

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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RICOH AMERICAS CORPORATION and XEROX CORPORATION,  
Petitioner,

v.

MPHJ TECHNOLOGY INVESTMENTS, LLC,  
Patent Owner.

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Case IPR2013-00302  
Patent 7,986,426 B1

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Before MICHAEL P. TIERNEY, KARL D. EASTHOM, and  
GREGG I. ANDERSON, *Administrative Patent Judges*.

EASTHOM, *Administrative Patent Judge*.

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

## I. INTRODUCTION

Petitioner, Ricoh Americas Corporation and Xerox Corporation, filed a Petition requesting an *inter partes* review of claims 1–11 of U.S. Patent No. 7,986,426 B1 (“’426 Patent”). Paper 1 (“Pet.”). Patent Owner, MPHJ Technology Investments, LLC, did not file a Preliminary Response, and we instituted *inter partes* review of claims 1–11, on two grounds of unpatentability, as listed below. See Paper 8 (“Dec. on Inst.”).

Subsequent to institution, Patent Owner filed a Substitute Patent Owner Response (Paper 30, “PO Resp.”), and Petitioner filed a Reply (Paper 39, “Pet. Reply”). Substantively, Petitioner relies on a declaration by Dr. Roger Melen (Ex. 1008), and Patent Owner relies on a declaration by Mr. Glenn E. Weadock (Ex. 2002). The parties requested and appeared at an oral hearing before the panel, which transpired on August 18, 2014. The record includes a transcript of the hearing. Paper 51 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision, issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73, addresses issues and arguments raised during trial.

For the reasons that follow, we determine that Petitioner has met its burden of proving, by a preponderance of the evidence, that claims 1–5 and 7–11 of the ’426 Patent are unpatentable. Petitioner, however, has not demonstrated by a preponderance of the evidence that claim 6 of the ’426 Patent is unpatentable.

### *A. Related Proceedings*

According to Petitioner, the ’426 Patent is involved in a declaratory judgment action, *Engineering & Inspection Services, LLC v. IntPar, LLC*, No. 13-0801 (E.D. La., Oct. 10, 2013), and, with related patents, is also the subject of a consumer protection lawsuit, *Vermont v. MPHJ Tech. Investments LLC*, No. 282-5-

13 (Ver. Sup. Ct., May 2013) (MPHJ filing notice of removal to D. Vt., June 7, 2013 (No. 2:13-cv-00170)). *See* Pet. 3. The '426 Patent is related to U.S. Patent No. 6,771,381, which is also the subject of an *inter partes* review. *See Hewlett-Packard, Co. v. MPHU Tech. Invs., LLC*, Case IPR2013-00309 (PTAB) (“'309 IPR”).

### *B. The '426 Patent*

The '426 Patent describes a “Virtual Copier” (VC) system. The system enables a user to scan paper from a first device and copy an electronic version of it to another remote device, or integrate that electronic version with a computer application in the network. *See* Ex. 1001, Abstract.

According to the '426 Patent, “VC can be viewed as a copier. Like a copier, VC takes paper in, and produces paper going out. The only difference is that VC does not distinguish between electronic and physical paper.” *Id.* at col. 70, ll. 37–39.

VC extends from “its simplest form” to its “more sophisticated form”:

In its simplest form it extends the notion of copying from a process that involves paper going through a conventional copier device, to a process that involves paper being scanned from a device at one location and copied to a device at another location. In its more sophisticated form, VC can copy paper from a device at one location directly into a business application residing on a network or on the Internet, or [vice] versa.

*Id.* at col. 5, ll. 48–55.

The VC includes “five essential modules”: input module, output module, process module, client module, and server module. “Each module is a counterpart to an aspect that is found on a conventional copier.” *Id.* at col. 70, ll. 41–43. Notwithstanding that the latter sentence refers to each module, the '426 Patent ambiguously states that “[t]here is no counterpart to VC’s Server Module on a

conventional copier.” *Id.* at col. 71, ll. 26–27. In any event, the other four modules have “counterparts” on “conventional” copiers: “The Input Module manages paper or electronic paper entering VC. . . . The counterpart to VC’s Input Module on a conventional copier is the scanner subsystem.” *Id.* at col. 70, ll. 47–53. “The Output Module manages paper or electronic paper exiting VC. . . . The counterpart to VC’s Output Module on a conventional copier is the printer or fax subsystem.” *Id.* at ll. 54–61. “The Process Module applies processing to the electronic paper as it is being copied. . . . The counterpart to VC’s Process Module on a conventional copier is the controller.” *Id.* at l. 61–col. 71, l. 3. “The Client Module presents the electronic paper as it is being copied, and any relevant information related to the input or output functions. . . . The counterpart to VC’s Client Module on a conventional copier is the panel.” *Id.* at col. 71, ll. 4–12. “Unlike conventional copiers, VC’s Server Module is a unique subsystem that can communicate with the other modules as well as third-party applications.” *Id.* at ll. 13–15.

Figure 28 of the ’426 Patent follows:

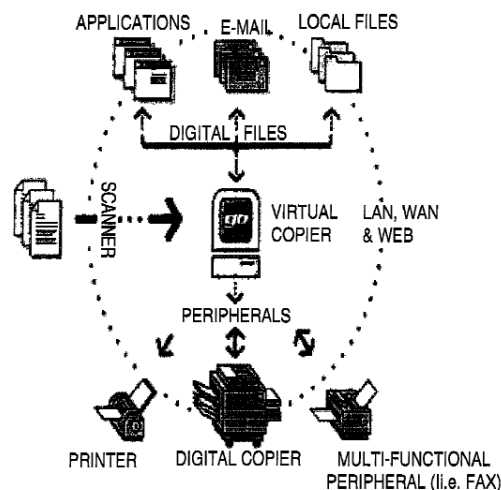


FIG. 28

Figure 28 depicts various peripheral devices networked with a VC. *See id.* at Abstract.

*C. Illustrative Claims*

Of the challenged claims, claims 1–5 and 9–11 are independent. Challenged claims 1, 5, and 10 follow:

1. A computer data management system including at least one of an electronic image, graphics and document management system capable of transmitting at least one of an electronic image, electronic graphics and electronic document to a plurality of external destinations including one or more of external devices and applications responsively connectable to at least one of locally and via Internet, comprising:

at least one scanner, digital copier or other multifunction peripheral capable of rendering at least one of said electronic image, electronic graphics and electronic document;

at least one memory storing a plurality of interface protocols for interfacing and communicating;

at least one processor responsively connectable to said at least one memory, and implementing the plurality of interface protocols as a software application for interfacing and communicating with the plurality of external destinations including the one or more of the external devices and applications,

wherein the computer data management system includes integration of at least one of said electronic image, electronic graphics and electronic document using software so that said electronic image, electronic graphics and electronic document gets seamlessly replicated and transmitted to at least one of said plurality of external destinations.

5. A computer data management system including at least one of an electronic image, graphics and document management system capable of transmitting at least one of an electronic image, electronic

graphics and electronic document to a plurality of external destinations including one or more of external devices and applications responsively connectable to at least one of locally and via Internet, comprising:

at least one scanner, digital copier or other multifunction peripheral capable of rendering at least one of said electronic image, electronic graphics and electronic document;

at least one memory storing a plurality of interface protocols for interfacing and communicating;

at least one processor responsively connectable to said at least one memory, and implementing the plurality of interface protocols as a software application for interfacing and communicating with the plurality of external destinations including the one or more of the external devices and applications,

wherein the software application comprises:

at least one input module managing data comprising at least one of paper and electronic input to the computer data management system, and managing said at least one scanner, digital copier or other multifunction peripheral, and managing the electronic input from at least one third-party software application;

at least one output module managing the data output from the computer data management system, managing at least one imaging device to output the data to at least one of a standard windows printer, an image printer, and a digital copier, and managing the output of the data to the third-party software application;

at least one process module applying at least one data processing to the data comprising the at least one of the paper and the electronic input as it is being copied, applying additional functionality including at least one of workflow and processing functionality to the data comprising the at least one of paper and electronic input as it is being copied, and applying multiple processes to a single virtual copy;

at least one client module presenting the data comprising the at least one of paper and electronic input as it is being copied, and information related to at least one of input and output functions; and

at least one server module communicable with said at least one input, output, client, and process modules and external applications, and capable of dynamically combining the external applications with at least one of digital capturing devices and digital imaging devices.

10. A computer data management system including a server module comprising:

enable virtual copy operation means for initiating, canceling, and resetting at least one operation managed by said computer data management system;

maintain list of available module means for maintaining a list of input, output, and process modules that can be used in said computer data management system, said list being used by at least one module object accessible by said server module;

maintain currently active modules means for maintaining input, output, and process modules currently being used for a current computer data management system operation in a program object; and

maintain complete document information means for maintaining information regarding a current file.

#### *D. References Relied Upon*

Petitioner relies upon the following prior art references in this Final Decision:

Salgado, U.S. Patent No. 5,872,569 (Feb. 16, 1999) (Ex. 1005);

XEROX CORP., XEROX NETWORK SYSTEMS ARCHITECTURE GENERAL INFORMATION MANUAL (1985) (Ex. 1002, “XNS Manual”); and

XEROX CORP., XEROX 150 GRAPHIC INPUT STATION OPERATOR AND  
REFERENCE MANUAL, Parts I and II (1985) (Ex. 1003, “GIS 150 Manual”).<sup>1</sup>

*E. The Asserted Grounds*

The trial involves the following grounds of unpatentability:

Claims 1–11 as anticipated under 35 U.S.C. § 102(b) by the XNS Manual;

Claims 1–11 as anticipated under 35 U.S.C. § 102(e) by Salgado.

II. ANALYSIS

*A. Claim Construction*

In an *inter partes* review, “[a] claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b); *see also Office Patent Trial Practice Guide*, 77 Fed. Reg. 48756, 48766 (Aug. 14, 2012) (Claim Construction). Under the

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<sup>1</sup> Petitioner refers to the GIS 150 Manual (Ex. 1003) as evidence to show inherent features of the Xerox 150 GIS scanner, which is described in the XNS Manual as a graphic input station, “Xerox 150 scanner,” and a “Xerox 150 GIS.” *See* Ex. 1002, 112, 114; Pet. 13–14 (discussing Ex. 1002 and Ex. 1003). Petitioner essentially maintains that because the XNS Manual discloses the GIS 150 scanner as part of XNS, the GIS 150 Manual forms a proper evidentiary basis to support anticipation by the XNS Manual (for some of the claims). *See* Pet. 13, n. 11 (citing *Schering Corp. v. Beneva Pharmaceuticals*, 339 F.3d 1373, 1377 (Fed. Cir. 2002), 18 (quoting Ex. 1002, 112); *see also* Ex. 1002, 114 (disclosing the “Xerox 150 GIS”); 135, Fig. 12-8 (“150 Graphic Input Station” “integrat[ed] in the Xerox electronic publishing applications.”). Patent Owner does not argue that Petitioner’s evidentiary use of the GIS 150 Manual to show inherent features is improper. *See* PO Resp. 21 (“Patent Owner asserts that Petitioner’s reliance on GIS 150 does not cure the deficiencies of the anticipation allegation,” because the GIS 150 Manual discloses destination “addresses . . . not applications”). On this record, under the reasoning and holding of *Schering* and *In re Baxter Travenol Labs*, 952 F.2d 388, 390 (Fed. Cir. 1991) (extrinsic evidence may be used to explain what a reference discloses), using the GIS 150 Manual as evidence to show inherent basic features of the GIS 150 scanner, which the XNS Manual discloses as an integrated Xerox networked device in XNS, is proper.



broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a special definition or other consideration, “limitations are not to be read into the claims from the specification.” *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

*At least one, at least one of, and related phrases*

Claim 1 and most of the other claims recite the phrase “at least one” or “at least one of” in a number of places. For example, claim 1 recites “at least one of locally and via the Internet,” and claim 5 recites “at least one input module managing data comprising at least one of paper and electronic input to the computer data management system.”

In the Institution Decision, we initially determined that phrases of this type, “at least one of A and B,” and “at least A and B,” are interpreted in the alternative, i.e., “one or more A or B.” Dec. on Inst. 14. Petitioner and Patent Owner do not challenge this interpretation. Patent Owner’s declarant, Mr. Weadock, “do[es] not take issue” with this interpretation, and agrees that “at least one of A and B” and “at least A and B” means “in the alternative.” Ex. 2002 ¶ 17.

*Software Application/Application*

Claims 1 and 5 recite a “software application,” and claim 1 also recites “one or more of external devices and applications.” Patent Owner contends that an “application” is “a discrete software program executable on an operating system for the purpose of accomplishing a task.” PO Resp. 6. Patent Owner also contends that an “application” and a “software application” do not include “firmware”:

“While firmware is made up of software, it is not the same thing as a software application. Nowhere in the specification of the ‘426 patent is ‘application’ or ‘software application’ used in the context of device firmware.” *Id.*

Petitioner contends that an “application” “does not exclude firmware (or even hardware),” and “is not limited to ‘a discrete software program.’” Pet. Reply 8. The Specification supports Petitioner’s contention. It refers to “an application (e.g., Lotus Notes, Microsoft Exchange, *the Internet*, or *an electronic filing system*).” Ex. 1001, col. 6, ll. 59–61 (emphasis added). Also, it states that VC can copy “in and out of devices and business applications (such as Microsoft Office, Microsoft Exchange, Lotus Notes).” *Id.* at col. 45, ll. 44–46.

Patent Owner’s contentions imply that an “application” and a “software application” mean the same thing. *See* PO Resp. 6–7. This contention renders the term “software” redundant. The term “application” is not limited to software, as the disclosed examples of the Internet and electronic filing systems verify. As another example, in the Institution Decision, we found that the ’426 Patent Specification “refers to copying from ‘one device and[/]or application to another device and/or application,’ thereby broadly blurring any distinction between a device and a device having a software application.” Dec. on Inst. 14 (quoting Ex. 1001, col. 6, ll. 44–46; col. 46, ll. 30–33). In other words, an “application” may include hardware, software, or software and hardware.

Patent Owner also argues that a “software application” must be “a *single* software application.” *See* PO Resp. 16. The claims do not recite a “single” software application. Patent Owner does not point the Board to how the ’426 Patent Specification distinguishes “firmware” from stored software that is distributed as part of a software application. Software must be stored somewhere typically (i.e., unless it is being transmitted). As Petitioner argues, the

Specification includes “distributed architecture” with the VC software stored virtually anywhere. *See* Pet. Reply 8. For example, the Specification states that “[t]he VC software can reside on a PC, LAN/WAN server, digital device (such as a digital copier), or on a web server to be accessed over the Internet.” Ex. 1001, col. 45, ll. 46–48. According further to the Specification, software is stored in “any multitude or combination of . . . storage devices.” *Id.* at col. 61, ll. 28–29; Fig. 15 (depicting system components including memory devices 60, 62, 66, 68, 70, and processor/CPU 58). The processing system can include “processing system network combinations of the same.” *Id.* at col. 61, l. 34. The software may reside on different servers and clients: “Alternatively, the engine object layer and the engine may be optionally located in a distributed environment on different machines, servers, and the like.” *Id.* at col. 66, ll. 65–67.

The “Internet,” and “filing system,” and listed examples of an “application,” involve a wide variety of distributed software and hardware. The Specification, therefore, does not preclude an “application” from including hardware and software, including firmware (software on a device). The ’426 Patent Specification includes other broad examples: “*Accounting systems, like most business applications, typically have no way of maintaining an electronic copy of the physical invoice . . . and . . . adding a document management system to an accounting system is cumbersome . . . and . . . difficult to coordinate.*” Ex. 1001, col. 47, ll. 5–12 (emphasis added). This sentence equates a “system” with an “application.” Claim 2 recites that “wherein one or more of the external devices and applications include a printer, facsimile and a scanner.” This further implies, in line with the ’426 Patent Specification, which includes the Internet or a file server as an application, that an “application” may include a printer, facsimile, and scanner hardware, with its associated software.

The record shows that a “software application” typically must be stored somewhere to be used by a system. Patent Owner does not explain why the claims preclude software from being stored as “firmware” and distributed in system-wide memory. The title of the ’426 Patent is “Distributed Computer Architecture and Process for Document Management.” The title bolsters the finding that the disclosed invention contemplates a software application that works in a distributed manner as a suite of programs, in different machines and on different memory locations, to accomplish various functions. The ’426 Patent also discloses combining a processing circuit with “any . . . suitable processing circuits, including programmable logic devices, such as PALs (programmable array logic) and PLAs (programmable logic arrays), DSPs (digital signal processors)[,] . . . ASICs (application specific integrated circuits), VLSIs (very large scale integrated circuits) or the like.” *Id.* at col. 61, ll. 58–64. This disclosure further shows that the invention may include distributed software, including firmware and other software.

During the hearing, Patent Owner acknowledged that one of the examples disclosed as an application, “Microsoft Office,” is not a discrete application:

JUDGE TIERNEY: Counsel, can you explain, is Microsoft Office a discrete application?

MR. HILL: No, it’s not, but every time Microsoft Office appears in the specification, it appears in a parenthetical that uses the phrase “business applications,” plural. So, when you open up that parenthetical and you see Microsoft Office, Microsoft Office is an embodiment of business applications. It’s PowerPoint, it’s Microsoft Word, a person of ordinary skill in the art would readily reconcile business applications and Microsoft Office in that parenthetical.

Tr. 27:21–28:4.

The ’426 Patent Specification does not support Patent Owner’s grammatically-based argument at the hearing. The ’426 Patent Specification refers

to the set of “business applications (such as Microsoft Office, Microsoft Exchange, Lotus Notes).” Ex. 1001, col. 10, ll. 32–33. It does not refer to each member of the set, for example, Microsoft Exchange, or Microsoft Office, as comprising a group of “business applications.”

Mr. Weadock, Patent Owner’s declarant, in forming his opinion that a software application is a “discrete program,” does not address the broad examples in the ’426 Patent Specification. *See* PO Resp. 6 (citing Ex. 2002 ¶ 22). During his deposition, Mr. Weadock acknowledged that the disclosed software application, Microsoft Office, constitutes multiple “programs . . . bundled in a package . . . or . . . suite” of applications. *See* Pet. Reply 7 (citing Ex. 1013, 42:1–12, 98:12–23, and discussing Mr. Weadock’s declaration).

Accordingly, a “software application” is a program, or group of programs, which operate together in a system to perform a function or functions, and the programs can be stored in a variety of places on a variety of devices, and operate in a distributed manner. An application may include software and hardware and performs a function or functions.

### *Module*

Claim 5 recites a software application comprising at least five modules: “at least one input module,” “at least one output module,” “at least one process module,” “at least one client module,” and “at least one server module.”

In the Institution Decision, we found that one plain meaning of “module,” is “a logically separable part of a program.” Dec. on Inst. 16 (citing IEEE 100 THE AUTHORITATIVE DICTIONARY OF IEEE STANDARDS TERMS SEVENTH EDITION 704 (2000), *available at* <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4116801> (last visited Sept. 19, 2013)).

We determined that a “‘module’ . . . is a logically separable part of the recited software application, and may include another module and may overlap with another module in functionality.” Dec. on Inst. 18. Petitioner agrees with the definition, and Patent Owner does not.

We noted that the ’426 Patent states that the modules have “counterparts” to “aspects” in conventional devices: “Each module [except perhaps a server module] is a counterpart to an aspect that is found on a conventional copier.” *Id.* at 3 (quoting Ex. 1001, col. 70, ll. 41–43), 16. As to the sever module, the ’426 Patent Specification states that “[u]nlike conventional copiers, VC’s Server Module is a unique *subsystem* that can communicate with the other modules.” Ex. 1001, col. 48, ll. 27–29 (emphasis added). A unique subsystem need not be a discrete module.

We also noted that the ’426 Patent states that “[t]he Client module is generally simply an interface to the Server Module.” Dec. on Inst. 16 (citing Ex. 1001, col. 49, ll. 30–32). Therefore, we reasoned that because one module may be within (i.e., an interface thereto) another module, a module may overlap with another module and may overlap in functionality. *See id.* This overlap of module programming code (or its associated function) coalesces with the ordinary definition, which does not preclude it.

Patent Owner maintains that the Specification provides no support for this inclusion or overlap. PO Resp. 7 (citing Ex. 2002 ¶ 27). Patent Owner proposes that a “module” is “a logically separable part of the software application of the data management system that can function in a plug-and-play manner within a Virtual Copier.” *Id.*

Patent Owner, relying on Mr. Weadock, maintains that this definition “is the broadest reasonable interpretation in light of the specification.” *Id.* (citing

Ex. 2002 ¶ 30). Mr. Weadock states that this definition constitutes a “more appropriate interpretation of ‘module’ in the context of the ‘426” Patent. Ex. 2002 ¶ 31. Mr. Weadock cites to the Institution Decision at page 12, where we noted that the ’426 Patent states that “[a]s long as the Input and Output Module conform to the API specified in this document it will plug-and-play with VC.” *See* Ex. 2002 ¶ 28; Ex. 1001, col. 9, ll. 33–36. Mr. Weadock also bases his opinion on the “fact [that] the ’426 specification does not disclose one module that includes another, or that overlaps with another.” Ex. 2002 ¶ 27.

The record does not support Mr. Weadock’s interpretation. Mr. Weadock’s opinion that there is no support for one module including the other does not address the fact quoted above and in the Institution Decision that the ’426 Patent states that “[t]he Client module is generally simply an interface to the Server Module.” Ex. 1001, col. 49, ll. 30–32. The client module, then, is an interface, or part of the server module. Mr. Weadock’s interpretation also ignores the qualifier in the Specification that is missing from claim 1: “[a]s long as the . . . [m]odule conform[s] to the API specified in this document it will plug-and-play.” Ex. 1001, col. 9, ll. 33–36 (emphasis added). No claim in the ’426 Patent requires a module to conform to the “API specified,” the “‘C’-language API” or “COM-based interface,” as specified in the ’426 Patent Specification. *See* Ex. 1001, col. 49, ll. 39–49. None of the claims, except claims 7 and 8, recite an API or “application programmer interface.” None of the claims recite a “discrete” or “plug-and-play” feature.

Patent Owner chose not to limit the claims by qualifying the modules as “discrete” or “plug-and-play.” The ’426 Patent implies that a module, as set forth in the claims, is broader than any specific examples of discrete “plug-and-play” modules. Salgado refers to “discrete modules.” Ex. 1005, col. 3, l. 39. This

further implies that skilled artisans would have recognized that the ordinary meaning of a generic module is not limited to discrete “plug-and-play” modules. In essence, a software module has boundaries defined by specific code that produces a specific software function. This generic software module is “logically separable,” because it can be defined by the logic code that produces its function, even if the module cannot be physically extracted from a single memory location as a “plug-and-play” module.

Dr. Melen supports this concept of a generic software module defined by its function. During cross-examination by Patent Owner, Dr. Melen, Petitioner’s declarant, testifies that “the word ‘module’ is very broad and very nonspecific, and be comprised of modules and modules of . . . modules, modules spread across the network, modules which include other people’s code.” Ex. 2003, 144:16–20.

Dr. Melen similarly testified, when asked about the five modules claimed and disclosed in a related patent having the same Specification as the ’426 patent, that

I don’t think . . . module is necessarily one thing. You can have a module inside a . . . module. You can have a module which spans machines. Module is not so precise. *But what is more specific is exactly what they do. And so the question is, does [the prior art] talk about those basic functions of scanning and printing and - - yes. . . . It’s just software.*

Ex. 2003, 142:5–15 (emphasis added).

Dr. Melen’s testimony is consistent with the ’426 Patent Specification, which defines modules as counterparts to prior art modules— defined by the function they perform. Another passage in the ’426 Patent implies that in addition to code, module functions may overlap: “[W]hile the above discussion has separated the various functions into separate layers of functionality, the layers may



be combined, physically and/or logically, and various functions may be combined together.” Ex. 1001, col. 84, ll. 19–22.

Mr. Weadock candidly stated during cross-examination that a module may overlap in code with another module, retreating from statements in his declaration that may have been interpreted as absolutely precluding overlap in modules: “And normally when we talk about modules, we think of them as not overlapping, but there might be situations in which modules could share some code. There might be some common code between two modules.” Ex. 1013, 191:3–7. Mr. Weadock also acknowledged that separate functionality between modules may not be required: “I hesitate to ever make any absolute statements when it comes to software. . . . Because there’s so many different designers and so many different philosophies, but it would - - I can say that it would surprise me to see a modular software application with *heavy* overlap of functionality between the modules.” *Id.* at 192:6–15.

As Petitioner argues, Mr. Weadock’s declaration does not cite to the ’426 Patent Specification for support of a limiting definition of a module, which would require it to be discrete, or plug-and-play. *See* Pet. Reply 10–11. Petitioner also points out that Mr. Weadock relies on a publication dated about fifteen years after the date of the invention, to support a limiting definition of module. *See id.* at 4, 10. Although Mr. Weadock generally testified during his cross-examination that the concept of a distinction between modular versus monolithic software is well-known, the testimony does not show that in light of the ’426 Patent Specification, it was a well-known distinction at the time of the invention. *See* Ex. 1013, 191–194. Rather, the testimony shows that both experts agree that at the time of the invention, skilled artisans would have understood that software modules may overlap in code and in function.

According to the foregoing discussion, each “module,” as recited in claim 5, does not require a discrete or plug-and-play feature, but each module is a logically separable part of the claimed “software application,” demarcated by code corresponding to the specific function recited for that software module. Each software module may include another software module and overlap with another such module.

### *B. The Hearing*

During the hearing, Patent Owner acknowledged that the XNS Manual or Salgado disclose the claimed functions with respect to claims 1–5:

JUDGE EASTHOM: Can I ask you another question, are you contending that those functions [i.e., claims 1–5] are not in the software of XNS or Salgado? Are they? In other words, are the functions separately there, or are they not?

MR. HILL: If you take XNS -- if you take all system elements on XNS and you aggregate them, and you list out every function that they, you know, are described or reasonably are associated with what is being described, you would -- *you would have all of the functions*. The problem is you wouldn't have a software application taught anywhere in Salgado that actually implements -- or I'm sorry, in XNS that actually implements two interface protocols from a common memory where that software application describes all of these functions in a modular fashion that meets a reasonable construction of the term “module.”

Tr. 43:17–44:5 (emphasis added); *see also* Tr. 44:1–7 (previous questioning about “claims one through five”).

### *C. The Demand Letter*

Petitioner Hewlett-Packard, in the related '309 IPR proceeding, submitted a demand letter ('309 IPR, Ex. 1016, 26) by Patent Owner to accused infringers of Patent Owner's patents. *See* '309 IPR, Paper 25 (Pet. Reply) 4 (arguing “it would be improper to ignore [Patent Owner's] prior statements for purposes of BRI

[broadest reasonable interpretation].”). The demand letter is not necessary to the holding or the claim construction, but it serves to corroborate the claim construction of module and application outlined above. The demand letter implies that Patent Owner’s claim construction of these terms corresponds to the constructions outlined above.<sup>2</sup>

For example, Patent Owner’s demand letter states that

[a] good example of an infringing system, and one your company likely uses, is an office local area network (“LAN”) which is in communication with a server, employee computers having email software such as Outlook or Lotus, and a third-party scanner (or a multi-function printer with scanning functionality) which permits the scanning of a document directly to [an] employee email address as a pdf attachment. Such a system would be a typical example of what infringes. There are other examples listed further below.

*. . . [Y]ou may find it useful to consider, as illustrative examples, claims 1–5 of the ’426 Patent. Reviewing those you can see that the patent claims are directed to a system having a digital copier/scanner/multifunction device with an interface to office equipment (or to the web) and related software, for scanning or copying and transmitting images electronically to one or more destinations such as email, applications or other local files. Coverage of this type of system, and of the more generally worded example [above] . . . , is further reflected in claims 1, 8 and 15 of the ’410 Patent, claims 12 and 15 of the ’381 Patent, and claims 9 and 16 of the ’590 Patent.*

’309 IPR, Ex. 1016, 27 (emphasis added).

As noted above, claim 5 includes “a software application” that “comprises . . . at least one input module . . . at least one output module . . . at least one process module . . . at least one client module . . . at least one client module . . . and at least one server module.” Ex. 1001, col. 86, ll. 21–46. The demand letter implies that

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<sup>2</sup> Patent Owner was questioned about the demand letter during the ’302 IPR hearing and the ’309 IPR hearing. See Tr. 43; IPR ’309, Tr. 18–22.

infringing this claim, or any of claims 1–5, does not require discrete modules or a single application. As the letter states, the claimed system is “directed to a system having a digital copier/scanner/multifunction device with *an interface to office equipment (or to the web) and related software*, for scanning or copying and transmitting images electronically to one or more destinations such as email, applications or other local files.” ’309 IPR, Ex. 1016, 27 (emphasis added).

#### *D. Asserted Grounds of Unpatentability*

##### *1. XNS Manual – Overview*

The XNS Manual, describes the Xerox Network System (“XNS”), which constitutes a document management system. The described system allows one “to design highly integrated information systems, using hardware and software elements designed by different groups using different technologies.” Ex. 1002, 4.<sup>3</sup> “The general objectives of XNS [are] . . . to increase the ROIA [(return-on-information assets)] by facilitating the creation, capture, storage, communication, printing, and replicating of electronic or paper documents within the office . . . . This is what Xerox calls document management.” *Id.* at 8. The XNS Manual generally describes producing electronic or paper processing of a “variety of complex images, including typeset quality documents, line graphics, and even photographs that have been converted into electronic form by a scanner.” *Id.* at 91. “In XNS, the electronic subsystem usually receives information over the network (Ethernet or larger internet). This information consists of data to be printed and instructions on how it is to be printed.” *Id.* at 92. The XNS Manual discloses

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<sup>3</sup> Exhibit 1002 includes original page numbers, to which Petitioner and Patent Owner refer, and different page numbers, added by Petitioner. We refer to the original page numbers.

email, network filing, network printing, and network scanning. *See id.* at 71–76, 83–116.

According to the XNS Manual, “server[s]” provide “services” which are “high-level functional activities such as filing, printing, mailing, and external communications.” Ex. 1002, 18. The services “represent high-level applications performed within the architecture.” *Id.* “The XNS services implement various application-layer protocols, as depicted in Fig. 2-4.” *Id.* “The[se] services are typically *collections of software* acting according to the rules of the architecture and its *protocols*.” *Id.* (emphases added, original emphasis omitted). “One should . . . think of a ‘server’ as any collection of necessary electronics, software, and peripheral equipment necessary to deliver a service.” *Id.* Servers may be “general-purpose minicomputers *programmed* to perform the requisite functions,” and include a workstation or a minicomputer. *Id.* (emphasis added).

“The user interface on Xerox professional work stations provides an easy way for anyone to create, file, mail, or print information.” *Id.* at 19. These “workstations are the clients of the described services.” *Id.* “Most system options appear on ‘pop up’ menus and can be activated by merely pointing at an option and clicking a button on a . . . ‘mouse’.” *Id.* The “user interface . . . makes services on the network readily accessible,” with “network resources . . . shown as . . . icons.” *Id.* XNS, according to the XNS Manual, divides conceptually into workstations, which a user accesses directly, and servers, which provide services, although workstations also can function as servers to provide a service (“given the appropriate peripherals and software”). *Id.* at 18.

The XNS architecture employs a hierarchy of known protocols on different layers. Ex. 1002, 14 (“Protocols for each layer”). In the XNS, the highest layer includes “application protocols,” which include “mailing, printing, filing, and

gateway access,” and which are “implemented in hardware/software to provide the XNS application services.” *Id.* at 16. Basically, two nodes (for example, two software services, two workstation interfaces) communicate with each other conceptually using several layers of protocols (“each layer in one node . . . working with the corresponding layer in other node”). *See id.* at 14. “[A] given protocol represents a dialogue between two equally potent functions, each of which operates through its upper and lower interfaces [i.e., through the interfaces to upper and lower protocol layers] to perform its specific tasks.” *Id.*

## 2. XNS Manual—Anticipation

### Claim 1

Claim 1 recites a “computer data management system including . . . at least one scanner, digital copier or other multifunction peripheral capable of rendering at least one of said electronic image, electronic graphics and electronic document.” Pet. 15–16. Addressing this limitation, Petitioner explains that an XNS scanning or other device, including workstations, “communicate[s] with other devices and services on the Internet,” and sends image data to “a specified file in a File Service for storage, or to a Print Service for printing (using Printer Subset of the Filing Protocol).” *Id.* (emphasis omitted) (quoting and citing Ex. 1002, 112, 126–135, Fig. 11-2).

Claim 1 also recites “at least one memory storing a plurality of interface protocols for interfacing and communicating,” and “at least one processor . . . implementing the . . . protocols as a software application.” Pet. 16. Addressing these related limitations, in addition to citing the Filing Protocols, Petitioner cites the Courier protocol, “multiple transmission protocols corresponding to different types of communication services,” and “multiple application protocols corresponding to different functions.” Pet. 16 (emphasis omitted) (quoting

Ex. 1002, 14; citing *id.* at 14–20, Fig. 2-4). As explained *supra* in the Overview section, system elements, including workstations, scanners, servers, and other devices, generally employ a myriad of protocol layers to communicate in the XNS network. *See* Pet. 16 (citing Ex. 1002, 17–18, 112; Ex. 1008 ¶ 34).

According to Dr. Melen, XNS software, including protocols, must be stored in the “necessary” memory hardware, *see id.* (citing Ex. 1008 ¶ 34), and other “necessary” hardware, such as a processor in a minicomputer, uses the software. *See* Ex. 1008 ¶ 34. Dr. Melen provides an analysis of the XNS Manual to support his opinion. The analysis tracks the findings *supra* in the Overview section. *See id.* ¶¶ 31–34. Dr. Melen explains that his opinion is based on his experience, “the explicit statements in [the] XNS [Manual] that the application protocols are ‘implemented in hardware/software’,” and that ““a directly-connected device is expected to implement all layers of XNS appropriate to its function which would include *at least* all the layers upward through Courier (see Fig. 2-4), plus selected application protocols.”” Ex. 1008 ¶ 34 (quoting Ex. 1002, 15, 18).

The record, summarized in the Overview section, supports Dr. Melen’s testimony. Implementing appropriate protocols according to a software application’s specific function implicitly means that the protocols must be stored in memory to be selected and implemented by the software using some type of a processor, i.e., “implemented in hardware/software.” Further, “[t]he XNS *services* implement various application-layer protocols, as depicted in Fig. 2-4.” Ex. 1002, 18 (emphasis added). “These services are typically *collections of software* acting according to the rules of the architecture and its *protocols*.” *Id.* (emphases added) (original emphasis omitted).

Claim 1 further requires that the data management system includes “integration of at least one of said electronic image, electronic graphics and

electronic document . . . so that said electronic image, electronic graphics and electronic document gets seamlessly replicated and transmitted to at least one of said plurality of external destinations the need to modify the destination application.”

Petitioner explains that XNS provides services “to the network users on a transparent basis, leaving them free to concentrate” on other tasks. Pet. 17 (emphasis omitted) (quoting Ex. 1002, 121). Petitioner also explain that XNS allows scanned and digitized documents to be sent to or via external applications, including a File Service for storage, Print Service for printing, XNS mail, editing at another workstation, or any other device or application on the network. *See id.* (citing Ex. 1002, 71–76, 91–116, 121, 128). According further to Petitioner, the XNS Manual describes that “[w]here graphic elements are acquired from other sources (e.g. photographs), they can be scanned . . . *and subsequently edited*. These electronic graphic elements can be *automatically integrated with the text* to form final-form page masters . . . .” Pet. 17 (quoting Ex. 1002, 128 (emphases added) (Petitioner’s emphasis omitted); citing Ex. 1008 ¶¶ 40, 41).

Fundamentally, the purpose of XNS is to provide “compatibility among products from different vendors,” (Ex. 1002, 146), and similarly, “functional integration”: “integration means that all products work effectively with other products, exchanging data, sharing resources, and building applications, thereby leading to new levels of productivity” (*id.* at 2). According to the ’426 Patent, “VC can be viewed as a copier,” even though “VC does not distinguish between electronic and physical paper.” Ex. 1001, col. 70, ll. 37–39. Based on the foregoing description, the XNS Manual and the ’426 Patent disclosure describe similar functionality—basic copying/scanning functions that include scanning paper for further application processing of an electronic copy of the paper.



Patent Owner asserts that the XNS Manual does not disclose “a ‘software application’ such that ‘**a plurality** of [interface] protocols’ are implemented as a software application,” as set forth in claims 1–5. PO Resp. 12 (emphasizing claims 1 and 5, addition by Board). Patent Owner argues that the highest protocol layer in XNS contains application protocols, that lower layers contain transmission protocols, and that the latter is not implemented as software application. *Id.* Patent Owner explains that “transmission protocols are used ‘without disturbing the protocols in higher layers.’” *Id.* (citing Ex. 1002, 21). Patent Owner also contends that XNS does not “implement[] the plurality of interface protocols as a software application.” *Id.* at 13 (emphasis omitted).

Patent Owner’s arguments are not persuasive. As explained in the Overview section, the application layer itself contains multiple protocols for each application, i.e., mailing, printing, filing, and gateway access. *See* Ex. 1002, 14–16, Fig. 2-4. Even if lower layer protocols do not “disturb[]” upper layer protocols, as Patent Owner contends, and even if an application layer does not contain multiple protocols (which Patent Owner does not contend), different layers of protocols generally communicate with, or at least “use the resources of,” lower layers through “interfaces.” *Id.* at 14, 11 (“[A] commonly-accepted perspective is that the functions of one layer use the resources of the lower layers to complete their assigned tasks.”). In any event, the application layer protocols comprise several types of application protocols. *Id.* at 15 (Fig. 2-4), 16.

The GIS-150 Manual is consistent with our understanding of the XNS Manual and the XNS protocols used in the XNS, and states that, in addition to Ethernet, the scanner “uses several additional layers of protocols,” and that devices “communicate via a network using . . . standard protocols . . . . These connection standards are *implemented in functionally identical programs* and operate through

compatible hardware interfaces in each attached device . . . .” Ex. 1003, App’x B-1, 203 (emphasis added).<sup>4</sup>

The “communication services” (i.e., software) implement transmission “protocol modules”: “[I]n most cases new classes of communication services can be accommodated through the addition of new transmission protocol modules without disturbing the protocols in the higher layers.” Ex. 1002, 21 (emphasis omitted). In other words, the “new transmission protocol modules” do not “disturb[]” upper protocol layers, in the sense that upper layer protocols need not be redesigned in order to continue to use or communicate with the new modules in the lower layers. *See id.* In any event, software services generally implement protocols. *See id.* at 16, 18; *see also supra* Overview section. The services “represent high-level applications performed within the architecture.” *Id.* at 18. “The XNS services implement various application-layer protocols, as depicted in Fig. 2-4.” *Id.* The XNS Manual also describes “protocols” as “control functions,” indicating, that protocols, as modules, implemented by software, primarily exist as a stored software application. *Id.* at 21; Ex. 1008 ¶ 34. In summary, Dr. Melen’s testimony supports our understanding and Petitioner’s showing regarding the XNS Manual , and shows that XNS protocols must be stored in memory and implemented as a software application to facilitate communication.

Patent Owner focuses attention on a “software application” as set forth in claim 1. Patent Owner contends that “Petitioner ultimately relies on an entire distributed network architecture made up of collections of software when alleging

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<sup>4</sup> The GIS 150 Manual corroborates our understanding of XNS protocols as disclosed in the XNS Manual, but it is not required to support the ground of anticipation by the XNS Manual of claim 1. Nevertheless, as discussed above, the use of the GIS 150 Manual as evidence to support anticipation by the XNS Manual of the claims (including claim 1) is proper on this record. *See supra* note 1.

[the] XNS [Manual] teaches ‘implementing a plurality of protocols.’” PO Resp. 14. Patent Owner similarly contends that “the distributed software that appears to access XNS services to implement XNS protocols is not the same thing as implementing the protocols as *one* software application.” *Id.* at 14 (emphasis added).

These arguments imply that claim 1 recites a “*single* software application.” *Id.* at 16. Claim 1 does not recite or require a “single software application,” nor does it preclude distributed software from implementing protocols. *Id.* at 14. As noted in the Claim Construction section, the disclosed system uses a distributed architecture: “communication may . . . provide . . . a distributed component interaction over a networking environment.” Ex. 1001, col. 67, ll. 58–61.<sup>5</sup> “Fig. 27 is a detailed illustration of a stand-alone and/or distributed environment or architecture for image viewer in the Internet environment.” *Id.* at col. 67, ll. 62–63. In addition, Patent Owner does not explain how the disclosed system in the ’426 Patent stores different “protocols” in a single memory, or what the limitation entails, given the emphasis on a single protocol, DCOM. *See* note 5.

Patent Owner also acknowledges that the “XNS [Manual] discloses multiple protocols,” (PO Resp. 16), implemented by distributed software, *id.* at 14 (describing “the distributed software that appears to access XNS services to implement XNS protocols”). *See also id.* at 16 (arguing that some of the XNS protocols “are implemented in software” and others are “implemented in hardware” (citing Ex. 2002 ¶ 103)). Nevertheless, Patent Owner contends that “different protocols appear to be supported on different machines,” but they are not “necessarily stored in the same ‘at least one memory.’” *Id.*

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<sup>5</sup> “The present invention utilizes the DCOM communication protocol defining the communication protocol . . . .” Ex. 1001, col. 67, ll. 44–45.

Contrary to these arguments, claim 1 does not recite a single, common, memory, for storing the protocols. Rather, claim 1 recites “at least one memory storing a plurality of interface protocols for interfacing and communicating.” Further, as described in the Claim Construction section and above, the ’426 Patent discloses storing software over a wide distributed architecture that includes many devices or storage locations over a wide network.

As indicated above, Dr. Melen testifies that “XNS necessarily include[s] . . . memory . . . and software to implement application and transmission protocols, and to connect to the network; the memory used to store the protocols and software, the processor used to implement the protocols and execute the software.” Ex. 1008 ¶ 34. Mr. Weadock challenges Dr. Melen’s testimony on the “single memory” basis: Dr. Melen “omits the ‘one memory’ wording from his analysis, and refers instead to ‘[] the memory used to store the protocols and software.’” Ex. 2002 ¶ 103. Mr. Weadock’s challenge, like Patent Owner’s, is not commensurate in scope with claim 1, which does not require only “one memory.” There is no dispute on this record that the XNS Manual discloses “*at least one* memory storing a plurality of interface protocols,” as recited in claim 1.

Based on the foregoing discussion and the record evidence, Petitioner shows by a preponderance of evidence that the XNS Manual anticipates claim 1.

#### Claims 2 and 11

Patent Owner contends that the XNS Manual does not disclose “integration of . . . [an] electronic document into a destination application,” as claim 2 recites, or “integrating electronic images into existing applications,” as claim 11 recites. Patent Owner contends that distributing a document with XNS mail, editing a file at a workstation, or sending a file to a print service or device, does not amount to integrating. PO Resp. 17–21. Patent Owner explains, for example, that “editing a

file ‘at a work station’ fails to disclose this limitation,” because “eventually editing [a scanned document] . . . at some prior point in time does not teach **integrating**.” PO Resp. 20.

Patent Owner’s arguments are not persuasive. Claims 2 and 11 do not define a temporal limitation that precludes “eventual[.]” editing. In addition, the central purpose of the XNS system is to provide document “integration,” as explained above in connection with claim 1. *See* Ex. 1002, 2 (“Productivity through Integration”). The XNS Manual describes “[i]ntegration of paper and electronic documents.” Ex. 1002, 7 (Fig. 2-1) (emphasis added). As Petitioner points out, the XNS Manual discloses that “[t]he scanned image may be *combined* with text to form a composite document . . . at a workstation or at a printer, using the Interpress SequenceInsertFile.” Pet. 17 (quoting Ex. 1002, 112, emphasis by Board, Petitioner’s emphasis omitted). Graphic elements may be scanned and subsequently edited and “automatically *integrated* with the text to form electronic final form page masters.” *Id.* (quoting Ex. 1002, 128, emphasis by Board, Petitioner’s emphasis omitted). The XNS Manual also allows a scanned document to be “rendered by a workstation, which makes an electronic document visible.” Ex. 1002, 8. The documents are compatible and “capable of being operated upon”: “Once a document is created, it must be capable of being operated upon at some point in the future and at another part of the system (even in another part of the world where a different language is used).” *Id.* at 9. The XNS avoids “‘dead-end’” documents. *Id.*

VC “‘involves paper being scanned from a device at one location and copied to a device at another location’” in “‘its simplest form’,” and “[i]n its more sophisticated form, VC can copy paper from a device at one location directly into a business application residing on a network or on the Internet, or [vice] versa.”

Dec. on Inst. 3 (quoting Ex. 1001, col. 5, ll. 48–55). Patent Owner does not explain how the invention recited in claims 2 and 11, presumably embracing either the disclosed “simplest form” or “more sophisticated form,” requires more than the integration disclosed in the XNS Manual: copying scanned electronic data, and sending it to a user in the XNS mail system, to a file system, or editing it, using these other destination applications as disclosed in the XNS distributed system, as set forth by Petitioner. *See* Pet. 16–18 (claim 1 requires “integration” also).

Contrary to Patent Owner’s related arguments (*see* PO Resp. 18–19), the disclosed XNS Manual destination applications, including printer software services in a remote printer, facsimile software services in a remote facsimile, mail software, or any myriad of interface or other software at remote destination workstations, including editing services, or such similar software services located in a distributed manner, constitute destination applications according to broad disclosures in the ’426 Patent, which include “the Internet, or an electronic filing system,” as “an application.” *See* Ex. 1001, col. 46, ll. 46–47; Pet. 17–18; *supra* Claim Construction section, and claim 1 discussion.

Contrary to Patent Owner’s argument that the claim phrase “without the need to modify the destination application” implies that the destination application must have the ability to be modified (*see* PO Resp. 19), the phrase does not imply that ability. Even if it does, any of the destination applications in the XNS Manual, which include software, could be modified, but need not be, because XNS provides “transparent” and integrated features, as Petitioner explains. *See* Pet. 17; Dec. on Inst. 25; Ex. 1008 ¶ 43; *supra* claim 1 discussion. Contrary to Patent Owner’s argument, a hardware printer can be modified, but need not be. *See* PO Resp. 19 (asserting “[u]nlike a software application, a device, such as a printer, cannot be modified.”). Therefore, the XNS Manual’s described destination applications

allow integration of an electronic image “without the need to modify the destination application,” as claims 2 and 11 require.

Based on the foregoing discussion and the record evidence, Petitioner shows by a preponderance of evidence that the XNS Manual anticipates claims 2 and 11.

Claims 4 and 9

Claim 4 recites a “computer data management system [that] includes adding at least one of electronic document, data and paper processing means via a single programming step.” Claim 9 recites a similar limitation. Patent Owner argues that “cropping,” using the Xerox GIS 150 scanner according to the Petition, does not satisfy adding electronic data in a single programming step according to claims 4 and 9. PO Resp. 22–23; Pet. 19 (citing Ex. 1003, 5-5).

Initially, it is not clear entirely, on this record, what “a single programming step” means. The limitation appears to be a product-by-process limitation, because it recites “adding” a “processing means” to the “data management system” “via a single programming step.” This claim language implies the system was created using the single step. However, on this record, how a step is added to create the management system does not limit the system’s structure or functionality. In any event, Petitioner asserts that “‘cropping’ can be added by providing instructions to (programming) the user interface.” Pet. 19.

Patent Owner does not address persuasively the contention that providing instructions for cropping satisfies claims 4 and 9. The ’426 Patent Specification discloses adding multi-step a “pre-packaged” “component” to legacy systems, showing that even if such a component is added to the legacy system in one step, it results in a legacy system with multiple programming steps (in the package). *See e.g.*, Ex. 1001, col. 5, ll. 38–40. Petitioner shows, by a preponderance of evidence, that the XNS (i.e., Xerox GIS 150) scanner discloses what amounts to a product-

by-process limitation—the Xerox GIS 150 scanner adds cropping functionality. Implicitly, the cropping functionality involves programming steps, as Petitioner shows.

In the Institution Decision, we made the following initial determination:

The Specification describes “a one step programming method . . . including at least one of a one step method of supporting paper within electronic business process application optionally including legacy systems with no or minimal reprograming.” Ex. 1001, col. 14, ll. 63-67. Therefore, on this record, “a single programming step” embraces a single function such as the XNS cropping function or other disclosed XNS paper processing functions.

Dec. on Inst. 26.

In the above-cited disclosure, the '426 Patent Specification refers to a “one step programming method” which allows for “no or *minimal* reprogramming” of legacy systems, implying a product-by-process limitation—adding something to a legacy system. Patent Owner does not address what “a single programming step” means. The “single programming step” may embrace a system function, for example, the cropping function disclosed in the GIS 150 Manual. Ex. 1003, 5–5. Although Patent Owner argues claims 4 and 9 together, claim 9 recites “the system comprises . . . a capacity for adding at least one of electronic document and paper processing with a single programming step.” Adding a “capacity” to a system claim in a single programming step does not mean that the capacity itself constitutes a single programming step.

Assuming it does, Patent Owner contends that “cropping” in the GIS 150 scanner “seems to require multiple programming steps . . . in order to perform crop processing.” PO Resp. 22. Patent Owner argues that certain entries, such as ““Right, Left, Top, and Bottom crop distances”” must be added, prior to performing cropping, thus Petitioner “fails to show paper processing with a single



programming step.” *Id.* at 23. Contrary to this argument, entering crop distances constitutes entering data prior to selecting the single cropping step. In a similar disclosed operation in the ’426 Patent, “the user simply has one sequence to execute: select From, select To, and then press GO.” Ex. 1001, col. 6, l. 67–col. 7, l. 1. In other words, prior to selecting GO, the user enters location data for the “From” and “To” commands. Therefore, the ’426 Specification implies that claims 4 and 9 do not preclude entering data prior to invoking a single programming step.

Based on the foregoing discussion and the record evidence, Petitioner shows by a preponderance of evidence that the XNS Manual anticipates claims 4 and 9.

#### Claim 5

Claim 5 recites a software application that includes an input module, an output module, a client module, a process module, and a server module, each with separate functions. The input module manages “electronic input from at least one third-party software application.” The output module manages “output of the data [from the management system] to the third-party software application.” Petitioner asserts that the XNS system, as disclosed in XNS Manual, includes the claimed modules, even if they are not discrete, and the third-party software application. *See* Pet. 19–20. As indicated in the discussion above, the record, including ’426 Patent Specification, the demand letter, and statements by Patent Owner at the hearing, corroborate Petitioner’s assertions regarding the construction of modules and application. *See supra* Section II.B. and II.C.

For example, Petitioner asserts that “[a]ny personal computer, workstation, or terminal,” with a software interface for bi-directional communications, as disclosed in the XNS Manual, constitutes third-party software. Pet. 19 (emphasis omitted). Petitioner also relies on other Xerox or non-Xerox facsimile machines,

and a “Kurzweil Intelligent Scanning System.” *See* Pet. 19 (citing Ex. 1002, 16, 113, 117); Ex. 1008 ¶¶ 42–46.

Regarding “at least one input module,” Dr. Melen explains that an interface such as the Gateway Access Protocol, which permits integration between Xerox and non-Xerox devices, constitutes a software communication interface, which manages inputs and outputs from and to third-party software and hardware. *See* Ex. 1008 ¶ 44; Pet. 19; Ex. 1002, 65–70.

Petitioner also generally refers to an Interactive Terminal Service, as software application input or output modules for interfacing third-party applications, including those on workstations on the network. *See* Pet. 19 (citing Ex. 1002, 117, 120). Another input (or output) module includes a “File Service” or “Print Service” that a scanner can access for sending digitized hard copies (thereby inputting data from the workstation or outputting data to the service). *See id.* Petitioner also shows that XNS manages data from a Kurzweil third-party software application using a gateway service. *Id.*; Ex. 1008 ¶ 44.

In addition to the input and output modules identified above (which may have some overlap in some instances), Petitioner points to a print service for printing, filing service for filing, facsimile device software, and standard input-output software (e.g., supporting ASCII communications) as “at least one output module.” *See* Pet. 19–20 (citing Ex. 1008 ¶¶ 42–46). Petitioner points to a user interface at a scanner, which provides cropping or scaling of an image, and other functions, such as labeling, or scaling, as “at least one process module.” *Id.* at 20. As an example scanner, Petitioner cites the Xerox GIS 150 scanner and scanner model that is disclosed as part of the XNS system in the XNS Manual, citing the GIS-150 Manual (Ex. 1003) as evidence of how the scanner inherently functions. *See supra* note 1; Pet. 20 (citing Ex. 1003); Ex. 1002, 112; Ex. 1008 ¶¶ 36–37.

Petitioner also identifies a display or user interface on a workstation connected to a scanner, with the interface for image editing, sending, applying settings and other functions, or a similar user interface or display on a scanner, as “at least one client module.” Pet. 20 (citing Ex. 1002, 111–113). The software for applying any of the settings or other functions, including cropping or scaling, corresponds to a process module.

These software packages, generally for handling inputs, outputs, services, and processes, constitute logically separable parts of the XNS program architecture—the modules as recited in claim 5, according to the construction outlined above. For example, the GIS-150 scanners, constitute client modules, input modules, and process modules. Such a scanner includes “Control Panel software,” as a client module that accesses certain process modules. *See* Ex. 1003, 228. One software “routine” in the GIS-150 provides a label function, constituting “at least one process module” providing “workflow” information, as claim 5 requires. *See id.* Generally, the GIS-150 “operating firmware” divides into “major functional modules and the application functions they provide,” including functions related to the Control Panel, the Image Input Subsystem, Ethernet Communications, and Diagnostics. *Id.* at 227. “Overall control . . . resides in the *set of tasks and programs stored in the Control/Communication module.*” *Id.* (emphasis added). “Destination performs Ethernet addressing.” *Id.* at 228. The Ethernet addressing software constitutes an input module to the XNS network. As Petitioner asserts, the GIS-150 receives paper scan inputs and sends outputs to at least five separate destinations, including third-party destinations, in the XNS system, and includes other functions that correspond to the claimed input, output, process, and client modules. *See* Pet. 18–20.

Petitioner also generally identifies software that provides or facilitates communication within the XNS network, as described above, as constituting at least one server module. *See id.* at 20 (referring back to Pet. 19). As discussed above in connection with claim 1 and in the Overview section, in addition to GIS-150, the XNS Manual describes servers that include software services, including for controlling communications, mailing, scanning, printing, implementing protocols, and other functions, and such servers may reside in workstations, personal computers, or other terminals. *See* Ex. 1002, 18–19 (“Servers and services”); Pet. 19. In addition, an “Application Support Environment provides support resources called on by users and/or the application protocols shown . . . . These protocols—mailing, printing, filing, and gateway access—are implemented in hardware/software to provide the XNS application services.” Ex. 1002, 16. These server services, “collections of software,” are “high-level functional activities such as filing, printing, mailing, and external communications.” *Id.* at 18. Such separate server software services each reasonably constitute “at least one server module communicable” with the other modules and “capable of dynamically combining the external applications with at least one of digital capturing devices and digital imaging devices,” as set forth in claim 5.

Patent Owner argues that the claimed modules must be discrete, and that the software application must be single software application. *See* PO Resp. 24 (arguing “XNS fails to disclose a modular software application”). Based on the Claim Construction section *supra*, these arguments are not commensurate in scope with claim 5. *See* Pet. Reply 10–11, 14–15 (explaining why claim 5 does not require a set of discrete modules or a single software application). As Petitioner notes, Dr. Melen testifies that “a module is ‘a piece of software’” and “‘is not so precise. But what is more specific is exactly what they do.’” Pet. Reply 14–15

(quoting Ex. 1013, 110:4–7, 142:6–11). Further, Patent Owner admitted during the hearing that the XNS Manual discloses the claimed functions (i.e., what the modules do), as noted above. *See supra* quoting Tr. 43:17–44:5; Tr. 44:1–7. In essence, the disclosed functions, which Patent Owner concedes that the XNS Manual discloses, demarcate the claimed modules, because modules may overlap in code or otherwise with other software. *See supra* Claim Construction.

Patent Owner makes a similar argument regarding the recited “process module” in claim 5: “The fact that functions are performed does not necessarily disclose that the functions are performed by a software module of the claimed ‘software application’.” PO Resp. 28. This basically acknowledges, similar to the admission at the hearing, that the XNS Manual discloses the recited process module functions (e.g., “applying additional functionality . . . to the data . . . as [paper or the electronic input] is being copied”). Nevertheless, Patent Owner argues that “XNS does not teach how cropping and scaling can be performed as a document is being copied.” PO Resp. 28. This argument, in addition to ignoring the admission, fails to acknowledge that claim 5 includes applying functionality to the “electronic input” of data. The XNS Manual, through the GIS 150 (with the GIS 150 Manual evidencing the inherent features of that particular scanner), discloses cropping or scaling the “electronic input” as it is being “copied”—transmitting the data from one location (e.g. a buffer) to another (e.g., a display) amounts to copying it.

Moreover, according to the ’426 Patent, “[t]he Client Module presents the electronic paper as it is being copied, and any relevant information related to the input or output functions. . . . The counterpart to VC’s Client Module on a conventional copier is the panel.” Ex. 1001, col. 71, ll. 4–12. This disclosure implies that the functional phrase “presenting [data] . . . as [the data or electronic

input] is being copied” embraces the electronic copying existent in prior art copiers, including the XNS copiers—tracking Patent Owner’s admission about functionality during the hearing.

Patent Owner’s argument that Petitioner “relies on GIS 150 in alleging XNS discloses a software application that includes a process module,” but “GIS 150 does not disclose an input module or an output module,” does not address Petitioner’s separate showings regarding the modules. *See* PO Resp. 28. For example, Patent Owner’s argument about input and output modules does not upset Petitioner’s showing that GIS 150 discloses a process module, i.e., a user interface that includes processes of cropping or scaling scanned images. *See* Pet. 20. In addition to the description of modules and software *supra*, the GIS 150 scanner includes the following separate functions, which correspond to input, client, output, and process modules: User input, User output, Scanning, Image processing, Compression, Storage, Ethernet, Diagnostics, and Error handling. Ex. 1003, 223.

Patent Owner also argues that the “XNS [Manual] does not teach a third-party software application that can provide an input as it is managed by an input module.” PO Resp. 25. Patent Owner focuses on Petitioner’s citation of the “Kurzweil Intelligent Scanning System” (“Kurzweil”) as the claimed “third party software application.” *See* Pet. 19. Patent Owner contends that “Kurzweil includes hardware components for scanning documents, XNS does not disclose that Kurzweil includes a software application,” and Kurzweil “is used to ‘exchange information over telephone lines with users on the Internet.’” PO Resp. 26 (quoting Ex. 1002, 70). According further to Patent Owner, XNS “does not disclose a software application that manages the input of Kurzweil.” *Id.*

Patent Owner’s arguments do not address the myriad of other types of software that would be resident on workstations disclosed in the XNS Manual that

Petitioner relies upon. *See* Pet. 19 (citing Ex. 1002, 117, 120). For example, the work stations on the XNS network can “send or receive mail messages and documents.” Ex. 1002, 120. The arguments also are not clear or not commensurate in scope with claim 5. Claim 5 requires “at least one input module . . . managing the electronic input *from* at least one third-party software application.” (Emphasis added to claim 5). As discussed above in Section II. B., Patent Owner conceded at oral argument that the XNS Manual discloses all the claimed functions. These conceded functions include managing data.

Patent Owner makes a parallel argument about an alleged lack of an output module by asserting that “Kurzweil does not teach a third-party software application that is managed by an input module and an output module of a software application.” PO Resp. 27. Claim 5 requires “at least one output module . . . managing the output of the data *to* the third-party software application.” The phrase “the third-party software application” refers back to the antecedent phrase in claim 5, quoted above, “at least one third-party software application.” The “at least one” output and input modules need not manage data to and from the same third party application, as Patent Owner’s argument implies, by referring to the Kurzweil system. Patent Owner does not explain how the disclosed input and output modules must manage data to and from the same third-party application. In any event, the XNS protocol applications, disclosed as a service (i.e., software), constitute input and output modules that manage data to and from the same third-party device, such as most software resident on a workstation or server. In addition, the Interactive Terminal Service, the Gateway Access Protocol, the 860 Gateway service, each send or receive mail messages or documents, or otherwise communicate bi-directionally with third-party applications, including facsimile

devices (with software). *See* Pet. 19 (citing Ex. 1002, 14–17, 65–70, 112, 113, 117; Ex. 1008 ¶¶ 42–46).

Patent Owner’s argument that Kurzweil does not include software contradicts its declarant: “Kurzweil is a discrete software program.” *Compare* PO Resp. 27, *with* Ex. 2002 ¶ 111. In addition, Dr. Melen testifies that the “XNS [Manual] describes managing input from non-Xerox hardware and software. For example, the XNS supports input from the ‘Kurzweil Intelligent Scanning System.’” Ex. 1008 ¶ 45.

The record supports both declarants who essentially agree that Kurzweil at least includes software: “Kurzweil Intelligent Scanning System . . . not only scans a document but converts it into textual rather than bit-map representation.” Ex. 1002, 113. It takes a hardcopy and converts it into textual digital data. *Id.* “[It] uses the 860 gateway service to connect to the internet . . . to store files on a file server or mail them to a user for editing at a workstation.” *Id.* On this record, skilled artisans would have recognized that “[i]ntelligent” character to textual conversion, file transfers, and electronic mail service, over the internet, imply software functions.

In addition to the showings discussed above regarding managing output to a third-party application, Petitioner relies on sending data to “a Print Service for printing,” and on sending output to facsimile devices. Pet. 19–20 (emphasis omitted) (citing Ex. 1002, 112, 120; Ex. 1008 ¶¶ 42–46). Patent Owner argues that a facsimile device may “not necessarily include a software application.” PO Resp. 26. To the contrary, based on the description of XNS above, skilled artisans would have recognized that XNS connects to devices, including facsimile devices, implementing application software protocols using firmware interfaces. *See id.* (acknowledging that “XNS discloses compatibility with ‘any Xerox or non-Xerox



facsimile device” (quoting Ex. 1002, 104–105)). In addition, a third-party application is not limited to software.

Patent Owner also contends that the XNS Manual does not disclose “managing output of data to a non-Xerox device,” another third-party software application identified by Petitioner, as discussed above. *See id.* at 27. As Patent Owner acknowledges, the XNS Manual describes services for communicating with a variety of non-Xerox devices, which include software services. *See id.* at 26. Sending data, including managing signals with the data, to and from such a compatible device, is implicit in the teaching of compatibility. *See* Dec. on Inst. 15 (construing “managing”); Ex. 1008 ¶ 45 (describing managing facsimile data in the XNS Manual (citing Ex. 1002, 105)).

Patent Owner also acknowledges that the “XNS enables effective integration between individual hardware and software elements within XNS-compatible products. Techniques are also provided within the XNS for bi-directional protocol and format conversion, permitting *other systems* to achieve integration with XNS.” PO Resp. 25 (emphasis omitted, Board emphasis added) (citing Ex. 1002, 16, and discussing Pet. 19). Patent Owner argues that “[t]his does not necessar[il]y teach ‘third party applications.’” *Id.* Patent Owner fails to explain why “other systems,” or “XNS-compatible” products, are not “third-party” applications. Moreover, even if the term “third-party” implies another programmer or source, distinct from the creator of the claimed “computer data management system” or the “software application,” the term does not create a structural limitation in claim 5 that distinguishes over the XNS Manual. At most, “third-party” is a product-by-process limitation that does not alter the structure of the “third-party software.”

Moreover, the ’426 Patent specifically states that a “third-party” may create one of the modules of the claimed invention: “The Client Module can be a GUI

that Imagination Software develops, or a third-party application that directly communicates with the Server Module.” Ex. 1001, col. 79, ll. 49–51. This verifies that a generic identifier (“third-party”) of a programmer who creates any software that communicates with the claimed “computer data management system,” does not structurally distinguish software made by the maker of the “computer data management system.”

Patent Owner also argues that the XNS Manual does not disclose a server module that communicates with other modules. PO Resp. 28. The argument is not persuasive. As discussed above in connection with claim 1 and in the general discussion of the XNS Manual, the XNS is based on servers with software services, and servers basically “perform their assigned function,” and are “programmed to perform the requisite functions,” including “filing, printing, mailing, and external communications,” thereby communicating with other servers, software, and devices, using XNS protocols in a distributed architecture, as generally explained above. *See* Ex. 1002, 18–19 (“Servers and services”). Each server software service constitutes a module according to the Claim Construction section above.

Based on the foregoing discussion and the record evidence, Petitioner shows by a preponderance of evidence that the XNS Manual anticipates claim 5.

#### Claim 6

Patent Owner contends that Petitioner does not establish that the XNS Manual discloses “a list of said input, output, and process modules . . . being read on startup,” as recited in claim 6. PO Resp. 31 (citing Ex. 1002, 149). Petitioner asserts that XNS uses a “Clearinghouse” service that contains the list. *See* Pet. 21–22 (discussing claims 6 and 10). Patent Owner maintains that the “XNS [Manual] states that before a user can use the clearinghouse, the ‘user must first locate a

clearinghouse server.” PO Resp. 31 (quoting Ex. 1002, 149). According to Patent Owner, “[t]his suggests that the clearinghouse is used on demand . . . . This is the opposite of reading a list on startup.” *Id.*

Patent Owner’s argument has merit. Petitioner does not explain persuasively, if at all, how the XNS Manual discloses the claimed list being read on start-up. Based on the foregoing discussion, Petitioner does not show by a preponderance of evidence that the XNS Manual anticipates claim 6.

#### Claim 10

Claim 10 recites a list that is similar in scope to claim 6, except claim 10 does not require the list to be read on start-up.<sup>6</sup> Patent Owner argues that claim 10 is “directed to a server module (which is part of a software application), that maintains a list of input, output, and process modules.” PO Resp. 30. According to Patent Owner, “there is no disclosure in [the] XNS [Manual] that demonstrates maintaining a list of input modules or process modules.” *Id.* Patent Owner argues that “a list of physical devices is not the same as a list of software modules of the same software application.” *Id.*

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<sup>6</sup> Claims 6 and 10 recite “means for” limitations that are not at issue. Patent Owner’s arguments are not directed to any specific “means for” clause recited in claim 10. Patent Owner’s declarant, Mr. Weadock, states that the means-plus-function limitations “will vary accordingly, depending on where the VC software resides.” Ex. 2002 ¶ 34, ¶ 33 (noting that “[c]laim 10 discloses very similar means-plus-function limitations” to claim 6). In other words, according to Mr. Weadock, the disclosed structure corresponding to the means clauses includes the various types of memory structure disclosed: “[T]he corresponding structure is the memory for storing.” *Id.* ¶ 34. Mr. Weadock does not argue that claim 10 requires specific algorithmic structure: “[T]he corresponding structure is the memory for storing the Server Module code and the processor that executes the Server Module code.” *Id.* ¶ 34. Petitioner has made a sufficient showing regarding claim 10. *See* Pet. 9, 22–23; Dec. on Inst. 20–23. As discussed above, XNS discloses different forms of memory and processors on servers, including workstations.

According to Patent Owner, the XNS Clearinghouse is used to locate physical devices such as workstations and servers. *Id.* Patent Owner relies on the following description in XNS that “[t]he clearing house is[] ‘[a]n XNS service that provides a central repository for names, addresses and properties of system resources, permitting XNS system elements (workstations, servers, etc.) to locate them.’” *Id.* at 29–30 (quoting Ex. 1002, 156).

Contrary to Patent Owner’s arguments, claim 10 does not specify that the input, output, or process modules are software modules, and the XNS Manual does not limit the listed “resources” to hardware, even if the claimed modules are software. Given that the modules have “counterparts” in prior art printer and scanning devices, listing hardware on the system reasonably satisfies the input, output, and process modules recited in claim 10 as part of a list. *See* Ex. 1002, 52.

In addition, or in the alternative, the XNS Clearinghouse service lists services (software) and devices by name, because “address numbers are unintuitive.” *Id.* at 50. Users can locate and access “specific resources . . . on the network,” including a “communication service.” *Id.* at 49. As another example, the XNS Manual discloses a “Help Service” software application, typically available in workstations, which helps client users find services by querying the Clearinghouse list based on descriptions in the list. *See id.* at 52. The Clearinghouse provides a list of all objects, functioning as a “Yellow Pages-like services”: “Client *software* can request *a service* in a standardized fashion, and need not remember what *named resources* are available.” *Id.* (emphases added).

Claim 10 does not specify any function for the input, output, and process modules recited. It specifies that the list must be “used by at least one module object accessible by said server module.” These claimed input, output, and process modules have “counterparts” in prior art printers and devices. Therefore, the

discussion of the modules in claim 5 applies, although the modules here are broader, and may include the hardware “counterparts.” For example, the XNS scanners or workstations, or software services thereon, constitute input modules; printers, facsimile devices, or workstations, or software services thereon, constitute output modules, other servers or services, including the user interface in scanners, described in the XNS Manual, constitute process modules. The server module reads on the Clearinghouse server, the map software therein, the client software service (the “Help Service,” or “Client service”), the communication service, or other services in the XNS system, including a number of application protocol services. *See* Ex. 1002, 52, and the discussion *supra* of claim 5. Alternatively, any of the software services, for example, the “Help service,” constitutes a process module of claim 10. As noted, all “system resources” would be in listed by name, including a “[g]eneric name,” in the Clearinghouse based on the record evidence. *See* Ex. 1002, 50, 156.

Claim 10 does not specify whether the list is within the computer data management system or the server in that system: “A computer data management system including a server module comprising: . . . a list of input, output, and process modules.” The XNS Manual’s Clearinghouse list may be distributed on several servers, with copies thereof for redundancy (*id.* at 52), or, “on a small network the Clearinghouse can co-exist with other services on a single system server” (*id.* at 53). Therefore, claim 10 reads on the single or multiple server Clearinghouse system.

Based on the foregoing discussion and record evidence, Petitioner shows by a preponderance of evidence that the XNS Manual anticipates claim 10.

Claims 7 and 8

Claim 7 requires “wherein the server module includes at least one server module application programmer interface.” Patent Owner argues that XNS does not disclose the interface limitation. PO Resp. 32. Claim 7 depends from claim 5, which recites “at least one server module.” Therefore, “the server module” in claim 7 refers to one of the plurality of server modules that are in the set of “at least one server module[s]” in claim 5.

Petitioner maintains that “Dr. Melen explains that at least one API is inherent in XNS.” Pet. 21 (citing Ex. 1008 ¶ 35). According to Dr. Melen, “numerous application programming interfaces exist between the programs illustrated [in] FIG 2-4. Application programming interfaces are necessary in order to link the various programs, layers, *etc.*, so that they may interact as described throughout the XNS disclosure.” Ex. 1008 ¶ 35.

Patent Owner responds that “an API used by a first software application to communicate with a second software application does not necessarily disclose a software module of a software application that includes an API.” PO Resp. 32. Patent Owner also contends that the layers “may . . . fall outside the application layer.” *Id.*

The former argument appears to rest on Patent Owner’s narrow constructions of “module” and “application layer.” The latter argument does not dispute that the application layer, or any of the layers, require an API. As discussed above, all the protocol layers are involved in communications. Therefore, Patent Owner’s arguments are not persuasive.

Moreover, Patent Owner provides a trade dictionary that includes a definition of “Application Program Interface” as follows: “API. A set of formalized software calls and routines that can be referenced by an application

program to access underlying network services.” Ex. 2009. The trade dictionary defines “Application Programming Interface” as follows: “API. A set of functions and values used by one program to communicate with another program or with an operating system.” *Id.*

Although the ’426 Patent Specification does not specify what an “application programmer interface” is, it admits that “[m]any, if not most, core software technologies, such as OCR (Optical Character Recognition) or barcode recognition, are designed and implemented using a ‘C’-language API (Application Program Interface). The technology is often complex . . . .” Ex. 1001, col. 49, ll. 45–49. Mr. Weadock testifies generally that “API’s are not ‘inherent’ in software.” Ex. 2002 ¶ 120.

Mr. Weadock does not support his testimony regarding lack of inherency with a persuasive, if any, explanation, whereas Dr. Melen’s testimony is supported by admissions in the ’426 Patent and the trade dictionary. The record shows that some form of at least a generic type of API is necessary for communication between nodes or software services. XNS provides communication between software services, including by using the protocol layers identified by Dr. Melen. Mr. Weadock does not address with specificity the evidence that shows that an API is necessary for at least one server software application (i.e., a server module) to communicate with other servers and software in the XNS system. According to the claim language, the server module with an API in claim 7 need not be the server module “communicable” with the other modules in claim 5—it may be one of the other “at least one server module[s].” Based on the foregoing discussion and record evidence, Petitioner shows by a preponderance of evidence that the XNS Manual anticipates claim 7.

The Decision to Institute outlines Petitioner's showing with respect to claim 8, which depends from claim 7. *See* Dec. on Inst. 7–8. Patent Owner does not argue claim 8 separately. However, Patent Owner argues a limitation recited in claim 6 that is similar to a limitation recited in claim 8. *See* PO Resp. 30. That is, Patent Owner argues that the XNS Clearinghouse server application only lists hardware instead of software. *See id.* Claim 8 requires the list to include available and currently used input, output, and server modules.

Petitioner maintains that Clearinghouse is a data base of objects, which “correspond to devices and services available on the network.” *See* Pet. 22–23 (identifying lists of currently available and active modules). As discussed in connection with claim 10, these XNS services reasonably correspond to software resident on servers and software throughout the system, and the Clearinghouse server or servers identifies all resources, including hardware and software services.

Based on the record evidence and arguments presented, Petitioner shows by a preponderance of evidence that the XNS Manual anticipates claim 8.

### *3. Summary*

Pursuant to the discussion above, Patent Owner generally argues that the XNS Manual does not disclose related elements of claims 1, 2, 4–7, and 9–11. Patent Owner does not present separate and distinct arguments for claims 3 and 8. Considering the arguments and record evidence, we determine that Petitioner demonstrates by a preponderance of the evidence that the XNS Manual anticipates claims 1–5 and 7–11 of the '426 Patent. *See* Pet. 13–23; Dec. on Inst. 23–28. Petitioner does not demonstrate by a preponderance of the evidence that the XNS Manual anticipates claim 6 of the '426 Patent. Patent Owner's acknowledgement during the oral hearing that the XNS Manual discloses all the claimed functions recited in claims 1–5, and Patent Owner's demand letter, corroborate our



determination that Petitioner has shown by a preponderance of evidence that the XNS Manual anticipates claims 1–5 and 7–11.

*4. Salgado*

Based on the finding of anticipation by the XNS Manual of claims 1–5 and 7–11, it is not necessary to reach the ground of anticipation of claims 1–5 and 7–11 by Salgado.

On the other hand, it is necessary to reach the ground of anticipation of claim 6 by Salgado. As discussed above in connection with Patent Owner’s arguments regarding claim 6, claim 6 requires “a list of said input, output, and process modules . . . being read on startup.” PO Resp. 31. Patent Owner generally asserts that Salgado does not disclose “a list of said input, output, and process modules.” PO Resp. 41.

The Petition refers to the analysis of claim 10 to address the limitations in claim 6. *See* Pet. 39. However, claim 10 does not recite the list “being read on start-up,” and Petitioner does not address persuasively, if at all, the start-up requirement. *See* Pet. 40. Petitioner does not show persuasively that Salgado discloses the claimed list being read on start-up, as required by claim 6. Based on the foregoing discussion, Petitioner does not show by a preponderance of evidence that Salgado anticipates claim 6.

### III. MOTION TO EXCLUDE

Patent Owner moves to exclude Dr. Melen’s testimony on re-direct during his deposition. Paper 40. We do not consider any of the re-direct testimony, rendering the motion moot. Therefore, we dismiss it.

### IV. WEIGHT OF TESTIMONY

Patent Owner maintains that Dr. Melen’s “opinion regarding anticipation [by the XNS Manual] should be given little to no weight.” PO Resp. 12. According to

Patent Owner, Dr. Melen “has not even considered the [XNS Manual] reference at issue.” *Id.* at 11–12. Patent Owner relies on statements made by Dr. Melen during cross-examination. *See id.* at 11 (discussing Ex. 2003). For example, Dr. Melen answers “I don’t know,” to a question about whether, if in 1985, “there was a single server module in XNS that performed the four functions of claim 6.” *See* PO Resp. 9–11 (quoting and discussing testimony at Ex. 2013, 113–116).

Even if Patent Owner’s assertions raise doubt as to Dr. Melen’s use of the XNS Manual to support his opinion that it anticipates claim 6, *see id.* at 9–12, Patent Owner does not show how this translates to undermining Dr. Melen’s opinion regarding the other claims. Throughout his analysis of the XNS Manual, Dr. Melen’s declaration provides specific and accurate citations to the XNS Manual (Ex. 1002), supporting his opinion and showing that he relies on the XNS Manual’s disclosure. *See* Ex. 1008 ¶¶ 29–47. In addition, because Petitioner has not shown that the XNS Manual or Salgado anticipates claim 6, Dr. Melen’s opinion about claim 6 is not of significant consequence.

In reciprocal fashion, Petitioner maintains that “the Board should give no weight to Mr. Weadock’s Declaration.” Pet. Reply 7–8. Mr. Weadock’s testimony is not necessary to reach our decision with regard to claim 6, and we did not consider it in reaching the decision about claim 6. Given the finding of anticipation of claims 1–5 and 7–11, the issue is moot.

Nevertheless, as this Final Decision implies, we afforded Mr. Weadock’s declaration and Dr. Melen’s declaration due weight in reaching the finding that the XNS Manual anticipates claims 1–5 and 7–11.

## V. CONCLUSION

Considering the record, including Petitioner’s showing in the Petition and Patent Owner’s arguments and evidence, Petitioner has demonstrated by a

preponderance of the evidence that the XNS Manual anticipates claims 1–5 and 7–11. Petitioner has not demonstrated by a preponderance of the evidence that the XNS Manual or Salgado anticipates claim 6.

#### VI. ORDER

In consideration of the foregoing, it is hereby

ORDERED that claims 1–5 and 7–11 of U.S. Patent No. 7,986,426 are unpatentable;

FURTHER ORDERED that Patent Owner’s Motion to Exclude Dr. Melen’s testimony on re-direct is *dismissed* as moot; and

FURTHER ORDERED that, because this is a final 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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