

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

3G LICENSING, S.A., KONINKLIJKE KPN
N.V., and ORANGE S.A.,

Plaintiffs,

v.

BLACKBERRY LIMITED and BLACKBERRY
CORPORATION,

Defendants.

C.A. No. 17-82-LPS-CJB

3G LICENSING, S.A., KONINKLIJKE KPN
N.V., and ORANGE S.A.,

Plaintiffs,

v.

LENOVO GROUP LTD., LENOVO HOLDING
CO., INC., LENOVO (UNITED STATES) INC.
and MOTOROLA MOBILITY LLC,

Defendants.

C.A. No. 17-84-LPS-CJB

3G LICENSING, S.A., KONINKLIJKE KPN
N.V., and ORANGE S.A.,

Plaintiffs,

v.

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

Defendants.

C.A. No. 17-85-LPS-CJB

KONINKLIJKE KPN N.V.,

Plaintiffs,

v.

GEMALTO IOT LLC, GEMALTO M2M GMBH,
and GEMALTO INC.,

Defendants.

KONINKLIJKE KPN N.V.,

Plaintiffs,

v.

SIERRA WIRELESS, INC. and SIERRA
WIRELESS AMERICA, INC.,

Defendant.

KONINKLIJKE KPN N.V.,

Plaintiff,

v.

TCL COMMUNICATION, INC., TCL
COMMUNICATION TECHNOLOGY HOLDING
LIMITED, TCT MOBILE, INC., TCT MOBILE
(US) INC., and TCT MOBILE (US) HOLDINGS,
INC.,

Defendants.

KONINKLIJKE KPN N.V.,

Plaintiff,

v.

TELIT WIRELESS SOLUTIONS, INC.,

Defendant.

C.A. No. 17-86-LPS-CJB

C.A. No. 17-90-LPS-CJB

C.A. No. 17-91-LPS-CJB

C.A. No. 17-92-LPS-CJB

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MEMORANDUM OPINION

March 22, 2018
Wilmington, Delaware


STARK, U.S. District Judge:

Plaintiff Koninklijke KPN N.V. (“KPN”) sued multiple defendants in numerous related actions for alleged infringement of KPN’s U.S. Patent No. 6,212,662 (“’662 patent”). Pending before the Court is Defendants’ motion under Federal Rule of Civil Procedure 12(c) for judgment on the pleadings that all the claims of the ’662 patent are invalid under 35 U.S.C. § 101. (C.A. No. 17-28 D.I. 28)¹ For the reasons below, the Court will grant Defendants’ motion.

I. BACKGROUND

KPN asserts the ’662 patent in a total of eleven cases against Defendants; in seven of those cases it is the only asserted patent, while in the remaining cases it is one of five patents-in-suit.² (*See* D.I. 29 at 1) The ’662 patent is entitled “Method and Devices for the Transmission of Data with Transmission Error Checking.” (D.I. 29-1 Ex. A) As the title suggests, the ’662 patent is related to the “detection of errors, in particular transmission errors, in data streams and/or data packets.” ’662 patent at Abstract; *see also id.* at 1:10-11 (“The invention relates to a method for the transmission of data with transmission error checking.”).

The patent explains that errors may occur when data is transmitted, for example, “through electromagnetic radiation, inadequacies in a storage medium (transmission in time), and errors in switching and transmission equipment.” *Id.* at 1:31-34. The claimed invention allows for checking such errors by first generating supplementary data at the transmitting and receiving end

¹Unless otherwise noted, all references to the docket index (D.I.) are to C.A. No. 17-82.

²The ’662 patent is the only asserted patent against Gemalto (C.A. No. 17-86), Kyocera (C.A. No. 17-87), NEC (C.A. No. 17-88), Sierra (C.A. No. 17-90), TCL (C.A. No. 17-91), Telit (C.A. No. 17-92), and OnePlus (C.A. No. 17-89). It is one of five patents asserted against Blackberry (C.A. No. 17-82), HTC (C.A. No. 17-83), Lenovo (C.A. No. 17-84), and LG (C.A. No. 17-85).

of a transmission channel using a first and a second function, respectively. *Id.* at 1:10-20. The supplementary data that is generated at each end is then compared to see if they correspond with each other. *Id.* If they do not, then a transmission error may have occurred and the relevant data can be re-transmitted, if necessary. *Id.* at 1:43-46.

The '662 patent also generally describes the principles of data transmission and error correction in the prior art. *Id.* at Fig. 1; 3:32-56. According to the patent, the concept of generating supplementary data to check for errors in data during transmission was already known. *Id.* at 1:21-22, 34-37. The patent provides examples of prior art methods for generating supplementary data like using parity bits and a cyclic redundancy code (CRC) generator. *Id.* at 1:37-46, 60-67.

However, as the patent explains, these prior art systems and methods were not completely effective because transmission errors were sometimes not detected. The patent provides two specific instances when this occurred. One, referred to as “systematic errors,” is when the errors repeat themselves, and the other is when the data is altered, for example, compressed or encoded, during transmission. *Id.* at 1:47-2:15. According to the “object of the invention,” the claimed method “allows data to be checked for errors in a better way, and thus considerably increases the probability of transmission errors being detected,” is well-suited “for application to compressed data,” and can be “applied in a simple manner.” *Id.* at 2:18-26.

To achieve this objective, the '662 patent, unlike the prior art methods, *varies* the original data to create supplementary data. *See id.* at 2:30-41. By varying the original data, the patent explains, the probability of detecting “systematic errors in particular increases considerably.” *Id.* at 2:42-47.

The four claims of the '662 patent are reproduced below:

1. A device for producing error checking based on original data provided in blocks with each block having plural bits in a particular ordered sequence, comprising:

a generating device configured to generate check data; and

a varying device configured to vary original data prior to supplying said original data to the generating device as varied data;

wherein said varying device includes a permutating device configured to perform a permutation of bit position relative to said particular ordered sequence for at least some of the bits in each of said blocks making up said original data without reordering any blocks of original data.
2. The device according to claim 1, wherein the varying device is further configured to modify the permutation in time.
3. The device according to claim 2, wherein the varying is further configured to modify the permutation based on the original data.
4. The device according to claim 3, wherein the permutating device includes a table in which subsequent permutations are stored.

As can be seen, claim 1 claims a device having three components: a generating device, a varying device, and a permutating device. The generating device generates “check data,” which the specification also refers to as supplementary data. *See* '662 patent at 3:32-34, 37-39. The varying device varies the original data to create “varied data” and then sends the varied data to the generating device. To vary the data, the varying device uses a permutating device, which permutes the data by changing one or more bit positions in each data block without reordering the blocks. All three dependent claims recite devices that claim additional features of either the varying device or the permutating device. The devices in the dependent claims are designed to modify the permutation based on time (claim 2) and the original data (claim 3) and also include a

table in which later permutations can be stored (claim 4).

II. RECENT § 101 DECISIONS

The parties completed briefing on the motion on October 4, 2017. (D.I. 29, 37, 45) The Court of Appeals has subsequently issued multiple opinions considering challenges to patentability pursuant to § 101.

On November 3, 2017, Defendants notified the Court of the Federal Circuit's decision in *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329 (Fed. Cir. 2017). (D.I. 51) *Two-Way Media* affirmed a decision from Judge Andrews of this Court finding that the claims of the asserted patents were not patent eligible under § 101. *Id.* at 1332. When the Court heard oral argument on December 8, 2017 (*see* D.I. 66 ("Tr.")), the parties were able to address the application of *Two-Way Media* to the pending motion. (*See e.g., id.* at 11, 32, 46, 65)

On February 20, 2018, KPN notified the Court of the opinion in *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121 (Fed. Cir. 2018). (D.I. 77) As KPN noted, *Aatrix* states with respect to the second step of the *Alice/Mayo* test (described further below) that "[w]hether the claim elements or the claimed combination are well-understood, routine [and] conventional is a question of fact." *Id.* at 1128. Defendants, in their response two days later, further advised the Court of the appellate court's decision in *Automated Tracking Sols., LLC v. Coca-Cola Co.*, 2018 WL 935455, at *5-6 (Fed. Cir. Feb. 16, 2018), which affirmed the grant of a motion for judgment on the pleadings finding that the asserted patent claims were ineligible. (D.I. 78)

The Court is also aware of other recent § 101 opinions. *See, e.g., Intellectual Ventures I LLC v. Symantec Corp.*, 2018 WL 1324863 (Fed. Cir. Mar. 15, 2018) (affirming this Court's

grant of summary judgment of invalidity due to lack of patentable subject matter); *Exergen Corp. v. Kaz USA, Inc.*, 2018 WL 1193529, *4 (Fed. Cir. Mar. 8, 2018) (“The district court’s conclusion that these claim elements were not well-understood, routine, and conventional is a question of fact to which we must give clear error deference. Like indefiniteness, enablement, or obviousness, whether a claim is directed to patentable subject matter is a question of law based on underlying facts. . . . [N]ot every § 101 determination contains disputes over the underlying facts.”) (internal citations omitted); *Zuilli v. Google LLC*, 2018 WL 798666 (Fed. Cir. Feb. 9, 2018) (affirming PTAB decision that claims were directed to patent-ineligible subject matter); *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018) (affirming grant of motion for judgment on pleadings while stating, “Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination”); *Move, Inc. v. Real Estate Alliance Ltd.*, 2018 WL 656377 (Fed. Cir. Feb. 1, 2018) (affirming grant of summary judgment finding patent invalid for claiming ineligible subject matter); *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356 (Fed. Cir. 2018) (affirming denial of summary judgment that claims are directed to patent ineligible subject matter); *Finjan, Inc. v. Blue Coat Systems, Inc.*, 879 F.3d 1299 (Fed. Cir. 2018) (affirming district court’s conclusion following bench trial that patent claims were directed to patent-eligible subject matter).

Even though the parties have not provided their specific analyses of all of these recent decisions, the Court has considered each of them in reaching its decision here.

III. LEGAL STANDARDS

A. Motion for Judgment on the Pleadings

Pursuant to Federal Rule of Civil Procedure 12(c), a party may move for judgment on the

pleadings “[a]fter pleadings are closed – but early enough not to delay trial.” When evaluating a motion for judgment on the pleadings, the Court must accept all factual allegations in a complaint as true and view them in the light most favorable to the non-moving party. *See Rosenau v. Unifund Corp.*, 539 F.3d 218, 221 (3d Cir. 2008); *see also Maio v. Aetna, Inc.*, 221 F.3d 472, 482 (3d Cir. 2000). This is the same standard that applies to a Rule 12(b)(6) motion to dismiss. *See Turbe v. Gov’t of Virgin Islands*, 938 F.2d 427, 428 (3d Cir. 1991).

A Rule 12(c) motion will not be granted “unless the movant clearly establishes that no material issue of fact remains to be resolved and that he is entitled to judgment as a matter of law.” *Rosenau*, 539 F.3d at 221. “The purpose of judgment on the pleadings is to dispose of claims where the material facts are undisputed and judgment can be entered on the competing pleadings and exhibits thereto, and documents incorporated by reference.” *Venetec Int’l, Inc. v. Nexus Med., LLC*, 541 F. Supp. 2d 612, 617 (D. Del. 2008); *see also In re Burlington Coat Factory Sec. Litig.*, 114 F.3d 1410, 1426 (3d Cir. 1997) (explaining that any documents integral to pleadings may be considered in connection with Rule 12(c) motion). “The issue is not whether a plaintiff will ultimately prevail but whether the claimant is entitled to offer evidence to support the claims.” *Burlington Coat Factory*, 114 F.3d at 1420. Thus, a court may grant a motion for judgment on the pleadings (like a motion to dismiss) only if, after “accepting all well-pleaded allegations in the complaint as true, and viewing them in the light most favorable to plaintiff, plaintiff is not entitled to relief.” *Maio*, 221 F.3d at 482.

B. Patentable Subject Matter

Under 35 U.S.C. § 101, “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof,

may obtain a patent therefor, subject to the conditions and requirements of this title.” There are three exceptions to § 101’s broad patent-eligibility principles: “laws of nature, physical phenomena, and abstract ideas.” *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980). “Whether a claim recites patent eligible subject matter is a question of law which may contain disputes over underlying facts.” *Berkheimer*, 881 F.3d at 1368.

In *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289 (2012), the Supreme Court set out a two-step “framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014). First, courts must determine if the claims at issue are directed to a patent-ineligible concept (“step one”). *See id.* If so, the next step is to look for an “‘inventive concept’ – i.e., 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” (“step two”). *Id.* (alteration in original). The two steps are “plainly related” and “involve overlapping scrutiny of the content of the claims.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016).

At step one, “the claims are considered in their entirety to ascertain whether their character **as a whole** is directed to excluded subject matter.” *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015) (emphasis added); *see also Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (“*Affinity Labs I*”) (stating first step “calls upon us to look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter”).

In conducting the step one analysis, courts should not “oversimplif[y]” key inventive concepts or “downplay” an invention’s benefits. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337-38 (Fed. Cir. 2016); *see also McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) (“[C]ourts ‘must be careful to avoid oversimplifying the claims’ by looking at them generally and failing to account for the specific requirements of the claims.”) (quoting *In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016)).

At step two, courts must “look to both the claim as a whole and the individual claim elements to determine whether the claims contain 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.” *McRO*, 837 F.3d at 1312 (internal brackets and quotation marks omitted). The “standard” step two inquiry includes consideration of whether claim elements “simply recite ‘well-understood, routine, conventional activit[ies].’” *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016) (quoting *Alice*, 134 S. Ct. at 2359). “Simply appending conventional steps, specified at a high level of generality, [is] not **enough** to supply an inventive concept.” *Alice*, 134 S. Ct. at 2357 (internal quotation marks omitted; emphasis in original).

However, “[t]he inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art.” *Bascom*, 827 F.3d at 1350. In *Bascom*, the Federal Circuit held that “the limitations of the claims, taken individually, recite generic computer, network and Internet components, none of which is inventive by itself,” but nonetheless determined that an **ordered combination** of these limitations was patent-eligible under step two. *Id.* at 1349.

The Federal Circuit recently elaborated on the step two standard, stating that “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact. Any fact, such as this one, that is pertinent to the invalidity conclusion must be proven by clear and convincing evidence.” *Berkheimer*, 881 F.3d at 1368; *see also Aatrix*, 882 F.3d at 1128 (“While the ultimate determination of eligibility under § 101 is a question of law, like many legal questions, there can be subsidiary fact questions which must be resolved en route to the ultimate legal determination.”); *Automated Tracking*, 2018 WL 935455, at *5 (“We have held that ‘whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.’”) (quoting *Berkheimer*, 881 F.3d at 1368).

“Whether a particular technology is well-understood, routine, and conventional goes beyond what was simply known in the prior art. The mere fact that something is disclosed in a piece of prior art, for example, does not mean it was well-understood, routine, and conventional.” *Berkheimer*, 881 F.3d at 1369; *see also Exergen Corp.*, 2018 WL 1193529, at *4 (“Something is not well-understood, routine, and conventional merely because it is disclosed in a prior art reference. There are many obscure references that nonetheless qualify as prior art.”).

As part of the step two “inventive concept” inquiry, the Federal Circuit has looked to the claims as well as the specification. *See Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) (“*Affinity Labs II*”) (“[N]either the claim nor the specification reveals any concrete way of employing a customized user interface.”). Still, it is not enough just to disclose the improvement in the specification; instead, the Court’s task becomes to “analyze

the asserted claims and determine whether they *capture these improvements*.” *Berkheimer*, 881 F.3d at 1369 (emphasis added). In other words, “[t]o save a patent at step two, an inventive concept must be *evident in the claims*.” *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (emphasis added); *see also Alice*, 134 S.Ct. at 2357 (“[W]e must examine the *elements of the claim* to determine whether it contains an ‘inventive concept.’”) (emphasis added); *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016) (“The § 101 inquiry must focus on the language of the Asserted Claims themselves.”).

At both steps one and two, it is often useful for the Court to compare the claims at issue with claims that have been considered in the now considerably large body of decisions applying § 101. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016).

Finally, as a procedural matter, the Federal Circuit has observed frequently that § 101 disputes may be amenable to resolution on motions for judgment on the pleadings, motions to dismiss, or summary judgment. *See, e.g., Berkheimer*, 881 F.3d at 1368 (“Whether a claim recites patent eligible subject matter is a question of law which may contain disputes over underlying facts. Patent eligibility has in many cases been *resolved on motions to dismiss or summary judgment*. *Nothing in this decision should be viewed as casting doubt on the propriety of those cases*. When there is no genuine issue of material fact regarding, whether the claim element or claimed combination is well-understood, routine, conventional to a skilled artisan in the relevant field, this issue can be decided on summary judgment as a matter of law.”) (emphasis added); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350 (Fed. Cir. 2014) (affirming grant of Rule 12(c) motion for judgment on pleadings for lack of patentable subject matter).

IV. DISCUSSION

A. Step One

At step one of the *Alice/Mayo* test, the question is whether the asserted claims are directed to a patent-ineligible concept. “[A]ll inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 132 S. Ct. at 1293. Thus, “an invention is not rendered ineligible for patent simply because it involves” a patent-ineligible concept. *Alice*, 134 S. Ct. at 2354. “Indeed, to preclude the patenting of an invention simply because it touches on something natural would ‘eviscerate patent law.’” *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1050 (Fed Cir. 2016) (quoting *Mayo*, 132 S. Ct. at 1293). “At step one, therefore, it is not enough to merely identify a patent-ineligible concept underlying the claim; we must determine whether that patent-ineligible concept is what the claim is ‘directed to.’” *Id.*

Applying this analysis, the Court agrees with Defendants that the claims of the ’662 patent are directed to the abstract idea of reordering data and generating additional data. (D.I. 29 at 10-12; *see also* Tr. at 70 (KPN seemingly agreeing that ’662 patent at its core relates to data manipulation in form of reordering and generating data))

The Federal Circuit has found other claims reciting similar steps of manipulating data invalid under § 101. *See Two-Way Media*, 874 F.3d at 1337 (claim requiring “converting,” “routing,” “controlling,” “monitoring” and “accumulating records” relate to “manipulat[ing] data but fail[] to do so in a non-abstract way”); *RecogniCorp*, 855 F.3d at 1326 (claim is “directed to the abstract idea of encoding and decoding image data”); *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) (“[A]t their core, [claims are] directed to

the abstract idea of collecting, displaying, and manipulating data.”); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (“[W]ithout additional limitations, a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible.”). In *Digitech*, 758 F.3d at 1351, the Federal Circuit stated that a “process that started with data, added an algorithm, and ended with a new form of data was directed to an abstract idea.”

On this same reasoning, the claims here – which do not say how data is reordered, how to use reordered data, how to generate additional data, how to use additional data, or even that any data is transmitted – are directed to an abstract idea. Simply “reciting . . . data manipulation steps” without additional limitations, constitutes, at step one, an abstract idea. *Capital One*, 850 F.3d 1332, 1340.

The dependent claims are also abstract. The additional limitations of these claims do not say how the permutations are modified in time or modified based on the data, and but indicate (for Claim 4) that the permutations are stored in a generic table.

The Court is not persuaded by KPN’s contrary view. KPN contends that the claims are directed to a specific implementation of a solution to a problem in the computer field rather than an abstract idea. (D.I. 37 at 6-12) But all of the components of the claims are generic devices. As the specification explains, the functions used to generate data in the claimed device “can be implemented in software as well as hardware (for example as an ASIC).” ’662 patent at 4:8-10; *see also id.* at 6:14-24 None of those features – functions, software, and hardware – are characterized as anything other than conventional. Generic devices do not make a claim non-abstract (as that concept is applied at step one). *See Alice*, 134 S.Ct. at 2347 (holding that

“purely functional and generic” devices do not save abstract claim); *Capital One*, 850 F.3d 1332 (finding apparatus claim abstract as it contained only generic components, e.g., “processor,” “component that organizes data,” and “component that organizes”); *Affinity Labs II*, 838 F.3d 1266 (finding system claim abstract that contained “storage medium” and “wireless cellular telephone device”).

Accordingly, the Court must turn to step two of the analysis.

B. Step two

At step two, the Court looks at “the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355; *see also Mayo*, 566 U.S. at 73 (explaining that steps of claim must amount to more than “well-understood, routine, conventional activity”). “To save a patent at step two, an inventive concept must be *evident in the claims*.” *RecogniCorp*, 855 F.3d at 1327 (emphasis added); *Alice*, 134 S.Ct. at 2357 (“[W]e must examine the *elements of the claim* to determine whether it contains an ‘inventive concept.’”) (emphasis added).

Defendants argue that the claimed devices are generic devices that perform the customary computer functions of reordering and generating data. (D.I. 29 at 18) Defendants further contend that the patent’s intended use of error checking merely restates the express goal of the patent and does nothing more than limit the technology to a particular field of use. (*Id.* at 18) Finally, Defendants assert that there is nothing inventive about the data itself that is generated (blocks consisting of bits) or the process of permutating the data (changing bit position without reordering the blocks making up the data). (*Id.* at 19)

KPN responds that “[n]othing more is needed to refute Defendants’ motion” than the “specification’s statements about the purported invention.” (D.I. 37 at 18) (citing *MAZ Encryption Techs. LLC v. Blackberry Corp.*, 2016 WL 5661981, at *5 (D. Del. Sept. 29, 2016)) In KPN’s view, the patent’s statements show the “inventiveness” of the claimed components, both individually and as an ordered combination. (*Id.*) KPN points to a portion of the specification purportedly explaining that the claimed devices disclose a “new, non-conventional way of generating check data that represented a marked improvement over the prior art.” *Id.* at 18-19) (citing ’662 patent at 2:41-62, 6:30-35).

The Court agrees with Defendants. No “saving inventive concept,” *Two-Way Media*, 874 F.3d at 1336, is evident in the claims. Claim 1, the only independent claim of the ’662 patent, contains essentially three limitations: a generating device that generates data, and a varying device that varies the original data by permutating the data using a permutating device. ’662 patent at 7:4-8:3. These device limitations contain no inventive concept that transforms the abstract idea of reordering and generating data into patent-eligible application of the abstract idea. Instead, claim 1 broadly recites generic functions, which encompass the abstract idea itself, without providing any details. Reciting limitations using such broad functional language without adequately explaining “**how** the desired result is achieved” is not enough at step two. *See Elec. Power*, 830 F.3d at 1355 (emphasis added).

Even accepting, *arguendo*, KPN’s contention that the **specification** discloses an inventive way of checking errors in transmitted data, the patent still fails at step two because that purported inventive concept is **not captured in the claims**. *See, e.g., Two-Way Media*, 874 F.3d at 1338-39 (“The main problem that Two-Way Media cannot overcome is that the **claim** – as opposed to

something purportedly described in the specification – is missing an inventive concept.”). “The improvements in the specification” are relevant at step two “to the extent they are captured in the claims.” *Berkheimer*, 881 F.3d at 1369. Here, any improvements disclosed in the ’662 patent are not captured in the claims of the patent.

As KPN observes, the *specification* explains that the “object of the invention” is met “by a method for the transmission of data between a transmitting end and a receiving end of a transmission channel while providing an error check.” ’662 patent at 2:18, 27-30. According to the *specification*, the method is performed by generating supplementary data at the transmitting end and regenerating the supplementary data at the receiving end using certain functions. *Id.* at 2:31-38. The *specification* then explains how error checking is done: “by comparing the regenerated supplementary data with the transmitted supplementary data.” *Id.* at 2:39-41.

These particular features of the purported inventive concept, however, are *not* recited in Claim 1. While the claim recites various device limitations to generate, vary, and permute data, there is no reference in the claim to a transmission channel, a transmitting end, a receiving end, or even to data transmission. Without such limitations, the other aspects of the purported inventive concept are also absent from the claim: the process of generating supplementary data at the transmitting end of a transmission channel and regenerating the supplementary data at receiving end of the channel, *id.* at 2:30-38; the requirement for “a form of synchronization” to exist between the user data and the supplementary data, *id.* at 2:59-62; and the process of “comparing the regenerated supplementary data with the transmitted supplementary data,” *id.* at 2:39-41, which is how error checking is accomplished, according to the patent.

Additionally, none of the capabilities or functions disclosed in the specification are

described as anything other than conventional. This applies to: (i) the patent's central concept of generating supplementary data to check for errors in transmitted data, which was already known, *see* '662 patent at 3: 32-56; Fig 1; (ii) the data structure used to generate supplementary data, *see id.* at 3:12-19 (describing conventional data structures); (iii) how the permutation is done, *see id.* at 5:58-65 (simply interchanging bit positions in a conventional manner); (iv) the permutation functions used to vary the data, *see id.* at 5:37-38, 41-42, 6:12-13 (using conventional linear and non-linear functions); and (v) software and hardware used to implement the functions, *see id.* at 4:8-11, 6:14-30; *see also* 3:66-4:1; 4:46-48 (using conventional adder and random number generator known in prior art). That the patent uses terms like "generating device," "varying device," "permutating device," "check data," and "varied data" does not save it because those terms simply refer to generic computer structures and functions. *See Capital One*, 850 F.3d at 1342 ("The mere fact that the inventor applied coined labels to conventional structures does not make the underlying concept inventive."). "Mere recitation of concrete, tangible components is insufficient to confer patent eligibility to an otherwise abstract idea. Rather, the components must involve more than performance of well-understood, routine, conventional activit[ies] previously known to the industry." *Automated Tracking*, 2018 WL 935455, at *5 (internal quotation marks omitted; alteration in original).

The dependent claims recite no additional features that capture an inventive concept. Claim 2 recites a device that is able "to modify the permutation in time." '662 patent at 8:5-6. Claim 3 recites a device that is able "to modify the permutation based on the original data." *Id.* at 8:8-9. The device in Claim 4 includes "a table in which subsequent permutations are stored." *Id.* at 8:11-12. KPN has not persuaded the Court how modifying the permutation based on time

or the original data, or storing permutations in a table, go beyond conventional computer operations and qualify for eligibility under § 101.

The cases on which KPN primarily relies in urging the Court to reach a contrary conclusion are unavailing. (See D.I. 37 at 1, 6-8, 11-12) KPN contends that the Federal Circuit's *Amdocs* case is most analogous. (See Tr. at 92) But there, unlike here, the *claims* being challenged captured the inventive concept. In *Amdocs*, 841 F.3d at 1301, the Federal Circuit held that claims relating to solutions for managing accounting and billing data over large, disparate networks recited an inventive concept because they contained "specific enhancing limitation[s] that necessarily incorporate[d] the invention's distributed architecture." See also *id.* at 1300 ("[T]he claim's enhancing limitation necessarily requires that [the] generic components operate in an unconventional manner to achieve an improvement in computer functionality."). In particular, the Court construed the term "enhance" in a manner that integrated the inventive concept – the systems's distributed architecture that the specification described as an important advance over prior art – into the claim language. See *id.* at 1300-02.³ Here, as already explained, the inventive concept is not captured in the claims.

Similarly, in *MAZ Encryption*, 2016 WL 5661981, at *5, this Court held, at step one, that a patent related to data encryption was directed to a technological improvement in the way

³ KPN does not contend that the Court must conduct claim construction before making a decision on the § 101 issues. (Tr. at 66) KPN previously asserted the '662 patent against Samsung Electronics Co., Ltd. in a case filed December 30, 2014 in the Eastern District of Texas (C.A. No. 2-14-cv-01165-JRG). That court issued a claim construction opinion. (D.I. 29-1 Ex. D) KPN disputes that the previous court's constructions are the most favorable constructions available to it and reserves the right to propose different constructions as this case proceeds. (See D.I. 37 at 6) The Court finds that in the instant case claim construction is not a prerequisite for determining the patent's subject matter eligibility. See *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1273-74 (Fed. Cir. 2012).

computers operate rather than an abstract idea. While the Court viewed the claim in light of the specification and the record before it, the Court ultimately concluded that the patent's claim – not just the specification – recited features (use of two separate tables) that provided a technical solution to problems in prior art encryption methods. *See id.* at *5-7.

In sum, evaluating the claims both individually and as an ordered combination, the Court finds that they recite no more than the routine steps of reordering data and generating data using generic components and conventional computer operations. While the '662 patent purports to have met a need in prior art for “a method which allows data to be checked for errors in a better way, and thus considerably increases the probability of transmission errors being detected,” '662 patent, 2:20-23, the claims recite no inventive step to achieve this stated goal. At bottom, even though the '662 patent may in its specification disclose a solution to a technological problem, its claims fail to claim one. *See Alice*, 134 S. Ct. at 2357-58 (explaining that “*claim* had to supply a ‘new and useful’ application of the [abstract] idea in order to be patent eligible”) (emphasis added). Accordingly, the '662 patent is not patent eligible.⁴

V. CONCLUSION

For the reasons stated above, on the record before the Court, the claims of the '662 patent *are* directed to an abstract idea and *are not* directed to patent-eligible subject matter. Therefore, the Court will grant Defendants' motion. An order follows.

⁴The Court has considered the other issues raised by the parties – including (i) whether the '662 patent claims survive the machine or transformation test (*see* D.I. 37 at 10); (ii) whether the claims can be performed in the human mind (*see* D.I. 29 at 12-13; D.I. 37 at 12-13); (iii) preemption concerns (*see* D.I. 29 at 16-17; D.I. 37 at 16; D.I. 45 at 8); and (iv) the relevancy of the Patent Trial and Appeal Board's decision not to institute *inter partes* review on some claims of the '662 patent (*see* D.I. 37 at 19; D.I. 45 at 10) – and has found none of them alters the outcome here. None warrants further discussion.