UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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EMC CORPORATION,
Petitioner,

v.

PERSONALWEB TECHNOLOGIES, LLC and
LEVEL 3 COMMUNICATIONS, LLC,
Patent Owners.
_____

Case IPR2013-00087
Patent 8,001,096 B2
_____

Before KEVIN F. TURNER, JONI Y. CHANG, and
MICHAEL R. ZECHER, *Administrative Patent Judges*.

TURNER, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

EMC Corporation ("EMC") filed a petition on December 17, 2012, requesting an *inter partes* review of claims 1, 2, 81, and 83 of U.S. Patent No. 8,001,096 B2 ("the '096 Patent"). Paper 3 ("Pet."). PersonalWeb Technologies, LLC and Level 3 Communications, LLC (collectively, "PersonalWeb") filed a patent owner preliminary response. Paper 11 ("Prelim. Resp."). Taking into account the patent owner preliminary response, the Board determined that the information presented in the petition demonstrated that there was a reasonable likelihood that EMC would prevail with respect to claims 1, 2, 81, and 83. Pursuant to 35 U.S.C. § 314, the Board instituted this trial on May 17, 2013, as to claims 1, 2, 81, and 83 of the '096 Patent. Paper 16 ("Dec.").

After institution, PersonalWeb filed a patent owner response (Paper 37 ("PO Resp.")), and EMC filed a reply to the patent owner response (Paper 44 ("Reply")). Oral hearing was held on December 16, 2013.[1]

We have jurisdiction under 35 U.S.C. § 6(c). This final written decision is entered pursuant to 35 U.S.C. § 318(a). We hold that claims 1, 2, 81, and 83 of the '096 Patent are unpatentable under 35 U.S.C. § 103.

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[1] This proceeding, as well as IPR2013-00082, IPR2013-00083, IPR2013-00084, IPR2013-00085, and IPR2013-00086, involve the same parties and similar issues. The oral arguments for all six *inter partes* reviews were merged and conducted at the same time. A transcript of the oral hearing is included in the record as Paper 68, hereinafter "Transcript."

A. *Related Proceeding*

EMC indicates that the '096 Patent is the subject of litigation titled *PersonalWeb Technologies LLC v. EMC Corporation and VMware, Inc.*, No. 6:11-cv-00660-LED (E.D. Tex.). Pet. 1.

B. *The '096 Patent*

The '096 Patent relates to a data processing system that identifies data items using substantially unique identifiers, otherwise referred to as True Names, which depend on all the data in the data item and only on the data in the data item. Ex. 1001, 1:44-48, 3:52-58, 6:20-24. According to the '096 Patent, the identity of a data item depends only on the data and is independent of the data item's name, origin, location, address, or other information not derivable directly from the data associated therewith. *Id*. at 3:52-58. The '096 Patent also examines the identities of a plurality of data items in order to determine whether a particular data item is present in the data processing system. *Id*. at 3:59-62.

The '096 Patent further discloses accessing data items by referencing their identities or True Names independent of their present location in the data processing system. *Id*. at 33:28-30. The actual data item or True file corresponding to a given data identifier or True Name is capable of residing anywhere on the data processing system, i.e., locally, remotely, offline, etc. *Id*. at 33:30-32. If a requested data item or True File is local with respect to the data processing system, a prospective user can access the data in the True File. *Id*. at 33:32-34. If a requested data item or True File is not local

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with respect to the data processing system, a prospective user may use the

True File registry to determine the location of copies of the True File

according to its given True Name. *Id*. at 33:34-38. However, if for some

reason a prospective user cannot locate a copy of the requested data item or

True File, the processor employed by the user may invoke the Request True

File remote mechanism to submit a general request for the data item or True

File to all the processors in the data processing system. *Id*. at 34:42-48.

C. Challenged Claim

Independent claim 1, along with dependent claims 2, 81, and 83, is

challenged by EMC in this *inter partes* review and is reproduced below:

> 1. A computer-implemented method operable in a file
> system comprising a plurality of servers, the method
> comprising the steps of:

> (A) adding a data item to the file system, *the data item
> consisting of a sequence of non-overlapping parts*, *each part
> consisting of a corresponding sequence of bits*, by:

> (A1) for *each part* in said sequence of parts, *determining*,
> using hardware in combination with software, *a
> corresponding digital part identifier*, wherein each said
> digital part identifier for each said part is determined *based
> at least in part on a first function of all of the bits in the
> sequence of bits* comprising the corresponding part, the
> first function comprising a first hash function;

> (A2) *determining*, using a second function, *a digital
> identifier for the data item*, said digital data item identifier
> being *based, at least in part, on the contents of the data
> item*, wherein two identical data items in the file system
> will have the same digital data item identifier in the file

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system, said second function comprising a second hash function;

(A3) storing each part in said sequence of parts on multiple servers of said plurality of servers in the file system;

(A4) storing first mapping data that maps the digital data item identifier of the data item to the digital part identifiers of the parts comprising the data item;

(A5) storing second mapping data that maps the digital part identifier of each part in said sequence of parts to corresponding location data that identifies which of the plurality of servers in the file system stores the corresponding part; and

(B) repeating step (A) for each of a plurality of data items; and

(C) attempting to access a particular data item in the file system by:

(C1) obtaining a particular digital data item identifier of the particular data item, said particular digital data item identifier of said particular data item being included in an attempt to access said particular data item in said file system;

(C2) attempting to match, using hardware in combination with software, said particular digital data item identifier of said particular data item with a digital data item identifier in said first mapping data; and

(C3) based at least in part on said attempting to match in step (C2), when said particular digital data item identifier obtained in step (C1) corresponds to an identifier in said first mapping data, using said first mapping data to determine a digital part identifier of each part comprising the particular data item;

(C4) using said second mapping data and at least one digital part identifier determined in step (C3) to determine

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> location data that identifies which of the plurality of
> servers in the file system stores the corresponding at least
> one part of the particular data item;

> (C5) attempting to access at least one part of the particular
> data item at one or more servers identified in step (C4) as
> storing said at least one part.

Ex. 1001, 38:36-39:28 (emphasis added).

D. Prior Art Relied Upon

EMC relies upon the following prior art references:

Frederick W. Kantor, "*FWKCS (TM) Contents-Signature System
Version 1.22*," FWKCS122.REF (Aug. 10, 1993) (Ex. 1004,
hereinafter "Kantor").

Mahadev Satyanarayanan, "*Scalable, Secure, and Highly Available
Distributed File Access*," 23 IEEE Computer 9-21 (May 1990)
(Ex. 1005, hereinafter "Satyanarayanan").

E. Ground of Unpatentability

The Board instituted the instant trial based on the following ground of

unpatentability:

Claims	Basis	References
1, 2, 81, and 83	§ 103(a)	Kantor and Satyanarayanan

II. ANALYSIS

A. Claim Construction

We begin our analysis by determining the meaning of the claims. In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Under the broadest reasonable construction standard, claim terms 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). An inventor may rebut that presumption by providing a definition of the term in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a definition, limitations are not to be read from the specification into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

In the Decision on Institution, we construed the claim term "data item" to mean "sequence of bits," and observed that in the context of the specification, the meaning also includes one of the following: (1) the contents of a file; (2) a portion of a file; (3) a page in memory; (4) an object in an object-oriented program; (5) a digital message; (6) a digital scanned image; (7) a part of a video or audio signal; (8) a directory; (9) a record in a database; (10) a location in memory or on a physical device or the like; and (11) any other entity which can be represented by a sequence of bits. Dec. 10. The parties agree with that claim construction. Pet. 6-7; PO Resp.

1-2. As noted in the Decision on Institution, that claim construction is consistent with the specification. Dec. 9-10 (citing Ex. 1001, 1:56-57 ("the terms 'data' and 'data item' as used herein refer to sequences of bits."); *id*. at 1:56-61, 1:66–2:4). We discern no reason to deviate from that claim construction for the purposes of this decision.

B. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). In that regard, an obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 418; *see also Translogic*, 504 F.3d at 1259.

We also recognize that prior art references must be "considered together with the knowledge of one of ordinary skill in the pertinent art." *Paulsen*, 30 F.3d at 1480. Moreover, "it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." *In re Preda*, 401 F.2d 825, 826 (CCPA 1968). We analyze the instituted ground of unpatentability in accordance with the above-stated principles.

C. Claims 1, 2, 81, and 83 – Obviouness over Kantor and Satyanarayanan

EMC asserts that claims 1, 2, 81, and 83 are unpatentable under 35 U.S.C. § 103(a) as obvious over Kantor and Satyanarayanan. Pet. 47-54. As support, EMC provides detailed explanations as to how each claim element, arranged as recited in the claim, is disclosed by Kantor, Satyanarayanan and/or the combination of both. *Id.* Additionally, EMC also directs our attention to the declaration of Dr. Clark. *Id.* (citing Ex. 1009).

PersonalWeb counters that Kantor fails to teach specific elements of claim 1 for which it is cited, that Kantor teaches away from the combination with Satyanarayanan, and that the proposed modification of Kantor would not have been obvious. PO Resp. 3-42. PersonalWeb also argues that claims 81 and 83 are not obvious over Kantor and Satyanarayanan, presenting separate arguments and relying on arguments made against the obviousness of claim 1. *Id.* at 42-50. PersonalWeb also alleges that Kantor is not a "printed publication" within the meaning of 35 U.S.C. § 102(b). *Id.*

at 51-56. In support of its argument, PersonalWeb proffers Mr. Todd
Thompson's declaration (Ex. 2014).

Upon review of the parties' arguments and supporting evidence, we
determine that EMC has demonstrated by a preponderance of the evidence
that claims 1, 2, 81, and 83 are unpatentable under 35 U.S.C. § 103(a) as
being obvious over Kantor and Satyanarayanan. We also determine that
Kantor is a "printed publication" within the meaning of 35 U.S.C. § 102(b).

Kantor

Kantor describes a method of identifying duplicate files. Ex. 1004,
2-4, 48-49. In particular, Kantor applies a hash function (*e.g.*, a cyclic
residue check or cyclic redundancy check (CRC)) to each file within a zip
file to obtain the contents signature for each file. *Id.* at 6-8, 48-49. Each
contents signature is a string of bits generated from the contents of a file. *Id.*

For each zip file, Kantor creates zip-file contents signatures by
hashing the contents signatures for the files contained within the zip file
("a hash of hashes"). *Id.* at 2, 9. As described by Kantor, this is done by
"adding together all the 32_bit CRC's for the files in the zip file, modulo
2^32, separately adding together their uncompressed file_lengths modulo
2^32, and then arranging the two resulting hexadecimal numbers as a single
structure." *Id*. at 9. Dr. Clark testifies that addition modulo 2^32 is another
well-known simple hashing function that uses addition to calculate a value
for a file based on the file's contents. Ex. 1009 ¶ 20. Kantor further

compares the zip-file contents signatures to check for duplicate files.
Ex. 1004, 2 of Preface, 5, 9.

According to Kantor, contents signatures and zip-file contents signatures are useful to identify files that have the same contents stored on the electronic bulletin board systems ("BBS"). Ex. 1004, 2 of Preface, 5, 9. For example, when uploading a zip file, the system determines whether that zip file already exists in the system using the zip-file contents signature, and then determines whether the inner files of that zip file already exist in the system using the contents signatures for the inner files. *Id.* at 9.

EMC has acknowledged that Kantor fails to disclose the underlying storage system of the BBS, and, thus, does not disclose that files are replicated on multiple servers, per claims 1, 2, 81, and 83. Pet. 52-53. Satyanarayanan discloses a network-based file replication system, where copies of files are stored at multiple servers (Ex. 1028, 447). EMC also argues that a person of ordinary skill would have found it obvious to modify Kantor to meet that limitation in view of Satyanarayanan. Pet. 53. On this record, we concur with the analysis of Dr. Clark, that it would have been obvious to combine Kantor and Satyanarayanan to provide more reliable storage systems for the BBS's files (Ex. 1009 ¶ 84).

Digital part identifiers for all parts of a data item/ based on all data

PersonalWeb argues that Kantor fails to disclose digital part identifiers for "each part" of a data item, or a data item identifier "based, at least in part, on the contents of the data item," because Kantor's "zipfile

contents-signatures" are based on "contents-signatures" of the inner files of
a zipfile, and are not based on all parts or all bits of the data item. PO Resp.
3-18. Because Kantor excludes some parts of the data item, i.e., the zip file,
it is argued that it cannot teach the portions of claim 1 on which it is relied
upon. *Id*. EMC counters that based on the claim construction for "data
item," i.e., a "portion of a file," the inner files of the zip file are a portion of
the file and are equivalent collectively to the "data item" of claim 1. Reply
1-2. We agree with EMC.

PersonalWeb assumes that the entire zip file in Kantor is equivalent to
the "data item" in claim 1 (PO Resp. 3), but we are not persuaded that this is
the sole, proper interpretation of Kantor. Claim 1 recites, in part, that "the
data item consisting of a sequence of non-overlapping parts, each part
consisting of a corresponding *sequence of bits*," and "for each part in said
sequence of parts, determining . . . a corresponding digital part identifier . . .
based at least in part on a first function of all of the bits in the *sequence of
bits*." (emphasis added). We are persuaded that the inner files of the zip file
in Kantor are equivalent to the claimed "data item" in that those files consist
of a sequence of non-overlapping parts. In addition, each file of the inner
files of the zip file consists of a sequence of bits, and a CRC of one of the
individual files, in Kantor, is based on a function of "all of the bits in the
sequence of bits" of the inner file.

Although PersonalWeb argues that the Petition found "that the 'data
item' in Kantor is a ZIP file" (PO Resp. 6, citing Ex. 1009 ¶¶ 86, 100; Ex.
1029 ¶¶ 2, 8-10), the support for that statement, citing to Dr. Clark's

declarations, also refers to "a sequence of non-overlapping parts" as the inner files within the zip file. Ex. 1009 ¶ 86, 100. We are persuaded that ground proffered in the Petition, and instituted in this proceeding, indicates that the "data item" of claim1 can be read as being equivalent to the inner files of the zip file in Kantor. Based on this, one need not use the *entire* zip file to meet the limitations of claim 1, if the inner files of the zip file constitute the data item. As a consequence, the fact that "a ZIP file includes much more than the individual 'files' therein," as argued by PersonalWeb (PO Resp. 9), is correct, but inapposite. Kantor's exclusion of other data or metadata in the zip file to determine the CRC is also not distinguishing. If the "data item" of claim 1 is taken as the inner files of the zip file in Kantor, then the fact that Kantor does not use every bit of the zip file does not distinguish it from claim 1.

This also comports with the overall purpose of the invention disclosed in the '096 Patent. The specification of the '096 Patent, in the "Summary of the Invention" section, provides that "the identity of the data item is independent of its name, origin, location, address, or other information not derivable directly from the data." Ex. 1001 3:56-58. Counsel for PersonalWeb argued at the oral hearing that "the things like File Name, et cetera, in the patents, the patent says -- makes clear they are not part of the data item. In the patent." Transcript 110. This is consistent with the view that that the inner files of a zip file can constitute a "data item," as claimed, in that such a construction would exclude metadata, i.e., the rest of the zip file, which can include name, location, etc. Limiting the "data item" to the

inner files would meet the definition found in claim 1, with the inner files being "a portion of a file," and consist solely of a "sequence of non-overlapping parts." This is distinct from PersonalWeb's view (PO Resp. 3) that the data item be taken to be the whole zip file in Kantor.

PersonalWeb responds to this view of Kantor, although it alleges that "petitioner does not make this argument," and argues that "the express language of claim 1, and the Board's construction of 'data item,' preclude such an argument." PO Resp. 16. We do not agree. As discussed above, we find EMC has represented that the inner files of the zip file in Kantor are equivalent to the claimed "data item" in its Petition. PersonalWeb argues that "[b]ecause a data item must be a '*sequence* of bits,' one cannot pick and choose some bits of the ZIP file (the alleged 'data item'), *while excluding other intervening bits* of the ZIP file, to make up the alleged data item because the result would not be a "*sequence* of bits' as required by the claim." *Id.*

However, that interpretation depends on the meaning of "sequence of non-overlapping parts" whereby a sequence cannot have any intervening gaps. We are persuaded that the inner files of the zip file in Kantor, even with interstitial parts, such as local headers and directories, still form a sequence of non-overlapping parts. The inner files form a sequence of files that make up the zip file, with each file being a sequence of bits. The parts or files make up the sequence, even with metadata included between the parts. Considering the cited example from Dr. Clark's deposition (PO Resp. 17; Ex. 2016, 98), of a single file line of 100 people, ordinarily skilled

artisans would consider that to be a sequence of people, and not need to look to any space left between the people as creating a non-sequence. One would not need to examine the intervening air, or mosquitoes, or dust that exists between the persons, because those elements would not be people. A sequence of persons need only look at the persons. Similarly, a sequence of inner files in Kantor can be a sequence, even if they have intervening "non-files" between them.

As such, we are persuaded that EMC has demonstrated that Kantor teaches that digital part identifiers are based on all parts of a data item, with the data item including a sequence of non-overlapping parts, each part consisting of a corresponding sequence of bits, and the digital part identifiers are based on all of the sequence of bits.

Kantor's 'y' procedure emphasizes the deficiencies of 'zcs'

PersonalWeb argues that the "y" procedure in Kantor (Ex. 1004, 55), wherein the CRC value is based on every byte in the zip file, illustrates that the "z" procedure, discussed above to compute zip-file contents signatures, does not apply a hash function to all of the data in the zip file. PO Resp. 18-21. PersonalWeb also argues that it would be fundamentally improper to switch between the "z" and "y" procedures to meet the limitations of claim 1 because the procedures are separate and distinct embodiments. *Id*. at 19-20. EMC counters that both disclosed procedures illustrate that whether to hash metadata is a mere design choice, and Kantor's preference to not hash

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metadata in the "z" procedure was made for the same reasons as made in the '096 Patent to not hash metadata. Reply 5. We agree with EMC.

As discussed above, we are persuaded that EMC has demonstrated that the broadest reasonable construction of claim 1, consistent with the specification, does not demand the hashing of metadata, such that there is no need to combine different embodiments of Kantor to teach or suggest all of the elements of claim 1.

Kantor fails to teach or suggest sub-steps (A4)-(A5) of claim 1

PersonalWeb argues claim 1 requires "storing second mapping data that maps the digital part identifier of each part in said sequence of parts to corresponding location data." PO Resp. 21. PersonalWeb argues that because a CRC is not computed for *all* parts of the zip file in Kantor, this element of claim 1 cannot be met. *Id.* We agree, however, with EMC that this argument is merely a restatement of PersonalWeb's earlier argument, discussed above. We do not conclude that claim 1 requires the hashing of metadata contained in the zip file of Kantor, such that the sub-steps of claim 1, (A4) and (A5), can be met by Kantor. As such, we are persuaded that EMC has demonstrated that Kantor teaches or suggests the subject limitations of claim 1.

Applying a hash to each of the plurality of parts of the first data item

Claim 1 requires that "each said digital part identifier for each said part is determined based at least in part on a first function of all of the bits in the sequence of bits comprising the corresponding part, the first function comprising a first hash function." Based on this, PersonalWeb argues that claim 1 requires applying a first hash to parts of the data item to come up with the digital part identifiers, and that Kantor fails to disclose this and teaches away because Kantor applies the CRC hash to the uncompressed files before they are compressed and packaged into the zip file. PO Resp. 23. In other words, the CRC in Kantor is applied to different bit sequences (uncompressed files) than the bit sequences (compressed files) that make up the inner files of the zip file. *Id.* PersonalWeb also alleges that the bit sequence of an uncompressed file is much different that the bit sequence of a compressed version of that same file. *Id.* at 26. As such, PersonalWeb argues that Kantor fails to disclose an identifier based on a hash of the sequence of bits in the part of the data item, as called for in claim 1. *Id.* at 26.

EMC counters that nothing in the claims requires that the inner files of the zip file be compressed files. We are persuaded that, based on the present record, that a zip file can include uncompressed files and that Kantor can work with zip files regardless of the method or amount of compression. Ex. 1083, 263-265; Ex. 1089 ¶ 19-21; Ex. 1004, 9, 55. If the inner files of the zip file in Kantor are uncompressed, then the CRC hash values determined

for the files before they become part of the zip file are the same as when the files are part of the zip file.

As such, we are persuaded that EMC has demonstrated that Kantor teaches or suggests the subject limitations of claim 1.

Determining the part identifiers in the file system

PersonalWeb argues that claim 1 requires the step of determining the part identifiers to be carried out "in a file system." PO Resp. 29-30. PersonalWeb argues that Kantor teaches away from claim 1 because the CRC values are determined outside the BBS. *Id.* PersonalWeb also alleges that Dr. Clark's testimony acknowledges that remote PCs are not part of the BBS when not logged into the BBS. *Id.*; Ex. 2016, 67, 101. EMC counters that ordinarily skilled artisans would appreciate that "a file system" could constitute the BBS, or it could constitute the BBS in combination with the computers communicating with the BBS, which is disclosed in Kantor. Reply 9. We agree with EMC.

The claim limitation "a file system" is not a limitation that has been construed specifically in this proceeding. Based on the deposition testimony, a "user's terminal or PC" would not be considered part of the BBS before login (Ex. 2016, 101), but that suggests that once it is connected, it would be considered a part of the BBS. Thus, PersonalWeb's analysis ignores the situation where a zip file is created by a user while connected to the BBS. We are persuaded that users connected to the BBS may form a new zip file, and thus also generate a zip-file contents signature, so that such

a new file could be uploaded to the BBS. Dr. Clark also points out that the "Lookup" operation in Kantor demonstrates that the BBS and the users' computers can operate together as a file system. Ex. 1089 ¶ 27; Ex. 1004, 96. Therefore, we are not persuaded that Kantor fails to teach or suggest that the part identifiers are determined in the file system.

As such, we are persuaded that EMC has demonstrated that Kantor teaches or suggests the subject limitations of claim 1.

Kantor teaches away from adding zip files to multiple servers

Personalweb argues that claim 1 requires the storage of each part of the data item on multiple servers in the file system, which necessarily creates duplicate files in the system. PO Resp. 31. PersonalWeb argues that it would not have been obvious to have modified Kantor to accomplish this, even in view of Satyanarayanan, because Kantor teaches away by its very purpose of avoiding duplicate files in the system. *Id*. at 31-32. EMC counters that Kantor is concerned with avoiding *unwanted* duplicates, and Kantor is unconcerned with the mirroring of files on multiple servers because that is a function of the BBS. Reply 9-10. We agree with EMC.

Kantor generates and maintains a master list of the contents signatures called CSLIST.SRT, and the MULTIS feature is used to analyze the CSLIST, and identify and list the files for which multiple copies exist. Ex. 1004, 189. Thereafter, a word processor is used to add a "d" to the line of the MULTIS file for the files to be deleted. *Id.* Thus, if the user does not place the "d" on the line for the file, that duplicate file will remain on the

system. Kantor does not require the elimination of all duplicates; it merely provides a mechanism that would allow for it. In view of the actual teachings of Satyanarayanan, namely that mirroring techniques can increase reliability and response times for requests for files (Ex. 1028, 450), we agree with EMC that it would have been obvious to mirror duplicate files that were not deleted in Kantor. Additionally, Dr. Dewar also agreed that mirroring technology was known. Ex. 1083, 114-115. Therefore, we are not persuaded that Kantor teaches away from mirroring of files on multiple servers.

Identifying files using contents signatures

Claim 1 recites "attempting to access a particular data item in the file system by: (C1) obtaining a particular digital data item identifier of the particular data item." Ex. 1001, 39:3-6. In its petition, EMC recognizes that the users typically request files based on the file names. Pet. 51. Nonetheless, EMC asserts that a person having ordinary skill in the art would have found it obvious to modify the electronic Bulletin Board Systems commands, including the download and read commands, to identify files using contents signatures or zip-file contents signatures, instead of file names. *Id*. at 51-52 (citing Ex. 1009 ¶ 83). According to EMC, "this would facilitate integrity checking by more precisely specifying the file of interest by its content, and thus improve accuracy." *Id*. at 51. Dr. Clark testifies that such a modification would provide a more efficient and context-free means for accessing and sharing files. Ex. 1009 ¶ 83.

PersonalWeb counters that it would not have been obvious to modify Kantor so that the read and download requests would accept contents signatures to identify files. PO Resp. 35-42. PersonalWeb alleges that Kantor fails to teach or suggest the alleged modification, and fails to provide any suggestion or motivation for the alleged modification. *Id*. at 35-39 (citing Ex. 2017 ¶¶ 62-63). PersonalWeb further submits that Kantor does not disclose any problems with the use of conventional file names for the read and download requests. *Id*. at 39-40. Additionally, PersonalWeb argues that Kantor teaches away from replacing conventional file names with contents signatures for identifying files, because "Kantor intentionally designed his contents-signatures so that certain different files would have the same signature." *Id*. at 40-42 (citing Ex. 1004, 3, 51; Ex. 2017 ¶¶ 64-66).

We are not persuaded by PersonalWeb's arguments. As to PersonalWeb's arguments that Kantor does not provide a motivation for the modification (*id*. at 36), a rationale to combine the prior art teachings does not have to be found explicitly in the prior art, itself. *See In re Kahn*, 441 F.3d 977, 987 (Fed. Cir. 2006) (A "motivation to combine the relevant prior art teachings does not have to be found explicitly in the prior art."). We also are not persuaded by PersonalWeb's argument that there would have not been a logical reason to modify Kantor in the manner alleged by EMC, other than impermissible hindsight (PO Resp. 36). As discussed above, EMC asserts that it would have been obvious to modify the read and download commands to identify files using contents signatures instead of file names. Pet. 51-52 (citing Ex. 1009 ¶ 83). EMC takes the position that "this would

facilitate integrity checking by more precisely specifying the file of interest by its content, and thus improve accuracy." *Id*. Dr. Clark testifies that such a modification would provide a more efficient and context-free means for accessing and sharing files. Ex. 1009 ¶ 83. EMC's position and Dr. Clark's testimony are consistent with Kantor's disclosure that using contents signatures, instead of file names, to find and delete duplicate files would increase system efficiency by reducing storage cost and system time for locating and managing files. Ex. 1004, Preface, 5, 9, 205-206. As such, we conclude that EMC has articulated a sufficient reason to combine the teachings of Kantor.

Also, we are not persuaded by PersonalWeb's argument that the proposed modification is not enabled and its argument that EMC fails to explain how the proposed modification could have been carried out to yield a predictable result. PO Resp. 36-39. EMC specifically explains that Kantor's Precheck and Lookup operations provide examples of user commands that utilize contents signatures. Pet. 46 (citing Ex. 1004, 97, 173; Ex. 1009 ¶ 83). For instance, Kantor describes the Precheck operation as a software utility running on the electronic Bulletin Board Systems for identifying files that already uploaded in the system by using their contents signatures. Pet. 51-52 (citing Ex. 1004, 173). Dr. Clark explains that Kantor's Lookup operation permits users to submit a request containing a contents signature to determine where the corresponding file is located on the system. Ex. 1009 ¶ 83 (citing Ex. 1004, 96-97). Dr. Clark further testifies the system as modified would have utilized one of those contents

signatures for the inner files in a download request to obtain the particular inner file that is associated with the contents signature. *Id.* Upon review of the parties' contentions and supporting evidence, we agree with EMC that Dr. Clark merely relies on the disclosure of Kantor (Ex. 1004, 96-97), and not LOOKUP.DOC and PRECHECK.DOC files as alleged by PersonalWeb. For the foregoing reasons, we determine that EMC has explained sufficiently how the proposed modification could have been carried out to yield a predictable result.

PersonalWeb's argument that Kantor does not teach or suggest the alleged modification is unpersuasive, because an obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 418. PersonalWeb's argument overlooks "the fundamental proposition that obvious variants of prior art references are themselves part of the public domain." *Translogic,* 504 F.3d at 1259. Moreover, we observe that the asserted ground of unpatentability is based on the *combination* of Kantor's teaching of using contents signatures to identify files with Kantor's teaching of requesting files. It is well settled that nonobviousness cannot be established by attacking each prior art teaching individually where, as here, the ground of unpatentability is based upon a combination of different teachings in the prior art. *See In re Keller*, 642 F.2d 413, 426 (CCPA 1981). Rather, the test for obviousness is whether the combination of prior art teachings, taken as a whole, would have suggested the patentees' invention

to a person having ordinary skill in the art. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

In light of Kantor, a person of ordinary skill in the art would have recognized how to calculate contents signatures and zip-file contents signatures and how to use them to identify files. *See, e.g.*, Ex. 1004, Preface, 5-9. A person with ordinary skill in the art also would have appreciated the benefit of using contents signature and zip-file contents signatures that are generated based on the contents of the files, rather than *file names*, for identifying files accurately. *Id.* The mere substitution of contents signatures and zip-file contents signatures for *file names* in read and download requests predictably uses prior art elements according to their established functions. Such a substitution is an obvious improvement. *See KSR*, 550 U.S. at 417 (The simple substitution of one known element for another is likely to be obvious if it does no more than yield predictable results.). Moreover, PersonalWeb has not provided sufficient evidence that such a substitution is beyond the level of a person with ordinary skill in the art. *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

PersonalWeb's teaching away argument is misplaced, as it fails to recognize that the cited portion of Kantor specifically explains that the different files that allegedly have the same signature files also have the *same contents*. *See* Ex. 1004, 3 ("[T]he same file contents . . . will have the same zipfile contents signature."). In fact, that is one of the reasons why using contents signatures or zip-file contents signature, instead of file names, to

identify files is more accurate. Ex. 1004, Preface, 5, 9. Notably, files that have the *same contents* would be identified as duplicates, and files that have *different contents* would be identified as different files, regardless of whether they have different file names. *Id*. As Kantor notes, finding and deleting duplicate files would improve system efficiency. *Id.*

Obviousness of Claims 2, 81, and 83

PersonalWeb discusses the subject matter of claim 2 only briefly, arguing that in addition to Kantor not teaching elements of claim 1, Kantor also fails to teach elements of claim 2, namely a second hash function applied to respective digital part identifiers in determining the digital identifier. PO Resp. 19, 29. We do not find those brief arguments to be persuasive and conclude that EMC has demonstrated that claim 2 is obvious over Kantor and Satyanarayanan. Pet. 56. PersonalWeb also separately argues the subject matters of claims 81 and 83 (PO Resp. 42-46), but we concur with EMC (Reply 13) that those arguments rely on the same claim limitations and make the same arguments already discussed above with respect to claim 1. We do not find such arguments any more persuasive with respect to claims 81 and 83.

Evidence of non-obviousness

PersonalWeb further submits that its evidence of non-obviousness rebuts EMC's evidence of obviousness. PO Resp. 50-51. In support of its argument, PersonalWeb directs our attention to three licensing agreements,

as well as the declaration of Mr. Kevin Bermeister. *Id*. at 12 (citing Exs. 2010-12; Ex. 2009 ¶¶ 3-9). PersonalWeb argues that each license granted to a third party was not for the purpose of settling a patent infringement suit. *Id*.

In its Reply, EMC contends that PersonalWeb has failed to establish a sufficient nexus between claims 1, 2, 81, and 83 of the '096 Patent and the above-identified license agreements. Reply 13-14. EMC argues that each of the licenses granted rights to more than just claims 1, 2, 81, and 83, and involved related parties with interlocking ownership and business interests. *Id*. We agree with EMC that PersonalWeb has failed to establish the requisite nexus between the licensing agreements and claims 1, 2, 81, and 83.

A party relying on licensing activities as evidence of non-obviousness must demonstrate a nexus between those activities and the subject matter of the claims at issue. *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995). Further, without a showing of nexus, "the mere existence of . . . licenses is insufficient to overcome the conclusion of obviousness" when there is a strong ground of unpatentability based on obviousness. *SIBIA Neurosciences, Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1349, 1358 (Fed. Cir. 2000); *see Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004).

The evidence of non-obviousness presented by PersonalWeb falls short of demonstrating the required nexus. Neither PersonalWeb nor the declaration of Mr. Bermeister (Ex. 2009) establishes that the licensing

agreements (Exs. 2010-12) are directed to the claimed subject matter recited in claims 1, 2, 81, and 83. For instance, PersonalWeb does not present credible or sufficient evidence that the three licensing agreements arose out of recognition and acceptance of the claimed subject matter recited in claims 1, 2, 81, and 83. In the absence of an established nexus with the claimed invention, secondary consideration factors are entitled little weight, and generally have no bearing on the legal issue of obviousness. *See In re Vamco Machine & Tool, Inc.*, 752 F.2d 1564, 1577 (Fed. Cir. 1985). Furthermore, even if we assume that above-identified licenses establish some degree of industry respect for the claimed subject matter recited in claims 1, 2, 81, and 83, that success is outweighed by the strong evidence of obviousness over Kantor and Satyanarayanan discussed above.

Based on the record before us, including the evidence of obviousness presented by EMC and the evidence of secondary considerations regarding licensing activities presented by PersonalWeb, we conclude that EMC has demonstrated by a preponderance of the evidence that claims 1, 2, 81, and 83 would have been obvious over the combination of Kantor and Satyanarayanan.

Whether Kantor is a "printed publication"

In its petition, EMC takes the position that Kantor is a "printed publication" under 35 U.S.C. § 102(b). Pet. 5. EMC asserts that Kantor has been publicly available since August 1993, which is prior to the critical date, April 11, 1995, one year before the earliest priority date claimed by the '096

Patent. *Id*. To substantiate its position, EMC explains that Kantor is "a published manual that describes a software program called the Frederick W. Kantor Contents-Signature System Version 1.22 ('FWKCS')." *Id*. at 47 (citing Ex. 1004, Title Page). EMC maintains that Dr. Frederick Kantor distributed Kantor—the user manual (version 1.22), the version relied upon by EMC (*see* Ex. 1004)—with the FWKCS program as shareware and posted it online to electronic Bulletin Board Systems including "The Invention Factory" and "Channel 1" for an extended period of time, where Kantor could be downloaded by anyone. Pet. 5, n. 3 (citing Ex. 1004, 3, 158-59). According to EMC, Kantor was accessible to others in the relevant community of the users and system operators of electronic Bulletin Board Systems. *Id*. In support of its position, EMC proffers a declaration of Mr. Michael A. Sussell (Ex. 1050) and declarations of Mr. Jason S. Sadofsky (Ex. 1078; Ex. 1088).

In its patent owner response, PersonalWeb counters that Kantor is not a "printed publication." PO Resp. 51-56. In particular, PersonalWeb alleges that EMC has not established that the specific version of Kantor existed prior to the critical date. *Id*. at 52. PersonalWeb contends that there is no evidence that Kantor was disseminated publicly, catalogued, or indexed in a meaningful way. *Id*. at 52-53. It is PersonalWeb's view that EMC fails to establish that one with ordinary skill in the art, exercising reasonable diligence, would have located Kantor prior to the critical date. *Id*. at 51.

We have reviewed the parties' arguments and supporting evidence. Based on the evidence before us, we are not persuaded by PersonalWeb's

arguments. Rather, we determine that EMC has demonstrated by a preponderance of the evidence that Kantor is a "printed publication" within the meaning of 35 U.S.C. § 102(b).

The determination of whether a given reference qualifies as a prior art "printed publication" involves a case-by-case inquiry into the facts and circumstances surrounding the reference's disclosure to members of the public. *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004). The key inquiry is whether the reference was made "sufficiently accessible to the public interested in the art" before the critical date. *In re Cronyn*, 890 F.2d 1158, 1160 (Fed. Cir. 1989); *In re Wyer*, 655 F.2d 221, 226 (CCPA 1981). "A given reference is 'publicly accessible' upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it." *Bruckelmyer v. Ground Heaters, Inc.*, 445 F.3d 1374, 1378 (Fed. Cir. 2006).

Indexing is not "a necessary condition for a reference to be publicly accessible," but it is only one among many factors that may bear on public accessibility. *In re Lister*, 583 F.3d 1307, 1312 (Fed. Cir. 2009). In that regard, "while often relevant to public accessibility, evidence of indexing is not an absolute prerequisite to establishing online references . . . as printed publications within the prior art." *Voter Verified, Inc. v. Premier Election Solutions, Inc.,* 698 F.3d 1374, 1380 (Fed. Cir. 2012).

Contrary to PersonalWeb's assertion that Kantor did not exist prior to the critical date and there is no evidence that Kantor was disseminated

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publicly, Kantor itself shows a copyright date of "1988-1993" and a posted

date of "1993 August 10." Ex. 1004, Title Page, the first page after the Title

Page ("All of the programs and documents, comprising the entire contents of

this Authenticity Verification Zip file FWKCS122.ZIP, together with this

Zipfile itself, are, in accordance with their respective dates of creation or

revision, (C) Copyright Frederick W. Kantor 1988-1993."). Kantor also

states:

> The FWKCS(TM) Contents_Signature System has become a robust platform for supporting contents_signature functions. FWKCS provides many functions and options for application in a public, commercial, school, institutional, or governmental environment. Extensive technical support is of special value in helping such users to benefit more fully from these many features.
>
> Registered FWKCS hobby BBS users are able to receive a modest amount of assistance, and are invited to participate in the FWKCS conference on The Invention Factory BBS, echoed via Execnet.
>
> Commercial, school, institutional, and governmental users, with their special support needs, are invited to discuss terms for obtaining such assistance.
>
> . . . .
>
> To get a new version of FWKCS, download FWKCSnnn.ZIP from The Invention Factory BBS, where nnn is the new version number without a decimal point. These special downloads are available at no fee, from a 43_line hunt_up group of USR Dual Standard modems, at 2400-16800 bits/sec (including V32.bis).

Ex. 1004, 158-159. It is clear from Kantor that, during the 1988-1993

timeframe, Dr. Kantor had posted many versions of his software and user

manual—including Kantor (version 1.22),, the version relied upon by EMC (Ex. 1004)—on electronic Bulletin Board Systems.

Mr. Sussell, the co-owner and system operator of the Invention Factory Bulletin Board System, testifies that the Invention Factory Bulletin Board System is a computer system that allows users to share files, messages, and articles, as well as search, upload, and download files. Ex. 1050 ¶¶ 3-4. According to Mr. Sussell, he and his wife launched the Invention Factory Bulletin Board System in 1983, and it had over 3,000 subscribers by mid-1993. *Id*. ¶ 6. Mr. Sussell testifies that, by 1993, the system provided all users keyword search functionality and access to various descriptive and meaningful directories. *Id*. ¶¶ 8-10.

More importantly, Mr. Sussell testifies that the Invention Factory Bulletin Board System "extensively utilized and hosted current versions of FWKCS software on its [Bulletin Board System]," and "made publicly accessible and available the complete FWKSC ZIP file that contained both the software as well as related documentation such as user manuals" prior to the critical date. *Id*. ¶ 15; *see id*. ¶¶ 16-27. Specifically, Mr. Sussell testifies that users would have found Kantor by performing keyword searches on the Invention Factory Bulletin Board System. *Id*. ¶ 21. Mr. Sussell also indicates that the Invention Factory Bulletin Board System advertised Dr. Kantor's software to its users by including information about Dr. Kantor's software on the "Welcome" screen, and made the FWKCS Zip file available in four different directories. *Id*. ¶¶ 18-20. Mr. Sussell further testifies that

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computer disks that contain the FWKCS Zip file were distributed at various Bulletin Board System conferences. *Id*. ¶ 18.

Mr. Sadofsky, a technology archivist and software historian, testifies that he personally verified the authenticity of Kantor—the user manual (version 1.22), the version relied upon by EMC (Ex. 1004)—by comparing it with a "1993 archived" version, and determined that Kantor is identical to the "1993 archived" version. Ex. 1078 ¶¶ 14-17. Mr. Sadofsky testifies that the source file of the "1993 archived" version has a timestamp of August 10, 1993, at 1:22 AM. *Id*. ¶ 16; Ex. 1088 ¶¶ 10-11; Ex. 2014 ¶ 5. According to Mr. Sadofsky, Kantor was publicly accessible prior to the critical date. *Id*.

PersonalWeb also asserts that Kantor was buried and hidden in the zip file in a manner such that "it would not have been located and accessed by persons interested and ordinarily skilled in the art exercising reasonable diligence even if they had access to the ZIP file." PO Resp. at 53-54 (citing Ex. 2014). However, PersonalWeb's supporting evidence, Mr. Thompson's declaration (Ex. 2014), does not substantiate PersonalWeb's assertion. Upon review of Mr. Thompson's declaration, we observe that Mr. Thompson downloaded the FWKCS Zip file—the zip file that contains the software and Kantor, the user manual—without any difficultly. Ex. 2014 ¶ 5. Significantly, Mr. Thompson did not follow the instructions provided with the zip file, nor did he use the appropriate computer environment (DOS 3.0 or an IBM OS/2 2.0) that was used normally in 1993-1994 timeframe, but instead he used non-compatible software (DOS 8.0 and 32-bit Windows XP operating system that was released in 2001). Ex. 2014 ¶¶ 6-11; Ex. 1088

¶¶ 5, 14. Once he followed the instructions and unzipped the FWKCS Zip file, Mr. Thompson located Kantor without difficulty. Ex. 2014 ¶¶ 20-22.

Mr. Sadofsky confirms that the README.TXT file provides simple instructions and, if a user follows the instructions and uses the operating system that was used normally in 1993-1994 timeframe, the user could locate Kantor without difficulty. Ex. 1088 ¶¶ 13-17. In fact, Mr. Sadofsky demonstrated, in his declaration, several relatively easy ways for a user to access Kantor—with or without installing the software, and with or without help screens. Ex. 1088 ¶¶ 8-16 (II. README.TXT); ¶¶ 17-20 (III. GETLOOK.BAT); ¶¶ 21-22 (IV. FWKCS122 Start Screen and In-Program Help). Based on the evidence before us, we determine that Kantor was available to the extent that persons interested and ordinarily skilled in the art, exercising reasonable diligence, could locate it.

PersonalWeb's argument that EMC's witnesses personally did not post or review Kantor prior to the critical date also is unavailing. PO Resp. 52-54 (citing Ex. 2015, 52-55; Ex. 2013, 29-30; Ex. 2016, 98). It is well settled that it is not necessary for the witnesses to have reviewed the reference personally prior to the critical date in order to establish publication. *See In re Hall*, 781 F.2d 897, 899 (Fed. Cir. 1986) (concluding "that competent evidence of the general library practice may be relied upon to establish an approximate time when a thesis became accessible"); *Wyer*, 655 F.2d at 226 (Notwithstanding that there is no evidence concerning actual viewing or dissemination of any copy of the Australian application, the court held that "the contents of the application were sufficiently accessible to the

public and to persons skilled in the pertinent art to qualify as a 'printed publication.'"); *In re Bayer*, 568 F.2d 1357, 1361 (CCPA 1978) (A reference constitutes a "printed publication" under 35 U.S.C. § 102(b) as long as a presumption is raised that the portion of the public concerned with the art would know of the invention.).

The evidence on this record clearly support that Kantor was posted on a publicly accessible site—the Invention Factory Bulletin Board System— well known to those interested in the art, and could be downloaded and retrieved from that site, and, therefore, Kantor, an electronic publication, is considered a "printed publication" within the meaning of 35 U.S.C. § 102(b). *See Wyer*, 655 F.2d at 226 (An electronic publication, including an on-line database or Internet publication, is considered to be a "printed publication" "upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it and recognize and comprehend therefrom the essentials of the claimed invention without need of further research or experimentation.").

For the foregoing reasons, we determine that EMC has demonstrated by a preponderance of the evidence that Kantor is a "printed publication" within the meaning of 35 U.S.C. § 102(b). Therefore, EMC may rely upon Kantor for its asserted ground of unpatentability under 35 U.S.C. § 103(a).

D. EMC's Motion to Exclude

EMC seeks to exclude the following exhibits: (1) three license agreements (Exs. 2010-12); (2) Mr. Bermeister's declarations (Exs. 2009, 2018) relating to those license agreements; and (3) Mr. Thompson's declaration (Ex. 2014). Paper 54 ("Pet. Mot."). PersonalWeb filed the license agreements and Mr. Bermeister's declarations as evidence of non-obviousness to rebut EMC's assertion that claims 1, 2, 81, and 83 would have been obvious over the combination of Kantor and Satyanarayanan. PO Resp. 50-51. As to Mr. Thompson's declaration, PersonalWeb proffered that evidence to support its assertion that Kantor—a user manual that was disseminated publicly with the software in a zip file—was not made sufficiently accessible to a person interested and ordinarily skilled in the art. *Id*. at 54-55. PersonalWeb opposes EMC's motion to exclude. Paper 57. In response, EMC filed a reply to PersonalWeb's opposition to its motion to exclude. Paper 62.

With respect to the license agreements and Mr. Bermeister's declarations (Exs. 2009-2012, 2018), EMC argues that they are irrelevant under Federal Rule of Evidence 402[2], highly prejudicial, confusing, and misleading under Federal Rule of Evidence 403. *Id*. at 8-13. As to Mr. Thompson's declaration, EMC argues that it should be excluded under Federal Rule of Evidence 402. *Id*. at 14-15. Specifically, EMC alleges that:

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[2] As stated in 37 C.F.R. § 42.62, the Federal Rules of Evidence generally apply to proceedings, including *inter partes* reviews.

(1) Mr. Thompson does not possess the skill of a person of ordinary skill in the art (*id*. at 14-15 (citing Ex. 1086, 13-14)); (2) Mr. Thompson did not use compatible software from the relevant time period (*id*. at 15 (citing Ex. 1086, 40-41; Ex. 2014, 4, 6)); and (3) Mr. Thompson did not follow the instructions provided with the zip file (*id*. at 15 (citing Ex. 1086, 32-35)).

The current situation does not require us to assess the merits of EMC's motion to exclude. As discussed above, even without excluding PersonalWeb's supporting evidence, we have determined that Kantor is a "printed publication" under 35 U.S.C. § 102(b), and EMC has demonstrated, by a preponderance of the evidence, that claims 1, 2, 81, and 83 are unpatentable over the combination of Kantor and Satyanarayanan.

Accordingly, EMC's motion to exclude evidence is *dismissed* as moot.

E. PersonalWeb's Motion to Exclude

PersonalWeb seeks to exclude the following items of evidence:
(1) Kantor (Ex. 1004); (2) certain documents (Exs. 1047-1049, 1052-1055, 1074, 1075, 1080-1082) and the declarations of Messrs. Sussell and Sadofsky (Exs. 1050, 1078, 1088) regarding those documents; (3) the declarations of Messrs. Sussell and Sadofsky regarding Kantor (Exs. 1050, 1078, 1088) and Mr. Sadofsky's deposition (Ex. 2013, 30, 66); and (4) Clark's rebuttal declaration (Ex. 1089 ¶¶ 26-27, 30). Paper 53 ("PO Mot.").

EMC opposes PersonalWeb's motion to exclude. Paper 60 ("Opp."). In response, PersonalWeb filed a reply to EMC's opposition to its motion to

exclude. Paper 63 ("PO Reply"). For the reasons stated below,
PersonalWeb's motion to exclude is *denied*.

Kantor

PersonalWeb alleges that Kantor should be excluded as
unauthenticated and inadmissible hearsay under Federal Rules of Evidence
901 and 902. PO Mot. 1, 6. In particular, PersonalWeb argues that "[n]o
witness of record has personal knowledge of Kantor existing prior to [the
critical date], and electronic data such as Kantor is inherently untrustworthy
because it can be manipulated from virtually any location at any time." *Id*.
at 2-4. According to PersonalWeb, the dates provided by Kantor are
inadmissible hearsay because Kantor is not self-authenticating. *Id*. at 2, 5-6.

EMC argues that Kantor has been authenticated under Federal Rules
of Evidence 901, and that the document is not hearsay, because it is being
offered for what it describes—not for the truth of its disclosures. Opp. 1-10.
In particular, EMC disagrees with PersonalWeb that Kantor cannot be
authenticated without direct testimony from a witness with personal
knowledge that Kantor existed prior to the critical date. Opp. 1. EMC
asserts that it need "only produce evidence 'sufficient to support a finding'
that the reference 'is what the proponent claims it is.'" *Id*. at 1-2 (citing Fed.
R. Evid. 901(a)). EMC also contends that testimony from Messrs. Sussell
and Sadofsky provides sufficient evidence to authenticate Kantor. Opp. 1-5
(citing Exs. 1050, 1078, 1088).

In its reply, PersonalWeb argues that Federal Rules of Evidence
identified by EMC are not applicable to Kantor, because Mr. Sussell did not
post or review Kantor prior to critical date. PO Reply 1-5 (citing
Ex. 2015, 32-36, 55, 55, 65). PersonalWeb also alleges that Kantor's
authenticity is suspicious, as electronic data are inherently untrustworthy and
there is no chain of custody. *Id.*

We have considered PersonalWeb's arguments as well as EMC's
contentions and supporting evidence. We are not persuaded that Kantor
should be excluded.

At the outset, we disagree with PersonalWeb's position that a witness
cannot authenticate a document, unless the witness is the author of the
document or the witness has reviewed the document prior to the critical date.
Federal Rule of Evidence 901(a) states that the authentication requirement is
satisfied if the proponent presents "evidence sufficient to support a finding
that the item is what the proponent claims it is." Therefore, neither a
declaration from the author, nor evidence of someone actually viewing the
document *prior to critical date*, is required to support a finding that the
document is what it claims to be. *See also Hall*, 781 F.2d at 899 (concluding
"that competent evidence of the general library practice may be relied upon
to establish an approximate time when a thesis became accessible."); *Wyer*,
655 F.2d at 226 (Notwithstanding that there is no evidence concerning actual
viewing or dissemination of any copy of the Australian application, the court
held that "the contents of the application were sufficiently accessible to the

public and to persons skilled in the pertinent art to qualify as a 'printed publication.'").

Further, it is well settled that an uninterrupted chain of custody is not a prerequisite to admissibility, but rather gaps in the chain go to weight of the evidence. *U.S. v. Wheeler*, 800 F.2d 100, 106 (7th Cir. 1986); *see also U.S. v. Aviles*, 623 F.2d 1192, 1198 (7th Cir. 1980) ("If the trial judge is satisfied that in reasonable probability the evidence has not been altered in any material respect, he may permit its introduction.") (Citation omitted). There is a strong public policy for making all information filed in a quasi-judicial administrative proceeding available to the public, especially in an *inter partes* review, which determines the patentability of a claim in an issued patent. It is within the Board's discretion to assign the appropriate weight to be accorded to evidence.

Although Messrs. Sussell and Sadofsky personally did not post or review the particular version of Kantor—version 1.22, the version relied upon by EMC (Ex. 1004)—prior to the critical date, they have sufficient personal knowledge and working experience to provide competent testimony to establish the publication and authentication of Kantor. *See Hall*, 781 F.2d at 899; *Wyer*, 655 F.2d at 226; *Bayer*, 568 F.2d at 1361.

Notably, Mr. Sussell, the co-founder and system operator of the Invention Factory Bulletin Board System, testifies that Dr. Kantor released the first version of his software on the Invention Factory Bulletin Board System in the 1980s, and the system continuously utilized and hosted current versions of the software and user manuals. Ex. 1050 ¶¶ 3, 13, 15. Mr.

Sussell also testifies that the Invention Factory Bulletin Board System
advertised Dr. Kantor's software to its users by including information about
Dr. Kantor's software on the "Welcome" screen, and made FWKCS Zip
file—a zip file that contains both the software and user manual—publicly
accessible and available under four different directories. *Id.* ¶ 18.
According to Mr. Sussell, the Invention Factory Bulletin Board System had
over 3,000 subscribers, in the 1993 timeframe, and all of the users had the
capability to perform keyword searches to retrieve FWKCS Zip file. *Id.*
¶¶ 6, 21.

Although we are cognizant that electronic documents downloaded
from websites normally are not self-authenticating, it has been recognized
that "[t]o authenticate printouts from a website, the party proffering the
evidence must produce some statement or affidavit from someone with
knowledge of the website . . . for example a web master or someone else
with personal knowledge would be sufficient." *St. Luke's Cataract and
Laser Institute v. Sanderson*, 2006 WL 1320242, *2 (M.D. Fla. 2006) (citing
In re Homestore.com, Inc. Sec.Litig., 347 F. Supp. 2d 769, 782 (C.D. Cal.
2004)) (quotation marks omitted); Ex. 2024; *see also Market-Alerts Pty. Ltd.
v. Bloomberg Finance L.P.*, 922 F. Supp. 2d 486, 493, n.12 (D. Del. 2013)
(citing *Keystone Retaining Wall Sys., Inc. v. Basalite Concrete Prods., LLC*,
2011 WL 6436210, at *9 n.9 (D. Minn. 2011)) (documents generated by a
website called the Wayback Machine have been accepted generally as
evidence of prior art in the patent context); *U.S. v. Bansal*, 663 F.3d 634,
667-68 (3d. Cir. 2011) (concluding that the screenshot images from the

Internet Archive were authenticated sufficiently under Federal Rule of Evidence 901(b)(1) by a witness with personal knowledge of its contents, verifying that the screenshot the party seeks to admit are true and accurate copies of Internet Archive's records).

Here, Mr. Sadofsky, who is a technology archivist and software historian and currently is an archivist for the Internet Archive, testifies that he launched the website textfiles.com and a subdomain cd.textfiles.com to collect software, data files, and related materials from Bulletin Board Systems. Ex. 1078 ¶¶ 9-11. According to Mr. Sadofsky, textfiles.com and cd.textfiles.com are dedicated to preserving, archiving, and providing free access to unaltered historical software programs and information that initially were made available on the Bulletin Board System. *Id*. Mr. Sadofsky states that he previously archived the FWKCS Zip file (FWKCS122.ZIP) that contains Dr. Kantor's software and user manual to cd.textfiles.com from his own copy of the *Simtel MSDOS Archive*, October 1993 Edition, Walnut Creek CD-ROM. *Id*. ¶ 14 (citing Ex. 1049). Mr. Sadofsky also testifies that he personally verified the authenticity of Kantor—version 1.22, the version relied upon by EMC (Ex. 1004)—by comparing it with the "1993 archived" version and determined that Kantor is identical to the "1993 archived" version. Ex. 1078 ¶¶ 13-15. Mr. Sadofsky confirms that the source file of the "1993 archived" version has a timestamp of August 10, 1993, at 1:22 AM. *Id*. ¶ 16; Ex. 1088 ¶¶ 10-11; Ex. 2014 ¶ 5. Mr. Sadofsky concludes that Kantor was publicly accessible prior to the critical date. Ex. 1078 ¶¶ 13, 16.

Moreover, we agree with EMC that Kantor also has been authenticated as an "ancient document" under Federal Rule of Evidence 901(b)(8).[3] Opp. 6-7 Kantor is "at least 20 years old and can be found in . . . an October 1993 *Simtel* CD-ROM – a place where an authentic 20-year old document distributed through a [Bulletin Board System] would likely be." *Id.*; Ex. 1072 ¶¶ 7-8; *see also* Fed. R. Evid. 901(b)(8) 2012 Adv. Comm. Note ("The familiar ancient document rule of the common law is extended to include data stored electronically or by other similar means."). Moreover, testimony of Messrs. Sussell and Sadofsky has established sufficiently that Kantor is in a condition that creates no suspicion about its authenticity. Exs. 1050, 1078, 1088.

PersonalWeb does not present sufficient or credible evidence to the contrary. Based on the evidence before us, we determine that Kantor has been authenticated under Federal Rules of Evidence 901(b)(1), (b)(3), (b)(4), and (b)(8) to warrant its admissibility.

PersonalWeb's hearsay argument regarding Kantor also is unavailing. As EMC notes (Opp. 7), "[p]rior art references are not hearsay because they are offered for what they *describe*, and *not* to prove the truth of the matters asserted." *See, e.g.*, *Joy Techs., Inc. v. Manbeck*, 751 F. Supp. 225, 233 n.2

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[3] Fed. R. Evid. 901(b)(8). Evidence About Ancient Documents or Data Compilations. For a document or data compilation, evidence that it:
> (A) is in a condition that creates no suspicion about its authenticity;
> (B) was in a place where, if authentic, it would likely be; and
> (C) is at least 20 years old when offered.

(D.D.C. 1990), *judgment aff'd*, 959 F.2d 226 (Fed. Cir. 1992); Fed. R. Evid. 801(c) 1997 Adv. Comm. Note ("If the significance of an offered statement lies solely in the fact that it was made, no issue is raised as to the truth of anything asserted, and the statement is not hearsay."). Therefore, Kantor is not hearsay under Federal Rule of Evidence 801(c).

We further agree with EMC that the posted date of "1993 August 10" or the copyright date of "1988-1993" on the Title page of Kantor is not a basis for excluding Kantor, as testimony from Messrs. Sussell and Sadofsky sufficiently establishes that Kantor existed as of August 10, 1993, prior to the critical date. Opp. 9-11. More importantly, the computer-generated timestamp—August 10, 1993, at 1:22 AM—of the "1993 archived" version of Kantor (Ex. 1078 ¶¶ 14-15; Ex. 1088 ¶¶ 10-11; Ex. 2014 ¶ 5) also independently corroborates Kantor's existence as of August 10, 1993. *See, e.g., U.S. v. Khorozian*, 333 F.3d 498, 506 (Fed. Cir. 2003) (concluding that an automatically generated time stamp on a fax was not a hearsay statement because it was not uttered by a person). Accordingly we are not persuaded that PersonalWeb has presented a sufficient basis to exclude Kantor as impermissible hearsay.

For the foregoing reasons, we decline to exclude Kantor.

Documents Corroborating Witnesses' Knowledge and Recollections

PersonalWeb asserts that certain documents submitted by EMC (Exs. 1047-1049, 1052-1055, 1074, 1075, 1080-1082) and the declarations of Messrs. Sussell and Sadofsky (Exs. 1050, 1078, 1088) regarding those

documents should be excluded because the documents have not been authenticated properly and are inadmissible hearsay. PO Mot. 6-10. PersonalWeb argues that EMC "has not established that any of these documents existed prior to the critical date, and no witness has personal knowledge of their alleged existence prior to April 11, 1995." *Id*. at 7. PersonalWeb further maintains that the documents that are Exhibits 1053, 1054, 1074, and 1075 are irrelevant, prejudicial, and confusing, as they discuss a version of Kantor different than the version relied upon by EMC (version 1.22, Ex. 1004). *Id*. at 8.

EMC responds that its witnesses provided those "documents concerning Kantor to corroborate their independent knowledge and recollections." Opp. 9. EMC asserts that the documents have been authenticated under Federal Rules of Evidence 901-902 and fall within a hearsay exception under Federal Rules of Evidence 803-807. *Id*. at 10-11. We are persuaded by EMC's arguments.

As the movant, PersonalWeb has the burden of proof to establish that it is entitled to the requested relief. 37 C.F.R. § 42.20(c). As discussed previously, we disagree with PersonalWeb that documents cannot be authenticated without direct testimony from the author or a witness who actually reviewed the documents prior to the critical date. *See* Fed. R. Evid. 901(a). Significantly, PersonalWeb's motion does not contain any sufficient explanation why each document should be excluded. For instance, PersonalWeb does not explain adequately why the declaration of Mr. Sussell (Ex. 1050 ¶¶ 6, 8, 18, 27) is not sufficient to authenticate Exhibits

1052-1055, 1074, and 1075, or why the declarations of Mr. Sadofsky

(Ex.1078 ¶¶ 7-17; Ex. 1088 ¶¶ 10-16) are not sufficient to authenticate

Exhibits 1047-49 and 1080-1082. *See* Fed. R. Evid. 901(b)(1).[4] Nor does

PersonalWeb explain sufficiently why the following documents are not self-

authenticated: (1) Exhibits 1047-1049 and 1052 that include articles

containing LexisNexis® trade inscriptions; (2) Exhibits 1074 and 1075 that

include Usenet newsgroup periodicals containing Usenet trade inscriptions;

and (3) Exhibit 1049 that contains a photograph of the *Simtel MSDOS*

Archive, October 1993 Edition, Walnut Creek CD-ROM, that has Simtel

trade inscriptions. *See* Fed. R. Evid. 902(6)-(7).[5]

In its motion, PersonalWeb fails to identify, specifically, the textual

portions of the aforementioned exhibits that allegedly are being offered for

the truth of the matter asserted, yet seeks to exclude the entirety of each

exhibit. The burden should not be placed on the Board to sort through the

entirety of each exhibit and determine which portion of the exhibit

PersonalWeb believes to be hearsay. Rather, PersonalWeb should have

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[4] Fed. R. Evid. 901(b)(1). Testimony of a Witness with Knowledge.
     Testimony that an item is what it is claimed to be.

[5] Fed. R. Evid. 902. Evidence that Is Self-Authenticating
The following items of evidence are self-authenticating; they require no
extrinsic evidence of authenticity in order to be admitted:
     (6) Newspapers and Periodicals. Printed material purporting to be a
     newspaper or periodical.
     (7) Trade Inscriptions and the Like. An inscription, sign, tag, or label
     purporting to have been affixed in the course of business and
     indicating origin, ownership, or control.

identified, in its motion, the specific portions of the evidence and provided sufficient explanations as to why they constitute hearsay. Furthermore, PersonalWeb does not explain adequately why the declarations of Messrs. Sussell and Sadofsky do not provide the proper foundation and corroboration for the documents.

To the extent PersonalWeb relies upon the same arguments with respect to Kantor for excluding the documents, we have addressed those arguments above and determined that they are unavailing. We also agree with EMC that the documents concerning prior versions of Kantor are relevant, and not prejudicial or confusing, as alleged by PersonalWeb, because such circumstantial evidence provides context and corroboration for the witnesses' independent knowledge and recollection.

Furthermore, we are not persuaded that the declarations of Messrs. Sussell and Sadofsky (Exs. 1050, 1078, 1088) should be excluded. As we discuss below in the next section, Messrs. Sussell and Sadofsky have sufficient personal knowledge and working experience to provide competent testimony to establish the publication and authentication of Kantor. The documents they cite serve to corroborate their independent knowledge and recollection.

For the foregoing reasons, PersonalWeb has not presented a sufficient basis to exclude Exhibits 1047-1049, 1052-1055, 1074, 1075, 1080-1082, as well as the declarations of Messrs. Sussell and Sadofsky (Exs. 1050, 1078, 1088) concerning those Exhibits.

Declarations of Messrs. Sussell and Sadofsky

PersonalWeb argues that the declarations of Messrs. Sussell and Sadofsky (Exs. 1050, 1078, 1088) should be excluded as hearsay under Federal Rule of Evidence 801, and are inadmissible under Federal Rules of Evidence 802-807 for lack of foundation and personal knowledge, and Federal Rule of Evidence 702 as improper testimony, because the witnesses personally did not review Kantor (Ex. 1004) and Simtel (Ex. 1049) prior to the critical date. PO Mot. 8-10. PersonalWeb also argues that Messrs. Sussell and Sadofsky "are not qualified experts in the field." *Id.* at 10. PersonalWeb further alleges that Mr. Sadofsky's deposition (Ex. 2013, 30, 66) should be excluded, as it was responsive to a leading question and non-responsive to the question. *Id.*

EMC responds that the testimony of Messrs. Sussell and Sadofsky should not be excluded because their testimony is based on their own personal knowledge and recollection, and the documents they cite serve to corroborate their independent knowledge and recollection. Opp. 11-12. EMC further explains that the witnesses have described thoroughly the underlying facts, and, therefore, the testimony should be admitted as relevant under Federal Rules of Evidence 401-402, supported by personal knowledge and foundation under Federal Rule of Evidence 602, and proper opinion testimony under Federal Rules of Evidence 701-703. *Id.* We find EMC's contentions have merit.

PersonalWeb's arguments rest on the erroneous premise that EMC's witnesses must have reviewed Kantor or Simtel personally prior to the

critical date in order to provide competent testimony regarding Kantor or Simtel. As discussed previously, it is well settled that it is not necessary for the witnesses to have reviewed the reference personally prior to the critical date in order to establish publication. *See, e.g., Wyer*, 655 F.2d at 226.

Although Messrs. Sussell and Sadofsky are not experts related to the claimed subject matter of the '096 Patent, each witness nevertheless has sufficient personal knowledge and working experience to provide competent testimony. *See Hall*, 781 F.2d at 899. Mr. Sussell was the co-owner and system operator of the Invention Factory Bulletin Board System from 1983 to 1996. Ex. 1050 ¶ 3. Mr. Sussell's testimony is based on his personal knowledge of the relevant facts related to the Invention Factory Bulletin Board System and Kantor. *Id.* at ¶ 2. Notably, Dr. Kantor specifically thanked Mr. Sussell in his user manual for hosting Dr. Kantor's software FWKCS and for Mr. Sussell's role in its development. Ex. 1004, 3 ("To Michael Sussell, sysop of The Invention Factory (R), home board for the support of FWKCS, for bringing the problem of duplicate files to my attention and for his help in testing . . . ."); *id.* at 6 ("When Michael Sussell, sysop of The Invention Factory (R) in New York, brought to my attention the problem of duplicate files with different names, these concepts provided valuable insight into how one might proceed.").

Mr. Sadofsky is a technology archivist and software historian, and works "for the Internet Archive, a non-profit digital library offering free universal access to books, movies, and music, as well as 342 billion archived webpages available through the Wayback Machine service." Ex. 1078 ¶ 3.

Mr. Sadofsky also "directed the film, *The BBS Documentary*, an eight-episode documentary about the subculture born from the creation of the [Bulletin Board System]." *Id*. at ¶ 4. Mr. Sadofsky's testimony is based on his personal knowledge of the relevant facts related to Kantor and the "1993 archived" version of Kantor. *Id*. at ¶ 2; Ex. 1088 ¶ 2. For example, Mr. Sadofsky personally verified the authenticity of Kantor by comparing it with the "1993 archived" version, and determined that Kantor—version 1.22, the version relied upon by EMC (Ex. 1004)—is identical to the "1993 archived" version. Ex. 1086 ¶¶ 14-15.

Upon review of the evidence on the record, we agree with EMC that both Messrs. Sussell and Sadofsky have disclosed sufficient underlying facts to support their testimony. For instance, the computer-generated timestamp—August 10, 1993, 1:22 AM—associated with the "1993 archived" version of Kantor corroborates their testimony regarding Kantor's existence as of August 10, 1993. Ex. 1078 ¶¶ 14-15; Ex.1088 ¶¶ 10-11; Ex. 2014 ¶ 5.

As to Mr. Sadofsky's deposition (Ex. 2013, 30, 66), PersonalWeb does not explain sufficiently why that testimony should be excluded. PO Mot. 11. Moreover, Mr. Sadofsky's deposition (Ex. 2013, 30, 66) is consistent with his direct testimony (Ex. 1078 ¶¶ 14-16), and, therefore, it would not prejudice PersonalWeb even if such evidence is not excluded.

For the foregoing reasons, PersonalWeb has not presented a sufficient basis to exclude the declarations of Messrs. Sussell and Sadofsky (Exs. 1050, 1078, 1088) and Mr. Sadofsky's deposition (Ex. 2013, 30, 66).

Clark's Rebuttal Declaration

PersonalWeb asserts that Dr. Clark's rebuttal declaration (Ex. 1089) should be excluded, because it is irrelevant, prejudicial, and confusing, as well as beyond the scope of this proceeding. PO Mot. 10-15. In support of its assertion, PersonalWeb advances several arguments. *Id.*

First, PersonalWeb argues that Dr. Clark's rebuttal declaration cites to references that do not serve as the basis of a ground of unpatentability instituted in this proceeding, i.e., Browne and Langer. *Id.* at 10-11. EMC counters that Dr. Clark's statements referencing those references were offered in response to PersonalWeb's argument that one with ordinary skill in the art would not have modified Kantor. Opp. 12 (citing PO Resp. 35-36; Ex. 2017 ¶¶ 60-62). According to EMC, those statements are relevant to the instituted grounds of unpatentability and confirm that the use of hash-based identifiers to identify files was well known in the art at the time of invention. *Id.* We agree with EMC that Dr. Clark's statements are proper rebuttal evidence submitted in response to PersonalWeb's arguments. Those references were cited merely to show the knowledge level of a person with ordinary skill in the art. *See Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013) (When considering whether a claimed invention would have been obvious, "the knowledge of [an ordinarily skilled] artisan is part of the store of public knowledge that must be consulted."). Such evidence does not change the combination that formed the basis of the grounds of unpatentability based on obviousness instituted in this proceeding. *Id.*; *see*

also In re Donohue, 766 F.2d 531, 534 (Fed. Cir. 1985). Accordingly, we are not persuaded that PersonalWeb has presented a sufficient basis to exclude Dr. Clark's rebuttal declaration.

Second, PersonalWeb contends that the "could" and "might" statements in Dr. Clark's rebuttal declaration should be excluded, because those statements are irrelevant, prejudicial, confusing, lacking foundation, and beyond the scope of this proceeding. PO Mot. 11. In response, EMC contends that the statements in Dr. Clark's rebuttal declaration were offered in response to PersonalWeb's arguments. Opp. 13 (citing *e.g.*, PO Resp. 27; Ex. 2017 ¶ 49). Having reviewed PersonalWeb's patent owner response and Dr. Clark's rebuttal declaration, we determine that Dr. Clark's testimony is reasonable rebuttal evidence in light of PersonalWeb's arguments. Furthermore, PersonalWeb's arguments concerning Dr. Clark's statements affect the weight to be given by us to Dr. Clark's testimony in deciding whether the instituted grounds of unpatentability render the challenged claimed unpatentable. When weighing evidence, we are capable of determining whether the prior art references anticipate or render obvious the challenged claims without being confused, misled, or prejudiced by Dr. Clark's testimony. Thus, we are not persuaded that PersonalWeb has presented a sufficient basis to exclude any portions of Dr. Clark's rebuttal declaration.

Third, PersonalWeb submits that Dr. Clark's rebuttal declaration of what Kantor's software allegedly could do is irrelevant because an *inter partes* review is limited to printed publications and patents. *Id*. at 11-12.

EMC counters that Dr. Clark's rebuttal declaration (Ex. 1089 ¶¶ 26) regarding what Kantor's software "could" do is relevant and admissible. Opp. 13. EMC points out that Dr. Clark's rebuttal declaration merely explains "what a person of skill in the art, reading the Kantor reference, would [have understood] the reference to disclose about Kantor's software." *Id.* (citing Ex. 1089 ¶ 26). We agree with EMC that Dr. Clark is not offering opinions on how Kantor's software might operate but, rather, on what it discloses or suggests. *Id.* Thus, we conclude it is relevant and we are not persuaded that PersonalWeb has presented a sufficient basis to exclude this portion of Dr. Clark's rebuttal declaration.

Fourth, PersonalWeb also submits that Dr. Clark's rebuttal declaration includes new obviousness allegations not presented previously with the petition. *Id.* at 12-13. In response, EMC contends that the statements in Dr. Clark's rebuttal declaration were offered in response to PersonalWeb's arguments. Opp. 14 (citing *e.g.*, PO Resp. 3-18, 27; Ex. 2017 ¶¶ 21-37, 60-62). Having reviewed PersonalWeb's patent owner response and Dr. Clark's rebuttal declaration, we determine that Dr. Clark's testimony is reasonable rebuttal evidence in light of PersonalWeb's arguments. Thus, we are not persuaded that PersonalWeb has presented a sufficient basis to exclude any portions of Dr. Clark's rebuttal declaration.

Finally, PersonalWeb contends that Dr. Clark's rebuttal declaration contradicts his prior deposition. PO Mot. 13-15. We are not persuaded by PersonalWeb's arguments. Rather, we agree with EMC that Dr. Clark's rebuttal testimony is consistent with his earlier testimony. Opp. 14-15.

PersonalWeb argues that Dr. Clark has changed his testimony on what part of Kantor is a "data item" (PO Mot. 13-14), but we agree with EMC that Dr. Clark has focused on the inner files of the zip file as the relevant portion. *Compare* Ex. 1009 ¶¶ 86, 100 *with* Ex. 1089 ¶¶ 7-10. Additionally, PersonalWeb argues that Dr. Clark has changed his testimony with respect to whether a "sequence" can have gaps (PO Mot. 14), where EMC argues that his testimony is consistent. Opp. 14. We do not discern that Dr. Clark's answer to a question related to "a sequence of *people*" (Ex. 2016, 94-98) contradicts with Dr. Clark's rebuttal testimony on "a sequence of *bits*" of a data item (Ex. 1089 ¶ 28). Dr. Clark in the prior deposition also testified that there are examples of sequences with intervening gaps including Fibonacci sequences, random sequences, odd sequences, and even sequences. Opp. 15 (citing Ex. 2016, 191-193).

In addition, Dr. Clark's rebuttal testimony that "zipfiles are not *always* compressed," and the inner files of a zip file may be *uncompressed* (Ex. 1089 ¶¶ 9-11), is consistent with his earlier testimony that the inner files of a zip file are compressed *typically* (Ex. 2016, 55, 59, 66-67). Moreover, Dr. Clark's testimony is reasonable rebuttal evidence in light of the evidence submitted by PersonalWeb. Dr. Clark merely points out in his rebuttal declaration that PersonalWeb's evidence also shows that zip files are not *always* compressed. Ex. 1089 ¶ 9 (citing Ex. 2004, 3 (the zip file format defines seven compression methods which include "Compression method 0" that does not compress the file); Ex. 1083, 262 (Dr. Dewar agrees that "the zipfile standard allows for uncompressed files.")).

For the foregoing reasons, we decline to exclude Dr. Clark's rebuttal declaration (Ex. 1089).

III. CONCLUSION

EMC has met its burden of proof, by a preponderance of the evidence, in showing that claims 1, 2, 81, and 83 of the '096 Patent are unpatentable based on the following ground of unpatentability:

Claims	Basis	References
1, 2, 81, and 83	§ 103(a)	Kantor and Satyanarayanan

IV. ORDER

In consideration of the foregoing, it is

ORDERED that claims 1, 2, 81, and 83 of the '096 Patent are held unpatentable;

FURTHER ORDERED that EMC's Motion to Exclude Evidence is *dismissed*;

FURTHER ORDERED that PersonalWeb's Motion to Exclude Evidence is *denied*; and

FURTHER ORDERED that, because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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