2021-2251, 2021-2291

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

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 Case No. 1:17-cv-00800-CFC, Judge Colm F. Connolly

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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 Case No. 1:17-cv-00925-CFC, Judge Colm F. Connolly

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APPELLANT REALTIME DATA LLC'S REPLY BRIEF

Dated: April 29, 2022

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CERTIFICATE OF INTEREST

Pursuant to Federal Circuit Rule 47.4 and Federal Rule of Appellate Procedure 26.1, counsel for Plaintiff-Appellant Realtime Data LLC certifies the following:

1. The full names of all entities represented by undersigned counsel in this case:

- Realtime Data LLC

2. The full names of all real parties in interest for the entities:

- None/not applicable

3. The full names of all parent corporations for the entities and all publicly held companies that own 10 percent or more stock in the entities:

- None/not applicable.

4. All law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities:

- Reza Mirzaie, Marc A. Fenster, Brian D. Ledahl, Paul A. Kroeger, Shani Williams, and Philip X. Wang of Russ August & Kabat
- C. Jay Chung and Stanley S. Thompson, formerly of Russ August & Kabat
- Stephen B. Brauerman and Ronald Golden of Bayard LLP
- Sara Bussiere, formerly of Bayard, LLP

5. The case titles and numbers of any case known to be pending in this court or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal:

- *Realtime Data, LLC v. Spectra Logic Corporation*, CAFC No. 2021-2291
- *Realtime Data, LLC v. MongoDB, Inc.*, D. Del. Case No. 19-492-CFC
- *Realtime Data, LLC v. Open Text, Inc.*, D. Del Case No. 19-394-CFC
- *Realtime Data, LLC v. Nimbus Data, Inc.*, D. Del. Case No. 19-279-CFC
- *Realtime Data, LLC v. Egnyte, Inc.*, D. Del. Case No. 20-1498-CFC
- *Realtime Data, LLC v. Reduxio Systems, Inc.*, D. Del. Case No. 17-1676-CFC
- *Realtime Data, LLC v. Fortinet, Inc.*, D. Del. Case No. 17-1635-CFC
- *Realtime Data, LLC v. Aryaka, Inc.*, D. Del. Case No. 18-2062-CFC
- *Realtime Data, LLC v. CTERA Networks, Inc.*, D. Del. Case No. 18-1200-CFC
- *Realtime Data, LLC v. Panzura, Inc.*, D. Del. Case No. 18-1200-CFC
- *Realtime Data, LLC v. Quest Software, Inc.*, D. Del. Case No. 18-1964-CFC
- *Realtime Data, LLC v. Acronis, Inc.*, D. Mass. Case No. 1:17-cv-012279-IT
- *Realtime Data, LLC v. Carbonite, Inc.*, D. Mass. Case No. 1:17-cv-12499-IT
- *Realtime Data, LLC v. Fujitsu America, Inc.*, N.D. Cal. Case No. 3:17-cv-02109-SK
- *Realtime Data, LLC v. Veritas Technologies, LLC*, N.D. Cal., Case No. 3:18-cv-06029-SI

6. Information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees):

- None/not applicable.

Dated: April 29, 2022

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I. INTRODUCTION

Defendants' arguments repeat the errors of the district court and should be rejected. In arguing that the claims are directed to an abstract idea, they improperly ignore the patents' claimed advances, omit key limitations of the claims directed to those claimed advances, and wrongfully assert, contrary to this Court's precedents, that the improved digital data compression techniques are abstract processes. Similarly, in arguing that the patents lack inventive concept, Defendants improperly focus only on certain purportedly generic limitations in isolation, ignore the limitations aimed at the claimed improvements in digital data compression, and assert, without any evidence or authority, that the claimed techniques were "well-known" and understood at the time of the inventions. Defendants are wrong on all counts. The claims are directed to non-abstract methods and systems for faster and more efficient digital data compression, which improve the functionality of a computer itself and are thus not abstract. Further, the patents' unconventional compression techniques utilize specially-configured computer components, thus providing the requisite inventive concept should this step two analysis even be necessary.

Notably, Defendants all but ignore this Court's prior ruling in *Realtime Data LLC v. Reduxio Sys., Inc.*, 831 F. App'x 492 (Fed. Cir. 2020), wherein this Court vacated the district court's prior ruling of ineligibility based on its erroneous and

improper § 101 analysis. Defendants, like the district court, ignore this Court's directives and repeat those same errors. Defendants' arguments should thus be rejected, and the patents should be found patent-eligible under § 101.

II. ARGUMENT

A. The Patents Are Directed to Improved Methods of Digital Data Compression and Are Not Abstract

1. Each of the asserted patents identify and solve problems specifically arising in the realm of computer networks

Defendants do not dispute that the seven patents at issue here are, at a high level, directed to different methods for digital data compression. *See, e.g.*, RB22–23. Defendants nonetheless argue that the patents are directed to an abstract idea because "data compression does not specifically arise in the realm of computers," and, as the district court noted, "data compression can be achieved using even pen and paper." *Id.* at 24 (citing Appx25). This unsupported attorney argument must be rejected.

Defendants essentially argue that all seven asserted patents fail at *Alice* step one simply because they involve data compression, which is purportedly abstract. But as explained by this Court, the "directed to" inquiry "cannot simply ask whether the claims involve a patent-ineligible concept, because essentially every routinely patent-eligible claim involving physical products and actions involves a law of nature and/or natural phenomenon." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327,

1335 (Fed. Cir. 2016). Rather, the claims must be considered "as a whole" and "in light of the specification." *Id.* And under a proper analysis, there can be no legitimate dispute that the claims at issue here are not directed to generic "data compression," but rather are directed to improved, particularized methods of *digital* data compression. For example, the faces of the '728, '203, and '825 patents make clear that they are directed to systems and methods for data compression using a combination of content-independent and content-dependent encoders, and are aimed at solving problems in the prior art relating to, *inter alia*, data dependency. Defendants' attempt to generalize the patents as being directed to generic "data compression" cannot be squared with the claim language and specifications.

Notably, Defendants do not even attempt to explain how digital data compression in general can be achieved by a human using pen and paper, and they also fail to explain how the specific methods and systems claimed in the seven asserted patents here can be achieved with pen and paper. That is because they clearly cannot be. Indeed, the Federal Circuit rejected a similar argument in *SRI Int'l, Inc. v. Cisco Sys., Inc.*, 930 F.3d 1295 (Fed. Cir. 2019). There, the defendant argued that claims relating to monitoring suspicious activity on computer networks were "so general that they encompass steps that people can 'go through in their minds.'" *Id.* at 1304. This Court rejected this argument, holding that "[t]his is not the type of human activity that § 101 is meant to exclude"—"the human mind is not equipped

to detect suspicious activity by using network monitors and analyzing network packets as recited by the claims." *Id.* Likewise, the human mind is not equipped to perform the digital data compression methods recited by Realtime's patent claims. Defendants' (and the district court's) attempt to compare the claims to activities like writing in shorthand only underscores their improper overgeneralization of the claims.

The specific types of data compression claimed in Realtime's patents, and the problems with conventional data compression systems described in the specifications, are unique to the realm of computers and computer networks and thus are not abstract. *See, e.g.*, *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1259 (Fed. Cir. 2014); *Intell. Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1315 (Fed. Cir. 2016) (recognizing "an improved, particularized method of digital data compression" as an example of a non-abstract, "technologically complex" invention). Defendants point to no evidence or authority proving otherwise, and instead merely parrot the district court's unsupported and incorrect conclusions. In Defendants' world, new and improved methods of digital data compression must all be abstract simply because they involve data compression. That is not the law.

2. The asserted claims do not merely invoke computers as a tool, but rather improve the functioning of the computer itself

Defendants' assertion that the claims do not improve computer functionality and merely invoke computers as a tool (RB24) also fails. Critically, Defendants have not identified any "fundamental practice or abstract process" which the asserted patents purportedly improve by simply incorporating computers. *See Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1364–65 (Fed. Cir. 2020). Nor can they, given this Court's clear guidance that improved methods of digital data compression are not abstract. *See, e.g.*, *DDR Holdings*, 773 F.3d at 1259. The asserted claims are thus easily distinguishable from Defendants' cited cases involving claims that "merely improve a fundamental practice or abstract process by invoking a computer merely as a tool." *Customedia*, 951 F.3d at 1364–65.

For example, in *Affinity Labs. of Texas, LLC v. DIRECTV, LLC*, this Court held that claims to a method of providing out-of-region access to regional broadcasts were directed to an abstract idea. 838 F.3d 1253, 1258 (Fed. Cir. 2016). The Court determined that the "concept of providing out-of-region access to regional broadcast content is . . . a broad and familiar concept concerning information distribution that is untethered to any specific or concrete way of implementing it," and that the claims were not patent-eligible simply because they used cellular phones. *Id.* Similarly, in *Customedia*, the patent claimed a "data delivery system for providing automatic

delivery of . . . specifically identified advertising data." 951 F.3d at 1364. This Court found that the claimed invention was "at most an improvement to the abstract concept of targeted advertising," which is "not an improvement in the functioning of the computer itself." *Id.* at 1365.

In contrast, the claims of the seven asserted patents do not simply use a computer to automate or improve some longstanding concept or idea such as targeted advertising or delivering broadcast content. Rather, they are directed to solving specific problems with then-existing data compression systems to improve the functioning of the computer itself by providing faster and more efficient methods of compressing digital data, as set forth in detail in Realtime's principal brief. This is not abstract.

Defendants also argue that Realtime has not "point[ed] to any limitations that identify specific computer technology or how problems are actually solved by such technology," citing to *Ericsson Inc. v. TCL Commc'n Tech. Holdings Ltd.*, 955 F.3d 1317 (Fed. Cir. 2020). RB24. But *Ericsson* is also distinguishable. In that case, the patent at issue claimed a "system for controlling access to a platform." *Id.* at 1326–27. The claims required nothing more than "receiving a request and determining if the request for access should be granted." *Id.* Accordingly, this Court determined that the claims were directed to the abstract idea of controlling access to resources,

and rejected the patent owner's attempt to save the claims by relying on features that did not actually appear in the claim language. *Id.* at 1328.

In contrast, Realtime's asserted claims set forth specific methods and systems for solving the problems identified in their respective specifications. The '728, '203, and '825 patents identify and solve problems relating to data dependency by utilizing a combination of content-dependent and content-independent encoders to compress data blocks based on an analysis of the specific content or type of data being encoded, without relying solely on a descriptor such as a file extension. The '928, '530, and '458 patents address problems relating to speed and bandwidth limitations by utilizing a plurality of different encoders, and optionally a compression descriptor, for accelerated storage and retrieval of data blocks. And the '751 patent addresses latency, data dependency, and other compression-related issues by, for example, recognizing a characteristic, attribute, or parameter of the data to select a compression encoder, and using a state machine to provide compressed data. Unlike *Ericsson*, these solutions are described in detail in the specifications and recited in the claims themselves.

3. The recited solutions are sufficiently specific and apply unconventional solutions to known problems

Defendants' assertion that the patents are not sufficiently specific and "simply apply known techniques" (RB26) is wrong. Like the district court, Defendants

improperly "disregard elements of the claims at issue that the specification makes clear are important parts of the claimed advance in the combination of elements." *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1294 (Fed. Cir. 2020).

For example, Defendants argue that the claims of the '728 and '825 patents "merely state that data compression is performed after a generic processor analyzes data to identify certain unspecified parameters or attributes and uses a generic encoder to compress the data based on the existence, or non-existence, of these unspecified parameters or attributes." RB at 26–27. Defendants similarly argue that the '203 claims "fail to explain how decompression is accomplished," and state only that "a data decompression processor is 'configured' to 'analyze' data, 'identify[]' an encoder, 'decompress[]' data based on its content, and then 'output' the decompressed data." RB27. But these characterizations blatantly ignore the claimed advance. The patents' shared specification makes clear that the claims are aimed at solving problems associated with conventional lossless data compression techniques, including the "fundamental problem" of their "content sensitive behavior." Appx333–334 at 2:29–3:19, Appx340–342 at 15:60–20:47, Appx345 at claim 1. And the patents recite specific solutions for achieving that goal—e.g., utilizing a combination of content-dependent and content-independent encoders to compress data blocks based on an analysis of the specific content or type of data being encoded, rather than relying solely on a descriptor such as a file extension.

Regarding the '908, '530, '458, and '751 patents, Defendants argue that they "fail to explain how storage of the compressed data occurs 'faster' or in less time, only that it is achieved." RB27. This too fails. Contrary to Defendants' assertions, the claims set forth specific solutions for achieving faster and more efficient digital data compression. For example, claim 1 of the '908 patent recites a system comprising, *inter alia*, a data accelerator configured to compress a first data block with a first compression technique, and a second data block with a second compression technique, different from the first compression technique. This unconventional utilization of a plurality of encoders and different compression techniques, and optionally a compression descriptor, "provides an effective increase of the data storage and retrieval bandwidth of a memory storage device." Appx175 at 2:61–62. The patent specification provides additional information regarding how to configure the claimed data accelerator so that the data is compressed faster than the transmission rate of the input data stream. *See, e.g.*, Appx175–177 at 2:63–3:45, 4:64–6:64, Appx180–181 at 12:40–13:18.

Defendants further assert that the '751 patent "does not state how to actually achieve a shorter compression, transmission, and decompression time." RB28. But again, Defendants simply ignore the clear language in the patent that sets forth exactly how this is achieved. For example, claim 1 recites a method comprising, *inter alia*, (1) analyzing the data to identify a parameter, attribute, or value of the

data that *excludes analyzing based solely on reading a descriptor*; (2) selecting an encoder associated with the identified parameter, attribute, or value; (3) utilizing a state machine to compress the data with the selected encoder; and (4) storing the compressed data block. Appx562; *see also* Appx551 at 2:42–56, Appx553–554 at 5:13–29, 6:13–40, 7:52–8:2 (describing problems in the current art and how the invention's utilization of a state machine to compress data blocks based on an analysis of the specific content of the data being encoded addresses these problems).

This Court's precedents confirm that the claims are sufficiently specific to pass muster under *Alice* step 1. *See, e.g.*, *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1257–61 (Fed. Cir. 2017) (rejecting argument that the claims were abstract because they do not "describe how to implement the 'programmable operational characteristic'"). Indeed, this Court expressly described the claims in *SRI* as reciting "***general steps*** for network monitoring with ***minimal detail*** present in the claim limitations themselves," and nonetheless held they were not abstract. *Packet Intel. LLC v. NetScout Sys., Inc.*, 965 F.3d 1299, 1309 (Fed. Cir. 2020).[1] The claims here are more specific than those in *SRI*. Defendants' assertion that *SRI* is inapposite because Realtime's patents do not identify "specific techniques" (RB30–31) simply cannot be squared with the claim language. Indeed, a comparison of the

[1] All emphases added unless otherwise noted.

representative claim in *SRI* (and other cases like *Visual Memory*) with one of Realtime's claims confirms that the recited techniques are sufficiently specific and not abstract. *Compare SRI*, 930 F.3d at 1301 with Appx345.

Realtime's claims are in stark contrast to those in Defendants' cited cases such as *Free Stream v. Alphonso Inc.*, which "do not at all describe how that result is achieved." No. 2019-1506, 2021 WL 1880931 (Fed. Cir. May 11, 2021). Defendants' reliance on *Yu v. Apple Inc.*, 1 F.4th 1040 (Fed. Cir. 2021), which concerned a patent on a digital camera with multiple sensors and lenses, is also misplaced. In that case, the recited solution was to take one digital image and "enhance" it with another, and the patent owner did not dispute that "the idea and practice of using multiple pictures to enhance each other has been known by photographers for over a century." *Id.* at 1043. In other words, the claimed solution itself was an abstract idea. But here, the claimed solutions in Realtime's patents are specific and unconventional methods for improved digital data compression, which are not abstract. *See DDR Holdings*, 773 F.3d at 1259. Defendants cite *no evidence or authority* that utilizing a plurality of content-dependent and content-independent encoders to compress the data based on the content of the data and not a file descriptor, for example, was a well-known longstanding technique at the time of the inventions. Defendants' unsupported attorney argument, which directly contradicts the faces of the patents themselves, is not clear and convincing evidence of

ineligibility. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018) ("whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact" that "must be proven by clear and convincing evidence").

4. That the recited solutions may utilize some generic components does not make them abstract

Defendants argue that the asserted claims must be abstract because they incorporate generic computer components. More specifically, Defendants point to the fact that the encoders may use known encoding algorithms and can be implemented on a general-purpose computer. RB30–31. This argument also fails.

As an initial matter, the claimed components are not all generic. For example, the processor recited in the '728, '825, and '203 patents, the data accelerator recited in the '908, '530, and '458 patents, and the data server and state machine recited in the '751 patent must be specially configured to perform the recited, non-conventional functions, such as analyzing the digital-data payload rather than just the descriptor, and utilizing multiple different compression techniques to provide accelerated data compression and storage.

But even to the extent that some of the recited components can properly be characterized as "conventional," this still would not render the claims abstract. Nor does an "invention's ability to run on a general-purpose computer doom[] the

claims." *Enfish*, 822 F.3d at 1338. The claims here are directed 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. *See id.* "None of the claims recite all types and all forms of [digital data compression]." *Visual Memory*, 867 F.3d at 1259. Defendants do not contend otherwise. Thus, contrary to Defendants' assertions, the claims fall squarely within the categories of claims this Court has repeatedly found to be patent-eligible such as in *Enfish*, *Finjan*, *Koninklijke*, *Visual Memory*, *SRI*, and *Uniloc*, to name a few.

Defendants appear to take the position that the foregoing cases are distinguishable because they recite "unconventional elements," whereas Realtime's claims do not. *See* RB34. But Defendants fail to identify a single purportedly "unconventional element" recited in the claims in those cases. Indeed, even a cursory look at the relevant claim language refutes Defendants' argument. For example, in *Visual Memory*, the claimed "computer memory system" comprised a "main memory" connected to a bus, and a "cache connected to said bus." 867 F.3d at 1257. In *Koninklijke*, the claimed error-checking device comprised a "generating device" and a "varying device." *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143, 1147 (Fed. Cir. 2019). And in *Uniloc*, the claim recited a "primary station for use in a communications system comprising at least one secondary station," a

"plurality of predetermined data fields arranged according to a first communications protocol," and "an additional data field for polling at least one secondary station." *Uniloc USA, Inc. v. LG Elecs. USA, Inc.*, 957 F.3d 1303, 1306 (Fed. Cir. 2020). There is nothing particularly "unconventional" about any of these recited elements when looking at them in isolation. But this Court nonetheless found the claims were not abstract because they were directed to specific improvements in existing technological processes. The same reasoning applies here. When properly looking at Realtime's claims *as a whole*, rather than at each element in isolation as Defendants attempt to do here, it is clear that they are directed to non-abstract improvements in existing digital data compression systems.

That the patents utilize known encoding techniques/algorithms also does not render them abstract. Realtime does not assert that the patents disclose a new type of encoding algorithm. Rather, the specifications make clear that the claimed advances are, for example, the utilization of 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, and their use of multiple encoders and compression techniques to achieve accelerated data compression. *See TecSec*, 978 F.3d at 1292 ("the Step 1 'directed to' inquiry" requires looking at "*what the patent asserts* to be the 'focus of the claimed advance over the prior art'"). Defendants point

to nothing to suggest that these were previously known techniques, and the patent specifications confirm they were not known at the time of the inventions.

5. Defendants ignore this Court's prior vacatur of the district court's ineligibility decision and the numerous errors repeated by the district court

Realtime's opening brief specifically identified numerous errors in the district court's § 101 analysis of the asserted patents, including (1) its assessment that there is no difference between claims directed to applications of abstract ideas, and claims that are directed to the abstract ideas themselves; (2) its conclusion that all claims across all seven asserted patents are directed to an abstract idea simply because they involve "information processing"; (3) its failure to conduct a claim specific analysis, instead improperly determining that the patents as a whole were abstract; (4) its treatment of the *'825 patent* as representative of *all seven asserted patents*, four of which are in different patent families; (5) its overgeneralization of the claims and failure to consider what the patents assert to be the claimed advance; (6) its erroneous and unsupported conclusion that its characterizations of the claims, which still show that they are directed to specific methods of digital data compression, are abstract; and (7) its failure to meaningfully distinguish the multiple prior § 101 rulings from other courts upholding the patentability of the claims. These errors were in direct contravention of this Court's prior findings in *Realtime*, wherein this Court found the district court had "improperly equated the presence of an abstract idea with a

conclusion that the claims are directed to such an idea," and directed the district court to "carefully consider the 'directed to' question once more." *Realtime*, 831 F. App'x at 497.

Defendants have *no response* to the vast majority of these clear errors in the district court's analysis. And for the few of these errors that Defendants do address, their response amounts to little more than conclusory assertions that Realtime is wrong and the district court was right. RB53–54. Indeed, in arguing that the district court purportedly conducted a proper "directed to" analysis, Defendants do not mention this Court's decision in *Realtime* at all. RB35–38. They also ignore this Court's directive to "at a minimum, provide[] a considered explanation as to why those judges [who previously ruled that Realtime's patent claims are patent-eligible] were wrong." *Realtime*, 831 F. App'x at 498. Instead, Defendants mischaracterize Realtime's arguments,[2] and generically argue, contrary to the record in this case, that the district court did consider the claims as a whole and "made extensive reference to the claims and limitations." *Id.* at 35. This fails.

While it may be true that in a few instances, the district court made reference to some of the limitations of the some of the claims, those references do not cure its

[2] *Compare* RB55 (falsely stating that "Realtime insists that the District Court was required to give deference to nonbinding opinions from other district courts") *with* BB57–59 (arguing that the district court again failed to distinguish the prior § 101 rulings upholding the patentability of Realtime's patents).

improper overgeneralization of the claims as being directed to mere "information processing." This finding flies in the face of this Court's prior findings in *Realtime*. *See also, e.g.*, *Mentone Sols. LLC v. Digi Int'l Inc.*, No. 2021-1202, 2021 WL 5291802, at *5–6 (Fed. Cir. Nov. 15, 2021) (rejecting district court's "high-level description" of the claims as "untethered to the invention as claimed," and finding that the claims aimed to "solve a challenge unique to computer networks" and increased the rate of network data transmission). There is also no legitimate explanation for the district court's treatment of the '825 patent as representative of other patents that are not even in the same family. *See, e.g.*, Appx15, Appx26, Appx32, Appx34. These are just a few of the many reversible errors committed by the district court.

Defendants attempt to distinguish this case from *TecSec* on the ground that "the characterization of the claims in *TecSec* was 'materially inaccurate.'" RB36. But so, too, was the district court's characterization of Realtime's claims. In vacating the district court's prior ruling, this Court "question[ed] 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.'" *Realtime*, 831 F. App'x at 497. This Court further found that the district court's analysis "omitt[ed] key aspects of the claims," and "improperly equated the presence of an abstract idea with a conclusion that the claims are directed to such an idea." *Id.* But rather than correct these errors

and "carefully consider the 'directed to' question once more," *id.*, the district court watered the claims down even further to mere "data compression" and "information processing." As in *TecSec*, this characterization is "materially inaccurate."

Defendants next point to the district court's statement that "Realtime's own descriptions of the patents are substantially similar to the abstract ideas that I find the patents directed to." RB37 (citing Appx46). For example, the district court found that "[e]ven under Realtime's own characterization of 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," the claims are "directed to the abstract analysis of data." Appx46. But contrary to Defendants' assertions, these statements do not show that the district court's conclusions are correct. Quite the opposite—these statements further demonstrate that the district court improperly stripped the claims of key limitations (e.g., the multiple encoders and utilization of content dependent and content independent compression of the data blocks) to conclude that they are directed to mere "analysis of data." This is the exactly the type of "sweeping generalization" this Court cautioned against. *Realtime*, 831 F. App'x at 497.

Finally, Defendants argue that the district court was correct to individually analyze each step of the '825 patent in isolation to determine whether each is

abstract. RB37. According to Defendants, this Court engaged in a similar analysis in *PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310 (Fed. Cir. 2021). But even there, this Court recognized that "the step-one inquiry 'looks to the claims' "character as a whole" rather than evaluating each claim limitation in a vacuum.'" *Id.* at 1317. And though the Court determined that the claims at issue in *PersonalWeb* were "clearly focused on the combination of . . . abstract-idea *processes*," Realtime's claims are not. Each of the claimed steps and data management functions in *PersonalWeb* was an abstract process that could be "performed in the human mind, or by a human using a pen and paper." *Id.* at 1316–17. For example, the Court likened controlling access to data to loaning library materials to only card-holding members, and marking data for deletion to the "long-prevalent practice" of looking at an envelope and discarding certain letters based on characteristics of the mail. *Id.* at 1317. But as explained above, digital data compression requires computer components and cannot be performed by a human. Defendants' attempt to water down the patents and read out the digital compression aspect of the claimed inventions is improper. *PersonalWeb* is thus easily distinguishable, and does not support the district court's improper analysis of the '825 and other patents. *See Realtime*, 831 F. App'x at 496 (admonishing the district court's "failure to evaluate the claims as a whole").

In addition, that the district court acknowledged that one of the figures of the '825 patent is a flow chart (RB38) does not demonstrate that it properly analyzed the claims as a whole. Had the district court actually considered each of the claimed steps and components together, it would have concluded that the claims are directed to specific improvements to digital data compression, which is not abstract.

6. Defendants' cited cases are distinguishable

The *Voit*, *Electric Power*, and *RecogniCorp* cases relied on by Defendants are distinguishable and do not support that Realtime's claims are directed to an abstract idea.

In *Voit Technologies, LLC v. Del-Ton, Inc.*, the claims were not directed to improving the functioning of the computer itself, but rather used conventional compression techniques to "facilitate the buying and selling of items." 757 F. App'x 1000, 1002 (Fed. Cir. 2019). And though the claims were described in the specification as being "directed to using different compression formats," the plaintiff failed to explain how this improved compression techniques or the functioning of a computer. *Id.* at 1003. In contrast, Realtime's claims are not directed to simply improving or automating an abstract idea like buying and selling items. Rather, it is clear from the faces of the patents that they are aimed at providing faster and more efficient methods and systems for digital data compression, which improves computer functionality. And further unlike the claims in *Voit*, the patent

specifications explain precisely how this is accomplished. For example, problems relating to data dependency are addressed by utilizing multiple encoders and a combination of content-dependent and content-independent compression techniques, unlike conventional "content dependent methods" which focused on descriptors such as file extensions. *See, e.g.*, Appx333–335 at 2:29–5:12.

The claims in *RecogniCorp, LLC v. Nintendo Co.* also were not directed to improvements in computer functionality, but rather recited methods for creating a composite image using standard encoding and decoding techniques. 855 F.3d 1322, 1326 (Fed. Cir. 2017). More specifically, the claimed invention was limited to taking an image on a display, assigning an image code, and reproducing the image based on the codes, which, as the court noted, "does not even require a computer." *Id.* at 1326, 1328. Here, by contrast, the claims are not simply directed to *standard* encoding and decoding. Nor do they merely use conventional computing techniques to achieve an abstract result. Rather, each of the asserted patents discloses specific and unconventional improvements to digital data compression, discussed in detail above and in Realtime's opening brief. Indeed, in another case involving some of the same patents at issue here, Judge Love expressly rejected the defendants' reliance on *RecogniCorp*, finding that "claim 1 of the '728 Patent is not simply encoding and decoding. Rather, it ***improves typical data compression*** by compressing the data stream through content dependent and independent data

recognition, as well as a plethora of encoders to achieve its maximum compression. '728 Patent at 5:03–07. This results in real-time or pseudo-real-time compression." Appx7490; *see also Koninklijke*, 942 F.3d at 1148 (rejecting the district court's reliance on *RecogniCorp*, as the claims at issue "actually improved the functioning of a computer").

Defendants' reliance on *Electric Power Group, LLC v. Alstom S.A* fails for the same reasons. The patent in that case claimed a method for "detecting events on an interconnected electric power grid in real time over a wide area and automatically analyzing the events on the interconnected electric power grid." 830 F.3d 1350, 1351 (Fed. Cir. 2016). As this Court explained, the advance the claims "purport to make is a process of gathering and analyzing information of a specified content, then displaying the results, and not any particular assertedly inventive technology for performing those functions." *Id.* at 1354. In contrast, Realtime's claims do not simply gather, analyze, and display information. The only way to reach that conclusion would be to strip the claims of key limitations and ignore the patents' claimed advances in digital data compression. *See Realtime*, 831 F. App'x at 497 (explaining that the '728 patent claims "expressly achieve [the claimed] result in certain ways, involving examining data blocks and not relying just on a descriptor"); *id.* at 500 (explaining that the "specification describes that data-examination basis for choosing a compressor method as one of the claimed advances over the prior

art," and that 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 [*Alice* Step 1] analysis").

B. Defendants' Assertions that the Patents Lack Inventive Concept Are Contrary to Fact and Law

Even assuming, *arguendo*, that the patents were directed to "information processing" or some other abstract idea, it is clear that each claim "amounts to significantly more than a patent upon the [abstract idea] itself" and is thus patent eligible. *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 217–18 (2014). Defendants' assertions that the patents lack inventive concept simply because they utilize some purportedly "generic" computer elements improperly overlooks the inventive aspects of the claims and should be rejected.

1. The '728, '203, and '825 patents

Defendants assert that the '728, '203, and '825 patents lack inventive concept because the encoders, compression, and processor "are nothing more than conventional components performing basic functions." RB45. More specifically, Defendants point to the fact that the encoders utilize known compression algorithms, and that the claims can be executed on a general-purpose computer. *Id.* These arguments fail.

As discussed in detail above and in Realtime's opening brief, while the claimed methods may be run on a general purpose computer and utilize known

compression algorithms, this does not render them ineligible. *See Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). The recited processor must be specially configured to perform the recited, non-conventional functions, including analyzing the data to identify one or more parameters or attributes, without relying solely on a descriptor, and performing compression with a plurality of different encoders based on that analysis. And, fatal to their *Alice* step two arguments, Defendants offer *no evidence or authority* for their assertion that "[a]nalyzing data without relying only on a descriptor is . . . a 'well-understood, routine, conventional activit[y] previously known to the industry.'" RB45–46. This unsupported attorney argument, contrary to the statements in the patents themselves, cannot support a finding of ineligibility.

Defendants' reliance on statements in the specification that the data in the data block can be examined using known methods (RB46) likewise fails. Realtime does not claim that the patents invented new methods for examining data. The inventiveness of the asserted claims lies in their direct examination of the digital-data payload as part of the determination of how to compress the data, rather than examining just the descriptor.

Finally, Defendants' attempt to justify the district court's erroneous analysis purporting to require that the claims recite "physical components" (Appx28) also fails. In concluding that the '825 patent "does not provide 'technological solutions,'"

the district court found that the claims do not require physical components, and that the claimed encoders are abstract. Appx28; *see also* Appx31. These conclusions are factually incorrect and contrary to this Court's precedents. *See Uniloc*, 957 F.3d at 1309. That the district court paid lip service to the correct standard does not redeem its erroneous step two analysis.

2. The '908, '530, and '458 patents

Defendants' step two arguments regarding '908, '530, and '458 patents likewise fail. According to Defendants, these patents lack inventive concept because the recited "memory device" is a generic component. RB47. But this does not and cannot render the claims ineligible. Indeed, the claims in *Visual Memory* similarly recited a "main memory" that could be found on a general-purpose computer. 867 F.3d at 1257. The claims were nonetheless found to be patent-eligible under § 101. *See also Enfish*, 822 F.3d at 1336 (reciting a "computer memory"). Contrary to Defendants' assertions, there is no requirement that each recited element, taken in isolation, must be inventive. *See Bascom*, 827 F.3d at 1349 (rejecting argument that claims lacked inventive concept because the limitations "local client computer," "remote ISP server," "Internet computer network," and "controlled access network accounts" were "described in the specification as well-known generic computer components").

Defendants next argue that the data accelerator is also generic and uses "well-understood, routine, conventional activity previously known to the industry." RB47–48. But again, Defendants cite *zero evidence or authority* to support that utilizing a data accelerator configured to apply two different compression techniques in order to compress and store digital data faster than the digital data can be stored in uncompressed form was a well-understood and common practice at the time of the invention. Nor do they provide any evidence to support their assertion that utilizing a descriptor in the manner claimed in the '530 patent, or the '458 patent's utilization of multiple encoders to apply different compression techniques based on analysis of the data to provide accelerated data storage, were well-known and conventional. Defendants would simply have this Court accept their unsupported attorney argument to invalidate each of the asserted patents. This falls far short of their burden to prove ineligibility by clear and convincing evidence.

Moreover, Defendants again fail to address the clear errors in the district court's analysis. As discussed in Realtime's opening brief, the district court failed to sufficiently analyze the limitations of the '908, '530, and '458 patents, and improperly analyzed only the "additional limitations" of '908 patent "relative to the #825 and #728 patents"—which are not even in the same patent family—without actually identifying what those "additional limitations" are. Appx34. The district court also disregarded the statements in the patent specifications regarding their

claimed advances, failed to consider the claims as an ordered combination, improperly treated the '908 *patent* as representative of all the claims of the '458 *patent*, improperly limited its step two analysis to determining whether the claims recite "conventional hardware," and improperly concluded that use of known compression algorithms renders the claims ineligible. *See* Appx32–38. These errors require reversal.

3. The '751 patent

Defendants' arguments regarding the '751 patent fail for the same reasons discussed above. Contrary to Defendants' assertions, the recited data server does not merely analyze data, select an encoder, compress and store data. RB49. This oversimplification of the claims leaves out key limitations aimed at the claimed advance, including use of a state machine to compress data blocks based on an analysis of the specific content of the data being encoded, without relying solely on a descriptor. *See, e.g.*, Appx563 at claim 25, Appx553 at 5:13–29, 6:13–40. Like the district court, Defendants fail to consider the limitations of the '751 claims as an ordered combination. And under a proper analysis, it is clear that the claims are directed to a specific and unconventional implementation of digital data

compression, which is patent-eligible. That some of the elements may be "well-known" components does not doom the claims. *Bascom*, 827 F.3d 1341, 1350.[3]

III. REALTIME'S RESPONSE TO *AMICUS CURIAE*

Realtime briefly responds to the *amicus curiae* brief filed by Veritas Technologies LLC ("Veritas") (Dkt. 60) regarding the '908, '530, and '728 patents, which is largely repetitive of the arguments set forth by Defendants. The arguments in Veritas's brief are without merit and should be rejected.

First, Veritas asserts that Realtime's patents must be invalid because Realtime has enforced its constitutionally protected patent rights against different companies and products. Dkt. 60 at 2–3. Not surprisingly, Veritas cites no authority to support that a patent owner's enforcement activities bear any relevance to the § 101 analysis—because they do not. If anything, that multiple different companies across different industries are utilizing the disclosed digital data compression methods and systems further confirms that they are inventive and improved upon the prior art.

Second, Veritas argues that the '908 and '530 patents are abstract because the claimed memory device is generic, the claims do not specify which compression

[3] Defendants attempt to fault Realtime for "accusing the District Court of mistakes without any reference to the record" (RB52), which is blatantly false. Realtime's opening brief is replete with citations to the district court's May 4, 2021 and August 23, 2021 orders. To the extent that Realtime's arguments are based on analysis that the district court improperly failed to conduct, Realtime of course cannot cite to parts of the record that do not exist.

algorithms are used, and do not state how to achieve accelerated data compression. These arguments fail for the reasons discussed above. Veritas improperly fails to acknowledge the patents' claimed advance and selectively analyzes only certain limitations in isolation, rather than looking at the claims as a whole, as this Court's precedents require. *See, e.g.*, *TecSec*, 978 F.3d at 1292. Further, the inventive aspect of the claimed inventions is not what particular compression technique is used to encode the data. Rather, the inventiveness lies in the patents' utilization of a plurality of encoders and compression techniques—which is how accelerated compression is achieved. Like Defendants, Veritas provides no evidence or authority to support that this was a known technique.

Third, Veritas argues that the '728 patent is directed to the abstract idea of "compressing data based on the content of that data," as found by the district court. Dkt. 60 at 12. This is essentially the same characterization of the claims that this Court has already rejected specifically with respect to this patent. As explained by this Court, this overgeneralization "miss[es] that the claims expressly achieve this result in certain ways, involving examining data blocks and not relying just on a descriptor." *Realtime*, 831 F. App'x at 497. Veritas, like Defendants, simply ignore this Court's findings. *See also Visual Memory*, 867 F.3d at 1262 (claims directed to "an 'improved memory system' that configured operational characteristics of a

computer's cache memory based on the type of processor connected to the memory system" not abstract).

Fourth, Veritas's assertions that the patents lack inventive concept because they utilize generic computer components fails for the reasons discussed above. The recited components are not all generic, but are specially configured to perform the claimed unconventional functions which provide faster and more efficient digital data compression.

Veritas's overarching complaint that the claims are too broad to be eligible for patenting falls flat. The claims do not preempt all ways of digital data compression, or even all ways of content-independent digital data compression—only the specific and limited methods and systems recited in the claims. Veritas's arguments repeat the errors of Defendants and the district court and should be rejected.

IV. CONCLUSION

For reasons set forth above and in Realtime's opening brief, the district court's orders granting Defendants' Rule 12(b)(6) motions to dismiss should be reversed, and the asserted patents should be found patent eligible under § 101.

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CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitation of Federal Circuit Rule 32(a). This brief contains 6,972 words, excluding the parts of the brief exempted under Federal Rule of Appellate Procedure 32(f) and Federal Circuit Rule 32(b).

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