

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMMVAULT SYSTEMS, INC.,
Petitioner,

v.

REALTIME DATA LLC,
Patent Owner.

Case IPR2017-02178
Patent 9,054,728 B2

Before CHRISTOPHER L. CRUMBLY, CHRISTOPHER M. KAISER,
and KAMRAN JIVANI, *Administrative Patent Judges*.

KAISER, *Administrative Patent Judge*.

DECISION

Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

INTRODUCTION

A. Background

Commvault Systems, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–25 of U.S. Patent No. 9,054,728 B2 (Ex. 1001, “the ’728 patent”). Realtime Data LLC (“Patent Owner”) filed a Corrected Preliminary Response (Paper 9, “Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

After considering the Petition, the Preliminary Response, and the evidence currently of record, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail with respect to at least one of the claims challenged in the Petition because Petitioner has not accounted properly for all limitations of the challenged independent claims. Accordingly, we do not institute an *inter partes* review.

B. Related Matters

The parties note that the ’728 patent has been asserted against Petitioner in *Realtime Data LLC d/b/a IXO v. Commvault Systems, Inc., et al.*, Case No. 1:17-cv-00925 (D. Del.), and *Realtime Data LLC d/b/a IXO v. Commvault Systems, Inc., et al.*, Case No. 6:17-cv-00123 (E.D. Tex.). Pet. 2–3; Paper 5, 6. The parties also identify 24 other district court cases in which the ’728 patent has been asserted against other defendants. Pet. 3; Paper 5, 5–8. Finally, some claims of the ’728 patent previously have been

challenged in other *inter partes* review proceedings, including IPR2017-00108, IPR2017-00179, IPR2017-00808, IPR2017-01354, and IPR2017-01690. Pet. 4; Paper 5, 4–5.

C. The Asserted Grounds of Unpatentability

Petitioner contends that claims 1–25 of the '728 patent are unpatentable based on the following grounds (Pet. 17–67):¹

| Statutory Ground | Basis | Challenged Claims |
|-------------------------|---|---------------------------------|
| § 103 | Medina '93 ² | 1, 3–10, 15, 18, 20, 21, and 24 |
| § 103 | Medina '93 and Medina '98 ³ | 2, 11–13, 19, 22, and 25 |
| § 103 | Medina '93 and Bodson ⁴ or Fax Standard ⁵ | 9, 10, and 20 |
| § 103 | Medina '93 and Moffat ⁶ or Fax Standard | 14 and 23 |

¹ Petitioner also relies on a Declaration from James Storer, Ph.D. Ex. 1002.

² Medina, U.S. Patent No. 5,274,474, issued Dec. 28, 1993 (Ex. 1004, “Medina '93”).

³ Medina, U.S. Patent No. 5,801,842, issued Sept. 1, 1998 (Ex. 1005, “Medina '98”).

⁴ Dennis Bodson, Stephen J. Urban, Alan R. Deutermann, & Charles E. Clarke, *Measurement of Data Compression in Advanced Group 4 Facsimile Systems*, 73 Proc. IEEE 731 (1985) (Ex. 1006, “Bodson”).

⁵ Int'l Telecomms. Union, ITU-T Recommendation T.4 (1996) (Ex. 1008, “T.4”), and Int'l Telecomms. Union, ITU-T Recommendation T.30 (1996) (Ex. 1010, “T.30”) (collectively, “Fax Standard”).

⁶ Alistair Moffat, Timothy C. Bell, & Ian H. Witten, *Lossless Compression for Text and Images*, 8 Int'l J. High Speed Electronics & Sys. 179 (1997) (Ex. 1007, “Moffat”).

| Statutory Ground | Basis | Challenged Claims |
|-------------------------|--|--------------------------|
| § 103 | Medina '93 and Hunter ⁷ or Fax Standard | 16 and 17 |
| § 103 | Medina '93 and Moffat, Hunter, Hoffman, ⁸ Zidar, ⁹ or Alsulaiman ¹⁰ | 18 |

D. The '728 Patent

The '728 patent, titled “Data Compression Systems and Methods,” issued on June 9, 2015. Ex. 1001, at [45], [54]. The '728 patent relates to “[d]ata compression using a combination of content independent data compression and content dependent data compression.” *Id.* at [57]. According to the patent, “[t]here are various problems associated with the use of lossless compression techniques,” including “data dependency,” in which “the compression ratio achieved is highly contingent upon the content of the data being compressed.” *Id.* at 2:29–40. In addition, “natural variation” can lead to “significant variations in the compression ratio obtained when using a single lossless data compression technique for data streams having different data content and data size.” *Id.* at 2:41–45. Thus, according to the '728 patent, it is important to select the best data

⁷ Roy Hunter & A. Harry Robinson, *Int'l Digital Facsimile Coding Standards*, 68 Proc. IEEE 854 (1980) (Ex. 1011, “Hunter”).

⁸ ROY HOFFMAN, *DATA COMPRESSION IN DIGITAL SYSTEMS* (1997) (Ex. 1016, “Hoffman”).

⁹ Judith A. Zidar, *Text Recognition and Optical Scanning*, in 18 *ENCYCLOPEDIA OF MICROCOMPUTERS* 157 (Allen Kent & James G. Williams eds., 1996) (Ex. 1019, “Zidar”).

¹⁰ Mansour Alsulaiman, *An Investigation of Storage and Communication Codes for an Electronic Library* (1987) (Ex. 1020, “Alsulaiman”).

compression technique for any given application by considering “many factors.” *Id.* at 2:46–64. Although methods to choose appropriate compression techniques existed in the prior art, the ’728 patent notes that those methods had shortcomings, including “the need to unambiguously identify various data types” and that “it may be difficult and/or impractical to predict which data encoding technique yields the highest compression ratio.” *Id.* at 3:20–52.

The ’728 patent purports to address these limitations. Specifically, the ’728 patent describes “a method for compressing data” that comprises “analyzing a data block of an input data stream” with “disparate data types” in order to determine which of those data types makes up the data block, then “performing content dependent data compression on the data block, if the data type of the data block is identified” or “performing content independent data compression on the data block, if the data type of the data block is not identified.” *Id.* at 3:59–4:4. The “data compression is performed on a per block basis.” *Id.* at 8:16–17; *see also id.* at 18:15–16, 21:1–2, 23:56–57 (same statement with respect to multiple embodiments).

E. Illustrative Claim

Claims 1–25 of the ’728 patent are challenged. Claims 1, 24, and 25 are independent. Claim 1 is illustrative; it recites:

1. A system for compressing data comprising:
a processor;
one or more content dependent data compression encoders; and
a single data compression encoder;
wherein the processor is configured:
to analyze data within a data block to identify one or more
parameters or attributes of the data wherein the analyzing of the

data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based solely on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block; to perform content dependent data compression with the one or more content dependent data compression encoders if the one or more parameters or attributes of the data are identified; and to perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified.

Ex. 1001, 26:29–48.

ANALYSIS

A. Discretionary Denial Under 35 U.S.C. § 325(d) or § 314(a)

Patent Owner argues that we should deny institution under either 35 U.S.C. § 325(d) or 35 U.S.C. § 314(a). Prelim. Resp. 7–21. As discussed below, we conclude on the merits of Petitioner’s challenges that Petitioner has not established a reasonable likelihood of prevailing in showing that any challenged claim is unpatentable. Accordingly, we do not reach the question of whether we should deny institution under either § 325(d) or § 314(a).

B. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 2131, 2144 (2016) (upholding the use of the broadest reasonable interpretation standard). Claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire

disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Neither Petitioner nor Patent Owner proposes construing any claim terms. Pet. 10; Prelim. Resp. 1–43. Accordingly, with the exception of the extent to which the claims permit different types of data compression to be used within a single data block, which is discussed below with respect to Petitioner’s obviousness arguments, we do not construe any terms expressly. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”).

C. Obviousness over Medina ’93

Petitioner argues that the subject matter of claims 1, 3–10, 15, 18, 20, 21, and 24 would have been obvious to a person of ordinary skill in the art given the teachings of Medina ’93. Pet. 17–36.

1. Medina ’93

Medina ’93 relates to a fax machine that can operate using either a standard mode or a high speed mode. Ex. 1004, at [57]. In the standard mode, “communication employs bit mapped pixels for both text and graphics.” *Id.* In the high speed mode, recognizable text characters are sent as codes and locations, while “[g]raphics and unrecognizable characters are transmitted as bit mapped pixels.” *Id.* In particular, Medina ’93 discloses a high speed mode that “has the capability of recognizing character areas on a document and graphics areas on a document.” *Id.* at 2:18–20. The “character areas” are “analyzed by an optical character recognition means to produce character codes for recognizable means to produce character codes for recognizable ASCII or the like.” *Id.* at 2:20–23. Other areas, including

“[b]oth unrecognizable characters and areas of the document which are analyzed as graphics areas,” “are coded according to standard telefacsimile methods,” and the “document is then transmitted as a combination of character codes, such as ASCII codes, and standard telefacsimile codes. *Id.* at 2:23–28. Figure 4 of Medina ’93 is reproduced below:

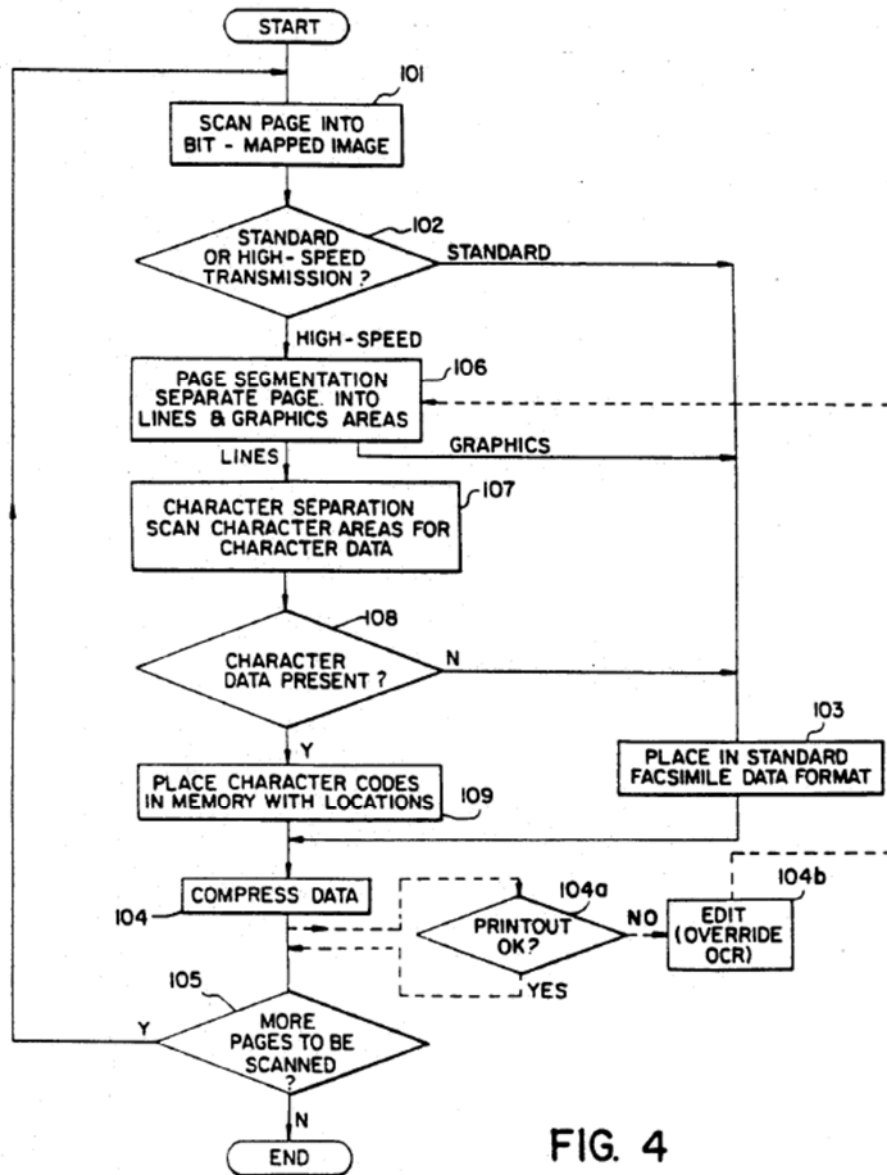


FIG. 4

Figure 4 depicts “a flow chart of the operation of the scanner interface” of Medina ’93. *Id.* at 2:62–63. In step 101, “a page is scanned into a bit-mapped image.” *Id.* at 5:17–18. In the high speed mode, in step 106, “a page is separated into potential character areas or graphics areas.” *Id.* at 5:39–43. Graphics areas are encoded in standard facsimile data format in step 103. *Id.* at 5:43–45. Character areas are separated into individual isolated characters in step 107. *Id.* at 5:45–48. Each character is then processed to determine whether it can be identified as “an actual ASCII or other coded character” in step 108. *Id.* at 5:48–51. Unrecognized characters are sent to step 103 to be encoded used standard facsimile data format. *Id.* at 5:51–53. Recognized characters are encoded as character codes and locations at step 109. *Id.* at 5:54–57. The standard-facsimile-format data and the character-code-and-location data are compressed at step 104. *Id.* at 5:57–58. The entire sequence of steps is repeated for each page to be scanned. *Id.* at 5:58–60.

2. *Analysis*

Petitioner argues that all limitations of claims 1, 3–10, 15, 18, 20, 21, and 24 are taught or suggested by Medina ’93. Pet. 17–36. Patent Owner argues that Petitioner has not shown sufficiently that Medina ’93 teaches or suggests the binary choice between “content dependent data compression” and “data compression” that is required by claim 1 of the ’728 patent. Prelim. Resp. 21–27. In addition, Patent Owner argues that Petitioner has not shown sufficiently that Medina ’93 teaches or suggests the binary choice between “compressing the data block with at least one of the one or more data compression encoders” and “compressing the data block with the

default data compression encoder” that is required by claim 24. *Id.* at 28–32. We agree with Patent Owner.

Claim 24 of the ’728 patent recites “one or more data compression encoders,” “a default data compression encoder,” and a “processor [that] is configured . . . to compress the data block to provide a compressed data block.” Ex. 1001, 28:12–30. This compressing may take either of two forms. First, data within the data block is analyzed “to identify one or more parameters or attributes of the data,” and, if there is an encoder of the “one or more data compression encoders” that is “associated with the one or more parameters or attributes of the data,” the data block is compressed “with at least one of the one or more data compression encoders.” *Id.* Second, in all other cases, the data block is compressed “with the default data compression encoder.” *Id.* Thus, claim 24 does not permit compressing *some* data within a data block using one of the “one or more data compression encoders” and *other* data within the same data block using the “default data compression encoder.” Petitioner’s argument for the obviousness of claim 24, however, is that “Medina ’93 teaches compressing the data block (page) to provide a compressed data block (compressed page),” identifying a scanned page in Medina ’93 as the “data block” of claim 24. Pet. 35 (citing Ex. 1004, 2:27–31). If the scanned page is the data block, as Petitioner asserts, then claim 24 requires the *entire* page to be compressed using “at least one of the one or more data compression encoders” or the *entire* page to be compressed using the “default data compression encoder.” Medina ’93 does not teach such a system, because it teaches compressing some portions of the page (the recognizable characters) using a content-dependent compression encoder and other portions of the page (the graphics areas and the unrecognizable

characters) using a default compression encoder. Ex. 1004, 5:16–60, Fig. 4. Accordingly, given Petitioner’s identification of a “data block” in Medina ’93 as a page, Petitioner has not shown sufficiently that Medina ’93 teaches or suggests the binary choice of data compression encoders recited in claim 24.

With respect to claim 1, Petitioner again argues that the scanned page in Medina ’93 is the “data block.” Pet. 20–21. As discussed above, Medina ’93 does not compress an entire page using one type of compression encoder or the other, but instead compresses portions of one page using one type and other portions of the same page using the other type. It is perhaps less facially apparent from the plain language of claim 1 than from that of claim 24, however, whether the claim requires that a single encoder type be used for an entire data block. Where claim 24 clearly recites a “processor [that] is configured . . . to compress the *data block*,” claim 1 recites only a “processor [that] is configured . . . to perform content dependent data compression . . . if the one or more parameters or attributes of *the data* are identified” and “to perform data compression with the single data compression encoder, if the one or more parameters or attributes of *the data* are not identified,” without reciting specifically what “data” is to have the “data compression” performed upon it. Ex. 1001, 26:29–48 (emphases added). This leaves open the possibility that compressing only a portion of a data block using a particular type of encoder might satisfy claim 1. On reviewing the remainder of the ’728 patent, however, we determine Petitioner has not shown sufficiently that the ’728 patent contemplates compressing only a portion of a data block using a particular type of encoder.

First, the Specification of the '728 patent is quite clear that the invention of the '728 patent involves compressing data “on a per block basis.”¹¹ *Id.* at 8:16–17; *see also id.* at 18:15–16, 21:1–2, 23:56–57 (same statement with respect to multiple embodiments). Given this focus on compressing data one block at a time, it would be inconsistent with the Specification to construe the ambiguous language of claim 1 as encompassing the compression of data in amounts smaller than a single block. *See, e.g., Translogic Tech., Inc.*, 504 F.3d at 1257 (claim terms are to be understood in light of the Specification).

Second, many claims dependent on claim 1 presume that the data compression carried out in claim 1 affects entire data blocks in uniform ways, rather than operating at the sub-data-block level. For example, claim 9 recites “a data token indicative of the content dependent data compression applied *to the data block* to create a *compressed data block*.” *Id.* at 27:4–7 (emphases added). Claim 10 uses the same language with respect to a “single data compression encoder” instead of a content dependent data compression encoder. *Id.* at 27:8–11. Claim 15 recites a “compressed data block,” suggesting that such a data block was created in claim 1. *Id.* at 27:26–27. Claims 16 and 17 recite outputting uncompressed data blocks if the data compression applied in claim 1 “results in a compressed data block indicative of data expansion,” again suggesting that it

¹¹ Where the '728 patent departs from handling data on a per-block basis, it describes doing so “on a per block or multi-block basis,” suggesting that compression of larger amounts of data might be contemplated, but not that compression of smaller amounts of data might be. *See, e.g., Ex. 1001*, 24:62–65.

is the data block in claim 1 to which the data compression is applied. *Id.* at 27:28–36.

Given the discussion of compression on a per-data-block basis in the written description and claims of the '728 patent, we are persuaded that an interpretation of claim 1 as limited to compression of entire data blocks is the broadest reasonable interpretation in light of the Specification. 37 C.F.R. § 42.100(b). Accordingly, we are not persuaded that Petitioner has shown sufficiently that Medina '93 teaches or suggests the subject matter of claim 1.

Claims 3–10, 15, 18, 20, and 21 depend from claim 1. Ex. 1001, 26:53–28:2. Thus, each of these claims incorporates all the limitations of claim 1. 37 C.F.R. § 1.75(c). Accordingly, given that Petitioner has not shown sufficiently that Medina '93 teaches or suggests the subject matter of claim 1, Petitioner also has not shown sufficiently that Medina '93 teaches or suggests the subject matter of these claims.

D. Remaining Obviousness Grounds

Petitioner argues that the subject matter of claims 2, 11–13, 19, 22, and 25 would have been obvious to a person of ordinary skill in the art given the teachings of Medina '93 and Medina '98; that the subject matter of claims 9, 10, and 20 would have been obvious to a person of ordinary skill in the art given the teachings of Medina '93 and either Bodson or the Fax Standard; that the subject matter of claims 14 and 23 would have been obvious to a person of ordinary skill in the art given the teachings of Medina '93 and either Moffat or the Fax Standard; that the subject matter of claims 16 and 17 would have been obvious to a person of ordinary skill in the art given the teachings of Medina '93 and either Hunter or the Fax Standard;

and that the subject matter of claim 18 would have been obvious to a person of ordinary skill in the art given the teachings of Medina '93 and one or more of Moffat, Hunter, Hoffman, Zidar, or Alsulaiman. Pet. 37–67.

In each of these grounds, Petitioner relies on Medina '93 to teach or suggest the subject matter of claim 1 in the manner discussed above. *Id.* For the reasons discussed above, we are not persuaded that Petitioner has shown sufficiently that Medina '93 teaches or suggests the subject matter of claim 1, and this means that Petitioner has not shown sufficiently that Medina '93 teaches or suggests the subject matter of claims 2, 9–14, 16–19, 20, 22, or 23.

With respect to claim 25, Petitioner relies on Medina '93 to teach or suggest the limitation reciting “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.” Ex. 1001, 28:31–51; *see* Pet. 52–53. As with claim 24 and claim 1, this claim requires compressing an entire data block using either content dependent data compression or a single data compression encoder, as opposed to permitting both types of data compression to be used within the same data block. As with those claims, however, Petitioner identifies the entire scanned page of Medina '93 as a data block and relies on the teaching in Medina '93 of compressing portions of a page with content dependent data compression and other portions of the page with default data compression. Pet. 47, 52–53 (“If OCR block 60 recognizes an individual character as a ‘recognizable character,’ the OCR block 60 compresses the *character* . . .” (emphasis added)). Accordingly, we are not persuaded that Petitioner has shown

sufficiently that Medina '93 teaches or suggests the subject matter of claim 25.

CONCLUSION

Upon consideration of the Petition, the Preliminary Response, and the evidence before us, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that any challenged claim of the '728 patent is unpatentable as obvious. Accordingly, we do not institute *inter partes* review on any of Petitioner's asserted grounds.

ORDER

It is hereby

ORDERED that, pursuant to 35 U.S.C. § 314, the Petition is denied, and no *inter partes* review is instituted.

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