Case Nos. 2021-2251, 2021-2291

IN THE 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 Case No. 1:17-cv-00800-CFC, 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 Case No. 1:17-cv-00925-CFC, Judge Colm F. Connolly

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EXEMPLARY CLAIMS

U.S. Patent No. 9,054,728

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,

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.

U.S. Patent No. 9,116,908

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.

U.S. Patent No. 9,667,751

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

CERTIFICATE OF INTEREST

Counsel for Defendant-Appellee Fortinet, Inc. certifies the following:

1.   The full name of the party represented by us is:

    Fortinet, Inc.

2.   The name of the real parties in interest represented by us:

    Not applicable.

3.   All parent corporations and publicly held companies that own 10 percent or more of the stock of the party represented by us are as follows:

    Not applicable.

4.   The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court (and who have not or will not enter an appearance in this case) are:

    John Neukom, Douglas Nemec, James Pak, Christopher McKinley of Skadden, Arps, Slate, Meagher & Flom LLP

    Jack Blumenfield, Brian Egan and Jeffrey Lyons of Morris, Nichols, Arsht & Tunnell LLP

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

    None

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):

    Not applicable.

DATED: March 11, 2022   By: /s/ John M. Neukom
                                    John M. Neukom

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1.   The full name of the party represented by us is:

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2.   The name of the real parties in interest represented by us:

      Not applicable.

3.   All parent corporations and publicly held companies that own 10 percent or more of the stock of the party represented by us are as follows:

      Reduxio Systems, LTD.

4.   The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court (and who have not or will not enter an appearance in this case) are:

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

      None

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):

      Not applicable.

DATED: March 11, 2022   By: /s/ Guy Yonay
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1. The full name of the party represented by us is:

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    Not applicable.

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    Seahawk Holding (Cayman) Limited.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court (and who have not or will not enter an appearance in this case) are:

    Steven L. Caponi and Matthew B. Goeller of K&L Gates LLP

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

    None

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):

    Not applicable.

DATED: March 11, 2022   By: /s/ Theodore J. Angelis
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2.   The name of the real parties in interest represented by us:

      Not applicable.

3.   All parent corporations and publicly held companies that own 10 percent or more of the stock of the party represented by us are as follows:

      Not applicable.

4.   The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court (and who have not or will not enter an appearance in this case) are:

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

      None

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):

      Not applicable

DATED: March 11, 2022   By: /s/ Guy Yonay
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2.   The name of the real parties in interest represented by us:

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

- Realtime Data LLC d/b/a IXO v. Acronis, Inc., United States District Court for the District of Massachusetts, Case No. 1:17-cv-11279-IT
- Realtime Data LLC v. Carbonite, Inc. et al, United States District Court for the District of Massachusetts, Case No. 1:17-cv-12499-IT
- Realtime Data LLC v. Veritas Technologies LLC, et al, United States District Court for the Northern District of California, Case No. 3:18-cv-06029-SI
- Realtime Data LLC v. Fujitsu America, Inc. et al, United States District Court for the Northern District of California, Case No. 3:17-cv-02109-SK

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):

      Not applicable.

DATED: March 11, 2022   By: /s/ Joshua M. Masur
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1.   The full name of the party represented by us is:

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2.   The name of the real parties in interest represented by us:

   Not applicable.

3.   All parent corporations and publicly held companies that own 10 percent or more of the stock of the party represented by us are as follows:

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   Not applicable

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DATED: March 11, 2022   By: /s/ Timothy J. Carroll

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  Not applicable.

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

  None

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):

  Not applicable.

DATED: March 11, 2022   By: /s/ Hilary L. Preston
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3.   All parent corporations and publicly held companies that own 10 percent or more of the stock of the party represented by us are as follows:

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4.   The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court (and who have not or will not enter an appearance in this case) are:

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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):

    Not applicable.

DATED: March 11, 2022   By: /s/ Christopher R. Kinkade
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1.   The full name of the party represented by us is:

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2.   The name of the real parties in interest represented by us:

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3.   All parent corporations and publicly held companies that own 10 percent or more of the stock of the party represented by us are as follows:

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4.   The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court (and who have not or will not enter an appearance in this case) are:

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

> None

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):

> Not applicable.

DATED: March 11, 2022   By: /s/ M. Michelle Rohani
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1. The full name of the party represented by us is:

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2. The name of the real parties in interest represented by us:

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3. All parent corporations and publicly held companies that own 10 percent or more of the stock of the party represented by us are as follows:

   Not applicable.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court (and who have not or will not enter an appearance in this case) are:

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   David E. Moore, Alan R. Silverstein, Bindu A. Palapura, and Stephanie E. O'Byrne of Potter Anderson & Corroon, LLP

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

   - Realtime Data LLC. v. Array Networks Inc., United States Court of Appeals for the Federal Circuit, Appeal No. 2021-2251

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):

   Not applicable.

DATED: March 11, 2022   By: /s/ Robert E. Purcell
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STATEMENT OF RELATED CASES

An appeal in this same action was previously before this Court in *Realtime Data LLC v. Reduxio Systems, Inc. et al.*, CAFC Nos. 2019-2198, 2019-2201, 2019-2202, 2019-2204. Judges Newman, O'Malley, and Taranto were on the panel. The Court issued its decision on October 23, 2020, and the decision can be found in the Federal Reporter at 831 F. App'x 492.

The cases collectively known to counsel for Defendants-Appellees to be pending in this or any other court that will directly affect or be directly affected by this Court's decision in this pending appeal are:

- *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

INTRODUCTION

Three times, the District Court considered whether patents asserted by Realtime Data, LLC ("Realtime") are eligible for protection under 35 U.S.C. § 101.[1] Three times, the District Court concluded they are not. It did not err in doing so. The District Court simply applied established law to indisputable facts.

Before applying the *Alice Corporation Pty. Ltd. v. CLS Bank International*, 573 U.S. 208 (2014) ("*Alice*") two-step framework, the District Court specifically considered whether patent eligibility could be resolved at the pleading stage. Noting that Realtime's own patents confirm that the claimed technologies and methods were well-known and routine, the District Court proceeded to address patent eligibility using Realtime's own claim constructions.

At *Alice* step one, the District Court correctly found that Realtime's patents are directed to abstract ideas—such as analyzing, processing, manipulating, storing, and outputting data—that this Court has long found ineligible for patent protection.

Turning to *Alice* step two, the District Court properly considered the ordered combination of claim limitations, noting that the abstract ideas are implemented with

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[1]   Realtime alleges that Defendants-Appellees infringe one or more patents from each of three patent families: U.S. Patent Nos. 9,054,728; 8,717,203; and 8,933,825 (Data Compression Patents); U.S. Patent Nos. 9,116,908; 7,415,530; and 10,019,458 (Accelerated Data Storage and Retrieval Patents); and U.S. Patent No. 9,667,751 (Data Feed Acceleration Patent).

computer components and processes already known in the art—a fact conceded in the patent specifications. Thus, although written in technical jargon, the claims fail to offer innovative technological solutions or even new techniques for well-known concepts. In other words, the patent claims lack an inventive concept to establish patent eligibility at step two.

Having thoroughly considered patent eligibility—at the outset of the case, following this Court's remand for reconsideration, and after Realtime amended its complaints—the District Court addressed the same arguments that Realtime now raises on appeal. For the same reasons the District Court rejected them below, so too should this Court on appeal.

Despite its thorough step one "directed to" analysis, Realtime argues that the District Court ignored claim limitations. *See* Br. at 12. The record shows otherwise. The District Court carefully distinguished between independent and dependent claims and specifically addressed additional limitations in the latter. *See* Appx19-20.

Realtime also argues that, at step one, the District Court oversimplified the patents. Br. at 12. Again, the record refutes the argument. In fact, the District Court addressed this very point. Noting that patents must not be oversimplified, the court explained that Realtime's patents are written at a high level of generality and that Realtime's own descriptions of its patents largely mirrored the District Court's

descriptions. *See* Appx46. Indeed, the District Court applied "Realtime's own characterization of the asserted patents" and still found them directed to abstract ideas. *Id.*

As for the District Court's step two analysis, Realtime complains that it improperly focused on the use of known computer components, failed to consider claim limitations as an ordered combination, and improperly resolved factual issues. Br. at 12-13. Again, the record refutes these three assertions.

First, although the District Court *did* observe that the claimed methods can be implemented with known technology, it did so in response to Realtime's far-fetched argument that its patents improve the function of "computer parts themselves." Appx26-27. Moreover, the District Court's apt observation that some of the patents do not "even require physical components" (Appx28) makes clear that its analysis did not turn on or unduly emphasize the use of known computer technology.

Second, the District Court made clear—explicitly and repeatedly—that it considered claim limitations "as an ordered combination." Appx25; Appx28; Appx55. Lastly, the District Court rested its step two conclusion on facts conceded by the patents themselves, intrinsic evidence properly considered at the pleading stage.

Unable to tie its legal arguments to the record, Realtime retreats to its familiar refrain—other judges were right and the District Court was wrong. But, as the

District Court noted, in the six-plus years since Judge Love's first report and recommendation in 2015, *see* Appx7504, this Court's § 101 jurisprudence—particularly with respect to patents claiming data activities—has substantially developed.

Realtime levels many unfounded accusations against the District Court. But it never fully addresses the key salient point—that Realtime's patents do not claim anything more than abstract ideas implemented using well-known data compression techniques and generic computer technology.

The District Court did not err in finding Realtime's patents ineligible for protection under § 101 and its judgment should be affirmed.

STATEMENT OF ISSUES ON REVIEW

This appeal presents the following issues for review by this Court:

1.   At *Alice* step one, did the District Court correctly conclude that Realtime's patents—claiming steps such as analyzing, processing, manipulating, storing, and outputting data—are directed to abstract ideas?

2.   At *Alice* step two, did the District Court correctly conclude that the limitations in Realtime's patents—individually or as an ordered combination—do not supply an inventive concept beyond the abstract ideas themselves?

3.   Where the District Court reached its *Alice* step one and two conclusions based on disclosures in the patents and applying Realtime's own claim constructions, did the District Court correctly dismiss Realtime's claims as a matter of law?

STATEMENT OF THE CASE

I.   The Patents-In-Suit

There are seven patents at issue: U.S. Patent Nos. 9,054,728 (the "'728 Patent"); 8,717,203 (the "'203 Patent"); 8,933,825 (the "'825 Patent"); 9,116,908 (the "'908 Patent"); 7,415,530 (the "'530 Patent"); 10,019,458 (the "'458 Patent"); and 9,667,751 (the "'751 Patent") (collectively, the "Patents-in-Suit").

The Patents-in-Suit are directed to abstract methods of information processing—analyzing, processing, manipulating, storing, and outputting data. The '728, '203, and '825 Patents describe the concept of compressing or decompressing data using a compression or decompression method that is based on the underlying type of data. The '908, '530, and '458 Patents describe the concept of using two or more compression techniques to compress and store data "faster" than it would be stored in uncompressed form. The '751 Patent describes the concepts of the two previous sets combined: (i) compressing data using a compression method that is dependent on the underlying data type, and (ii) thereafter using two or more compression techniques to compress and store data "faster" than it would be stored in uncompressed form.

A.   The Data Compression Patents

The first family includes three asserted patents (the '728, '203, and '825 Patents) entitled "Data Compression Systems and Methods." These patents, which share a common specification, purport to resolve "the problem of 'data dependency' in prior art [compression] systems. 'Data dependency' is 'content sensitive behavior' that means 'the compression ratio achieved is highly contingent upon the content of the data being compressed.'" *Realtime Data LLC v. Reduxio Sys., Inc.*, 831 F. App'x 492, 493 (Fed. Cir. 2020) (nonprecedential) (citing the '728 Patent, col. 2, ll. 29-35). To avoid problems associated with data dependency and improve efficacy, the Data Compression Patents describe "a system for data compression that looks beyond the file type descriptor [e.g., .doc, .txt, or .pdf], to the underlying data, to complete the desired compression." *Id*. at 493-94 (citing col. 3, l. 59-col. 5, l. 11).

The '728 Patent

The '728 Patent focuses on "determining the optimal compression technique for a given set of input data and intended application." Appx333 at 2:66-67. Claim 25 of the '728 Patent is representative. *See* Appx346 at 28:31-51. The specification states that incoming data is analyzed to identify "parameters that may be indicative of either the data type/content of a given data block or the appropriate data compression algorithm or algorithms" to apply. Appx340 at 16:22-28. If the data type is recognized, the data is routed to a "content dependent encoder module"; if

not, the data goes to a "content independent encoder module." Appx340 at 16:31-34. Both the "content dependent encoder module" and "content independent encoder module" may include "any number" of lossless or lossy encoding techniques "currently well known within the art." Appx340 at 16:37-44; *id.* at 16:50-57.

Claim 25 fails to specify the type of compression to be performed. The claim does not define the structure of the encoders, and the specification merely treats the encoders as generic components. *See, e.g.*, Appx306 (depicting "Encoder E1 ... En" boxes within encoder module 30); Appx335 at 6:30-32 ("[T]he present invention may be implemented in various forms of hardware, software, firmware, or a combination thereof."). That is because *any* type of compression can be used. *See* Appx336 at 7:11-22 ("any number ... of ... encoding techniques currently well known within the art ... to provide a broad coverage of existing and future data types").

The '203 Patent

The '203 Patent is the decompression counterpart to the '728 Patent. It focuses on using a plurality of decompression techniques "to reduce the data decoding time." Appx417 at 15:8-10. Claim 14 of the '203 Patent is representative. *See* Appx423 at 27:65-28:37. Claim 14 requires the analysis of unspecified characteristics of the data to determine the appropriate decompression technique and results in the output of decompressed data. *See id.* Like claim 25 of the '728 Patent,

this claim also fails to specify the type of decompression to be performed. The specification does not limit what the "data decompression engine" encompasses or includes. Instead, the specification notes that "[t]he decoders D1 ... Dn may include those lossless encoding techniques currently well known within the art[.]" Appx416-417 at 14:66-15:3. It also states that "pars[ing], lexically, syntactically, or otherwise analyz[ing] the input data block" can be performed "using methods known by those skilled in the art to extract the data compression type descriptor associated with the data block." Appx416 at 14:52-57.

The '825 Patent

The '825 Patent, like the '728 Patent, is focused on the compression of data based on its content. Claim 18 of the '825 Patent is representative. *See* Appx501 at 27:19-42. Claim 18 describes a method where (i) at least one encoder is associated with unspecified parameters or attributes of the data, (ii) the presence or absence of the unspecified parameters or attributes is identified, and (iii) the encoder is used to compress the data. *See id.* Although claim 18 of the '825 Patent is a method claim, it is analogous to the representative claim in the '728 Patent. Moreover, because the '825 Patent shares a specification with the '728 and '203 Patents, it suffers from the same shortcomings as those identified above.

Each of the methods claimed in the '728, '203 and '825 Patents may be "implemented in various forms of hardware, software, firmware, or a combination

thereof … preferably … [on] a general purpose computer or any machine or device having any suitable and preferred microprocessor architecture." Appx335 at 6:30-37; Appx412 at 6:24-31; Appx490 at 6:24-31.

B.   The Accelerated Data Storage And Retrieval Patents

The second family includes three asserted patents (the '908, '530, and '458 Patents), entitled "System and Methods for Accelerated Data Storage and Retrieval." The patents, which share a common specification, disclose using "lossless data compression and decompression." Appx176 at 4:42-44; Appx112 at 4:42-44; Appx259 at 4:45-47.

The '908 Patent

Claim 1 is representative of the '908 Patent. *See* Appx183 at 18:50-62. Claim 1 is directed to a system that includes memory and a data accelerator that (i) compresses two data blocks using different compression techniques; (ii) stores the blocks; and (iii) does this compression and storage "faster" than it could store the uncompressed blocks. *See id.*

Claim 1 of the '908 Patent does not disclose any specific compression techniques, nor does the specification. The specification discloses that "the data storage accelerator ... employs ... any conventional data compression method suitable for compressing data at a rate necessary for obtaining accelerated data storage" (Appx182 at 16:49-54; *see* Appx180 at 11:31-36), and that "the data

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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" (Appx179 at 10:6-10). It also states 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 techniques currently well known within the art[.]"   Appx180 at 11:66-12:5. Moreover, the claimed invention "may be implemented in various forms of hardware, software, firmware, or a combination thereof." Appx176 at 4:47-50.

Claim 1 and the '908 Patent's specification also does not specify how the claimed "faster" results are achieved. The specification simply states that a "data storage accelerator includes one or a plurality of high speed data compression encoders that are configured to simultaneously or sequentially losslessly compress data at a rate equivalent to or faster than the transmission rate of an input data stream."   Appx176-177 at 4:64-5:1.   The '908 Patent does not provide any meaningful details concerning the high-speed compression encoders, nor does it explain how they are configured to compress data "faster."

The '530 Patent

Claim 1 of the '530 Patent is representative of the patent and analogous to claim 1 of the '908 Patent, with one addition: it recites storing a compression technique "descriptor" and using that descriptor to decompress the data. *See*

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Appx119 at 18:24-42. But attaching a descriptor to an encoded data block is a well-known technique—as the specification explains, the system "analyzes the input data block using methods known by those skilled in the art to extract the data compression type descriptor associated with the data block." Appx117 at 14:5-15. In addition, because the '530 Patent shares a specification with the '908 Patent, it also fails to adequately disclose any specific compression techniques or any additional detail as to how the claimed "faster" results are achieved.

The '458 Patent

Claim 9 is representative of the '458 Patent and analogous to the representative claims of the '908 and '530 Patents, save for the fact that claim 9 is a method claim that requires the analysis of each data block and use of lossless compression techniques. *See* Appx267 at 19:63-20:14. The '458 Patent and its specification has the same deficiencies as those associated with the '908 and '530 Patents.

C.   The Data Feed Acceleration Patent

The '751 Patent

From a third family, Realtime asserts just one patent (the '751 Patent) entitled "Data Feed Acceleration" that combines the concepts of the previous patents. It is focused on "providing accelerated transmission of data ... over a communication channel using data compression and decompression[.]" Appx551 at 1:25-36. Claim

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1 of the '751 Patent is representative. *See* Appx562 at 23:45-57. Claim 1 recites the steps of (i) identifying a "parameter, attribute, or value" of data; (ii) selecting an encoder based on that parameter; (iii) compressing the data at a certain rate; (iv) storing the data; and (v) doing this compression/transmission in less time than it could have for uncompressed data. *See id.*

Claim 1 of the '751 Patent does nothing more than state the result to be achieved: "compressing the data block and the storing the compressed data block" in "less than the time of storing the data block in the uncompressed form." *Id.* at 23:55-57. The specification notes unhelpfully 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." Appx553 at 6:28-36.

The '751 Patent claims the use of a state machine during compression. But the state machine is described as "either part of the hardware, microinstruction code or application programs that are executed via the operating system, or any combination thereof." Appx554 at 8:13-17. More importantly, the state machine is not a meaningful limitation to the '751 Patent. Instead, it "comprises a set of compression tables that comprise information for encoding the next character" (Appx555 at 9:11-13), and is implemented using "[g]eneral purpose computers,

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servers, workstations, personal digital assistants, special purpose microprocessors, dedicated hardware, or and [sic] combination thereof" (Appx554 at 8:23-25). Furthermore, the specification states that, in preferred embodiments, compression is achieved using well-known, conventional algorithms. Appx555 at 9:6-10.

II.   The District Court's Prior Patent Eligibility Determinations

Realtime asserted a combination of the Patents-in-Suit against each of the Defendants-Appellees. In the course of two related actions, the District Court has addressed Realtime's patents three times, finding each time that they are invalid.

First, in an oral decision following lengthy argument on motions to dismiss, the District Court found the '203, '728, '530, '908, and '751 Patents ineligible. *See* Appx4938-4939. At *Alice* step one, the District Court found the claims directed to abstract ideas because they "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." Appx4935 at 45:12-20 (citing *McRo, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016)). At *Alice* step two, the District Court found the claim limitations—both individually and as an ordered combination—lack an inventive concept. *See* Appx4938 at 48:19-25; Appx4924 at 34:2-10.

Realtime appealed. On appeal, this Court found that it was not able to meaningfully review the District Court's decision and remanded the case so that the District Court could "give additional consideration to the eligibility question and elaborate on its reasoning." Appx8209. The Court made clear 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." Appx8219.

On remand, the District Court once again found Realtime's patents invalid. *See Realtime Data LLC v. Array Networks Inc.*, 537 F. Supp. 3d 591, 621 (D. Del. 2021); *see also* Appx56. Its decision began with an analysis of the patents, separately applying *Alice* steps one and two to each patent. Appx18-43. It then summarized and specifically addressed Realtime's arguments. Appx44-55. In rejecting Realtime's argument that the patents "provide particular technological solutions to overcome technological problems specific to the field of data compression," the District Court noted that the patents simply disclose the benefits of data compression, rather than how to engineer an improved system. Appx44-47.

The District Court also identified "paradigmatic examples of results-based claiming" found in the faster speed and compression ratio limitations of the '530, '908, '751, and '458 Patents. Appx49. It remarked that "[w]hile 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." *Id*. The

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District Court acknowledged that while it must be careful not to oversimplify, the Patents-in-Suit are "written at a high level of generality" and "Realtime's own descriptions of the patents are substantially similar to the abstract ideas" identified by the District Court. Appx46.

With respect to step two, the District Court found the patents "simply apply an abstract idea on generic computers with generic techniques" which "is not enough to transform the claimed idea into a patent-eligible invention." Appx44. The District Court rejected Realtime's argument that the combination of the elements of the claims are unconventional, stating "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.'" Appx55.

Ultimately, the District Court found "the asserted patents are nothing 'more than a drafting effort designed to monopolize' abstract ideas for data compression." Appx56 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 77 (2012)). However, the District Court permitted Realtime to amend its complaints, which it did. *See* Appx67.

Realtime's new complaints (i) added lengthy quotes from the patent specifications and decisions of other judges (*see* Appx76-77); (ii) added claim constructions that would not change the outcome of the *Alice* inquiry (*see* Appx74-75); and (iii) even added allegations regarding unrelated patents not at issue (*see*

Appx77).   Served with amended complaints that largely padded the original

complaints with irrelevant allegations and legal conclusions, Defendants-Appellees

again moved to dismiss.

In August 2021, the District Court, in another opinion, found all claims were

invalid.   Appx84.   The District Court explained, "[t]he 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 something 'more.'"   Appx80.   The patents lack this

something more, in part, because the "claims do not identify specific techniques that

provide a technical solution."   *Id.*   The District Court also addressed Realtime's

additional arguments asserted in its amended pleadings and briefing, and the District

Court revisited its detailed discussion of the claims from its prior order.   Appx73-

84.   The District Court ultimately concluded:

> 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.

Appx84.

SUMMARY OF THE ARGUMENT

The claims of the Patents-in-Suit fail both steps of the *Alice* analysis.   First,

the claims as a whole are directed to abstract ideas involving data compression—

namely, analyzing, processing, manipulating, storing, and outputting data. These
are the types of generalized concepts that this Court has previously found to be
ineligible. *See, e.g.*, *Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353-
54 (Fed. Cir. 2016) (stating that collecting information, analyzing that information
by steps people go through in their minds or by mathematical algorithms, and merely
presenting the results were examples of abstract ideas); *Voit Techs v. Del-Ton, Inc.*,
757 F. App'x 1000, 1002 (Fed. Cir. 2019) (nonprecedential) (holding claims "are
directed to the abstract idea of entering, transmitting, locating, compressing, storing,
and displaying data (including text and image data) to facilitate the buying and
selling of items."). The fact that Realtime's patents address the compression of
digital data, a point it emphasizes, does not make its patents any less abstract.

Moreover, the Patents-in-Suit do *not* improve computer functionality. Rather,
the claims are directed to abstract ideas for which computers are merely invoked as
a tool. Realtime argues the claimed inventions are "necessarily rooted in computer
technology." Br. at 46. This argument is incorrect, as data compression has long
occurred outside of the computer context. *See* Appx51 (tracing "long history" of
compression in contexts that do not require computers); *RecogniCorp, LLC v.
Nintendo Co., Ltd.*, 855 F.3d 1322, 1326 (Fed. Cir. 2017) (finding claimed method
"reflect[ed] standard encoding and decoding, an abstract concept long utilized to
transmit information"). It is also irrelevant, as "invocation of a computer does not

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necessarily transform an abstract idea into a patent-eligible invention." *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1362 (Fed. Cir. 2020).

The Patents-in-Suit do not claim or teach "specific techniques" that purport to improve computer functionality, as Realtime argues. *See* Br. at 47. Instead, the claims and specifications describe generic and well-known components, such as encoders and a state machine, which are utilized to carry out abstract ideas on general purpose computers. *See* Appx336 at 7:13-22 ("encoder set ... may include any number 'n' of those lossless encoding techniques currently well known within the art"); Appx335 at 6:30-37 ("present invention may be implemented in various forms of hardware, software, firmware, or combination thereof ... preferably implemented in software as an application program that is executable by, e.g., a general purpose computer"); Appx4921 at 31:19-20 (acknowledging "state machines are well-known computer components"). But "an abstract idea for which computers are invoked merely as a tool" remains merely an abstract idea. *Customedia Techs.*, 951 F.3d at 1363 (quoting *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1259–60 (Fed. Cir. 2017)).

While Realtime argues the District Court did not analyze the claims as a whole (*see* Br. at 51), the record shows otherwise. The District Court carefully reviewed the claims and limitations, including those identified by Realtime. *See, e.g.*, Appx19 (encoder associated with parameters that compress data based on the attributes of

the data itself, rather than just a descriptor); Appx19-20 (token for identifying the compression technique used); Appx34-36 (data accelerator, file descriptor, memory device, and encoders); Appx39-40 (state machine). In doing so, the District Court correctly found that "[t]his is a case where although written in technical jargon, a close analysis of the claims reveals that they require nothing more than ... abstract ideas[.]" Appx71-72 (internal quotations and citation omitted).

The Patents-in-Suit also fail *Alice* step two. Beyond the abstract ideas claimed in Realtime's patents, the patents merely claim generic computer components which are "insufficient to add an inventive concept to an otherwise abstract idea." *In re TLI Commc'ns LLC Patent Litig.,* 823 F.3d 607, 614 (Fed. Cir. 2016). Indeed, the only tangible elements are generic computer elements utilized in a generic, conventional way. Nor do the claims provide an inventive concept by resolving known prior art problems.

The District Court gave Realtime the chance to amend its complaints and explain how its patents claim anything other than abstract ideas using well-known, routine, and conventional technology. But it could not do so. Instead, it urged the District Court to simply acquiesce in the conclusions reached by other judges many years ago. That the District Court instead independently analyzed Realtime's patents *three times* and reached a different conclusion does not constitute legal error. *See Camreta v. Greene*, 563 U.S. 692, 709 n.7 (2011). Further, Realtime's argument

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that the District Court improperly identified representative claims for each of the

Patents-in-Suit is unavailing. Case precedent (and common sense) supports the use

of representative claims, especially where hundreds of claims are at issue.[2] *See*

Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n, 776 F.3d

1343, 1348 (Fed. Cir. 2014).

Lastly, because the District Court based its findings on disclosures in the

patents themselves (without resolving factual disputes) and applied Realtime's own

claim constructions, it did not err in resolving patent eligibility at the pleading stage.

ARGUMENT

I.   The Patents-In-Suit Are Directed To An Abstract Idea And Lack An Inventive Concept

"Laws of nature, natural phenomena, and abstract ideas" are not patentable

because they represent "the basic tools of scientific and technological work." *Mayo*

Collaborative Servs., 566 U.S. at 70-71 (citation omitted).

In *Alice*, the Supreme Court set out a two-step test 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. First, the

court asks whether the claims are directed to a patent-ineligible concept, such as an

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[2]   Notably, Realtime has not made any attempt to analyze each of the Patents-in-Suit on a claim-by-claim basis, despite claiming that doing so would have somehow changed the analysis. *See* Br. at 51, 56.

abstract idea. *Id.* Second, the court must decide whether the claims add 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." *Id.* at 217-18 (final alteration in original) (citation omitted).

For *Alice* purposes, the District Court analyzed a representative claim for each of the Patents-in-Suit. Claim 25 of the '728 Patent, claim 14 of the '203 Patent, claim 18 of the '825 Patent, claim 1 of the '908 Patent, claim 1 of the '530 Patent, claim 9 of the '458 Patent, and claim 1 of the '751 Patent are representative.[3]

It is now well established that, in many instances, district courts may resolve patent eligibility under § 101 at the pleading stage. *See, e.g., FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1097 (Fed. Cir. 2016). In this case, it was appropriate to adjudicate patent eligibility at the outset. No claim construction disputes precluded resolution of the issue as a matter of law. Indeed, the District Court accepted Realtime's proposed constructions in finding the patents invalid.

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[3] In the previous appeal, Defendants relied on the same representative claims except for the '728 and '751 Patents, for which they asserted that claims 1 and 25, respectively, were representative. The District Court concluded that the claims were equivalent for purposes of § 101 and only differed in form. *See* Appx29, Appx39.

See, e.g., Appx16 (accepting that Realtime's claims are directed to compression of *digital* data).

Additionally, the district court did not resolve any factual disputes in adjudicating patent eligibility. Nor did it need to—Realtime's own patents make clear that the abstract ideas in the claims are implemented with well-known, conventional computer technology. *See infra* at § I(B)(1).

A.   The Claims Of The Patents-In-Suit Fail *Alice* Step One Because They Are Directed To An Abstract Idea

At step one of the *Alice* analysis, courts look to the "focus" and "character" of a claim as a whole to determine if it is directed to an abstract idea. *Electric Power Grp.*, 830 F.3d at 1353; *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016). Here, the claims of the Patents-in-Suit describe the compression of data and combinations of (i) analyzing data without relying only on a descriptor; (ii) using two or more encoders; (iii) using a token identifier; (iv) compressing and storing data "faster"; and (v) using a state machine.

The District Court properly and repeatedly concluded in two separate rulings that the claims of the Patents-in-Suit are directed to abstract ideas. Specifically, the District Court found that the '728 and '825 Patents are "directed to the abstract idea of compressing data based on the content of the data"; the '203 Patent is "directed to the abstract idea of compressing or decompressing data based on the characteristics of the data where a token is used to signify the compression method

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used"; the '530 and '908 Patents are "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"; 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"; and 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." Appx66-67.

> **1.**   **Realtime's Patent Claims Do Not Focus On A Specific Asserted Improvement In Computer Capabilities and Merely Invoke Computers As A Tool**

In cases involving software innovations, the inquiry at step one "asks whether the focus of the claims is on the specific asserted improvement in computer capabilities … or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335-36 (Fed. Cir. 2016).

As Realtime acknowledges, this step often involves two inquiries: "'(1) whether the focus of the claimed advance is on a solution to "a problem specifically

arising in the realm of computer networks" or computers,' and (2) 'whether the claim

is properly characterized as identifying a "specific" improvement in computer

capabilities or network functionality, rather than only claiming a desirable result or

function.'" Br. at 44 (citing *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1293 (Fed.

Cir. 2020)).

As to the first inquiry, the focus of the claimed advance is the compression of

data, as Realtime points out. *See* Br. at 53 (stating patents assert improvements to

"digital data compression"). But data compression does not specifically arise in the

realm of computers—as the District Court noted, data compression can be achieved

using even pen and paper. *See* Appx25.

Realtime repeatedly argues that its inventions are "necessarily rooted in

computer technology" and thus patent eligible because they involve "*digital* data

compression." *See, e.g.,* Br. at 46, 48 (emphasis added). However, that simple fact

does not transform abstract ideas into patent-eligible inventions. *See Customedia*

Techs., 951 F.3d at 1362 (noting "the invocation of a computer does not necessarily

transform an abstract idea into a patent-eligible invention"); *Affinity Labs*, 838 F.3d

at 1259 ("[M]erely limiting the field of use of the abstract idea to a particular existing

technological environment does not render the claims any less abstract."). In any

event, Realtime does not meaningfully point to any limitations that identify specific

computer technology or how problems are actually solved by such technology. *Cf.*

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Ericsson Inc. v. TCL Commc'n Tech. Holdings Ltd., 955 F.3d 1317, 1328 (Fed. Cir. 2020) (finding "asserted claims merely require '[a] system for controlling access to a platform,' whether mobile, desktop, or otherwise," and that Plaintiff's "reference to a 'specific, layered software architecture,' which does not appear in the claims, is unavailing" (second alteration in original) (citations omitted)), *cert. denied*, 141 S. Ct. 2624 (2021).

As to the second inquiry, the claims of the Patents-in-Suit are not specific improvements in computer capabilities or network functionality. While the specifications of the Patents-in-Suit mention benefits of data compression, the claims do not recite anything more than basic concepts of compression such as analyzing, processing, manipulating, storing, and outputting data. Such concepts do not explain how to accomplish the desired compression and are not specific techniques that provide a technological solution or improvement. *See Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1363-64 (Fed. Cir. 2021) ("[A]sserted claims do not at all describe how th[e] result is achieved"); *Voit Techs.*, 757 F. App'x at 1004 ("General statements of 'advanced image data compression' or faster communications will not suffice where it is unclear how the different compression format claim limitations actually achieve the alleged improvements"); *Affinity Labs*, 838 F.3d at 1259, 1262; *see also Ericsson Inc.*, 955 F.3d at 1328 (finding a claim merely making generic functional recitations did not "ha[ve] the specificity required

to transform a claim from one claiming only a result to one claiming a way of achieving it" (alteration in original) (citation omitted)); *Electric Power Grp.,* 830 F.3d at 1351 (concluding claims failed at step one because they did not go beyond requiring the collection, analysis, and display of information in a particular field, stated in functional, general terms, without limiting them to technical means for performing the functions).

The District Court explained that the Patents-in-Suit "do not teach how to engineer an improved system[,] ... allow the use of *any* compression method ... [and] do [not] teach how to achieve the claimed efficiency benefits, beyond directing the skilled artisan to apply well-known techniques" and that "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. Appx45-46 (emphasis in original). On this point, Realtime argues that its claims teach "specific techniques" that purport to improve computer functionality but fails to meaningfully identify such techniques. Br. at 47. Nor can it identify any, because the specifications of the Patents-in-Suit instruct readers to simply apply known techniques.

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. Appx345 at claim 25; Appx501 at claim 18. Nowhere do the claims—or the specification—state how that data is to be analyzed or compressed. *See, e.g.*, Appx336 at 7:11-22 (noting only that "any number ... of ... encoding techniques currently well known within the art ... to provide a broad coverage of existing and future data types" can be used).

The claims of the '203 Patent similarly fail to explain how decompression is accomplished, stating 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. Appx423 at claim 14.

The claims of the '908, '530, '458, and '751 Patents also fail to explain how storage of the compressed data occurs "faster" or in less time, only that it is achieved. The specifications of the patents do not provide any further guidance. The specifications for the '908 and '458 Patents only state 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." Appx176-177 at 4:64-5:1; Appx259-260 at 4:67-5:4. The specification for the '530 Patent states that the "data storage accelerator ... must be configured to compress a given input data block at a rate that is equal to or faster than receipt of the input data." Appx113 at 5:29-32. This "vague, functional" description of an

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accelerator that predictably does things faster is a hallmark of ineligible abstract ideas. *See In re TLI Commc'ns*, 823 F.3d at 615 ("'[C]ontrol unit' predictably 'controls' various aspects of the claimed functionality"); *Intellectual Ventures I LLC v. Erie Indem. Co.*, 711 F. App'x 1012, 1017 (Fed. Cir. 2017) (nonprecedential) ("[S]peed and accuracy increases stem[] from the ordinary capabilities of a general-purpose computer.").

Furthermore, while the specification of the '751 Patent explains that acceleration occurs when the "total time for compression, transmission, and decompression, is less than the total time for transmitting the data in uncompressed form", it does not state how to actually achieve a shorter compression, transmission, and decompression time. *See* Appx553 at 6:61-65; *see also* Appx554 at 7:11-14 ("if the time to compress, transmit, and decompress a data packet is less than the time to transmit the data in original format, then the delivery of the data is said to be accelerated"); Appx554 at 7:42-44 ("the latency reduction is the simple arithmetic difference between the time to transmit the original data minus the total time to transmit the accelerated data").

Because the claims in the '908, '530, '458, and '751 Patents are "'directed to a result or effect that itself is the abstract idea and merely invoke[s] generic processes and machinery' rather than 'a specific means or method that improves the relevant technology,'" they fail step one of the *Alice* test. *Yu v. Apple Inc.*, 1 F.4th 1040,

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1043 (Fed. Cir. 2021) (alteration in original), *cert. denied*, No. 21-811, 2022 WL 515904 (U.S. Feb. 22, 2022) (quoting *Smart Sys. Innovations, LLC v. Chi. Transit Auth.*, 873 F.3d 1364, 1371 (Fed. Cir. 2017)). As in *Yu*, the claimed "solution to [the alleged] problems is the abstract idea itself"—to take data and compress it or decompress it based on the type of data it is. *Id.* at 1044. Neither the claims nor the specifications of the asserted patents contain specific details of any technological advancements. "[T]he breadth of [the asserted claims] underscores that the focus of the claimed advance is the abstract idea and not the particular configuration discussed in the specification that allegedly departs from the prior art." *Id.* at 1045. The generic compression and decompression processes and hardware "merely serve as a conduit for the abstract idea" of compression and decompression according to data type. *Id.* (quoting *In re TLI Commc'ns*, 823 F.3d at 612).

Moreover, Realtime's reliance on *SRI International, Inc. v. Cisco Systems, Inc.*, 930 F.3d 1295 (Fed. Cir. 2019), *cert. denied*, 140 S. Ct. 1108 (2020) at step one is misplaced. *See* Br. at 41. In *SRI*, the patent covered a specific technique for identifying potential intruders in a network, which was "a solution to a computer-specific problem—uniquely difficult-to-track, large-scale attacks caused by the decentralized nature of computer networks—and a concrete improvement to network functionality—the deployment of specific monitors to collect specific types of data." *TecSec*, 978 F.3d at 1293-94 (analyzing *SRI*, 930 F.3d at 1303).

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Unlike *SRI*, no such specific techniques are identified. Moreover, this Court has emphasized that "claiming the improved speed or efficiency inherent with applying the abstract idea on a computer," as is the case here, "[is] insufficient to render the claims patent eligible as an improvement to computer functionality." *Customedia Techs.*, 951 F.3d at 1364 (quoting *Intellectual Ventures I LLC v. Cap. One Bank (USA)*, 792 F.3d 1363, 1367, 1370 (Fed. Cir. 2015)).

2. Realtime's Patents Claim Generic Computer Elements Utilized In Generic, Conventional Ways

Trying to depict the claims of the Patents-in-Suit as complex or unconventional, Realtime identifies elements such as "two digital data-compression techniques," "direct examination of the digital-data payload," "plurality of different encoders," "compression descriptor," and a "state machine," which are all purportedly utilized to solve "problems specifically arising in the realm of digital data compression." Br. at 46-47, 63. But the specifications reveal that these elements are simply generic computer elements that perform conventional functions.

For example, analyzing data without relying only on a descriptor is accomplished by looking at the data block itself, which can be "parse[d], lexically, syntactically, or otherwise ... using methods known by those skilled in the art[.]" Appx494 at 14:52-57; *see also* Br. at 46 ("requiring a direct examination of the digital-data payload rather than examining just the descriptor"). The two or more encoders "may include any ... lossless encoding techniques currently well known

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within the art[.]" Appx336 at 7:11-17; Appx491 at 7:5-11; Appx413 at 7:5-11;

Appx180 at 11:66-12:5; Appx116 at 11:40-46; Appx263 at 12:16-22; Appx558 at

15:23-29. The token identifier is a "descriptor that indicates which data encoding

technique has been applied to the data." *See* Appx336 at 8:63-66.

In addition, compressing and storing data faster can be accomplished using

"any conventional data compression method suitable for compressing data at a rate

necessary for obtaining accelerated data storage." *See, e.g.*, Appx182 at 16:49-54;

Appx118 at 16:23-28; Appx266 at 17:9-14; Appx554 at 7:17-25 ("the concept of

'acceleration' may be applied to the storage and retrieval of data to any memory or

storage device using the compression methods disclosed ... and the storage

acceleration techniques disclosed in the above-incorporated application").

And finally, the state machine only requires that "in each state, there is a

compression/decompression   table   comprising   information   on   how   to

encode/decode[.]" *See* Appx557 at 13:28-33.

Moreover, the specifications of the Patents-in-Suit concede that these generic

computer elements can be performed using any combination of general purpose

computers. *See* Appx335 at 6:32-37 ("implemented in software as an application

program that is executable by, e.g., a general purpose computer"); Appx490 at 6:26-

31 (same); Appx412 at 6:26-31 (same); Appx554 at 8:23-26 ("[g]eneral purpose

computers ... may be employed to implement the present invention"); Appx176 at

4:50-54 ("present invention is implemented on a computer platform"); Appx112 at

4:50-54 (same); Appx259 at 4:53-57 (same). Thus, well-known technology is being

used to carry out the claimed steps.

In contrast, the cases Realtime relies on are easily distinguishable because

they involve computer elements utilized in unconventional ways. For instance, in

Enfish, the claims were "not simply directed to *any* form of storing tabular data, but

instead are specifically directed to a *self-referential* table for a computer database."

822 F.3d at 1337 (emphasis in original). Furthermore, the specification taught "that

the self-referential table functions differently than conventional database structures."

Id. Similarly, in *Finjan*, the claim "employ[ed] a new kind of file that enabl[ed] a

computer security system to do things it could not do before." *Finjan, Inc. v. Blue

Coat Sys., Inc.*, 879 F.3d 1299, 1305 (Fed. Cir. 2018). And in *Koninklijke*, the court

found that, similar to the patent in *Finjan*, the claimed invention was "directed to a

non-abstract improvement because it employ[ed] a new way of generating check

data that enable[d] the detection of persistent systematic errors in data transmissions

that prior art systems were previously not equipped to detect." *Koninklijke KPN

N.V. v. Gemalto M2M Gmbh*, 942 F.3d 1143, 1151 (Fed. Cir. 2019).

In *Visual Memory*, the case Realtime initially identified as "most analogous

to this one" (Br. at 30), the claims did not merely recite "generalized steps to be

performed on a computer using conventional computer activity." *Visual Memory*

LLC v. NVIDIA Corp., 867 F.3d 1253, 1260 (Fed. Cir. 2017) (citation omitted).

Rather, the claimed "enhanced computer memory system" would change the

performance of the computer memory system through "the use of programmable

operational characteristics that are configurable based on the type of processor." *Id.*

at 1259-60. The relevant specification in that case further explained that "[f]or a

system employing a 386 or 386sx system processor, internal cache 16 holds only

code data, whereas for a system employing a 486 processor, internal cache 16 holds

both code and non-code data." *Id.* at 1261 (citation omitted). Notably, "[n]one of

the claims recite all types and all forms of categorical data storage." *Id.* at 1259

(citation omitted).

This was also the case in *Uniloc USA, Inc. v. LG Elecs. USA, Inc.*, 957 F.3d

1303 (Fed. Cir. 2020) and *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245

(Fed. Cir. 2014), in which this Court found that the claimed inventions changed the

normal operation of the technology at issue. Specifically, in *Uniloc*, the result was

a reduction in response time by peripheral devices which were part of the claimed

system. *See* 957 F.3d at 1308. In *DDR Holdings*, the claims specified how to

manipulate a computer network system to generate a new hybrid web page after

clicking a hyperlink, which was a departure from the normal, expected result. *See*

773 F.3d at 1258-59.

Unlike the above cases, no such unconventional elements are recited, and the claims do not improve computer functionality. Instead, the claims of the Patents-in-Suit are similar to the claims in *Yu*, which claimed "conventional components perform only their basic functions" and ultimately created nothing more than "a generic environment in which to carry out the abstract idea." 1 F.4th at 1043.

The claimed invention does not improve the performance of these conventional components, rather, the specifications assert that a general purpose computer is all that is required to perform the claims. *See* Appx335 at 6:30-37 (noting that "the present invention may be implemented in various forms of hardware, software, firmware, or a combination thereof," and ultimately the system may be implemented on "a general purpose computer or any machine or device having any suitable and preferred microprocessor architecture"); Appx176 at 4:47-54 (stating that "the present invention may be implemented in various forms of hardware, software, firmware, or a combination thereof. Preferably ... on a computer platform including hardware such as one or more central processing units (CPU) or digital signal processors (DSP), a random access memory (RAM), and input/output (I/O) interface(s)"); Appx554 at 8:4-10 (same). Courts have repeatedly found that, in such instances, the inventions are directed towards the use of a computer as a "tool" to implement an abstract idea. *See Customedia Techs.*, 951 F.3d at 1364 ("[I]t is not enough … to merely improve a fundamental practice or abstract process by

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invoking a computer merely as a tool"); *see also Alice*, 573 U.S. at 225 (finding

claimed invention was not patentable where each step did "no more than require a

generic computer to perform generic computer functions").

3.   The District Court Conducted A Proper "Directed To" Analysis And Considered Realtime's Claims As A Whole

The District Court explicitly considered the claims as a whole. Appx21.

Realtime's argument that the District Court "impermissibly stripped out key

elements," "oversimplified the claims," and "failed to consider the patents' claimed

advances" (Br. at 51) is without merit and attempts to read in details that nowhere

appear in the specifications, let alone the claims. The District Court made extensive

reference to the claims and limitations, including those Realtime now complains

were purportedly absent from analysis. *See, e.g.*, Appx19 (encoder associated with

particular parameters that compresses data based on the attributes of the data itself,

rather than just a descriptor); Appx19-20 (token for identifying the compression

technique used); Appx34-36 (data accelerator, file descriptor, memory device, and

encoders); Appx39 (use of a state machine).

After reviewing these limitations, the District Court properly reaffirmed its

prior conclusion:

> 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.

Appx74; *see also Ericsson Inc*, 955 F.3d at 1326 ("[W]here, as here, the bulk of the claim provides an abstract idea, and the remaining limitations provide only necessary antecedent and subsequent components, the claim's character as a whole is directed to that abstract idea.").

Realtime's reliance on *TecSec* in attacking the District Court's analysis is misplaced. *See* Br. at 43-44, 47, 52-53, 55-56. There, the Court identified specific elements that were missing from the *Alice* analysis in question, such as an "object-oriented key manager" that were "part of the focus of the claimed advance." *TecSec*, 978 F.3d at 1295.

Here, however, no specific elements in the patent claims would change the analysis. The District Court identified and reviewed the limitations of the Patents-in-Suit (including the limitations that Realtime now identifies, such as the compression encoder) and determined that they did not change the determination that the claims were directed to abstract ideas. *See* Appx74; s*ee also RecogniCorp*, 855 F.3d at 1327 ("[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.").

Additionally, *TecSec* is distinguishable because the characterization of the representative claims in *TecSec* was "materially inaccurate." *TecSec*, 978 F.3d at 1294; *see also Mentone Sols. LLC v. Digi Int'l Inc.*, Nos. 2021-1202, 2021-1203, 2021 WL 5291802, at *6 (Fed. Cir. Nov. 15, 2021) (nonprecedential) (finding the

court's formulation only referred to a "USF" and failed to mention the "shifted USF" which operated in a way that departed from conventional use).

Moreover, as the District Court observed, "Realtime's own descriptions of the patents are substantially similar to the abstract ideas that [the District Court] f[ou]nd the patents directed to." Appx46. For example, Realtime states the "'728, '203, and '825 patents ... are directed to systems and methods for data compression using a combination of content-independent and content-dependent data compression and decompression." Br. at 16. The District Court found that the '728 and '825 Patents were "directed to the abstract idea of compressing data based on the content of that data." Appx66. While the District Court does not recite Realtime's formulation verbatim, the two are essentially the same—compression is "based on the content" of data, or in other words, "content-independent and content-dependent data compression" is used. Thus, there can be no serious claim that the characterization of the focus of these patents is inaccurate, much less materially so.

Realtime also states, with respect to the '825 Patent specifically, that the District Court erred by "analyz[ing] individual steps to determine whether each is abstract." Br. at 52. But it was not error for the District Court to point out the abstract ideas present at each of the individual steps. In fact, this Court previously found that claims were directed to an abstract idea after engaging in a similar analysis. *See PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1317 (Fed.

Cir. 2021) ("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") (alterations in original) (citations omitted).

In any event, the District Court's analysis was not limited to looking at each step individually. Rather, it went on to analyze the '825 Patent claims as a whole, even going so far as to point out that the specification of the patent contains a flow chart that combines the claimed abstract steps. *See* Appx23.

4.   <u>Realtime's Patent Claims Are Directed To Abstract Ideas This Court Has Found To Be Ineligible</u>

The District Court's conclusion that the claims are directed to abstract ideas is supported by this Court's prior analysis of similar patents. *See, e.g.*, *Enfish*, 822 F.3d at 1334 (courts generally "compare claims at issue to those claims already found to be directed to an abstract idea in previous cases").

In *Voit Techs.*, the claims were directed to the abstract idea of "entering, transmitting, locating, compressing, storing, and displaying data (including text and image data) to facilitate the buying and selling of items." 757 F. App'x at 1002. The specification described the limitations as "being directed to using different compression formats in the claimed network," but Voit "fail[ed] to explain how employing different formats, as claimed, improve[d] compression techniques or the functioning of the computer"; instead, the specification demonstrated that the claims

were "directed to use of generic computer components performing conventional compression techniques to carry out the claimed invention." *Id.* at 1003.

Not only do the claims of the Patents-in-Suit recite similar abstract ideas, they also fail to explain how using different compression formats improves the functioning of the computer network—only that conventional compression techniques are used to carry out the claimed invention. *See, e.g.*, Appx336 at 7:11-17 (describing encoders that use "any" number of lossless encoding techniques "currently well known within the art"); Appx342 at 19:5-9 (defining data compression type descriptor as "any recognizable data token or descriptor that indicates which data encoding technique has been applied to the data").

In *Electric Power Grp.*, this Court stated that collecting information, analyzing that information by mental steps or mathematical algorithms, and merely presenting the results were all examples of abstract ideas. 830 F.3d at 1353-54. Thus, the claims in that case were "clearly focused on the combination of those abstract-idea processes" and the "advance they 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.

Similarly, in *RecogniCorp*, this Court found that processing data by encoding or decoding was "an abstract concept long utilized to transmit information." 855

F.3d at 1326. This Court reasoned that "[a] process that started with data, added an algorithm, and ended with a new form of data was directed to an abstract idea." 830 F.3d at 1327; *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) ("The focus of the claims ... is on selecting certain information, analyzing it using mathematical techniques, and reporting or displaying the results of the analysis. That is all abstract."). The Court ultimately held that claims that took displayed images, assigned image codes to the images through an interface using a mathematical formula, and reproduced the images based on the codes "reflect[ed] standard encoding and decoding, an abstract concept long utilized to transmit information." *RecogniCorp*, 855 F.3d at 1326 (citing Morse code, ordering food via a numbering system, and Paul Revere's "one if by land, two if by sea" signaling system as examples of the abstract idea of encoding and decoding).

The claims of the Patents-in-Suit are abstract for the same reason. For instance, the representative claim of the '751 Patent describes analyzing content of a data block, adding an algorithm (*i.e.*, an encoder) to compress the data, and storing the compressed data in a new form. *See* Appx562 at 23:45-57.

The steps of Realtime's patents—analyzing, processing, manipulating, storing, and outputting data—have long been performed outside of the computer context. Realtime's claims are thus distinguishable from those found to be patent-eligible in *Mentone* and *Packet Intelligence*. In those cases, the claims presented a

solution to a "challenge unique to computer networks." *Mentone*, 2021 WL 5291802, at *5; *Packet Intel. LLC v. NetScout Sys., Inc.*, 965 F.3d 1299, 1309 (Fed. Cir. 2020), *cert. denied*, 141 S. Ct. 2521 (2021). Data compression, however, is not unique to computer networks, or computers generally, as the District Court recognized.   Appx51 ("Everyday uses of compression include shorthand, abbreviations, the repeat symbol in musical notation, and scientific notation.").

While not dispositive, Realtime's claims are also mental processes that "can be performed in the human mind" or "using a pencil and paper," which is a "telltale sign of abstraction." *PersonalWeb Techs.*, 8 F.4th at 1316 (citations omitted); *see also Electric Power Grp.*, 830 F.3d at 1354 ("[W]e have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.") Functions that fall into this category include those found in the claims at issue here, such as using a content-based identifier, comparing a content-based identifier against other values, retrieving data, and classifying data. *See PersonalWeb Techs.*, 8 F.4th at 1316-17 (collecting cases).

As this Court found in *PersonalWeb Techs.*, "[s]tringing 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." *Id.* at 1317 (second and third alterations in original) (citations omitted).

Realtime's claims, considered as a whole, "are directed to a medley of mental processes that, taken together, amount only to a multistep mental process." *Id.* at 1318. Realtime's attempts to insert phrases such as "digital data" into the claims (*see, e.g.*, Br. at 15-16) should be given no credence and, in any event, do not remove the claims from the realm of abstraction. *See Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1349-50 (Fed. Cir. 2014) (finding claims to manipulation of digital data abstract because "[d]ata in its ethereal, non-physical form is simply information that does not fall under any of the categories of eligible subject matter").

B.   The Claims of the Patents-In-Suit Fail At *Alice* Step Two Because They Lack An Inventive Concept

Under *Alice* step two, courts consider "the elements of each claim both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent-eligible application." *Alice*, 573 U.S. at 217 (internal quotations and citation omitted). Where the inquiry at step one involves looking to the focus of the claims as a whole, the inquiry at step two requires "more precisely [looking] at what the claims add." *Electric Power Grp.*, 830 F.3d at 1353. The Supreme Court "ha[s] described step two … as a search for an inventive concept … 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 (alteration in original) (internal quotations and citation omitted). This

"inventive concept" must be more than "well-understood, routine, or conventional activit[ies]." *Id.* at 225 (alteration in original) (internal quotations and citation omitted).

In the same vein, "mere recitation of concrete, tangible components is insufficient to confer patent eligibility to an otherwise abstract idea." *In re TLI Commc'ns*, 823 F.3d at 613. Instead, an inventive concept requires the claims to "propose a solution or overcome a problem 'specifically arising in the realm of computer [technology]'" beyond the "recitation of generic computer limitations." *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1097 (Fed. Cir. 2016) (alteration in original) (citations omitted). If the claims involve an ordered combination, they must demonstrate a specific, inventive arrangement of elements. *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016).

As discussed in further detail below, the District Court properly recognized that the Patents-in-Suit fail under either analysis called for in *Alice* step two.

1.   The Claims Of The Patents-In-Suit Recite No Specific Technological Solution Sufficient To Supply An Inventive Concept

The Patents-in-Suit claim no specific technological solution. *See FairWarning IP*, 839 F.3d at 1097. The only tangible elements are generic

computer elements, such as a processor (*e.g.*, '728 Patent, claim 25; '203 Patent, claim 1), memory (*e.g.*, '908 and '530 Patents, claim 1), and encoders (all).

The processor and memory are generic computer components and are "insufficient to add an inventive concept to an otherwise abstract idea." *In re TLI Commc'ns*, 823 F.3d at 614; *Alice*, 573 U.S. at 226 ("Nearly every computer will include a 'communications controller' and 'data storage unit' capable of performing the basic calculation, storage, and transmission functions required by the method claims.").

The "encoders" are similarly generic and do not call for any special or unique software or hardware. *See, e.g.*, Appx306 (depicting "Encoder E1 ... En" boxes within encoder module 30); Appx335 at 6:30-32 ("[T]he present invention may be implemented in various forms of hardware, software, firmware, or a combination thereof."). In fact, the claims of the Patents-in-Suit encompass all manner of encoding, which itself is not new and is well-known in the relevant art. *See, e.g.*, Appx558 at 15:23-29 ("encoder set ... may include any number ... of those lossless encoding techniques currently well known within the art"); Appx336 at 7:11-17 (same); Appx491 at 7:5-11 (same); Appx413 at 7:5-11 (same); Appx263 at 12:16-22 (same); Appx116 at 11:40-46 (same); Appx180 at 11:66-12:5 (same).

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As discussed below, Realtime's reference to multiple conventional computer components does not alter the conclusion that the claims recite no specific technological solution.

a.   *Data Compression ('728, '825, and '203 Patents)*

With respect to the '728, '825, and '203 Patents, Realtime recites elements of claim 1 of the '728 Patent in an effort to show that the claims solve technological issues by "requir[ing] specific, unconventional combinations of specially configured computer elements." Br. at 60. It also claims that the '203 and '825 Patents claim unconventional combinations of computer elements "utilizing content dependent and content independent data compression." *Id.* at 61. But the encoders, compression, and processor that Realtime points to are nothing more than conventional components performing basic functions. *See RecogniCorp*, 855 F.3d at 1328 (stating that the claim at issue did "exactly what we have warned it may not: tell a user to take an abstract idea and apply it with a computer"). For example, as stated above, the encoder modules "may include any number ... of those lossless or lossy encoding techniques currently well known in the art[.]" Appx340 at 16:37-44.

The processor is not a specially configured computer component; instead, it is a processor that would be found in any general purpose computer. *See* Appx335 at 6:32-37 ("[I]mplemented in software as an application program that is executable by, e.g., a general purpose computer[.]"). Analyzing data without relying only on a

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descriptor is also a "well-understood, routine, conventional activit[y] previously known to the industry." *In re TLI Commc'ns*, 823 F.3d at 613 (citation omitted); *see PersonalWeb Techs.*, 8 F.4th 1310 at 1312-13, 1318-19 (finding no inventive concept where claims used an identifier that "depends on the item's content" and perform "data-management functions"). The '728 Patent even acknowledges that data in a data block could be examined using known methods—"parse[d], lexically, syntactically, or otherwise ... using methods known by those skilled in the art[.]" Appx339 at 14:59-64.

Additionally, Realtime appears to argue that the District Court's sole basis for deciding that the '825 Patent failed at *Alice* step two was that none of the claims "even required physical components." Br. at 65. Although the District Court did note that the '825 Patent did not require physical components, its inquiry did not end there. It went on to add that "[s]ince the patent neither requires any hardware *nor otherwise teaches any technical improvement to computer technology*," it does not provide technological solutions. Appx28 (emphasis added).

Lastly, the alleged "non-conventional functions," *e.g.*, "analyzing the data to identify one or more parameters or attributes and performing compression with a plurality of different encoders" (Br. at 64), involve mere abstract manipulation of data that "cannot supply the inventive concept." *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018).

b.   *Accelerated Data Storage and Retrieval ('908, '530, and '458 Patents)*

Turning to the '908, '530, and '458 Patents, Realtime refers to claim 1 of the '908 Patent and argues that it contains "specific, unconventional combinations of specially configured computer elements." Br. at 61. But the memory device is not a specially configured computer component; rather, it is a device that would be found in any general purpose computer. *See* Appx177 at 5:42-47 ("memory storage device ... may be volatile or non-volatile in nature[;] ... [s]torage devices as known within the current art include all forms of random access memory"). As the court stated in *In re Board of Trustees of Leland Stanford Junior University*, "it is hard to imagine a patent claim that recites [a] hardware limitation[] in more generic terms[.]" *In re Bd. of Trs. of Leland Stanford Junior Univ.*, 989 F.3d 1367, 1374 (Fed. Cir. 2021).

Use of a data accelerator that stores data "faster" is also not sufficient to turn the claim into "anything more than a generic computer for performing the abstract idea." *Ericsson Inc.*, 955 F.3d at 1330. That is because "merely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea." *PersonalWeb Techs.*, 8 F.4th at 1319 (citation omitted); *see also Electric Power Grp.* 830 F.3d at 1355 (noting that claims "merely call for performance of the claimed information ... analysis ... on a set of generic computer components," and thus "do[] not transform the claimed subject matter into patent-eligible applications") (citations omitted). This is more so the

case because the data acceleration here uses "'well-understood, routine, conventional activit[y]' previously known to the industry." *In re TLI Commc'ns*, 823 F.3d at 613 (citation omitted).

Realtime also points to additional generic elements, such as a descriptor in claim 1 of the '530 Patent, as well as the encoder and compression in claim 1 of the '458 Patent. Br. at 61-62. But utilizing a descriptor is also a "'well-understood, routine, conventional activit[y]' previously known to the industry" (indicative of a compression technique and used to perform decompression). *In re TLI Commc'ns*, 823 F.3d at 613 (citation omitted). The specification of the '530 Patent confirms that decompression in this manner is conventional by noting "other data decompression systems and methods known to those skilled in the art may be employed for providing accelerated data retrieval." Appx117 at 14:42-48.

Use of an encoder and performing compression is another generic computer element that calls for any combination of hardware or software. *See, e.g.*, Appx116 at 11:62-12:2 ("encoding process may be performed either in parallel or sequentially ... the encoders E1 through En of encoder module 25 may operate in parallel (i.e., simultaneously processing a given input data block by utilizing task multiplexing on a central processor, via dedicated hardware, by executing on a plurality of processor or dedicated hardware systems, or any combination thereof)."). This is not a "particularized application of encoding ... data" but instead is an improper attempt

at claiming all manner of encoding. *RecogniCorp* 855 F.3d at 1328; *see Adaptive Streaming Inc. v. Netflix, Inc.*, 836 F. App'x 900, 904 (Fed. Cir. 2020) (nonprecedential) (finding "no identification in the claims or written description of specific, unconventional encoding, decoding, compression, or broadcasting techniques").

Here, too, the alleged inventive concept, using multiple encoders to store and retrieve data (Br. at 68), amounts to an abstract idea itself and cannot provide an inventive concept. *BSG*, 899 F.3d at 1290.

c.   *Data Feed Acceleration ('751 Patent)*

With respect to the '751 Patent, Realtime recites generic computer elements, including "a data server" implemented on one or more "processors" and one or more "memory systems," as well as a state machine. Br. at 62-63. But the data server is merely configured to "analyze" data, "select" an encoder, "compress" data using a state machine, and "store" the data. The data server, used in conjunction with a processor and memory, are precisely the type of elements that this Court has found to be generic. *See In re Stanford*, 989 F.3d at 1374 (finding claim reciting method steps carried out by a "computer" with a "processor" and a "memory" to be reciting hardware limitations in generic terms (citation omitted)).

The state machine is also a generic limitation. The specification explains it only requires that "in each state, there is a compression/decompression table

comprising information on how to encode/decode[.]" *See* Appx557 at 13:28-33.

Moreover, Realtime acknowledged state machines "are well-known computer

components." Appx4921 at 31:19-20.

Again, the purportedly unconventional "solution" resides in "digital data

transmission" (Br. at 69), an abstract idea that cannot furnish the inventive concept.

BSG, 899 F.3d at 1290; *see Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*,

874 F.3d 1329, 1340 (Fed. Cir. 2017) (holding ineligible claims to "processing data

streams, transmitting them from 'an intermediate computer,' and then confirming

certain information about the transmitted").

2.   The Claims Of The Patents-In-Suit Do Not Provide Unconventional Solutions To Known Problems In Data Compression

Relying heavily on the specifications, Realtime argues that an inventive

concept exists because the Patents-in-Suit solve known prior art problems. *See, e.g.*,

Br. at 60 (citing to specification in stating that the '728, '203, '825 Patents addressed

problems relating to "data dependency").

As an initial matter, the inquiry at *Alice* step two is strictly limited to what is

claimed, not what the specification discloses. *See Two-Way Media*, 874 F.3d at 1338

("The main problem … is that the *claim*—as opposed to something purportedly

described in the specification—is missing an inventive concept." (emphasis in

original)).

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Moreover, even if considered, the specifications do *not* identify an unconventional solution to data dependency. Instead, they disclose use of generic computer technology to compress data. *See* Appx335 at 6:32-37 ("implemented in software as an application program that is executable by, e.g., a general purpose computer"); Appx490 at 6:26-31 (same); Appx412 at 6:26-31 (same); Appx554 at 8:23-26 ("[g]eneral purpose computers ... may be employed to implement the present invention"); Appx176 at 4:50-54 ("present invention is implemented on a computer platform"); Appx112 at 4:50-54 (same); Appx259 at 4:53-57 (same). Use of generic computer technology does not provide an inventive concept. *See FairWarning IP*, 839 F.3d at 1097 (an inventive concept requires claims to "propose a solution or overcome a problem 'specifically arising in the realm of computer [technology]'" beyond the "recitation of generic computer limitations" (alteration in original) (citations omitted)); *see also In re TLI Commc'ns*, 823 F.3d at 615 (noting the "specification limits its discussion of these components to abstract functional descriptions devoid of technical explanation as to how to implement the invention.").

3. The Analysis Does Not Change When Considering The Claims As An Ordered Combination

Realtime repeatedly argues that the District Court failed to consider the claim limitations of the Patents-in-Suit as an ordered combination. *See, e.g.*, Br. at 34, 67, 70. For example, Realtime argues that the limitations of the '908 Patent as an ordered combination were not considered. *See* Br. at 67-68. But, the District Court

did look at the limitations in the '908 Patent, and specifically referred to the claims

of the '908 Patent as requiring "compressing two different data blocks with different

methods" and "compression and storage [that] together are faster than storage of the

uncompressed data alone." Appx33. Utilizing multiple compression techniques and

compressing and storing data on to a generic device "faster" than it can be stored in

uncompressed form, when viewed together, "ad[d] nothing ... that is not already

present when the steps are considered separately." *Alice*, 573 U.S. at 225 (alterations

in original) (citation omitted).   Thus, the District Court correctly concluded that the

claims of the '908 Patent were "purely abstract and do not provide any inventive

steps[.]" Appx34.

Realtime also argues that the District Court failed to consider the limitations

of the '751 Patent's claims as an ordered combination. *See* Br. at 69-70. But it does

not support this argument with any citation or, importantly, explain how the

purported failure should have changed the District Court's conclusion. Indeed, this

failure is pervasive throughout its brief—accusing the District Court of mistakes

without any reference to the record, and then failing to explain how such purported

mistakes caused it to reach a supposedly incorrect legal conclusion.

In the end, as with its step one arguments, Realtime's criticisms of the District

Court's step two analysis are not supported by the actual record. There is no legal

error for this Court to correct.

II.   The District Court Correctly Applied The *Alice* Analysis

Contrary to Realtime's argument that the District Court erred in applying *Alice* (Br. at 49-57), the District Court correctly applied the two-step *Alice* framework. It identified and analyzed limitations of each representative claim, and concluded that they were directed to abstract ideas and added no inventive features. *See* Appx18-40.

After allowing Realtime the opportunity to amend its complaint, the District Court addressed additional limitations that Realtime specifically identified, but concluded that Realtime failed to "explain why these limitations are relevant to subject-matter eligibility." Appx74.

Notably, the District Court never said that claims "involv[ing]" an abstract idea are necessarily directed to that abstract concept, as Realtime suggests. Br. at 50; *compare* Appx70-71.

A.   The District Court's Analysis Of Representative Claims Was Appropriate

Realtime argues that the District Court's designation of certain claims as representative was incorrect. *See* Br. at 34, 51-52, 63-64. But Realtime's decision to assert patents containing hundreds of claims required analysis of representative claims. *See Content Extraction*, 776 F.3d at 1348 (substantially similar claims directed to the same abstract idea can be considered together for subject-matter eligibility); *see also BanCorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*,

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687 F.3d 1266, 1277 (Fed. Cir. 2012) (holding that "asserted system and medium claims [were] no different from the asserted method claims for patent eligibility purposes").[4]

The District Court carefully reviewed the Patents-in-Suit—many of which share common specifications—to identify representative claims. *See* Appx18-21; Appx29-30; Appx32-33; Appx34-37; Appx39; Appx42-43. The differences among many of the claims, which share most limitations—(i) analyzing data without relying only on a descriptor; (ii) using two or more encoders; (iii) using a token identifier; (iv) compressing and storing data "faster"; and (v) using a state machine—are of form, not substance.

Realtime wrongly asserts that the District Court deemed "the '825 patent [] representative of *all seven asserted patents.*" Br. at 52 (emphasis in original). Rather, the District Court "consider[ed] each patent individually, beginning with the [']825 [P]atent," and rather than repeat the consistent portions, "address[ed] subsequent patents by discussing whether any of the limitations they add change the § 101 analysis"—including a representative claim for *each* of the Patents-in-Suit. Appx18-21; Appx29-30; Appx32-33; Appx34-37; Appx39; Appx42-43.

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[4]   Rewarding "safety in numbers" would create a perverse incentive for a plaintiff to assert as many claims as possible to prevent efficient § 101 analysis.

B. The District Court Considered, But Did Not Need To Give Deference To, Non-Binding Precedent Cited By Realtime

Realtime insists that the District Court was required to give deference to non-binding opinions from other district courts. *See* Br. at 24-28, 57-59; *but see Camreta*, 563 U.S. at 709 n.7 ("A decision of a federal district court judge is not binding precedent in either a different judicial district, the same judicial district, or even upon the same judge in a different case." (citation omitted)). Realtime references two rulings in cases involving a total of three of the seven Patents-in-Suit, where a district judge adopted the recommendations of Magistrate Judge Love in the Eastern District of Texas recommending denial of motions to dismiss in *Realtime Data, LLC v. Carbonite, Inc.*, No. 6:17-cv-121, D.I. 70 (E.D. Tex. Sept. 20, 2017) ("*Carbonite*") and *Realtime Data LLC v. Actian Corp.*, No. 6:15-cv-00463, D.I. 84 (E.D. Tex. Nov. 30, 2015) ("*Actian*"). Realtime faults the District Court for making "no attempt to distinguish its decision[.]" Br. at 59. But although Realtime identifies no authority requiring a district court to distinguish prior decisions, it ignores that the District Court did so here, including because "the Federal Circuit has [since] reaffirmed that the processing of information, without more, is not patent eligible." *See* Appx48 at n.4.

Additionally, the District Court here had the benefit of many years of additional guidance on patent eligibility from this Court, as well as a more robust record, including three rounds of briefing and a hearing at which Realtime's counsel

conceded that a state machine was a well-known computer component and was unable to persuasively articulate how the claims were not abstract, nor identify an inventive concept. Appx4921 at 31:12-20; Appx4924-4928 at 34:8-38:24. Moreover, the '825, '458, '203, and '751 Patents were not even asserted in the *Carbonite* and *Actian* cases.

In any event, the *Carbonite* decisions distinguished the claims of the '728 Patent from those at issue in *RecogniCorp*, stating that, rather than claiming the abstract idea of encoding and decoding, the invention "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." Appx7490. Because *Carbonite* ignores that the '728 Patent's specification expressly discloses that "content dependent" and "content independent data encoders" can be the same, and "are well known within the art," that conclusion is substantively incorrect. Appx251 at 16:35-62.

Lastly, *Actian* did not find that Realtime's patents claim eligible subject matter, but merely deferred resolution of "whether the patents contain an inventive concept" until claim construction provided a "settled interpretation of the claim language." Appx7514-7515. There was no need to defer a resolution here because the District Court adopted Realtime's own proposed constructions for purposes of adjudicating the motions to dismiss. *See* Appx75.

CONCLUSION

The Federal Circuit tasked the District Court with reassessing the eligibility of the Patents-in-Suit on remand. Heeding this Court's guidance, the District Court carefully reconsidered and refined its "directed to" analysis, addressed the decisions of other courts reaching differing conclusions on patent eligibility, and distinguished the cases cited by this Court and Realtime. Moreover, the District Court allowed Realtime to amend its complaints.

Yet the result remained the same—Realtime's patents are directed to abstract ideas and, further, lack any inventive concept to transform the ideas into patent-eligible subject matter.

Accordingly, this Court should affirm the judgment that the Patents-in-Suit are invalid under § 101.

DATED: March 11, 2022   Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

The brief complies with the type-volume limitation of Federal Circuit Rule 32(a). This brief contains 13,348 words, excluding the parts of the brief exempted under Federal Rules of Appellate Procedure 32(f) and Federal Circuit Rule 32(b).

The brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type-style requirements of Federal Rule of Appellate Procedure 32(a)(6). This brief has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Times New Roman font.

DATED: March 11, 2022   By: /s/ John M. Neukom
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CERTIFICATE OF SERVICE

I hereby certify that on March 11, 2022, I electronically filed the foregoing with the Clerk of the Court of the United States Court of Appeals for the Federal Circuit by using the appellate CM/ECF System.

I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

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