "Lunsford patent"), 0,146,765 (the "Van De Sluis patent"), and 0,191,028 (the Hinckley patent").

On March 15, 2024, InterDigital responded in opposition, arguing that the '054 and '933 patents are directed to methods of wireless file-sharing that improve upon the speed and security of prior art methods and the '877 patent is directed to improvements in storage capacity in CODEC technology. Lenovo replied in support of its motion.

Thereafter, InterDigital filed the instant motion for leave to file a surreply, relying upon a proposed surreply.

Pursuant to the court's case management order entered November 30, 2023, the parties filed an amended joint claim construction statement April 12, 2024, followed by opening claim construction briefs, pertaining only to construction of disputed claims in the '859 patent and '556 patent. On May 23, 2024, the parties filed their responsive claim construction briefs, and

[4] Lenovo PC HK Limited filed its operative answer February 23, 2024, and Lenovo (United States) Inc. and Motorola Mobility LLC filed their operative answer and amended counterclaims March 1, 2024. Lenovo (United States) Inc. and Motorola Mobility LLC stated initially that they would join the instant motion by Lenovo PC HK Limited once pleadings closed following resolution of InterDigital's motion to dismiss count III of their amended counterclaims. (DE 69 at 2 n. 1). Upon filing of the instant motion for judgment on the pleadings by Lenovo (United States) Inc. and Motorola Mobility LLC, April 15, 2024, the parties filed a joint notice stating that they will rely upon the briefs and exhibits thereto associated with Lenovo PC HK Limited's motion in lieu of refiling briefs.

InterDigital thereafter filed a motion to strike portions of Lenovo's responsive claim construction brief. The court has set a claim construction hearing for July 25, 2024.

In the meantime, on March 20, 2024, Lenovo filed a notice stating that, in a co-pending proceeding before the United States International Trade Commission ("ITC"), Lenovo moved for "an order terminating the [ITC] Investigation with respect to three of the five asserted patents that are also at issue in this case," the '877 patent, the '859 patent, and the '556 patent, in favor of negotiation and arbitration (the "arbitral patents").[5] Lenovo represented that if the ITC terminates its investigation in favor of arbitration, Lenovo intends to seek a stay of this litigation with respect to the '877, '859, and '556 patents pending resolution of that arbitration. "Lenovo does not intend, however, to seek a stay of this litigation with respect to the other two asserted patents not subject to the arbitration agreement," the '054 patent and the '933 patent. (DE 79 at 2). Accordingly, Lenovo's potential future stay request would implicate the portion of the instant motion for judgment on the pleadings bearing on the '877 patent, but not the '054 patent or '933 patent.[6] However, where Lenovo has not filed a motion to stay this litigation by the date of this order, the court proceeds to address that part of Lenovo's motion for judgment on the pleadings bearing on the '877 patent.

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[5] On September 1, 2023, InterDigital commenced a companion case before the ITC asserting claims under 19 U.S.C. § 1337 against Lenovo for alleged infringement of InterDigital's patents.

[6] On July 11, Lenovo filed a supplemental notice regarding the ITC proceedings and additional proceedings before the USPTO's Patent Trial and Appeal Board ("PTAB"). (See DE 124). First, the PTAB proceedings are based upon two of four petitions filed by Microsoft in its case against InterDigital, Microsoft Corp. v. InterDigital Patent Holdings, Inc., Case Nos. IPR2024-00305, IPR2024-00306. Those petitions challenge the validity of the '933 and '054 patents (the "file sharing patents") under 35 U.S.C. §§ 102 and 103 in view of prior art grounds. Where Lenovo's motion for judgment on the pleadings challenges the eligibility of the file sharing patents under 35 U.S.C. § 101, Lenovo states that the PTAB's proceedings do not implicate that part of Lenovo's motion for judgment on the pleadings. Second, Lenovo provides an update as to its request stay this litigation with respect to the arbitral patents, noting the administrative law judge has not issued an opinion regarding the request, but an administrative hearing has been scheduled for August 13-19, 2024.

STATEMENT OF FACTS

According to the complaint, "Lenovo is a global manufacturer of various cellular, wireless, and video devices – including smartphones, computers, tablets, and components thereof." (Compl. (DE 64) ¶ 32). "Lenovo's products use wireless file-sharing, AOMedia Video 1 ['AV1'] and VP9 ['VP9'] technology," allegedly covered by InterDigital's "duly issued" patents. (Id. ¶¶ 32, 39). "The [a]sserted [p]atents provide benefits to the [AV1] and [VP9] protocols and enable wireless file-sharing between devices." (Id. ¶ 33). InterDigital alleges that, in addition to designing, offering, and selling devices that use the technologies covered by the asserted patents, "Lenovo also performs several services to support the sale of the [allegedly infringing products]," including marketing, developing, distributing, repairing, and other after-sale services. (Id. ¶¶ 58, 60). Nevertheless, "Lenovo refuses to pay its fair share for the technology it exploits." (Id. ¶ 32).

1. The '054 Patent and the '933 Patent

The '054 patent and the '933 patent (together, the "file sharing patents") are both entitled Data Transfer Between Wireless Devices.[7] ('054 patent (Compl. Ex. 4 (DE 64-5)) at 2; '933 patent (Compl. Ex. 5 (DE 64-6)) at 2). According to the complaint, the file sharing patents describe "a device and method for wirelessly transferring data from a touchscreen device." (Compl. (DE 64) ¶¶ 101, 114). InterDigital asserts that "the claimed invention improves upon the prior art by using two separate protocols for (1) detecting the proximity of candidate transferee devices, and (2) transferring the selected files to said devices, in a specific combination that was inventive and novel at the time." (Id. ¶ 46).

[7] According to InterDigital, the file sharing patents "share a common specification." (Compl. (DE 64) ¶ 42 n.9). A "specification" is one of "two distinct elements of a patent document." Markman v. Westview Instruments, Inc., 517 U.S. 370, 373 (1996). The "specification" describes "the invention in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same." Id.

Under the file sharing patents' method, "a user may select a file to transfer from a touchscreen device." (Id. ¶¶ 101, 114). "[T]he touchscreen device uses Bluetooth to detect nearby devices, from which the user can select a target device." (Id.). "After sending a message to the target device to transfer the selected file, and receiving an acceptance, the touchscreen device transfers the file to the target device using WiFi." (Id.).

By way of illustration, claim 1 of the '054 patent requires that a wireless transmit/receive unit ("WTRU") "'detect[] . . . over Bluetooth, another WTRU' after a user selects media to be transferred using the touch display." (Id. ¶ 47 (quoting patent '054, col. 10. 57)). The sending WTRU sends "a message to transfer the selected media" to the target WTRU. (Patent '054, col. 10. 60–61). The sending WTRU then receives "an acceptance to transfer the selected media" from the target WTRU and subsequently transfers the selected media "to the selected [target] WTRU over WiFi[.]" (Id. at col. 10. 62–65). In identifying the receiving WTRU, "the '054 Patent uses environment information . . . [which is] an input that may be used to drive a target discrimination algorithm . . . that uniquely identifies a target WTRU for transfer of data." (Compl. (DE 64) ¶ 47).

InterDigital alleges that "the use of Bluetooth is central to the discovery of other compatible devices that are in close proximity to the user wishing to transfer a media file." (Id. ¶ 48). "Conventional wireless file-sharing methods . . . used a single communication protocol such as Bluetooth for both the detection of devices and the transfer of data to selected devices . . . [whereas the file sharing patents], for the first time, combined two disparate communication protocols, i.e., Bluetooth and WiFi . . . for a more efficient way of sharing files wirelessly." (Id.). Thus, according to InterDigital, the file sharing patents "improve[d] the fragmented approach to access and manipulation of files that plagued [the] prior art file-sharing system." (Id. ¶ 44).

InterDigital further alleges that "by requiring that the [sending] WTRU receive an acceptance to transfer the selected media before transferring the media over WiFi, the invention of the [file sharing patents] improved upon the security of wireless file-sharing methods." (Id. ¶ 49). Existing methods of wireless file-sharing allegedly were "prone to exploitation by spam accounts and human error." (Id.).

InterDigital asserts that prior to the technology claimed in the file sharing patents, "using touch screens and wireless protocols to transfer data from one wireless device to another was cumbersome and inefficient." (Id. ¶ 41). "[T]he mobile phones of 2008 used applications such as e-mail or [multimedia message services] to transmit data from one device to another through an Internet connection or through a cellular communication network." (Id. ¶ 43). Mobile phones "could also use Bluetooth and near-field communication ('NFC') protocols to transfer data over shorter distances." (Id.). However, "it was not until 2013 – over four years after the priority date of the [file sharing patents] – that leading tech companies such as Apple began implementing the patents' claimed wireless file-sharing functionalities in their own touchscreen devices." (Id. ¶ 51). "The equivalent file-sharing application for Android devices was not released until 2020." (Id. ¶ 52) (emphasis omitted).

In sum, the file sharing patents allegedly "invent[ed] a secure novel transfer method that combined a Bluetooth protocol for nearby device detection, and WiFi for the fast transfer of data." (Id. ¶ 41). According to InterDigital, "[t]he use of Bluetooth for proximity detection and WiFi for file transfer presented a simplified and more intuitive approach that enabled users to quickly and easily share files with nearby users, while skipping the steps and time involved with opening a messaging app, finding a contact or correctly entering recipient information, and then finding the file they would like to attach." (Id. ¶ 54).

2. The '877 Patent

"The '877 [p]atent is entitled Method and Device for Coding an Image Block, Corresponding Decoding Method and Decoding Device." (Id. ¶ 34 (quoting '877 patent (Compl. Ex. 1 (DE 64-2))). According to the complaint, the '877 patent "relate[s] to CODEC technology, which helps facilitate the transfer of video media to and from electronic devices by reducing the size of files prior to transmission . . . and decoding it on a receiving device after reception." (Compl. (DE 64) ¶ 33). More granularly, the '877 patent describes "a method for reconstructing a current block of a current image from at least one block of a reconstructed reference image that is a different size from the size of the current image." (Id. ¶ 62). Typically, when the reconstruction process involves a reference image and a current image with different sizes, "the reference image is resized by resampling to match the size of the current image before being motion compensated." (Id.). "This may include storing the reconstructed reference images and resized reference images of various sizes in the decoded picture buffer ['DPB'] memory, which may require more memory space." (Id.). InterDigital asserts that the '877 patent, "unlike previous methods for reconstructing image blocks, does not require the storage of resized, i.e., unsampled and/or subsampled, versions of the reference image in the DPB memory." (Id.).

COURT'S DISCUSSION

A. Motion for Leave to File Surreply

InterDigital argues that Lenovo's reply in support of its motion for judgment on the pleadings "improperly contains new arguments and references to new materials outside of the pleadings." (Pl.'s Mot. for Leave (DE 87) at 1). The day before InterDigital filed its response in opposition to Lenovo's motion for judgment on the pleadings, Lenovo deposed Philippe Bordes ("Bordes"), the inventor of the '877 patent, as part of the proceedings before the ITC. (See id. at

2). Thus, InterDigital contends Lenovo impermissibly incorporated in its reply "a new argument that the invention of the '877 [p]atent is an abstract idea because it could be performed using pen and paper based on the testimony [Bordes] gave during his deposition." (Id. at 2).

There is an insufficient basis for the making of a surreply, in which InterDigital presents a number of contentions presented already in its response in addition to highlighting perceived improprieties in Lenovo's reply brief where it relies on deposition testimony. Further, because the court addresses herein that part of Lenovo's motion for judgment on the pleadings pertaining to the '877 patent without resort to the "pen and paper" argument referenced in Bordes' testimony, the court will not consider the proposed surreply. Thus, InterDigital's motion for leave to file surreply is denied.

B. Motion for Judgment on the Pleadings

1. Standard of Review

"After the pleadings are closed[,] . . . a party may move for judgment on the pleadings." Fed. R. Civ. P. 12(c). In reviewing a motion for judgment on the pleadings, the court "appl[ies] the same standard as a 12(b)(6) motion to dismiss." Mayfield v. Nat'l Ass'n for Stock Car Auto Racing, Inc., 674 F.3d 369, 375 (4th Cir. 2012).

To survive a motion to dismiss under Rule 12(b)(6), "a complaint must contain sufficient factual matter, accepted as true, to 'state a claim to relief that is plausible on its face.'" Ashcroft v. Iqbal, 556 U.S. 662, 678 (2009) (quoting Bell Atl. Corp. v. Twombly, 550 U.S. 544, 570 (2007)). "Factual allegations must be enough to raise a right to relief above the speculative level." Twombly, 550 U.S. at 555. In evaluating whether a claim is stated, "[the] court accepts all well-pled facts as true and construes these facts in the light most favorable to the plaintiff," but does not consider "legal conclusions, elements of a cause of action, . . . bare assertions devoid of further

factual enhancement[,] . . . unwarranted inferences, unreasonable conclusions, or arguments." Nemet Chevrolet, Ltd. v. Consumeraffairs.com, Inc., 591 F.3d 250, 255 (4th Cir. 2009).[8]

2. Analysis

Lenovo asserts that it is entitled to judgment on the pleadings with respect to InterDigital's infringement claims where the claims at issue of the challenged patents are ineligible and thus invalid under 35 U.S.C. § 101. "Patent eligibility under 35 U.S.C. § 101 is an issue of law[,]" which properly may be decided on a Rule 12(c) motion. OIP Techs., Inc. v. Amazon.com, Inc., 788 F.3d 1359, 1362 (Fed. Cir. 2015). "[E]valuation of a patent claim's subject matter eligibility under § 101 can proceed even before a formal claim construction." Genetic Techs. Ltd. v. Merial L.L.C., 818 F.3d 1369, 1373 (Fed. Cir. 2016); see Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Canada (U.S.), 687 F.3d 1266, 1273 (Fed. Cir. 2012) ("[C]laim construction is not an inviolable prerequisite to a validity determination under § 101.").[9] However, "patent eligibility may be resolved at the Rule 12 stage only if there are no plausible factual disputes after drawing all reasonable inferences from the intrinsic and Rule 12 record in favor of the non-movant." Coop. Ent. Inc. v. Kollective Tech., Inc., 50 F.4th 127, 130 (Fed. Cir. 2022).

Under 35 U.S.C. § 101, a patent may be obtained for "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." 35 U.S.C. § 101. "Laws of nature, natural phenomena, and abstract ideas" are excepted from § 101 and thus, are not patent-eligible. Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 573 U.S. 208, 216 (2014). However, since "all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural

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[8] Throughout this order, internal quotation marks and citations are omitted unless otherwise specified.

[9] The parties do not identify any claim terms that require construction prior to deciding this motion or assert that resolution of this motion will impact a later claim construction of the challenged patents. Accordingly, this court may resolve the instant motion without engaging first in claim construction of the challenged patents. See e.g., Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A., 776 F.3d 1343, 1349 (Fed. Cir. 2014).

phenomena, or abstract ideas" at some level, "an invention is not rendered ineligible from patent simply because it involves an abstract concept." Id. at 217. "Applications of such concepts to a new and useful end . . . remain eligible for patent protection." Id.

The United States Supreme Court has delineated a two-step process for "distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." Id. The first step requires the court to determine whether the patent claims at issue are directed toward an "abstract idea." Id. At this step, the court looks "at the focus of the claims, their character as a whole," Elec. Power Grp., LLC v. Alstom S.A., 830 F.3d 1350, 1353 (Fed. Cir. 2016).

If the court concludes the claims are directed to an abstract idea, it proceeds to the second step to determine "what else is there in the claims before [the court]?" Alice, 573 U.S. at 217. At this step, courts must then look "more precisely at what the claim elements add." Elec. Power, 830 F.3d at 1353. This comprises a "search for an 'inventive concept'" – that is, whether there exists "an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." Alice, 573 U.S. at 217–18.

a. The File Sharing Patents (the '054 and '933 Patents)

i. Representativeness

As a threshold matter, Lenovo argues that the court may conduct the § 101 analysis for the file sharing patents together, where "[c]laim 1 of the '054 [p]atent is representative of the claims of the '054 and '933 patents because every claim is drawn to the same abstract idea." (Defs' Br.

(DE 70) at 14).[10] InterDigital opposes this approach, arguing that claim 1 of the '054 patent is not representative of the claims across the file sharing patents.

"[A]ddressing each claim of the asserted patents [is] unnecessary" to the § 101 analysis if certain claims "are representative" of others, because all the claims are "substantially similar in that they recite little more than the same abstract idea." Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A., 776 F.3d 1343, 1348 (Fed. Cir. 2014). The court "may treat a claim as representative in certain situations, such as if the patentee does not present any meaningful argument for the distinctive significance of any claim limitations not found in the representative claim." Berkheimer v. HP Inc., 881 F.3d 1360, 1365 (Fed. Cir. 2018); see Mortg. Grader, Inc. v. First Choice Loan Servs. Inc., 811 F.3d 1314, 1324 n.6 (Fed. Cir. 2016) (finding it unnecessary to address four asserted claims individually where the claims did not "differ in any manner . . . material to the patent-eligibility inquiry"). The representativeness analysis thus "may be unavoidably tied up with the Alice analysis in the sense that an objector must argue that focuses or claim limitations not found in the representative claims have distinctive significance under the Alice test." DriverDo, LLC v. Social Auto Transp., Inc., No. 3:23-cv-265, 2024 WL 1376218, at *12 (E.D. Va. Mar. 29, 2024).

The file sharing patents include four independent claims:[11] claims 1 and 23 of the '054 patent and claims 1 and 23 of the '933 patent. Claim 1 of the '054 patent recites:

A method performed by a [WTRU], the method comprising:

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[10] Throughout this order, page numbers in citations to documents in the record, are to those specified by the court's Case Management / Electronic Case Filing ("CM/ECF") system, and not the page number, if any, showing on the face of the underlying document.

[11] "[A]n independent claim is broader than a claim that depends from it, so if a dependent claim reads on a particular embodiment of the claimed invention, the corresponding independent claim must cover that embodiment as well." Littelfuse, Inc. v. Mersen USA EP Corp., 29 F.4th 1376, 1380 (Fed. Cir. 2022).

> processing, by the WTRU from a touch display, an input to select media in an application;
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> detecting, by the WTRU over [B]luetooth, another WTRU;
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> processing, by the WTRU, another input from the touch display to select the another WTRU;
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> sending, by the WTRU to the selected another WTRU, a message to transfer the selected media;
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> receiving, by the WTRU, an acceptance to transfer the selected media; and
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> transferring, by the WTRU to selected another WTRU over WiFi, the selected media.

('054 patent, col. 10. 53–65). Claim 23 of the '054 patent recites:

> A [WTRU] comprising:
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> circuitry configured to process, from a touch display, an input to select media in an application;
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> circuitry configured to detect, by the WTRU over [B]luetooth, another WTRU;
>
> the circuitry further configured to process another input from the touch display to select the another WTRU;
>
> circuitry configured to send, by the WTRU to the selected another WTRU, a message to transfer the selected media;
>
> circuitry configured to receive, by the WTRU, an acceptance to transfer the selected media; and
>
> circuitry configured to transfer, by the WTRU to the selected another WTRU over WiFi, the selected media.

(Id. at col. 11. 61–67, col. 12. 1–7).

Meanwhile, claim 1 of the '933 patent mirrors claim 1 of the '054 patent in significant part where the former accounts for a "touchscreen input" instead of the latter's "touch display" and designates "a plurality of WTRUs in proximity to the WTRU" in lieu of "another WTRU." ('933

patent, col. 10. 54–67). Claim 23 of the '933 patent differs from claim 23 of the '054 patent in the following elements: it designates a "processor" instead of "circuitry," substitutes a "touchscreen input" for "touch display," and accounts for "a plurality of WTRUs in proximity to the WTRU" rather than "another WTRU." (Id. at col. 12. 8–21).

Here, claim 1 of the '054 patent is representative of the other three independent claims in the file sharing patents. Claim 23 of the '054 patent provides for the same methods as claim 1 – processing an input to transfer selected media from a touch display, detecting another WTRU over Bluetooth, processing another input from a touch display to select another WTRU, sending a message to transfer to the other WTRU, receiving an acceptance to transfer, and transferring the selected media – but differs only where it accounts for "circuitry configured to process" the steps of claim 1. See In re TLI Commc'ns Patent Litig., 823 F.3d 607, 610 (Fed. Cir. 2016) ("Independent claims 1 and 25 recite substantially the same concept but do so in the context of an apparatus or system."); see also Alice, 573 U.S. at 226 ("[T]he systems claims are no different from the method claims in substance. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea."). Similarly, claims 1 and 23 of the '933 patent, which are directed to a touchscreen input, a plurality of WTRUs, and a processor, recite the same transfer process as claim 1 of the '054 patent. The '933 patent's independent claims describe additional features, but Interdigital fails to assert how these added elements transform those claims in a way "material to the patent-eligibility inquiry." Mortg. Grader, 811 F.3d at 1324 n.6.

Beyond the four independent claims in the file sharing patents, InterDigital argues that Lenovo "glosses over the significant differences that set the dependent claims apart from the

independent claims from which they depend." (Pl.'s Br. in Opp. (DE 74) at 17).[12] In particular, InterDigital identifies the use of a "WiFi link" described in claims 7, 29, 45, 46, 48, and 49 of the '054 patent as materially distinct from claim 1 of the '054 patent.[13] (See, e.g., '054 patent, col. 11. 10–11 ("The method of claim 1, wherein the transferring by the WTRU over WiFi uses a WiFi link.")); (see also id. at col. 13. 8–11 ("The method of claim 7, wherein the WiFi link operates using 802.21 . . . The method of claim 7, wherein the WiFi link utilizes peer-to-peer communication.")). While InterDigital asserts that using a WiFi link to transfer data between connected devices was not well-understood, routine, or conventional, InterDigital fails to meaningfully argue how the incorporation of WiFi link versus WiFi alters the patent-eligibility analysis such that claim 1 is not representative. See Elec. Power, 830 F.3d at 1352 (finding an asserted claim representative where there was no other "meaningful argument for the distinctive significance of any claim limitations other than those included in [the representative claim]"); see also Beteiro, LLC v. BetMGM, LLC, 626 F.Supp.3d 789, 797 (D.N.J. 2022) ("But what Plaintiff fails to identify is the significance of these distinctions to the [c]ourt's patentability analysis under Alice"). And, ultimately, "the dependent claims of the [file sharing patents] all recite functions that are not inventive but simply constitute particular choices from within the range of existing [software] or hardware[.]" Affinity Labs of Texas, LLC v. DIRECTV, LLC, 838 F.3d 1253, 1264 (Fed. Cir. 2016).

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[12] In support, InterDigital also cites to Honeywell Intern. Inc. v. Hamilton Sundstrand Corp., 370 F.3d 1131 (Fed. Cir. 2004). But InterDigital relies on language from the dissenting opinion, and the court's discussion of independent and dependent claims in Honeywell did not relate to a representativeness analysis pursuant to a § 101 eligibility challenge.

[13] InterDigital identifies these dependent claims from a larger subset of claims entitled "Requiring Specific Protocols" in Lenovo's brief. (See Defs' Br. (DE 70) at 24). InterDigital asserts that all the dependent claims in this category – claims 7, 8, 9, 10, 20, 29, 30, 31, 32, 45, 46, 47, 48, and 49 of the '054 patent and claims 6, 7, 8, 9, 28, 29, 30, and 31 of the '933 patent – are "directed to a particular improvement in the performance of wireless file-sharing technology, and each meaningfully differs from claim 1 of the '054 patent." (Pl.'s Br in Opp. (DE 74) at 17).

InterDigital further asserts that claims 2, 19, 20, 21, 22, 24, 41, 42, 43, and 44 of the '933 patent provide enhanced file-sharing security, thus distinguishing them from the methods of claim 1 of the '054 patent. But upon examination, these claims add display functionalities that do not alter the § 101 analysis. See Bancorp Servs., 687 F.3d at 1277 (finding "no material difference between . . . two categories of claims in the asserted patents" where one claim recited a method, and another recited a system on which the method operated). While these dependent claims may recite additional elements, they do not, and InterDigital does not allege how they "could make a material impact to the Section 101 analysis." Sanderling Mgmt. Ltd. v. Snap Inc., 64 F.4th 698, 701 n.1 (Fed. Cir. 2023); see, e.g., Listingbook, LLC v. Mkt. Leader, Inc., 144 F.Supp.3d 777, 789 (M.D.N.C. 2015) ("Each of these dependent claims narrows the method of [c]laim 1 by adding details and functions to improve the information exchange and collaborative process, but none of these claims changes the concept at the core of the claimed method.").

InterDigital also appears to ask the court to conduct a "claim-by-claim analysis" for all claims in the file sharing patents. (See Pl.'s Br. in Opp. (DE 74) at 18 ("[Lenovo]'s bold attempt to short-circuit the required claim-by-claim analysis . . . should be rejected.")). However, the court "may treat a claim as representative" where, as here, "the patentee does not present any meaningful argument for the distinctive significance of any claim limitations not found in the representative claim." Berkheimer, 881 F.3d at 1365.[14] Indeed, InterDigital fails to assert any meaningful

[14] Content Extraction also forecloses an argument that the court must necessarily analyze each claim whenever the non-moving party "makes a meaningful argument for the distinctive significance of any claim limitations not found in the representative claim." Berkheimer, 881 F.3d at 1365. In Content Extraction, the United States Court of Appeals for the Federal Circuit addressed the patentee's arguments as to the lack of representativeness among the claims. The Federal Circuit independently "reviewed all the claims of CET's asserted patents" and found they were "substantially similar in that they recite little more than the same abstract idea." 776 F.3d at 1349. Thus, to the extent InterDigital argues that the court is required to conduct a claim-by-claim analysis whenever the representativeness of any claim is meaningfully disputed, the court disagrees. See also Front Row Techs., LLC v. NBA Media Ventures, LLC, 204 F.Supp.3d 1190, 1250–51 (D.N.M. 2016) (drawing the same conclusion).

argument for many of the dependent claims in the file sharing patents.[15] This makes sense where courts frequently treat a single claim as representative of claims in a patent or across multiple patents. See Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC, 874 F.3d 1329, 1333 (Fed. Cir. 2017) ("Claim 1 of the '187 patent is representative of all claims of the '187 patent and '005 patent[.]"); see also RecogniCorp, LLC v. Nintendo Co., 855 F.3d 1322, 1324 (Fed. Cir. 2017) (finding one claim of the asserted patent to be representative of all claims in the patent).

In sum, the court turns next to the two steps of the Alice analysis, treating claim 1 of the '054 patent as representative of all claims in the file sharing patents.

ii. Abstract Idea

Lenovo argues that the claims of the file sharing patents are directed to an abstract idea where they "recite the logical sequence of steps necessary to transfer data wirelessly in functional terms, i.e., select data to transfer, find and select a recipient, establish a wireless connection to the recipient, and transfer the data." (Defs' Br. (DE 70) at 7). The court agrees.

Representative claim 1 of the '054 patent provides for the following steps, to be performed by a WTRU:[16] 1) processing a user input to select media in an unspecified application, 2) detecting another WTRU over Bluetooth, 3) sending to the target WTRU a request to transfer the selected

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[15] For example, InterDigital's brief in opposition does not address dependent claims 2, 4, 5, 6, 11, 12 13, 14, 15, 16, 17, 18, 19, 22, 24, 26, 27, 28, 33, 34, 35, 36, 37, 38, 39, 40, 41, and 44 of the '054 patent or dependent claims 3, 4, 5, 10, 11, 12, 13, 14, 15, 16, 17, 18, 25, 26, 27, 32, 33, 34, 35, 36, 37, 38, 39, and 40 of the '933 patent. (See generally Pl.'s Br. in Opp. (DE 74) at 17–18).

[16] Review of the common specification of the file sharing patents at issue reveals no claim to any new hardware or other technology, specifically referring only generically to an WTRU that "includes but is not limited to a user equipment, a communications devices, a mobile station, . . . or any other type of device operating in a wireless environment." ('054 patent, col. 2. 26–32) (emphasis added). The involved WTRUs must be "each minimally comprised of an application processor 105, a communication peripheral 107, and a touchscreen/peripheral 109." (Id. at col. 2. 43–45). The specification then lists compatible processors and peripherals, noting that "[a]ny combination or all of these communication technologies may be implemented in a single component design." (Id. at col. 2. 63–65).

media, 4) receiving an acceptance to transfer from the target WTRU, and 5) transferring the selected media to the target WTRU over WiFi. ('054 patent, col. 10. 53–65). As set forth below, users of WTRU devices have long performed this step of electronically exchanging documents and files when sharing information with nearby devices.

In re TLI Commc'ns LLC Patent Litig., 823 F.3d 607 (Fed. Cir. 2016) is instructive. There, the patent in suit related to "an apparatus for recording of a digital image, communicating the digital image from the recording device to a storage device, and to administering the digital image in the storage device." Id. at 609. The invention sought to address problems in the "recording, administration and archiving of digital images simply, fast and in such way that the information therefore may be easily tracked." Id. at 610. Although the patent claims at issue were limited to a "particular environment . . . a mobile telephone system," id. at 613, the United States Court of Appeals for the Federal Circuit held that they were "simply directed to the abstract idea of classifying and storing digital images in an organized manner." Id.

In so holding, the Federal Circuit stated as follows:

> We recently clarified that a relevant inquiry at step one is "to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea." See Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335 (Fed. Cir. 2016). We contrasted claims "directed to an improvement in the functioning of a computer" with claims "simply adding conventional computer components to well-known business practices," or claims reciting "use of an abstract mathematical formula on any general purpose computer," or "a purely conventional computer implementation of a mathematical formula," or "generalized steps to be performed on a computer using conventional computer activity." Id. at 1338. Contrary to TLI's arguments on appeal, the claims here are not directed to a specific improvement to computer functionality. Rather, they are directed to the use of conventional or generic technology in a nascent but well-known environment, without any claim that the invention reflects an inventive solution to any problem presented by combining the two. According to the '295 patent, the problem facing the inventor was not how to combine a camera with a cellular telephone, how to transmit images via a cellular network, or even how to append classification information to that data. Nor was the problem related to the structure of the server

> that stores the organized digital images. Rather, the inventor sought to "provid[e] for recording, administration and archiving of digital images simply, fast and in such way that the information therefore may be easily tracked." '295 patent, col. 1 ll. 62–65.

Id. at 612.

Similarly, here, InterDigital's claims are focused on functional improvements to wireless file transfers. InterDigital's claimed solution allegedly addressed a "cumbersome process to transfer data files between wireless devices." (Compl. (DE 64) ¶ 42). The file sharing patents' common specification does not describe an improvement to touchscreen devices and states instead that "[t]he methods . . . provided herein may be implemented in a computer program, software, or firmware incorporated in a computer-readable storage medium for execution by a general purpose computer or a processor." ('054 patent, col. 10. 19–22); see Uniloc USA, Inc. v. LG Elecs. USA, Inc., 957 F.3d 1303, 1306 (Fed. Cir. 2020) ("In cases involving software innovations, [the Alice step one] inquiry often turns on whether the claims focus on the specific asserted improvement in computer capabilities or, instead, on a process that qualifies as an abstract idea for which computers are invoked merely as a tool.").

The claims of the file sharing patents also use results-based language similar to other claims found patent-ineligible. See Elec. Power, 830 F.3d at 1356 ("[T]he essentially result-focused, functional character of claim language has been a frequent feature of claims held ineligible under § 101."). Here, an WTRU is simply tasked with the functional steps of processing user inputs, detecting other WTRUs, sending and receiving messages, and transferring files. (See '054 patent, col. 10. 55–65); see Two-Way Media, 874 F.3d at 1337 ("The claim requires the functional results of converting, routing, controlling, monitoring, and accumulating records, but does not sufficiently describe how to achieve these results in a non-abstract way.").

That the claims of the file sharing patents relate to wireless technologies makes no difference. "[T]he broad concept of communicating information wirelessly, without more, is an abstract idea." Chamberlain Grp., Inc. v. Techtronic Indus. Co., 935 F.3d 1341, 1347 (Fed. Cir. 2019). In Affinity Labs of Texas, LLC v. Amazon.com Inc., the patent in suit was "directed to a network-based media system with a customized user interface, in which the system delivers streaming content from a network-based resource upon demand to a handheld wireless electronic device having a graphical user interface." 838 F.3d 1266, 1268 (Fed. Cir. 2016). While as of the priority date of the asserted patent, "wireless streaming of media was not [allegedly] routine, conventional, or well-known," id. at 1269, the Federal Circuit held that "the concept of delivering user-selected media content to portable devices is an abstract idea." Id.

Here too, InterDigital does not allege that it "invented any of th[e] components or their basic functions, nor does it suggest that those components, at that level of generality, were unknown in the art as of the priority date[.]" Id. at 1270. In the common specification, InterDigital states that it relies on existing generic hardware and does not allege designing the detection and transfer technologies underlying the alleged two-step improvement. (See '054 patent, col. 2. 60–63 ("The communication peripherals 107 may include technologies such as . . . Bluetooth or WiFi.")). Independent claims 23 of both file sharing patents recite circuitry and a processor as additional elements, but the specification provides for various types of "[s]uitable processors" including "a general purpose processor, a special purpose processor, a conventional processor, [or] . . . any other type of integrated circuit, and/or a state machine." (Id. at col. 10. 29–36).

Instead, InterDigital contends that the claims in the file sharing patents "improve upon the speed and security of wireless data transfer devices by using two separate protocols for detecting the proximity of candidate devices and transferring data to the selected devices." (Pl.'s Br. in Opp.

(DE 74) at 22 (quoting (Compl. (DE 64) ¶¶ 46, 49, 54, 56))). In support, InterDigital relies on Enfish, LLC v. Microsoft Corp, 822 F.3d 1327 (Fed. Cir. 2016). In Enfish, the Federal Circuit found that claims directed to a logical model for a data storage and retrieval system, understood in light of their specific limitations, were not directed to an abstract idea, where such claims were unambiguously directed to improving computer functionality. Id. at 1335–36. InterDigital contends that, like in Enfish, the claims in the file sharing patents represent specific improvements to the security, speed, and ease of data transfer methods by combining a detection step using Bluetooth and a transfer step using WiFi. Here, the improvements in the file sharing patents are not directed to improvements in the software itself, but to the abstract idea of transferring files from one user to another user nearby. Unlike the claims in Enfish, the method claims in the file sharing patents "merely invoke generic processes and machinery," McRO, Inc. v. Bandai Namco Games Am., 837 F.3d 1299, 1314 (Fed. Cir. 2016), and do not assert an innovation like "a specific type of data structure designed to improve the way a computer stores and retrieves data in memory." Enfish, 822 F.3d at 1339.

In Electric Power, the Federal Circuit distinguished the patents in suit, directed to "systems and methods for performing real-time performance monitoring of an electric power grid by collecting data from multiple data sources, analyzing the data, and displaying the results," from the patents in Enfish. 830 F.3d at 1351. Referencing Enfish, the Federal Circuit held that "the claims at issue focused not on asserted advances in uses to which the existing computer capabilities could be put, but on a specific improvement – a particular database technique – in how computers could carry out one of their basic functions of storage and retrieval of data." Id. at 1354.

Here, the technologies claimed in the file sharing patents do not propound the same benefits recognized in Enfish, such as the "faster searching of data," "more effective storage of data," or

"more flexibility in configuring the database." Enfish, 922 F.3d at 1333. And, to satisfy step one of Alice, InterDigital cannot rely on allegations regarding the increased speed or efficiency generated by the application of generic wireless technologies. See Customedia Techs., LLC v. Dish Network Corp., 951 F.3d 1359, 1364 (Fed. Cir. 2020) ([C]laiming the improved speed or efficiency inherent with applying the abstract idea of a computer [is] insufficient to render the claims patent eligible as an improvement to computer functionality."); see also Uniloc, 957 F.3d at 1309 ("[S]oftware can make patent-eligible improvements to computer technology, and related claims are eligible as long as they are directed to non-abstract improvements to the functionality of a computer or network platform itself."). Similar to the claims in Electric Power, the claims of the file sharing patents "are clearly focused on the combination of . . . abstract-idea processes." 830 F.3d at 1354.

InterDigital argues that Lenovo oversimplifies the claims in the file sharing patents and invokes Enfish's caution that "describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule." (Pl.'s Br. in Opp. (DE 74) at 20 (quoting Enfish, 922 F.3d at 1337)). But in Enfish, the Federal Circuit concluded that the claims were "directed to a specific improvement to the way computers operate," where they were "not simply directed to any form of storing tabular data, but instead [were] specifically directed to a self-referential table for a computer database." Enfish, 922 F.3d at 1336–37. In this case, the claims in the file sharing patents assert "advances in uses to which the existing computer capabilities could be put" – Bluetooth and WiFi – and, beyond pointing to the unpatentable intrinsic speed and efficiency benefits, do not allege how this alleged improvement help touchscreen devices carry out their basic function of wirelessly transferring data. See Elec. Power, 830 F.3d at 1354; see also Chamberlain, 935 F.3d at 1346, 1348 (rejecting

patentee's allegation that the claims were directed to a "novel combination of its prior art movable barrier operator with a transmitter that is wireless" and instead finding that they were directed to the abstract idea of "wirelessly communicating status information about a system").

InterDigital also asserts that the claimed inventions improve upon the security of the wireless file transfer system where the target WTRU must accept the transferor WTRU's request to transfer the selected media. (See Compl. (DE 64) ¶ 49). "Improving security . . . can be a non-abstract computer-functionality improvement if done by a specific technique that departs from earlier approaches to solve a specific computer problem." Ancora Techs., Inc. v. HTC America, Inc., 908 F.3d 1343, 1348 (Fed. Cir. 2018). In Ancora, the Federal Circuit found that the patent in suit "addresse[d] a technological problem with computers . . . [the] vulnerability of license-authorization software to hacking" where "a structure containing a license record is stored in a particular, modifiable, non-volatile portion of the computer's BIOS, and the structure in that memory location is used for verification by interacting with the distinct computer memory that contains the program to be verified." Id. at 1348–49. The Federal Circuit in Ancora concluded that the claims were directed to patent-eligible material where they were directed to "an improvement in computer functionality that has the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it." Id. at 1349.

Here, the claimed language – "sending . . . a message to transfer the selected media . . . [and] receiving . . . an acceptance to transfer the selected media" – recites results-based language distinct from the "assertedly unexpected" solution like the claims in Ancora. (Patent '054, col. 10. 60–63). The purported improvement does not specify a technological solution beyond "a second layer of abstraction – specifically, identity authentication." Boom! Payments, Inc. v. Stripe, Inc., 839 F. App'x 528, 532 (Fed. Cir. 2021); see also Dropbox, Inc. v. Sychronoss Techs, Inc., 815 F.

App'x 529, 533 (Fed. Cir. 2020) ("This is not a specific technique for improving a computer, but a change in the abstraction providing the fundamental principles for access filters."). In short, the alleged security feature, an acceptance by the target WTRU, does not resemble "the concrete assignment of specific functions among a computer's components to improve computer security." Ancora, 908 F.3d at 1344.

Lastly, InterDigital falls back on the posture of the case upon a Rule 12 motion where it alleges that the complaint includes numerous facts supporting the patent eligibility of the claims in the file sharing patents. (See Pl.'s Br. in Opp. (DE 74) at 22). While required to accept all well-pleaded facts as true and construe these facts in the light most favorable to the plaintiff, courts "are not bound to accept as true a legal conclusion couched as a factual allegation." Dropbox, Inc. v. Synchronoss Techs., 815 F. App'x 529, 538 (Fed. Cir. 2020); see also Yu v. Apple, Inc., 1 F.4th 1040, 1046 (Fed. Cir. 2021). Moreover, upon a motion for judgment on the pleadings, Federal Circuit precedent supports "the practice of taking note of fundamental economic concepts and technological developments." Amazon.com, 838 F.3d at 1270.

Here, InterDigital's complaint makes assertions the court need not credit as well-pleaded factual allegations. (See, e.g., Compl. (DE 64) ¶ 40 ("The claimed advancements in secure wireless file-sharing technology were not well-known, routine, or conventional at the time of the invention, and represent specific improvements over the prior art."). And where InterDigital does plead factual allegations, they must be "concrete allegations regarding the claimed combination's improvement to the functioning of the computer[.]" Aatrix Software, Inc. v. Green Shades Software, Inc., 882 F.3d 1121, 1128 (Fed. Cir. 2018). In Aatrix, the Federal Circuit credited the patentee's factual allegations where the complaint alleged that the patent "increased the efficiencies of computers processing tax forms . . . saved storage space[, and] reduce[d] the risk of

thrashing." Id. at 1127. Here, InterDigital fails to allege how the purported dual-step detection and transfer processes increase the functioning of the touchscreen devices or the wireless network. See Dropbox, 815 F. App'x at 533 ("The patent has to describe how to solve the problem in a manner that encompasses something more than the principle in the abstract . . . [a]nd that solution has to be evident from the claims."); see also SAP America, Inc. v. InvestPic, LLC, 898 F.3d 1161, 1166 (Fed. Cir. 2018) ("Like other legal questions based on underlying facts, this question may be, and frequently has been resolved on a Rule 12 . . . motion where the undisputed facts, considered under the standards required by that Rule, require a holding of ineligibility under the substantive standards of law.").

In sum, the claims in the file sharing patents are directed to the "abstract idea" of wirelessly transferring data. Alice, 573 U.S. at 217. The court thus turns to whether the file sharing patents otherwise contain an "inventive concept." Id.

iii. Inventive Concept

Lenovo argues that the file sharing patents "use routine and conventional steps to perform this abstract idea [of wirelessly transferring data], and thus contain no inventive concept to save them from ineligibility." (Defs' Br. (DE 70) at 7). The court agrees.

Claim 1 of the '054 patent states a logical method for processing, detecting, and transferring files using wireless technologies. The claim's language does not recite any non-conventional steps on its face. (See id. at col. 10. 53–65 (listing functional steps including "processing . . . an input," "detecting . . . another input," "sending . . . a message," "receiving . . . an acceptance," and "transferring . . . media")). "If a claim's only inventive concept is the application of an abstract idea using conventional and well-understood techniques, the claim has not been transformed into a patent-eligible application of the abstract idea." BSG Tech LLC v.

Buyseasons, Inc., 899 F.3d 1281, 1290–91 (Fed Cir. 2018). The use of Bluetooth and WiFi to transfer data also was admittedly known in the prior art. (See '054 patent, col. 2. 60–63). And here, "the recited . . . components [of Bluetooth and WiFi] behave exactly as expected according to their ordinary use." In re TLI Commc'ns, 823 F.3d at 615. Thus, InterDigital cannot supply a sufficient inventive concept in the claim's combination of conventional wireless technologies. See DIRECTV, 838 F.3d at 1262 (finding claim lacked an inventive concept where it "simply recite[d] the use of generic features . . . as well as routine functions, such as transmitting and receiving signals, to implement the underlying idea").

In addition, the shared specification recites an "application processor . . . [that] may be equipped with software such as an operating system" or "a processor that is configurable to process information" from the communication peripheral or touchscreen display. (Patent '054, col. 2. 49–50); (id. at col. 4. 35–37). The communication peripheral "may include technologies such as . . . Bluetooth or WiFi" and the display peripheral "may be implemented . . . in a touchscreen/display." (Id. at col. 2. 61–63); (id. at col. 4. 8–9). "[T]he invocation of already-available computers that are not themselves plausibly asserted to be an advance . . . amounts to a recitation of what is well-understood, routine, and conventional." Customedia, 951 F.3d at 1366; see also Sanderling, 65 F.4th at 705 ("The distribution rule is just that: the application of the abstract idea using common computer components.").

Accordingly, the claims in the file sharing patents simply provide a method for implementing the abstract idea of wirelessly transferring data using conventional software and hardware. "Nearly every computer will include a communications controller and data storage unit capable of performing the basic calculation, storage, and transmission functions required by the method claims." Alice, 573 U.S. at 226. And the admitted existence of prior art techniques shows

that the claims do not provide "an arguably inventive set of components or methods." Elec. Power, 830 F.3d at 1355. The elements in the claims of the file sharing patents thus do not provide an "inventive concept." Alice, 573 U.S. at 217; cf. Intell. Ventures I L.L.C. v. Capital One Bank (USA), 792 F.3d 1363, 1367 (Fed. Cir. 2015) (finding that limitations involving the use of the Internet and telephone networks were insufficient to render a claimed method directed to tracking financial transactions patent-eligible); OIP Techs, 788 F.3d at 1364 (finding claims directed to price-optimization and implemented through generic computer processes and hardware to be patent-ineligible).

Relying on BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC, 827 F.3d 1341, 1349 (Fed. Cir. 2016), InterDigital argues that, even if the claimed invention is abstract, the asserted claims are still patent-eligible because they "represent nonconventional and non-generic arrangements of communications between Bluetooth-enabled and WiFi-enabled touchscreen devices that constitute technical improvements to conventional communications between the devices." (Pl.'s Br. in Opp. (DE 74) at 24).[17]

In BASCOM, the Federal Circuit found an inventive concept "in the non-conventional and non-generic arrangement of known, conventional pieces," even though the asserted claims, taken individually, merely "recite[d] generic computer, network and Internet components, none of which [was] inventive by itself." Id. at 1349–1350. However, unlike the claimed method in BASCOM,

[17] Because the court has found claim 1 of the '054 patent to be representative where the other claims in the file sharing patents are directed to "little more than the same abstract idea," the court need not address extensively InterDigital's argument that the individual limitation of the use of WiFi link to transfer data between connected devices was not well-understood, routine, or conventional. See BSG Tech LLC v. Buyseasons, Inc., 899 F.3d 1281, 1287 n.1 (Fed. Cir. 2018) ("Although these [dependent] claims cover a narrower range . . . than claim 1, the claims' focus remains on the abstract idea of considering historical usage information while inputting data."); see also Chiron Corp. v. Genentech, Inc., 363 F.3d 1247, 1260 (Fed. Cir. 2004) ("[T]he validity challenges to the independent claims coincided with the validity challenges to the dependent claims; the sameness of the inquiries permitted the treatment of all claims at once.").

InterDigital's claimed method is not a "software-based invention that improves the performance of the computer system itself." Id. at 1351. Furthermore, the instant method claims do not require modification of the conventional use of the devices or network technologies, or otherwise use the devices or existing transfer techniques in a non-conventional combination or arrangement. The Federal Circuit's discussion of BASCOM in Intell. Ventures I LLC v. Symantec Corp, 838 F.3d 1307 (Fed. Cir. 2016) is instructive.

> Contrary to the dissent, this case is unlike BASCOM, where, "[o]n [a] limited record" and when viewed in favor of the patentee, the claims alleged a "technical improvement over prior art ways of filtering [Internet] content." 827 F.3d at 1350. The patent in BASCOM did not merely move existing content filtering technology from local computers to the Internet, which "would not contain an inventive concept," but "overc[a]me[ ] existing problems with other Internet filtering systems"—i.e., it solved the problem of "inflexible one-size-fits-all" remote filtering schemes (caused by simply moving filtering technology to the Internet) by enabling individualized filtering at the ISP server. Id. at 1350–51. In other words, the patent in BASCOM did not purport to improve the Internet itself by introducing prior art filtering technology to the Internet. Rather, the BASCOM patent fixed a problem presented by combining the two.

Id. at 1321.

Similarly, here, InterDigital's combination of Bluetooth for nearby detection and WiFi for faster transfer does not allegedly solve any technical problem, like the "inflexible one-size-fits-all remote filtering schemes" presented by the existing Internet filtering systems in BASCOM. Id. InterDigital alleges that the dual use of Bluetooth and WiFi "presented a simplified and more intuitive approach that enabled users to quickly and easily share files with nearby users." (Compl. (DE 64) ¶ 52). But the method claims merely disclose a functional process for more seamlessly transferring media files between devices. See buySAFE, Inc. v. Google, Inc., 765 F.3d 1350, 1355 (Fed. Cir. 2014) ("That a computer receives and sends . . . information over a network— with no further specification— is not even arguably inventive."); see also Sanderling, 65 F.4th at 705

("[E]ven if true, claiming the improved speed or efficiency inherent with applying the abstract idea on a computer does not provide a sufficient inventive concept."). And unlike in BASCOM, the file sharing patents do not address a technical problem with a technical solution but rather "purport to improve [the field of wireless data transfers] by introducing prior art . . . technology." Symantec, 838 F.3d at 1321.

InterDigital's attempt to rely on Cellspin Soft, Inc. v. Fitbit, Inc., 927 F.3d 1306 (Fed. Cir. 2019) also fails. There, the asserted claims were directed to the abstract idea of "capturing and transmitting data from one device to another." Id. at 1315. At the second step of Alice, the Federal Circuit found that the claims sufficiently alleged an inventive concept where "they recite[d] a specific, plausibly inventive way of arranging devices and using protocols rather than the general idea of capturing, transferring, and publishing data." Id. at 1319. In so concluding, the Federal Circuit noted that the claims "unconventional[ly] . . . separate[d] the steps of capturing and publishing data so that each step would be performed by a different device, linked via a wireless, paired connection." Id. at 1316. The structure also allowed the data capturing device to "serve one core function . . . [and] leverage the hardware and software on a user's mobile device," resulting in smaller and cheaper capture devices, capture devices with one data plan, and user access even if the capture devices were physically inaccessible to the user. Id. at 1317.

Here, while some of InterDigital's allegations parallel the two-step protocol and the incorporation of Bluetooth as in Cellspin, the file sharing claims do not purport to imbue the same benefits to the devices themselves. See Intell. Ventures I LLC v. Capital One Fin. Corp., 850 F.3d 1332, 1342 (Fed. Cir. 2017) ("[T]he claims do not recite particular features to yield these advantages . . . [i]ndeed, the claim language here provides only a result-oriented solution, with insufficient detail for how a computer accomplishes it."). Moreover, in Cellspin, the patentees

alleged an unconventional protocol that resulted in improvements over the "inferior prior art capture devices." 927 F.3d at 1317. InterDigital does not allege any unconventional hardware structure along the lines of the two-device separation in Cellspin, And, while InterDigital asserts that the dual detection and transfer technique was an unconventional and non-generic improvement to wirelessly transferring data, the common specification of the file sharing patents states that "[a]lthough features and elements are described above in particular combinations, each feature or element can be used alone without the other features and elements or in various combinations with or without other features or elements." ('054 patent, col. 10. 15–18); see ChargePoint, Inc. v. SemaConnect, Inc., 920 F.3d 759, 766 (Fed Cir. 2019) ("[T]he specification [is] helpful in illuminating what a claim is directed to."). Thus, "taken individually or in combination, the recited limitations neither improve the functions of the computer itself, nor provide specific programming, tailored software, or meaningful guidance for implementing the abstract concept." Capital One, 850 F.3d at 1342.

InterDigital also analogizes the claims in this case to those in Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc., 827 F.3d 1042 (Fed. Cir. 2016) and DDR Holdings, LLC v. Hotels.com, L.P., 773 F.3d 1245 (Fed. Cir. 2014). In CellzDirect, after finding that the asserted claims were not directed to an abstract idea, the Federal Circuit concluded that the claims still satisfied Alice step two where the claimed method "applie[d] the discovery that hepatocytes can be twice frozen to achieve a new and useful preservation process." 827 F.3d at 1050–51. While "each of the claims' individual steps (freezing, thawing, and separating) were known independently in the art . . . a process of preserving hepatocytes by repeating those steps was itself far from routine and conventional." Id. at 1051. The Federal Circuit relied on the patent's inventive repeated-step solution: "the prior art only disclose[d] methods having one freeze-thaw cycle of hepatocytes" and

"the prior art taught away from multiple freezings as a single round of freezing severely damage[d] hepatocyte cells and result[ed] in lower cell viability." Id. Further, the claimed method "create[d] hepatocyte preparations that no longer exhibit[ed] unacceptable loss of viability [a]nd it allow[ed] researchers to pool samples together in advance and preserve them for later use, rather than needing to wait until enough single samples [were] accumulated." Id. at 1050.

In DDR Holdings, the patent in suit's claims "address[ed] the problem of retaining website visitors that, if adhering to the routine, conventional functioning of Internet hyperlink protocol, would be instantly transported away from a host's website after clicking on an advertisement and activating a hyperlink." 773 F.3d at 1257. The Federal Circuit found that the recited invention was not merely routine or conventional where "[i]nstead of the computer network operating in its normal, expected manner by sending the website visitor to the third-party website that appear[ed] to be connected with the clicked advertisement, the claimed system generate[d] and direct[ed] the visitor to the . . . hybrid web page that present[ed] product information from the third-party and visual look and feel elements from the host website." Id. at 1258–59.

In both CellzDirect and DDR Holdings, the Federal Circuit found an inventive concept where the asserted claims were directed to technical solutions unknown in the prior art – preserving hepatocytes by repeating steps of freezing, thawing, and separating in CellzDirect and retaining website visitors by devising a hybrid web page that integrated third-party information and attributes in DDR Holdings. These inventions went beyond reciting "standing, well-known techniques in a logical combination." CareDx, Inc. v. Natera, Inc., 40 F.4th 1371, 1380 (Fed. Cir. 2022). Here, InterDigital alleges that the combination of Bluetooth and WiFi technologies addressed a specific, concrete problem in the realm of wireless data transfers, namely, impediments to "seamlessly and securely sharing user-selected media to a nearby recipient." (Pl.'s

Br. in Opp. (DE 74) at 26). But "claims to an abstract idea implemented on generic computer components, without providing a specific technical solution beyond simply using generic computer concepts in a conventional way, do not suffice at step two." Int'l Bus. Mach. Corp. v. Zillow Grp., 50 F.4th 1371, 1379 (Fed. Cir. 2020). The combination of these conventional techniques "merely call for performance of the claimed [processing, detecting, and transferring] functions on a set of generic computer components and display devices." Elec. Power, 830 F.3d at 1355; see Boom! Payments, 839 F. App'x at 533 ("[T]he order and timing of the claim elements are merely the necessary steps of executing payment escrow and so do not constitute an inventive concept.").

Instead, the claims here better parallel the claims in CareDx. There, the patents in suit "appl[ied] conventional measurement techniques to detect . . . the level of donor cfDNA and the likelihood of organ transplant rejection." CareDx, 40 F.4th at 1378. The Federal Circuit found that "that asserted claims add[ed] nothing inventive because they merely recite[d], standard well-known techniques in a logical combination." Id. at 1380. And, like the claims of the file sharing patents, "[e]ach of the methods in the recited steps were already being performed in the art [and] the claimed combination of steps – collecting a sample, genotyping, sequencing, and quantifying – was a straightforward, logical, and conventional method" for addressing the alleged industry problem. Id; (see '054 patent, col. 2. 60–63 ("The communication peripherals 107 may include technologies such as . . . Bluetooth or WiFi.")). That the claims in CareDx were directed to natural phenomena rather than computer-implemented methods makes no difference at Alice step two where "[s]imply appending conventional steps, specified at a high level of generality [is] not enough to supply an inventive concept." Alice, 573 U.S. at 222.

Lastly, while the court must accept the complaint's "plausible and specific factual allegations" upon a Rule 12(c) motion, it need not credit "any allegation about inventiveness, wholly divorced from the claims or the specification." Cellspin, 927 F.3d at 1317. Here, the court has accepted InterDigital's well-pleaded allegations that the file sharing patents sought to create a more intuitive file-sharing approach while reducing the time needed to open a messaging app and correctly enter recipient information. (Compl. (DE 64) ¶ 54). But even inferring well-pleaded allegations in favor of InterDigital, the court may also look to the claims and specification of the file sharing patents, which show that the claimed Bluetooth and WiFi techniques were known in the prior art. See In re TLI Commc'ns, 823 F.3d at 613–14 (recognizing the pleading standard upon a Rule 12 motion but finding no inventive concept after looking at the specification's description of only conventional devices and functions known in the art); see also Zillow, 50 F.4th at 1380 (recognizing that certain claim limitations were already known in the prior art).

In addition, the prior art attached to Lenovo's motion also recites the combination of Bluetooth and high-speed wireless technologies, stating "[o]nce a Bluetooth connection has been established between the two devices, the Bluetooth software will then proceed to instruct the devices to establish a secondary data channel between the two devices using higher-speed network links provided by other technologies." (See Burns patent (Ex. A (DE 68-1) at 6)). While this is not determinative of the court's analysis, because "[t]he search for a § 101 inventive concept is . . . distinct from demonstrating § 102 novelty," Synopsys, Inc. v. Mentor Graphics Corp., 839 F.3d 1138, 1151 (Fed. Cir. 2016), the existence of similar transfer techniques in the prior art further demonstrates the lack of an inventive concept in InterDigital's asserted two-step detection and transfer protocol. See also DIRECTTV, 838 F.3d at 1261 ("[A]ny novelty in implementation of the idea is a factor to be considered . . . in the second step of the Alice analysis.").

In sum, InterDigital fails to specify how the performance of the dual-step technique transforms or improves enough upon the idea of wirelessly transferring data "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [abstract idea] itself." Alice, 573 U.S. at 218. Accordingly, viewed "both individually and as an ordered combination," the claims of the file sharing patents do not contain an "inventive concept." Id. at 217.

Therefore, that part of Lenovo's motion seeking judgment of invalidity as to the '054 patent and the '933 patent is granted.

b. The '877 Patent

Lenovo argues that the claims of the '877 patent cover the abstract idea of encoding and decoding image data. (See Defs' Br. DE 70 at 30).[18] The court disagrees.

Claim 1 of the '877 patent recites:

> A decoding method of a binary stream to reconstruct a current block of a current image from a reference block of a reference image reconstructed at a different size from the size of said current image, said reconstructed reference image being stored in a decoded picture buffer comprising:
>
> motion compensating said reference block of said reconstructed reference image by applying a single horizontal filter GFH and a single vertical filter GFv successively on the lines and on the columns of pixels of said reference block,
>
> decoding, for the current block, a residue block, and
>
> reconstructing the current block from said residue block and from said motion compensated reference block, wherein said single vertical filter GFv applied on a pixel s is such that GFv(s)=MCIFv(SCFv(s)), where MCIFv is a vertical motion compensation interpolation filter and SCFv is a vertical

[18] Lenovo argues that claim 1 of the '877 patent is representative where they "are all drawn to the same abstract idea . . . of coding and decoding image data." (Defs' Br. (DE 70) at 29). InterDigital does not contest Lenovo's argument. Finding that the independent and dependent claims do not "differ in any manner . . . material to the patent-eligibility inquiry," the court agrees and will treat claim 1 of the '877 patent as representative. Mortg. Grader, 811 F.3d at 1324 n.6.

> resampling filter, MCIFv and SCFv being applied jointly and wherein said single horizontal filter GFH applied on a pixel u is such that GFH(u)=MCIFH(SCFH(u)), where MCIFH is a horizontal motion compensation interpolation filter and SCFH is a horizontal resampling filter, MCIFH and SCFH being applied jointly and wherein no resampled version of said reconstructed reference image is stored in the decoded picture buffer.

(U.S. Patent No. 10,250,877, col. 11. 44–67, col. 12. 1–3) (emphasis added).

Claim 1 of the '877 patent provides for the joint application of an interpolation filter and resampling filter to improve upon the adaptive resolution process by increasing the storage space of a device's decoded picture buffer. (See id. at col. 12. 1–3 (providing the mechanism where a horizontal motion compensation interpolation filter and a horizontal resampling filter are "applied jointly wherein no resampled version of said reconstructed reference image is stored in the decoded picture buffer.")). Thus, the claims are not directed to just any form of encoding or decoding image data, but rather to a specific coding mechanism that increases the memory capacity of devices when transmitting images. See Enfish, 822 F.3d at 1337 (emphasis omitted) ("[T]he claims are not simply directed to any form of storing tabular data, but instead are specifically directed to a self-referential table for a computer database."). Further, InterDigital alleges that the claims of the '877 patent relate "to a method for reconstructing a current block of a current image from at least one block of a reconstructed image that is a different size from the size of the current image." (Compl. (DE 64) ¶ 62). Unlike previous methods for reconstructing image blocks, "[t]he method of the '877 patent [allegedly] . . . does not require the storage of resized . . . versions of the reference image in the DPB memory." (Id.).

This case can be distinguished from Adaptive Streaming Inc. v. Netflix, Inc., 836 F. App'x 900 (Fed. Cir. 2020), where the Federal Circuit found that the patent in suit was directed to "the abstract idea of collecting information and transcoding it into multiple formats." Id. at 903. While

"the ideas of encoding and decoding image data and of converting formulas . . . are by themselves abstract ideas," id., in Adaptive Streaming, the asserted claims focused on "the abstract idea of format conversion . . . [and not on] any specific advance in coding or other techniques for implementing that idea." Id. Indeed, the Federal Circuit noted a line of cases where the claims were directed to the abstract idea of "encoding and decoding image data" in part because "the claims focused on those general ideas governing basic communication practices, not on any more specific purported advance in implementation." Id. But here, InterDigital has alleged, and the claims language supports, a unique filtering mechanism for encoding and decoding image data that improves upon the prior art device storage capacity.

For similar reasons, the claims at issue here are different than those in Hawk Tech. Sys, LLC v. Castle Retail, LLC, 60 F.4th 1349 (Fed. Cir. 2023).[19] There, while the claims were "directed to the abstract idea of storing and displaying video," id. at 1356, the Federal Circuit relied in significant part on the "result-based functional language" in the claims. See id. at 1357 (listing the claims limitations of receiving, digitizing, displaying, converting, storing, providing, transmitting, and displaying). Stressing the importance of the claims' actual language, the Federal Circuit concluded that the claims' alleged solution was not directed to the technical problem of "conserving bandwidth while preserving data." Id. Here, representative claim 1 of the '877 patent recites an algorithmic method by which the horizontal motion compensation interpolation filter and the horizontal resampling filter work simultaneously wherein "no resampled version of . . . [a] reference image is stored in the decoded picture buffer." (See '877 patent, col. 11. 58–67, col. 12. 1–3). Conversely, in Hawk, the claims language detailing the "storage" mechanism merely recited

[19] Hawk was not briefed by the parties, but the court finds it to be a useful precedent where the Federal Circuit decided it more recently than other cases briefed and the subject matter, like here, pertained to "displaying images, converting them into a format, [and] transmitting them." Hawk, 60 F.4th at 1357.

the results-based step of "contemporaneously storing at least a subset of the converted images in a storage device in a network environment." 60 F.4th at 1353. Moreover, the patentee in Hawk alleged a video storage and display process that used the "same bandwidth" as in the prior art, where as here, InterDigital alleges that the improvement increases computer memory capacity. Therefore, the claims in the '877 patent are materially distinct in their specificity and substance from those in Hawk.

Lenovo argues that the alleged memory reduction benefits are "not an improvement to the generic computer" and merely "a byproduct from performing the abstract idea on a generic computer." (Defs' Reply Br. (DE 82) at 10). In effect, Lenovo argues that the claims of the '877 patent are not directed to a device improvement where the "focus" of the claims is directed to the abstract idea of encoding and decoding image data. In BSG Tech, the Federal Circuit held that the patents in suit were directed to the abstract idea of considering historical usage information while inputting data even though they "appl[ied] an abstract idea in a narrow way." 899 F.3d at 1287. But there, "information inputted by users into a database [wa]s stored and organized in the same manner as information inputted into conventional databases capable of indexing data as classifications, parameters, and values." Id. at 1288. The Federal Circuit held that "[w]hile the presentation of summary comparison usage information to users improves the quality of the information added to the database, an improvement to the information stored by a database is not equivalent to an improvement in the database's functionality." Id. Indeed, BSG Tech distinguished the claims at issue from those in Visual Memory LLC v. NVIDIA Corp,, 867 F.3d 1253, 1261 (Fed. Cir. 2017), where the claims "were directed to an improved memory system." Id. The Federal Circuit concluded that "the claims [in BSG Tech] [did] not recite any improvement

to the way in which such databases store or organize information analogous to the self-referential table in Enfish or the adaptable memory caches in Visual Memory." Id.

Here, the claims language recites that the interpolation filter and the resampling filter are "applied jointly and wherein no resampled version of said reconstructed reference image is stored in the decoded picture buffer." ('877 patent, col. 11. 67. col. 12. 1–3); See ChargePoint, 920 F.3d at 766 ("[W]hile the specification may help illuminate the true focus of a claim, when analyzing patent eligibility, reliance on the specification must always yield to the claim language in identifying that focus."). And while the specification acknowledges that the underlying filters and hardware were known, the specification also notes the technical storage problem in the prior art. (See '877 patent at col. 2. 8–13 ("The [prior art] adaptive resolution method thus requires more memory space as several versions (reconstructed image and upsampled and/or subsampled versions) of a same reference image are stored. Increasing the memory size is a problem notably in the hardware implementations for which the surface of the component is notably critical.")). Thus, where the court must construe all well-pleaded allegations in InterDigital's favor, the court cannot say that "the focus of the claims is . . . on a process that qualifies as an abstract idea for which computer are invoked merely as a tool" rather than on "specific asserted improvements in computer capabilities," as InterDigital alleges. BSG Tech, 899 F.3d at 1286; see Enfish, 822 F.3d at 1335 ("Software can make non-abstract improvements to computer technology just as hardware improvements can.").

Lenovo also points to numerous statements from the specification allegedly showing that the "claims are drawn to nothing more than coding and decoding images from digital video." (Defs' Br. (DE 70) at 31). But InterDigital alleges an improvement to the device's memory capacity by eliminating the need to store reconstructed and upsampled versions of the transmitted

image, and the court has noted the claims language supporting that assertion. (See '877 patent, col. 12. 1–3). Moreover, the '877 patent's specification buttresses the claims recitation of the device's increased memory capacity where it states, in the previous art, "it [was] thus known to apply the filters . . . on the reconstructed reference images with a view to generating upsampled and/or subsampled images which are stored in the DPB memory." ('877 patent, col. 5. 23–26). However, the specification recites that "[b]y advantageously grouping, the filters for interpolation and resampling horizontally on the one hand and vertically on the other hand, no resampled reference image . . . is stored in the DPB memory in addition to the reconstructed reference image." (Id. at col. 6. 2–6).

Further, Lenovo's argument that the '877 patent is not patent-eligible because it simply uses mathematical calculations in service of an abstract idea fails for the same reasons. Unlike in RecogniCorp, LLC v. Nintendo Co., 855 F.3d 1322 (Fed. Cir. 2017) and Digitech Image Techs., LLC v. Elecs. for Imaging, Inc., 758 F.3d 1344 (Fed. Cir. 2014), here, the claims of the '877 patent are directed to a patent-eligible non-abstract idea not because they use algorithms to perform resampling and motion compensation in a single step. Rather InterDigital asserts, and the claims support, that the encoding and decoding invention improves the use of computers through a specific filtering mechanism that increases the storage capacity in the DPB. Cf. BSG Tech, 899 F.3d at 1288 ("BSG Tech's claimed invention results in better user input, but the database serves in its ordinary capacity of storing the resulting information."). And, in any event, "an application of a . . . mathematical formula to a known structure or process may well be deserving of patent protection." Diamond v. Diehr, 450 U.S. 175, 187 (1981).

Lastly, Lenovo relies upon Sensormatic Elecs., LLC v. Wyze Labs, Inc., No. 2020-2320, 2021 WL 2944838 (Fed. Cir. July 14, 2021), where the Federal Circuit determined in an

unpublished decision that claims directed to "the abstract ideas of wireless communication and remote surveillance" were abstract. Id. at *3. In particular, Lenovo relies on a sentence in the opinion where the Federal Circuit resolved that "[t]he concept of encoding or decoding image data is abstract, even if for the purpose of transmitting files to devices with less memory or bandwidth or by transcoding data into multiple formats." Id. Thus, Lenovo argues that Sensormatic commands a similar conclusion of patent-ineligibility here. The court disagrees for two main reasons.

First, the claims in Sensormatic were far more like the functional, results-based claims as in Hawk and Two-Way Media than the claims in the '877 patent. The claims at issue in Hawk do not speak of decoding or encoding technologies, and instead, in that portion of the opinion, the Federal Circuit addressed the patentee's arguments as to the nonabstract improvements rather than the claims' language directly. Nothing in the language of the claims in Sensormatic spoke of improvements to memory or storage capacity. Second, and more importantly, the court does not agree that the sentence cited in the Federal Circuit's opinion stands for what Lenovo suggests or that it is clearly dispositive of this case. Sensormatic determined that claims directed to "encoding or decoding image data" are abstract even where encoding or decoding image data is used "for the purpose of transmitting files to devices with less memory or bandwidth." Id. (emphasis added). The alleged improvement in the '877 patent results in more computer memory, not less. And the opinion discusses encoding and decoding in the context of alleged improvements to transmission. See id. ("Sensormatic argues that the claims are directed to . . . dual encoding of input data, which improves use of bandwidth and device compatibility."). But here, the alleged improvement in the '877 patent relates to increases in the capacity of a computer's decoded picture buffer, not directly to transmission or "device compatibility." And the use of the descriptor phrase "with less memory

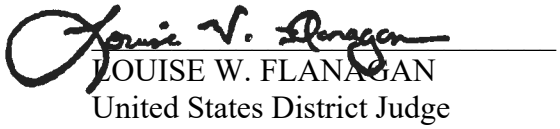
or bandwidth" supports that interpretation. "[L]ess memory or bandwidth" qualifies the type of receiving device in the transmission process. See id. Thus, the court does not interpret the Federal Circuit's unpublished opinion in Sensormatic to mean that encoding and decoding techniques with resulting benefits to a computer's storage or memory capacity are always directed to abstract ideas.

Accordingly, that part of Lenovo's motion seeking judgment of invalidity as to the '877 patent is denied.[20]

CONCLUSION

Based on the foregoing, Lenovo's motions for judgment on the pleadings (DE 69, DE 90) are GRANTED IN PART and DENIED IN PART, as set forth herein. Lenovo's motion for a judgment of invalidity is GRANTED as to the '054 patent and the '933 patent. Lenovo's motion for a judgment of invalidity is DENIED as to the '877 patent. InterDigital's motion for leave to file surreply (DE 87) is also DENIED.

SO ORDERED, this the 17th day of July, 2024.



LOUISE W. FLANAGAN
United States District Judge

[20] Because the court finds that the claims of the '877 patent are not directed to an abstract idea, it does not address whether the elements of the claims add an inventive concept sufficient "to transform the nature of the claim[s] into a patent-eligible application." SAP, 898 F.3d at 1166–67.