APPENDIX

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APPENDIX A

NOTE: This disposition is nonprecedential.

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

[Filed August 2, 2023]

2021-2251

REALTIME DATA LLC, DBA IXO,
Plaintiff-Appellant

v.

ARRAY NETWORKS INC., NIMBUS DATA, INC.,
Defendants

FORTINET, INC., REDUXIO SYSTEMS, INC., QUEST SOFTWARE, INC., CTERA NETWORKS, LTD., ARYAKA NETWORKS, INC., OPEN TEXT, INC., MONGODB INC., EGNYTE, INC., PANZURA, INC.,
Defendants-Appellees

Appeal from the United States District Court for the District of Delaware in No. 1:17-cv-00800-CFC, Chief Judge Colm F. Connolly.

2021-2291

REALTIME DATA LLC, DBA IXO, *Plaintiff-Appellant*	)
v.	)
SPECTRA LOGIC CORPORATION, *Defendant-Appellee*	)

Appeal from the United States District Court for the District of Delaware in No. 1:17-cv-00925-CFC, Chief Judge Colm F. Connolly.

Decided: August 2, 2023

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Before NEWMAN, REYNA, and TARANTO,
Circuit Judges.

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

Dissenting opinion filed by *Circuit Judge* NEWMAN.

REYNA, *Circuit Judge*.

This case returns to us for the second time. Appellant Realtime sued several companies, including some of the Appellees, in the District of Delaware for infringing various combinations of five patents related to methods and systems for data compression. Some of the Appellees moved to dismiss under Federal Rule of Civil Procedure 12(b)(6) for, among other things, failure to state a claim, arguing that the claims of the patents were patent ineligible under 35 U.S.C. § 101. The district court held a hearing and orally announced that all of the claims from the five patents were invalid under § 101. On appeal, this court vacated and remanded for the district court to provide a more detailed § 101 analysis. *Realtime Data LLC v. Reduxio Systems, Inc.*, 831 F. App'x 492 (Fed. Cir. 2020) ("*Realtime I*").

On remand, the district court issued a written opinion that found that the claims from all eight asserted patents (by then, Realtime had asserted three more patents and had added more parties) were invalid under § 101 because the claims were directed to an abstract idea. *Realtime Data LLC v. Array Networks Inc.*, 537 F. Supp. 3d 591 (D. Del. 2021) ("*Realtime II*"). The court dismissed Realtime's complaints but allowed Realtime to amend them, which it did—adding material and dropping a patent. On renewed motions to dismiss, the district court reaffirmed its prior analysis and dismissed the amended complaints—this

time, without leave to amend. *Realtime Data LLC v. Array Networks Inc.*, 556 F. Supp. 3d 424 (D. Del. 2021) ("*Realtime III*").

Realtime appeals. For the reasons below, we affirm.

BACKGROUND

A. The Asserted Patents

The seven patents at issue here are U.S. Patent Nos. 9,054,728 ('728 patent), 8,933,825 ('825 patent), 8,717,203 ('203 patent), 9,116,908 ('908 patent), 7,415,530 ('530 patent), 10,019,458 ('458 patent), and 9,667,751 ('751 patent). All generally relate to methods and systems for digital data compression. Appellant's Br. 15. The seven patents can be broken into three families. *Id*.

The family 1 patents. The '728, '825, and '203 patents are in the same family, share a specification, and are titled "Data Compression Systems and Methods."[1] The patents address issues with lossless data compression techniques, including the "fundamental problem" of their "content sensitive behavior" or "data dependency," which "implies that the compression ratio achieved is highly contingent upon the content of the data being compressed." '728 patent at 2:29–35. Another issue with lossless data compression techniques is that "there are significant variations in the compression ratio obtained when using a single lossless data compression technique for

[1] Because these patents share a specification, when appropriate, we will refer to the '728 patent specification for all three.

data streams having different data content and data size." *Id*. at 2:41–45. According to the patents, although "conventional content dependent techniques," which typically rely on file type descriptors appended to file names, for example, ".doc" or ".txt," may be used to address these problems, those content dependent techniques had "[f]undamental limitations." *Id*. at 2:65–3:19; *see also* Appellant's Br. 17.

To avoid problems associated with data dependency and to improve efficacy, the patents describe "a system for data compression that looks beyond the file type descriptor, to the underlying data, to complete the desired compression." *Realtime I*, 831 F. App'x at 493–94 (citing '728 patent at 3:59–5:11). The system uses a combination of content-independent and content-dependent data compression and decompression. *See* '728 patent at Abstract, 1:34–37, 3:59–62, 6:24–27.

The '728 patent includes 25 claims.[2] Claim 25 recites:

> 25. A computer implemented method comprising:
>
> analyzing, using a processor, data within a data block to identify one or more parameters or attributes of the data within the data block;
>
> determining, using the processor, whether to output the data block in a received form or in a compressed form; and
>
> outputting, using the processor, the data block in the received form or the compressed form based on the determination,

---

[2] The district court implicitly treated a single claim from each asserted patent as representative. *See, e.g., Realtime II*, 537 F. Supp. 3d at 599–602 (reproducing a single claim from each patent). It also at times did so expressly. *See id.* at 606 ("I adopt claim 18 as representative of the ']825 patent for the purposes of § 101 subject-matter eligibility."); *id.* at 613–14 ("agree[ing]" that claim 9 of the '458 patent and claim 1 of the '751 patent were representative). Appellees assert that the claims that the district court reproduced are representative. Realtime does not meaningfully argue that, for eligibility purposes, there is any distinctive significance between the claims that the district court and the Appellees treat as representative and the other claims in the respective patents. We thus treat those claims as representative. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018) (claims may be treated as "representative" if a patentee makes no "meaningful argument for the distinctive significance of any claim limitations not found in the representative claim").

> wherein the outputting the data block in the compressed form comprises determining whether to compress the data block with content dependent data compression based on the one or more parameters or attributes of the data within the data block or to compress the data block with a single data compression encoder; and
>
> wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based only on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block.

Id. at claim 25.

The '825 patent includes 30 claims. Claim 18 recites:

> 18. A method comprising:
>
> associating at least one encoder to each one of a plurality of parameters or attributes of data;
>
> analyzing data within a data block to determine whether a parameter or attribute of the data within the data block is identified for the data block;
>
> wherein the analyzing of the data within the data block to identify a parameter or

> attribute of the data excludes analyzing based only on a descriptor that is indicative of the parameter or attribute of the data within the data block;
>
> identifying a first parameter or attribute of the data of the data block;
>
> compressing, if the first parameter or attribute of the data is the same as one of the plurality of parameter or attributes of the data, the data block with the at least one encoder associated with the one of the plurality of parameters or attributes of the data that is the same as the first parameter or attribute of the data to provide a compressed data block; and
>
> compressing, if the first parameter or attribute of the data is not the same as one of the plurality of parameters or attributes of the data, the data block with a default encoder to provide the compressed data block.

'825 patent at claim 18.

The '203 patent includes 30 claims. Claim 14 recites:

> 14. A system for decompressing, one or more compressed data blocks included in one or more data packets using a data decompression engine, the one or more data packets being transmitted in sequence from a source that is internal or external to the data decompression engine,

wherein a data packet from among the one or more data packets comprises a header containing control information followed by one or more compressed data blocks of the data packet the system comprising:

a data decompression processor configured to analyze the data packet to identify one or more recognizable data tokens associated with the data packet, the one or more recognizable data identifying a selected encoder used to compress one or more data blocks to provide the one or more compressed data blocks, the encoder being selected based on content of the one or more data blocks on which a compression algorithm was applied;

one or more decompression decoders configured to decompress a compressed data block from among the one or more compressed data blocks associated with the data packet based on the one or more recognizable data tokens; wherein:

the one or more decompression decoders are further configured to decompress the compressed data block utilizing content dependent data decompression to provide a first decompressed data block when the one or more recognizable data tokens indicate that the data block was encoded utilizing content dependent data compression; and

> the one or more decompression decoders are further configured to decompress the compressed data block utilizing content independent data decompression to provide a second decompressed data block when the one or more recognizable data tokens indicate that the data block was encoded utilizing content independent data compression; and
>
> an output interface, coupled to the data decompression engine, configured to output a decompressed data packet including the first or the second decompressed data block.

'203 patent at claim 14.

The family 2 patents. The '908, '530, and '458 patents are in the same family, share a specification, and are titled "System and Methods for Accelerated Data Storage and Retrieval."[3] These patents are directed to "[s]ystems and methods for providing accelerated data storage and retrieval utilizing lossless data compression and decompression." '908 patent at Abstract; *see also id*. at 1:15–18, 2:58–60, 4:42–44. The patents describe certain drawbacks found in prior art systems, including that "high performance disk interface standards . . . offer only the promise of higher data transfer rates through intermediate data buffering in random access memory" and do not address the "fundamental problem" with physical

[3] Because these patents share a specification, when appropriate, we will refer to the '908 patent specification for all three.

media limitations, *id*. at 2:34–42; and that "[f]aster disk access data rates are only achieved by the high[-]cost solution of simultaneously accessing multiple disk drives with a technique known . . . as data striping," *id*. at 2:42–45.

The patents purport to overcome these issues by using a "data storage accelerator," which "operates to increase the effective data storage rate of" a "data storage device" or "memory device." *Id*. at 5:35–47; *see also id*. at 3:25–33. The specification explains that "the data storage accelerator . . . employs . . . any conventional data compression method suitable for compressing data at a rate necessary for obtaining accelerated data storage." *Id*. at 16:49–54; *see also id*. at 11:31–36. "[T]he data compression ratio of the data storage accelerator . . . may be adjusted by applying a different type of encoding process such as employing a single encoder, multiple parallel or sequential encoders, or any combination thereof." *Id*. at 10:6–10. The specification further explains that "[d]ata compression is performed by an encoder module . . . which may comprise a set of encoders . . . [that] may include any number . . . of those lossless encoding techniques currently well known within the art." *Id*. at 11:66–12:5. In a preferred embodiment, "the encoding techniques are based upon their ability to effectively encode different types of input data." *Id*. at 12:5–7. This, the specification explains, is meant "to eliminate the complexity and additional processing overhead associated with multiplexing concurrent encoding techniques." *Id*. at 12:31–33. A "compression type descriptor," moreover, can be appended to the encoded data block output "so as to indicate the type of

compression format of the encoded data block." *Id*. at 12:40–67.

The '908 patent includes 30 claims. Claim 1 recites:

> 1. A system comprising:
>
> a memory device; and
>
> a data accelerator configured to compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block;
>
> wherein the compressed first and second data blocks are stored on the memory device, and the compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form.

Id. at claim 1.

The '530 patent includes 26 claims. Claim 1 recites:

> 1. A system comprising:
>
> a memory device; and
>
> a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in received form, said data stream includes a first data block

> and a second data block, said data stream is compressed by said data accelerator to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form, a first data descriptor is stored on said memory device indicative of said first compression technique, and said first descriptor is utilized to decompress the portion of said compressed data stream associated with said first data block.

'530 patent at claim 1.

The '458 patent includes 22 claims. Claim 9 recites:

> 9. A method for accelerating data storage comprising:
>
> > analyzing a first data block to determine a parameter of the first data block;
> >
> > applying a first encoder associated with the determined parameter of the first data block to create a first encoded, data block wherein the first encoder utilizes a lossless dictionary compression technique;

> analyzing a second data block to determine a parameter of the second data block;
>
> applying a second encoder associated with the determined parameter of the second data block to create a second encoded data block, wherein the second encoder utilizes a lossless compression technique different than the lossless dictionary compression technique; and
>
> storing the first and second encoded data blocks on a memory device, wherein encoding and storage of the first encoded data block occur faster than the first data block is able to be stored on the memory device in unencoded form.

'458 patent at claim 9.

The family 3 patent. The '751 patent is titled "Data Feed Acceleration" and relates to "systems and method[s] for providing accelerated transmission of data . . . over a communication channel using data compression and decompression to . . . effectively increase the bandwidth of the communication channel and/or reduce the latency of data transmission." '751 patent at 1:25–36. The specification explains that "accelerated" transmission is "a process of receiving a data stream for transmission over a communication channel, compressing the broadcast data in realtime . . . at a compression rate that increases the effective bandwidth of the communication channel, and transmitting the compressed broadcast data over the

communication channel." *Id*. at 6:28–36. The '751 patent describes drawbacks with conventional data transmission systems, including that "current methods of encryption and compression take as much or substantially more time than the actual time to transmit the uncompressed, unencrypted data." *Id*. at 3:31–33. A "problem within the current art," the '751 patent explains, "is the latency induced by the act of encryption, compression, decryption, and decompression." *Id*. at 3:34–36.

The '751 patent asserts that it solves these problems with a "data compression ratio [that] is substantial and repeatable on each data packet" and that has "no packet-to-packet data dependency." *Id*. at 7:55–66. The patent explains that compression can be "achieved" using one or more "state machines," which "are constructed based on apriori knowledge of the structure and content of one or more given broadcast and data feeds" and which "comprise[] a set of compression tables that comprise information for encoding the next character (text, integer, etc.) or sequence of characters in the broadcast data feed, as well as pointers which point to the next state (encoding table) based on the character or character sequence." *Id*. at 9:6–16. The patent further explains that "[g]eneral purpose computers, servers, workstations, personal digital assistants, special purpose microprocessors, dedicated hardware, or and [sic] combination thereof may be employed to implement the present invention." *Id*. at 8:23–26.

The '751 patent includes 48 claims. Claim 1 recites:

> 1. A method for compressing data comprising:
>
> analyzing content of a data block to identify a parameter, attribute, or value of the data block that excludes analyzing based solely on reading a descriptor;
>
> selecting an encoder associated with the identified parameter, attribute, or value;
>
> compressing data in the data block with the selected encoder to produce a compressed data block, wherein the compressing includes utilizing a state machine; and
>
> storing the compressed data block;
>
> wherein the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form.

Id. at claim 1.

B. Procedural History

Realtime filed suit alleging infringement of various combinations of the claims of the '728, '203, '908, '530, and '751 patents against Appellees Fortinet and Reduxio in November 2017, against Appellee Panzura in August 2018, and against Appellee Aryaka in December 2018. *Realtime I*, 831 F. App'x at 494. Fortinet, Reduxio, Panzura, and Aryaka moved to

dismiss for failure to state a claim in 2019. *Id*. at 494–95. They argued, among other things, that the claims from those five patents were patent ineligible under 35 U.S.C. § 101. *Id*. at 495.

In 2019, the district court issued an oral ruling from the bench dismissing those five patents for lack of subject matter eligibility under § 101. *Id*. On appeal, this court vacated and remanded, finding that the district court had provided too cursory a ruling to allow for meaningful appellate review. *Id*. at 496–98. For example, we explained that the district court failed to consider the claims as a whole; to "seriously consider[]" claims beyond claim 25 of the '751 patent; or to carefully consider the "directed to" question. *Id*.

Following remand, the district court issued a May 4, 2021 written opinion, in which it found that the seven patents at issue here (and another patent that Realtime later dropped) invalid for claiming patent-ineligible subject matter. *Realtime II*, 537 F. Supp. 3d at 599.[4] In doing so, the district court first rejected Realtime's argument that the court could not rule on a motion to dismiss because there were factual assertions that prevented disposal at the pleading stage. *Id*. at 604–05. The court found, for instance, that the "patents themselves explain that the technologies and methods used in the claimed analyses were well-known and routine." *Id*. at 605. The court also found that the 42 paragraphs in one of Realtime's complaints, which

[4] By this time, Realtime had sued additional parties and added additional patents, and some of the new parties had also filed motions to dismiss. *Realtime II*, 537 F. Supp. 3d at 599.

Realtime argued contained relevant factual assertions, merely recited legal conclusions, quotations from the patents, and conclusory allegations. *Id*. None, it found, identify an inventive feature that is distinct from one of the claimed abstract ideas. *Id*.

The district court next analyzed the specific patents. *Id*. at 605–616. The court considered whether it was appropriate to use representative claims (concluding that it was) and applied the two-step ineligibility analysis set forth in *Alice Corp. v. CLS Bank International*, 573 U.S. 208 (2014) for each patent. *Id*. It then summarized its analysis and addressed Realtime's arguments, which the court found were applicable to every patent. *Id*. at 616–21.

As for *Alice* step one, the court found that every claim from the asserted patents is "directed to the concept of manipulating information using compression." *Id*. at 616. And "[b]ecause data compression is, without more, simply a form of data analysis, the claims are directed to abstract ideas." *Id*. The court found that the claims are not "highly specific" and do not provide a "technical solution": they fail to teach "how to engineer an improved system," how to "analyze data," or how to achieve the claimed "efficiency benefits." *Id*. at 616–17. The court found that these factors distinguished the claims from those at issue in the cases Realtime relied on—which were "necessarily rooted in computer technology." *Id*. at 618 n.4.

As for *Alice* step two, the court found that the claims provided no additional features that would transform the claims into non-abstract subject matter:

"they simply apply an abstract idea on generic computers with generic techniques." *Id.* at 616. The court thus concluded that "all claims of the asserted patent are invalid under § 101 for lack of subject matter eligibility." *Id.* at 621. The district court gave Realtime the opportunity to file amended complaints. *Id.* After Realtime did so, the defendants renewed their motions to dismiss. *See, e.g.*, J.A. 3411.

On August 23, 2021, the district court again dismissed, finding once again that the patents were invalid under § 101. *Realtime III*, 556 F. Supp. 3d at 437. The court first examined whether there were any material differences between Realtime's prior complaints and its amended complaints. *Id.* at 433. It found that nothing added changed its prior § 101 analysis. *Id.* It then incorporated its legal analysis from the *Realtime II* decision into its decision, reaffirmed its determination that the claims are all invalid under § 101, and granted dismissal. *Id.* at 435–36. At this point, the district court did not offer Realtime leave to amend.

Realtime appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

We review the grant of a Rule 12(b)(6) motion to dismiss under the law of the applicable regional circuit—here, the Third Circuit. *Endo Pharms. Inc. v. Teva Pharms. USA, Inc.*, 919 F.3d 1347, 1352 (Fed. Cir. 2019). The Third Circuit reviews de novo a district court's grant of a motion to dismiss for failure to state a claim under Rule 12(b)(6). *Id.* (citing *Ballentine v.*

United States, 486 F.3d 806, 808 (3d Cir. 2007)). To survive a motion to dismiss for failure to state a claim, a complaint must allege "enough facts to state a claim to relief that is plausible on its face." *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 570 (2007).

Section 101 of the Patent Act states: "Whoever 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." 35 U.S.C. § 101. But § 101 "contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice*, 573 U.S. at 216 (citations omitted). The Supreme Court has articulated a two-step test for examining patent eligibility when a patent claim allegedly involves such patent ineligible subject matter. *Id*. at 217–18. Under the "*Alice*" test, a claim falls outside § 101 if (1) it is directed to a patent-ineligible concept like an abstract idea, and (2) it lacks elements sufficient to transform the claim into a patent-eligible application. *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1166–67 (Fed. Cir. 2018).

We review § 101 patent eligibility under Federal Circuit law. *Smart Sys. Innovations, LLC v. Chi. Transit Auth*., 873 F.3d 1364, 1367 (Fed. Cir. 2017). Eligibility is ultimately a question of law that may be based on underlying factual findings. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018). And it may be resolved on a Rule 12(b)(6) motion "where the undisputed facts, considered under the standards required by that Rule, require a holding of ineligibility

under the substantive standards of law." *SAP Am.*, 898 F.3d at 1166.

Here, the district court found that the claims of all seven patents at issue are directed to abstract ideas and that they do not recite elements that transform the subject matter into an eligible application of the abstract ideas. We agree.

A. *Alice* Step One

At *Alice* step one, we consider whether the claims are directed to an abstract idea. In doing so, we review the asserted claims, considered in light of the specification. *Yu v. Apple*, 1 F.4th 1040, 1043 (Fed. Cir. 2021) (citing *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1292 (Fed. Cir. 2020)).

The district court found that the claims from the asserted patents are directed to the abstract idea "of manipulating information using compression." *Realtime II*, 537 F. Supp. 3d at 616. Specifically, it found that the patents are directed to the following abstract ideas:

- the '728 and '825 patents—"compressing data based on the content of that data";
- the '203 patent—"compressing or decompressing data based on the characteristics of that data where a token is used to signify the compression method used";
- the '908 and '530 patents—"the combination of the abstract idea of compressing two different data blocks with different methods and the

logical condition that compression and storage together are faster than storage of the uncompressed data alone";

- the '458 patent—"compressing data using two distinct lossless compression algorithms such that the time to compress and store the first data block is less than the time to store the uncompressed data block"; and
- the '751 patent—"compressing data with a state machine under conditions where compressing and storing the data is faster than storing the uncompressed data and where the compression method applied to the data is based on the content of the data."

Realtime III, 556 F. Supp. 3d at 430.

Realtime argues that the claims of the asserted patents are directed not to abstract ideas but "to specific improvements to digital data compression, and do not simply recite the use of an abstract mathematical formula, or a fundamental economic or business practice, on any general-purpose computer." Appellant's Reply Br. 13 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1338 (Fed. Cir. 2016)). Realtime contends that this court has "on multiple occasions highlighted 'an improved, particularized method of digital data compression' as an example of a non-abstract, 'technologically complex' invention." Appellant's Br. 48 (quoting *DDR Holdings v. Hotels.com, L.P.*, 773 F.3d 1245, 1259 (Fed. Cir. 2014)).

The district court found these arguments unpersuasive. "The asserted patents," it explained, "do

not in fact offer a 'technologically complex . . . improved, particularized method' for compression but instead recite abstract ideas with only the most general directions to apply those ideas." *Realtime II*, 537 F. Supp. 3d at 621–22 (modifications in original). Indeed, the district court observed, the claims do not disclose the "how"—"how to engineer an improved system," how to "analyze data," or how to achieve the claimed "efficiency benefits." *Id.* at 616–17; *see also Realtime III*, 556 F. Supp. 3d at 435 n.6 ("[W]hile the patents do disclose potential challenges (e.g., the problem of selecting the best compression method for given data), they do not teach how to address those challenges.").

We agree. As we have "repeatedly" held, to avoid ineligibility, "a claim must have the specificity required to transform the claim from one claiming only a result to one claiming a way of achieving it." *Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1363 (Fed. Cir. 2021) (cleaned up) (citing *SAP Am.*, 898 F.3d at 1167–68). We have determined that "the claim itself . . . must go beyond stating a functional result." *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1302 (Fed. Cir. 2020). The claim must "identify 'how' th[e] functional result is achieved by limiting the claim scope to structures specified at some level of concreteness, in the case of a product claim, or to concrete action, in the case of a method claim." *Id.*; *see also Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) ("[T]here is a critical difference between patenting a particular concrete solution to a problem and attempting to patent the abstract idea of a solution to the problem in general." (citation omitted)).

The claims at issue here fail to do this. As the district court explained, none of the claims at issue specifies any particular technique to carry out the compression of data—the particular rules for producing a smaller set of data out of a larger starting set. Rather, they all take the availability of compression techniques as a given and address the threshold matter of choosing to use one or more such available techniques. And even as to making such a selection, the claims are directed to only abstract ideas, calling for unparticularized analysis of data and achievement of general goals.

We begin our review with the family 1 patents. The representative claim of the '728 patent recites a method that requires "analyzing" "data within a data block" using a "processor" to "identify" certain unspecified "parameters" or "attributes" of the data; "determining" whether to "output" the data block in either a "received" or "compressed" form; and "outputting" the data block in the determined form; wherein outputting in compressed form comprises determining whether to compress with "content dependent data compression" (based on the parameters or attributes) or to compress with a "single data compression encoder"; and wherein analyzing the data "excludes analyzing based only on a descriptor that is indicative" of the parameters or attributes. '728 patent at claim 25. But neither the claim nor the specification ever explains *how* that data is to be analyzed or compressed. *See, e.g.*, *id.* at 7:11–22 ("The encoder set E1, E2, E3 . . . En may include any number . . . of . . . lossless encoding techniques currently well known within the art . . . to provide a broad coverage of existing and future data types"). The

claim, for example, does not recite whether it analyzes data to determine the data's length, complexity, type, or structure. The sole guidance it provides is that the analysis cannot be "based only on a descriptor." But minimal narrowing does not make the claim less abstract. *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1287 (Fed. Cir. 2018); s*ee also SAP Am.*, 898 F.3d at 1169 ("further narrowing of what are still mathematical operations" is still abstract).

The representative claim of the '825 patent is similar. It recites a method that requires "associating" at least one "encoder" with unspecified "parameters" or "attributes" of the data; "analyzing" the data within a "data block" to determine whether the unspecified parameters or attributes are identified; "identifying" a "parameter"; and "compressing" the data. '825 patent at claim 18. Like claim 25 of the '728 patent, this claim also fails to recite how the data is to be analyzed or compressed.

The representative claim of the '203 patent fares no better. It recites a decompression system that requires a "data decompression processor" to "analyze" a "data packet" to "identify" "data tokens" associated with the data packet and which "identify[]" an "encoder used" for compression; "decompression decoders" to "decompress" a "compressed data block" based on the tokens associated with the compression method; and an "output interface" to "output" the decompressed data. '203 patent at claim 14. Neither the claim nor the specification explains how the decompression is actually achieved. *See id*. at 14:66–15:3 ("The decoders

D1 . . . Dn may include those lossless encoding techniques currently well known within the art.").

Turning to the family 2 patents, the representative claim of the '908 patent recites a system requiring a "memory device" and a "data accelerator" to "compress" a "first data block with a first compression technique" and a "second data block with a second compression technique," wherein the compressed data blocks are stored on the memory device and the "compression and storage occurs faster" than storage of the uncompressed data alone. '908 patent at claim 1. The claim does not recite specific compression techniques or explain how the data accelerator selects those techniques. The specification simply notes that "any" of many "conventional," "well known," or "widely used" compression techniques can be used. *Id*. at 1:50–53, 4:48–54, 16:49–53, 11:31–45, 11:66–12:5, 13:45–57. Neither the claim nor the specification, moreover, explains how the storage of the compressed data occurs "faster." *Id*. at 4:64–5:1 (stating that the "data storage accelerator" is "configured to simultaneously or sequentially losslessly compress data at a rate equivalent to or faster than the transmission rate of an input data stream").

The representative claim of the '530 patent is similar to claim 1 of the '908 patent but adds storing a compression technique "descriptor" and "utiliz[ing]" that descriptor to decompress the data. '530 patent at claim 1. These recitations do not explain how the storage of the compressed data occurs "faster," do not say how the descriptor is implemented, and are at most simply more abstract data manipulation. *See Hawk*

Tech. Sys., LLC v. Castle Retail, LLC, 60 F.4th 1349, 1357 (Fed. Cir. 2023) ("[C]onverting information from one format to another—including changing the format of video data or compressing it—is an abstract idea."). Requiring the compression to be done using an identifier or data descriptor does not make the claims less abstract. *See PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1315–18 (Fed. Cir. 2021) (finding that claims directed to the use of "an algorithm-generated content-based identifier to perform the claimed data-management functions" were abstract); *Intell. Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1313 (Fed. Cir. 2016) (finding that claims for identifying digital data based on "file content identifiers" were abstract).

The representative claim of the '458 patent is similar to those of the '908 and '530 patents. It recites a method that requires "analyzing" a first and a second data block to determine a "parameter" of those data blocks; "applying" "encoder[s]" associated with the determined parameters to create a first and second encoded data block wherein the encoders "utilize[]" a "lossless dictionary compression technique"; and "storing" the encoded data blocks on a memory device, "wherein encoding and storage of the first encoded data block occur faster than the first data block is able to be stored on the memory device in unencoded form." '458 patent at claim 9. But requiring the analysis of data blocks—without explaining how the data is to be analyzed—and the use of lossless compression techniques does not make the claim any less abstract. *See Hawk*, 60 F.4th at 1357; *RecogniCorp, LLC v. Nintendo Co., Ltd.*, 855 F.3d 1322, 1327 (Fed. Cir.

2017) ("[P]rocess that start[s] with data, add[s] an algorithm, and end[s] with a new form of data [is] directed to an abstract idea."); *PersonalWeb Techs.*, 8 F.4th at 1317 ("Stringing together the claimed steps by '[a]dding one abstract idea . . . to another,' . . . amounts merely to the abstract idea of using a content-based identifier to perform an abstract data-management function." (citations omitted)). Neither the claim nor the specification explains how the storage of the compressed data occurs "faster." '458 patent at 4:67–5:4.

As for the family 3 patent, the representative claim of the '751 patent recites a method that requires "analyzing content of a data block to identify a parameter, attribute, or value" of the data block "that excludes analyzing based solely on reading a descriptor"; "selecting an encoder" based on that parameter; "compressing" the data at a certain rate using a "state machine"; "storing" the data; "wherein the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form." '751 patent at claim 1. This claim too states the result to be achieved: compressing the data block and storing the compressed data block in "less than the time of storing the data block in the uncompressed form." *Id*. Like the claims of the family 2 patents, claim 1 of the '751 patent does not explain how to accomplish the result. Nor does the specification meaningfully do so. *Id*. at 6:28–36 (explaining that "accelerated" transmission is "a process of receiving a data stream for transmission over a communication channel, compressing the broadcast data . . . at a compression rate that increases

the effective bandwidth of the communication channel, and transmitting the compressed broadcast data over the communication channel"); *see also id.* at 7:11–14. And like the claims of the family 1 patents, claim 1 of the '751 patent fails to explain how to "analyze" data.

In sum, the claims of the asserted patents are "data manipulation" claims that are recited at a high "level of result-oriented generality" and that lack "sufficient recitation of *how* the purported invention[s]" accomplish the results. *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143, 1152 (Fed. Cir. 2019) (citation omitted). They thus "amount[] to a mere implementation of . . . abstract idea[s]." *Id.*

Realtime argues that the claims at issue here are like those we found eligible in *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253 (Fed. Cir. 2017). *See Realtime I*, 831 F. App'x at 496 ("Realtime identified *Visual Memory* . . . as the case most analogous to this one."). We disagree. The claims there recited "an enhanced computer memory system" that used "programmable operational characteristics configurable based on the type of processor" to "enabl[e] interoperability with multiple different processors." *Visual Memory*, 867 F.3d at 1259–60. The patent explained that the enhanced computer memory system "outperform[ed] a prior art memory system . . . armed with 'a cache many times larger than the cumulative size of the subject caches.'" *Id.* at 1259. As we later explained, "[t]he patent did not merely claim this enhancement to the computer memory system; it explained how it worked, appending '263 frames of computer code.'" *Univ. of Fla. Research Found., Inc. v.*

GE Co., 916 F.3d 1363, 1368 (Fed. Cir. 2019) (distinguishing the claims in *Visual Memory*). The patents here, by contrast, fail to explain the "how."

Because the claims of the asserted patents are directed to abstract ideas, we examine the claims at *Alice* step two to determine if the claims are transformed into subject matter beyond the abstract ideas themselves.

B. *Alice* Step Two

At *Alice* step two, we look for an "inventive concept"—"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 (citation and internal quotation marks omitted). In so doing, we consider the claim elements—individually and as an ordered combination—"to assess whether [they] transform the nature of the claim into a patent-eligible application of the abstract idea." *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1338 (Fed. Cir. 2017) (citation omitted). The inventive concept must amount to more than "well-understood, routine, or conventional activities." *Alice*, 573 U.S. at 225 (cleaned up). And the "mere recitation of concrete, tangible components is insufficient to confer patent eligibility to an otherwise abstract idea." *In re TLI Commc'ns, LLC Patent Litig.*, 823 F.3d 607, 613 (Fed. Cir. 2016). At the same time, "an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016).

The district court found that the claims from the asserted patents "simply apply an abstract idea on generic computers with generic techniques." *Realtime II*, 537 F. Supp. 3d at 616. It thus found that the claims failed *Alice* step two. We agree.

Realtime argues that "the disclosed inventions . . . provide specific, unconventional technological solutions that improve computer functionality and overcome problems specifically arising in the realm of compression of digital computer data." Appellant's Br. 63. But this "amounts to no more than a restatement of the assertion that the desired results are an advance." *Am. Axle & Mfg.*, 967 F.3d at 1299. As explained above, the claims here merely claim a result and are thus directed to ineligible subject matter. "'[A] claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept' required to cross the line into eligibility." *Id.* (quoting *BSG Tech*, 899 F.3d at 1290).

As for the specific patents, Realtime contends that the claims of the family 1 patents "require specific, unconventional combinations of specially configured computer elements," like using content dependent and content independent data compression, encoders, and processors. Appellant's Br. 60–61. The common specification of the family 1 patents, however, does not purport to require the use of any special processor. *See, e.g.*, '728 patent at 6:32–37 ("[T]he system modules described herein are preferably implemented in software as an application program that is executable by, e.g., a general purpose computer or any machine or device having any suitable and preferred micro-

processor architecture."). The same goes for the "encoders." *See, e.g.*, *id.* at 7:13–17 ("The encoder set . . . may include any number . . . of those lossless encoding techniques currently well known within the art . . . ."); *id.* at 6:30–32 ("[T]he present invention may be implemented in various forms of hardware, software, firmware, or a combination thereof."). And the common specification explains that data can be analyzed "using methods known by those skilled in the art to extract the data compression type descriptor associated with the data block," *id.* at 14:59–64, that "there are many conventional content dependent techniques," *id.* at 2:67–3:2, and that it was known that the effectiveness of data compression is "highly contingent upon the content of the data being compressed," *id.* at 2:33–35.

Realtime also argues that "analyzing the data to identify one or more parameters or attributes and performing compression with a plurality of different encoders based on that analysis" is a "non-conventional" function and that using "multiple encoders to compress data blocks based on an analysis of the specific content or type of the data being encoded without relying solely on a descriptor" is what the common specification of the family 1 patents "makes clear" is the "inventive concept." Appellant's Br. 64–65. But these are themselves abstract ideas and thus cannot provide an inventive concept. *BSG Tech*, 899 F.3d at 1290.

As for the family 2 patents, Realtime contends that they solve "problems in conventional digital data compression systems," like "bandwidth limitations," by

requiring "specific, unconventional combinations of specially configured elements." Appellant's Br. 61. Realtime, for example, points to '908 patent claim 1's "memory device" and "data accelerator," the latter of which Realtime argues is "unconventional" because it "requires two different compression techniques and the structural capability of compressing and storing digital data faster than the digital data can be stored in uncompressed form." *Id*. But the "memory device" is simply a generic computer component. *See* '908 patent at 5:42–47 ("The memory storage device 45 may be volatile or non-volatile in nature, or any combination thereof. Storage devices as known within the current art include all forms of random access memory . . . ."). The compression techniques are generic, well-known, and conventional. *See, e.g.*, *id*. at 1:51–53, 11:31–45, 11:65–12:10, 13:45–48, 16:52–53. And using a "data accelerator" to store data "faster" amounts to using a generic component "to increase the speed or efficiency of the process" and thus "does not confer patent eligibility on an otherwise abstract idea." *PersonalWeb Techs*., 8 F.4th at 1319 (citations omitted). Using multiple compression techniques and compressing and storing data on a generic component faster than if it were uncompressed data, moreover, is an abstract idea and cannot provide an inventive concept. *BSG Tech*, 899 F.3d at 1290.

Realtime also highlights that claim 1 of the '530 patent adds using a descriptor to decompress the compressed data. Appellant's Br. 61–62. The '530 patent specification, however, confirms that using a descriptor to decompress data is conventional, explaining that "other data decompression systems and

methods known to those skilled in the art may be employed for providing accelerated data retrieval." '530 patent at 14:42–48. Realtime also directs us to an encoder performing compression in claim 1 of the '458 patent. Yet neither the claim nor the specification describes specific, unconventional encoding or compression techniques. So Realtime's reliance on the encoder is misplaced. *See Adaptive Streaming Inc. v. Netflix, Inc.*, 836 F. App'x 900, 904 (Fed. Cir. 2020) (nonprecedential) (finding that claims failed *Alice* step two where there was "no identification in the claims or written description of specific, unconventional encoding, decoding, compression, or broadcasting techniques").

As for family 3, Realtime asserts that the '751 patent addresses problems in the prior art like "latency" and solves them "by providing an unconventional compression system allowing for a multiplication of bandwidth and a reduction in transmission latency." Appellant's Br. 62. Realtime points to claim 25's requirement of "a data server" that is implemented on "processors" and "memory systems," and that is configured to "analyze" data, "select" an encoder, "compress" the data using a "state machine," and "store" the data. *Id.* But Realtime fails to explain how a "data server," "processor," and "memory system" are anything but generic computer components, and indeed, "it is hard to imagine a patent claim that recites hardware limitations in more generic terms." *In re Bd. of Trs. of Leland Stanford Junior Univ.*, 989 F.3d 1367, 1374 (Fed. Cir. 2021) (explaining that patent reciting a method carried out by a "computer" with a "processor" and a "memory" failed to require a

"specialized computer or a computer with a specialized memory or processor"). And as for the "state machine," Realtime has acknowledged that such machines are "well-known computer components." J.A. 4921 at 31:19–20.

Realtime further contends that the '751 patent provides "unconventional technological solutions in digital data transmission," by, for instance, providing "transmission and transparent multiplication of digital data communication bandwidth, as well as a potential reduction of the latency associated with data transmission of conventional systems." Appellant's Br. 69. Data transmission, however, is an abstract idea that does not provide an inventive concept. *See Two-Way Media*, 874 F.3d at 1340–41. And Realtime's assertion of a potential reduction of the latency "amounts to no more than a restatement of the assertion that the desired results are an advance." *Am. Axle & Mfg.*, 967 F.3d at 1299.

In short, we see nothing in the individual limitations or their ordered combination that transform the claims into patent-eligible subject matter. "[M]erely reciting an abstract idea performed on a set of generic computer components, as [the claims] do[] here, would 'not contain an inventive concept.'" *Two-Way Media*, 874 F.3d at 1339 (quoting *BASCOM*, 827 F.3d at 1350).

CONCLUSION

We have considered Realtime's other arguments and find them unpersuasive. For the above reasons, we hold that the claims of the asserted patents are directed to patent-ineligible subject matter. We thus

affirm the district court's dismissal under Rule 12(b)(6) based on subject-matter ineligibility under 35 U.S.C. § 101.

AFFIRMED

COSTS

No costs.

NOTE: This disposition is nonprecedential.

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

2021-2251

REALTIME DATA LLC, DBA IXO,
Plaintiff-Appellant

v.

ARRAY NETWORKS INC., NIMBUS DATA, INC.,
Defendants

FORTINET, INC., REDUXIO SYSTEMS, INC., QUEST SOFTWARE, INC., CTERA NETWORKS, LTD., ARYAKA NETWORKS, INC., OPEN TEXT, INC., MONGODB INC., EGNYTE, INC., PANZURA, INC.,
Defendants-Appellees

Appeal from the United States District Court for the District of Delaware in No. 1:17-cv-00800-CFC, Chief Judge Colm F. Connolly.

2021-2291

REALTIME DATA LLC, DBA IXO,
Plaintiff-Appellant

v.

SPECTRA LOGIC CORPORATION,)
Defendant-Appellee)
)

Appeal from the United States District Court for the District of Delaware in No. 1:17-cv-00925-CFC, Chief Judge Colm F. Connolly.

NEWMAN, *Circuit Judge*, dissenting.

This is properly an enablement case. The panel today invalidates patent claims under 35 U.S.C. § 101 by applying the test for judicial exceptions to patent eligibility as presented by the Supreme Court in *Alice* and as enlarged by the Federal Circuit. I write separately to note once again that § 101 was never intended to bar categories of invention in this way. This judicial exception to eligibility is an unnecessary and confusing creation of the courts. This case is an example, for the enablement requirement of § 112 is better suited to determining validity of these claims than is the distortion of § 101. I respectfully dissent, and would remand for determination of validity under § 112.

The current law of § 101 has diverged from its historical purpose. Numerous scholars, practitioners, and Congresspeople have observed that the current law of § 101 creates uncertainty and stifles innovation. As I have summarized:

> At the time of the Domestic Policy Review, the meaning of § 101 was not a topic of concern. Section 101 was understood as an introduction to the statute, not as a limitation on patentable

> subject matter. The interpretation of patentable subject matter today is unsatisfactory; it is time to clarify the principles of patentable subject matter, and to apply principles supportive of innovation.

Pauline Newman, *The Birth of the Federal Circuit*, AIPLA Q.J. 515, 518 (2022).

Representative Doug Collins, then the ranking member of the House Judiciary Committee, complained about this court's application of § 101, stating:

> It's unthinkable . . . . The courts have misstated the law several times, which deprives many innovative products of adequate protection. Congress must establish a new eligibility test to encourage investment in developing new U.S. technologies and ensure American inventors aren't at a global disadvantage.

Rep. Doug Collins, Press Release, House of Representatives Judiciary Committee, Office of the Ranking Member (Oct. 4, 2019), https://republicans-judiciary.house.gov/press-release/collins-calls-for-new-patent-eligibility-test-following-flawed-court-ruling/ (discussing *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 939 F.3d 1355 (Fed. Cir. 2019), *opinion withdrawn and replaced by* 967 F.3d 1285 (Fed. Cir. 2020)).

Senator Chris Coons, chair of the Senate Subcommittee on Intellectual Property, recently stated:

> More than a decade after the Supreme Court waded into patent eligibility law, uncertainty

> remains about what areas of innovation are eligible for patent protection. Critical technologies like medical diagnostics and artificial intelligence can be protected with patents in Europe and China, but not in the United States.

Sen. Chris Coons, *quoted in* Sen. Thom Tillis, Press Release (June 22, 2023), https://www.tillis.senate.gov/2023/6/tillis-coons-introduce-landmark-legislation-to-restore-american-innovation. Senator Tillis, ranking member of the same subcommittee, added:

> I have long said that clear, strong, and predictable patent rights are imperative to enable investments in the broad array of innovative technologies that are critical to the economic and global competitiveness of the United States, and to its national security . . . . Unfortunately, our current Supreme Court's patent eligibility jurisprudence is undermining American innovation and allowing foreign adversaries like China to overtake us in key technology innovations.

Sen. Thom Tillis, *id.*

Eligibility law has been called a "morass of seemingly conflicting judicial decisions." Michael Xun Liu, *Subject matter Eligibility and Functional Claiming in Software Patents*, 20 N.C. J.L. & Tech. 227, 266 (2018). We should not wade further into this morass.

This case is another example that conforms with our flawed precedent. I respectfully dissent. I would

remand for determination of validity under § 112 and, if applicable, §§ 102 and 103.

APPENDIX B

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

[Filed August 23, 2021]

Civil Action No. 17-0800-CFC
CONSOLIDATED

Realtime Data LLC,	)
Plaintiff,	)
	)
v.	)
	)
Array Networks Inc., et al.,	)
Defendants.	)
	)

Civil Action No. 17-0925-CFC

Realtime Data LLC,	)
Plaintiff,	)
	)
v.	)
	)
Spectra Logic Corp.,	)
Defendant.	)
	)

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MEMORANDUM OPINION

August 23, 2021
Wilmington, Delaware

/s/ Colm F. Connolly
COLM F. CONNOLLY
CHIEF JUDGE

Plaintiff Realtime Data LLC has sued Defendants for infringement of various combinations of seven patents it holds: U.S. Patent Nos. 7,415,530 (the #530 patent), 8,717,203 (the #203 patent), 8,933,825 (the #825 patent), 9,054,728 (the #728 patent), 9,116,908

(the #908 patent), 9,667,751 (the #751 patent), and 10,019,458 (the #458 patent). The asserted patents pertain to systems and methods involving data compression.

Pending before me are motions to dismiss pursuant to Federal Rule of Civil Procedure 12(b)(6) filed by the consolidated Defendants and Spectra Logic. D.I. 78;[1] *Realtime Data LLC v. Spectra Logic Corp.*, No. 17-0925, D.I. 68. Defendants argue that I should dismiss Realtime's complaints because the asserted patents are invalid under 35 U.S.C. § 101 for failing to claim patentable subject matter.

I. BACKGROUND

A. Asserted Patents

The asserted patents all relate to methods and systems for compression and decompression of data. The asserted patents come from three patent families. The #203, #825, and #728 patents share one written description; the #530, #908, and #458 patents share another written description; and the #751 has a distinct written description. The #751 patent is titled "Data Feed Acceleration." The #530, #908, and #458 patents are titled "Systems and Methods for Accelerated Data Storage and Retrieval." And the #203, #825, and #728 patents are titled "Data Compression Systems and Methods." Not every patent is asserted against every defendant, but collectively Defendants challenge the validity of all asserted patents.

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[1] All citations are to *Realtime Data v. Array Networks, Inc.*, No. 17-800 unless otherwise noted.

Claim 1 of the #751 patent recites

[a] method for compressing data comprising:
analyzing content of a data block to identify a parameter, attribute, or value of the data block that excludes analyzing based solely on reading a descriptor;
selecting an encoder associated with the identified parameter, attribute, or value;
compressing data in the data block with the selected encoder to produce a compressed data block, wherein the compressing includes utilizing a state machine; and
storing the compressed data block;
wherein the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form.

Clam 1 of the #530 patent recites

[a] system comprising:
a memory device; and
a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in received form, said data stream includes a first data block and a second data block, said data stream is compressed by said data accelerator to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed

data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form, a first data descriptor is stored on said memory device indicative of said first compression technique, and said first descriptor is utilized to decompress the portion of said compressed data stream associated with said first data block.

Claim 1 of the #908 patent recites

[a] system comprising:
a memory device; and
a data accelerator configured to compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block;
wherein the compressed first and second data blocks are stored on the memory device, and the compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form.

Claim 9 of the #458 patent recites

[a] method for accelerating data storage comprising:
analyzing a first data block to determine a parameter of the first data block;

applying a first encoder associated with the determined parameter of the first data block to create a first encoded, data block wherein the first encoder utilizes a lossless dictionary compression technique;

analyzing a second data block to determine a parameter of the second data block;

applying a second encoder associated with the determined parameter of the second data block to create a second encoded data block, wherein the second encoder utilizes a lossless compression technique different than the lossless dictionary compression technique; and

storing the first and second encoded data blocks on a memory device, wherein encoding and storage of the first encoded data block occur faster than the first data block is able to be stored on the memory device in unencoded form.

Claim 14 of the #203 patent recites

[a] system for decompressing, one or more compressed data blocks included in one or more data packets using a data decompression engine, the one or more data packets being transmitted in sequence from a source that is internal or external to the data decompression engine, wherein a data packet from among the one or more data packets comprises a header containing control information followed by one or more

compressed data blocks of the data packet the system comprising:

a data decompression processor configured to analyze the data packet to identify one or more recognizable data tokens associated with the data packet, the one or more recognizable data identifying a selected encoder used to compress one or more data blocks to provide the one or more compressed data blocks, the encoder being selected based on content of the one or more data blocks on which a compression algorithm was applied;

one or more decompression decoders configured to decompress a compressed data block from among the one or more compressed data blocks associated with the data packet based on the one or more recognizable data tokens; wherein:

the one or more decompression decoders are further configured to decompress the compressed data block utilizing content dependent data decompression to provide a first decompressed data block when the one or more recognizable data tokens indicate that the data block was encoded utilizing content dependent data compression; and

the one or more decompression decoders are further configured to decompress the compressed data block utilizing content independent data decompression to provide a second decompressed data block when the one or more recognizable data tokens indicate that the data block was

encoded utilizing content independent data compression; and

an output interface, coupled to the data decompression engine, configured to output a decompressed data packet including the first or the second decompressed data block.

Claim 18 of the #825 recites

[a] method comprising:

associating at least one encoder to each one of a plurality of parameters or attributes of data:

analyzing data within a data block to determine whether a parameter or attribute of the data within the data block is identified for the data block;

wherein the analyzing of the data within the data block to identify a parameter or attribute of the data excludes analyzing based only on a descriptor that is indicative of the parameter or attribute of the data within the data block;

identifying a first parameter or attribute of the data of the data block;

compressing, if the first parameter or attribute of the data is the same as one of the plurality of parameter or attributes of the data, the data block with the at least one encoder associated with the one of the plurality of parameters or attributes of the data that is the same as the first parameter or attribute of the data to provide a compressed data block; and

compressing, if the first parameter or attribute of the data is not the same as one of the plurality of parameters or attributes of the data, the data block with a default encoder to provide the compressed data block.

Claim 25 of the #728 patent recites

[a] computer implemented method comprising:
analyzing, using a processor, data within a data block to identify one or more parameters or attributes of the data within the data block;
determining, using the processor, whether to output the data block in a received form or in a compressed form; and
outputting, using the processor, the data block in the received form or the compressed form based on the determination,
wherein the outputting the data block in the compressed form comprises determining whether to compress the data block with content dependent data compression based on the one or more parameters or attributes of the data within the data block or to compress the data block with a single data compression encoder; and
wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based only on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block.

B. Procedural History

This is the third time I am ruling on the subject-matter eligibility of some of these patents. The first time was an oral ruling on motions to dismiss brought by Aryaka, Panzura, Fortinet, and Reduxio. I found the #728, #908, #530, and #751 patents invalid under § 101. *Reduxio*, No. 17-1676, D.I. 46 (oral order). These four patents were the only patents before me at that hearing. Realtime appealed, and the Federal Circuit vacated my prior ruling as insufficient. *Realtime Data LLC v. Reduxio Sys., Inc.*, 831 F. App'x 492, 499 (Fed. Cir. 2020). The Federal Circuit cautioned that "[n]othing in [its] opinion should be read as opining on the relative merits of the parties' arguments or the proper resolution of the case." *Id.*

I subsequently issued a written opinion finding all the asserted patents invalid for claiming ineligible subject-matter.[2] D.I. 41. I found the #825 and #728 patents directed to the abstract idea of compressing data based on the content of that data. D.I. 41 at 20, 27. I found the #908 and #530 patents directed to the combination of the abstract idea of compressing two different data blocks with different methods and the logical condition that compression and storage together are faster than storage of the uncompressed data alone. D.I. 41 at 30. I found that combination to itself be an abstract idea. D.I. 41 at 30. I found that the #458 patent is directed to the abstract idea of compressing data using two distinct lossless compression algorithms

[2] I also found U.S. Patent No 8,717,204 (the #204 patent) invalid, but it is no longer asserted in Realtime's amended complaints.

such that the time to compress and store the first data block is less than the time to store the uncompressed data block. D.I. 41 at 34. I found the #751 patent directed to the abstract idea of compressing data with a state machine under conditions where compressing and storing the data is faster than storing the uncompressed data and where the compression method applied to the data is based on the content of the data. D.I. 41 at 36. And lastly, I found the #203 patent directed to the abstract idea of compressing or decompressing data based on the characteristics of that data where a token is used to signify the compression method used. D.I. 41 at 40.

I gave Realtime the opportunity to file amended complaints, and it did. Defendants have renewed their motion to dismiss. The case against Spectra Logic has not been consolidated with the other case, and so Spectra Logic moves for dismissal separately but joins the other Defendants in briefing. *See* No. 17-925, D.I. 65; No. 17-925, D.I. 68; No. 17-925, D.I. 69; No. 17-925, D.I. 71.

II. LEGAL STANDARDS

A. Legal Standards for Stating a Claim

To state a claim on which relief can be granted, a complaint must contain "a short and plain statement of the claim showing that the pleader is entitled to relief." Fed. R. Civ. P. 8(a)(2). Detailed factual allegations are not required, but the complaint must include more than mere "labels and conclusions" or "a formulaic recitation of the elements of a cause of action." *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007) (citation

omitted). The complaint must set forth enough facts, accepted as true, to "state a claim to relief that is plausible on its face." *Id.* at 570. A claim is facially plausible "when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (citation omitted). Deciding whether a claim is plausible is a "context-specific task that requires the reviewing court to draw on its judicial experience and common sense." *Id.* at 679 (citation omitted).

When assessing the merits of a Rule 12(b)(6) motion to dismiss, a court must accept as true all factual allegations in the complaint and in documents explicitly relied upon in the complaint, and it must view those facts in the light most favorable to the plaintiff. *See Umland v. Planco Fin. Servs.*, 542 F.3d 59, 64 (3d Cir. 2008).

B. Legal Standards for Patent-Eligible Subject Matter

Section 101 of the Patent Act defines patent-eligible subject matter. It provides: "Whoever 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." 35 U.S.C. § 101.

There are three judicially created limitations on the literal words of § 101. The Supreme Court has long held that laws of nature, natural phenomena, and abstract ideas are not patentable subject matter. *Alice*

Corp. Pty. v. CLS Bank Int'l, 573 U.S. 208, 216 (2014). These exceptions to patentable subject matter arise from the concern that the monopolization of "these basic tools of scientific and technological work" "might tend to impede innovation more than it would tend to promote it." *Id.* (internal quotation marks and citations omitted). Abstract ideas include mathematical formulas and calculations. *Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972).

"[A]n invention is not rendered ineligible for patent [protection] simply because it involves an abstract concept[.]" *Alice*, 573 U.S.. at 217. "[A]pplication[s] of such concepts to a new and useful end . . . remain eligible for patent protection." *Id.* (internal quotation marks and citations omitted). But in order "to transform an unpatentable law of nature [or abstract idea] into a patent-eligible application of such law [or abstract idea], one must do more than simply state the law of nature [or abstract idea] while adding the words 'apply it.'" *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 71 (2012) (emphasis omitted).

In *Alice*, the Supreme Court established a two-step framework by which courts are to distinguish patents that claim eligible subject matter under § 101 from patents that do not claim eligible subject matter under § 101. The court must first determine whether the patent's claims are drawn to a patent-ineligible concept—i.e., are the claims directed to a law of nature, natural phenomenon, or abstract idea? *Alice*, 573 U.S. at 217. If the answer to this question is no, then the patent is not invalid for teaching ineligible subject matter. If the answer to this question is yes, then the

court must proceed to step two, where it considers "the elements of each claim both individually and as an ordered combination" to determine if there is 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." *Id* at 217–18 (alteration in original) (internal quotations and citations omitted).[3]

Issued patents are presumed to be valid, but this presumption is rebuttable. *Microsoft Corp. v. i4i Ltd. Partnership*, 564 U.S. 91, 96 (2011). Subject-matter eligibility is a matter of law, but underlying facts must be shown by clear and convincing evidence. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

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[3] The Court in *Alice* literally said that this two-step framework is "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." 573 U.S. at 217. But as a matter of logic, I do not see how the first step of the *Alice/Mayo* framework can distinguish (or even help to distinguish) patents in terms of these two categories (i.e., the categories of (1) "patents that claim laws of nature, natural phenomena, and abstract ideas" and (2) patents "that claim patent-eligible applications of [laws of nature, natural phenomena, and abstract ideas]"). *Both* categories *by definition* claim laws of nature, natural phenomena, and abstract ideas; and only one of *Alice*'s steps (i.e., the second, "inventive concept" step) could distinguish the two categories. I therefore understand *Alice*'s two-step framework to be the framework by which courts are to distinguish patents that claim eligible subject matter under § 101 from patents that do not claim eligible subject matter under § 101.

III. DISCUSSION

I previously considered whether the asserted patents were invalid under § 101 and found them subject-matter ineligible. D.I. 41 at 11-53. In summary, I found at step one that each of the patents are directed to related abstract ideas involving the compression of data. Data compression is an example of abstract information processing. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) ("A process that start[s] with data, add[s] an algorithm, and end[s] with a new form of data [is] directed to an abstract idea."). In order to be patentable claims must do more than simply process data. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (explaining claims that "analyz[e] information . . . by mathematical algorithms, without more" are directed to abstract ideas). The asserted claims lack this something more. This is a case where "although written in technical jargon, a close analysis of the claims reveals that they require nothing more than . . . abstract idea[s]" for the algorithmic processing of information. *Ericsson Inc. v. TCL Commc'n Tech. Holdings Ltd.*, 955 F.3d 1317, 1326 (Fed. Cir. 2020), *cert. denied sub nom. Ericsson Inc. v. TCL Commc'n*, 209 L. Ed. 2d 752 (May 17, 2021).

At step two, I found that the patents do not contain any inventive step other than the abstract ideas to which the patents are directed. The patents' written description makes clear that the only inventions are the ineligible abstract ideas. *See* #530 patent at 4:47–61, 5:20–24, 11:5–10, 40–46, 14: 19–23 (describing how the invention can be implanted on generic

technology using any compression technique "currently well known within the art"), #203 patent at 6:24–41, 7:7–11, 9:24–26, 12:50–54, 14:66–15:3, 16:30–37 (same), #751 patent at 6:20–27, 7:17–25 (incorporating the parents of the #530 and #203 patents by reference). The patents simply apply the claimed abstract ideas on generic hardware in a straightforward manner. This does not constitute an inventive step sufficient for subject-matter eligibility. *Alice*, 573 U.S. 208 at 223–24 (explaining an abstract idea is not patent eligible when simply applied on generic computer hardware).

In considering the renewed motions to dismiss, I will first examine whether there are any material differences in Realtime's complaints. Then, I consider whether Realtime has presented new legal arguments that require me to reconsider my original analysis.

A. New Pleadings

I first consider whether any of the new pleadings in Realtime's amended complaints requires me to change my prior analysis. Realtime argues that it has introduced new factual pleadings relevant to § 101 that preclude dismissal, because its "amended complaints contain numerous detailed factual allegations demonstrating the inventiveness of each of the patents . . . ." D.I. 91 at 34. The new paragraphs in the complaints assert that certain claims are not representative, offer proposed claim constructions, repeat numerous quotations from the patents' written descriptions, summarize the results of other proceedings involving the asserted patents, assert that the claims cannot be performed by hand, offer conclusory statements, and contain legal

argumentation. *See, e.g.*, D.I. 53 ¶¶ 10–15, 20–32. None of these changes impact the § 101 inquiry for the following reasons.

1. Representative Claims

In my previous opinion, I explained my decision to adopt certain claims as representative and to treat each patents' claims as equivalent for the purpose of § 101 eligibility. D.I. 41 at 15–18, 26–27, 29–30, 32–34, 36, 39–40. In short, the claims of each patent can be considered together for the purposes of the *Alice* test, because the independent claims reflect the same ideas written in different ways and because the dependent claims do not add limitations that affect eligibility under § 101. *See Content Extraction & Transmission LLC v. Wells Fargo Bank*, 776 F.3d 1343, 1348 (Fed. Cir. 2014).

Subsequently, Realtime amended its complaints to emphasize the fact that the claims do not have identical limitations. *See, e.g.*, D.I. 43 ¶ 26 ("Claim 1 is not representative of all claims of the [#]728 patent. For example, claim 24 claims the use of a "default" compression encoder."),¶ 28 ("The dependent claims contain limitations not found in the independent claims."). Realtime also argues that Defendants have failed to uniquely explain the lack of subject-matter eligibility for all 211 asserted claims. D.I. 92 at 35.

Realtime's new pleadings do not change my prior analysis. Realtime simply provides quotations from the asserted claims and provides conclusory assertions that these limitations must be considered separately for the purposes of § 101. But Realtime does not explain why

these limitations are relevant to subject-matter eligibility, and I have already concluded otherwise. Since Realtime provides neither affirmative argument nor new factual pleadings relevant to representativeness, there is no need to revisit my prior analysis.

2. Claim Construction

Realtime asserts that its proposed claim constructions preclude a decision on subject-matter eligibility at this time because the proposed constructions would, if adopted, confirm that that the patents are directed to technological solutions. D.I. 91 at 36. But I already considered five of the six suggested claim constructions in my prior opinion. *See* D.I. 41 at 50–51 (discussing the "compressing" terms, "descriptor," "data stream," "data block," and "analyze"). The same constructions were proposed as part of the complaint against Kaminario that was before me at the time. *See Realtime Data, LLC v. Kaminario*, No. 19-cv-350, D.I. 18 ¶ 9 (D. Del. Aug. 16, 2019). I concluded that the proposed claim constructions did not require postponing a decision on § 101 eligibility, because the constructions did not change the *Alice* inquiry. D.I. 41 at 51. I also noted that the proposed constructions only "confirm that the claims are directed to data analysis." D.I. 41 at 50–51.

The only new proposal is to construe "data accelerator" as "hardware or software with one or more compression encoders" in the #530 and #908 patents. *See, e.g.*, D.I. 43 ¶ 48. Not only does this broad construction not impact the § 101 analysis, it also effectively concedes that a "data accelerator" does not

require any components beyond a generic processer that can run software. Once again, I conclude that the proposed claim constructions do not impact the *Alice* test, and, accordingly, I simply choose to adopt Realtime's proposed constructions for the purposes of these motions to dismiss.

3. Additional Citations to the Patents

Realtime quotes extensively from the asserted patents in its amended complaints. *See, e.g.*, D.I. 43 ¶¶ 20–24, 28. Adding quotations from the asserted patents' written descriptions does not create a factual dispute (or otherwise alter my analysis), because the patents were already in the record before me. To the extent that the pleadings interpret the text of the patents, I am free to look directly to the patents. *Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 913 (Fed. Cir. 2017) ("In ruling on a 12(b)(6) motion, a court need not accept as true allegations that contradict matters properly subject to judicial notice or by exhibit, such as the claims and the patent specification." (internal quotation marks omitted)). I previously considered the written descriptions in my earlier ruling. These amendments to the complaints are immaterial.

Realtime also argues that the file histories for the patents show that the claimed inventions were not well-understood, routine, and conventional, because the U.S. Patent and Trademark Office "considered hundreds of references." *See, e.g.*, D.I. 43 ¶¶ 25, 60, 95. But the Patent and Trademark Office has always reviewed prior art in the course of issuing a patent before a district court rules on the patent's § 101

eligibility. The number of references the Patent and Trademark Office examined is of no consequence.

4. Non-Binding Rulings from Other Districts

Realtime has included in its complaints the outcomes of other cases involving the same patents. *See, e.g.*, D.I. 43 ¶¶ 10–13. Realtime previously presented these same arguments in briefing and in its First Amended Complaint against Kaminario. No. 19-cv-350, D.I. 18 ¶¶ 10–14; D.I. 33 at 36–37. In my prior opinion, I considered these non-binding rulings. D.I. 41 at 45 n.4. I conducted an independent analysis and reached a different conclusion.

5. Statements in Unrelated Patents

Realtime has pled that patents filed in 2012 and 2013 by Altera and Western Digital "admitted that there was still a technical problem associated with computer capacity and a need for a more efficient compression system." D.I. 43 ¶¶ 29–31. I previously considered these pleadings as they were included in the First Amended Complaint against Kaminario. *See* No. 19-cv-350, D.I. 18 ¶¶ 25–27. Even taking as true that there was a technical problem associated with compression, that does not imply that the claims in the asserted patents are directed to a subject-matter eligible solution. I must consider the asserted patents based on what they claim and statements in unrelated patents do not change that analysis.

6. Pen and Paper Argument

Realtime now pleads that the asserted claims cannot be carried out on "pen and pencil." *See, e.g.*, D.I. 43 ¶¶ 18, 50. Even assuming, without deciding, that this is a factual assertion I must take as true, it does not change my analysis. A patent can be directed to an abstract idea even if it cannot literally be performed on pen and paper. *FairWarning IP, LLC v. Iatric Sysc.*, 839 F.3d 1089, 1098 (Fed. Cirl. 2016) ("[T]he inability for the human mind to perform each claim step does not alone confer patentability."). Regardless of whether the asserted patents are limited to being carried out in a computational environment, they are still directed to the type of abstract data manipulation that is not patent eligible. Otherwise, a patentee could ensure subject-matter eligibility simply by including as a limitation that the invention cannot be performed on pen and paper or in the human mind. This is inconsistent with governing law. *See Intell. Ventures I LLC v. Cap. One Bank (USA)*, 792 F.3d 1363, 1366 (Fed. Cir. 2015) ("An abstract idea does not become nonabstract by limiting the invention to a particular field of use or technological environment.").

7. Conclusory Statements

The remaining amendments to the complaints consist of conclusory statements and legal argument. *See, e.g.*, D.I. 43 ¶ 14 ("[T]he patents are directed to patent eligible subject matter."), ¶ 17 ("The claims of the patent are not abstract . . . ."), ¶ 27 ("The claims do

not merely recite a result.").[4] I am to ignore such pleadings in ruling on a motion to dismiss. *Iqbal*, 556 U.S. at 678 ("[W]e are not bound to accept as true a legal conclusion couched as a factual allegation."); *Simio, LLC v. FlexSim Software Prod., Inc.*, 983 F.3d 1353, 1365 (Fed. Cir. 2020) ("We disregard conclusory statements when evaluating a complaint under Rule 12(b)(6). A statement that a feature 'improves the functioning and operations of the computer' is, by itself, conclusory." (internal citation omitted)); *Boom! Payments, Inc. v. Stripe, Inc.*, 839 F. App'x 528, 533 (Fed. Cir. 2021) (finding allegations that the claims were not routine or conventional were conclusory statements to be disregarded).

B. Renewed Legal Arguments

Having found that none of Realtime's amendments materially change my prior analysis, I incorporate my previous decision into this opinion, subject to the preceding discussion about the significance of the pen-and-paper criterion.[5]

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[4] Some of the legal conclusions in the complaint are assertions of novelty. *See, e.g.*, D.I. ¶ 21 ("The [#]728 patent solves the foregoing problems with novel technological solutions . . . ."). But novelty under § 102 is a separate issue than subject-matter eligibility under § 101. A novel abstract idea is still a patent-ineligible abstract idea. *Adaptive Streaming Inc. v. Netflix, Inc.*, 836 F. App'x 900, 904 (Fed. Cir. 2020) ("We have explained that satisfying the requirements of novelty and non-obviousness does not imply eligibility under § 101, . . . because what may be novel and non-obvious may still be abstract.").

[5] Additionally, the discussion of U.S. Patent No. #204 is now moot because Realtime no longer asserts that patent.

Realtime's legal arguments on these renewed motions are substantially similar to its previous arguments. Realtime again argues that the asserted patents "claim specific improvements in computer functionality." D.I. 91 at 4. Because Realtime repeats essentially the same arguments, there is no reason to reconsider my prior analysis. I again find that the asserted patents lack subject-matter eligibility under § 101. The unavoidable problem for Realtime is that data compression by itself is a type of information processing and information processing, without more, is patent-ineligible subject matter. The asserted patents do not have that something "more." *See Elec. Power*, 830 F.3d at 1353–54. For the reasons I previously explained, the asserted claims do not identify specific techniques that provide a technical solution.[6] Compression is an idea relevant to

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[6] As I explained in my prior opinion,

> The patents do not provide a technical solution to a technical problem because they do not teach how to engineer an improved system. *See Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1345 (Fed. Cir. 2018) (explaining that a patent is not directed to a technical solution when it covers results without teaching how to obtain those results). The asserted patents allow the use of *any* compression method. *See* #908 patent 16:49–54 ("the data storage accelerator 10 employs . . . any conventional data compression method suitable for compressing data at a rate necessary for obtaining accelerated data storage); #825 patent at 7:7–11; #204 patent at 15:12–22; #203 patent at 16:30–16:42. The patents do not teach a technical solution to analyze data. *See, e.g.*, #825 patent at 16:15–24 (describing a content dependent data recognition module without any

information in general and is not inherently grounded in a particular technical environment. The results-based claims describe desirable outcomes and functionality, but do not offer ways to achieve these results. *See Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1269 (Fed. Cir. 2016) (finding claims abstract because they did "no more than describe a desired function or outcome, without providing any limiting detail that confines the claim to a particular solution to an identified problem."). The patents are directed to abstract ideas. And the patents simply direct artisans to apply those ideas without teaching any additional inventive features. They are, therefore, subject-matter ineligible under the *Alice* test. *Alice*, 513 U.S. at 222–24.

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specificity). Nor do the patents teach how to achieve the claimed efficiency benefits, beyond directing the skilled artisan to apply well-known techniques. *See WhiteServe LLC v. Dropbox, Inc.*, No. 19-2334, slip op. at 9, (Fed. Cir. Apr. 26, 2021) (finding patent invalid under § 101 when "[t]he specification d[id] not [] explain the technological processes underlying the purported technological improvement."). In arguing that the patents teach a specific way of or structure for performing compression, Realtime is only able offer conclusory statements while repeating the same generic language in the claims. *See, e.g.*, *Reduxio*, 17-1676, D.I. 14 at 10–12. In short, while the patents do disclose potential challenges (e.g., the problem of selecting the best compression method for given data), they do not teach *how* to address those challenges.

D.I. 41 at 42–43.

The cases cited by Realtime do not suggest a different outcome.[7] In *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, for example, the Federal Circuit explained that for a software patent "[t]o be patent-eligible, the claims must recite a specific means or method that solves a problem in an existing technological process." 942 F.3d 1143, 1150 (Fed. Cir. 2019). The asserted claims, by contrast, may be performed using any means or methods that can implement the ideas to which the patents are directed. Realtime's other cited cases are not applicable here because those opinions considered claims that were genuinely directed to technical problems inherently grounded in computer technology and that offered specific technical solutions. *See Packet Intel. LLC v. NetScout Sys., Inc.*, 965 F.3d 1299, 1309 (Fed. Cir. 2020), *cert. denied*, 209 L. Ed. 2d 552 (Apr. 19, 2021) (finding that the asserted patent solved a technical

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[7] Realtime filed as an exhibit a claim chart comparing claim 1 of the #728 patent to claims Realtime represents as being invalid. D.I. 91-1, Ex. 1. First, review of this claim chart shows substantial differences between claim 1 of the #728 patent and the comparison claims. The large differences make clear that the claims are not directly comparable. Second, Realtime compared claim 1 of the #728 patent to a claim that was in fact found invalid. D.I. 91-1, Ex. 1 at 1. The comparison claim, claim 1 of the patent at issue in *Koninklijeke KPN*, was found invalid under § 101 and this finding was not appealed. *Koninklijke KPN N. V. v. Gemalto M2M GmbH*, 942 F.3d 1143, 1149 (Fed. Cir. 2019). And in finding the appealed claims valid, the Federal Circuit relied on a claim limitation that was in the appealed claims but not in claim 1 to show that the claims had a technological solution. *Id.* at 1150. Thus, comparing claim 1 of the #728 patent to claim 1 of the patent at issue in *Koninklijeke KPN* only suggests that the #728 patent should also be invalid.

problem "unique to computer networks"); *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1295 (Fed. Cir. 2020) (finding claims patent eligible because they were directed to solving a technical problem specific to computer network security); *Uniloc USA, Inc. v. LG Elecs. USA, Inc.*, 957 F.3d 1303, 1308 (Fed. Cir. 2020) (finding that "the claims at issue do not merely recite generalized steps to be performed on a computer using conventional computer activity"); *SRI Int'l, Inc. v. Cisco Sys., Inc.*, 930 F.3d 1295, 1303 (Fed. Cir. 2019), *cert. denied*, 140 S. Ct. 1108 (2020) (finding claims eligible at *Alice* step one because the claims were "directed to using a specific technique . . . to solve a technological problem" in network security).

There can be a fine—and often unclear—line between applying an abstract idea on technology and claiming a software-based improvement to technology. But in my view, the line here is clear, and the asserted claims do not have the specificity required of a technical solution *See Elec. Power*, 830 F.3d at 1356 ("[T]here is a critical difference between patenting a particular concrete solution to a problem and attempting to patent the abstract idea of a solution to the problem in general."); *Cf Ericsson*, 955 F.3d at 1328 (finding claims invalid when they did "not have the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it" (internal quotation marks and alternations omitted)); *Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1363–64 (Fed. Cir. 2021) (finding claim directed to gathering, matching, and sending information ineligible in part because "the asserted claims do not at all describe how [the claimed]

result is achieved."). The patentee had ideas about data compression, but rather than claim specific implementations of those ideas or provide new techniques to achieve the claimed results, the patentee sought and received claims on the ideas themselves. The patents claim abstract ideas without teaching how to implement those ideas. This is what § 101 jurisprudence prohibits.

IV. CONCLUSION

For the reasons stated above and in my prior opinion, D.I. 41, I find that all claims of the asserted patents are invalid under § 101 for lack of subject-matter eligibility. Accordingly, I will grant Defendants' Renewed Motion to Dismiss.

The Court will issue Orders consistent with this Memorandum Opinion.

APPENDIX C

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

[Filed May 4, 2021]

Civil Action No. 17-0800-CFC
CONSOLIDATED

Realtime Data LLC,	)
Plaintiff,	)
	)
v.	)
	)
Array Networks Inc., et al.,	)
Defendant.	)
	)

Civil Action No. 17-0925-CFC

Realtime Data LLC,	)
Plaintiff,	)
	)
v.	)
	)
Spectra Logic Corp.,	)
Defendant.	)
	)

Stephen B. Brauerman, BAYARD, P.A., Wilmington, Delaware; C. Jay Chung, Christian X. Conkle, Marc A. Fenster, Adam S. Hoffman, Paul A. Kroeger, Reza Mirzaie, Philip X. Wang, RUSS AUGUST & KABAT, Los Angeles, California

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MEMORANDUM OPINION

May 4, 2021
Wilmington, Delaware

/s/ Colm F. Connolly
COLM F. CONNOLLY
UNITED STATES DISTRICT JUDGE

Plaintiff Realtime Data LLC has sued fourteen Defendants for infringement of various combinations of eight patents it holds: U.S. Patent Nos. 7,415,530 (the #530 patent), 8,717,203 (the #203 patent), 8,717,204 (the #204 patent), 8,933,825 (the #825 patent), 9,054,728 (the #728 patent), 9,116,908 (the #908 patent), 9,667,751 (the #751 patent), and 10,019,458 (the #458 patent). The asserted patents are directed to systems and methods involving data compression.

Pending before me are motions to dismiss pursuant to Federal Rule of Civil Procedure 12(b)(6) filed by six Defendants. *Realtime Data LLC v. Fortinet, Inc.*, No. 17-1635, D.I. 11; *Realtime Data LLC v. Spectra Logic Corp.*, No. 17-0925, D.I. 41; *Realtime Data LLC v. Reduxio Systems, Inc.*, No. 17-1676, D.I. 9; *Realtime Data LLC v. Panzura, Inc.*, No. 18-1200, D.I. 21; *Realtime Data LLC v. Aryaka Networks, Inc.*, No. 18-2062, D.I. 15; *Realtime Data LLC v. Kaminario, Inc.*, No. 19-0350, D.I. 23. All six Defendants argue that I should dismiss Realtime Data's complaints because the asserted patents are invalid under 35 U.S.C. § 101 for failing to claim patentable subject matter. Some Defendants argue additional grounds for dismissal, but because I find all the asserted patents invalid on § 101 grounds I do not reach those arguments.

I. BACKGROUND

Realtime alleges that it is a developer of data compression technology and that it maintains an active patent licensing business. *See Fortinet*, No. 17-1635, D.I. 1 ¶ 1. The asserted patents claim variations on a common theme. The patents all relate to methods and systems for compression and decompression of data. Each of the eight patents has one of three shared written descriptions. The #825, #728, and #203 patents share one written description; the #530, #908, and #458 patents share another written description; and the #204 and #751 patents share a third written description.

Kaminario challenges as ineligible the #825 and #458 patents. Kamanario, Fortinet, Reduxio, Panzaura, and Aryaka challenge the #751 patent. Fortinet, Spectra, Reduxio, Panzaura, and Aryaka challenge the #728 and #908 patents. Fortinet and Reduxio challenge the #203 patent. Spectra challenges the #204 patent. And Spectra, Panzura, and Aryaka challenge the #530 patent.

Claim 18 of the #825 recites

> [a] method comprising:
> associating at least one encoder to each one of a plurality of parameters or attributes of data:
> analyzing data within a data block to determine whether a parameter or attribute of the data within the data block is identified for the data block;
> wherein the analyzing of the data within the data block to identify a parameter or

attribute of the data excludes analyzing based only on a descriptor that is indicative of the parameter or attribute of the data within the data block;

identifying a first parameter or attribute of the data of the data block;

compressing, if the first parameter or attribute of the data is the same as one of the plurality of parameter or attributes of the data, the data block with the at least one encoder associated with the one of the plurality of parameters or attributes of the data that is the same as the first parameter or attribute of the data to provide a compressed data block; and

compressing, if the first parameter or attribute of the data is not the same as one of the plurality of parameters or attributes of the data, the data block with a default encoder to provide the compressed data block.

Claim 25 of the #728 patent recites

[a] computer implemented method comprising:

analyzing, using a processor, data within a data block to identify one or more parameters or attributes of the data within the data block;

determining, using the processor, whether to output the data block in a received form or in a compressed form; and

outputting, using the processor, the data block in the received form or the compressed form based on the determination,

wherein the outputting the data block in the compressed form comprises determining whether to compress the data block with content dependent data compression based on the one or more parameters or attributes of the data within the data block or to compress the data block with a single data compression encoder; and

wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based only on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block.

Claim 1 of the #908 patent recites

[a] system comprising:

a memory device; and

a data accelerator configured to compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block;

wherein the compressed first and second data blocks are stored on the memory device, and the compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form.

Clam 1 of the #530 patent recites

[a] system comprising:
a memory device; and
a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in received form, said data stream includes a first data block and a second data block, said data stream is compressed by said data accelerator to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form, a first data descriptor is stored on said memory device indicative of said first compression technique, and said first descriptor is utilized to decompress the portion of said compressed data stream associated with said first data block.

Claim 9 of the #458 patent recites

[a] method for accelerating data storage comprising:
analyzing a first data block to determine a parameter of the first data block;
applying a first encoder associated with the determined parameter of the first data block

to create a first encoded, data block wherein the first encoder utilizes a lossless dictionary compression technique;

analyzing a second data block to determine a parameter of the second data block;

applying a second encoder associated with the determined parameter of the second data block to create a second encoded data block, wherein the second encoder utilizes a lossless compression technique different than the lossless dictionary compression technique; and

storing the first and second encoded data blocks on a memory device, wherein encoding and storage of the first encoded data block occur faster than the first data block is able to be stored on the memory device in unencoded form.

Claim 1 of the #751 patent recites

[a] method for compressing data comprising:

analyzing content of a data block to identify a parameter, attribute, or value of the data block that excludes analyzing based solely on reading a descriptor;

selecting an encoder associated with the identified parameter, attribute, or value;

compressing data in the data block with the selected encoder to produce a compressed data block, wherein the compressing includes utilizing a state machine; and

storing the compressed data block;

wherein the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form.

Claim 12 of the #204 patent recites

[a] method for processing data, the data residing in data fields, comprising:
recognizing any characteristic, attribute, or parameter of the data;
selecting an encoder associated with the recognized characteristic, attribute, or parameter of the data;
compressing the data with the selected encoder utilizing at least one state machine to provide compressed data having a compression ratio of over 4:1; and
point-to-point transmitting the compressed data to a client;
wherein the compressing and the transmitting occur over a period of time which is less than a time to transmit the data in an uncompressed form.

Claim 14 of the #203 patent recites

[a] system for decompressing, one or more compressed data blocks included in one or more data packets using a data decompression engine, the one or more data packets being transmitted in sequence from a source that is internal or external to the data decompression engine, wherein a data packet from among the one or more data

packets comprises a header containing control information followed by one or more compressed data blocks of the data packet the system comprising:

a data decompression processor configured to analyze the data packet to identify one or more recognizable data tokens associated with the data packet, the one or more recognizable data identifying a selected encoder used to compress one or more data blocks to provide the one or more compressed data blocks, the encoder being selected based on content of the one or more data blocks on which a compression algorithm was applied;

one or more decompression decoders configured to decompress a compressed data block from among the one or more compressed data blocks associated with the data packet based on the one or more recognizable data tokens; wherein:

the one or more decompression decoders are further configured to decompress the compressed data block utilizing content dependent data decompression to provide a first decompressed data block when the one or more recognizable data tokens indicate that the data block was encoded utilizing content dependent data compression; and

the one or more decompression decoders are further configured to decompress the compressed data block utilizing content independent data decompression to provide a second decompressed data block

> when the one or more recognizable data tokens indicate that the data block was encoded utilizing content independent data compression; and
>
> an output interface, coupled to the data decompression engine, configured to output a decompressed data packet including the first or the second decompressed data block.

In a prior oral ruling on motions to dismiss brought by Aryaka, Panzura, Fortinet, and Reduxio, I found the #728, #908, #530, and #751 patents invalid for claiming ineligible subject matter. *Reduxio*, No. 17-1676, D.I. 46 (oral order). Realtime appealed, and the Federal Circuit vacated my prior ruling as insufficient. *Realtime Data LLC v. Reduxio Sys., Inc.*, 831 F. App'x 492, 499 (Fed. Cir. 2020). The Federal Circuit cautioned that "[n]othing in [its] opinion should be read as opining on the relative merits of the parties' arguments or the proper resolution of the case." *Id.*

II. LEGAL STANDARDS

A. Legal Standards for Stating a Claim

To state a claim on which relief can be granted, a complaint must contain "a short and plain statement of the claim showing that the pleader is entitled to relief." Fed. R. Civ. P. 8(a)(2). Detailed factual allegations are not required, but the complaint must include more than mere "labels and conclusions" or "a formulaic recitation of the elements of a cause of action." *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007) (citation omitted). The complaint must set forth enough facts, accepted as true, to "state a claim to relief that is

plausible on its face." *Id.* at 570. A claim is facially plausible "when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (citation omitted). Deciding whether a claim is plausible is a "context-specific task that requires the reviewing court to draw on its judicial experience and common sense." *Id.* at 679 (citation omitted).

When assessing the merits of a Rule 12(b)(6) motion to dismiss, a court must accept as true all factual allegations in the complaint and in documents explicitly relied upon in the complaint, and it must view those facts in the light most favorable to the plaintiff. *See Umland v. Planco Fin. Servs.*, 542 F.3d 59, 64 (3d Cir. 2008).

B. Legal Standards for Patent-Eligible Subject Matter

Section 101 of the Patent Act defines patent-eligible subject matter. It provides: "Whoever 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." 35 U.S.C. § 101.

There are three judicially created limitations on the literal words of § 101. The Supreme Court has long held that laws of nature, natural phenomena, and abstract ideas are not patentable subject matter. *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014). These exceptions to patentable subject matter arise

from the concern that the monopolization of "these basic tools of scientific and technological work" "might tend to impede innovation more than it would tend to promote it." *Id.* (internal quotation marks and citations omitted). Abstract ideas include mathematical formulas and calculations. *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972).

"[A]n invention is not rendered ineligible for patent [protection] simply because it involves an abstract concept[.]" *Alice*, 573 U.S.. at 217. "[A]pplication[s] of such concepts to a new and useful end . . . remain eligible for patent protection." *Id.* (internal quotation marks and citations omitted). But in order "to transform an unpatentable law of nature [or abstract idea] into a patent-eligible application of such law [or abstract idea], one must do more than simply state the law of nature [or abstract idea] while adding the words 'apply it.'" *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 71 (2012) (emphasis omitted).

In *Alice*, the Supreme Court established a two-step framework by which courts are to distinguish patents that claim eligible subject matter under § 101 from patents that do not claim eligible subject matter under § 101. The court must first determine whether the patent's claims are drawn to a patent-ineligible concept—i.e., are the claims directed to a law of nature, natural phenomenon, or abstract idea? *Alice*, 573 U.S. at 217. If the answer to this question is no, then the patent is not invalid for teaching ineligible subject matter. If the answer to this question is yes, then the court must proceed to step two, where it considers "the elements of each claim both individually and as an

ordered combination" to determine if there is 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." *Id.* at 217–18 (alteration in original) (internal quotations and citations omitted).[1]

Issued patents are presumed to be valid, but this presumption is rebuttable. *Microsoft Corp. v. i4i Ltd. Partnership*, 564 U.S. 91, 96 (2011). Subject-matter eligibility is a matter of law, but underlying facts must be shown by clear and convincing evidence. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

III. DISCUSSION

Applying the two-step framework from *Alice*, I find that the asserted patents are invalid under § 101. The

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[1] The Court in *Alice* literally said that this two-step framework is "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." 573 U.S. at 217. But as a matter of logic, I do not see how the first step of the *Alice/Mayo* framework can distinguish (or even help to distinguish) patents in terms of these two categories (i.e., the categories of (1) "patents that claim laws of nature, natural phenomena, and abstract ideas" and (2) patents "that claim patent-eligible applications of [laws of nature, natural phenomena, and abstract ideas]"). *Both* categories *by definition* claim laws of nature, natural phenomena, and abstract ideas; and only one of *Alice*'s steps (i.e., the second, "inventive concept" step) could distinguish the two categories. I therefore understand *Alice*'s two-step framework to be the framework by which courts are to distinguish patents that claim eligible subject matter under § 101 from patents that do not claim eligible subject matter under § 101.

Federal Circuit has repeatedly held that manipulation of information is inherently abstract. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) ("A process that start[s] with data, add[s] an algorithm, and end[s] with a new form of data [i]s directed to an abstract idea."); *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) ("[S]electing certain information, analyzing it using mathematical techniques, and reporting or displaying the results of the analysis . . . is all abstract."); *Elec. Power Grp.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) ("[W]e have treated collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas."). The asserted patents purport to teach the abstract manipulation of data and they lack any additional inventive features. They are thus ineligible for patent protection.

I structure my analysis as follows. I first consider whether it is appropriate to declare the patents invalid at the motion to dismiss stage. I conclude that it is. I then consider each patent individually, beginning with the #825 patent. I apply the two-part *Alice* test and consider whether each patents' claims should be considered together for the purpose of subject-matter eligibility. Because each of the asserted patents are directed to abstract ideas that are the same as or related to those in the #825 patent or another asserted patent, I address subsequent patents by discussing whether any of the limitations they add change the § 101 analysis I have already provided for previously considered patents. In all cases I find that these subsequent patents are directed to substantively

similar abstract ideas and add no inventive features. I conclude by considering arguments Realtime directed to all the asserted patents without distinguishing among the patents.

A. It Is Appropriate to Resolve This Case on a Motion to Dismiss

"[W]hether a claim recites patent eligible subject matter is a question of law [that] may contain underlying facts." *Berkheimer*, 881 F.3d at 1368. But "not every § 101 determination contains genuine disputes over the underlying facts . . . ." *Id.* When there is no dispute of material fact, § 101 arguments may be resolved at the pleading stage. *Id.* The Federal Circuit has "repeatedly affirmed § 101 rejections at the motion to dismiss stage, before claim construction or significant discovery has commenced." *Cleveland Clinic Found. v. True Health Diagnostics LLC*, 859 F.3d 1352, 1360 (Fed. Cir. 2017); *see also SAP Am.*, 898 F.3d at 1166 (citing cases); *Epic IP LLC v. Backblaze, Inc.*, 351 F. Supp. 3d 733, 751–52 (D. Del. 2018) (discussing when it is appropriate to resolve a § 101 motion on the pleadings).

Consideration of the asserted patents' subject-matter eligibility is appropriate at this stage of the case. Realtime argues that there are underlying factual disputes about whether the patents cover new solutions to existing technological problems and that fact discovery is necessary before ruling on the § 101 motions. But the patents themselves explain that the technologies and methods used in the claimed analyses were well-known and routine. *See, e.g.*, #825 patent at 6:24–31, 7:5–11. And precedent makes clear that the

inventive feature in a patent cannot be the abstract idea itself. *See Mayo*, 566 U.S. at 72–73 (explaining the inventive concept must be "significantly more" than the abstract idea itself); *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) ("a claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept").

Realtime also argues that 42 paragraphs in its First Amended Complaint against Kaminario contain relevant factual assertions. *Kaminario*, 19-0350, D.I. 33 at 29 (citing D.I. 18 at ¶¶ 9–14, 16–27, 45–56, 72–83). But the cited paragraphs recite legal conclusions, quotations from the patents, and conclusory allegations that the patents contain inventive features. None of the cited paragraphs identify an inventive feature that is distinct from one of the claimed abstract ideas. Even taking as true all facts as alleged, Realtime has not identified any elements of any claims that amount to "significantly more" than the abstract idea to which the claims are directed. Thus, discovery is not necessary.

Resolving eligibility on the pleadings minimizes "expenditure of time and money by the parties and the court" and "protects the public" from illegitimate patents. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 719 (Fed. Cir. 2014) (Mayer, J., concurring) (citation omitted). Such resolution is appropriate in these cases.

B. The #825 Patent

The #825 patent claims methods for selecting and performing data compression based on the data being compressed.

1. Claim 18 is Representative in the #825 Patent

Kaminario argues that claim 18 is representative. No. 19-0350, D.I. 24 at 4. Realtime's response to this assertion (and Kaminario's other proposed representative claims) is that Kaminario "provides no clear and convincing evidence that ***all*** of the claims of the asserted patents (totaling 100 claims across three different, unrelated patents) are ineligible." D.I. 33 at 35 (emphasis in original). If accepted, this response would effectively make dismissal on § 101 grounds impossible at the pleadings stage. Realtime's only substantive responses are to dismiss Kaminario's arguments as "conclusory attorney argument" and to offer a single sentence footnote listing terms from the patents asserted against Kaminario without any context. D.I. 33 at 36 n. 12. Realtime makes no effort to explain how the listed terms affect the *Alice* inquiry or to meaningfully respond to Kaminario's arguments about why claim 18 is representative. I have reviewed the claims and agree that claim 18 is representative.

Substantially similar claims directed to the same abstract idea can be considered together for subject-matter eligibility. *Content Extraction & Transmission LLC v. Wells Fargo Bank*, 776 F.3d 1343, 1348 (Fed. Cir. 2014). The #825 patent's independent claims (1, 18, 23, and 28) all recite a common algorithmic procedure with inconsequential variations. Each of the independent claims covers a method where (1) encoders are associated with particular parameters; (2) the presence or absence of those parameters in the data to be compressed, excluding any descriptive metadata, is

identified; and (3) the associated encoder is used to compress the data. *See* #825 patent at claims 1, 18, 23, 28. In other words, the data is compressed based on the attributes of the data itself, rather than a descriptor such as ".txt," ".png," ".doc," or ".csv." The independent claims are all directed to various wordings of this same procedure. Claims 23 and 28 add the additional step of providing a token indicative of the compression technique, but this extra algorithmic step does not alter the *Alice* analysis. *See Smart Sys. Innovations, LLC v. Chi. Transit Auth.*, 873 F.3d 1364, 1374 & n.9 (Fed. Cir. 2017) (finding claims covering an algorithmic step with "identifying tokens" invalid for lack of patentable-subject matter and explaining that adding a "hash identifier" did not impact the *Alice* test because it did not add the requisite inventive concept).

The dependent claims also do not add any limitations that affect the § 101 analysis. Those claims merely specify additional steps of abstract data analysis or limit the claims to particular operations. "A claim is not patent eligible merely because it applies an abstract idea in a narrow way." *BSG*, 899 F.3d at 1287 & n.1 (dependent claims focused on same abstract idea despite minor differences); *see also buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (explaining that narrowing the use of an abstract idea "to a particular technological environment" does not make a claim directed to an otherwise abstract idea patent eligible).

Several claims recite additional abstract steps for the receiving, storing, or manipulation of information. #825 patent at claims 2, 10, 19, 24, 27. Other claims

recite well-known compression methods. #825 patents at claims 12–16. Claims 6, 7, 20, 25, and 29 add the arbitrary condition that compression occur in "real time," and claims 8 and 9 specify whether the data is of variable or fixed size. Claims 3, 21, and 30 add as an additional step the provision of a token identifying the compression technique; and claims 17 and 26 allow the user to disable certain compression methods. The remaining claims combine some of these limitations. #825 patent at claims 4–5, 11, 22. For example, claims 5 and 22 require both the transmission of a token indicating the method of compression and decompression based on that token. If the independent claims are invalid for claiming ineligible subject matter, the dependent claims are also invalid for the same reasons. The dependent claims are directed to the same abstract process and do not add any unconventional or inventive steps. None of the additional limitations alter the § 101 analysis.

Accordingly, I adopt claim 18 as representative of the #825 patent for the purposes of § 101 subject-matter eligibility.

2. *Alice* Step One

The court determines at step one whether the claims at issue are directed to a patent-ineligible concept. *Alice*, 573 U.S. at 217. "[C]laims are considered in their entirety [at step one] 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). In conducting step one, I "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." *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (quotation marks omitted).

"The Supreme Court has not established a definitive rule to determine what constitutes an 'abstract idea' sufficient to satisfy the first step of the *Mayo/Alice* inquiry." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016) (citation omitted). The Court has recognized, however, that fundamental economic practices, methods of organizing human activity, and mathematical formulae are abstract ideas. *See Bilski v. Kappas*, 561 U.S. 593, 611 (2010) ("fundamental economic practice" of hedging is unpatentable abstract idea); *Alice*, 573 U.S. at 220–21 ("organizing human activity" of intermediated settlement falls "squarely within realm of 'abstract ideas'"); *Gottschalk*, 409 U.S. at 68, 71–72 (mathematical algorithm to convert binary-coded decimal numerals into pure binary code is unpatentable abstract idea); *Parker v. Flook,* 437 U.S. 584, 594–95 (1978) (mathematical formula for computing "alarm limits" in a catalytic conversion process is unpatentable abstract idea).

To determine whether claims are directed to an abstract idea courts generally "compare the claims at issue to those claims already found to be directed to an abstract idea in previous cases." *Enfish*, 822 F.3d at 1334. The Federal Circuit has also instructed district courts to consider as part of *Alice*'s step one whether the claims "focus on a specific means or method that improves the relevant technology or are instead

directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (citing *Enfish*, 822 F.3d at 1336).

Claims directed to the manipulation of data are abstract absent additional features, because, "information as such is an intangible." *Elec. Power*, 830 F.3d at 1353. "[A]nalyzing information by steps people go through in their minds, or by mathematical algorithms, without more" is "within the abstract-idea category." *Id.* at 1354. In other words, "[a] process that start[s] with data, add[s] an algorithm, and end[s] with a new form of data [is] directed to an abstract idea." *RecogniCorp*, 855 F.3d at 1327 (citing *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014)).

Because the #825 patent covers a procedure for manipulating information, the Federal Circuit's prior cases considering patents directed to the manipulation of information are directly relevant. Applying these standards, I find that the #825 patent is directed to the abstract idea of compressing data based on the content of that data.

Claim 18 consists entirely of general, abstract steps. The claim requires "associating [an] encoder," "analyzing data," "identifying a [] parameter," and "compressing." The other requirements of the claim are logical conditions that limit the claim's scope and do not change the focus of the claims from the abstract manipulation of information. Illustrating their abstract nature, the claimed steps are captured in a simple flow

chart. #825 patent at 6:7–10, figs. 17a. 17b. Claim 18 is directed to precisely the type of abstract information processing that the Federal Circuit has repeatedly found patent ineligible. *See, e.g.*, *RecogniCorp*, 855 F.3d at 1327 (encoding and decoding data is an abstract idea); *In re Bd. of Trustees of Leland Stanford Junior Univ.*, 2021 WL 922727, at *4 (Fed. Cir. Mar. 11, 2021) ("mathematical algorithms for performing calculations, without more, are patent ineligible under § 101"); *iLife Techs., Inc. v. Nintendo of Am., Inc.*, 2021 WL 117027, at *2 (Fed. Cir. Jan. 13, 2021) ("We have routinely held that claims directed to gathering and processing data are directed to an abstract idea."); *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017) (claims focused on sending and monitoring information are directed to an abstract idea); *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 612 (Fed. Cir. 2016) (classifying and storing information is abstract); *Digitech Image Techs.*, 758 F.3d at 1351 (method claims for organizing information through mathematical analyses was directed to an abstract idea); *Mortg. Application Techs., LLC v. MeridianLink, Inc.*, 2021 WL 97347, at *4 (Fed. Cir. Jan. 12, 2021) ("information storage and exchange is an abstract idea even when it uses computers as a tool or is limited to a particular technological environment").

The Federal Circuit's decision in *SAP America* confirms this analysis. 889 F.3d 1161. In that case, the claims were focused on "selecting certain information, analyzing it using mathematical techniques, and reporting or displaying the results of the analysis." *Id.* at 1167. The Federal Circuit held that the asserted claims were ineligible because the claimed operations

were "all abstract." *Id.* at 1167. The claims in the #825 patent are not materially different from the claims considered in *SAP America.* Indeed, Realtime itself alleges in its complaint against Kaminario that the #825 patent is "directed to systems and methods of digital-data compression utilizing multiple encoders to compress data blocks *based on an analysis of the specific content or type of the data being encoded.*" *Kaminario,* 19-350, D.I. 18 ¶ 74 (emphasis added).

Nothing in the #825 patent's claims goes beyond conducting data analysis and performing mathematical operations. The disclosed analysis could be implemented using pen and paper. Because there is "no particular concrete or tangible form" to the claims, they are abstract. *Ultramercial*, 772 F.3d at 715; *see also CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011) ("[A] method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101."). The patent is, in short, focused on an abstract idea for analyzing data.

3. *Alice* Step Two

Having found that the claims are directed to an abstract idea, I next ascertain whether the claims contain an "'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (quoting *Mayo*, 566 U.S. at 77). It is insufficient for the patent to "simply state the law of nature while adding the words 'apply it.'" *Mayo*, 566 U.S. at 72. A claim directed towards an abstract idea must include "'additional features' to ensure 'that the [claim] is more than a drafting effort

designed to monopolize the [abstract idea].'" *Alice*, 573 U.S. at 221 (alterations in original) (quoting *Mayo*, 566 U.S. at 77). No such additional features exist here, and I find that, whether considered individually or as an ordered combination, the claim elements of the #825 patent do not "transform" the claimed abstract idea into patent-eligible subject matter.

The patent's claims take the abstract idea of compressing data based on the content of that data and simply apply that idea. Reciting the application of an abstract idea without more does not provide an inventive concept. *See, e.g.*, *Alice*, 573 U.S. at 221 ("transformation into a patent-eligible application requires more than simply stating the abstract idea while adding the words 'apply it'" (alterations, internal citations, and quotation marks omitted)); *BSG*, 899 F.3d at 1290 ("[A] claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention 'significantly more' than that ineligible concept."); *Content Extraction*, 776 F.3d at 1347–48 ("For the role of a computer in a computer-implemented invention to be deemed meaningful in the context of this analysis, it must involve more than performance of well-understood, routine, and conventional activities previously known to the industry." (quotation marks and alterations omitted)).

Realtime argues the #825 patent teaches "specific improvements to the function of [] computer parts themselves," and therefore contains an inventive

feature. *Kaminario*, 19-350, D.I. 33 at 9.[2] But this argument is inconsistent with the plain language of the patent. The #825 patent's written description explains that all the constituent elements are generic and well-

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[2] Realtime argues at both steps of the *Alice* inquiry that the #825 patent is subject-matter eligible because the patent covers technological solutions. Realtime phrases its arguments slightly differently at each step to correspond to the *Alice* test as it has been articulated in Federal Circuit case law. At step one, Realtime argues that the #825 patent is subject-matter eligible because it is "directed to technological solutions" and therefore is not directed to an abstract idea. D.I. 33 at 12 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1259 (Fed. Cir. 2014) and *Enfish*, 822 F.3d at 1339). Its argument at step two is summarized in the main text above. Both arguments are premised on finding that the #825 patent covers technical solutions for improved computer functionality.

The Federal Circuit has at times considered computer functionality at step one of the *Alice* inquiry and at times at step two. *Compare Enfish*, 822 F.3d at 1335 ("Therefore, we find it relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the *Alice* analysis."), *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1315–16 (Fed. Cir. 2019) (considering introduction of computer functionality into claims at step one of *Alice* inquiry), *and TLI Commc'ns*, 823 F.3d at 611–13 (same), *with Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084, 1094 (Fed. Cir. 2019) (considering whether the claims "improve computer functionality" at step two), *Intell. Ventures I LLC v. Symantec*, 838 F.3d 1307, 1320 (Fed. Cir. 2016) (considering whether "the asserted claim improve[s] or change[s] the way a computer functions" at step two), *and BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1351 (Fed. Cir. 2016) (finding that "the claims may be read to improve an existing technological process" at step two (internal quotation marks and alteration omitted)). I have followed the Supreme Court's lead in *Alice* and consider computer functionality at step two.

understood in the art. The claimed methods are preferably implemented on "a general purpose computer or any machine or device" with a microprocessor using any of the "many conventional content dependent techniques" for compression, including many that are "currently well known." #825 patent at 2:65–66, 6:26–31, 7:7–11. And these elements are not combined in an inventive way; rather, they are simply combined in the order logic requires. *Two-Way Media*, 874 F.3d at 1339 (claiming the "conventional ordering of steps" to implement an abstract idea on a generic computer is not inventive); *see also In re TLI Commc'ns*, 823 F.3d at 615 ("vague, functional descriptions" are insufficient to transform an abstract idea into a patent-eligible invention").

Indeed, none of the claims in the #825 patent even require physical components. *See, e.g.*, #825 patent claims 1, 18, 23, 28. The claims recite an "encoder," but "encoder" is simply the patent's name for a mathematical compression algorithm. *See* #825 patent at 7:5–11 (distinguishing between an "encoder module" and "encoders," and explaining that the encoders can be any number of compression algorithms). Since the patent neither requires any hardware nor otherwise teaches any technical improvement to computer technology, it clearly does not provide "technological solutions."

The #825 patent's claims do not contain additional limitations, whether considered individually or as an ordered combination, that "transform" the claimed abstract idea into patent-eligible subject matter. I

therefore find the #825 patent invalid for claiming ineligible subject matter.

C. The #728 Patent

The #728 patent is directed to systems and a method that compress data based on the characteristics of the data to be compressed.

1. The #728 Patent Claims are Equivalent for the Purposes of § 101

None of the claims in the #728 patent are materially different from each other for the purposes of § 101. The #728 patent has three independent claims—1, 24, and 25. Though they are drafted slightly differently, they all are directed to the same idea of compressing data based on the characteristics of that data. Claim 25 differs from claim 1 insofar as claim 25 is a method and claim 1 is a system claim. Claim 24 claims essentially the same system as claim 1 but uses a "default data compression encoder" instead of a "single data compression encoder." When the only difference between claims is the form in which they are drafted, it is appropriate to treat them as "as equivalent for purposes of patent eligibility under § 101." *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Can. (U.S.)*, 687 F.3d 1266, 1277 (Fed. Cir. 2012).

The dependent claims, all of which depend from claim 1, add additional steps or criteria that limit the scope of the claims, but they too are directed to the same idea and do not add additional limitations that would alter the *Alice* analysis. For example, claims 2 and 3 indicate whether the data block is transmitted from an internal or external source, and claims 4–6

require that some or all of the data compression happen in real time. Claim 14 requires that the single data compression encoder be "lossy" and claim 15 requires that the compressed data block be stored.[3] I have reviewed each of the dependent claims and find that if claim 1 is directed to an abstract idea and is implemented on generic hardware, the same is true of every dependent claim. When claims "require performance of the same basic process . . . they should rise or fall together." *Smart Sys.*, 873 F.3d at 1368 n.7. I will therefore not separately analyze the dependent claims.

2. *Alice* Test

The #728 patent is directed to the same idea as the #825 patent—compressing data based on the content of that data. The #728 patent is for all relevant purposes the same as the #825 patent. Both patents are directed to abstract information processing. The fact that most of the #728 patent's claims are written in system form and reference generic processors, does not make the claims less directed to the abstract processing of information. *See In re TLI Commc'ns*, 823 F.3d at 613 ("although the claims limit the abstract idea to a particular environment[,] . . . that does not make the claims any less abstract for the step 1 analysis"). Accordingly, the #728 patent is directed to ineligible subject matter for the same reasons as the #825 patent.

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[3] A "lossy" data compression technique is one in which information is lost upon compression, such that the compressed data differs from the original. #530 patent at 1:56–59. A "lossless" compression technique avoids any information loss. #530 patent at 2:4–7.

At step two of the *Alice* test, the #728 patent's claims do not contain any additional features that make them patent eligible. The claims teach nothing beyond the notion of applying the identified abstract idea on generic computer technology. For example, claim 1 of the #728 patent, consists of nothing more than a processor and compression encoders. The encoders are inherently abstract, and the processor is a generic computer component. Claim 1 describes the configuration of the processor, but the configuration simply captures the identified abstract idea for information processing. *Ultramercial*, 772 F.3d at 716 ("[C]onventional steps, specified at a high level of generality, [are] insufficient to supply an inventive concept." (citing *Alice*, at 2357)).

In sum, like the #825 patent's claims, the #728 patent's claims are directed to ineligible subject matter and lack additional features that would make them valid under § 101.

D. The #908 Patent

The #908 patent claims systems and methods for compressing data with two key characteristics. First, the #908 patent teaches compressing a data stream in two separate blocks, with each block being compressed with a different method. Second, the #908 patent requires the logical condition that the combined time of compressing and storing the compressed data be faster than storing the uncompressed data.

1. The #908 Patent Claims are Equivalent for the Purposes of § 101

The #908 patent has four independent claims. Claim 1 is a system claim, and claims 21, 25, and 29 provide three method claims for the process performed by the system in claim 1. Each of the three independent method claims contain only incidental variations on the same process. Claim 21 is simply a rewriting of claim 1 in a different form, claim 25 adds a "receiving" step to claim 21, and claim 29 is written in terms of data retrieval rather than data storage. These differences do not affect the *Alice* analysis. *See Smart Sys.*, 873 F.3d at 1368 n.7 (explaining that when claims "require performance of the same basic process . . . they should rise or fall together.").

The dependent claims of the #908 patent add limitations that are similar to those already discussed for the #825 patent. Claims 2–7, 14, 19, 22–23, and 26–28 add additional informational processing steps, specify conditions for the input or output of data analysis, or impose additional speed conditions. Claims 8–13, 20, and 30 specify either generic hardware or known compression methods. Claim 18 requires that the data blocks represent audio or video information. Claims 15–17, and 24 combine some of these same limitations. None of these additional limitations affect eligibility under § 101.

Since all the claims in the #908 patent share the same focus and no claim includes additional elements requiring separate § 101 analysis, I consider the subject-matter eligibility of all the claims together.

2. *Alice* Test

The #908 patent is directed to the combination of two abstract ideas. First, the #908 patent claims require compressing two different data blocks with different methods. This requirement is nothing more than duplicating the idea of compressing data plus an abstract logical conditional. The Federal Circuit has explained that duplication of an abstract idea does not affect the *Alice* test. *See Content Extraction*, 776 F.3d at 1348–49 ("repeating some steps" is not inventive). And requiring that the two methods are distinct is itself an abstract condition that does not redirect the claims away from the abstract analysis of information.

Second, the #908 patent requires that compression and storage together are faster than storage of the uncompressed data alone. This results-based limitation does not affect the subject-matter eligibility of the #908 patent compared to the previously considered patents. *Two-Way Media*, 874 F.3d at 1337 ("result-based functional language" is abstract). This speed requirement is simply a results-based logical condition, and nothing in the patent teaches how to achieve such a result. *Cf Intell. Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1316 (Fed. Cir. 2016) ("[W]hen a claim directed to an abstract idea contains no restriction on how the result is accomplished and the mechanism is not described, although this is stated to be the essential innovation, then the claim is not patent-eligible." (internal quotation marks, alterations, and citations omitted)). The speed result is asserted without any guidance and the written description explains that

such speed benefits were already well-known in the art. *See* #908 patent at 2:13–19.

Because the additional limitations of the #908 patent relative to the #825 and #728 patents are purely abstract and do not provide any inventive steps, the #908 patent's claims are invalid for the same reasons that the #825 and #728 patents' claims are invalid.

E. The #530 Patent

The #530 patent covers systems for compressing data that are almost identical to the systems claimed in the #908 patent. The additional limitation in claim 1 of the #530 patent compared to claim 1 of the #908 patent is that the #530 patent requires that the first data block be stored with an indicator of how it was compressed and that the descriptor be used to decompress that first data block.

Having already found that the #908 patent is invalid for claiming ineligible subject matter, it follows that claim 1 of the #530 patent is also invalid. Like the #908 patent, the #530 patent is directed to the abstract idea of compressing data with multiple distinct compression methods with the required result that storage is faster. Requiring that a descriptor is stored and used to decompress is simply another example of abstract data manipulation on generic hardware. *See Smart Sys. Innovations*, 873 F.3d at 1372.

The claims that depend from claim 1 are all the same as claim 1 for the purposes of the *Alice* test. These claims simply add additional abstract steps or apply the same idea on routine and conventional hardware. For example, claim 2 requires that the data

accelerator store the first descriptor on the memory device, and claim 4 requires that the data accelerator retrieve the compressed data from the memory device. Claims 9–12 specify generic types of memory devices, claims 13 and 14 require known compression methods, and claims 22 and 23 limit the claims to certain types of data streams. None of these dependent claims have limitations that effect patent eligibility, and they are invalid for the same reasons that the #908 patent's claims are invalid.

The #530 patent also has three claims that were added during reexamination. Claim 24 is an independent system claim that adds steps requiring that the compressed data stream is buffered to be compatible with the bandwidth of the memory device. Nothing in the patent suggests that buffering a data stream to match the bandwidth limits of the receiving device was new or in any way unconventional. #530 patent at 2:33–37 (discussing the need for buffering in the prior art). The claim is the direct application of the logical flow chart illustrated in Figure 6b, which represents abstract data manipulation. #530 patent at 4:9–10 & fig. 6b. Dependent claim 25 adds a requirement of appending encoder type descriptors to the data and dependent claim 26 requires compressing the data with a lossless encoder, where the rate of compression is adjusted based on the encoder's compression ratio. Neither of these additional limitations affects the § 101 analysis because both claims remain directed to the manipulation of information using generic hardware.

All the claims in the #530 patent are directed to the same idea as the #908 patent and are nothing more than directions to apply an abstract idea in conventional settings. Accordingly, I find that they are all invalid for claiming ineligible subject matter for the same reasons the #908 patent's claims are invalid. *See Content Extraction*, 776 F.3d at 1348 (explaining substantially similar claims directed to the same abstract idea can be considered together for subject-matter eligibility).

F. The #458 Patent

The #458 patent is also very similar to the #908 patent. Like the #908 patent, the #458 patent requires the compression of at least two distinct data blocks and that the time for compression and storage be faster than the time for storage without compression for the first data block. The major difference between the two patents is that the #458 patent requires two distinct lossless compression techniques. *See, e.g.*, #458 patent at claims 1, 9, and 17.

The § 101 analysis is identical for all claims of the #458 patent. Kaminario argues that claim 9 is representative, and I agree. Independent claims 1 and 9 of the #458 patent are directed to the same idea even though claim 1 is written in system form and claim 9 is written in method form. Independent claim 17 is nearly identical to claim 1, except that it is written in terms of a "computer-readable storage device" rather than in terms of a general system. Since these claims are directed to the same ideas and are merely expressed in slightly different ways, they are equivalent for *Alice* purposes. The dependent claims are also equivalent for

§ 101 purposes. All the dependent claims are directed to the same informational process, but merely limit the process to well-understood environments or add additional abstract steps. For instance, claim 10 extends the speed requirements to both data blocks, not only the first data block; and claim 11 specifies that the first data block must be analyzed based on its contents rather than a metadata descriptor. Having reviewed all the claims and finding them equivalent for the purposes of subject-matter eligibility, I adopt claim 9 as representative.

The #458 patent is directed to the abstract idea of compressing data using two distinct lossless compression algorithms such that the time to compress and store the first data block is less than the time to store the uncompressed data block. The restriction to lossless compression algorithms in the #458 patent does not make the patent any less directed to an abstract idea than the #908 patent is. A lossless compression algorithm, like any compression algorithm, is a mathematical procedure and is thus not patent-eligible on its own. *In re Stanford*, 2021 WL 922727, at *4.

The written description of the #458 patent explains that lossless compression algorithms were well-understood at the time of patenting. #908 patent at 1:54–59. Limiting the claimed abstract idea to certain well-known algorithms does not add an inventive step. *TLI Commc'ns*, 823 F.3d at 613 (at step two "the components must involve more than performance of well-understood, routine, conventional activities previously known to the industry" (quoting *Alice*, 573

U.S. at 225) (internal quotation marks and alterations omitted)).

In all other respects relevant to the *Alice* test, the #458 patent is identical to the #908 patent. Since the #458 patent is also directed to an abstract idea and lacks any inventive features that would make it patent eligible, I find that the #458 patent's claims cover ineligible subject matter and are invalid. *See Content Extraction*, 776 F.3d at 1348 (explaining substantially similar claims directed to the same abstract idea can be considered together for subject-matter eligibility).

G. The #751 Patent

The #751 patent is directed to another variation on the theme of using compression to achieve faster data storage. The #751 patent does not require repeating the compression step over two distinct data blocks, but it does require choosing a compression method based on the content of the data. It combines ideas from the #825 and #908 patents. The #751 patent's claims also require that the "compression uses a state machine." *See, e.g.*, #751 patent at claim 1. A state machine is an abstract model in certain compression methods. #751 patent at 9:6–10, 15:27–29.

Kaminario argues that claim 1 is representative. *Kaminario*, 19-0350, D.I. 24 at 8. I agree. The #751 patent contains two independent claims and 46 dependent claims. Although claim 1 is written in method form and claim 25 is written in system form, the two claims are identical in all material respects. The dependent claims add limitations requiring additional abstract steps or conditions relating to the

receipt, processing, or transmission of data. For example, claim 2 adds the additional abstract step of transmitting both control information and the compressed data, claims 17 and 18 describe the type of table used in the state machine, and claim 21 specifies that that compression method is lossless. None of the limitations in any of the dependent claims affect the *Alice* inquiry.

I find that the #751 patent is directed to the abstract idea of compressing data with a state machine, under conditions where compressing and storing the data is faster than storing the uncompressed data and where the compression method applied to the data is based on the content of the data. The #751 patent explains that a "state machine" is an element in "Huffman or Arithmetic encoding" and that these compression methods were well known in the art. #751 patent at 9:6–10, 15:27–29. The written description teaches that each state machine is a set of nodes and pointers containing encoding tables and pointers based on the data's character sequence. #751 patent at 9:11–20. Essentially, the state machine is a form of a cipher, which makes the state machine an abstract component in a method for information processing. *See Elec. Power Grp*, 830 F.3d at 1353. Thus, the #751 patent's claims are directed to abstract information processing.

The #751 patent also does not contain any inventive features beyond the abstract idea. The #751 patent fully incorporates by reference the written description of the #825 patent, and therefore also provides that the claimed systems and methods can be performed on

conventional computer hardware with well-known compression techniques. *See* #751 patent at 6:20–27; #825 patent at 2:65–66, 6:26–31, 7:7–11. The patent further explains that compression methods using state machines were well-known. #751 patent at 15:27–29. The addition of the "state machine" limitation therefore neither redirects the focus of the invention away from the claimed abstract idea nor adds any inventive step capable of transforming the claimed processes and methods into a patent-eligible invention. Thus, the #751 patent is invalid for the same reasons the previously considered patents are invalid.

H. The #204 Patent

The #204 patent claims methods for compressing and broadcasting data. Every claim in the #204 is directed to the abstract idea of compressing information before transmitting it. All the patent's claims require taking data, selecting an encoding scheme, compressing the data with that encoding scheme, and then transmitting or broadcasting the data. All of these steps are abstract because they are nothing more than information processing. *See SAP Am.*, 898 F.3d at 1167.

The #204 patent also lacks any additional features that transform the claimed idea into a patent-eligible invention. The #204 patent does not teach how to achieve faster transmission. Rather, it simply includes faster transmission or a higher compression ratio as limitations in the claims. These results-based limitations are abstract and do not change the § 101 analysis. *See Two-Way Media*, 874 F.3d at 1337. And, as with the other asserted patents, the disclosed

analysis can be performed with well-understood compression methods on generic computers. #204 patent at 8:3–25; 15:13–17.

The three independent claims are informative. The claims vary in how they specify the required amount of compression. Claim 1 requires a compression ratio of 10:1. Claim 12 requires a compression ratio of at least 4:1 and adds a speed requirement that compression and transmission be faster than transmission without compression. This speed requirement is for all relevant purposes identical to the speed requirement previously discussed in the #908 patent. Claim 22 repeats the speed and compression ratio limitations of claim 12 but is restricted to financial data and requires a list mapping data fields to particular encoders. Despite these differences, the focus of all the claims is still on the abstract operations of receiving, processing, and transmitting information. The dependent claims add information processing steps and narrowing limitations, such as limiting the data to financial information or requiring the data field to include stock information. #204 patent at claims 5 and 6. As additional examples, claim 4 requires that more than one message be within a data packet, and claim 8 specifies that compression is lossy. But none of these limitations alter the focus of the claims or add any new inventive steps.

Accordingly, the #204 patent is invalid under § 101.

I. The #203 Patent

The #203 patent covers systems and methods for compression and decompression that are similar to the

systems and methods claimed in the previously discussed patents.

Claims 21 and 27 recite another version of a compression system that compresses data based on the characteristics of that data and that has an output interface that provides a data token identifying the selected encoding method. Claim 21 is written as a method and claim 27 is written as a system. Dependent claims 22–26 and 28–30 add additional informational processing steps or narrow the claims to certain contexts and applications. None of these limitations affect the § 101 inquiry. These claims are another variation on the compression claims previously discussed. They are directed to the abstract idea of compressing data based on the characteristics of that data and contain no additional features that make them patent eligible.

Claims 1 and 14 cover the corresponding decompression method and system. In these claims the data token provided during compression is used to decompress the data. In other words, these claims are directed to the abstract idea of decompressing data based on a token signifying the compression method where that method was selected based on the characteristics of the data. The dependent claims again add additional information processing steps or narrow the application of the claimed idea to certain contexts and applications without providing any additional features that would make the claims patent eligible. Once again, at step one of the *Alice* test, the claims are directed to an inherently abstract procedure for transforming data. And at step two, the claims do not

add any "additional features" such that the claims cover eligible subject-matter.

For these reasons, I find that the #203 patent is invalid for claiming ineligible subject matter.

J. General Discussion

The preceding discussion of the eight asserted patents can be summarized as follows. At step one of the *Alice* test, every claim in every asserted patent is directed to the concept of manipulating information using compression. Because data compression is, without more, simply a form of data analysis, the claims are directed to abstract ideas. *See SAP Am.*, 898 F.3d at 1167. At step two of the *Alice* test, a claim must provide "'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Alice*, 573 U.S. at 221 (alterations in original) (quoting *Mayo*, 566 U.S. at 77). But the asserted patents contain no such features. Rather, they simply apply an abstract idea on generic computers with generic techniques. This is not enough to transform the claimed idea into a patent-eligible invention. *Id.* at 225.

Realtime's principal argument is that the asserted patents are not directed to an abstract idea, because they "provide particular technological solutions to overcome technological problems specific to the field of digital data compression." *Kaminario*, 19-0350, D.I. 33 at 9. But the patents do not provide technological solutions. To the extent that the patents teach anything, it is simply the benefits of data compression. *See, e.g.*, #825 patent at 1:65–67 ("Data compression is

widely used to reduce the amount of data required to process, transmit, or store a given quantity of information."); #825 patent at 2:64–3:3 (noting that there are many known techniques for content dependent encoding); #908 patent at 2:14–19 ("First, data compression can reduce the time to transmit data by more efficiently utilizing low bandwidth data links. Second, data compression economizes on data storage and allows more information to be stored for a fixed memory size by representing information more efficiently.").

The patents do not provide a technical solution to a technical problem because they do not teach how to engineer an improved system. *See Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1345 (Fed. Cir. 2018) (explaining that a patent is not directed to a technical solution when it covers results without teaching how to obtain those results). The asserted patents allow the use of *any* compression method. *See* #908 patent 16:49–54 ("the data storage accelerator 10 employs . . . any conventional data compression method suitable for compressing data at a rate necessary for obtaining accelerated data storage); #825 patent at 7 :7–11; #204 patent at 15:12–22; #203 patent at 16:30–16:42. The patents do not teach a technical solution to analyze data. *See, e.g.*, #825 patent at 16:15–24 (describing a content dependent data recognition module without any specificity). Nor do the patents teach how to achieve the claimed efficiency benefits, beyond directing the skilled artisan to apply well-known techniques. *See WhiteServe LLC v. Dropbox, Inc.*, No. 19-2334, slip op. at 9, (Fed. Cir. Apr. 26, 2021) (finding patent invalid under § 101 when "[t]he

specification d[id] not[] explain the technological processes underlying the purported technological improvement."). In arguing that the patents teach a specific way of or structure for performing compression, Realtime is only able offer conclusory statements while repeating the same generic language in the claims. *See, e.g., Reduxio*, 17-1676, D.I. 14 at 10–12. In short, while the patents do disclose potential challenges (e.g., the problem of selecting the best compression method for given data), they do not teach *how* to address those challenges.

Realtime argues that I must be careful to not oversimply the patents, because "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo.*, 566 U.S. at 71 (2012). I do not disagree with the premise of this argument; but, in this case, the asserted patents are written at a high level of generality and the identified abstract ideas fairly capture the focus of the claims. Realtime's own descriptions of the patents are substantially similar to the abstract ideas I find the patents directed to. For example, Realtime describes the #728 patent as being directed to "digital data compression/decompression utilizing two encoders [/decoders] (e.g., content dependent and content independent) to compress/decompress data blocks based on an analysis of the specific content of the data." *Tegile Systems*, No. 18-1267, D.I. 20 at 7. Even under Realtime's own characterization of the asserted patents, they are directed to the abstract analysis of data.

The asserted patents are not, as Realtime argues, "highly specific." *Kaminario*, 19-0350, D.I. 33 at 14. The Federal Circuit recently remarked in *In re Stanford* that it was "hard to imagine a patent claim that recites hardware limitations in more generic terms," because it required a "computer" with a "processor" and "memory." That observation applies equally here. *See, e.g.*, #458 patent at claim 1 (reciting a "memory device" and "one or more processors"). Indeed, in this case many of the asserted patents do not even require generic computer components. The #825 patent's claims are written even more generically than the claims at issue in *In re Stanford*. They require "associating," "analyzing," "identifying," and "compressing" without mentioning any hardware to implement these processes. Similarly, in the #530 patent, claim 1 requires a "memory device" and a "data accelerator," neither of which are limited to computer devices. (The patent describes a "memory device" as covering "all forms and manners of memory devices," and the "data accelerator" is functionally defined and could be nearly anything. #530 patent at 2:51, 5:8–13.) "Claims directed to generalized steps to be performed on a computer using conventional computer activity are not patent eligible." *Internet Pats.*, 790 F.3d at 1348–49; *see also WhiteServe*, slip op. at 8 (reiterating that claims invoking computer functionality to manipulate data are subject-matter ineligible).[4]

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[4] The cases cited by Realtime where patents were found eligible under § 101 are inapposite because the patents in those cases were "necessarily rooted in computer technology." *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014). In *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.* the patents

The patents' lack of a technical solution is highlighted by the claims' focus on results and benefits without teaching how to achieve those results and benefits. The faster speed and compression ratio limitations of the #530, #204, #908, #751, and #458 patents are paradigmatic examples of results-based

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were directed to improvements in graphical user interfaces for electronic devices with small screens. 880 F.3d 1356, 1362 (Fed. Cir. 2018). In *Enfish* the claimed invention provided a new method to construct databases. 822 F.3d at 1335–36. In *Visual Memory LLC v. NVIDIA Corp.* the patents taught a new, particularized memory system. 867 F.3d 1253, 1259–60 (Fed Cir. 2017). And in *Finjan, Inc. v. Blue Coat Systems, Inc.* the asserted patent was directed to improvements in computer virus scanning, which is a concern unique to computers. 879 F.3d 1299, 1305 (Fed. Cir. 2018).

Realtime also relies heavily on Magistrate Judge Love's opinions regarding the #530 and #908 patents and their adoption by judges in other districts in different proceedings. *See* Order Adopting Report and Recommendation of United States Magistrate Judge, *Realtime Data, LLC v. Actian Corp.*, 2016 WL 11089485 (E.D. Tex. Jan. 21, 2016); Report and Recommendation of United States Magistrate Judge, *Realtime Data, LLC v. Actian Corp.*, 2016 WL 11089485 (E.D. Tex. Nov. 30, 2015); Report and Recommendation of United States Magistrate Judge, *Realtime Data, LLC v. Carbonite, Inc.*, 2017 WL 4693969 (E.D. Tex. Sept. 20, 2017). I disagree with Magistrate Judge Love's conclusions, and note that since those opinions were issued, the Federal Circuit has reaffirmed that the processing of information, without more, is not patent eligible. *See, e.g.*, *Ericsson Inc. v. TCL Commc'n Tech. Holdings Ltd.*, 955 F.3d 1317, 1327–28 (Fed. Cir. 2020) (rejecting plaintiffs argument that the claims solved a specific computer problem because the claims lack specificity and were not particularized to any technical environment); *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1364 (Fed. Cir. 2020) (explaining that a patent is not directed to a patent-eligible improvement in computer functionality when computers are invoked as the tools for abstract processes).

claiming. And assertions of beneficial results do not allow a claim directed to an abstract idea to bypass the requirements of § 101. *Elec. Power Grp.*, 830 F.3d at 1351 (holding that claims on a "desirable information-based result" that are "not limited to inventive means of achieving th[at] result" are invalid under § 101); *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1241 (Fed. Cir. 2016) (finding patent claims directed to abstract ideas because they did "not claim a particular way of programming or designing . . . but instead merely claim the resulting systems."); *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1269 (Fed. Cir. 2016) (finding claims abstract because they did "no more than describe a desired function or outcome, without providing any limiting detail that confines the claim to a particular solution to an identified problem.").

While it might be the case that the patents' claims describe systems and methods that are useful when applied on computers, that fact does not by itself make the claims patent eligible. Many ideas are useful, but their utility does not make them patentable. Einstein's theory of relativity is useful, but it is not patent eligible. *Mayo*, 566 U.S. at 71 ("Einstein could not patent his celebrated law that $E=mc^2$; nor could Newton have patented the law of gravity.").

Here, the utility of the ideas to which the asserted patents are directed does not change the fact that the patents are directed to abstract ideas. *See Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 910 (Fed. Cir. 2017) ("The fact that an [idea] can be used to make a process more efficient, however, does not necessarily render an abstract idea less abstract.");

Voit Techs. LLC v. Del-Ton, Inc., 757 F. App'x 1000, 1003–04 (Fed. Cir. 2019) ("claims directed to 'improved speed or efficiency inherent with applying the abstract idea on a computer' are insufficient to demonstrate an inventive concept" (quoting *Intell. Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1367 (Fed. Cir. 2015)). This is a case where "patent-ineligible abstract ideas are plainly identifiable and divisible from the generic computer limitations recited by the remainder of the claim." *DDR Holdings*, 773 F.3d at 1256 (noting that such patents are subject-matter ineligible).

Efficiency gains are not the same as a technical solution to a technical problem. *DDR Holdings* teaches that because it can be difficult to distinguish between abstract ideas and patent-eligible inventions in the realm of computer software, one test is to ask if the patent teaches improvements that resolve problems unique to computers. 773 F.3d at 1255–59 (finding a patent claimed eligible subject matter because "the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks"). Since such technical problems *only* exist in the context of computers, solutions to those problems are effectively directed to improved computers, which are not abstract. But here the claims are not directed to a problem that is unique to digital computers. In other words, they are not directed to improved computers but to various ideas involving compression that may be usefully applied by computers.

Realtime argues that its claims "are necessarily directed to improved systems of **digital data compression**." *Reduxio*, No. 17-1676, D.I. 14 at 13 (emphasis in original). But digital data compression is abstract. Compression has a long history outside of computer technology. Everyday uses of compression include shorthand, abbreviations, the repeat symbol in musical notation, and scientific notation. These methods of compression are chosen in part based on the content of the information being compressed. Problems related to the bandwidth of information transfer and receipt are inevitable for any form of information exchange, including exchanges of digital data, which is simply the representation of information in the form of "0"s and "1"s. The digital compression described in the asserted patents involves applying an (unspecified) algorithm to that sequence of "0"s and "1"s. Nothing prevents this type of analysis from being done on pen and paper.

Realtime relies on the patents' statement that "**digital data** is thus a representation of data that [is] **not easily recognizable to humans** in its native form." *Reduxio*, No. 17-1676, D.I. 14 at 14 (emphasis and alterations in original) (citing #908 patent at 1:35–37; #728 patent at 1:52–54). But the fact that digital data is not easily recognizable does not mean that a human is incapable of analyzing it or that it is inherently rooted in computer technology. Indeed, the written descriptions of the patents, while sometimes focusing on computer applications, also recognize the pervasive nature of information exchange and attempt to reach any and all such communication. For instance, the #751 patent describes itself as "universally

applicable to all forms of data communication." #751 patent at 1:43–44; *see also* #204 patent at 8:29–33 ("It should be noted that the techniques, methods, and algorithms and teachings of the present invention are representative and the present invention may be applied to any financial network, trading system, data feed or other information system."). The problems of information storage and transmission are not limited to a particular technological environment, and so an idea that addresses such problems generally is not a technological solution. *See DDR Holdings*, 773 F.3d at 1257.

At an oral argument, Realtime agreed that claim 25 of the #751 patent, which it treated as representative, was directed to "analyz[ing] the content of a data block to identify a parameter or attribute or value of that block" where the analysis is not "based solely on reading a descriptor." Hr'g at 26:18–21, Jul. 21, 2019. Realtime was then unable to cogently articulate how this focus was anything more than the abstract analysis of information. When I pressed counsel during argument to "show me where [claim 25 is] not abstract," he replied: "So, you're analyzing that data block in a specific fashion, and by that what I mean is, you are looking at the content of the data block itself, not at a descriptor." *Id.* at 27:3–8. But looking at the content of the data as opposed to the data's descriptor is an abstract concept. A human being can look at the data's content instead of its descriptor. Counsel did not identify, and the patent does not teach, a technical solution that makes it possible for a computer to look at content as opposed to a descriptor.

Realtime also raises an argument based on its proposed claim constructions. Realtime proposes the following constructions:

- "compressing" / "compressed" / "compression": representing / represented / representation of data with fewer bits
- "descriptor": recognizable digital data
- "data stream": one or more data blocks transmitted in sequence
- "data block": a single unit of data, which may range in size from individual bits through complete files or collection of multiple files
- "analyze": directly examine

D.I. 33 at 36. Realtime argues that its proposed constructions "confirm" that the asserted patents are "focused" on "a technical sub-species of digital data compression." D.I. 33 at 36. But "[t]he mere fact that Defendants' proposed constructions might be more specific and therefore limited to a particular technological environment does not transform an otherwise abstract idea into a patent-eligible application." *Reese v. Sprint Nextel Corp.*, 774 F. App'x 656, 660 (Fed. Cir. 2019), *cert. denied*, 140 S. Ct. 2507 (2020). Realtime's proposed constructions confirm that the claims are directed to data analysis. And Kaminario, the sole defendant against which Realtime has identified particular constructions, does not dispute Realtime's constructions for the purposes of its motion. D.I. 34 at 19–20. Accordingly, there is no claim construction dispute relevant to eligibility, and therefore I do not need to engage in claim construction

before ruling on the pending motions. *Cleveland Clinic*, 859 F.3d at 1360 ("[Plaintiffs] provided no proposed construction of any terms . . . that would change the § 101 analysis. Accordingly, it was appropriate for the district court to determine that the testing patents were ineligible under § 101 at the motion to dismiss stage.").

Realtime also emphasizes dicta in *DDR Holdings* in which the Federal Circuit remarked that the claims at issue were not "as technologically complex as an improved, particularized method of digital data compression." *DDR Holdings*, 773 F.3d at 1259. But this statement does not mean that all patents related to compression are subject-matter eligible. The asserted patents do not in fact offer a "technologically complex . . . improved, particularized method" for compression but instead recite abstract ideas with only the most general directions to apply those ideas.

Finally, Realtime argues that even if every individual element of the claims were well-understood or conventional at the time of patenting, the combination of those elements is not. *Tegile Systems*, No. 18-1367, D.I. 20 at 19 (citing *BASCOM Global Internet Servs. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016)). But simply combining understood steps and generic hardware in a logical, straightforward sequence in order to implement an abstract idea does not provide an "inventive concept." In *BASCOM*, the arrangement of elements was essential to the claimed invention, and the Federal Circuit explained that the "particular arrangement of elements [was] a technical improvement over [the]

prior art." *BASCOM*, 827 F.3d at 1350. But the asserted patents here do not provide a technical improvement. Rather they "merely recite [an] abstract idea . . . along with the requirement . . . to perform it on a set of generic computer components." *Id. BASCOM* explained that "[s]uch claims [do] not contain an inventive concept." *Id.* Even when considered as an "ordered combination," the asserted patents lack the additional features requires at step two of the *Alice* inquiry. *Alice*, 573 U.S. at 217.

In short, the asserted patents are nothing "more than a drafting effort designed to monopolize" abstract ideas for data compression. *Mayo*, 566 U.S. at 77 (2012). Accordingly, they are invalid under § 101.

IV. CONCLUSION

For the reasons stated above, I find that all claims of the asserted patent are invalid under § 101 for lack of subject-matter eligibility. Accordingly, I will grant Defendants' motions to the extent they seek dismissal of the operative complaints on § 101 grounds.

Realtime has requested leave to amend some of its operative complaints, and accordingly I will give it 14 days to do so in each case.

The Court will issue Orders consistent with this Memorandum Opinion.

APPENDIX D

NOTE: This disposition is nonprecedential.

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

[Filed November 30, 2020]

2019-2198, 2019-2201, 2019-2202, 2019-2204

REALTIME DATA LLC, DBA IXO,
Plaintiff-Appellant

v.

REDUXIO SYSTEMS, INC., ARYAKA NETWORKS, INC., PANZURA, INC., FORTINET, INC.,
Defendants-Appellees

Appeals from the United States District Court for the District of Delaware in Nos. 1:17-cv-01635-CFC, 1:17-cv-01676-CFC, 1:18-cv-01200-CFC, 1:18-cv-02062-CFC, Judge Colm F. Connolly.

Decided: October 23, 2020

BRIAN DAVID LEDAHL, Russ August & Kabat, Los Angeles, CA, argued for plaintiff-appellant. Also

represented by MARC AARON FENSTER, PAUL ANTHONY KROEGER, REZA MIRZAIE.

JOHN NEUKOM, Skadden, Arps, Slate, Meagher & Flom LLP, Palo Alto, CA, argued for all defendants-appellees. Defendant-appellee Fortinet, Inc. also represented by MICHELLE KAO, JAMES Y. PAK.

GUY YONAY, Pearl Cohen Zedek Latzer Baratz LLP, New York, NY, for defendant-appellee Reduxio Systems, Inc.

JOSHUA M. MASUR, Zuber Lawler & Del Duca LLP, Redwood City, CA, for defendant-appellee Aryaka Networks, Inc.

BRIAN E. MITCHELL, Mitchell & Company, San Francisco, CA, for defendant-appellee Panzura, Inc.

Before NEWMAN, O'MALLEY, and TARANTO,
Circuit Judges.

Opinion for court filed by *Circuit Judge* O'MALLEY.

Concurring opinion filed by *Circuit Judge* TARANTO.

O'MALLEY, *Circuit Judge*.

In 1955, Judge Learned Hand called the court-created "invention requirement" "the most baffling concept" in all of patent law. *Lyon v. Bausch & Lomb Optical Co.*, 224 F.2d 530, 536 (2d Cir. 1955).[1] Today,

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[1]Essentially, the invention requirement instructed courts to invalidate patents that did not involve a true measure of invention, with little explanation of what that concept meant. *See McClain v.*

he would likely save that characterization for the court-created exceptions to what constitutes patentable subject matter under 35 U.S.C. § 101. Because those exceptions are complex and their application is reviewed de novo, district courts might be tempted to opt for an effective coin toss rather than a reasoned analysis when faced with a challenge under § 101. This is especially so where the abstract idea exception is invoked. But the system is not supposed to work that way. The parties are entitled to more and the Court of Appeals needs more.

A district court opinion "must contain sufficient findings and reasoning to permit meaningful appellate scrutiny." *Gechter v. Davidson*, 116 F.3d 1454, 1458 (Fed. Cir. 1997). Although we have said that we review judgments, not opinions, *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 862 (Fed. Cir. 1985), where a district court has offered no reasoning for us to review we may, and most often do, decline to analyze a legal question in the first instance. *Proveris Sci. Corp. v. Innovasystems, Inc.*, 739 F.3d 1367, 1373 (Fed. Cir. 2014).

Realtime Data LLC ("Realtime") appeals from a bench ruling of the United States District Court for the

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Ortmayer, 141 U.S. 419, 427 (1891) ("In a given case we may be able to say that there is present invention of a very high order. In another we can see that there is lacking that impalpable something which distinguishes invention from simple mechanical skill."). Congress did away with the requirement in the 1952 Patent Act and, instead, directed courts to assess whether the invention was nonobvious, codifying that concept in 35 U.S.C. § 103.

District of Delaware holding all 159 claims of U.S. Patent Nos. 7,415,530 ("'530 patent"), 8,717,203 ("'203 patent"), 9,054,728 ("'728 patent"), 9,116,908 ("'908 patent"), and 9,667,751 ("'751 patent") (collectively "patents-in-suit") patent ineligible under 35 U.S.C. § 101. *See* J.A. 52–59. Because this case presents one of those rare circumstances in which a district court's treatment of a complex and close legal issue is too cursory to allow for meaningful appellate review, we vacate and remand for the district court to give additional consideration to the eligibility question and elaborate on its reasoning.

I. BACKGROUND

A. The Patents-in-Suit

The patents-in-suit all relate, at a high level, to methods and systems for digital data compression. The '728 patent and '203 patent, which are in the same family and share a common specification, are titled "Data Compression Systems and Methods." The patents' written descriptions explain the problem of "data dependency" in prior art systems. "Data dependency" is "content sensitive behavior" that means "the compression ratio achieved is highly contingent upon the content of the data being compressed." '728 patent, col. 2, ll. 29–35. One prior art solution was to select a compression technique based on "file type descriptors" (*e.g.*, .doc, .txt, or .pdf) that are used to identify "the application programs that normally act upon the data contained within the file." *Id.* at col. 3, ll. 2–5. The written descriptions explain, however, that this solution's efficacy is limited by the sheer number and rate of development of application program types.

Id. at col. 3, ll. 9–19. The written descriptions further describe a system for data compression that looks beyond the file type descriptor, to the underlying data, to complete the desired compression. *See generally id.* at col. 3, l. 59–col. 5, l. 11.

The '908 patent and the '530 patent, which are in the same family and share a common specification, are titled "System and Methods for Accelerated Data Storage and Retrieval." The patents' written descriptions explain that the disclosed invention relates to "improving data storage and retrieval bandwidth utilizing lossless data compression and decompression." '908 patent, col. 1, ll. 17–18. The written descriptions describe certain drawbacks found in prior art systems, including that they did not adequately account for hardware limitations. *Id.* at col. 2, ll. 34–45. The patents' disclosed invention purports to overcome these limitations by, for example, selecting encoding techniques "based upon their ability to effectively encode different types of input data." *Id.* at col. 12, ll. 5–7. The written descriptions explain that this is meant "to eliminate the complexity and additional processing overhead associated with multiplexing concurrent encoding techniques." *Id.* at col. 12, ll. 31–33.

The '751 patent is titled "Data Feed Acceleration" and relates to "systems and method for providing accelerated transmission of data . . . over a communication channel using data compression and decompression to . . . effectively increase the bandwidth of the communication channel and/or reduce the latency of data transmission." '751 patent, col 1.,

ll. 27–36. The '751 patent's written description describes drawbacks in the prior art, including that "current methods of encryption and compression take as much or substantially more time than the actual time to transmit the uncompressed, unencrypted data." *Id.* at col. 3, ll. 31–33. The disclosed invention purports to solve these problems via a "data compression ratio [that] is substantial and repeatable on each data packet" that has "no packet-to-packet data dependency." *Id.* at col. 7, ll. 55–66.

The patents-in-suit and members of their patent families have been widely litigated. *See* Appellees' Br. 14 n.1 (collecting cases). Of particular relevance to this appeal, Magistrate Judge John D. Love of the Eastern District of Texas considered the patent eligibility of the '728, '530, and '908 patents, as well as the eligibility of members of the '203 and '751 patents' families, in two separate cases. *See Realtime Data, LLC v. Carbonite, Inc.*, No. 6:17-CV-00121, 2017 WL 4693969 (E.D. Tex. Sept. 20, 2017), *report and recommendation adopted*, No. 1:17-cv-12499-WGY (D. Mass. March 7, 2018), ECF No. 97; *Realtime Data, LLC v. Actian Corp.*, No. 6:15-CV-463-RWS-JDL, 2015 WL 11089485 (E.D. Tex. Nov. 30, 2015), *report and recommendation adopted*, 2016 WL 259581 (E.D. Tex. Jan. 21, 2016). In each case, Judge Love recommended that the challenged claims be deemed patent eligible at both *Alice* step 1 and step 2. His reports and recommendations were fully adopted by two different district court judges—Judge Robert W. Schroeder III of the Eastern District of Texas and, due to an intervening transfer, Judge William G. Young of the

District of Massachusetts—each with significant experience in patent cases.

B. District Court Proceedings

Realtime filed suit alleging infringement of various combinations of the claims of the patents-in-suit against Fortinet, Inc. ("Fortinet") and Reduxio Systems, Inc. ("Reduxio") in November 2017, against Panzura, Inc. ("Panzura") in August 2018, and against Aryaka Networks, Inc. ("Aryaka") in December 2018. Fortinet, Reduxio, Panzura, and Aryaka (collectively "defendants") filed motions to dismiss the suits for failure to state a claim in early 2019. Among other things, the defendants argued that all 159 claims of the patents-in-suit are patent ineligible under 35 U.S.C. § 101.

Pursuant to a June 10, 2019 order, the parties were instructed to submit a letter to the court in advance of oral argument identifying "which Supreme Court or Federal Circuit case that party contends is most similar to the challenged claim(s)." *See, e.g.*, Order, *Realtime Data LLC v. Fortinet, Inc.*, No. 17-cv-01635-CFC (D. Del. June 10, 2019), ECF No. 51. Defendants identified *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322 (Fed. Cir. 2017). *See, e.g.*, Letter, *Realtime Data LLC v. Fortinet, Inc.*, No. 17-cv-01635-CFC (D. Del. July 3, 2019), ECF No. 56. Realtime pointed to *Visual Memory LLC v. Nvidia Corp.*, 867 F.3d 1253 (Fed. Cir. 2017). *See* Letter, *Realtime Data LLC v. Fortinet, Inc.*, No. 17-cv-01635-CFC (D. Del. July 3, 2019), ECF No. 57.

On July 19, 2019, the district court heard argument on the motions to dismiss. The proceeding lasted two hours and eight minutes, including a recess. The argument focused primarily on claim 25 of the '751 patent. *See* J.A. 29–51. The district court asked numerous questions of Realtime—focusing on individual claim elements and asking Realtime to explain what made the claim "novel." *See* J.A. 33–34. At one point, the district court interjected that the solution claimed in the '751 patent was "obvious—it's just stating the obvious." J.A. 48. The court then clarified, "I don't mean obviousness in the patent sense. I mean it is obvious like it's common sense." *Id.* While Realtime's counsel attempted to focus the court to the question of whether the claims were directed to an improvement on existing technology, as opposed to mere use of such technology, the court did not appear to consider that question. *See* J.A. 42–46. Having dissected claim 25 of the '751 patent, the district court ended the argument. *See* J.A. 52.

Following a short recess, the district court announced it was "prepared to rule on the pending motions" and explained it would "not be issuing written opinions." J.A. 52. The transcript would serve as its ruling on all pending motions. The court stated that it had "followed a thorough process before making the decision," including considering the briefing and engaging in oral argument, J.A. 52, but its complete oral analysis of the patent eligibility of the 159 claims in the asserted patents fills only five pages of transcript. J.A. 53–57. At the end of those five pages, the court declared all claims of U.S. Patent

Nos. 7,415,530, 8,717,203, 9,054,728, 9,116,908, and 9,667,751 patent ineligible. J.A. 57.

After the district court announced its ruling, Realtime asked for the court's decision on its request for leave to amend its complaints. J.A. 59. The district court responded, "my practice has been to ignore [requests for leave to amend] and just to grant a motion to dismiss." J.A. 60. Although the district court conceded that "reasonable people can disagree" on the eligibility of the asserted claims, J.A. 58, it denied Realtime's request for leave to amend its complaint. J.A. 63. ("I think you can take your issues up with the Federal Circuit, and if I'm wrong, I'm wrong.").

Judgment was entered in each case on July 29, 2019. J.A. 1–8. Realtime timely appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

II. DISCUSSION

Courts must assess the patent eligibility of claims via the two-part test established by the Supreme Court in *Alice Corp. v. CLS Bank International*, 573 U.S. 208 (2014). At *Alice* step 1, a court must "determine whether the claims at issue are directed to a patent-ineligible concept." *Id.* at 218. Patent ineligible concepts include laws of nature, natural phenomena, and abstract ideas. A court's determination of whether a claim is directed to one of those patent ineligible concepts must consider individual claim elements and the elements as an ordered combination. *Id.* at 217. At *Alice* step 2, a court must decide whether the claims contain an "inventive concept" such that "the patent in practice amounts to significantly more than a patent

upon the [ineligible concept] itself." *Id.* at 217–18 (alteration in original) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 73 (2012)).

The ultimate determination of patent eligibility under 35 U.S.C. § 101 is a question of law that we review de novo. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018). That we have de novo review does not, however, mean that we are a court of *first* view. Despite the standard of review that we apply, we remain a court of appeal not a court of original jurisdiction. *Compare* Original Jurisdiction, Black's Law Dictionary (10th ed. 2014) ("A court's power to hear and decide a matter before any other court can review the matter."), *with* Appellate Jurisdiction, *id.* ("The power of a court to review and revise a lower court's decision."). District courts have an obligation to provide us with a reviewable decision, commensurate with the issues before it. *See Nazomi Commc'ns, Inc. v. ARM Holdings, PLC*, 403 F.3d 1364, 1371 (Fed. Cir. 2005) ("[T]his court must be furnished 'sufficient findings and reasoning to permit meaningful appellate scrutiny.' This requirement for sufficient reasoning applies with equal force to issues of law . . . and issues of fact . . . ." (quoting *Gechter*, 116 F.3d at 1458)). De novo appellate review certainly does not justify resolving a complex legal issue without an opinion or reasoned analysis. Unfortunately, that is exactly the type of improper justification the district court proffered in this case. *See* J.A. 55 (district court discussing the de novo standard of review and concluding "[t]hat's why I'm not going to write anymore"); *see also id.* ("[M]aybe Realtime is right and

the Federal Circuit panel will say differently and will have that opportunity to do that.").

We hold, on the record presented to us on appeal, that the district court's short analysis is insufficient to facilitate meaningful appellate review. We are particularly concerned with four shortcomings in the court's process: (1) the colloquy between the court and Realtime indicates an apparently improper focus on factual questions that are unsuitable for resolution at the pleading stage and a failure to evaluate the claims as a whole; (2) to the extent the district court purported to resolve the "directed to" question of *Alice* step 1, its process is unclear and its conclusion questionable; (3) the court did not address or even acknowledge Judge Love's lengthy written opinions, which were adopted by two district courts, addressing the precise question faced by the court; and (4) although, as the district court requested, Realtime identified *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253 (Fed. Cir. 2017), as the case most analogous to this one and directed the court to our decision in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), and *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), the district court failed to address or distinguish those cases.

First, the colloquy between the district court and Realtime leaves us unclear as to the true basis for the district court's decision. Rather than focus first on whether the claims are "directed to" an abstract idea as we explained in *Enfish* is the initial inquiry in cases like this, the district court repeatedly inquired whether claim limitations were "novel." *See, e.g.*, J.A. 33 ("The

Court: You are not going to tell me it's novel to have a data server implemented on one or more processors, are you?"); *id.* at 34 ("The Court: Well, at the end, you can tell me what's novel about the configuration, so we'll come back to that."). The district court later expressed a view that the claimed invention of the '751 patent was "obvious"—but not in the patent sense, "like it's common sense." *Id.* at 48. Novelty and nonobviousness are well-established patent law doctrines and, though they are not wholly divorced from some aspects of the § 101 inquiry, they are rarely issues appropriate for resolution on the pleadings. That is especially true where, as here, Realtime repeatedly contested as factually incorrect propositions posited by the district court. *See, e.g.*, J.A. 45–46. Those concepts, moreover, are not part of the *Alice* step 1 inquiry, they relate, if at all, to step 2. And, to the extent the court was influenced by its subjective understanding of "common sense," that is plainly irrelevant.

Nothing in the discussion between the court and Realtime leads us to understand that the district court considered the claims as a whole or, for that matter, seriously considered any claims beyond claim 25 of the '751 patent. With the little we have before us, it is hard, if not impossible, to put the district court's commentary out of mind. And, it is difficult to discern what part of the court's concerns with the claims were directed to which step of the *Alice* analysis.

Second, to the extent the court purported to answer the *Alice* step 1 "directed to" question, it is unclear that it did so correctly. One critical shortcoming in the district court's analysis is a failure to identify which, if

any, claims are representative. Although the court articulated a "fair description" of each patent-in-suit, J.A. 56, it failed to tie those descriptions to any specific claim or to clarify whether those descriptions are the abstract ideas that the claims are "directed to" within the meaning of § 101 jurisprudence. It is, of course, incorrect to consider whether a patent as a whole is abstract. The analysis is claim specific. If, as we suspect, the district court's analysis simply generalized the claims, absent a finding of the representativeness of certain claims and without considering the "directed to" inquiry, that was error.

We further question the district court's statements that the claims are, to use the '728 patent as an example, merely "choosing a compression method based on the data type." J.A. 56. This statement seems to miss that the claims expressly achieve this result in certain ways, involving examining data blocks and not relying just on a descriptor. *See* '728 patent, claim 24. Without more analysis, we cannot identify the district court's reasons for omitting key aspects of the claims and we cannot say whether that rationale was sound. It appears, however, that the district court improperly equated the presence of an abstract idea with a conclusion that the claims are directed to such an idea. *Mayo*, 566 U.S. at 71 ("[A]ll inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas."). On remand, we caution the district court away from sweeping generalizations and encourage the court to carefully consider the "directed to" question once more.

Third, as we discuss above, the patents-in-suit and their relatives have been subject to § 101 scrutiny in the past. Two district court judges and one magistrate judge, across two judicial districts, have separately considered whether the claims are patent eligible and concluded that they are. This is not to say that those judges were necessarily correct in their assessment of this issue nor that the court was bound by those conclusions. We mean only to say that, when deciding the motions to dismiss in this case, the court should have, at a minimum, provided a considered explanation as to why those judges were wrong. This could have been done expressly; the court could have cited the earlier cases and distinguished them. Or the analysis could have been implied; the court could have analyzed the arguments for eligibility in such a way that the reasons for the differing conclusions are apparent. Here, however, rather than take either approach, the court recited a series of legal conclusions and § 101 cases, without analysis. That simply was not enough.

Fourth, the district court asked each party to identify a single case that most closely supports its position on the eligibility of the claims. Defendants selected *RecogniCorp*. The district court mentioned *RecogniCorp* in its oral opinion. It articulated the holding of that case as, "noting that processes that start with data and add in an algorithm and end with a new form of data are directed to an abstract idea." J.A. 54. It then concluded, without explanation, "[t]hat's what we have here." *Id.* Prior to argument, Realtime identified *Visual Memory*. It argued that the case was analogous during the colloquy. J.A. 50–51. As noted, Realtime also advocated that *Enfish* and *DDR*

Holdings are analogous. J.A. 28, 44. The district court, however, never mentioned *Visual Memory*, *Enfish*, or *DDR*, much less distinguished them. We do not today opine on the merits of Realtime's contention that its patents are akin to the patent eligible claims of *Visual Memory* or to any of the other cases where our court has found claims to be patent eligible. We merely note that, by not addressing even the one case held out as most comparable by Realtime, the district court did not do enough.[2]

To be clear, we do not hold that a written order is always necessary. There are indeed times, even on a case dispositive motion, where an oral order is enough. We have seen and affirmed several such orders in the past. This case is unique, however, in its paucity of analysis and the closeness of the underlying legal issue. Our conclusion that the district court must do more in this case is reinforced, moreover, by the fact that through its abbreviated process the district court eviscerated five of Realtime's patents and completely resolved four separate district court actions. While much can be said on the benefits of judicial efficiency,

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[2] This is an important failure. Assessments of patent eligibility are best done by reference to our numerous cases engaging in those assessments and gleaning insight from the resolutions. As that exercise reveals, there are often very fine lines between those cases and between what is patent eligible and what is not. A detailed analysis of those cases and the record before the district court is often needed if we are to appropriately assess the court's resolution of a § 101 challenge.

the process used here strays beyond efficient to the realm of insufficient.[3]

III. CONCLUSION

For the reasons discussed above, we vacate the district court's judgments and remand for further proceedings consistent with this opinion. Nothing in this opinion should be read as opining on the relative merits of the parties' arguments or the proper resolution of the case.

VACATED AND REMANDED

COSTS

No costs.

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[3] Because we vacate the district court's judgment, we need not decide whether the district court abused its discretion by denying Realtime's request for leave to amend its complaints. We are concerned, however, with the district court's statement that its blanket practice is to deny such requests. Factual allegations in a complaint can suffice to overcome *Alice* step 2 and district courts should, as in any civil case, freely grant leave to amend to allege the necessary facts. *See Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1317 (Fed. Cir. 2019); *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1127–30 (Fed. Cir. 2018).

NOTE: This disposition is nonprecedential.

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

2019-2198, 2019-2201, 2019-2202, 2019-2204

REALTIME DATA LLC, DBA IXO,
Plaintiff-Appellant

v.

REDUXIO SYSTEMS, INC., ARYAKA NETWORKS, INC., PANZURA, INC., FORTINET, INC.,
Defendants-Appellees

Appeals from the United States District Court for the District of Delaware in Nos. 1:17-cv-01635-CFC, 1:17-cv-01676-CFC, 1:18-cv-01200-CFC, 1:18-cv-02062-CFC, Judge Colm F. Connolly.

TARANTO, *Circuit Judge*, concurring in the judgment.

I concur in the judgment, which vacates the district court's judgments dismissing the cases and denying an opportunity to amend the complaints and remands for further proceedings.

The foundation of a proper determination of the eligibility of claimed subject matter under 35 U.S.C. § 101 and the framework of *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014), is an accurate identification of the focus of the claimed advance at

Alice's Step 1, to be followed (if necessary) by an accurate identification of all specifics of the claims at *Alice*'s Step 2. At both stages, it is important to avoid "overgeneralizing [the] claims," *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016), *i.e.*, "'oversimplifying the claims' by looking at them generally and failing to account for the[ir] specific requirements," *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016). At *Alice*'s Step 1, a claim must be "considered in light of the specification" to identify "the focus of the claimed advance." *Enfish*, 822 F.3d at 1335; *Solutran, Inc. v. Elavon, Inc.*, 931 F.3d 1161, 1168 (Fed. Cir. 2019) (internal quotation marks omitted). In particular, that identification is crucial to applying what is in the present cases the key doctrinal distinction—derived from *Alice*, 573 U.S. at 225—between using unimproved computers and networks as tools and improving computers or networks as tools, *i.e.*, improving basic computer or network functions themselves (*e.g.*, processing, memory, input/output, transmission) in specific ways, *see Enfish*, 822 F.3d at 1335–36; *see also Uniloc USA, Inc. v. LG Electronics USA, Inc.*, 957 F.3d 1303, 1306–07 (Fed. Cir. 2020) (citing cases). Identifying claim specifics is also crucial at *Alice*'s Step 2—to determining whether the claim contains limitations that, alone or in combination, are not aspects of the ineligible matter itself and (if they are not) go beyond "'well-understood, routine, conventional activit[ies]' previously known in the industry." *Alice*, 573 U.S. at 225 (alteration in original) (citation omitted).

In the present cases, the district court erred at the foundational stage. In the decision-announcing part of the July 19, 2019 hearing, the court characterized the claims without mention of what, for at least some (perhaps all) of the claims at issue, the claim language and specifications make clear are important parts of what the patents assert are the advances in the art. For example, the court described claim 1 of U.S. Patent No. 9,054,728 as a system for "choosing a compression method based on the data type." J.A. 56. That description disregards claim language requiring that the identification of data type rely on examination of data blocks and not on a file extension or comparable descriptor of the data type. '728 patent, col. 26, lines 29–48 ("to analyze data within a data block to identify one or more parameters or attributes of the data wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based solely on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block"). The specification describes that data-examination basis for choosing a compressor method as one of the claimed advances over the prior art. *Id.*, cols. 3, 4. The district court's truncated characterization of claim 1 of the '728 patent, and of some or all of the other claims at issue, created an incorrect starting point for the required analysis.

A seemingly related error appears in the portion of the July 2019 hearing devoted to colloquies between the district court and counsel. Although such colloquies are intrinsically only exploratory, and thus could easily have been superseded by the court's articulation of its

rationale in the decisional portion of the hearing, in these cases the court's statements in the two portions align. In the colloquy portion, the district court made statements suggesting adoption of a premise that the *Alice* test might be flunked solely because the claimed systems and methods use hardware components such as processors, servers, and memory. *See* J.A. 33–41. To the extent that the district court adopted that premise, it was mistaken. Eligibility analysis in cases like these requires consideration of whether the hardware components have been configured by programming to improve their basic functionalities (*e.g.*, processing functions, memory functions, input/output functions, transmission functions) in specific ways. Such improvements can be eligible subject matter under *Enfish* and many later cases.

The error at the foundational stage in these cases is not a matter of choosing among an often-available range of formulations that are relatively minor variations in how to describe the claims for both Step 1 and Step 2 purposes. The error here is far more basic, and more consequential for the conduct of a sound analysis. The district court essentially disregarded limitations, in at least some of the patent claims at issue, that are part of the focus of the asserted advances. Because the court overgeneralized, or oversimplified, the claims in that fundamental way, the court in effect failed to conduct the inquiries required under the branch of § 101 doctrine relevant here.

The § 101 inquiries demand close attention to the specific content of the patent claims at issue; the specifics matter under the growing body of precedents

that provide both significant analytical distinctions and fact-specific judgments important to the assessment of later-litigated facts. At least since *Alice* was decided, it has become clear that sometimes those inquiries lead quickly, and without the need for extensive discussion, to a conclusion that a claim, despite its length, is merely elaborating on what are all abstract ideas or reciting the details of what are conventional tools of implementation. *See*, *e.g.*, *Electric Power Group, LLC v. Alstrom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016). But the present cases are in a more challenging category, because the claims, on their face and understood in light of the specifications, purport to solve engineering problems in the transfer of data. Whatever conclusion is ultimately reached for the claims before us, these cases require a sounder starting point, and a more extensive analysis, than the district court provided.

In these cases, I agree that it is appropriate to take what is, and should remain, the unusual step of remanding for reconsideration of the § 101 issue without ruling on the issue ourselves. A remand will allow the district court to characterize the claims more accurately and, on that new basis, to consider relevant precedents of this court that the district court did not address, including a number of post-July 2019 precedents that provide clarifying guidance concerning the inquiries pertinent to the analysis in cases like the ones before us. *See*, *e.g.*, *TecSec, Inc. v. Adobe Inc.*, Nos. 2019-2192, -2258 (Fed. Cir. Oct. 23, 2020), slip op. at 20–31 (citing and discussing cases); *Packet Intelligence LLC v. NetScout Sys., Inc.*, 965 F.3d 1299, 1309–10 (Fed. Cir. 2020); *Uniloc*, 957 F.3d at 1306–07; *Ericsson Inc. v. TCL Commc'n Tech. Holdings Ltd.*, 955

F.3d 1317, 1327–28 (Fed. Cir. 2020); *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1364–65 (Fed. Cir. 2020); *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143, 1149–50 (Fed. Cir. 2019); *see also SRI Int'l, Inc. v. Cisco Systems, Inc.*, 930 F.3d 1295, 1303–04 (Fed. Cir. 2019) (mid-July 2019). A remand will also allow the district court, should Step 2 be reached, to reconsider, after a re-focused analysis proceeding through the Step 1 and Step 2 inquiries, whether the filing of amended complaints should be permitted. I therefore concur in the judgment of the court.

APPENDIX E

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

[Filed June 19, 2019]

CIVIL ACTION NO. 17-1635-CFC

REALTIME DATA LLC d/b/a IXO, Plaintiff,

vs.

FORTINET INC., Defendant.

CIVIL ACTION NO. 17-1676-CFC

REALTIME DATA LLC d/b/a IXO, Plaintiff,

vs.

REDUXIO SYSTEMS, INC., Defendant.

CIVIL ACTION NO. 18-1200-CFC

REALTIME DATA LLC d/b/a IXO, Plaintiff,

vs.

PANZURA, INC.,
Defendant.

Wilmington, Delaware
Friday, June 19, 2019
9:00 o'clock, a.m.

BEFORE: HONORABLE COLM F. CONNOLLY, U.S.D.C.J.

Valerie J. Gunning
Official Court Reporter

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CIVIL ACTION NO. 18-2062-CFC

REALTIME DATA LLC d/b/a IXO,
Plaintiff,

vs.

ARYAKA NETWORKS, INC.,
Defendant.

[p.3]

APPEARANCES:

BAYARD, P.A.
BY: STEVEN B. BRAUERMAN, ESQ.

-and-

RUSS AUGUST & KABAT
BY: BRIAN LEDAHL, ESQ.

Counsel for Plaintiff

MORRIS, NICHOLS, ARSHT & TUNNELL P.A.
BY: BRIAN P. EGAN, ESQ.

Counsel for Defendants.
Fortinet Inc. and Panzura, Inc.

SKADDEN, ARPS, SLATE, MEAGER & FLOM
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MITCHELL + COMPANY
BY: BRIAN MITCHELL, ESQ.
(San Francisco, California)

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Panzura, Inc.

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APPEARANCES (Continued):

ASHBY & GEDDES, P.A.
BY: ANDREW C. MAYO, ESQ.

-and-

PEARL COHEN ZEDEK LATZER BARATZ
BY: GUY YONAY, ESQ. and

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MORRIS JAMES LLP
BY: KENNETH L. DORSNEY, ESQ.

-and-

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BY: JOSHUA MASUR, ESQ.
(Silicon Valley, California)

Counsel for Defendant
Aryaka Networks, Inc.

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P R O C E E D I N G S

(Proceedings commenced in the courtroom, beginning at 9:00 a.m.)

THE COURT: All right. Good morning. Please be seated.

(Counsel respond, "Good morning.")

THE COURT: Mr. Brauerman?

MR. BRAUERMAN: Good morning Your Honor."

THE COURT: Good morning.

MR. BRAUERMAN: Steve Brauerman from Bayard on behalf of the plaintiff. I am joined at counsel table by Brian Ledahl and Paul Kroeger from Russ, August

& Kabat in Los Angeles, and with Your Honor's permission, Mr. Ledahl will be addressing the Court today.

THE COURT: Thank you.

MR. LEDAHL: Thank you, Your Honor.

MR. DORSNEY: Good morning, Your Honor. On behalf of Aryaka Networks, Ken Dorsney from Morris James, and with me I have Joshua Masur from Zubler Lawler & Del Duca.

THE COURT: Okay.

MR. MASUR: Good morning, Your Honor.

THE COURT: Good morning.

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MR. EGAN: Brian Egan from Morris Nichols on behalf of Fortinet and Panzura. With me today on behalf of Fortinet is Jay Neukom from the Skadden law firm and Brian Mitchell on behalf of Panzura from Mitchell + Company, and Mr. Neukom will be arguing on the 101 arguments on behalf of the defendants today.

THE COURT: All right. Thank you.

Mr. Brauerman, who is going to argue on your side?

MR. BRAUERMAN: I'm sorry, Your Honor. Mr. Ledahl.

THE COURT: You did say that. I got lost with all the names. Okay. All right.

MR. MAYO: Good morning, Your Honor. Andrew Mayo from Ashby & Geddes on behalf of defendant Reduxio Systems. I am joined this morning by my co-counsel Pearl Cohen. In the back we have Guy Yonay and Kyle Auteri.

THE COURT: All right. Is that everybody? Have we gotten everybody? Right?

MR. EGAN: I believe so, Your Honor.

THE COURT: All right. We are here today in four cases filed by Realtime Data LLC, Civil Action No. 17-1635, 17-1676, 18-1200, and 18-2062.

We'll have a single transcript. It will be docketed in each of the four cases argued. The record of

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the hearing is going to be identical in the four cases, and that means that I will not feel it necessary to repeat myself in each case if, for example, I discuss a particular decision of the Federal Circuit or principle of law.

I will give the parties a chance to address any comments or questions I've made during the arguments in the other cases or that counsel has made in other arguments. If one party makes a concession on an issue, I will be mindful not to attribute that to other parties.

In Civil Action No. 18-200, defendant Panzura did not brief its own motion. Instead, it joined the briefing in Civil Action No. 18-1267 in support of Western Digital and Project Taurus' respective Alice motions.

Civil No. 18-1267 is now closed, but I have considered the briefing in that matter, or in that action in support of Panzura's motion.

Now, have you all discussed or thought of how best to proceed?

MR. LEDAHL: Your Honor, I don't know that we've had particular discussions between the parties. I think obviously, there's a lot of commonality in terms of the patents, but to some extent, whatever Your Honor would like is fine for us. Obviously, these are defendants' motions, so to the extent they want to take the leading oar on that, that's certainly fine.

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THE COURT: Well, since you're standing though, do you have a preference?

MR. LEDAHL: I don't have a strong preference, Your Honor. I guess my suggestion would be that rather than jumping party to party when there are common patents, that might be somewhat inefficient, and that dealing with patents as a group or particular patents collectively might make more sense. It sounds like Mr. Neukom is sort of taking the lead, so that may be easier than shifting between parties anyway.

THE COURT: All right. Mr. Neukom?

MR. NEUKOM: So my suggestion, Your Honor, is while we have five different patents and lots of different parties, the specifications, the claim language, the concepts are so similar, I'm at the pleasure of the Court how to proceed.

I was planning to walk the Court through some concepts which don't necessarily require a per patent breakdown.

THE COURT: And that's my sense. That's the way the briefing was.

MR. NEUKOM: Yes.

THE COURT: It sounds like both sides are content to proceed not by on a patent-by-patent basis, and that it's best to address the concepts in the manner the

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briefing did. Is that fair, plaintiff? Right?

MR. LEDAHL: I think that's right, Your Honor. Obviously, the patents do have differences. Certainly, as we get into dependent claims, certainly, that can make a difference. I think certainly as a starting point, that's fine.

THE COURT: All right. Let's proceed. Mr. Neukom? And incidentally, so, Mr. Neukom, your client hasn't been accused of infringement of the '530 patent. Right?

MR. NEUKOM: That's right, Your Honor.

THE COURT: Are you going to discuss it though? Shall I take it -- or maybe another way is, for clarity, have the other defendants essentially agreed to have you be the, at least initial spokesperson on their behalf?

MR. NEUKOM: Against their better judgment, yes, Your Honor.

THE COURT: Okay. And then so therefore can I take it, for instance, with respect to Panzura, which has been accused of infringing the '530 patent, that your argument will address the '530 patent as well?

MR. NEUKOM: That's right, Your Honor.

THE COURT: Okay. All right. Go ahead.

MR. NEUKOM: And that actually dovetails perfectly with my initial remark, which is I'm privileged to

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be before you today talking about five disputed patents. I, of course, represent Fortinet. In an effort to try to make this hearing efficient for the Court, the defendants got together and decided to have primarily one speaker at the podium, and that's me.

Because I represent Fortinet, and because there are so many other defendants ably represented in the courtroom, there may be a time or two this morning, depending on questions from the Court, when I may have to confer with my colleagues on this side of the courtroom, but if that happens, I will try to make it minimal and pretty quick.

THE COURT: All right. And also I invite any of the defense counsel, if they think that it's important to speak about a particular issue, just stand up and we'll wait until Mr. Neukom has paused and then I can hear from you as well. All right?

All right. So therefore your silence would be viewed as an admission that whatever Mr. Neukom said was correct unless you're standing up. All right.

MR. NEUKOM: So of the five patents, Your Honor, to prepare for today, I reviewed primarily, and we are relying primarily on three sets of briefing. The Court has at least three complete sets of briefing on the Alice issues for these five patents. I'm looking in particular at the

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iXsystems case, the Pure Storage case, and the Commvault briefing as well. Between those three sets of complete briefing, we've got coverage on all five of the disputed patents for purposes of today.

So I've been before Your Honor a time or two before and I've read, for example, the Alphonso transcript. Because of that, I'm going to guess that the Court is already pretty well aware of the arguments in the briefing. In light of that, I'm not planning this morning, although I am prepared to, if the Court would like it, to go through a detailed patent by patent Step 1 and Step 2 Alice analysis. Instead, I'm hoping to streamline the discussion to make it a little more useful for the Court.

So I will start with a summary of the Alice arguments across the five patents. We are claiming, we are arguing that the patents claim abstract concepts. Now, how we characterize the abstract concepts depends on which briefing we look at. Pure Storage described the abstract concepts as analyzing and processing data. By contrast, iXSystems and

Commvault were slightly, if you will forgive the expression presentation, less abstract, and, for example, for the compression/decompression patents, they abstracted those as choosing a compression method based on data type, or for the more complicated patents, if you will, using two or more compression methods to compress

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faster.

I think the Pure Storage abstraction of analyzing and processing data is correct. However, I'm mindful of ample Federal Circuit case law that advises us not to over-abstract -- to, in essence, bootstrap the Alice analysis. I think if we proceed on the iXsystems and Commvault proposals for abstraction, that works as well.

THE COURT: So, wait. Let's then be clear. So how are you defining the abstract concept today on behalf of all of the defendants?

MR. NEUKOM: So I would refer Your Honor's attention to the iXSystems brief, and I can go through that on a patent-by-patent basis.

THE COURT: Well, just give me -- you can do that or you can just read it into the record.

MR. NEUKOM: Sure.

THE COURT: And I will get it down.

What is your notion of the abstract idea that would apply across the board? So it's choosing a compression method?

MR. NEUKOM: So I would break it down into two categories.

THE COURT: Right. Go ahead and do that.

MR. NEUKOM: The first is choosing a compression method based on the data type.

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THE COURT: All right. And that would be for?

MR. NEUKOM: That would be for the '728 and the '203. The '203 would be choosing a decompression technique.

THE COURT: So it's choosing a compression or decompression method based on the data type. Is that correct?

MR. NEUKOM: That's right.

THE COURT: All right. And then for the --

MR. NEUKOM: For the '908, using two or more compression techniques to compress or store data faster.

THE COURT: Using two or more compression techniques to, what did you say?

MR. NEUKOM: To compress or store data faster.

THE COURT: All right.

MR. NEUKOM: I'm sorry, Your Honor. I just said a disjunctive. I think it's a conjunctive. To compress and store data faster.

THE COURT: All right. And that's for the, you would say the '908?

MR. NEUKOM: That's right.

THE COURT: All right.

MR. NEUKOM: So the '751 --

THE COURT: Yes.

MR. NEUKOM: -- is a combination of the '728 and the '908, so it is both choosing a compression technique

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based on the data type and using two plus compression techniques to compress and store data faster.

THE COURT: All right. Okay.

MR. NEUKOM: And the '530 is choosing a compression technique based on the data type.

THE COURT: Choosing a compression, what did you say?

MR. NEUKOM: Choosing compression type or method based on --

THE COURT: Choosing a compression method. Right? Go ahead. Based on?

MR. NEUKOM: The data type.

THE COURT: Okay. Anything else that you would want to say as far as the abstract idea that would be at play?

MR. NEUKOM: No, with one caveat. As the argument this morning progresses, we may discuss tweaks on or additions to those abstract concepts based on arguments we hear from the patentee.

THE COURT: All right.

MR. NEUKOM: But I think what I've given for Your Honor is, it is -- it cues closer to the claim language than the analyzing and processing data abstraction, and yet we respectfully submit has it squarely within Step 1 of Alice.

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THE COURT: Right. I take it effectively what you would say, I'm not sure what the right adverb is, but distilled to its essence, you would say that the abstract ideas that you have just articulated ultimately are really nothing more than the analysis and processing of data?

MR. NEUKOM: That's right.

THE COURT: Okay. All right.

MR. NEUKOM: So at this point in the transcript, I think we've used the word compression or decompression about 50 times, but I do want to make clear, these patents, none of these patents claims a single method for the compression or decompression of data. All of the compression or decompression methods contemplated in these patents are, there's no novelty,

there's no claim for a method of compression. Instead, the patents describe the use of generic, off-the-shelf processors and encoders. There's no limitation on the kind of data being handled, for example, like there was in RecogniCorp about it being images. With one or two small exceptions, which I think we'll probably talk about this morning, there's also no limit or specificity on the parameters or attributes of the data that are used to analyze it.

And then a few of the patents we've got the desired result problem, where we literally have patent claims where the limitation is happening faster without a

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claimed technical solution to make that happen. And I would also submit an enablement problem, but I'm guessing in this room, we've all read the same Federal Circuit case law, so I won't go down that Alice enablement mishmash.

So across all five patents, as I read them, you can use any general purpose computer handling any kind of data using any already known compression techniques which techniques are chosen based on innumerable parameters or attributes of the data.

So that's my attempt, Your Honor, at an efficient five patent summary.

My thought on how we could use our time at the podium most usefully for the Court is twofold. One, each side has submitted a letter to Your Honor saying what their favorite case is and I thought I could go through those two cases briefly.

Secondly, I thought I could go through what one might argue are the best arguments from Realtime in trying to save these patents from --

THE COURT: So I'm thinking the same thing. Let me tell you where I am. And you've just described I think what my conclusions are based on the briefing.

So is it more efficient then for you to continue, or should we maybe hear from --

MR. NEUKOM: I'm inclined to sit down if not

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leave the many courtroom, Your Honor.

THE COURT: All right. Let's hear from the plaintiff.

MR. LEDAHL: Thank you, Your Honor. I think perhaps the place I would like to start is something that I did not hear, which is, is this the first time that a Court has looked at these questions, and it's not.

So there are three -- Mr. Neukom kind of grouped the patents in his fashion. Three of those five patents have been the subject of one or more Section 101 challenges in other courts that have already been decided, so I know the Court asked what's the most pertinent Federal Circuit case and we provided the Visual Memory case.

If you had asked what's the most pertinent District Court case, I might have pointed to cases specifically about these very patents because I think that is incredibly helpful.

So with respect to the '728, the '908, and the '530 patents, the District Court in Texas, Judge Love, initially looked at those, issued a detailed ruling about why he concluded that they were not, in fact, abstract and were not directed to abstract ideas. He specifically considered, among other things, the RecogniCorp case that the defendants rely on, and indicated his view, we say, submit correctly that that did not very well describe the

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situation here. He held in a report and recommendation that the patents were not, should not be held invalid under Section 101.

Procedurally, the case was then actually transferred to the District of Massachusetts, and so his report and recommendation actually went to Judge Young in the District of Massachusetts, who subsequently issued an order indicating that having carefully considered Judge Love's analysis, he concluded that it was correct and that the patents were not, in fact, invalid for being directed to patent ineligible subject matter.

The '908 and '530 patents were also the subject of a separate 101 challenge in a different case, this time that stayed in Texas, in which Judge Love initially issued an order concluding that they were not patent ineligible and denying that motion. That report and recommendation was adopted and I would suggest strengthened by District Judge Schroeder, who concluded not only that some of the issues were subject to relevant claim construction considerations, but that if the claim construction asserted by Realtime,

particularly as relates to the fact that these patents operate on digital data, not just human perceivable pieces of information like a page of text, that therefore under those circumstances, it would be clear that they were not directed to patent ineligible subject matter, and he again

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adopted that report and recommendation denying the motion.

Now, I think if I heard defendants correctly during Mr. Neukom's presentation, the two patents that were not at issue in those motions, the '203 patent, it was suggested was very similar to the '728 patent that was upheld in those proceedings, and that the other patent that wasn't at issue there, the '751, was argued to be a combination of the '728 and the '908 patents which, both of which were held themselves not to address an abstract idea, so the suggestion that the combination thereof would do so would also fail.

So as an initial matter, these are unusual patents in some sense for a Court to be looking at on 101 because there's already some case law, some decisional law from other Court addressing these very issues. I guess to put it colloquially, don't take my word for it. Several of your colleagues have already looked at this question.

But we would submit that they were correct because these patents do not fall into what I will call one of -- so a lot of the jurisprudence in this area seems to divide between what I will call human problems, like arbitrating an investment, where the claim is simply doing that, but with a computer. And the Federal

Circuit distinguishes those from technical solutions that address problems and improve the functioning of computer systems.

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They're not human problems just using a computer, but rather computers have these issues, and these are solutions that help make them operate better. Cases like Enfish, DDR, and the case we pointed the Court to, Visual Memory, those all talk about improvements to computer system functioning.

And the compression techniques and combinations of new uses of compression that these patents describe and claim are directed to exactly that -- recognizing that there are problems in the ways that computers function and in the ways that they move data around. I will put it in a sort of simplified context. There are lots of different components that may be involved in the transfer and storage of data from one place to another in a computer system and each of them can operate and move things at particular speeds and work at particular speeds, but you're somewhat limited to whatever the slowest link in the chain is, and that link may be a storage device.

The patents point, for example, in some of the specifications to the issues with hard drive storage rates and the access times that they require. Sometimes it's the transmission channel. Some of the patents point to, for example, the speed limitations of a T1 transmission line and what that might implicate. And they talk about using compression in new ways and in new combinations of

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techniques to improve the functioning of the computers by allowing them to move data, store data, access data faster and more efficiently. And part of the difficulty here is that the traditional paradigm might be that, yes, compression is nice, but the more you want to do compression, it takes extra time to do the processing to compress something, and so whatever you might be saving on the storage side or the transmission side, you're actually adding time on the compression side. And these patents address ways to actually improve that functioning, by using multiple techniques, by choosing techniques based on the data types and the information that the system is able to acquire about the data.

THE COURT: So what are the techniques? Can you just show me?

MR. LEDAHL: So, Your Honor, if you look, for example -- let's look at one of them, the '751. I will start there.

THE COURT: Okay.

MR. LEDAHL: Since that's one of the ones that hasn't really been directly considered before.

THE COURT: I've got it.

MR. LEDAHL: So in the '751, Your Honor, and I'm going to talk -- I will talk about claim 25.

THE COURT: All right.

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MR. LEDAHL: Although a number of claims are potentially at issue here.

THE COURT: I've got it.

MR. LEDAHL: So in claim 25, we have a system for compressing data, and basically, what we're doing is, you're configuring the system to receive the information and -- sorry. There are enough patents that I sometimes have to turn to my notes a little more slowly.

You're analyzing the content at a block level of the data that's coming in to look at what that data type is, and you are not doing so based on what the patents refer to as a descriptor.

So I will give you an example. Sometimes you could imagine that certain types of files have extensions, like .DOC or .PDF. That's not what this is talking about. It's talking about analyzing the blocks of data as they come across and making selections.

THE COURT: What's a technical solution that this analysis teaches?

MR. LEDAHL: Well, part of the technical solution, Your Honor, is actually to do this in a dynamic fashion and make choices.

THE COURT: What does that mean?

MR. LEDAHL: Well, imagine if you have a system where you basically say, I'd like to compress things, and so

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here's my compressor, and I will run things through it, and some things, that will work great, and some things, it's not so great.

And because it's a single purpose, one-size-fits-all solution, it kind of runs okay, maybe it doesn't compress certain things very well, maybe it takes a long time to process certain things. It's not making any smart choices.

THE COURT: What's the "it"?

MR. LEDAHL: The compressor itself. So if I have a computer system and I say, I like to use compression, I will say, okay, I choose to use a kind of compression. I will just run that compression. Sometimes it will work well, sometimes it won't. The processor will have a compression system designated and it will do something, but it may not be the best way, and so it may not help my system function as well as I would like.

The patents talk about adding in functionality to make more dynamic selections essentially that allow you to make smart choices.

So if --

THE COURT: Okay. I've got to tell you, dynamic, it sounds like gobbledygook. That's how I would phrase what you just said. It's gobbledygook. I mean, it doesn't make any sense.

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Let's be really, really precise going forward and let's use, if we're going to refer to a part of the computer, let's not use a pronoun. Let's use the part. If you're going to use a system, let's be consistent throughout and use a system, but be really careful with our use of pronouns.

So let's start with, again, what is it -- what about the compression? You started with compression and you moved to compression system. So let's back up and start.

MR. LEDAHL: So the claim is, the claim is to a system for compressing data.

THE COURT: Okay.

MR. LEDAHL: You've got a server.

THE COURT: I have a server. You agree that's a generic computer component. Right?

MR. LEDAHL: Yes, Your Honor, I would agree the server is a generic computer component and I'm going to anticipate a little bit.

As we know from a lot of Federal Circuit cases, the combination of components in a new way is an invention whether they're generic components or not. Basically, that's every invention. It's very rare that people invent new elements, new --

THE COURT: Okay.

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MR. LEDAHL: New components altogether.

THE COURT: Let's keep going. We start with a data server.

MR. LEDAHL: That server is implemented on processors.

THE COURT: Which are generic computer parts. Right? Agreed?

MR. LEDAHL: Processors are generic computer components, that's correct.

THE COURT: You are not going to tell me it's novel to have a data server implemented on one or more processors, are you?

MR. LEDAHL: Well, Your Honor, what I'm going to say is that it's not an appropriate analysis to question the novelty of a claim based on a single element. And so --

THE COURT: I will give you your chance, but I've got to work through it slowly.

MR. LEDAHL: That's fine.

THE COURT: Okay.

MR. LEDAHL: All right.

THE COURT: So I don't want to spend the whole day on this, so let's just do it. I'm going to let you at the end say, Judge, you know, you led me down this path.

Now you want to come back. I will give you a chance. I've got to understand it.

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So far we've got a data server, which you agree is a generic computer component, and it's implemented on one or more processors, which you agree are generic computer components, and you agree that the implementation of a data server on one or more processors is not novel. All right. Now, keep going.

MR. LEDAHL: And I would say that the whole claim is the implementation of the data server with the processors, so the configuration as a whole is novel, but I think --

THE COURT: Well, at the end, you can tell me what's novel about the configuration, so we'll come back to that.

MR. LEDAHL: As if as the claim recites in that first element, you also have memory systems.

THE COURT: Right.

MR. LEDAHL: And this overall system is configured to analyze the content of a data block to identify a parameter or attribute or value of that block, and that excludes analysis based solely on reading a descriptor.

THE COURT: All right. Let's just stop there.

So far is there anything non-abstract about what we just read?

MR. LEDAHL: Yes.

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THE COURT: Where? Tell me.

MR. LEDAHL: Well --

THE COURT: And look at the words that we've just read and show me where it's not abstract.

MR. LEDAHL: So you're analyzing that data block in a specific fashion, and by that what I mean is, you are looking at the content of the data block itself, not at a descriptor. So there were lots of prior art systems.

THE COURT: Wait.

MR. LEDAHL: So this is discussed.

THE COURT: Okay. So you're analyzing the content of data. Now, you agree, that's an abstract idea, analyzing the content of data. Right?

MR. LEDAHL: If that were all we were looking at by itself, yes.

THE COURT: Okay. All right.

MR. LEDAHL: Now, in the context of compression and picking compression systems, that was not something that was well-known. It was typically either you would do generic compression or you would look at the file descriptor as opposed to analyzing the content of the data itself. So that's the distinction.

THE COURT: What's generic compression?

MR. LEDAHL: Generic in prior art systems, I guess I'm referring to the pre-existing technology that

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predates these patents.

THE COURT: All right. You're saying this has new technology. Right? That's the whole thing you're saying?

MR. LEDAHL: Right.

THE COURT: So what's the new technology? Are we not in generic compression anymore?

MR. LEDAHL: So part of this is as the claim goes on, we see that analyzing the data itself, not the descriptor of the data, but the data itself to make decisions about how to compress it was not something that was used in the art. It was --

THE COURT: You are saying nobody ever looked beyond the three-letter tag, the descriptor, and nobody ever looked at the data itself to compress it. Really?

MR. LEDAHL: Not in the manner that's described in these patents. That's correct.

THE COURT: Let's be precise, because you said nobody ever looked. That's different. Right?

So what is it about the manner of this system that -- in fact, let's back up.

So you're no longer saying, prior to this patent, nobody ever looked beyond the descriptor. Now you've said, you agree that people have looked at the data content prior to this patent in order to compress data. Is

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that correct?

MR. LEDAHL: I am hard pressed to think of a system that looked in order to select a compression algorithm. There are systems that one could argue.

So a lot of the prior art as an example, Your Honor, might have, to the extent that it had multiple compression options available, what it would actually do in some of the prior art is run the same, run all of those different compression algorithms on the same block of data, see which one gave it the best result, and store or retain that one.

THE COURT: Okay. So then you do agree that prior to this patent, in fact, folks were running algorithms at the data level. They were not just limiting the compression to an examination of the descriptor. You agree on that?

MR. LEDAHL: I would not agree that that is how it was characterized.

THE COURT: I think that's what you just said.

MR. LEDAHL: No.

THE COURT: Well, then, how is it different?

MR. LEDAHL: So I think one could argue that you're doing something after the fact insofar as if you run a bunch of different types of compressions just to see which one works, it's not clear to me that you've made any

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decision based on the data itself except perhaps that after the fact, you've looked at which one gave you fewer bits to store. That's not the same as looking at data to choose a compression technique. It's the ex ante versus ex post question.

THE COURT: That doesn't help.

MR. LEDAHL: So, Your Honor, if I were to come in and say, here are ten documents and I will run them, or ten files and I will run them all through this array of six compression techniques and it will take a bunch of time, and when it's done I will have ten sets of compressed files, and I will look at each one and I will say, okay. This one is the smallest. Now that I've done all of that extra work, I will save that one. That's very different from looking at the file beforehand and saying, ah, this file is this kind of data. It's useful for me to use Compressor A and only Compressor A for that, and this file has a different type of data that would be better suited to Compressor B and I will run that through Compressor B. That's something different. And I'm not personally aware of particular prior art that really did that and made those kinds of determinations. It would either, as I said, run everything through the same compression or it would run multiple compressions taking a lot of time and then after the fact make a determination, oh, I look this one the best.

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THE COURT: All right.

MR. LEDAHL: So we've talked a little bit, or perhaps a lot about analyzing the content of the data block.

And the next element really goes to what I was mentioning, which is selecting an encoder, a mechanism for the compression based on that analysis, based on the parameter identified, and then obviously, use that to compress the data with that encoder and, in addition, here you're using what is called a state machine as part of that technique.

So, in addition --

THE COURT: You agree that's a generic computer component?

MR. LEDAHL: Well, a state machine is a computer construct. I think using it in the context --

THE COURT: That's not my question. You just want to make sure we agree. So we can get some common ground, you agree that's a generic computer component.

MR. LEDAHL: I agree that state machines are well-known computer components.

THE COURT: All right.

MR. LEDAHL: Or constructs. That's right.

You then, having performed the compression as the claim requires, store the compressed data block, and the claim further recites that you do this using a decisional

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tree that basically causes you to compress and store the data faster than you could have stored it by -- in its uncompressed form.

And --

THE COURT: Now, that is an abstract idea. Right? You'll agree on that?

MR. LEDAHL: I do not agree that that is an abstract idea. The point, Your Honor, is, compression -- so compression has a time overhead in a system, so think of it this way. If I'm going to store the full file and let's say it's a hundred units, I won't use bytes or bits, but it's a hundred units, and so if I can store it five units per second, it's going to take me 20 seconds to store that file.

Now, compression takes time. It's processing, it's requiring some utilization of time. And so basically, if I'm going to compress it, maybe I can get it down from instead of a hundred, I can get it to 50, and so that will take me half as long. So if I can do 20 per second, that's two-and-a-half seconds now. But if it takes me more than two-and-a-half seconds to do the compression, that wasn't a good trade. I didn't get any benefit. In fact, I slowed things down. And so this is not purely abstract.

THE COURT: What's this? What's the this?

MR. LEDAHL: The overall system performance.

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THE COURT: Right.

MR. LEDAHL: Because that's what this is improving.

THE COURT: Comparing, comparing how fast it takes just to do the compression with how fast it would take to make a comparison to other potentially faster compressions and adding up the time is not abstract?

MR. LEDAHL: I'm not sure I agree with the way you've characterized it.

So the distinction that the claims draw is, can I do both? Can I compress it and store it faster than I could have just stored it if I didn't bother trying to compress it?

THE COURT: Okay. That's actually an understandable summary. All right. You're telling me that comparison is not abstract?

MR. LEDAHL: No, Your Honor, because it's part of the decisional logic that the system has to use in choosing these compression algorithms.

THE COURT: So would you agree decisional logic is abstract?

MR. LEDAHL: The word decisional logic standing alone may be abstract, Your Honor. I guess as I mentioned, I'm a little bothered by the attempt to sort of chop the claim into so many pieces and look at the abstraction in

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that context, because that's not the analysis that the Federal Circuit mandates. The Federal Circuit's analysis is, we look at the claim as a whole and the combination of elements in the claim as a whole.

THE COURT: Right. But to get to the whole, I have to go through the --

MR. LEDAHL: That's correct, Your Honor.

THE COURT: So I'm waiting for you to tell me something that is inventive or is not abstract and I have not heard one thing so far.

MR. LEDAHL: So, Your Honor what's inventive about this is, computers are able to run faster when you implement a system like this.

THE COURT: Okay.

MR. LEDAHL: They're able to improve their performance.

THE COURT: Then tell me something not abstract or inventive about this system you keep talking about.

MR. LEDAHL: So what is not abstract and what is inventive about this system is using compression in a new way that was not known in the art to not just compress willy-nilly, but rather to make decisions and to control the compression in such a with a way that it would not, it would not be used in a way that would slow down the system. It was designed only to be used when it would speed it up

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and to be used in specific compression techniques only when it actually would help speed up the performance of the system.

THE COURT: All right.

MR. LEDAHL: Selectively.

THE COURT: Now, what you've just said, I still have not heard one non-abstract idea or inventive concept. So now just take what you have just described, break it down and identify for me within that summary an example of a non-abstract or inventive concept.

MR. LEDAHL: Well, Your Honor, respectfully, using computer technology to change the way that compression is used in a computer system to improve the performance by selecting from multiple possible compression techniques and using ones that will allow the storage and compression to occur faster than storage would have occurred without compression, that's not abstract.

THE COURT: All right.

MR. LEDAHL: That's --

THE COURT: You can't point me to like a technical solution in there that's not abstract? Something very specific?

MR. LEDAHL: I would argue, Your Honor, I think that the Court may be -- you and I may have a different understanding of what a technical solution is, because that

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is a technical solution, and that is the kind of technical solution that the Federal Circuit recognizes in DDR, in Enfish, in Visual Memory. These are technical solutions.

THE COURT: All right.

MR. LEDAHL: Optimizing things within the function of the computer by using techniques in new and different ways, just like these claims do, that's a technical solution. The fact that that uses words and components that are non-original in a new way, that's true of every computer improvement. Whether it's the improved cache management systems of the Visual Memory case, or whether it's the improved functioning of a database structure in Enfish, these are technical improvements that make the system work better. They make the system work faster.

THE COURT: You say these are technical improvements. Just give me a list of the technical improvements.

MR. LEDAHL: So the technical improvements are implementing. So it is implementing a compression system and encoder that is --

THE COURT: Wait. Let's do this. Let's make a list. So you keep going back to the summary of the overall system. Give me a list of the technical components. I will write them down. Go ahead.

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MR. LEDAHL: So, well, Your Honor, you have an encoder.

THE COURT: All right.

MR. LEDAHL: Some of the claims refer to a data accelerator. Some refer to a series of encoders.

THE COURT: I can't write that fast. I've got number one, technical component or technical solution, an encoder. All right. What's number two?

MR. LEDAHL: The encoder is integrated into the system in such a with a way that it analyzes before compression takes place to determine which compression to use so that it can accelerate the storage of data faster than either using compression alone without that process, or simply storing without using compression at all.

THE COURT: Okay. That is an abstract idea.

MR. LEDAHL: It's a novel implementation of an encoder that did not exist in the art. It's a different way to structure the encoder.

THE COURT: So how is it novel?

MR. LEDAHL: Because the encoders of the prior art simply did not perform this block analysis in order to determine the compression to be used.

THE COURT: So you're back to they look beyond the descriptor to look at the underlying data?

MR. LEDAHL: And not just to look at the

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underlying data. Many systems wouldn't even look at the descriptor, but as a practical matter, these patents were about looking at the data on a block level and making determinations to direct that data to the encoder that was most appropriate for that data. That was not something that was done before. It does have processing overhead. So it's not an intuitive tradeoff. Making these kinds of determinations, running these kinds of processing, would appear to be slowing down the system, because you're adding in processing steps. However, because you are using them to make better determinations about which encoders to use, you can achieve overall improvement in this non-intuitive way by actually adding processing steps.

THE COURT: All right. Anything else?

MR. LEDAHL: I'm happy to answer any further questions Your Honor has and I'm happy to talk about particular claims. I think this gives us a lot of overview of the same issues. If you have questions that vary from this on other claims, they --

THE COURT: So I have not heard any non-abstract, so if you want to take your best shot. If that is as good as it gets, I am where I was when I came into this hearing, which I think the briefing has demonstrated you are not going to pass.

MR. LEDAHL: Well, Your Honor, I would suggest

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that I'm not sure -- it would appear to me, and if that's the Court's view, my take is Your Honor is not applying the Federal Circuit's law consistent with the principles articulated in the relevant cases because that is precisely the kind of technological improvement that the Federal Circuit repeatedly holds as non-abstract, and that other district courts and other judges, not just one, not two, three different judges have said is not abstract, is directed to a technological solution, is directed to the improvement of the functioning of a computer. That's not abstract. It doesn't just say, we claim improving the functioning of the computer. It tells you how to do it. It tells you --

THE COURT: I'm looking for that. Point me where in the claim.

MR. LEDAHL: Your Honor, using compression in these ways, it improves the functioning of a computer. That is both required and it is the result of performing these steps. That if you do it this way, the computer works faster. The system works faster. That's essentially what these are about.

THE COURT: I don't think anybody disputes that by looking at the underlying data as opposed to limiting yourself to the descriptor, you could use, make the computer work faster.

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Do the defendants dispute that?

MR. NEUKOM: Fortinet does not, Your Honor, and I'm happy to confer with my colleagues if you would like.

THE COURT: Sure.

MR. MASUR: Aryaka Networks does not dispute that. We don't concede that that is novel either.

THE COURT: I didn't say that. I just think it's such an obvious -- it's just stating the obvious.

MR. MASUR: Particularly to one who had practiced in the art in the prior art period. Yes, Your Honor.

MR. LEDAHL: Well, Your Honor, now what we're talking about is a different question, which is this allegation of obviousness.

THE COURT: I don't mean obviousness in the patent sense. I mean it is obvious like it's common sense.

MR. LEDAHL: It's actually not, Your Honor. Respectfully, that, and I would submit, that's actually a fact question that you can't resolve in summary judgment.

THE COURT: So, wait. Just to be really clear, when I said common sense, what I mean is that it's obvious that it could be the case. Maybe that's the best way to articulate it. And so to look at the content of the data as opposed to limiting yourself to the descriptor, that idea that you would look at both is what I think is a common

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sense notion.

MR. LEDAHL: So I think, Your Honor, to be clear, it's not just that it's looking at the content of the data. That's certainly a part, but it's looking at the content of the data. It's making a determination of how to encode based on that determination, based on that look before encoding, which is not something the prior art was doing. It's using that pre-encoding determination to pick the right encoder to make it go faster, which is not how encoding, excuse me, not how compression was really being used.

The fact is that the prior art wasn't looking at this. Compression was viewed as something that it's nice, but it has a lot of time overhead. It takes time, and so it was intuitively thought that it would slow the process down.

These patents actually describe and claim techniques that are specifically set up to allow you to use compression in a way that speeds things up, which is counterintuitive and not at all common sense or obvious, and certainly not what the prior art was doing.

So I mentioned a prior art system that might try an array of compression techniques and just keep the best one. That takes a long time, and that system was designed to sort of do that later on afterward when you were storing

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something so you had some time. This is a system that allows you to do it in line in a way that's going to improve the performance and the functioning of the system when you have to move large volumes of data that are not uniform and that can't all just go the same path.

So the patent talks a lot about the problem created by the increase of what's called data dependency, the notion that different compression techniques will work better for different kinds of data, and that by looking at that, before you perform the compression and by routing the data in the particular manner that will allow it to go through the system more efficiently, you're improving the performance and the functioning of the computer in a way that people had not done before and that was not intuitive or obvious. These are new concepts that were not well-known in the art, and respectfully, these patents have been challenged lots of times and related patents have been challenged lots of times as being obvious, being anticipated, and yet they've survived repeatedly, in part because that was a new solution. That was something that people weren't doing and it was not intuitive. It was not something that everybody just understood you should do it that way. That's a new technique, just like in Visual Memory, changing the way that you manage where the data comes from and how it gets stored and used in the cache was

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a new technique. It used conventional components. All of the memories were well-known and moving data between those memories was well-known. But the Federal Circuit noted that when you start organizing them in a different way to move the data differently, that's a new invention. That's not abstract. That's a technological improvement that makes the computer function more efficiently, function better, and that's not abstract. It's not patent ineligible.

THE COURT: Okay. Anything else?

MR. LEDAHL: Not at this time, Your Honor.

THE COURT: Mr. Neukom, is there anything else?

MR. NEUKOM: No, Your Honor. Not unless you have questions.

THE COURT: No. Let's take a break of about 10 to 15 minutes.

MR. NEUKOM: I'm sorry. I do have one point of clarification.

THE COURT: Yes.

MR. NEUKOM: I made a mistake earlier. For the '530 patent, when I tried to summarize for Your Honor what the iXSystems or the Commvault proposed level of abstraction was --

THE COURT: Yes. Choosing a compression method based on the data type.

MR. NEUKOM: That's right. And I got that

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wrong. If one refers to the briefing that I was relying on, the proposed abstraction for the '530 is the same as the '908, which is which is the using two compression techniques to go faster, plus using a descriptor for the compression technique to help decompress the data. Thank you, Your Honor.

THE COURT: All right. Okay. Take a break. Thank you.

(Short recess taken.)

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(Proceedings resumed after the short recess.)

THE COURT: All right. Please be seated.

All right. Thank you for the arguments this morning. I'm prepared to rule on the pending motions. I will not be issuing written opinions. The transcript will serve as my ruling.

I do want to emphasize that although I'm not issuing a written opinion, I have followed a thorough process before making the decision I'm about to state.

There was full briefing. The parties were permitted and did submit filings indicating the cases they thought were most analogous to this case. There has been oral argument and I've thought about what was said this morning. I've also carefully considered the briefs.

I'm not going to read into the record my

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understanding of Section 101 law. I would refer the parties to my In-Depth decision, Civil Action No. 14-887 in that regard, and I will incorporate the law as set forth in that opinion adopted into my rulings today.

There are, as we've discussed, five patents at issue -- the '530, '203, '728, '908 and '751. These patents generally claim systems and methods for digitally storing and transmitting data. In Realtime's own words, the claims involve, and I quote, "digital data compression systems to increase the capacity of a computer system to store or transfer data more efficiently," and that's DI 14, page 1.

I find that the claims lack a specific means or method that improves the relevant technology and instead merely invoke generic processes and machinery to achieve a desired result, that being the more efficient storage and transmission of digital data. I think this falls within the McRO, Incorporated against Bandai Namco Games America Inc. decision with the Federal Circuit, found at 837 F3d. 1299, and in particular, I would point the parties to page 1314.

The Federal Circuit made clear in that decision that merely claims some improvement of computer functionality as a desired result is not enough to pass Step 1 of the Alice inquiry.

The provision of concrete elements in the

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patent, like a state machine, merely provide a generic environment in which to carry out an abstract idea and they therefore do not render the claims not abstract. I would refer the parties to In re: TLI Communications LLC Patent Litigation, found at 823 F3d. 607. In particular, page 611.

And I would again refer the parties as well to Digitech Image Technology against Electronics for Imaging, Inc., at 758 F3d. 1344, and the RecogniCorp decision at 855 F3d. 1322, noting that processes that start with data and add in an algorithym and end with a new form of data are directed to an abstract idea. That's what we have here.

I found particularly informative, Realtime Data's brief at page 5 through 6. Realtime stated there that the patents teach specific improvements to the function of computer parts themselves, such as computer memory and computer data storage and retrieval mechanisms.

Realtime says, for example, the '728 and the '203 patents describe various problems in the conventional art, including the "content sensitive behavior" of various compression techniques and the "extremely large number of application programs" and data types with content. And Realtime says the '728 and '203 patents solve these problems by providing systems utilizing two digital data compression

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techniques. To give an example, content dependent and content independent techniques to compress or decompress data blocks based on analysis of the specific content of data. And Realtime says the patents overcame the issue of relying solely on a descriptor, for example, file extensions such as .doc, .txt, by requiring a direct examination of the digital data payload rather than examining just the descriptor.

It continues that the '908 patent solved problems in the conventional digital data compression arts by providing systems utilizing, and it emphasizes, two different encoders. And Realtime states that the '751 patent solved problems in the conventional digital data compression by utilizing a state machine to compress data blocks based on an analysis of the specific content of the data being encoded. And after writing all of that, Realtime says, the claimed solutions are not abstract. I had exactly the opposite conclusion. I think that it is clearly a description of ideas that are abstract. That's why I'm not going to write anymore, because, A, there's de novo review, but I read what Realtime itself wrote and come to the conclusion that that is an abstract idea, and maybe Realtime is right and the Federal Circuit panel will say differently and will have that opportunity to do that. In my mind, the defendants have accurately summarized what the patents are

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about more succinctly than what I just read from Realtime's brief, so for the record, I will say I want to adopt that.

With respect to the '728 patent, I think a fair description of what it is is choosing a compression method based on the data type.

With respect to the '203 patent, a fair description of it is choosing a decompression method using a data type.

With respect to the '908 patent, a fair description of it is using two or more compression techniques to compress and store data faster.

And with respect to the '530 patent, it's using two or more compression techniques to compress and store data faster and using a descriptor -- plus rather using a descriptor.

For the '751 patent, it's choosing a compression method based on data type and using two or more compression techniques to compress and store data faster.

These are abstract ideas, and none of the patents, getting to the Step 2 inquiry, provide an inventive concept. None of them point to a technical solution to compress or transmit data more efficiently. At bottom the patents claim a desired result and they do not present or recite a technical solution to achieve that result, and therefore they're not patent eligible.

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And I'm going to grant the 101 motion. To be precise, with respect to DI No. 11 in Civil Action No. 17-1635, the defendants' motion to dismiss is granted in part. It is granted to the extent it is based

on the asserted patents claiming ineligible subject matter and the remainder of the motion is denied as moot.

With respect to DI 9 in Civil Action 17-1676, the motion to dismiss is granted.

With respect to DI 21 in Civil Action 18-1200, which is Panzura's motion to dismiss plaintiffs' complaint and joinder in Western Digital and Project Taurus' motion to dismiss is granted.

With respect to DI 15 in Civil Action 18-2062, this is defendant Aryaka's motion to dismiss, is granted in part. The motion is granted to the extent it is based on the asserted patents claiming ineligible subject matter and the remainder of the motion is denied as moot.

And United States Patent No. 7,415,530 and 8,717,203 and 9,054,728, and 9,565,908, and 9,667,751 are hereby declared invalid for claiming ineligible subject matter.

All right. Is there anything else I need to address?

MR. NEUKOM: Two points of clarification for the record, Your Honor. The first is it would be helpful. I

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think when Your Honor read into the record, into the Court's decision a portion of the opposition brief from Realtime, if it helps, I believe Your Honor -- there are multiple sets of briefing.

THE COURT: Oh, should I make clear what case it was? That's a good point.

MR. NEUKOM: Yes.

THE COURT: I was reading from -- I'm glad you said that. I meant to because I had a DI number. So I'm referring to in that case, it's Civil Action 17-1676. And mind you, I just want to make clear, I think, you know, I guess reasonable people can disagree.

I felt like Realtime's counsel was afforded every opportunity this morning to articulate something non-abstract, to articulate some technical solution in the claims of the patent this morning and I just didn't hear it. And you'll be, I'm sure, able to make that argument in an effective manner again at the Federal Circuit and maybe make it better, and who knows.

Mr. Neukom, anything else?

MR. NEUKOM: My second was, I was taking notes on the substance of what Your Honor said and I just wanted to make sure that the Fortinet motion, I did write it down in the list of case numbers for the motion that was just granted. The Fortinet motion is, the Civil Action number is

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17-1635.

THE COURT: That was the very first motion I addressed. And, you know, it's funny. I'm pretty sure you're right. I did not, or I neglected to mention the name Fortinet when I discussed that patent, so that's my bad. But that was the first one and I granted it in part.

MR. NEUKOM: Right.

THE COURT: To the extent it addressed ineligible subject matter, and I denied as moot the remainder of the motion.

MR. NEUKOM: Thank you, Your Honor.

THE COURT: Counsel?

MR. LEDAHL: Briefly, Your Honor, Realtime had indicated, and we believe the Federal Circuit's case law it is clear that in light of the Court's ruling, it should be granted with leave to amend. We obviously, reserving our position regarding the Court's ruling, we also think consistent with the Aatrix and Berkheimer cases that granting such a motion without leave to amend is inconsistent with Federal Circuit case law and so we would just reiterate our request to that extent. I did not hear the Court address it one way or the other, but I wanted to make clear that we are making that request.

THE COURT: Let me hear from the defense.

MR. NEUKOM: I will have to review the briefing,

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Your Honor. This is a little bit of a curve ball for me. I don't believe this request was made in the briefing, so I would argue it has been waived.

THE COURT: Well, part of it is. I generally -- parties often, and it may be in one of the briefs in this case. They throw in a with leave to amend, and my practice has been to ignore it and just to grant a motion to dismiss, and then if somebody wants to seek leave to amend, they can follow the Rules of Civil Procedure.

I'm willing to listen to both sides about what is the appropriate practice.

MR. NEUKOM: My answer, Your Honor, would be more practical, which is that we have Your Honor's decision. I take it Realtime is going to take it up on appeal and complicating this with leave to amend is going to be inefficient for all sides.

THE COURT: Well, the reason, first of all, to grant it is Realtime would add something perhaps to its complaint and then we're back to square one here. And that's what I'm just trying to figure out as opposed to taking it right to the Federal Circuit as it is. I mean --

MR. NEUKOM: Again, Your Honor, I would --

THE COURT: I'm going to let the plaintiff speak.

MR. NEUKOM: Pardon me?

THE COURT: Mr. Neukom, you can finish. I just

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want to give both sides an opportunity to be heard.

MR. NEUKOM: There have been I believe multiple dozens of parties sued, defendants sued on these patents. We've got at least three and I think maybe four complete sets of briefing on the Alice issues for these patents, and, again, I'm speaking more case management practically speaking than I am in some sort of legal doctrine way, but the idea that it makes any sense for this plaintiff to be given a fourth or fifth bite at the apple to amend its pleadings makes no sense to me. Even just on the issues teed up here today,

we've got multiple sets of briefing. So I think they've been given a more than fair opportunity to be heard on multiple occasions.

THE COURT: I think they've been given more than a fair opportunity. I'm just thinking what's right before me more procedurally. As a practical matter, I think they should go to the Federal Circuit.

MR. NEUKOM: We agree.

THE COURT: That's really what ought to be done. I mean, let's hear from plaintiff.

MR. LEDAHL: Well, Your Honor, I think two points.

First of all, I think we obviously disagree. I think there are a number of issues that are in the nature of factual issues, including as the factor, the sort of second

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step under the Alice analysis that raise factual issues that shouldn't be resolved at this stage regardless, but in any event, should be the subject, to the extent that the Court believes that those are non-technological or not present in the specification, it's appropriate to allow us an opportunity to provide an amended complaint consistent with, for example, the Aatrix case from the Federal Circuit reversing a denial without leave to amend and noting that leave to amend should be granted. We did request this in the briefing.

THE COURT: But it doesn't hold that in every case, leave to amend should be granted. You're not going to take that position, are you?

MR. LEDAHL: I would not suggest that every -- I think it's correct that Aatrix does not say leave to amend must always be granted. We think in this case, it's consistent with the reasoning behind the Aatrix decision and it is appropriate to grant leave to amend. I understand the Court's view, but frankly we think it is a necessary and important component and that that is consistent with how the Federal Circuit has analyzed these issues both in Aatrix and in Berkheimer with respect to the factual nature of some of these matters.

THE COURT: All right. So you're making a formal request for leave to amend?

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MR. LEDAHL: And just to be clear, Your Honor, obviously, there's a bit of an agglomeration of briefing because some of these motions are really joinders, and somebody else's motion, it's not even a pending case anymore. But I will note in the one that was most fully briefed of the defendants that are here, the Reduxio motion, that's Civil Action No. 17-1676, we expressly made that at the end of our brief.

THE COURT: All right. Okay. I'm going to deny it. I'm not going to give leave to amend. I am going to grant the motion to dismiss and I think you can take your issues up with the Federal Circuit, and if I'm wrong, I'm wrong.

Anything else?

MR. NEUKOM: No, Your Honor.

MR. LEDAHL: Not at this time, Your Honor. Thank you.

THE COURT: All right. Thank you, all. Have a good day.

(Counsel respond, "Thank you, Your Honor.")

(Hearing concluded at 11:08 a.m.)

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