

**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION**

VPS, LLC (d/b/a Virtual Photo Store, LLC),

Plaintiff,

v.

SmugMug, Inc; Daniel Gin Photography;  
SNO Studios; Welsh Video Productions, Inc.;  
J.W. Lee Photography; and Chicagoland  
Event Photographers,

Defendants.

No. 10 CV 2142  
Judge James B. Zagel

**MEMORANDUM OPINION AND ORDER**

Plaintiff VPS, LLC, accuses Defendants SmugMug, Inc., Daniel Gin Photography, SNO Studios, Welsh Video Productions, Inc., J.W. Lee Photography; and Chicagoland Event Photographers of infringing three U.S. patents. The patents are U.S. Patent No. 6,321,231 (“’231 patent”), U.S. Patent No. 6,332,146 (“’146 patent”), and U.S. Patent No. 7,487,155 (“’155 patent”). All three patents concern a system and method for the centralized storage of digital images. On August 6, 2012, the Court conducted a hearing during which it heard evidence and argument regarding the construction of several different claims of all three patents. The Court’s construction of these claims is set forth below.

**I. BACKGROUND**

The U.S. Patent and Trademark Office (PTO) issued the ’231 patent in late 2001 (filed on August 11, 1997), the ’146 patent in late 2001 (filed July 19, 2000), and the ’155 patent in early 2009 (filed December 6, 2000). VPS is the current assignee of each patent. These three patents concern a system and method for the centralized storage of digital images. Providers of images may permit users to access them. Users authorized to access these images may order prints of the

images or elect to have the images routed to another user or to another location. Images are not accessible by unauthorized users.

For viewing or tasks other than printing and routing, the system employs a lower-resolution copy of the stored images, which requires relatively lower bandwidth communication.

Defendant SmugMug, Inc. operates an online system for hosting, viewing, sharing, printing, and selling digital images at its website [www.smugmug.com](http://www.smugmug.com). Plaintiff VPS alleges that the SmugMug system offers image providers the storage, sharing, viewing, printing, routing, and security features of the claimed invention.

VPS accuses Defendants of infringing three U.S. patents: (1) U.S. Patent No. 6,321,231 (“231 patent”), (2) U.S. Patent No. 6,332,146 (“146 patent”), and (3) U.S. Patent No. 7,487,155 (“155 patent”). I begin with some boilerplate for the reason that I have not included it in any recent opinion.

## **II. THE LAW OF CLAIM CONSTRUCTION**

### **A. Generally**

A patent infringement analysis involves two steps. The first step, claim construction, is a determination of the meaning and scope of the asserted patent claims. Claim construction is a matter of law for the court, subject to *de novo* review on appeal. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed.Cir.1995) (*en banc*), *aff'd* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). The second step is for the trier of fact to determine whether the accused product or method falls within the scope of the properly construed claims. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1467 (Fed. Cir. 1998) (*en banc*). Claim construction is to be based primarily on the “intrinsic evidence” of the patent (in order of importance): the claim

language, the patent specification,<sup>1</sup> and the prosecution history<sup>2</sup> of the patent. *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1329 (Fed. Cir. 2007); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed Cir. 2005) (en banc).

“[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips*, 415 F.3d at 1312. *See also Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1370 (Fed. Cir. 2005) (“In construing claims the analytical focus must begin and remain centered on the language of the claims themselves...”). The words in a claim usually carry their “ordinary and customary meaning,” which is “the meaning that the term[s] would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application” in the context of the entire patent. *Phillips*, 415 F.3d at 1312-13. “[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent” in light of the specification, prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art. *Id.* at 1332; *Phillips*, 415 F.3d at 1313; *Markman*, 517 U.S. at 370.<sup>3</sup>

In addition to the claim language, the specification is “always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a

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<sup>1</sup> 35 U.S.C. § 112, ¶ 1 provides that, every patent must have a specification containing “a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.”

<sup>2</sup> The prosecution history, also referred to as the file history, is the record of the correspondence between the applicant and the U.S. Patent and Trademark Office during the patent application process. The prosecution history becomes public record upon issuance of the patent.

<sup>3</sup> “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314. For example, *Texas Digital Systems, Inc. v. Telegenix, Inc.*, suggested greater emphasis on dictionary definitions of claim terms and assigned a less prominent role to the specification and the prosecution history. *Phillips*, 415 F.3d at 1319 (referencing *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed.Cir.2002)).

disputed term.” *Phillips*, 415 F.3d at 1315 (citing *Vitronics*, 90 F.3d at 1582) (internal quotation marks omitted).

The claim language need not necessarily have a customary and ordinary meaning because a patentee may act (at his considerable peril) as his own “lexicographer” and give words special meaning by clearly defining a patent term in the specification or prosecution history. *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1382 (Fed. Cir. 2011). The specification itself may also reveal an intentional disclaimer, or disavowal, of claim scope by the inventor, in which case, “the inventor’s intention, as expressed in the specification, is regarded as dispositive.” *Phillips*, 415 F.3d at 1316. *See also Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1370 (Fed. Cir. 2003) (holding that despite the absence of the word “play” in floor panel patent claims, the claimed invention must have included a play limitation because the claim language recited floor system features in which a play limitation was necessarily present, the specification read as a whole led to the “inescapable conclusion” of a play limitation, and the “specification also distinguished the prior art on the basis of play”).

Courts are cautioned against reading an inappropriate limitation from the specification into the claims. *Phillips*, 415 F.3d at 1320 (“one of the cardinal sins of patent law”). *See also Retractable Technologies, Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011) (“There is a fine line between construing the claims in light of the specification and improperly importing a limitation from the specification into the claims . . . In reviewing the intrinsic record to construe the claims, we strive to capture the scope of the actual invention, rather than strictly limit the scope of claims to disclosed embodiments or allow the claim language to become divorced from what the specification conveys is the invention.”) (internal citation omitted); *Kara Tech., Inc. v. Stamps.com, Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009)

(“The claims, not specification embodiments, define the scope of patent protection. The patentee is entitled to the full scope of his claims, and we will not limit him to his preferred embodiment or import a limitation from the specification into the claims.”).

Beyond the specification a court may consider, if in evidence, a patent’s prosecution history—the “undisputed public record” of proceedings in the Patent and Trademark Office—to ascertain the true meaning of patent claim language. *Markman*, 52 F.3d at 980. “Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Phillips*, 415 F.3d at 1317. *See also Inverness Med. Switz. GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1380-82 (Fed.Cir.2002) (ambiguity of prosecution history made it less relevant to claim construction). “Nonetheless, the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Phillips*, 415 F.3d at 1317. *See also Schwing GmbH v. Putzmeister Aktiengesellschaft*, 305 F.3d 1318, 1324 (Fed. Cir. 2002) (“Although prosecution history can be a useful tool for interpreting claim terms, it cannot be used to limit the scope of a claim unless the applicant took a position before the PTO that would lead a competitor to believe that the applicant had disavowed coverage of the relevant subject matter.”).

Only when ambiguity remains after consulting the intrinsic evidence may the court resort to “extrinsic” evidence external to the claim language and file history to construe the claim terms. *See generally Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1382 (Fed. Cir. 2008); *LB Plastics, Inc. v. Amerimax Home Prods., Inc.*, 499 F.3d 1303, 1308 (Fed. Cir. 2007).

Dictionaries, treatises, and inventor testimony, extrinsic evidence such as reasoned and well supported expert testimony may be useful to provide background on the technology, explain how the invention works, or to establish that a particular term in the patent has a particular meaning in the pertinent art. *Phillips*, 415 F.3d at 1317-18.

### **B. Means-Plus-Function Limitations (Claims 9-20)**

Under 35 U.S.C. § 112, ¶ 6 (“Patent Act”), a patentee may express a claim element in “means-plus-function” form, stating a claim limitation as “a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112, ¶ 6. Means-plus-function claiming applies only to purely functional elements that do not provide sufficient structure to perform the recited function. *Phillips*, 415 F.3d at 1311; *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880-81 (Fed. Cir. 2000).

A claim element is presumed to be in means-plus-function form subject to § 112, ¶ 6 if the element contains the word “means” and recites a function. *Envirco Corp. v. Clestra Cleanroom, Inc.*, 209 F.3d 1360, 1364 (Fed. Cir. 2000). To construct such an element and apply § 112, ¶ 6 a court must first identify the function of the element and then identify the corresponding structure in the specification that performs the recited function. *See Inventio AG v. Thyssenkrupp Elevator Am. Corp.*, 649 F.3d 1350, 1355 (Fed. Cir. 2011); *Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1257 (Fed. Cir. 1999). § 112, ¶ 6 does not permit incorporation of structure from the specification beyond that necessary to perform the claimed function. This means-plus-function presumption is rebutted if the claim itself recites sufficient structure, material, or acts to perform the claimed function. A claim element recites sufficient

structure if “the term, as the name for structure, has a reasonably well understood meaning in the art.” *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996).

If a claim element does not use the word “means,” there is a strong presumption that the term is not a means-plus-function limitation and that § 112, ¶ 6 does not apply. *Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1318 (Fed. Cir. 1999). This presumption can be overcome only if the claimed structure is not sufficient to perform the recited functions or if the claim element invokes purely functional terms. *Microprocessor Enhancement v. Texas Instruments*, 520 F.3d 1367, 1374-75 (Fed. Cir. 2008) (reasoning that even if a claim does not use the conventional means-plus-function format, functional language may still limit the claims). The Federal Circuit has “seldom held that a limitation not using the term ‘means’ must be considered to be in means-plus-function form, and the circumstances must be unusual to overcome the presumption.” *Mass. Inst. of Tech. & Elecs. for Imaging, Inc. v. Abacus Software*, 462 F.3d 1344, 1356 (Fed. Cir. 2006) (“*MIT v. Abacus Software*”).

## **I. CLAIM CONSTRUCTION ANALYSIS**

### **A. Asserted Claims**

VPS asserts five independent claims as infringed by the defendants: claim 74 of the ’231 patent (claim ’231/74); claims ’146/1, 12, and 17; and claim ’155/1. VPS also asserts that nine dependent claims are infringed; however, the parties have not requested that the Court construe any terms of those dependent claims.

Of the asserted independent claims, three recite digital image management systems: claim ’231/74; claim ’146/12; and claim ’155/1; and two recite methods for printing or managing digital images: claims ’146/1 and 17.

### **B. Construction of Disputed Claim Terms**

**1. [claims '231/74, '146/1, '146/12, '146/17, '155/1] transparent/transparency**

The parties do not quarrel over the definition of the word *transparency*, which the specifications describe as the prevention of access to and visibility of a stored digital image. *See* '231 patent col.11, ll.41-50. At issue is the proper construction of the claim elements containing the word transparency.

Defendants argue that across all five claims, *transparency* should be construed to mean that “all users who are not explicitly authorized by an image provider to access such provider’s digital images are prevented by the system from accessing any such images and even from being able to tell that any such provider has stored any images on the system.” Defendants base their construction on the specification description of transparency common to all five asserted patents (*see* '231 patent, col.11, ll.41-50; '146 patent, col.11, ll.42-51; '155 patents, col.11, ll.39-47), arguing that “the specification is always highly relevant to the claim construction analysis.” *Phillips*, 415 F.3d at 1315.

Plaintiff contends that the word *transparency* ought to be construed according to its plain meaning (“not visible”) within the context of each individual claim. In other words, the claim terms each explain specific relationships of transparency—that is, the images subject to transparency and the parties for whom the images are transparent. Plaintiff argues the file history comports with its plain language interpretation because the PTO examined the claims individually and made its determination that each claim was patentable over the prior art based on the specific transparency features of each individual claim.

The Court agrees with Plaintiff’s plain language construction because the individual claims express particular transparent relationships. Specifically, the claims describe transparency of images for “all users except users identified by the first digital image provider” ('231/74 and



'146/12), transparency between a first and second user authorized by two different digital image providers ('146/1), transparency of a second set of images to a first authorized user ('146/17), and transparency between a first and second image provider ('155/1). While Defendants did construe *transparency* in light of the specifications, their construction papers over the subtleties of the claim language and narrows the scope of the claims. *See Kara Tech.*, 582 F.3d at 1348 (“The claims, not specification embodiments, define the scope of patent protection. The patentee is entitled to the full scope of his claims, and we will not limit him to his preferred embodiment or import a limitation from the specification into the claims.”).

The Court construes *transparency* according to its plain meaning of “not visible.”

## 2. system/method

The term *system* is part of the preambles of asserted claims '231/74, '146/12, and '155/1:

Claim	Preamble, plus transitional language
'231/74	“A digital image management and order delivery <i>system</i> comprising . . . ”
'146/12	“A digital image management and delivery <i>system</i> comprising . . . ”
'155/1	“A digital image management <i>system</i> comprising . . . ”

The term *method* is part of the preambles of asserted claims '146/1 and 17:

Claim	Preamble, plus transitional language
'146/1	“A <i>method</i> for printing digital images, the method comprising the steps of . . . ”
'146/17	“A <i>method</i> of managing digital images, the method comprising the steps of . . . ”

At issue is whether the above preambles should be treated as limitations of their corresponding claims. The preamble of a claim is an introductory statement that gives context to the invention by stating a basic purpose or intended use of the invention. *See Symantec Corp. v. Computer Assocs. Int'l, Inc.*, 522 F.3d 1279, 1288-89 (Fed. Cir. 2008). (“[W]here a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a

purpose or intended use for the invention,” the preamble is not limiting.) The preamble should be treated as a limitation of the claim only if it recites essential structure or steps “necessary to give life, meaning, and vitality to the claim.” If the preamble is necessary to provide “antecedent basis” for the terms in the body of the claim or if the patentee relies on the preamble during prosecution to distinguish the claimed invention from the prior art, the preamble should be treated as a limitation of the claim. *Id.* at 1289. In other words, a preamble should be treated as a claim limitation if doing so would prevent the claim language from becoming divorced from what the specification conveys is the invention. *See Retractable Technologies*, 653 F.3d at 1305.

Plaintiff argues that because the terms *system* and *method* appear in the preambles of the asserted claims and recite the general purpose or intended use of each claimed invention, these terms have simple, ordinary meanings that should not be treated as limitations of the claims and require no construction by this Court.

Defendants argue that the preamble terms *system* and *method* should be construed as “a system of complete invisibility for unauthorized users.” However, Defendants do not show how the ordinary meaning of *system* or *methods* divorces the claims from their specifications. While Defendants’ proposed construction incorporates general concepts of *transparency* and *authorized users* from the specifications, Defendants do not identify specific language in the claims, patent specification, or prosecution history to explain why any of the preambles should be treated as claim limitations. Thus, I adopt Plaintiff’s plain language argument.

The Court construes the preamble terms *system* and *method* according to their ordinary meanings and do not treat them as limitations to the claims.

### **3. [claims’146/12, ’146/17, ’155/1] authorized user[s] identified by**

Of the five asserted independent claims, three recite the term *authorized user[s]*

*identified by*. Specifically, claims '146/12, '146/17, and '155/1 refer to an *authorized user[s]* *identified by* the first image provider. The remaining two asserted independent claims, '231/74 and '146/1, recite the term *user identified by* (but do not recite “authorized”). At issue is the construction of the term *authorized user[s]* *identified by*.

Plaintiff argues that the ordinary meaning of *authorized user identified by*, considering the patent specification, is a user to whom an image provider has given permission to access the provider's images. The specifications for all three patents support this plain language interpretation by referring to users (i) “given permission” to access the system and download low-resolution copies of the stored images; (ii) “permissioned” to access data; (iii) “granted access” to the database; and (iv) those “logging in under a given Image Provider User's authority.” *See* '231, '146, and '155 patents: (i) col.5, ll.11-13; (ii) col.16, ll.19-21; (iii) col.11, ll.30-34; and (iv) col.11, ll.49-53.

Defendants counter that the Court should incorporate specification details into the claims—details such as contact and security features of the system's administrative program, the authorized user being “registered” with the system, and the authorized user having an assigned username and password linked to the image provider's unique client identification number. Although the prosecution history shows that the ability of an image provider to grant others access to specific images was central to the invention, Defendants have not identified specific statements made by the patentee to the PTO that would suggest to a competitor that the applicant meant to incorporate into the claims the specification limitations Defendants seek to incorporate. *See Schwing*, 305 F.3d at 1324 (“Although prosecution history can be a useful tool for interpreting claim terms, it cannot be used to limit the scope of a claim unless the applicant took a position before the PTO that would lead a competitor to believe that the applicant had

disavowed coverage of the relevant subject matter.”).

Once again, Plaintiff’s plain language construction prevails because it is consistent with how the specification characterizes the claimed invention. Defendants’ proposed construction goes too far by incorporating details from the specifications without adequate support from the prosecution history. Because the meaning of *authorized user[s] identified by* can be ascertained from the plain language, Defendants’ extrinsic evidence is not relevant in construing this claim.

The Court construes *authorized user identified by* as a user or users given permission to access images by an image provider.

#### **4. [claims ’231/74, ’146/1] user**

Plaintiff says the Court should apply the ordinary meaning of *user*, which is distinct from, and broader than, the term *authorized user identified by*. Under the doctrine of claim differentiation, it is presumed that different words used in different claims result in a difference in meaning and scope for each of the claims. *Clearstream Wastewater Sys., Inc. v. Hydro-Action, Inc.*, 206 F.3d 1440, 1446 (Fed. Cir. 2000). “This doctrine cannot be used to make a claim broader than what is contained in the written description . . . but it prevents the narrowing of broad claims by reading into them the limitations of narrower claims.” *Id.*

Plaintiff’s ordinary-meaning construction is also supported by the specification, which refers to several types of users, including “browsers,” “client orderers,” “image providers,” “jobbers,” and “suppliers.” *See, e.g.*, ’231 patent col.6, ll.52-65. The specification further states that “[b]rowsers and orderers are users *given permission* by the image providers to access the database,” suggesting that there is a point at which a user does not already have permission to access any provider’s photos. *See, e.g.*, ’231 patent col.6, ll.52-65 (emphasis added).

Defendants assert essentially identical constructions for the terms *user* and *authorized*

*user identified by*.<sup>4</sup> Similar to their proposed construction for *authorized user identified by*, Defendants’ construction for *user* incorporates specification details into the claims—details such as contact and security features of the system’s administrative program, the authorized user being “registered” with the system, and the authorized user having an assigned username and password linked to the image provider’s unique client identification number. In sum, Defendants argue that “[a] person who has been identified by an image provider and registered by the system can gain access to the system [a]s a ‘user.’”

I adopt Plaintiff’s proposed construction and apply the ordinary meaning of *user* because the term’s meaning is apparent from the plain language of the claims in light of the specifications. The specifications state, “Significantly, the digital data of every image provider user is transparent to all *users* except those *users* authorized to view the data.” ’231 patent col.11, ll42-44 (emphasis added). This specification distinguishes between users who have access, and users who do not have access. If, according to Defendants’ construction, the defining feature of a *user* is that at least one image provider has *already* authorized him or her to access the provider’s images, then it would be impossible to have a *user* who has yet to be authorized by any image provider. Thus, Defendants’ construction is incompatible with the specifications, which distinguish between a *user* and an *authorized user*. *See also* ’231 patent col.11, ll.30-33 (“Each image provider user can specify users (such as browsers and client orderers and jobbers) who are *to be granted* access to the files of that particular image provider user.”) (emphasis added).

**5. [claim ’155/1] each of the high resolution digital images having a higher bandwidth communication requirement than each of the corresponding low resolution copies**

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Defendants mention that there are “slight differences” between their constructions of *user* and *authorized user identified by*, but they do not confirm the nature or significance of those differences.

The parties agree that the Court need not construe the terms *high resolution* and *low resolution* digital images, but at issue is the construction of the term *bandwidth communication requirement*.

Plaintiff's position is that the ordinary meaning of *bandwidth communication requirement* refers to a characteristic of the data being transmitted. Plaintiff argues that *bandwidth communication requirement*, in light of the specification language in the '231, '146, and '155 patents, refers to the relative difference between high resolution and low resolution images in terms of the time required to transmit each over a given communications channel and the degree to which the amount of information contained within each serves to tax the comparable computer resources. That is, the term describes a difference between high resolution and low resolution images with respect to the information carrying capacity necessary to transmit high and low resolution images in a given amount of time.

Defendants argue that data can be transmitted at any bandwidth, so there is no particular bandwidth *required* to transmit data. Rather, Defendants construe *bandwidth communication requirement* to mean that the data management system can be configured to set the *bandwidth communication requirement* for the data being transmitted. In other words, the system imposes different bandwidth communication conditions from user to user, so the term should be construed as "a minimum amount of data per unit time, the minimum being defined by the system." Defendants rely on Dan Schonfeld, Ph.D.'s analysis to conclude that *bandwidth communication requirements* has no ordinary meaning to one skilled in the art.<sup>5</sup> However, Dr.

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<sup>5</sup> Dr. Schonfeld's analysis of the terms (1) *job order developer* and (2) *each of the high resolution digital images having a higher bandwidth communication requirement than each of the corresponding low resolution copies* was as follows:

7. I also have been asked whether two phrases used in the patent claims had an ordinary meaning to one of ordinary skill in the art in 1997. In particular, independent claim 1 of the '155 patent uses the phrase "each of the high resolution digital images having a higher bandwidth communication requirement than each of the corresponding low resolution copies." Independent claim 74 of the '231 patent uses the phrase "a job

Schonfeld failed to indicate the basis for his opinion or whether he considered the patent specification in his analysis of *bandwidth communication requirement*.

Plaintiff's construction prevails, I believe, because the plain language of the claim suggests that *bandwidth communication requirement* refers to an inherent characteristic of the image being transmitted. For instance, the specifications consistently refer to images *having* either a high or low bandwidth communication requirement, but never discuss being *subjected to* a certain bandwidth communication requirement.<sup>6</sup> Furthermore, nothing in the specifications suggests Defendants' proposed construction that a *bandwidth communication requirement* is imposed by the data system. Thus, in claim '155/1, the term modifies "each of the high resolution digital images," and the entire element should be construed as Plaintiff recommends.

Finally, because the term *bandwidth communication requirement* can be construed based on the plain language of the claim, the Court need not consider Defendants' extrinsic evidence i.e. Dr. Schonfeld's opinion. *See Phillips*, 415 F.3d at 1317-24.

The Court construes the term *bandwidth communication requirement* as a reference to a characteristic of the data—namely, the relative difference between high resolution and low resolution images in terms of the time required to transmit each over a given communications channel, and the degree to which the amount of information contained within each serves to tax

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order developer." In my opinion, neither of those terms had an ordinary meaning to one of ordinary skill in the art in 1997.  
Dkt. 131-1.

The specifications for the '231, '146, and '155 patents provide:  
Advantageously, the low-resolution images downloaded to the agency preferably have a relatively low *bandwidth communication requirement* and can be transmitted in a relatively short amount of time. Such images are also far less taxing on the computer resources of the agency during the creation of the brochure than high resolution copies of those same images. After the images are stored on the system, high-resolution versions of the images, with their relatively high *bandwidth communication requirements* and relatively long transmission times, are preferably only downloaded when required; such as when printing or otherwise publishing a finalized product incorporating such images.  
'231 col.5, ll.23-34; '146 col.5, ll.25-36; '155 patent col.5, ll.32-43 (emphasis added). *See also* '155 patent col.6, ll.27-31 ("For the purpose of effecting the database functions described above, the host system includes storage means for storing high and low resolution image data *having* high and low bandwidth communication requirements, respectively.") (emphasis added).

the comparable computer resources.

6. **[claim '231/74] a router for electronically routing the job order developed by the job developer to a second user specified by the first user;**  
**[claim '146/12] a router for electronically routing at least one high resolution copy of a digital image contained in the subset and identified by the first authorized user to a printer**

At issue is the term *router for electronically routing*, which appears in both claims '231/74 and '146/12.

Plaintiff contends that *router for electronically routing* should be construed to mean “device(s) that automatically directs or diverts” and that the plain language of the claim, in light of the patent specification and prosecution histories, supports its construction. The specifications only reference “a router for electronically routing the job order developed by the job order developer[.]” '231 patent col.2, ll.27-29. During prosecution of the two patents, John Jebens, one of the named inventors, submitted a declaration under Patent Office Rule 131 (37 C.F.R. § 1.131) to establish a date of invention prior to the filing date of the patent application and identified “automatic routing” as a distinguishing feature of the invention (whose predecessor relied on manual retrieval of high-resolution images). With respect to extrinsic evidence, Plaintiff argues that the ordinary meaning of “router” to those skilled in the art is “an intermediary device on a communications network that expedites message delivery,” or a link between an interconnected set of networks, enabling messages to be sent from one to another. Microsoft Press Computer Dictionary (3d ed. 1997). *See also* Merriam Webster’s Third New International Dictionary [unabridged] (1986) (to “route” means to “direct” or to “divert in a specified direction”).

Defendants counter that *router for electronically routing* requires a “direct connection” with a printer, “directly transmitting” an image, “without the need for any additional action on the part of the printer, the host system, or any third party.” Defendants’ proposed construction



for *router* goes too far by incorporating details from the specifications, effectively limiting the claims. Defendants did not identify specific language in the claims, patent specification, or prosecution history that suggests that using the ordinary meaning of *router for electronically routing* divorces the claims from their specifications.

Thus, Plaintiff's construction for the term *router for electronically routing* should be adopted because the plain language of the claim has an ordinary meaning to those skilled in the art, and the specifications and prosecution history support Plaintiff's construction.

The Court construes *router for electronically routing* as used in claim '231/74 to mean device(s) that automatically directs or diverts the job order developed by the job order developer to a second user. The Court construes the same term as used in claim '146/12 to mean device(s) that automatically directs or diverts at least one high resolution copy of a digital image contained in the subset and identified by the first authorized user to a printer.

**7. [claim '146/17] automatically electronically routing the high resolution copy of at least one digital image to a printer**

At issue is the term *automatically electronically routing the high resolution copy of at least one digital image to a printer*, found in claim '146/17.

Plaintiff construes the word *routing* to mean "directing or diverting" so that the entire claim is construed to mean "automatically electronically directing or diverting the high resolution copy of at least one digital image to a printer." Plaintiff bases its construction on the same claim language, specification, prosecution histories, and reasoning outlined with respect to the previous term *router for electronically routing*. *See also NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005) (reasoning that "patents all derive from the same parent application and share many common terms, we must interpret the claims consistently across all asserted patents.").

Similarly to Defendants' above argument for *router for electronically routing*, Defendants argue that *automatically electronically routing the high resolution copy of at least one digital image to a printer* requires a "direct connection" with a printer, "directly transmitting" an image, "without the need for any additional action on the part of the printer, the host system, or any third party." Defendants' proposed construction goes too far by incorporating details from the specifications, effectively limiting the claims. Defendants do not identify specific language in the claims, patent specification, or prosecution history that suggests that using the ordinary meaning of *automatically electronically routing the high resolution copy of at least one digital image to a printer* divorces the claims from their specifications.

Thus, Plaintiff's construction for the term *router for electronically routing* should be adopted because the plain language of the claim has an ordinary meaning to those skilled in the art, and the specifications and prosecution history support Plaintiff's construction.

The Court construes *automatically electronically routing* to mean automatically electronically directing or diverting the high resolution copy of at least one digital image to a printer.

**8. [claim '146/1] receiving and storing the first [second] high resolution digital image at the electronic storage facility**

At issue is the term *receiving and storing the first high resolution digital image at the electronic storage facility*, found in claim '146/1; this phrase, Plaintiff says needs no judicial construction.

Defendants disagree and urge that this claim should be construed to mean the "electronic storage facility receives and stores the first high resolution digital images." Defendants' construction suggests that the step of receiving and storing is performed *by* the electronic storage facility rather than *at* the electronic storage facility, as provided in the claim. As Plaintiff notes,

“*at* does not mean *by*.”

Nevertheless, both parties’ constructions could be equally plausible. Although “*at* does not mean *by*,” in this case “received at an electronic storage facility” and “received by an electronic storage facility” could be equivalent terms. Similarly, “stored at an electronic storage facility” could be equivalent to “stored by an electronic storage facility.” The specification indicates only that the digital data storage facility is “provided with . . . means for receiving digital data from a user . . . and means for storing the digital data compressed by the compressing means in the storage device.” ’146 patent col.3, ll.33-39.

Where two alternative claim constructions are equally plausible based on the intrinsic evidence, claims should be construed so as to preserve their validity. *Phillips*, 415 F.3d at 1327-28. Because Defendants’ construction could slightly alter the meaning of the term, I adopt Plaintiff’s recommendation and need not construe the term.

Because the term can be resolved based on the plain language of the claim, I need not consider Defendants’ extrinsic evidence consisting of the declarations of Mark H. Larson, the English teacher.

9. **[claim ’146/12] a storage device for providing storage for digital images of a plurality of unrelated image providers the storage device storing the digital images of a first one of the image providers such that the digital images of the first image provider can only be accessed by authorized users identified by the first image provider and such that the digital images of the first image provider are transparent to users that are not authorized by the first image provider, the high resolution digital images stored in the storage device being received via the Internet**

At issue is whether the above claim element is a means-plus-function term subject to § 112, ¶ 6 of the Patent Act, which provides:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112, ¶ 6.

Does *a storage device for providing storage for digital images of a plurality of unrelated image providers* provide sufficient structure to perform the subsequent functions? Plaintiffs break the entire claim element into five constituent limitations as follows:

[1] a storage device for providing storage for digital images of a plurality of unrelated image providers [2] the storage device storing the digital images of a first one of the image providers [3] such that the digital images of the first image provider can only be accessed by authorized users identified by the first image provider and [4] such that the digital images of the first image provider are transparent to users that are not authorized by the first image provider, [5] the high resolution digital images stored in the storage device being received via the Internet.

Plaintiff says the words [1] *a storage device for providing storage for digital images of a plurality of unrelated image providers* is a single structural limitation because the definite article *the* in limitation [2] clearly refers back to the storage device described in limitation [1] (see articles underlined above). Thus, Plaintiff argues the functional language, *for providing storage for digital images of a plurality of unrelated image providers*, gives *a storage device* sufficient structure to perform the rest of the functions listed in the claim.

Defendants say that the claim element need not be broken down as Plaintiff suggested and argue that the entire element is a single means-plus-function limitation subject to § 112, ¶ 6 because the ordinary meaning of *storage device* does not capture all of the functions subsequent to that term. In other words, Defendants argue the claim is in means-plus-function form because the language following *storage device* does not recite functions inherent to any storage device. While Defendants admit that *storage device* has sufficient structure to perform the first listed function—*to store digital data or images*—they argue that a *storage device* does not have the structure to perform each of the remaining recited functions. Thus, Defendants incorporate structural details of hardware and software from the patent specifications into their proposed

construction of the claim.

Plaintiff has the better (but not perfect) case that the entire claim element is not a means-plus-function term subject to § 112, ¶ 6. Since the claim limitation does not use the phrase “means for,” there is a strong presumption that the element is not in means-plus-function form. *See Al-Site Corp.*, 174 F.3d at 1318.

Defendants are correct that *for providing storage for digital images of a plurality of unrelated image providers* is clearly a functional term signaled by the preposition “for.” *See Micro Chem.*, 194 F.3d at 1258 (reasoning that the preposition “for” often signals the start of a functional term in a patent claim). However, Defendants do concede that the term *storage device* connotes sufficient structural meaning for a person of ordinary skill in the art to know that the device specifically stores digital data or images. With this in mind, it seems reasonable that a person of ordinary skill in the art would then read the remainder of the claim element as additional details of the *storage device*’s structure.

Overall, the claim element is not so purely functional that it overcomes the presumption that it is not a § 112, ¶ 6 term. Thus, the element ought not be construed as a means-plus-function term under § 112, ¶ 6 and should be construed according to its plain meaning.

**10. [claim ’231/74] a storage device for storing digital images received from a first digital image provider and a second digital image provider**

At issue is whether the above claim element should be construed as a means-plus-function term subject to § 112, ¶ 6.

Consistent with its construction of *storage device* in claim ’146/12 (see Section III.B.9 above), Plaintiff argues that the entire claim element is not a means-plus-function term subject to § 112, ¶ 6 because it recites sufficient structure for the subsequent functional terms. Thus, Plaintiff argues the element should be construed according to its plain language.

Defendants respond that the entire element is a single means-plus-function limitation subject to § 112, ¶ 6 because the ordinary meaning of *storage device* does not capture all of the functions subsequent to that term. Defendants propose a claim construction different from that it proposed for the previously discussed claim element in '146/12 (see Section III.B.9 above) because the structural term *storage device* is followed by different subsets of listed functions. Thus, Defendants incorporate different structural details of hardware and software from the patent specifications into their proposed construction of the claim.

Plaintiff appears to be correct here. The entire claim element is not a means-plus-function term subject to § 112, ¶ 6. Since the claim limitation does not use the phrase “means for,” there is a strong presumption that the element is not in means-plus-function form. *See Al-Site Corp.*, 174 F.3d at 1318.

The words *for storing digital images received from a first digital image provider and a second digital image provider* do in fact describe a function. But if, as Defendants previously admitted, *storage device* connotes sufficient structural meaning for a person of ordinary skill in the art to know that the device stores digital data or images, then it seems reasonable that *storage device* provides sufficient structure to perform the function of *storing digital images received from a first digital image provider and a second digital image provider*. Here, the words *received from a first digital image provider and a second digital image provider* simply describe in more detail the images to be stored in the storage device.

Overall, the claim element is not so purely functional that it overcomes the presumption that it is not a § 112, ¶ 6 term. Thus, the element ought not be construed as a means-plus-function term under § 112, ¶ 6 and should be construed according to its plain meaning.

**11. [claim '155/1] an electronic storage facility for providing storage for high resolution digital images of a plurality of unrelated image providers, at least**

**some of the high resolution digital images stored in the electronic storage facility being used to develop corresponding low resolution copies, each of the high resolution digital images having a higher bandwidth communication requirement than each of the corresponding low resolution copies, the electronic storage facility storing the high resolution digital images of a first one of the image providers, such that the high resolution digital images of the first image provider can only be accessed by an authorized user identified by the first image provider, and such that the high resolution digital images of the first image provider are transparent to other unrelated image providers that are not authorized users identified by the first image provider**

Plaintiff writes that the claim element is not a means-plus-function term subject to § 112, ¶ 6 because *an electronic storage facility* provides structure sufficient for performing the function of *providing storage for high resolution digital images of a plurality of unrelated image providers*. Plaintiff argues that this functional language helps define the *electronic storage facility* but does not convert the entire element into a completely functional, means-plus-function term. Finally, Plaintiff argues that *electronic storage facility* has an ordinary meaning but uses as its only support the holding in *01 Communique Laboratory, Inc. v. Citrix Systems, Inc.*, 2007 WL 782160, at \*3 (N.D. Ohio, March 13, 2007) that the term *data communication facility* has ordinary meaning and was therefore not a § 112, ¶ 6 term. This argument is weak, however, because *01 Communique* construed a different term in a different patent.

Defendants write that the entire element is a single means-plus-function limitation subject to § 112, ¶ 6 because the term *electronic storage facility* does not ordinarily capture all of the functions subsequent to that term. Additionally, Defendants argue that all of the language following *electronic storage facility* is purely functional and does not recite functions inherent to an electronic storage facility. Thus, Defendants incorporate structural details of hardware and software from the patent specifications into their proposed construction of the claim.

Plaintiff seems to be correct to say that the entire claim element is not a means-plus-function term subject to § 112, ¶ 6. Since the claim limitation does not use the phrase “means

for,” there is a strong presumption that the element is not in means-plus-function form. *See Al-Site Corp.*, 174 F.3d at 1318. The words *for providing storage for high resolution digital images of a plurality of unrelated image providers* do in fact describe a function of the *electronic storage facility*, as Defendants argue. The rest of the language appears to be non-functional because it serves to describe in more detail characteristics of both the high resolution images being stored and the electronic storage facility’s structure.

Overall, the claim element is not so purely functional that it overcomes the presumption that it is not a § 112, ¶ 6 term. Thus, the element ought not be construed as a means-plus-function term under § 112, ¶ 6 and should be construed according to its plain meaning.

## **12. [claim ’146/1] an electronic storage facility**

At issue is the proper construction of the above claim element, which appears on numerous occasions in claim ’146/1.

Plaintiff asserts that the term *an electronic storage facility* ordinarily means “a facility for electronic storage.” Plaintiff then argues that because *electronic storage facility* has ordinary meaning, similar to claim ’155/1, the term is not in means-plus-function form subject to § 112, ¶ 6. *See also NTP, Inc.*, 418 F.3d at 1293 (reasoning that if “patents all derive from the same parent application and share many common terms, we must interpret the claims consistently across all asserted patents.”).

Defendants counter that *electronic storage facility* does not have ordinary meaning as understood by a person of skill in the art and thus should be construed to incorporate specification details. However, Defendants misunderstand how to determine ordinary meaning of a claim term. To determine the ordinary meaning of a claim term, “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent” including the



specification. *Am. Piledriving*, 637 F.3d at 1332 ; *Phillips*, 415 F.3d at 1313. Defendants do not dispute that *electronic storage facility* is defined in the specification as a “digital data storage facility”:

. . . a digital data storage facility for providing storage for a plurality of third party users is provided. The storage facility is provided with a storage device; means for receiving digital data from a user in the plurality; means for compressing the digital data received by the receiving means in accordance with a parameter set by the user; and, means for storing the digital data compressed by the compressing means in the storage device.

*See* ’146 patent col.3, ll.31-39; Defendants’ Reply Brief, 27. Because Defendants concede that the above specification defines *electronic storage facility*, the term has ordinary meaning as understood by a person of skill in the art and, as Plaintiff argues, need not be further construed.

Additionally Defendants’ construction imports specification details—such as “a building or other physical structure having a storage device”—into the claim, thereby narrowing the claim scope. *See e.g., Kara Tech.*, 582 F.3d at 1348 (“The patentee is entitled to the full scope of his claims, and we will not limit him to his preferred embodiment or import a limitation from the specification into the claims.”). Thus, Plaintiff’s position is more reasonable based on the plain language of the claims in the context of the specification.

Overall, the claim element is not so purely functional that it overcomes the presumption that it is not a § 112, ¶ 6 term. Thus, the element ought not be construed as a means-plus-function term under § 112, ¶ 6 and should be construed according to its plain meaning.

**13. [claim ’231/74] a user identifier for discriminating between users communicating with the system to control user access to the digital images stored in the storage device, the user identifier limiting access to the digital images provided by the first digital image provider to at least one user identified by the first digital image provider, wherein the digital images provided by the first image provider are transparent to all users except users identified by the first digital image provider.**

Claim ’231/74 recites a digital image management system that employs a *user identifier* to discriminate between users of the system. Should it be construed as a means-plus-function

term subject to § 112, ¶ 6?

Plaintiff says no; the *user identifier* plainly provides sufficient structure for the subsequent functional terms and the term *user identifier* (also known as “user ID”) ordinarily means “a value identifying a system user.” IEEE Standard Dictionary of Electrical & Electronics Terms (6th ed. 1996). Plaintiff argues this definition is consistent with the patent specification, which states:

In some embodiments the system is provided with . . . a *user identifier* for discriminating between users communicating with the system to control access to the digital images stored in the storage device . . . .

’231 patent col. 2, ll.29-35 (emphasis added). The specification further provides that the hot-folder transport system has destination folders configured with “the proper *user identifier* and password for access to the remote site for transmitting files.” ’231 patent col.18, ll.55-67

(emphasis added). Thus, Plaintiff argues the entire element should be construed according to its plain language and the ordinary meaning of *user identifier*.

There is no dispute that *user identifier* has an ordinary meaning in the art, namely “the name used to associate a user profile with a user when a user signs on to the system.” *See IBM Dictionary of Computing* (10th ed. 1993). However, Defendants argue that the entire element is still a single means-plus-function limitation subject to § 112, ¶ 6 because a *user identifier* cannot perform all of the functions subsequent to *user identifier*. Thus, Defendants incorporate different structural details of hardware and software from the patent specifications into their proposed construction of the claim.

The entire claim element is not a means-plus-function term subject to § 112, ¶ 6 absent use of the phrase “means for.” *See Al-Site Corp.*, 174 F.3d at 1318. The words *for discriminating between users communicating with the system to control user access to the digital images stored in the storage device* do in fact describe a function. However, Defendants don’t disagree that the

term *user identifier* connotes sufficient structural meaning for a person of ordinary skill in the art. With this in mind, it is reasonable that a person of ordinary skill in the art would then read the remainder of the claim element as additional details of the *user identifier's* structure.

Overall, the claim element is not so purely functional that it overcomes the presumption that it is not a § 112, ¶ 6 term. Thus, the element ought not be construed as a means-plus-function term under § 112, ¶ 6 and should be construed according to its plain meaning.

**14. [claim '231/74] a job order developer responsive to inputs received from the first user for developing a job order which includes at least one high resolution copy of a digital image contained in the subset and identified by the first user.**

Claim '231/74 recites a digital image management system that includes the above claim element. The parties do not request that the Court construe the term *job order*; at issue is whether the above claim element should be construed as a means-plus-function term subject to § 112, ¶ 6.

Again Plaintiff argues the claim element is not a means-plus-function term subject to § 112, ¶ 6 because the term *job order developer responsive to inputs received from the first user for developing a job order* provides sufficient structure for any functional terms. Plaintiff argues the term has ordinary meaning because the specification describes a job order developer as follows:

Upon receiving the work order, the host site 10 develops a job order in accordance with the instructions contained in the work order. The development of a job order is preferably initiated by the internet server 24 which parses the destination and instruction form for the address of the receiving user (block 516). Next, the internet server locates any original data file(s) (such as high resolution image file(s)) identified in the work order (block 518). The original data file(s) and any local documents contained in the work order are then compressed (preferably, pursuant to a user defined algorithm as discussed above in connection with FIGS. 4A-4C) (block 520) and forwarded to the receiving user specified in the destination and instruction form (block 522).

'231 patent col.14, ll.57-67. Thus, the above specification indicates that an "internet server" is the hardware structure that implements the *job order developer*.

Additionally, claim '231/50 (not presently asserted in this case) states, “the job order developer and the router are implemented by at least one programmed processing device.” Since claim terms are presumed to have consistent meaning throughout a patent, *Research Plastics, Inc. v. Fed. Packaging Corp.*, 421 F.3d 1290, 1295 (Fed. Cir. 2005), Plaintiff contends a job order developer is implemented by at least one programmed processing device. Thus, *job order developer* would be understood by one of ordinary skill in the art to mean “one or more programmed processing devices adapted to respond to inputs received from the first user to develop a job order.”

Finally, Plaintiff argues that claim '231/1 (not asserted in this case) invokes § 112 ¶ 6 by reciting “job order developer *means* . . .” (emphasis added). That '231/1 expressly recited a means-plus-function element by using the word “means,” and *job order developer* in '231/74 does not, supports Plaintiff’s argument that the patentee did not intend for the term in '231/74 to be a means-plus-function term. In sum, Plaintiff argues the entire element should be construed according to its ordinary meaning in light of the patent claims and specification.

Defendants respond that the entire element is still a single means-plus-function limitation subject to § 112, ¶ 6 because a *job order developer* did not have an ordinary meaning to those skilled in the art in 1997. Defendants rely on a statement by Dan Schonfeld, Ph.D. to conclude that *job order developer responsive to inputs received from the first user for developing a job order* has no ordinary meaning to someone skilled in the art.<sup>7</sup> However, Dr. Schonfeld failed to

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<sup>7</sup> Dr. Schonfeld’s analysis of the terms (1) *job order developer* and (2) *each of the high resolution digital images having a higher bandwidth communication requirement than each of the corresponding low resolution copies* was as follows:

7. I also have been asked whether two phrases used in the patent claims had an ordinary meaning to one of ordinary skill in the art in 1997. In particular, independent claim 1 of the '155 patent uses the phrase “each of the high resolution digital images having a higher bandwidth communication requirement than each of the corresponding low resolution copies.” Independent claim 74 of the '231 patent uses the phrase “a job order developer.” In my opinion, neither of those terms had an ordinary meaning to one of ordinary skill in the art in 1997.

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indicate the basis for his opinion or whether he considered the patent specification in his analysis of the term. Additionally, Defendants argue that a *developer* was as generic as “mechanism,” “device,” or “element” in 1997, so *job order developer* does not provide structure sufficient to perform all of the functions in the claim element. Thus, Defendants incorporate different structural details of hardware and software from the patent specifications into their proposed construction of the claim.

The claim limitation does not use the phrase “means for,” which invokes the strong presumption that the element is not in means-plus-function form. Additionally, Plaintiff’s argument for the ordinary meaning of *job order developer* is firmly rooted in the plain language of the specifications and other claims. Thus, the entire element provides sufficient structural meaning for a person of ordinary skill in the art.

The claim element is not so purely functional that it overcomes the presumption that it is not a § 112, ¶ 6 term. Thus, the element ought not be construed as a means-plus-function term.

**15. [claim ’146/17] storing a high resolution and a low resolution copy of each of a first [second] plurality of digital images provided by a first [second] asset [image] provider user in an electronically searchable format on a storage device.**

Claim ’146/17 recites a digital image management method that includes a step consisting of the above claim element. At issue is whether the above claim element is in step-plus-function format and therefore subject to § 112, ¶ 6.

Method claims are commonly drafted, as in this case, by reciting the phrase “steps of” followed by a list of actions comprising the method claimed. *Masco Corp. v. United States*, 303 F.3d 1316, 1327 (Fed. Cir. 2002). A step-plus-function construction is appropriate only if the claim limitation contains nothing that can be construed as an act. In other words, where a method claim does not contain the term “step[s] for,” “a limitation of that claim cannot be

construed as a step-plus-function limitation without a showing that the limitation contains no act.” *Id.* In distinguishing between acts and functions under § 112, ¶ 6, the “function” of a method claim element is *what* that element ultimately accomplishes. “Acts,” on the other hand, refer to *how* the function is accomplished, or a step for performing a function. *Masco*, 303 F.3d at 1327. Because of the difficulty of distinguishing acts from functions in step-plus-function claim elements, the claim drafter bears a significant burden to choose language with a definite and clear meaning. *Seal-Flex, Inc. v. Athletic Track & Court Const.*, 172 F.3d 836, 848-49 (Fed. Cir. 1999). Thus, to invoke a presumption of § 112, ¶ 6 application, a claim drafter must use language that expressly signals the recitation of a function as distinguished from an act. *Seal-Flex*, 172 F.3d at 848-49.

Plaintiff asserts that the step of *storing a high resolution and a low resolution copy* cannot be construed as a step-plus-function term because the word *storing* is an act preceded by “steps of” in the claim. Defendants respond that no act is recited because *storing* is not an “act” that actually accomplishes the claim element’s function of transforming high and low resolution images into an electronically searchable format.

The claim element is clear that the step of *storing a high resolution and a low resolution copy* is an action. Thus, Plaintiff is entitled to the full scope of the ordinary meaning of the term, and specification features ought not be imported to limit the scope of the claims.

The Court construes *storing a high resolution and a low resolution copy of each of a first [second] plurality of digital images provided by a first [second] asset [image] provider user in an electronically searchable format on a storage device* to mean storing the images in an arrangement that permits one or more computer programs or portions thereof, or computer code, to search for or to look for the stored images electronically.

- 16. [claim '231/74] a searching engine for developing a subset of the digital images stored in the storage device in response to inputs received from a first user, the searching engine being adapted to download low resolution copies of the subset to the first user;**  
**[claim '146/12] a searching engine for developing a subset of the digital images stored in the storage device by the first image provider in response to inputs received from a first authorized identified by the first image provider, the searching engine being adapted to download low resolution copies of the subset to the first authorized user**

Claims '231/74 and '146/12 recite a digital image management system including a *searching engine for developing a subset of the digital images stored in the storage device.*

Plaintiff contends that the claim element is not a means-plus-function term subject to § 112, ¶ 6 because the term *searching engine* provides sufficient structure for the subsequent function of *developing a subset of the digital images stored in the storage device in response to inputs received from a first user.* Plaintiff does not dispute that this functional language helps define the *searching engine* but, nevertheless, does not convert the entire element into a completely functional, means-plus-function term.

Plaintiff and Defendants agree that the term *searching engine* has an ordinary meaning in the art, namely “a program that searches for keywords in documents or a database.” *See* Microsoft Press Computer Dictionary (3rd ed. 1997). However, Defendants say that the entire claim element is still a single means-plus-function limitation subject to § 112, ¶ 6 because a *searching engine* cannot perform the recited function of *downloading low resolution copies.* Thus, Defendants incorporate different structural details of hardware and software from the patent specifications into their proposed construction of the claim.

The words *for developing a subset of the digital images stored in the storage device in response to inputs received from a first user* do in fact describe a function. Yet, since Defendants admit that the term *searching engine* connotes sufficient structural meaning for a person of ordinary skill in the art, it is unambiguous in the claim. This would lead a person of ordinary

skill in the art to interpret the remainder of the element as additional details of the *searching engine* structure.

Overall, the claim element is not so purely functional that it overcomes the presumption that it is not a § 112, ¶ 6 term. Thus, the element ought not be construed as a means-plus-function term under § 112, ¶ 6 and should be construed according to its plain meaning.

- 17. [claim '146/1] permitting the first [second] image provider to identify users who can access the first [second] high resolution digital image stored at the electronic storage facility; [claim '146/17] permitting a first authorized user identified by the first image provider to locate and download a low resolution copy of at least one of the digital images provided by the first image provider, the second plurality of digital images being transparent to the first authorized user**

Claim '146/1 recites a method for printing digital images, and claim '146/17 recites a method of managing digital images. Each includes a step consisting of the above claim elements (as indicated). At issue is whether the above claim elements should be construed as step-plus-function terms which is appropriate only if the claim limitation contains nothing that can be construed as an act. *Masco*, 303 F.3d at 1316.

Plaintiffs argue that neither of the above steps can be construed as step-plus-function terms within their respective claims because both terms express acts preceded by “steps of.” Defendants argue that the elements are purely functional and that no act is recited in either element because *permitting* is not an “act” that actually accomplishes the claim elements’ functions.

The language of the claim elements is clear that both elements are actions not subject to § 112, ¶ 6. Plaintiff is entitled to a construction of the full scope of the ordinary meaning of the terms, and specifications ought not be imported to limit the scope of the claims.

- 18. [claim '155/1] means for notifying an authorized user identified by the first image provider that the authorized user has been authorized to download a low resolution copy corresponding to one of the high resolution digital**



**images, wherein the notifying means transmits at least a portion of a pathname associated with the low resolution copy to the authorized user**

All sides agree that the above claim element should be construed as a means-plus-function term subject to § 112, ¶ 6 because it contains the phrase “means for.”

Plaintiff first defines the recited function as: *notifying an authorized user identified by the first image provider that the authorized user has been authorized to download a low resolution copy corresponding to one of the high resolution digital images*. Plaintiff then argues that the specification structure necessary to perform this function is: one or more programmed processing devices, such as one or more task specific servers, programmed to notify the authorized user that the authorized user has been authorized to download. *See* 155 patent col.6, ll.3-21.

Defendants first define the recited function as the entire claim element. Defendants then argue that the specification fails to disclose hardware or software necessary to perform the recited function of notifying an authorized user that he or she has permission to download a low resolution copy because the specification provides for only the function of notifying an authorized user that his or her job order is being sent. *See* '155/1 col.15, ll.1-4.

Defendants' construction of two recited functions is accurate because the following two functions are performed by the same “notifying means”: [1] *notifying an authorized user identified by the first image provider that the authorized user has been authorized to download a low resolution copy corresponding to one of the high resolution digital images* and [2] *wherein the notifying means transmits at least a portion of a pathname associate with the low resolution copy to the authorized user*.

However, as Plaintiff argues, the specification does recite adequate structure for performing these functions, for instance:

Depending upon the instructions of the sending user, the destination and instruction form will then be e-mailed or faxed to the receiving user to notify the receiving user that a job order is being sent . . .

The user will also choose the method to notify the selected jobber/supplier 16 that a job has been sent. In the preferred embodiment, that notification can be by facsimile or e-mail.

'155 patent col.14, ll.62-65; '155 patent col.22, ll.14-15. While being notified that you are authorized to download and being notified that you are being sent a job order may be different, the specification appears to indicate that various uses of the system's *notifying* function may be performed by "task-specific servers." *See* '155 patent col.6, ll.3-21. I adopt Plaintiff's proposed construction.

**19. [claim '155/1] means for electronically routing one of the high resolution digital images to a printer in response to a request from the authorized user**

Parties agree that the above claim element should be construed as a means-plus-function term. Additionally, the parties agree that the recited function is *electronically routing one of the high resolution digital images to a printer in response to a request from the authorized user*.

However, parties dispute the specification structure necessary to perform this function.

Plaintiff argues that the specification discloses sufficient structure necessary to perform the function. For instance, the specifications reference a "router for electronically routing the job order." *See* '155 patent col.2, ll.42-44. Additionally, as discussed above, the specification discloses that the data management system, including its *routing* function, can be implemented in a variety of ways, such as by programmed processing devices, preferably in the form of "task specific servers." *See* 155 patent col.6, ll.3-21.

Defendants, on the other hand, argue that the specification fails to disclose hardware or software necessary to perform the recited function of electronically routing *to a printer*.

However, Defendants' argument fails, I believe, because the specifications state, "the system

includes a router for electronically routing the job order developed by the job order developer to a second user specified by the first user,” and a printer could be that second user. *See* 155 patent col.2, ll.42-44; 155 patent col.2, ll.56-60 (“In some preferred embodiments, the file in the job order developed by the job order developer defines a document to be printed; the second user is a printer; and at least one high resolution image is to be printed as part of the document.”).

Because the specification appears to disclose numerous structures for performing the *electronic routing* function, the Court construes *means for electronically routing* as: (1) a router; or (2) one or more programmed processing devices, such as one or more task specific servers, programmed to electronically direct or divert one of the high resolution digital images to a printer in response to a request from the authorized user.

**20. [claim '155/1] means for allowing the authorized user to download the low resolution copy corresponding to one of the high resolution digital images of the first image provider from the electronic storage facility to a first location**

This claim element is agreed to be a means-plus-function term. All sides agree that the recited function is *electronically routing one of the high resolution digital images to a printer in response to a request from the authorized user*. The specification structure necessary to perform this function is in dispute.

Plaintiff argues the structure necessary to perform the stated function is “one or more programmed processing devices, such as one or more task specific servers, programmed to allow the authorized user to download the low resolution copy.” The specification discloses various details on how to allow an authorized user to download a low-resolution copy of a high resolution image. In describing the downloading of low resolution thumbnails, the specification discloses the following:

When such a request for downloading is received, the internet server 24 will utilize the pathname(s) in the appropriate item record(s) to locate and download copies of the selected data file(s) (block 424). If the selected data files are image files, low resolution

copies of the files will be downloaded.

....

If the user requests thumbnails (block 410), the internet server 24 will utilize the thumbnail pathnames stored in the item records identified by the search to locate and display thumbnail depictions of the search results on the user's display device (block 412).

....

Regardless of the viewing format chosen, the user can select an image for downloading by clicking on a corresponding thumbnail and selecting the "Download" option 776. The host site 10 processes the download request (block 790) by accessing the file system 729 (block 792) and downloading low resolution copies of the requested files (block 794) to the requesting user.

....

Regardless of the display format(s) utilized by the user, the user can identify any or all of the data files identified in the search for downloading (block 422). When such a request for downloading is received, the internet server 24 will utilize the pathname(s) in the appropriate item record(s) to locate and download copies of the selected data file(s) (block 424). If the selected data files are image files, low resolution copies of the files will be downloaded.

*See* '155 patent col.13, ll.5-10; 155 patent col.12, ll.43-49; '155 patent col.20, l.62-col.21, 11; '155 patent col.13, ll.3-10.

Defendants say that the specification discloses the hardware structure necessary to perform the stated function—all the hardware within host site 10—but not the software necessary to perform the stated function.

A plain reading of the specification supports Plaintiff's argument that "one or more programmed processing devices, such as one or more task specific servers, programmed to allow the authorized user to download the low resolution copy" is sufficient to perform the recited function. The specification discloses the structure of numerous embodiments that allow an authorized user to download a low-resolution copy of a high resolution image. The Court construes the specification structure as such.

#### **A. Level of Ordinary Skill**

Parties do not dispute that one of ordinary skill in the relevant art in 1997 (the filing date of the first application) would have a Bachelor of Science degree in Computer Science,

Computer Engineering, Electrical Engineering, or the equivalent, and at least two years of experience in the field of storage and deliver of digital images.

Additionally, each patent has a section titled “Field of the Invention.” The section states, “The present invention relates generally to data management and publishing, and, more particularly, to a data management and order delivery system for providing storage of data such as digital images and for routing and delivering orders incorporating a selected subset of the stored data to a publishing facility or the like.”

#### **IV. THE COURTS CONSTRUCTION OF THE DISPUTED CLAIM TERMS**

The Court having considered all submission and the oral presentation of both sides, and been fully advised, IT IS HEREBY ORDERED as follows:

1. Claims ’231/74, ’146/1, ’146/12, ’146/17, and ’155/1 recite “transparent” or “transparency.” The Court interprets this claim element to mean “not visible.”
2. The preambles of asserted claims ’231/74, ’146/12, and ’155/1 recite “system.” The preambles of asserted claims ’146/1 and 17 recite the term “method.” The Court interprets these terms in accordance with their ordinary meaning and find that they do not limit the claims.
3. Claims’ 146/12, ’146/17, and ’155/1 recite “authorized users identified by.” The Court interprets this claim element to mean a user or users given permission to access images by an image provider.
4. Claims ’231/74 and ’146/1 recite “user.” The court interprets the claim element according to its plain meaning
5. Claim ’155/1 recite “each of the high resolution digital images having a higher bandwidth communication requirement than each of the corresponding low resolution

copies.” The Court interprets this claim element to mean that each of the high resolution digital images requires relatively higher bandwidth communication for transmission of the image in a given time, in comparison to a corresponding low resolution copy of the image.

6. Claim ’231/74 recite “a router for electronically routing the job order developed by the job developer to a second user specified by the first user.” The Court interprets this to mean device(s) that automatically directs or diverts the job order developed by the job order developer to a second user. Claim ’146/12 recites “a router for electronically routing at least one high resolution copy of a digital image contained in the subset and identified by the first authorized user to a printer.” The Court interprets this to mean device(s) that automatically directs or diverts at least one high resolution copy of a digital image contained in the subset and identified by the first authorized user to a printer.
7. Claim ’146/17 recites “automatically electronically routing the high resolution copy of at least one digital image to a printer.” The Court interprets this to mean automatically electronically directing or diverting the high resolution copy of at least one digital image to a printer.
8. Claim ’146/1 recites “receiving and storing the first [second] high resolution digital image at the electronic storage facility.” The Court interprets find there is no need to construe this term and applies the ordinary meaning.
9. Claim ’146/12 recites “a storage device for providing storage for digital images of a plurality of unrelated image providers the storage device storing the digital images of a first one of the image providers such that the digital images of the first image provider can only be accessed by authorized users identified by the first image provider and such

that the digital images of the first image provider are transparent to users that are not authorized by the first image provider, the high resolution digital images stored in the storage device being received via the Internet.” The Court finds that this is not a § 112, ¶ 6 term and applies the ordinary meaning.

10. Claim ’231/74 recites “a storage device for storing digital images received from a first digital image provider and a second digital image provider.” The Court finds that this is not a § 112, ¶ 6 term and applies the ordinary meaning.

11. Claim ’155/1 recites “an electronic storage facility for providing storage for high resolution digital images of a plurality of unrelated image providers, at least some of the high resolution digital images stored in the electronic storage facility being used to develop corresponding low resolution copies, each of the high resolution digital images having a higher bandwidth communication requirement than each of the corresponding low resolution copies, the electronic storage facility storing the high resolution digital images of a first one of the image providers, such that the high resolution digital images of the first image provider can only be accessed by an authorized user identified by the first image provider, and such that the high resolution digital images of the first image provider are transparent to other unrelated image providers that are not authorized users identified by the first image provider.” The Court finds that this is not a § 112, ¶ 6 and applies the ordinary meaning.

12. Claim ’146/1 recites “an electronic storage facility.” The Court finds that this is not a § 112, ¶ 6 term and applies the ordinary meaning.

13. Claim ’231/74 recites “a user identifier for discriminating between users communicating with the system to control user access to the digital images stored in the storage device,

the user identifier limiting access to the digital images provided by the first digital image provider to at least one user identified by the first digital image provider, wherein the digital images provided by the first image provider are transparent to all users except users identified by the first digital image provider.” The Court finds that this is not a § 112, ¶ 6 term and interprets the claim element (“user identifier”) to mean one or more designations, adapted to distinguish a user communicating with the system from one or more other users.

14. Claim ’231/74 recites “a job order developer responsive to inputs received from the first user for developing a job order which includes at least one high resolution copy of a digital image contained in the subset and identified by the first user.” The Court finds that this is not a § 112, ¶ 6 term and interprets the claim element as one or more programmed processing devices adapted to respond to inputs received from the first user to develop a job order.

15. Claim ’146/17 recites “storing a high resolution and a low resolution copy of each of a first [second] plurality of digital images provided by a first [second] asset [image] provider user in an electronically searchable format on a storage device.” The Court finds that this is not a § 112, ¶ 6 term and interprets the claim element to mean storing the images in an arrangement that permits one or more computer programs or portions thereof, or computer code, to search for or to look for the stored images electronically.

16. Claim ’231/74 recites “a searching engine for developing a subset of the digital images stored in the storage device in response to inputs received from a first user, the searching engine being adapted to download low resolution copies of the subset to the first user.” Claim ’146/12 recites “a searching engine for developing a subset of the digital images



stored in the storage device by the first image provider in response to inputs received from a first authorized user identified by the first image provider, the searching engine being adapted to download low resolution copies of the subset to the first authorized user.” The Court finds that neither claim elements contain § 112, ¶ 6 terms and applies their ordinary meaning.

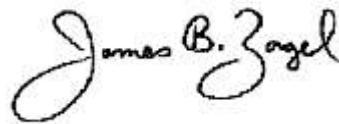
17. Claim ’146/1 recites “permitting the first [second] image provider to identify users who can access the first [second] high resolution digital image stored at the electronic storage facility.” Claim ’146/17 recites “permitting a first authorized user identified by the first image provider to locate and download a low resolution copy of at least one of the digital images provided by the first image provider, the second plurality of digital images being transparent to the first authorized user.” The Court finds that neither claim elements contain § 112, ¶ 6 terms and applies their ordinary meaning.

18. Claim ’155/1 recites “means for notifying an authorized user identified by the first image provider that the authorized user has been authorized to download a low resolution copy corresponding to one of the high resolution digital images, wherein the notifying means transmits at least a portion of a pathname associated with the low resolution copy to the authorized user.” The Court finds that this is a § 112, ¶ 6 term. The Court interprets the function to be notifying an authorized user identified by the first image provider that the authorized user has been authorized to download a low resolution copy corresponding to one of the high resolution digital images. The Court interprets the structure to be one or more programmed processing devices, such as one or more task specific servers, programmed to notify the authorized user that the authorized user has been authorized to download.

19. Claim '155/1 recites “means for electronically routing one of the high resolution digital images to a printer in response to a request from the authorized user.” The Court finds that this is a § 112, ¶ 6 term. The Court interprets the function to be electronically routing one of the high resolution digital images to a printer in response to a request from the authorized user. The Court interprets the structure to be one or more programmed processing devices, such as one or more task specific servers, programmed to electronically direct or divert one of the high resolution digital images to a printer in response to a request from the authorized user.

20. Claim '155/1 recites “means for allowing the authorized user to download the low resolution copy corresponding to one of the high resolution digital images of the first image provider from the electronic storage facility to a first location.” The Court finds that this is a § 112, ¶ 6 term. The Court interprets the function to be allowing the authorized user to download the low resolution copy corresponding to one of the high resolution digital images of the first image provider from the electronic storage facility to a first location. The Court interprets the structure to be one or more programmed processing devices, such as one or more task specific servers, programmed to allow the authorized user to download the low resolution copy.

ENTER:

A handwritten signature in black ink that reads "James B. Zagel". The signature is written in a cursive, flowing style.

James B. Zagel  
United States District Judge

DATE: November 9, 2012