

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MITEK SYSTEMS, INC.,
Petitioner,

v.

ROTHSCHILD MOBILE IMAGING INNOVATIONS, LLC,
Patent Owner.

Case IPR2015-00621
Patent 7,991,792 B2

Before JAMESON LEE, DAVID C. McKONE, and
CHARLES J. BOUDREAU, *Administrative Patent Judges*.

LEE, *Administrative Patent Judge*.

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

I. BACKGROUND

A. Introduction

Mitek Systems, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) to institute an *inter partes* review of claims 1–11 of U.S. Patent No. 7,991,792 B2 (Ex. 1001, “the ’792 patent”). Rothschild Mobile Imaging Innovations, LLC (“Patent Owner”) filed a Preliminary Response (Paper 6). We issued an Institution Decision (Paper 7, “Inst. Dec.”) instituting trial on claims 1–10. Thereafter, Patent Owner filed a Response (Paper 19, “PO Resp.”), and Petitioner filed a Reply (Paper 22, “Pet. Reply”).

Oral hearing was held on April 19, 2015. A transcript of the oral hearing is included in the record. Paper 35 (“Tr.”).

Petitioner has shown by a preponderance of the evidence that each of claims 1–10 of the ’792 patent is unpatentable.

B. Related Proceedings

The ’792 patent has been asserted in several lawsuits in the United States District Court for the District of Delaware. Pet. 1–2; Paper 4, 2–3. It also was the subject patent of a petition filed in IPR2015-00620. We denied institution of trial in IPR2015-00620. IPR2015-00622, IPR2015-00623, and IPR2015-00624 involve patents related to the ’792 patent.

C. The ’792 Patent

The ’792 patent relates generally to digital image processing. Ex. 1001, 1:25–27. It discloses a method that facilitates organizing and processing of digital and printed images. *Id.* at Abstr. Figures 6A and 6B of the ’792 patent illustrate methods executed by programmable instructions either at a local computer or at an imaging web server. *Id.* at 10:11–13. In

that regard, the '792 patent states: "Although the following description will be described in relationship to methods being implemented by software on the local computer 402, the methods can be implemented at web server 408 after the images are transferred to the web server 408 via the Internet." *Id.* at 10:13–18.

The '792 patent describes associating certain information with digital images, and then transferring that associated information from digital imaging devices to a local computer. *Id.* at 10:19–22. The local computer stores the associated information of each image in separate fields within a single record in a relational database. *Id.* at 10:22–27. With regard to encoding an identifier for each image, the '792 patent states:

Once transferred to the user's local computer or storage site, the identifier will be encoded by interacting with the relational database. The local computer processing unit (CPU) will extract the necessary information by parsing the associated information from the database and encode an identifier for each image (step 714) and, subsequently, store the identifier back in the database.

Id. at 16:49–55. The '792 patent indicates that the software utilized to implement its methods could reside at a server and the local computer is used only to transfer digital images and requests to the server. *Id.* at 12:36–40.

Of the challenged claims, claim 1 is the only independent claim and is reproduced below:

1. A method for managing a plurality of digital images over a network comprising:

receiving, at an imaging web server coupled to the network, a digital image file along with information associated to the digital image file, wherein the digital image file comprises data representing a digital image and the associated

information includes at least one of a location of the image web server, a customer identification number, a date image was taken, a picture sequence number, a name of the digital image, a time the digital image was taken, location where the image was taken at, author/publisher of the digital image, subject matter of the digital image; keyword for the digital image file and a name of the imaging web server;

parsing the associated information to extract multiple pieces of information from the associated information;

coding the multiple pieces of extracted information of the associated information to create an identifier for the digital image file;

storing the digital image file and the identifier in a database coupled to the imaging web server;

receiving a search request;

querying the database with the search request;

retrieving at least one requested digital image file matching the search request; and

presenting at least one requested digital image corresponding to the at least one requested digital image file to a user.

Id. at 18:6–33.

D. Evidence Relied Upon by Petitioner

Petitioner relies on the following prior art:

Reference		Date	Exhibit No.
Alattar	Adnan M. Alattar, “ <i>Smart Images</i> ” Using Digimarc’s Watermarking Technology, 25 IS&T/SPIE’S 12TH INT’L SYMP. ON ELEC. IMAGING, Vol. 3971, 1–10 (Jan. 25, 2000)	Feb. 13, 1996	Ex. 1005
Miyawaki	US Pub. No. 2004/0119831 A1	June 24, 2004	Ex. 1006
Nybo	US Pub. No. 2001/0052933 A1	Dec. 20, 2001	Ex. 1007
Leonardos	US Pat. 7,814,134 B2	Oct. 12, 2010 filed June 22, 2004	Ex. 1008

Petitioner also relies on the Declaration of Irfan Essa, Ph.D.
Ex. 1012.¹

E. The Asserted Grounds of Unpatentability

Basis	Reference(s)	Claim(s)
§ 103(a)	Nybo and Leonardos	1, 3, 4, and 7–9
§ 103(a)	Nybo, Leonardos, and Alattar	5 and 6
§ 103(a)	Nybo, Leonardos, and Miyawaki	2, 9, and 10

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b);

¹ Patent Owner has not, in support of its Patent Owner Response, filed a Declaration from its own technical witness.

Cuozzo Speed Techs., LLC v. Lee, No. 15–446, 2016 WL 3369425, at *12 (U.S. June 20, 2016) (upholding the use of the broadest reasonable interpretation standard as the claim construction standard to be applied in an *inter partes* review proceeding). Consistent with the rule of broadest reasonable interpretation, claim terms also 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. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007); *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

Although reading of the claim language may be aided by explanations contained in the written description, it is important not to import limitations that are not a part of the claim. *See SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment. *See id.*; *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).² That is no different even if the patent specification describes only a single embodiment. *See Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372–73 (Fed. Cir. 2014); *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004); *Liebel-Flarsheim Co. v. Medrad Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004).

² A patent applicant is not required to describe explicitly in the specification every embodiment of the invention. *See LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336, 1345 (Fed. Cir. 2005).

If a feature is not necessary to give meaning to what the inventor means by a claim term, it would be “extraneous” and should not be read into the claim. *See Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 950 (Fed. Cir. 1993); *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433 (Fed. Cir. 1988).

If a patentee desires to be his or her own lexicographer, the purported definition must be set forth in either the specification or prosecution history. *See CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). Such a definition must be set forth with reasonable clarity, deliberateness, and precision. *See Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998); *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). “Absent claim language carrying a narrow meaning, the [Patent and Trademark Office] should only limit the claim based on the specification or prosecution history when those sources expressly disclaim the broader definition.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004); *accord Liebel-Flarsheim*, 358 F.3d at 906–09.

Only terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See, e.g., Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011); *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

1. “parsing” and “extract”

In the Institution Decision, we construed “parsing” and “extract” in this manner:

parsing — The broadest reasonable interpretation of “parsing” requires the information that is parsed be previously gathered, collected, or organized in some tangible form, such that it can be broken down from that state.

extract — A common term in the English language and requires no construction, given our construction of “parsing,” other than to say that where information has been “parsed” from a larger set of information, it has been “extracted” from the set.

Inst. Dec. 6–8. Subsequent to institution of trial, neither party challenged our construction of “parsing” and “extract.” We adopt these same constructions based on the full record.

2. “coding” and “coding the multiple pieces of extracted information of the associated information to create an identifier for the digital image file”

Claim 1 recites: “coding the multiple pieces of extracted information of the associated information to create an identifier for the digital image file.” The Petition does not propose a construction for “coding,” and we did not expressly construe “coding” in the Institution Decision. Patent Owner proposes to construe “coding” as *changing information from one form to another form, which can be read by a computer*. PO Resp. 9. For reasons discussed below, we decline to do so because Patent Owner’s proposed construction is overly restrictive. Instead, we construe “coding” as *processing*, and the entire phrase “coding the multiple pieces of extracted information of the associated information to create an identifier for the digital image file” means *processing the multiple pieces of extracted information of the associated information to create an identifier for the digital image file*.

The word “coding” referring to an action is used only in the claims, not elsewhere in the Specification, and the Specification contains no express definition for “coding.” Patent Owner urges that we regard “coding” the same as “encoding” which is used elsewhere in the Specification. In that regard, Patent Owner states:

The term coding is referred to as “encoding” in the originally filed claims dated December 29, 2008, and the specification of the ’792 patent. Hence, the word “coding” in the claim derives its meaning from “encode/encoding” in the specification of the ’792 patent. The word “encode/encoding” is used in multiple instances in the Specification of the ’792 patent.

PO Resp. 9–10. Patent Owner further notes that the Specification states that a communication module is provided “for encoding a user’s speech to be transmitted via antenna ANT using CDMA, PCS, GSM or any other known wireless communication technology.” *Id.* at 10 (emphasis omitted). Thus, a user’s speech is “encoded” into an electrical signal for wireless transmission, and in that context the form of the subject being encoded has changed, from raw voice detectable by a human ear to an electrical wireless signal for transmission.

Patent Owner identifies instances in the Specification where variables that are numbers, such as SLN (site location number), CIN (customer identification number), and PSN (picture sequence number) are each said to be “encoded” individually into an “alpha string” or are collectively said to be “encoded” into a bar code. Thus, in those embodiments, numbers are encoded into alphabetic strings or a bar code. *Id.* at 10–11. Patent Owner further argues:

The definition of the term “code” or “encode” as per MERRIAM-WEBSTER ONLINE DICTIONARY, 2015, available at, <http://www.merriam-webster.com/dictionary/encode> or <http://www.merriam-webster.com/dictionary/code>, provides further support for the patent Owner’s proposed construction[:]

“to change (information) into a set of letters, numbers, or symbols that can be read by a computer.”

Id. at 12.

Patent Owner has not explained adequately what it means by saying that “coding” is derived from “encoding.” For instance, Patent Owner does not provide an explanation as to why “encoding” in the originally filed claims was subsequently changed to “coding.” On this record, the evidence is insufficient to support a conclusion that, in the context of the Specification, “coding” means the same as “encoding” or that “coding” and “encoding” are interchangeable. Patent Owner submitted no testimony of any technical witness indicating that one with ordinary skill in the art would have regarded “coding” and “encoding” as necessarily having the same meaning. Thus, we are unpersuaded that whatever the Specification describes about “encoding” similarly applies to and limits “coding.”

Even assuming that “coding” and “encoding” are interchangeable, “[a]bsent claim language carrying a narrow meaning, [we] should only limit the claim based on the specification or prosecution history when those sources expressly disclaim the broader definition.” *In re Bigio*, 381 F.3d at 1325; *Liebel-Flarsheim*, 358 F.3d at 906–09. Patent Owner has shown no such disclaimer or disavowal sufficient to limit “coding” to processes that require a form transformation. It is well settled that a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment. *See SuperGuide Corp.*, 358 F.3d at 875; *In re Van Geuns*, 988 F.2d at 1184. Although the Specification does describe preferred embodiments wherein that which is subjected to coding is converted from one form to another, e.g., voice to

wireless signal, numbers to alphabets, Patent Owner has not pointed to anything in the Specification that conveys or otherwise indicates that form transformation is important. The Specification does not use the word “form,” and no relative advantage or disadvantage is discussed in the Specification for coding with form transformation versus coding without form transformation.

We discern no persuasive reason to read the Specification as requiring form transformation for coding or encoding. The Specification describes encoding DIT (Date Image Taken) as a “six digit English language numerical date description,” “e.g. 010104,” without indicating that the date had any different form prior to the encoding process. Ex. 1001, 15:61–63. That description is consistent with not having form transformation as a requirement for “coding.” The DIT already may be in a numerical form, as entered by a user.

Patent Owner’s proposed construction also is problematic for two other reasons. The first has to do with the meaning of “form.” Patent Owner offers no definition for “form” and the Specification is equally silent. Thus, Patent Owner’s proposed construction for “coding” is nebulous. The second has to do with the dictionary definition produced by Patent Owner for “code,” i.e., “to change (information) into a set of letters, numbers, or symbols that can be read by a computer.” PO Resp. 12. That definition is overly narrow by suggesting that information cannot be used for coding if it already consists of “a set of letters, numbers, or symbols that can be read by a computer.” In any event, dictionary definitions are not determinative, and they are more useful for what a term typically includes rather than what a term excludes.

Although not by itself determinative, the dictionary definitions produced by Petitioner (Pet. Reply 2 (citing Exs. 1013 and 1014)) for “code” do not refer to any transformation with regard to form and thus support a broader construction than that urged by Patent Owner.

We determine that Patent Owner’s proposed construction is overly restrictive. On this record, we determine that coding is not limited to action that changes or converts the form of any information. Rather, “coding” is met so long as the input is processed to yield the desired output. Thus, we construe “coding” as *processing*, and the entire phrase “coding the multiple pieces of extracted information of the associated information to create an identifier for the digital image file” as *processing the multiple pieces of extracted information of the associated information to create an identifier for the digital image file*.

B. Alleged Obviousness of Claims 1,
3, 4, and 7–9 over Nybo and Leonardos

1. Procedural Background

Although Petitioner’s stated ground of obviousness is based on the combined teachings of Nybo and Leonardos, in the Institution Decision we explained that the two limitations of claim 1 for which Petitioner relied on the disclosure of Leonardos are, based on the arguments and evidence presented in the Petition, accounted for solely by reliance on the disclosure of Nybo. Specifically, we stated:

No reliance on any teaching from Leonardos is necessary, to combine with the cited disclosure of Nybo, for Petitioner to make a sufficient showing that these claim features are met:

*parsing the associated information to extract
multiple pieces of information from the associated
information;*

*coding the multiple pieces of extracted
information of the associated information to create
an identifier for the digital image file;*

Inst. Dec. 16–17. Patent Owner had notice, upon institution of trial, that it should also address obviousness of the challenged claims over Nybo alone.³

2. Applicable Law on Obviousness

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. *See* 35 U.S.C. § 103(a); *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 ordinary skill in the art; and (4) objective evidence of nonobviousness. i.e., secondary considerations.⁴ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

3. Level of Ordinary Skill in the Art

The Petition does not explicitly take a position on the level of ordinary skill in the art, although Dr. Essa expresses an opinion on this subject in his Declaration. *See* Ex. 1012 ¶ 12. Patent Owner does not take a position on the level of ordinary skill in the art. With regard to the level of ordinary skill

³ At oral argument, counsel for Patent Owner acknowledged having notice, upon institution of trial, of the Board’s determination that Petitioner had shown enough from Nybo alone to account for limitations the Petition relies on Leonardos to show. Tr. 48:14–25, 50:4–13.

⁴ The record does not contain any evidence of secondary considerations.

in the art, we determine that no express finding is necessary, on this record, and that the level of ordinary skill in the art is reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

4. Scope and Content of the Prior Art

Nybo (Exhibit 1007)

Nybo discloses a system and method for image capture, storage, and retrieval. Ex. 1007, Abstr. One or more images are captured in a digital format and then stored in a database to improve their accessibility. *Id.* Nybo's system and method allow access to the images from remote locations by way of a computer network such as the Internet. *Id.* When a triggering event occurs,⁵ processing module 120 creates a data structure which is configured to store one or more digital images and their accompanying identification data. *Id.* ¶ 41. Examples of such data structures include an array, a database record, a linked list, a queue, and a stack. *Id.*

⁵ A trigger event is an electronic signal to processing module 120 that a user has requested the capture of one or more digital images. *Id.* ¶ 39.

Figure 1 of Nybo is reproduced below:

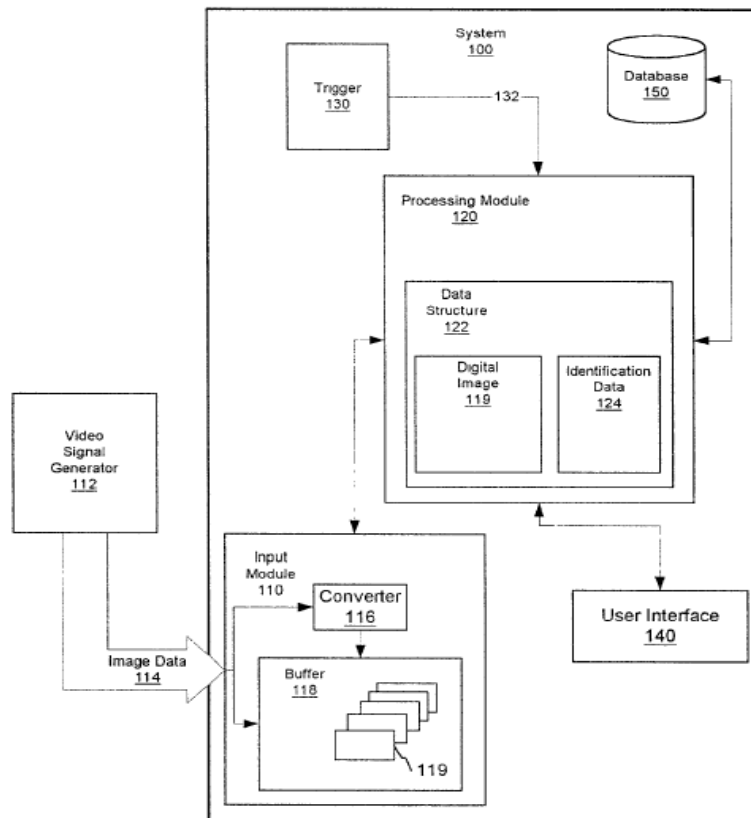


FIG. 1

Figure 1 illustrates a preferred embodiment of Nybo's system. *Id.* ¶ 20.

"[T]he processing module 120 cooperates with the input module 110 and the trigger 130 to capture one or more digital images 119 from the buffer 118."

Id. ¶ 37. Trigger 130 may be activated manually or automatically according to some criteria such as the passing of time. *Id.* ¶ 38. The purpose of the trigger is to signal to system 100 when a digital image is to be captured, how many images to capture, and how the one or more images are to be identified once stored in the database. *Id.* "All of the information which a trigger 130 is responsible for is communicated to the processing module 120 by way of a trigger event." *Id.* ¶ 39.

Processing module 120 stores images 119 and corresponding identification data 124 in data structure 122. *Id.* ¶¶ 42, 43. Identification data 124 serves to describe uniquely digital image 119, and, generally, identification data is defined by the user prior to initiation of the trigger. *Id.* ¶ 43. With regard to identification data 124, Nybo states:

Identification data 124 may include a digital image name, description, time stamp, date stamp, and identification number, and other like identifying data elements. *These data elements may be used alone or in combination to uniquely identify the digital image 119 from all others captured.*

Id. ¶ 44 (emphasis added).

In a preferred embodiment of Nybo, data structures 122 are stored in database 150. Nybo also describes the generation of unique identifiers corresponding to each data structure 122, which may hold only a single image file. *Id.* ¶ 58. With regard to such identifiers, Nybo states:

To speed up the retrieval of the data structures 122 from the database 150, the system 100 indexes the data structures 122. An index 220 is a list of unique identifiers. *The unique identifiers may be generated by the database 150 or come from the identification data 124.* Each unique identifier in the index 220 is associated with a location in the database 150 of one data structure 122.

Id. ¶ 58 (emphasis added).

Once data structure 122 is created and holds digital image 119 and its associated identification data 124, processing module 120 makes the data structure available to users through user interface 140. *Id.* ¶ 47. User interface 140 enables a user to manage and use data structure 122. *Id.*

Figure 2 of Nybo is reproduced below:

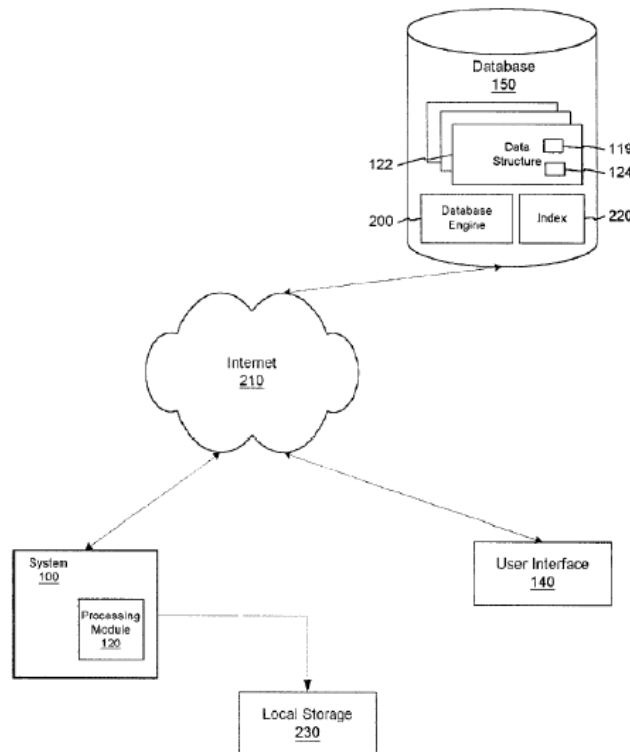


FIG. 2

Figure 2 illustrates database 150 in more detail and how system 100, database 150, and user interface 140 may all operate at remote locations relative to each other. *Id.* ¶¶ 50, 51. In that regard, Nybo describes:

Alternatively, the system 100 may permit the user interface 140 to make requests directly of the database 150. Therefore, the user interface 140 may send a request for a data structure 122 through the Internet 210 to the database engine 200 of the database 150. Then, the database engine 200 may service the request in a similar manner to those which originated from the processing module 120.

Id. ¶ 52.

Leonardos (Exhibit 1008)

Leonardos pertains to a system and method for managing electronic information. Ex. 1008, Abstr. In particular, Leonardos discloses creating an electronic folder, storing the electronic folder in an electronic folder managing system, maintaining a collection of electronic folders and files stored therein, and associating the electronic folders with one or more files such that each file may be accessed by identifying the related electronic folder. *Id.* The system may be accessed by a plurality of users simultaneously, and comprises a plurality of databases for storing information on users, files, emails, facsimiles, search parameters, and the like. *Id.* at 4:5–8. It includes “an electronic mail (e-mail) client that receives and sends e-mails, and organizes them into a format that may be directly accessed from the user’s electronic folder.” *Id.* at 4:17–20. It also includes “a facsimile client that receives and sends facsimiles, and organizes facsimiles into a file format that may be directly accessed from the user’s electronic folder.” *Id.* at 4:21–24.

Each electronic folder is divided into one or more sections, and each section may correspond to a different topic or subject and may be used to divide the contents of an electronic folder. *Id.* at 6:12–15. Within each section, the user may store one or more computer-readable files, and each file “may represent an e-mail, a word processor document, a spreadsheet, a[n] audio file, a video file or any other computer-readable file.” *Id.* at 6:15–19.

When a user decides to create an electronic folder, the user is presented with a screen having a blank cover page for the folder on which to enter all the pertinent information for the folder. *Id.* at 6:60–64. The

information is used to identify and label the folder, and to provide assistance when the user later seeks to search for a given folder. *Id.* at 6:64–67. Once the user has entered pertinent information on the cover provided for a folder, the system creates the folder and the user may create one or more files to be stored in the folder. *Id.* at 7:2–5.

Leonardos states that “the cover is user interface that is provided with identifying information regarding the electronic folder.” *Id.* at 9:12–14. After a user logs on to the system, if the user has an existing electronic folder, the user is provided with an opportunity to search for the desired electronic folder out of many electronic folders in the system. *Id.* at 7:9–13. The user would enter the search criteria, and then the system searches for folders satisfying those criteria. *Id.* at 7:13–15. Finally, the system generates a list of electronic folders that satisfy the search terms entered. *Id.* at 7:15–17. “The user is able to use all the fields previously defined on the cover of the electronic folder to search for a specific electronic folder or file.” *Id.* at 9:31–33. The system allows a user to select an electronic folder out of a plurality of electronic folders listed. *Id.* at 7:25–28. Also, the system allows a user to perform a search on the contents of an electronic folder to yield a list of files that satisfy the search criteria. *Id.* at 8:24–27.

In case email is received, the system extracts all the information included in the e-mail, such as the subject header, sender’s name and address, message body, and recipient’s name and address, to create electronic folder content. *Id.* at 13:12–18. Similarly, a received facsimile is saved as electronic folder content. *Id.* at 13:18–20. In either case, the created electronic folder content is provided with a time and date at which

the email or facsimile arrived, and the electronic folder content is stored in an appropriate electronic folder. *Id.* at 13:21–25.

Leonardos’s claims also provide pertinent disclosure. For instance, Leonardos’s claim 1 is directed to a method for managing access of data stored in a document management system, and includes these steps:

examining an electronic object, wherein the electronic object is configured in accordance with one of a plurality of allowed base electronic object formats;

extracting information from the electronic object based on examining the electronic object;

determining at least one indexing identifier characteristic of the electronic object using the extracted information;

Id. at 18:18–24. Claim 2 depends from claim 1 and recites “receiving the electronic object.” *Id.* at 18:46–47. Claim 3 depends from claim 2 and adds “wherein the receiving of the electronic object is from an application program.” *Id.* at 18:48–49. Claim 4 depends from claim 3 and adds “wherein the application program includes a word processing program, a spreadsheet program, a presentation authoring program, a multimedia authoring program, an electronic mail program, a data transfer program, and a facsimile machine.” *Id.* at 18:50–54. Claim 6 depends from claim 1 and adds “wherein the electronic object includes content data and data that describes the electronic object.” *Id.* at 18:58–60.

Thus, Leonardos’s claims disclose that, in a method for managing access to data in a document management system, an email, a facsimile, or a file outputted from a word processing program, a spreadsheet program, a presentation authoring program or a multimedia authoring program, can be received and then subjected to the examining, extracting, and determining steps of Leonardos’s claim 1. It is also disclosed that what results from such

examining, extracting, and determining steps is at least one indexing identifier characteristic of the file, email, or facsimile.

5. Claim 1 of the '792 patent

Claim 1 recites “[a] method for managing a plurality of digital images over a network,” which Petitioner identifies as element 1(a). Pet. 11.

Petitioner accounts for element 1(a) by reliance on these portions of Nybo: Abstract, Figs. 2–5, ¶¶ 9, 13, 44, 47, 51, 53, 58, 87. *Id.* at 34. On the basis of the cited disclosures, we find that Nybo discloses element 1(a).

Claim 1 recites “receiving, at an image web server coupled to the network, a digital image file along with information associated to the digital image file,” which Petitioner identifies as element 1(b). Pet. 12. Petitioner identifies Nybo as disclosing element 1(b). *Id.* at 35, 41. Specifically, Petitioner identifies web server user interface 140 as an imaging web server. *Id.* at 35. Petitioner also identifies database 150 and system 100 collectively as the imaging web server. *Id.* Petitioner further identifies database 150 alone as the imaging web server. *Id.* at 35, 41.

Petitioner has not adequately explained how any image file and information associated with the image file is received by the web server user interface, which is described in Nybo as receiving a request from users to access stored images. Petitioner also has not adequately explained how system 100 in combination with database 150 together receive an image file and information associated with the image file. However, Petitioner persuasively has explained how database 150 receives an image file and information associated with the image file. Pet. 35 (citing Ex. 1007 ¶¶ 9, 29, 49, 58, 87, 88 and Ex. 1012 ¶ 78). In particular, Nybo describes that data structure 122 is stored in database 150 as a database record. Ex. 1007 ¶ 87.

Nybo also describes that it is processing module 120 that puts data structure 122 into database 150. *Id.* ¶ 49. Data structure 122 holds digital image 119 and its associated identification data 124. *Id.* ¶ 47. We find that Nybo discloses element 1(b).

Claim 1 recites “wherein the digital image file comprises data representing a digital image and the associated information includes at least one of a location of the imaging web server, a customer identification number, a date image was taken, a picture sequence number, a name of the digital image, a time the digital image was taken, location where the image was taken at, author/publisher of the digital image, subject matter of the digital image; keyword for the digital image file and a name of the imaging web server,” which Petitioner identifies as element 1(c). Pet. 12. Petitioner persuasively explains how this element is disclosed by Nybo. *Id.* at 35–36 (citing Ex. 1007 ¶¶ 13, 41, 43, 44, 46, 47, 86). Satisfaction of any one of the listed items satisfies this claim element. Nybo discloses that image identification data is the data the user associates with the image. Ex. 1007 ¶ 13. Nybo states: “Identification data 124 may include a digital image name, description, time stamp, date stamp, an identification number, and other like identifying data elements.” *Id.* ¶ 44. The time stamp satisfies “a time the digital image was taken.” The date stamp satisfies “a date image was taken.” We find that Nybo discloses element 1(c).

Claim 1 recites “parsing the associated information to extract multiple pieces of information from the associated information,” which Petitioner identifies as element 1(d), and “coding the multiple pieces of extracted information of the associated information to create an identifier for the digital image file,” which Petitioner identifies as element 1(e). Pet. 16. We

discuss elements 1(d) and 1(e) together, based on the construction of “extract,” “coding,” and “coding the multiple pieces of extracted information of the associated information to create an identifier for the digital image file” as set forth above.

With regard to elements 1(d) and 1(e), Petitioner first accounts for them by relying solely on the disclosure of Nybo, without explicitly stating its position as such. Pet. 36–37. In that regard, pertinent explanations of Petitioner are reproduced below, which convey that Nybo itself, without Leonardos, leads one with ordinary skill in the art to elements 1(d) and 1(e):

Nybo discloses using parts of the associated information, such as the image name, description, date and time the image was taken, or any secondary or custom identification number, to create a unique identifier for a captured digital image.

Pet. 36 (citing Ex. 1007 ¶¶ 44, 46, 58).

In particular, *Nybo* discloses analyzing the associated information in parts such that, for example, the name of the image, its description, or its date and time stamp information is extracted and considered apart from the other information that is associated with the captured image to create an identifier for the image. *See, e.g., id.*, ¶ 44 (explaining the various data elements in the identification data “may be used alone or in combination to uniquely identify the digital image.”), 46, 58 (describing the “generation” of “unique identifiers” for each image file based on associated identification data).

Pet. 36–37.

The data elements comprising an image file’s associated identification data are used in parts to create an identifier for the digital image file, and are thus parsed. The pieces of data must be extracted from the image file’s identification data in the creation of the image file’s unique identifier, as disclosed by *Nybo*, in order to be compiled and stored as identifier data. The extracted data is used in combination and converted into an identifier for the image, and the unique identifiers are compiled

into a list and stored as an index in database 150 to facilitate search and retrieval.

Pet. 37 (citing Ex. 1007, Fig. 2, ¶¶ 44, 58; Ex. 1012 ¶¶ 84–85).

One skilled in the art at the time of the alleged invention would have understood from the disclosures in *Nybo* that the index of unique identifiers generated from the identification data (Ex. 1007, ¶ 58) correspond to the unique identifiers created from a combination of extracted data elements of an image file's identification information, as *Nybo* describes in ¶ 44. Ex. 1012, ¶ 85.

Id.

As explained below, we are *not* persuaded by the entirety of Petitioner's arguments above. However, also as explained below, those parts of Petitioner's arguments which we find persuasive are sufficient to demonstrate, notwithstanding Patent Owner's arguments, that *Nybo* discloses or renders obvious elements 1(d) and 1(e).

The record does not support, and we are unpersuaded by, Petitioner's contention that the index of unique identifiers referred to in paragraph 58 of *Nybo* corresponds to unique identifiers referred to in paragraph 44 of *Nybo*. Although paragraph 44 of *Nybo* states that various identification data may be used alone or in combination to "uniquely identify" a digital image, the index referred to in paragraph 58 of *Nybo*, which is a list of unique identifiers, is created for and directed to data structures 122 that contain the images and associated information. Ex. 1007 ¶¶ 44, 58. The two are not the same, particularly in light of *Nybo*'s disclosure that the use of an index of unique identifiers for data structure 122 merely is optional, to provide quicker access to data structure 122. In that regard, *Nybo* states:

Alternatively, the database 150 may be located at a remote location accessible by the system 100 through a computer network such as the Internet 210. *The data structure 122 may be*

indexed to provide more efficient access to the data structure 122.

Id. ¶ 87 (emphasis added).

That deficiency in Petitioner's argument is inconsequential, because Nybo describes that the index of unique identifiers, which uniquely identify each data structure 122, may be used. *Id.* ¶¶ 58, 97. Because each data structure 122 holds either an image or a video clip, the evidence presented by Petitioner establishes that a unique identifier for the data structure is the same as a unique identifier for the image or video clip within the data structure. At the very least, the record supports and we conclude, based on the evidence presented and discussed by the parties, that one with ordinary skill in the art would have recognized that the unique identifier for each data structure 122 also serves as a unique identifier for the digital image or video clip that is contained within the data structure.

Patent Owner asserts that a digital image is not the same as the data structure that holds the digital image, and that the description in Nybo's paragraph 58 of providing unique identifiers for data structures is directed to an embodiment different from the embodiment described in Nybo's paragraph 44 pertaining to identifiers for images. PO Resp. 14–17. Like Petitioner's argument discussed above, Patent Owner's argument is only partially correct. Specifically, the provision of an index of unique identifiers, as described in paragraph 58 of Nybo, is for data structures 122 and not expressly for images within the data structures. Also, the provision of such an index for data structures is only described as optional, as we have discussed above.

Thus, Patent Owner is technically correct that Nybo's paragraph 58 is about an index for data structures, which index is only included optionally,

and that Nybo's paragraph 44 is about unique identifiers for images which are stored in data structures. In that regard, the two paragraphs are not facially drawn to precisely the same embodiment. We have acknowledged and addressed that difference in the above analysis of Petitioner's arguments. As discussed above, however, that difference is inconsequential, because Nybo describes that the index for data structures 122 optionally may be included, "to provide more efficient access to the data structure 122." See Ex. 1007 ¶ 87. Where that option is exercised, as is provided for by Nybo, paragraphs 44 and 58 would pertain to the same embodiment. As discussed above, we find that a unique identifier for the data structure is the same as a unique identifier for the image within the data structure, and that one with ordinary skill in the art would have recognized that the unique identifier for each data structure 122 also serves as a unique identifier for the digital image that is contained within the data structure.

Patent Owner argues that even assuming that parsing the associated information is disclosed by Nybo, Nybo does not teach extracting multiple pieces of information from the associated information. PO Resp. 17. The argument is unpersuasive. Nybo describes that the various data elements in the information associated with a digital image, whether "*alone or in combination*," may be used to uniquely identify the digital image. Ex. 1007 ¶¶ 43, 44. Because each data structure contains a digital image, one with ordinary skill in the art would have known that the unique identifier for a data structure holding an image could be created in the same manner a unique identifier for the digital image within the data structure would be created.

Patent Owner argues that Nybo does not teach “coding the multiple pieces of extracted information of the associated information to create an identifier for the digital image file,” because “coding” requires transforming the information from one form to another. PO Resp. 19–21. The argument is without merit, because we have rejected Patent Owner’s proposed construction of “coding.” Per our construction of “coding,” as explained above, no transformation from one form to another is required to satisfy “coding” or “coding the multiple pieces of extracted information of the associated information to create an identifier for the digital image file.” We have construed “coding” as *processing*, and the entire phrase “coding the multiple pieces of extracted information of the associated information to create an identifier for the digital image file” as *processing the multiple pieces of extracted information of the associated information to create an identifier for the digital image file*. Petitioner has established that in Nybo, “processing” of multiple pieces of information extracted from the associated information does occur to create an identifier for the digital image file.

Petitioner further relies on teachings from Leonardos to buttress and support its accounting of elements 1(d) and 1(e). Pet. 38–41. As discussed above, the inclusion of Leonardos in the alleged ground of unpatentability is unnecessary, because the teachings of Nybo itself are sufficient to account for elements 1(d) and 1(e). Nevertheless, for the reasons discussed below, the combination of Nybo and Leonardos makes even stronger Petitioner’s accounting of elements 1(d) and 1(e).

Petitioner persuasively asserts that Leonardos discloses parsing information associated with a file to extract multiple pieces of information and coding the extracted information to create an identifier for the file, citing

Leonardos's disclosure of (1) examining an electronic object, (2) extracting information from the electronic object based on examining the object, and (3) determining at least one indexing identifier characteristic of the electronic object using the extracted information. Pet. 39 (citing Ex. 1008, 18:18–24). As discussed above, Leonardos discloses that the electronic object is received from an application program which can be a word processing program, a spreadsheet program, a presentation authoring program, a multimedia authoring program, an electronic mail program, a data transfer program, or a facsimile machine, and that the electronic object includes content data and data that describes the electronic object. Ex. 1008 at 18:46–60. Leonardos also discloses that the determined indexing identifier characteristic of the electronic object would uniquely identify the electronic object. *Id.* at 19:6–8. In the context of the cited disclosure, the electronic object is the output file provided by or received from a word processing program, a spreadsheet program, a presentation authoring program, a multimedia authoring program, an electronic mail program, a data transfer program, or a facsimile machine. Petitioner also notes the disclosure in Leonardos that the unique identifiers are incorporated in the file management system's organizational index, and that identifying information is used to facilitate the searching and sorting of files and/or documents. Pet. 39 (citing Ex. 1008, 18:36–38, 4:26–36).

Leonardos's disclosure is relevant with respect to elements 1(d) and 1(e) insofar as a digital image file is concerned. Leonardos discloses that a facsimile is received in an image format, such as in “.tif” format. Ex. 1008, 13:9–10. Leonardos also discloses that in its file management system, file types for all files may include images. *Id.* at 6:34–35. We agree with

Petitioner that in light of the disclosure of *Leonardos*, it would have been obvious to one with ordinary skill in the art to implement elements 1(d) and 1(e) in the method and system of *Nybo*, although we have determined above that *Nybo* itself includes sufficient disclosure to account for elements 1(d) and 1(e). Notably, we agree with Petitioner’s contention that:

[O]ne skilled in the art would have found it a predictable and common sense implementation to configure the system [and] process of *Nybo* to parse an image file’s associated information to extract multiple pieces of information from the associated information and to use the extracted information to create an identifier corresponding to the image, given the disclosure of *Leonardos* and given that *Nybo* already disclosed the creation and use of identifiers to provide a user with efficient access to the corresponding image files. See *KSR*, 550 U.S. at 417; Ex. 1012, ¶¶ 91–92.

Pet. 41. Petitioner persuasively articulates additional reasons with rational underpinnings for combining the teachings of *Leonardos* and *Nybo*.

Petitioner notes that both *Leonardos* and *Nybo* describe Internet-accessible electronic file management systems providing access to files and associated information stored in databases, and that the teachings of *Nybo* and *Leonardos* about searching for and accessing stored files are complementary to each other. Pet. 40. Petitioner further notes that applying *Leonardos*’s teaching in *Nybo* would “provide a mechanism to ensure the identifier created for an image file is based from information related to the image and usable to retrieve the file and related information.” *Id.*

Patent Owner argues that both the Petition and Dr. Essa’s Declaration “are missing an analysis of the differences between the claimed subject matter and the prior art beyond singular statements that one reference is missing a particular element of the claims.” PO Resp. 27. The argument is

without merit because it is Petitioner's position that aside from elements 1(d) and 1(e), Nybo discloses all other elements of the claims. Petitioner identified the differences between the claimed invention and the prior art by noting that "Nybo does not expressly disclose parsing the associated information to extract multiple pieces of information and coding the extracted information to create an identifier for the digital image." Pet. 38. There is no requirement that a Petitioner identify all of the differences between the claimed subject matter and "each" prior art reference of record. Here, it is proper and sufficient for Petitioner to identify differences between the claimed invention and the disclosure of Nybo, and then how that difference would have been accounted for by disclosure in Leonardos and the combined teachings of Nybo and Leonardos.

Patent Owner argues that Dr. Essa's testimony is deficient because it "does not analyze the underlying factual determinations outlined in *Graham*." PO Resp. 26. The argument is without merit. It is incorrect that Dr. Essa must address all of the underlying factual inquiries outlined in *Graham, supra*, before any of his testimony may be considered. The ultimate conclusion of obviousness is a question of law that we reach based on the underlying inquiries outlined in *Graham*. Dr. Essa's testimony in paragraphs 76–85 of his Declaration as to the scope and content of Nybo, and in paragraphs 87–89 of his Declaration as to the scope and content of Leonardos, are relevant and proper for such a consideration. Likewise, Dr. Essa's testimony in paragraph 86 of his Declaration pertains to differences between the claimed invention and Nybo and is relevant and proper for consideration.

Patent Owner argues that Dr. Essa's Declaration lacks articulated reasoning with rational underpinnings. PO Resp. 26. The argument is unpersuasive. Dr. Essa explains in a cogent and persuasive manner in paragraphs 90–92 of his Declaration why it would have been obvious to one with ordinary skill in the art to incorporate into Nybo's system and method what Leonardos discloses about forming an identifier for an image file. Specifically, Dr. Essa testifies:

A person of ordinary skill in the art at the time of the alleged invention would have been motivated to modify *Nybo*'s processes and system to utilize *Leonardos*'s processes to parse the image file's associated information disclosed by *Nybo* to extract pieces of the associated information to create an identifier corresponding to the image file. Such a person would have been motivated to do so in order to provide a mechanism to ensure the identifier is based from information related to the image and usable to retrieve the file and related information.

Ex. 1012 ¶ 90.

One of ordinary skill in the art would have understood based on *Nybo* and *Leonardos* that at the time of the alleged invention, electronic file management systems and database servers were known to utilize image identifiers to organize, query, and retrieve corresponding files and related data stored in the database. One skilled in the art would have been motivated to look to *Leonardos* to [complement] the features of the systems and processes of *Nybo* given they both describe Internet-accessible electronic file management systems, including various methods by which to provide access to files and associated information stored in their databases. See my discussion of *Nybo* and *Leonardos* above and in Parts VI.A.5, VI.A.6. Indeed, such a skilled person would have recognized from the disclosure of *Nybo* that I discussed above, that the systems and processes of *Nybo* look to extract pieces of associated information of an image file to provide an identifier for the image. Such disclosures would have informed such a person that implementing the features discussed above for *Leonardos* would have

[complemented] and enhanced the identifier coding functions of *Nybo*.

Id. ¶ 91.

Thus, one skilled in the art would have found it a predictable and common sense implementation to configure the system [and] processes of *Nybo* to parse an image file's associated information to extract multiple pieces of information from the associated information and to use the extracted information to create an identifier corresponding to the image, given the disclosure of *Leonardos* and given that *Nybo* already disclosed the creation and use of identifiers to provide a user with efficient access to the corresponding image files. Such a modification would have been within the realm of knowledge of one skilled in the art at the time of the alleged invention and would have yielded the predictable result of providing additional methods of managing, organizing, and indexing image files for the efficient search and retrieval of stored digital images and associated information, as is consistent with the disclosure of *Nybo*.

Id. ¶ 92. The above testimony constitutes reasoning with rational underpinnings.

Patent Owner asserts that “Dr. Essa defines the problem solved by the combination of *Nybo* and *Leonardos* in the context of the solution provided by the '792 Patent,” and that “[s]uch an analysis is improper hindsight.” PO Resp. 29. The argument is unpersuasive. A determination of obviousness at the time of the invention is necessarily based on hindsight, but so long as the determination takes into account only knowledge gleaned from the prior art, there is nothing inappropriate with the determination. *See In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971). A contrary position, as that evidently taken by Patent Owner, would nullify teachings from the prior art if they happen to describe precisely that which is at issue in an involved claim. As discussed above, both *Nybo* and *Leonardos* already describe that it is

desirable to use information associated with an image as an identifier usable for providing access to the image. Petitioner persuasively states:

Nybo similarly explains a need for a system that captures, stores, and retrieves digital images in a database and does so through the use of information associated with the image. (See *e.g.*, Ex. 1007 at ¶¶ 8, 13.) *Leonardos* also addresses the need for a system that allows computer files (which can include images) to be easily retrieved using associated information. (See *e.g.*, Ex. 1008 at 2:15, 2:56–67, 6:34–35). (See also Ex. 1012 at ¶¶ 26–28.)

Pet. Reply 23.

Patent Owner argues: “[N]either the Petition nor Dr. Essa’s declaration explain[s] how one of ordinary skill in the art would go about combining the disparate elements of *Nybo* and *Leonardos*, nor is it explained what modifications one of ordinary skill in the art would necessarily have made in order to combine them.” PO Resp. 27–28. The argument is unpersuasive. As discussed above, Dr. Essa has explained how *Leonardos*’s teaching would have prompted one with ordinary skill in the art to parse, in *Nybo*’s system, an image file’s associated information to extract multiple pieces of information from the associated information and to use the extracted information to create an identifier corresponding to the image.

Also, Petitioner correctly states:

That Dr. Essa did “not provide a design document” illustrating how one skilled in the art would modify *Nybo* in view of *Leonardos* is of no import. (Ex. 2002 at 95:25–96:7.) A determination of obviousness does not turn on whether and precisely how the references could be physically combined; rather, “the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.” *In re Keller*, 642 F.2d 413, 425 (C.C.P.A. 1981); see also *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) (citing *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc) (“[T]he criterion [is] not whether the references could be physically combined but

whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole.”)).

Pet. Reply 20–21. In addition, based on the disclosure of Nybo and Leonardos as discussed above, we disagree with Patent Owner’s characterization that Petitioner has relied on “disparate” elements from Nybo and Leonardos.

Patent Owner argues that although Leonardos teaches examining an electronic object and extracting information from the object based on examination of the object, the Petition fails to demonstrate what information is extracted from the object. PO Resp. 18. The argument is misplaced, because one cannot show non-obviousness by attacking references individually where the grounds of unpatentability are based on combinations of references. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *Keller*, 642 F.2d at 426. The details of what information is extracted and subsequently used for coding an identifier comes not from Leonardos, but Nybo. Leonardos describes that information is extracted from an electronic object, that the electronic object includes content data and also data that describe the electronic object, and that the extracted information is used to form an identifier for the electronic object. Ex. 1008, 18:21–24, 18:58–60.

Patent Owner further argues that the Petition fails to demonstrate whether, in Leonardos, the information extracted refers to files contained in an electronic folder, or the data that describes the folder. PO Resp. 18. The argument is misplaced because it is inconsequential. Patent Owner does not explain why it matters whether the extracted information refers to files or data that describe a folder. What matters here is that, as discussed above, Leonardos discloses that an electronic object includes content data and data that describe the electronic object, that information is extracted from an

electronic object based on examination of the object, and that the extracted information is used to create an identifier for the electronic object. Further as discussed above, in light of that disclosure, and given that Nybo already discloses that elements within the identification data for a digital image may be used alone or in combination to identify the image (Ex. 1007 ¶ 44), it would have been obvious to one with ordinary skill in the art to parse, in Nybo, the information associated with an image file to extract multiple pieces of information therefrom, and to code an identifier for the digital image file with the extracted information.

Patent Owner argues that Dr. Essa was not “consistent in articulating what he considered in determining the alleged obviousness combination.” PO Resp. 26 (citing Ex. 2002, 86–96). The argument is unpersuasive because it is not adequately explained. We have reviewed Dr. Essa’s testimony and find his testimony in support of Petitioner’s arguments to be credible. In that regard, we note also that Patent Owner has not submitted the testimony of any technical witness to support its arguments or to rebut the testimony of Dr. Essa.

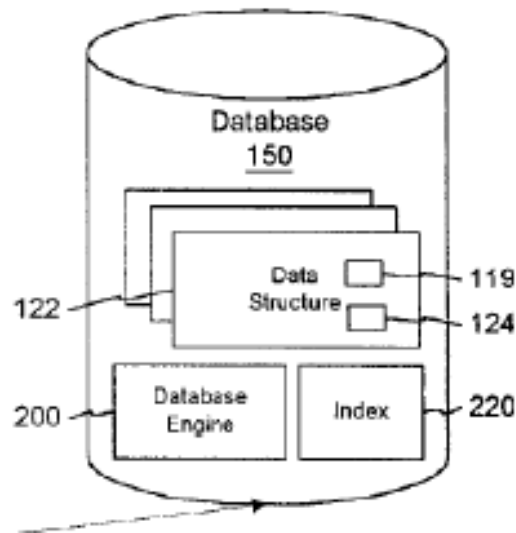
Claim 1 further recites: “storing the digital image file and the identifier in a database coupled to the imaging web server,” which Petitioner identifies as element 1(f). Pet. 17. As explained above in connection with element 1(b) of claim 1, Petitioner persuasively has identified Nybo’s database 150 as the imaging web server. Also as explained above in the discussion of element 1(b), Nybo describes that data structure 122 is stored in database 150 as a database record, and that data structure 122 holds digital image 119 and its associated identification data 124. Ex. 1007 ¶¶ 47, 87. On that basis, for element 1(f), Petitioner also identifies database 150 as the

recited database that is coupled to the imaging web server. Pet. 41. At issue is whether Petitioner can rely on Nybo's database 150 as both the imaging web server and the database that is coupled to the imaging web server.

Patent Owner argues that if Nybo's database 150 is the imaging web server, then it cannot also be the database that is coupled to the imaging web server, and that if Nybo's database 150 is the database that is coupled to an imaging web server, then it cannot also be that imaging web server. PO Resp. 21–22.

We determine that, under the rule of broadest reasonable interpretation, it is not *per se* unreasonable to regard a part as being “coupled to” itself, at least in the absence of additional limitations such as requiring the sending of information between parts that are coupled to each other. Although in the typical case, “coupled to” implies the existence of two separate parts that are connected to each other, our task is not to search what is the most popular understanding of a term, but to exclude the unreasonable. We determine that it is not unreasonable to regard a part as coupled to itself, in the absence of additional limitations directed to the particular manner of coupling or to communication of information between the coupled parts. Also, Patent Owner has submitted no testimony from any technical witness to support an assertion that one with ordinary skill in the art would have regarded as unreasonable that a part is coupled to itself. Accordingly, Petitioner properly can rely on Nybo's database 150 as both the imaging web server and the database that is coupled to the imaging web server.

In the alternative, Petitioner nonetheless has shown in Nybo's database 150: (1) an imaging web server, and (2) a database coupled to the imaging web server. A portion of Nybo's Figure 2 that illustrates database 150 is reproduced below:



The illustration depicts the structure of Nybo’s database 150. Petitioner persuasively explains that, as described in Nybo, database engine 200 is the processing portion of database 150 and is separate from and, thus, coupled to the portions of database 150 that provide the storage function. Pet. Reply 17–18. Specifically, it is database engine 200 that receives requests and services those requests by searching the storage portion of database 150. Ex. 1007 ¶ 50. Thus, based on the internal structure of database 150, within database 150 itself is an imaging web server (database engine 200) and a database (storage portion) that is coupled to the imaging web server. Petitioner’s explanation in the Reply with respect to such structure is not belated but is properly responsive to Patent Owner’s contention that database 150 cannot be both the imaging web server and the database that is “coupled to” the imaging web server.⁶

⁶ During oral argument, Petitioner argued that Nybo’s processing module 120 constitutes an imaging web server. Tr. 32:16–34:2. That is an improper new argument not entitled to consideration at this late stage of the proceeding. *See Dell Inc. v. Acceletron, LLC*, 818 F.3d 1293, 1301 (Fed. Cir. 2016). We decline to consider it.

Claim 1 further recites “receiving a search request.” Petitioner persuasively identifies Nybo’s database engine 200 as receiving a request for access to a specific data structure. Pet. 42. Petitioner also persuasively explains that one with ordinary skill in the art would have understood a retrieve request for access to a particular data structure involves making a search request for that data structure. *Id.* (citing Ex. 1012 ¶ 94). Patent Owner does not advance any argument with regard to this limitation. We find that Nybo’s method and system includes the step of “receiving a search request.”

Claim 1 further recites: “querying the database with the search request.” Petitioner persuasively explains that in Nybo the data structure is stored in database 150, and that retrieval of the data structure in response to a user request for access to that data structure would involve querying the database with the request. Pet. 43 (citing Ex. 1007 ¶ 50; Ex. 1012 ¶¶ 95–96). Patent Owner does not advance any argument with regard to this limitation. We find that Nybo’s method and system includes the step of “querying the database with the search request.”

Claim 1 further recites: “retrieving at least one requested digital image file matching the search request” and “presenting at least one requested digital image corresponding to the at least one requested digital image file to a user.” Petitioner persuasively explains how Nybo discloses each of these two steps. Pet. 43–44 (citing Ex. 1012 ¶¶ 97–98). Patent Owner does not advance any argument with regard to these limitations. We find that Nybo’s method and system includes the step of “retrieving at least one requested digital image file matching the search request” and

“presenting at least one requested digital image corresponding to the at least one requested digital image file to a user.”

For the reasons discussed above, we conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 1 would have been obvious to one with ordinary skill in the art over the combined teachings of Nybo and Leonardos.

6. Claims 3, 4, and 7–9

Claim 3 depends from claim 1 and further recites: (1) receiving the identifier of the digital image file and at least one request, (2) querying the database to retrieve a record associated to the digital image file based on the identifier, and (3) processing the at least one request with information in the record associated to the digital image file. Petitioner persuasively explains how Nybo describes each of the three further recited steps of claim 3 relative to claim 1. Pet. 45–46 (citing Ex. 1007 ¶¶ 13, 15, 44, 48, 50–53, 58, 87; Ex. 1012 ¶¶ 99, 101, 102). Patent Owner does not advance any argument with respect to claim 3 other than those it has presented for claim 1. We have reviewed the arguments and evidence presented by Petitioner and find that Nybo discloses each of the steps further recited in claim 3. We conclude, based on the reasoning discussed above with respect to the subject matter of claim 1 and on Nybo’s disclosing the limitations further recited in claim 3, that Petitioner has demonstrated by a preponderance of the evidence that claim 3 would have been obvious to one with ordinary skill in the art over Nybo and Leonardos.

Claim 4 depends from claim 3 and further recites: “wherein the at least one request is displaying of the digital image in a particular sequence, printing of the digital image, e-mailing of the digital image file or storing the

digital image file on a second server coupled to the network.” Because of the disjunctive term “or,” satisfying any one of the enumerated alternative actions satisfies this limitation. Petitioner persuasively explains how Nybo describes requests that include printing the digital image, e-mailing the digital image, and also storing the digital image file on a remote computer. Pet. 47 (citing Ex. 1007 ¶¶ 13, 48, 50, 53, claim 4; Ex. 1012 ¶ 103). Patent Owner does not advance any argument for claim 4 other than those it has presented for claim 1. We have reviewed the arguments and evidence presented by Petitioner and find that Nybo discloses the limitation added by claim 4 relative to claim 3. We conclude, based on the reasoning discussed above with respect to the subject matter of claim 1 and on Nybo’s disclosing the limitations further recited in claims 3 and 4, that Petitioner has demonstrated by a preponderance of the evidence that claim 4 would have been obvious to one with ordinary skill in the art over Nybo and Leonardos.

Claim 7 depends from claim 1 and further recites: (1) receiving a user request pertaining to the at least one requested digital image, and (2) processing the user request with the associated information of the at least one requested digital image. Petitioner persuasively explains how Nybo discloses each of the two further recited steps of claim 7 relative to claim 1. Pet. 47 (citing Ex. 1007 ¶¶ 13, 15, 44, 48, 50–53, 58, claim 4; Ex. 1012 ¶¶ 104–106). Patent Owner does not advance any argument for claim 7 other than those it has presented for claim 1. We have reviewed the arguments and evidence presented by Petitioner and find that Nybo discloses the limitation added by claim 7 relative to claim 1. We conclude, based on the reasoning discussed above with respect to the subject matter of claim 1 and on Nybo’s disclosing the limitations further recited in claim 7, that

Petitioner has demonstrated by a preponderance of the evidence that claim 7 would have been obvious to one with ordinary skill in the art over Nybo and Leonardos.

Claim 8 depends from claim 7 and further recites: “wherein the user request is e-mailing of the at least one requested digital image file, purchasing of the at least one requested digital image, resizing of the at least one requested digital image, playing of associated audio or video of the at least one requested digital image, printing of the at least one digital image, or simultaneously sharing of the at least one requested digital image file with at least a second user.” Because of the disjunctive term “or,” satisfying any one of the enumerated alternatives actions satisfies this limitation. Petitioner persuasively explains how Nybo describes requests that include e-mailing the image, playing the associated video, printing the image, and broadcasting the image to others (thus simultaneously sharing the image). Pet. 48 (citing Ex. 1007 ¶¶ 13, 15, 48, 50–53, 58, claims 4, 14; Ex. 1012 ¶ 107). Patent Owner does not advance any argument for claim 8 other than those it has presented for claim 1. We have reviewed the arguments and evidence presented by Petitioner and find that Nybo discloses the limitation added by claim 8 relative to claim 7. We conclude, based on the reasoning discussed above with respect to the subject matter of claim 1 and on Nybo’s disclosing the limitations further recited in claims 7 and 8, that Petitioner has demonstrated by a preponderance of the evidence that claim 8 would have been obvious to one with ordinary skill in the art over Nybo and Leonardos.

Claim 9 depends from claim 1 and further recites: “wherein the identifier is an alphanumeric string.” Petitioner persuasively explains how Nybo discloses that its identifier is an alphanumeric string. Pet. 48–49

(citing Ex. 1007 ¶¶ 13, 44, 45, 50, 58; Ex. 1012 ¶ 108). Patent Owner does not advance any argument for claim 9 other than those it has presented for claim 1. We have reviewed the arguments and evidence presented by Petitioner and find that Nybo discloses the limitation added by claim 9 relative to claim 1. We conclude, based on the reasoning discussed above with respect to the subject matter of claim 1 and on Nybo's disclosing the limitation further recited in claim 9, that Petitioner has demonstrated by a preponderance of the evidence that claim 9 would have been obvious to one with ordinary skill in the art over Nybo and Leonardos.

C. Obviousness of Claims 5 and 6
over Nybo, Leonardos, and Alattar

Claim 5 depends from claim 1, and further recites: (1) "positioning a hot spot on the at least one requested digital image," and (2) "selecting the hot spot, wherein upon selection the associated information for the corresponding requested digital image is presented to the user." Petitioner relies on Alattar as disclosing the limitations further recited in claim 5, and persuasively explains how Alattar discloses these further limitations of claim 5. Pet. 25, 26, 50 (citing Ex. 1012 ¶¶ 58, 59, 111–113). Petitioner also explains why it would have been obvious to one with ordinary skill in the art to incorporate Alattar's teachings regarding the positioning and selecting of a hot spot on a requested image into the combined system of Nybo and Leonardos as applied previously to claim 1. Pet. 50–51 (citing Ex. 1012 ¶¶ 22–23, 26–28, 114–115). Patent Owner does not dispute that Alattar discloses the limitations further recited in claim 5, or that one with ordinary skill in the art would have incorporated Alattar's teachings regarding a hot

spot on an image into the combined method and system of Nybo and Leonardos as previously discussed in the context of claim 1.

Patent Owner does not advance any argument for claim 5 that it has not presented for claim 1. We have reviewed the arguments and evidence presented by Petitioner and find that Alattar discloses the limitations added by claim 5 relative to claim 1. We have considered the reasoning discussed above for claim 1, Alattar's disclosing the limitations added by claim 5, and Petitioner's explanation on why it would have been obvious to incorporate Alattar's teachings into the combined method and system of Nybo and Leonardos. Petitioner has demonstrated by a preponderance of the evidence that claim 5 would have been obvious to one with ordinary skill in the art over Nybo, Leonardos, and Alattar.

Claim 6 depends from claim 1, and further recites: (1) "positioning a hot spot on the at least one requested digital image," and (2) "selecting the hot spot, wherein upon selection the user is linked to at least a second server storing the at least one requested digital image file." Petitioner relies on Alattar as disclosing the limitations further recited in claim 6, and persuasively explains how Alattar discloses these further limitations of claim 6. Pet. 27–29, 51–52 (citing Ex. 1012 ¶¶ 63, 117–118). Petitioner also explains why it would have been obvious to one with ordinary skill in the art to incorporate Alattar's teachings regarding the positioning and selecting of a hot spot on a requested image into the combined system of Nybo and Leonardos as applied previously to claim 1. Pet. 52 (citing Ex. 1012 ¶¶ 22–23, 26–28, 119–120). Patent Owner does not dispute that Alattar discloses the further limitations recited in claim 6, or that one with ordinary skill in the art would have incorporated Alattar's teachings regarding a hot spot on an

image into the combined method and system of Nybo and Leonardos as previously discussed in the context of claim 1.

Patent Owner does not advance any argument for claim 6 that it has not presented for claim 1. We have reviewed the arguments and evidence presented by Petitioner and find that Alattar discloses the limitations added by claim 6 relative to claim 1. We have considered the reasoning discussed above for claim 1, Alattar's disclosing the limitations added by claim 6, and Petitioner's explanation on why it would have been obvious to incorporate Alattar's teachings into the combined method and system of Nybo and Leonardos. Petitioner has demonstrated by a preponderance of the evidence that claim 6 would have been obvious to one with ordinary skill in the art over Nybo, Leonardos, and Alattar.

D. Obviousness of Claims 2, 9, and 10
over Nybo, Leonardos, and Miyawaki

Claim 2 depends from claim 1, and further recites: "further comprising the step of printing the digital image with a visual representation of the identifier." Petitioner relies on Miyawaki as disclosing the limitation further recited in claim 2, and persuasively explains how Miyawaki discloses the added limitation of claim 2. Pet. 56 (citing Ex. 1012 ¶¶ 24, 25, 129). Specifically, Miyawaki discloses that the digital image is printed with a barcode. Ex. 1006 ¶¶ 57, 69, 72. Petitioner also explains why it would have been obvious to one with ordinary skill in the art to incorporate Miyawaki's teachings regarding printing the digital image with a visual representation into the combined system of Nybo and Leonardos as applied previously to claim 1. Pet. 56 (citing Ex. 1012 ¶¶ 24–28, 130–132). Patent Owner does not dispute that Miyawaki discloses the further limitation recited in claim 2,

or that one with ordinary skill in the art would have incorporated Miyawaki's teachings regarding printing the digital image with a barcode into the combined method and system of Nybo and Leonardos.

Patent Owner does not advance any argument for claim 2 that it has not presented for claim 1. We have reviewed the arguments and evidence presented by Petitioner and find that Miyawaki discloses the limitation added by claim 2 relative to claim 1. We have considered the reasoning discussed above for claim 1, Miyawaki's disclosing the limitations added by claim 2, and Petitioner's explanation on why it would have been obvious to incorporate Miyawaki's teachings into the combined method and system of Nybo and Leonardos. Petitioner has demonstrated by a preponderance of the evidence that claim 2 would have been obvious to one with ordinary skill in the art over Nybo, Leonardos, and Miyawaki.

Claim 9 depends from claim 1, and further recites: "wherein the identifier is an alphanumeric string." We have determined above that Nybo discloses this limitation of claim 9 and that claim 9 would have been obvious over Nybo and Leonardos without the addition of Miyawaki.

Here, Petitioner further relies on Miyawaki as disclosing the limitation added by claim 9, and persuasively explains how Miyawaki discloses the added limitation. Pet. 57 (citing Ex. 1006 ¶¶ 22, 44, 45, 54–59, 72, 74, 75; Ex. 1012 ¶ 134). Petitioner also explains why it would have been obvious to one with ordinary skill in the art to incorporate Miyawaki's teachings regarding forming the identifier as an alphanumeric string into the combined system of Nybo and Leonardos as applied previously to claim 1. Pet. 57–58 (citing Ex. 1012, ¶¶ 24–28, 135–136). Patent Owner does not dispute that Miyawaki discloses the further limitation added by claim 9, or that one with

ordinary skill in the art would have incorporated Miyawaki's teachings regarding forming the identifier as an alphanumeric string into the combined method and system of Nybo and Leonardos as previously discussed in the context of claim 1.

Patent Owner does not advance any argument for claim 9 that it has not presented for claim 1. We have reviewed the arguments and evidence presented by Petitioner and find that Miyawaki discloses the limitation added by claim 9 relative to claim 1. We have considered the reasoning discussed above for claim 1, Miyawaki's disclosing the limitations added by claim 9, and Petitioner's explanation on why it would have been obvious to incorporate Miyawaki's teachings into the combined method and system of Nybo and Leonardos. Petitioner has demonstrated by a preponderance of the evidence that claim 9 would have been obvious to one with ordinary skill in the art over Nybo, Leonardos, and Miyawaki.

Claim 10 depends from claim 1, and further recites: "wherein the identifier is a barcode." Petitioner relies on Miyawaki as disclosing the limitation added by claim 10, and persuasively explains how Miyawaki discloses the added limitation. Pet. 59 (citing Ex. 1006 ¶¶ 57–59, 64–65, 73–75; Ex. 1012 ¶¶ 24–25, 138). Petitioner also explains why it would have been obvious to one with ordinary skill in the art to incorporate Miyawaki's teachings regarding forming the identifier as barcode into the combined system of Nybo and Leonardos as previously applied to claim 1. Pet. 59–60 (citing Ex. 1012 ¶¶ 24–28, 139–140). Patent Owner does not dispute that Miyawaki discloses the further limitation added by claim 10, or that one with ordinary skill in the art would have incorporated Miyawaki's teachings

regarding forming the identifier as a barcode into the combined method and system of Nybo and Leonardos.

Patent Owner does not advance any argument for claim 10 that it has not presented for claim 1. We have reviewed the arguments and evidence presented by Petitioner and find that Miyawaki discloses the limitation added by claim 10 relative to claim 1. We have considered the reasoning discussed above for claim 1, Miyawaki's disclosing the limitations added by claim 10, and Petitioner's explanation on why it would have been obvious to incorporate Miyawaki's teachings into the combined method and system of Nybo and Leonardos. Petitioner has demonstrated by a preponderance of the evidence that claim 10 would have been obvious to one with ordinary skill in the art over Nybo, Leonardos, and Miyawaki.

III. ORDER

For the reasons given, it is:

ORDERED that claims 1, 3, 4, and 7–9 of U.S. Patent No. 7,991,792 B2 have been shown by a preponderance of the evidence to be unpatentable, under 35 U.S.C. § 103(a), as obvious over Nybo and Leonardos;

FURTHER ORDERED that claims 5 and 6 of U.S. Patent No. 7,991,792 B2 have been shown by a preponderance of the evidence to be unpatentable, under 35 U.S.C. § 103(a), as obvious over Nybo, Leonardos, and Alattar;

FURTHER ORDERED that claims 2, 9, and 10 of U.S. Patent No. 7,991,792 B2 have been shown by a preponderance of the evidence to be unpatentable, under 35 U.S.C. § 103(a), as obvious over Nybo, Leonardos, and Miyawaki; 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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