

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC. and AMAZON WEB SERVICES, LLC,
Petitioner,

v.

PERSONALIZED MEDIA COMMUNICATIONS, LLC,
Patent Owner.

Case IPR2014-01531
Patent 8,046,791 B1

Before KARL D. EASTHOM, TRENTON A. WARD, and
GEORGIANNA W. BRADEN, *Administrative Patent Judges*.

WARD, *Administrative Patent Judge*.

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

I. INTRODUCTION

We have jurisdiction to hear this *inter partes* review under 35 U.S.C. § 6(c), and this Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 18–20 of U.S. Patent No. 8,046,791 B1 (Ex. 1001, “the ’791 patent”) are unpatentable. We also determine that Patent Owner has not met its burden on its Motion to Amend regarding entry of the proposed substitute claims, and thus, we deny the Motion to Amend.

A. Procedural History

Amazon.Com, Inc. and Amazon Web Services, LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) to institute an *inter partes* review of claims 18–20 of the ’791 patent. Personalized Media Communications, LLC (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). Pursuant to 35 U.S.C. § 314(a), we instituted an *inter partes* review on two grounds that: (1) claims 18–20 are unpatentable under 35 U.S.C. § 103 in view of Cookbook Guide¹ and Sedman²; and (2) claims 18–20 are unpatentable under 35 U.S.C. § 103 in view of Lockwood³ and Sedman. See Paper 7 (“Dec. to Inst.”), 27.

¹ The Micro Cookbook User’s Guide and Reference Booklet, 1984 (Ex. 1008) (“Cookbook Guide”).

² E.C. Sedman, The Use of MicroCobol for Telesoftware, VIDEOTEX, VIEWDATA, & TELETEXT – A TRANSCRIPT OF THE ONLINE CONFERENCE ON VIDEOTEX, VIEWDATA, & TELETEXT (Online Publications Ltd., 1980) (Ex. 1009) (“Sedman”).

³ US Patent No. 4,359,631, filed July 11, 1980 (Ex. 1015) (“Lockwood”).

After institution of trial, Patent Owner then filed a Patent Owner Response (Paper 18, “PO Resp.”), to which Petitioner filed a Reply (Paper 28, “Pet. Reply”).

In addition, Patent Owner also filed a Contingent Motion to Amend (Paper 19), to which Petitioner filed an Opposition (Paper 29). Patent Owner then filed a Reply to Petitioner’s Opposition to the Contingent Motion. Paper 43.

Patent Owner filed Observations on the Cross-Examination of Petitioner’s Declarant (Paper 41), to which Petitioner filed a Response (Paper 44). Petitioner filed Observations and Amended Observations on the Cross-Examination of Patent Owner’s Declarant (Papers 42 and 46), to which Patent Owner filed a Response (Paper 45).

An oral argument was held on Dec. 8, 2015. A transcript of the oral argument is included in the record. Paper 49 (“Tr.”).

B. Related Proceedings

Petitioner informs us that the ’791 patent is the subject of a lawsuit: *Personalized Media Commc’ns, LLC v. Amazon.com, Inc.*, No. 1:13-cv-1608-RGA (D. Del. filed Sept. 23, 2013). Pet. 1. According to Petitioner, the District Court’s judgment in the lawsuit has been appealed to the Court of Appeals for the Federal Circuit as Appeal No. 15-2008. Paper 31, 1. Six patents related to the ’791 patent are the subject of concurrently-filed petitions for *inter partes* review. Pet. 1; Paper 31, 1; *see* IPR2014-01527, IPR2014-01528, IPR2014-01530, IPR2014-01532, IPR2014-01533, and IPR2014-01534.

C. The '791 Patent

The '791 patent is titled "Signal Processing Apparatus and Methods" and generally relates to a unified system of programming communication. Ex. 1001, Abstr. The challenged claims relate to methods of controlling a subscriber station or receiver station to receive and execute computer programs. Claim 18 is reproduced below:

18. A method of controlling a receiver station, comprising:

storing information about a user of said receiver station at a memory of said receiver station;

receiving, at said receiver station, a first computer program transmitted from a transmitter station;

storing said first computer program in memory at said receiver station;

executing said first computer program using a processor at said receiver station to generate an order for a product by processing said information about a user of said receiver station;

receiving, at said receiver station, a second computer program transmitted from a said transmitter station;

storing said second computer program in memory at said receiver station; and

executing said second computer program using said processor, which causes said receiver station to communicate said order for a product to a remote station.

The '791 patent describes an embodiment in which a user can view a television program on cooking techniques, titled "Exotic Meals of India."

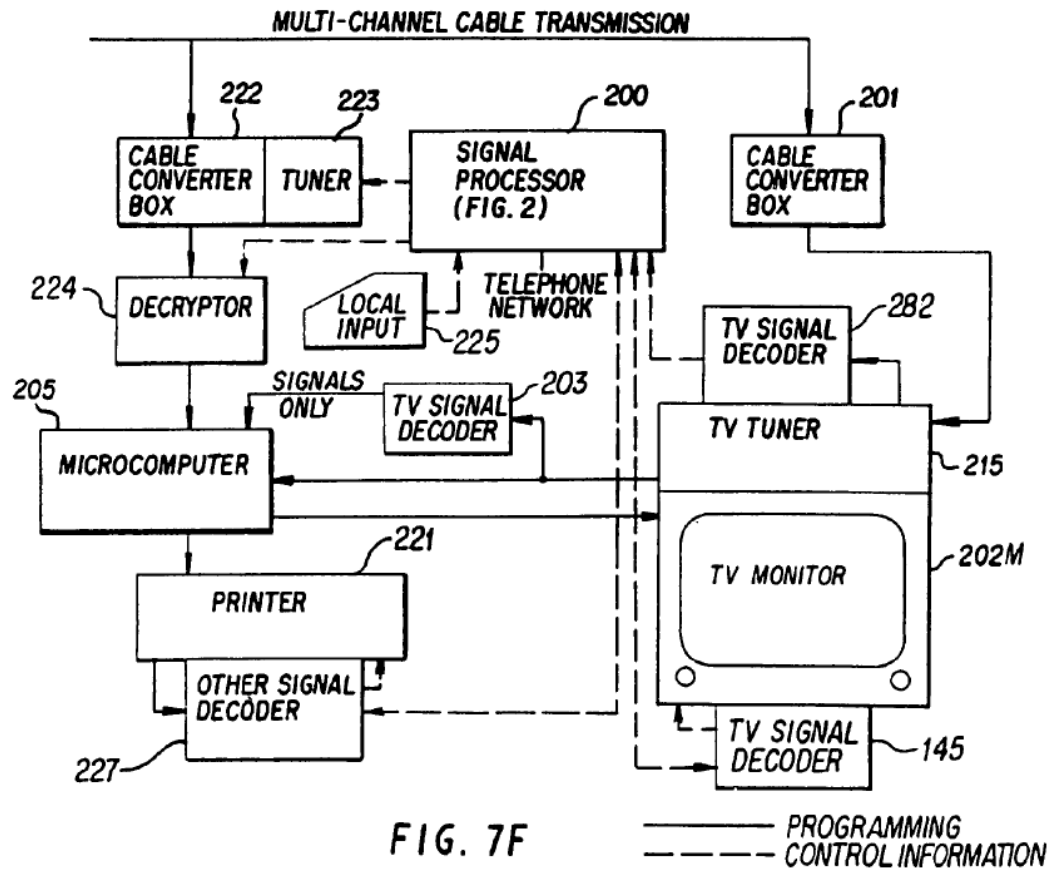
Ex. 1001, 241:48–51. The television program is directed to cooking a particular type of fish curry that can be “mild or moderately hot and spicy, or as a vindaloo, very hot and spicy.” *Id.* at 242:18–20.

Microcomputer 205 of the subscriber station is preprogrammed to receive and process meal recipe instructions and holds records of the size of the family of the subscriber and the tastes and dietary habits of the members of the family. *Id.* at 241:21–24. For example, microcomputer 205 of the subscriber station can store that a family prefers very hot and spicy foods, prefers to minimize salt consumption, and consists of four adults. *Id.* at 241:27–30. The '791 patent discloses that halfway through the program the host says the following:

If you are interested in cooking what we are preparing here and want a your own printed copy of the recipe tailored to your own tastes and your own shopping list for a charge of only 10 cents, enter on your Widget Signal Generator and Local Input the information that you see on your screen.

Id. at 242:21–26. The subscriber may accept the offer by entering the associated code, “TV567#,” into the keyboard of specific local input 225, which is then processed by controller 20 at the subscriber station. *Id.* at 242:28–39.

Figure 7F of the '791 patent, reproduced below, illustrates a subscriber station:



As shown above in Figure 7F, the '791 patent discloses a subscriber station having microcomputer 205, decoder 203, and TV monitor 202M. *Id.* at 243:29–44. The programming originating studio embeds in the transmission of the “Exotics Meals of India” programming a SPAM message that consists of an “01” header. *Id.* at 243:18–21. The message is received at the subscriber station and causes controller 39 of decoder 203 to load-and-execute the generate-recipe-and-shopping-list instructions at microcomputer

205, which generates information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the subscriber station in Fig. 7F. *Id.* at 243:43–53. The subscriber station also generates an order for ingredients based on the shopping list. *Id.* at 260:29–54; 262:30–33. The subscriber can be prompted by the announcer in the program to receive a personalized order by entering a code, “TV568.” *Id.* at 260:29–44. If the subscriber enters the code, “TV568,” the subscriber’s shopping list will be transmitted to a local supermarket, which will deliver the items on the shopping list the following day. *Id.* at 260:29–50. The subscriber station can access the necessary data in the DATA_OF.ITS file and record instructions at a particular location, “A:SHOPPING.EXE,” which will cause the subscriber station’s controller to dial a telephone number and transmit the shopping list to a computer of the supermarket chain. *Id.* at 261:55–262:45.

II. DISCUSSION

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); see *In re Cuozzo Speed Technologies, LLC*, 793 F.3d 1268, 1275–79 (Fed. Cir. 2015 (“Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA,” and “the standard was properly adopted by PTO regulation), *cert. granted*, *Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 890 (mem.) (2016). Under that standard, and absent any special definitions,

we give claim terms their ordinary and customary meaning, as would be understood by one of ordinary skill in the art at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc)). For sake of completeness, we also observe that the outcome of this decision remains the same under either the broadest reasonable interpretation standard or the claim construction standard under *Phillips*, 415 F.3d 1303. The claim construction principles discussed above, as applied to the claim terms at issue here, result in the same construction under either standard.

1. “*computer program*”

The specification of the '791 patent does not define expressly the term “computer program.” The specification does make, however, multiple references to computer programs and computer program instructions, such as the following: “*Computer program instructions*, of the sort well known in the art, are also inputted to computer, 73, and computer, 73, is caused to execute said instructions.” Ex. 1001, 183:47–49 (emphasis added). Furthermore, the specification states that “[i]n order to control fundamental aspects of the processing of any given data file, such as a DATA_OF.ITS or DATA_OF.URS file, under control of any given *computer program*, such as a PROGRAM.EXE program, a computer is usually preprogrammed with an operating system that controls such fundamental aspects.” Ex. 1001, 265:12–17 (emphasis added).

Patent Owner’s use of the term “computer program” in the specification appears to comport with the ordinary and customary meaning of the term. There is a presumption that a claim term carries its ordinary and

customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). In the Decision on Institution, we adopted the Patent Owner’s proposed construction of the term “computer program” as “a set of instructions that are executed by a processor.” Dec. to Inst. 7. Neither Petitioner nor Patent Owner dispute this construction. See PO Resp. 10. Accordingly, we maintain our construction of the term for purposes of this decision.

2. “*order for a product*”

Patent Owner argues that the Board, in applying the claims to the prior art in the Decision on Institution, used an unreasonably broad application of the claim term “order for a product” to encompass shopping lists and flight reservations. PO Resp. 11. Patent Owner proposes that the term “order for a product,” recited in claim 18, should be construed to mean “a buyer’s agreement to purchase a product or service sent from the buyer to the seller.” PO Resp. 11 (citing Ex. 2007⁴).

Patent Owner argues that the Exotic Meals of India program disclosed in the specification of the ’791 patent supports its construction because it describes that, after the user has entered a code, the subscriber station automatically telephones the shopping list order to a computer of a local super market chain for fulfillment. PO Resp. 11 (citing Ex. 1001, 261:55–59, 262:9–21). Petitioner counters that Patent Owner’s proposed

⁴ We note that Patent Owner fails to identify how this definition, obtained from “business dictionary.com” on Jan. 3, 2015 relates to the relevant time period for the construction of the claims at issue in this proceeding. Ex. 2007.

construction contradicts the specification because it is undisputed that the only output of the “generate-recipe-and-shopping-list” program is a shopping list and a recipe (Pet. Reply 3 (citing Ex. 1001, 243:50–244:15)) and that only the shopping list is retained and later communicated to a remote station (Pet. Reply 3 (citing Mot. 4–5)). Petitioner further argues the shopping list is the “order” generated by a first program and communicated by a second computer program, in accordance with claim 18. Pet. Reply 3 (citing Declaration of Dr. Charles J. Neuhauser, Ph. D., Ex. 1044 ¶ 40). Petitioner relies upon Dr. Neuhauser’s testimony that the specification discloses that the “generate-recipe-and-shopping list” program generates a shopping list and stores it in memory. Ex. 1044 ¶ 40 (citing Ex. 1001, 243:43–244:15). The specification discloses:

Executing said generate-recipe-and-shopping-list instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber of the station of FIGS. 7 and 7F; to cause said recipe and shopping list to be printed at printer, 221; and to retain information of said shopping list at particular memory.

Ex. 1001, 243:50–56. Dr. Neuhauser states that the only thing generated by the first computer program in this disclosure and retained for later sending to the supermarket is a shopping list; thus, the output of the first computer program (i.e., the shopping list) constitutes the claimed “order.” Ex. 1044 ¶¶ 40, 47. Furthermore, Petitioner argues that the specification does not disclose the generation of a “buyer’s agreement.” Pet. Reply 3 (citing Ex. 1044 ¶ 40).

We are not persuaded by Patent Owner that the specification of the ’791 patent requires the “order for a product” recited in claim 18 to be a

buyer's agreement. As Petitioner further points out that the claimed "order for a product" must include a shopping list because claim 19, which depends directly from claim 18, recites "wherein said order comprises a shopping list." We agree. "Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (citing *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed.Cir.2001); *CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1159 (Fed.Cir.1997)). It would be improper to construe the term "order for a product" in independent claim 18 in a manner that expressly excludes an embodiment of an "order for a product" recited in dependent claim 19. Given the express recitation in dependent claim 19 and in view of the disclosure in the specification of the '791 patent, we determine the broadest reasonable construction for the term "order for a product" must include, at least, a shopping list.

In the Decision on Institution, we construed the term "order for a product" according to its plain and ordinary meaning. Dec. to Inst. 16. Petitioner proposes that term "order" is defined in a dictionary from the relevant time period, a 1982 Webster's New World Dictionary, as "a request or commission to make or supply something." Pet. Reply 20 (citing Ex. 1042, 1000); see also Ex. 1044 ¶ 121. We agree that this definition provides the ordinary and customary meaning of "order" at the relevant time period, as would be understood by one of ordinary skill in the art at the time of the invention. See *In re Translogic Tech*, 504 F.3d at 1257. Accordingly, we

determine the broadest reasonable construction of an “order for a product” is “a request or commission to make or supply a product.”

B. Principles of Law

To prevail in its challenges to the patentability of the claims, a petitioner must establish facts supporting its challenges by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. See *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

We analyze the instituted grounds of unpatentability in accordance with the above-stated principles.

C. Level of Ordinary Skill in the Art

According to Petitioner’s declarant, Michael Slinn, a person of ordinary skill in the art relevant to the ’791 patent would have “a Bachelor’s degree of Electrical Engineering” and have between two and four years of experience beyond graduation in the implementation of communications

systems and controlling these systems. Declaration of Michael O. Slinn, Ex. 1003 ¶ 27. Patent Owner's declarant, Dr. Samuel Russ, stated that Mr. Slinn's position is fairly consistent with his opinion that a person of ordinary skill in the art relevant to the '791 patent would have a bachelor's degree (or equivalent) in digital electronics, electrical engineering, computer engineering and two to five years of post-degree experience in system engineering. Declaration of Samuel Russ, Ex. 2018 ¶¶ 34–36. Thus, the parties' assessments of the level of ordinary skill in the art are roughly equivalent.

Based on our review of the '791 patent, the types of problems and solutions described in the '791 patent and cited prior art, and the testimony of Petitioner's declarant and Patent Owner's declarant, we adopt Patent Owner's definition of a person of ordinary skill in the art at the time of the claimed invention. We note that the applied prior art also reflects the appropriate level of skill at the time of the claimed invention. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

D. Asserted Obviousness In View of Cookbook Guide and Sedman

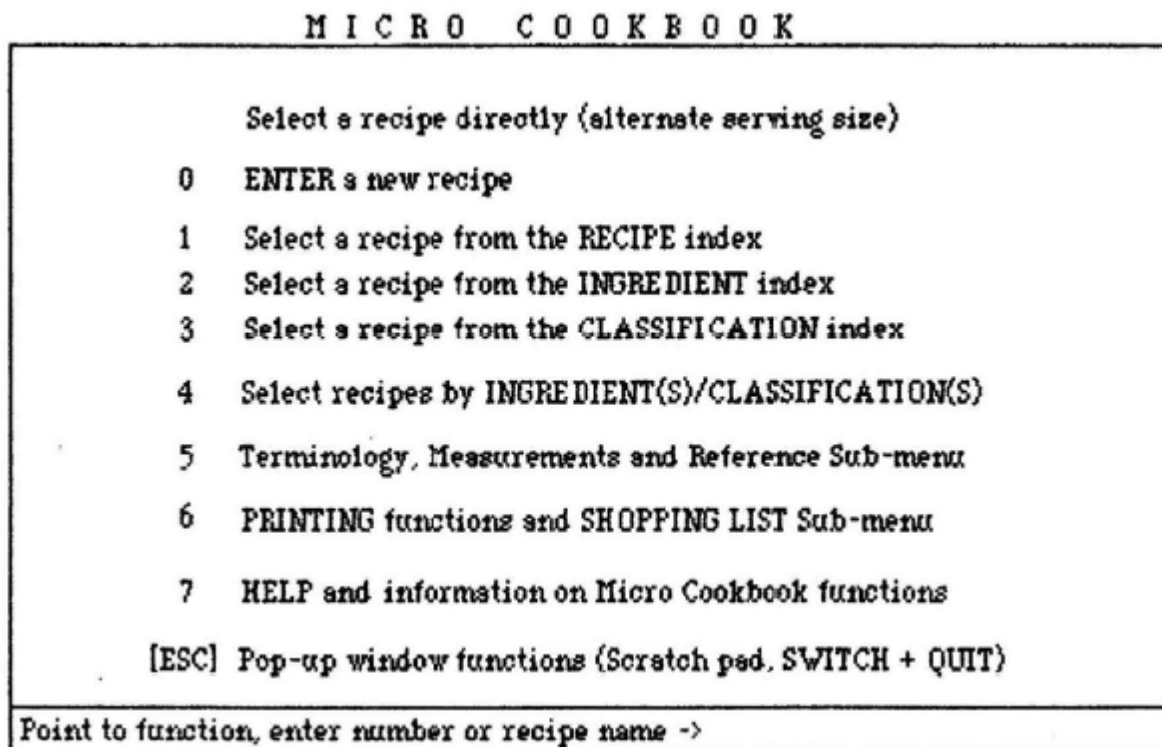
Petitioner argues that claims 18–20 would have been obvious in view of Cookbook Guide and Sedman. Pet. 20–30; Reply 5–19. Patent Owner disputes Petitioner's position, arguing that the cited references fail to teach or suggest all the elements required by the challenged claims. PO Resp. 25–36. We have reviewed the Petition, the Patent Owner's Response, and Petitioner's Reply, as well as the relevant evidence discussed in those papers and other record papers. We determine the record supports Petitioner's

contentions and adopt Petitioner's contentions discussed below as our own. For reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 18–20 would have been obvious in view of Cookbook Guide and Sedman.

1. Overview of Cookbook Guide

The Cookbook Guide is titled “Micro Cookbook, User Guide, and Reference Booklet” and provides a user guide that accompanies software, including the Micro Cookbook Software diskette and the Basic Recipes Diskette, for a “computerized cookbook series” and recipe management system to be executed on an Apple IIc or IIe computer. Ex. 1008, ii.

The figure from page 4 of the Cookbook Guide illustrates the graphical user interface of the software system, and is reproduced below:



Id. at 4. As shown above in the figure from page 4 of the Cookbook Guide, the software allows a user to select recipes and ingredients and to print those recipes and associated shopping lists. *Id.* at 4, 17. The Cookbook Guide instructs that the users may modify and save existing recipes that are provided with the software or create new recipes. *Id.* at 17, 18. Users can specify a serving size and the “Micro Cookbook can automatically adjust the various quantities of ingredients found in any recipe up or down to an alternate serving size.” *Id.* at 10. Additionally, the Cookbook Guide discloses an “Add to Shopping List” feature that enables the user to automatically generate a shopping list based on selected recipe and route the list to a printer or a “scratch pad,” which is an area of computer memory. *Id.* at 17, 22–23, 31. The Cookbook Guide discloses that the contents of the “scratch pad” can be saved on a disk file that can be read by another program or re-loaded in a later session. *Id.* at 32. “This function is especially useful if several recipe images or shopping lists are desired to be passed to a word processing program to ‘spruce’ them up, personalize them, change their format, or even communicate the file over a phone line.” *Id.*

2. Overview of Sedman

Sedman is titled “Videotex, Viewdata, and Teletext” and provides a discussion from an online conference on videotext, viewdata, and teletext. Ex. 1009, i. Sedman provides a general discussion of the “principle of telesoftware: the distribution of software via a communication medium.” *Id.* at 400. More particularly, Sedman describes how viewdata receivers carry out more complex operations than a standard terminal and, because they are connected to a telephone network, it is possible to distribute data

and programs or software to the viewdata receivers. *Id.* Sedman discloses some of the benefits of telesoftware as the following:

As the cost of hardware has been coming down rapidly there has not been a corresponding fall in the cost of developing and maintaining software, which remains labor intensive and therefore increases with inflation. However, there is an alternative way to reduce the selling price, and this is to sell many copies of the same software. *The ideal way to achieve this is to have a means of distribution whereby the software supplier can set up a single copy of a program which is updated when necessary.* Purchasers can take copies paying a usage charge each time they do so. This is precisely the facility that telesoftware can provide.

Id. (emphasis added). Sedman further describes the data format for telesoftware and implementation with systems such as Prestel and Viewdata. *Id.* at 400, 405–406.

3. *Analysis of the Asserted Obviousness of Claims 18-20 in View of Cookbook Guide and Sedman*

a. *Claim 18—Motivation to Combine*

Petitioner summarizes its challenge to the various limitations of claim 18 based on the Cookbook Guide as follows: storing information about a user (the Cookbook Guide's user-created recipe, modified recipe, user-specific serving sizes), at a memory of the receiver station (the Cookbook Guide's computer), storing a first computer program (the Cookbook Guide's Micro Cookbook recipe program), executing that program to generate an order for a product (the Cookbook Guide's shopping list) by processing the user information (the Cookbook Guide's user-created recipe, modified recipe, or -serving sizes), storing a second computer program (the Cookbook Guide's scratch pad program, the word processing

program, or another communications program), and executing the second computer program to communicate the order to a remote station (communicating the file over a phone line). Pet. 21–22 (Ex. 1003 ¶ 43).

Petitioner argues that the “only limitations of Claim 1[8] that are not disclosed by the Cookbook Guide are the limitations that require the computer programs to be ‘receiv[ed] . . . from a transmitter station.’” Pet. 22.⁵ Petitioner further contends that claim 18 of the ’791 patent would have been obvious over the Cookbook Guide and Sedman. *Id.* Specifically, Petitioner argues that Sedman discloses a specific application of the telesoftware concept, in which software is distributed via a communication medium, such as a telephone. *Id.* (citing Ex. 1009, 400). Furthermore, Petitioner argues that a person of ordinary skill in the art would have been motivated to deliver the shopping list generation and word processing software described in the Cookbook Guide via the telephone lines as described in Sedman. *Id.* at 24. As a rationale for the combination, Petitioner cites to the teachings in Sedman that that the supplier benefits from having to only create a single copy, rather than thousands of copies of the program. *Id.* (citing Ex. 1009, 400; Ex. 1003 ¶ 51).

Patent Owner argues that a person of ordinary skill in the art would not have been motivated to combine the Cookbook Guide and Sedman to

⁵ Claim 18 requires: “receiving, at said receiver station, a first computer program transmitted from a transmitter station;” and “receiving, at said receiver station, a second computer program transmitted from a said transmitter station.”

distribute the Micro Cookbook software via a communication medium.

PO Resp. 26.

(1) *List of Standard Equipment*

Patent Owner argues that the Cookbook Guide includes a list of standard equipment, which does not include a phone or cable line, but instead requires a Micro Cookbook software diskette and a recipe diskette. *Id.* Patent Owner's Declarant Dr. Russ adds that the equipment list fails to include any communication media, such as modems, although they existed when the Cookbook was published. Ex. 2018 ¶ 91. Contrary to Patent Owner's arguments, the Cookbook Guide expressly contemplates the idea of "communicat[ing] the file over a phone line." Ex. 1008, 32. Furthermore, the Cookbook Guide discloses a user registration form that requests the user of the Cookbook Guide to provide a "modem type" and "interface." Ex. 1008, 43; *see also* Ex. 2015, 106 (Dr. Neuhauser describing disclosures in the Cookbook Guide relating to modems and use of a phone line). Thus, although not mandatory for the use of the Cookbook Guide software, the Cookbook Guide contemplates the use of a modem and communicating a file over a phone line.

In addition to the fact that the Cookbook Guide contemplates the use of a modem and communicating a file over a phone line, we are not persuaded by Patent Owner's arguments because they attack the references individually, rather than in combination. Nonobviousness cannot be established by attacking the references individually when a challenge is predicated upon a combination of prior art disclosures. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Petitioner

argues that it does not merely rely upon disclosure of a phone line the Cookbook Guide as a motivation to combine. Pet. Reply 10. Petitioner concedes that the Cookbook Guide does not expressly disclose the “receiving . . . from a transmitter station” limitations of claim 18, but relies upon the combination of the Cookbook Guide with Sedman as teaching these limitations. Pet. 22. Specifically, Petitioner argues that Sedman describes the numerous benefits of providing software via telephone, including that the supplier of the software only has to create a single copy, rather than thousands of copies of the program, and that updates could be provided instantaneously without incurring the cost of creating, packaging, and shipping new disks. *Id.* at 25 (citing Ex. 1009, 400; Ex. 1003 ¶ 51). We determine the record supports Petitioner’s contentions and we adopt them as our own.

(2) *Transfer Speed*

Patent Owner also argues the combination of the Cookbook Guide and Sedman is improper because the transfer of software over a modem was so slow in 1987 that it would have taken hours to download the Mirco Cookbook software and the cost for downloading programs would have been prohibitive because users were charged for connection time on the Prestel system. PO Resp. 27 (citing Ex. 2018 ¶ 92). Patent Owner further argues that distribution of a program via floppy disk was generally considered advantageous from a cost and security perspective. *Id.* (citing Ex. 2018 ¶ 92).

While cost reduction may provide motivation, merely because something has a high cost does not show unobviousness. *See Dystar*

Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick, 464 F.3d 1356, 1368 (Fed. Cir. 2006) (making something “stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient” constitutes a “common-sensical . . . motivation”). Rather, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 550 U.S. at 417. Additionally, Mr. Slinn testifies that the benefits of electronically distributing software were widely recognized and well known to those of skill in the art. Ex. 1003 ¶ 51 (citing Ex. 1013, 25 (noting that “[r]ecording thousands of copies of a particular software item, ensuring their accuracy and robustness, and making them small enough to store easily and cheap to obtain is a daunting task,” and that telesoftware avoids the expensive and time-consuming problems of distributing pre-recorded software)). Dr. Neuhauser also testifies that Dr. Russ offers no basis for the opinion that it would have taken hours to download the Micro Cookbook Guide, and Dr. Neuhauser provides the basis for his estimation that it would have taken around 30 minutes to download the Micro Cookbook Guide at the 20K byte rate disclosed in Sedman in 1980. Ex. 1044 ¶ 70 (estimating 240K bytes could be downloaded an hour using the 20K bytes per five minutes disclosed in Sedman, thus downloading the 128K byte Micro Cookbook Guide in around 30 minutes).

Furthermore, Dr. Neuhauser testifies that between 1980, when Sedman published, and the relevant time frame of September 11, 1987, modem speeds had at least doubled, thereby reducing the estimated

download time to around 15 minutes. Ex. 1044 ¶ 70. Dr. Neuhauser also states that software like the Micro Cookbook Guide was routinely delivered via telesoftware at the relevant time. Ex. 1044 ¶ 70 (citing Ex. 1032, 27; Ex. 1046, 9). One reference relied upon by Dr. Neuhauser provides an excerpt from the May 1984 edition of Microcomputing magazine describing CompuServe's Vidtex telecommunications package that allows users to transfer programs from CompuServe's library to their own systems. Ex. 1032, 27; *see* Ex. 1044 ¶ 70. Additionally, Dr. Neuhauser relies upon a page from the February 1985 edition of Creative Computing magazine that also describes the use of CompuServe's Vidtex system by Apple, Commodore, and Tandy/Radio Shack personal computers for "error-free downloading from CompuServe's extensive software libraries." Ex. 1046, 9; *see* Ex. 1044 ¶ 70. Accordingly, Petitioner argues that a person of ordinary skill in the art would have known about telesoftware as described by Sedman and would have been motivated to deliver the computer programs described in the Cookbook Guide in that manner. Pet 22–25; Ex. 1003 ¶¶ 50–52; Pet. Reply 9–10; Ex. 1044 ¶ 70. We determine the record supports Petitioner's contentions and we adopt them as our own.

(3) *Availability of Telesoftware*

Patent Owner also argues that there was no Internet nor AOL available in 1984, and Apple did not support online services until May 1988; thus, Patent Owner argues that it would have been difficult for the Micro Cookbook software to have been distributed to Apple II computers via an online connection. PO Resp. 27 (citing Ex. 2018 ¶ 92). Petitioner counters this argument by relying upon Dr. Neuhauser's testimony and the supporting

documentation (Exs. 1032 and 1046), discussed above regarding the ability of Apple and Commodore computers to remotely download a variety of software programs from a variety of suppliers through services like Vidtex. Pet. Reply, 13–14 (citing Ex. 1044 ¶ 80, Ex. 1032, 27, Ex. 1046, 9).

Petitioner also argues that software and hardware existed at the time to adapt personal computers, like Apple computers, to operate on the Prestel network. Pet. Reply 14 (citing Ex. 1044 ¶80, Ex. 1035, 124). We determine the record supports, and adopt as our own, Petitioner’s contentions that a person of ordinary skill in the art would have known about telesoftware as described by Sedman and would have been motivated to deliver the computer programs described in the Cookbook Guide in that manner.

(4) *Whether Sedman Teaches Away*

Patent Owner also argues that Sedman teaches away from proposed combination because Sedman discloses implementation in the MicroCobol computer language, suitable for an intelligent business viewdata terminal, and yet the Micro Cookbook software disclosed in the Cookbook Guide is for use on an Apple II, a personal computer. PO Resp. 28 (citing Ex. 1009, 401–402). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Additionally, a reference does not teach away if it does not “‘criticize, discredit, or otherwise discourage’ investigation into the invention claimed.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) (quoting *In re*

Fulton, 391 F.3d 1195, 1201 (Fed.Cir.2004)). Petitioner counters that Sedman does not criticize the use of telesoftware for consumer applications but actually expressly teaches the use of telesoftware for consumer applications. Pet. Reply 16–17 (citing Ex. 1009, 411 (“the potential of telesoftware for the distribution of home [] programs will be enormous.”)). Accordingly, we are not persuaded that Sedman’s discussion of an implementation in MicroCobol would discourage a person of ordinary skill in the art from an implementing telesoftware on a personal computer, as the MicroCobol implementation was just one embodiment. Furthermore, Petitioner relies upon Sedman for its general teachings regarding the distribution of software via a communication medium, not the specific MicroCobol implementation disclosed in Sedman. See Pet. 22.

(5) *MicroCobol*

Patent Owner argues that sending the Micro Cookbook software via Sedman’s system would have required the Micro Cookbook software to be rewritten in MicroCobol and users of the modified Micro Cookbook software would have to acquire a Prestel viewdata terminal rather than an Apple II computer. PO Resp. 28–29 (citing Ex. 2018 ¶ 94). Petitioner argues that Patent Owner’s premise is mistaken because telesoftware was available for many programs, including MicroCobol. Pet. Reply 17 (citing Ex. 1044 ¶¶ 80, 82). Furthermore, Petitioner argues Patent Owner’s assertion that a user would have to acquire a Prestel viewdata terminal rather than an Apple II computer is incorrect because, as Dr. Neuhauser testifies, it was possible at the time to adapt personal computers, including Apple computers, to operate on the Prestel network. Pet. Reply 17 (Ex. 1044 ¶ 80,

Ex. 1035, 124). In fact, the May 1983 issue of Creative Computing relied upon by Dr. Neuhauser to support his testimony states:

To use Prestel, you must purchase a special terminal that supports the display products, or *buy hardware or software product to adapt a personal computer to Prestel*. Currently, the Apple II and TRS-80 Model II can be adapted for black and white display simply by running special software.

Ex. 1035, 124 (emphasis added). In view of this testimony and evidence, we are not persuaded by Patent Owner's argument that sending the Micro Cookbook software via Sedman's system would have required the Micro Cookbook software to be rewritten in MicroCobol and that users of the modified Micro Cookbook software would have to acquire a specialized Prestel viewdata terminal.

(6) *Conclusion Regarding the Motivation to Combine Cookbook Guide and Sedman*

We have reviewed Petitioner's analysis and supporting evidence regarding the proposed ground of obviousness based on the Cookbook Guide and Sedman and Patent Owner's arguments and evidence in opposition. Upon review, we determine Petitioner has presented sufficiently an "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" and we adopt its contentions as our own. *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)) (internal quotation marks omitted).

b. *Claim 18: Teaching or Suggestion of Every Claim Element*

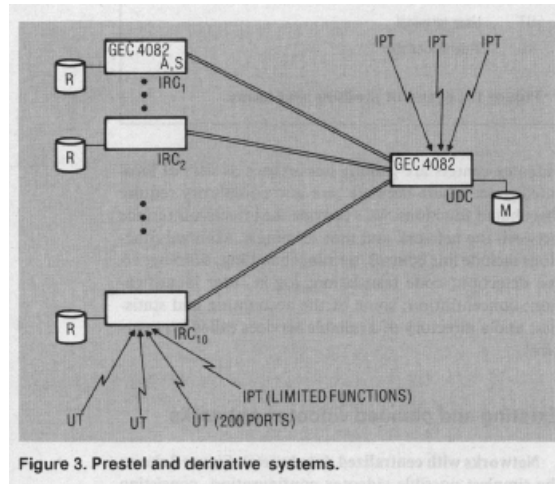
Patent Owner argues that, assuming the Cookbook Guide could be combined with Sedman, the combination fails to teach or suggest every element of claims 18–20. PO Resp. 31.

(1) “*transmitter station*”

Patent Owner argues that claim 18 requires the same transmitter station to transmit the first computer program and the second computer program to the receiver station. PO Resp. 31. Specifically, Patent Owner argues that according to Petitioner’s claim mapping, the Micro Cookbook Software (associated with the first computer program) and the word processing program (associated with the second computer program) would have to be transmitted from the same transmitter station. PO Resp. 31–32. Patent Owner argues that this would not have been the case because the Micro Cookbook software was distributed by Virtual Combinatics, Inc. and the Apple IIc or Apple IIe computer running the Micro Cookbook software could have used a word processing program like AppleWorks 1.0, distributed by Apple Inc. PO Resp. 32 (citing Ex. 2018 ¶ 103).

Petitioner rebuts Patent Owner’s arguments by pointing out that in the relied upon telesoftware systems in 1987, all of the software a user received would be obtained from a single local host computer, i.e. a single transmitter station. Pet. Reply 6 (citing Ex. 1044 ¶¶ 94–96). Dr. Neuhauser testifies that for Prestel, users connect to a local Information Retrieval Computer (“IRC”), which maintains its own copy of all system data including all software. Ex. 1044 ¶ 94 (citing Ex. 1043 at 10). To support his testimony, Dr. Neuhauser relies upon “Videotex Networks” by A. J. S. Ball, et al., IEEE Computer (December 1980) (“Ball”) (Ex. 1043). *See id.* Figure 3 of

Ball illustrates an embodiment of the Prestel system and is reproduced below:



Ex. 1043, Fig. 3. Ball discloses the following:

The network shown in Figure 3, designed to serve several thousand users, is currently used in British Telecommunications' Prestel and its derivatives. The update center, UDC, maintains a master data base and controls the interaction with information providers. A number of information retrieval computers, IRCs, are connected to the UDC through leased synchronous lines; all IRCs maintain identical copies of the master data base and provide 200 dial-up ports for user terminals.

Ex. 1043, 10. In view of this disclosure in Ball, Dr. Neuhauser testifies that even programs created by separate companies were received from the same transmitter station—the host computer to which the terminal connects.

Ex. 1044 ¶ 96. Based on the foregoing, we determine the record supports Petitioner's contention that in a combination of the Cookbook Guide and Sedman, the first program and the second program would have been sent from the same transmitter station.

Patent Owner also argues that if even one were to assume that both programs originated from the same source, the next question is to consider whether the programs would have been combined into a more efficient single download. PO Resp. 33 (citing Ex. 2018 ¶ 105). Petitioner counters that Patent Owner's argument is irrelevant because claim 18 does not require the first computer and second computer program to be sent in separate transmissions. Pet. Reply 7 (citing Ex. 1044 ¶ 97). We agree. Claim 18 merely recites "receiving, at said receiver station, a first computer program transmitted from a transmitter station" and "receiving, at said receiver station, a second computer program transmitted from a said transmitter station." Nothing in these claim recitations require the programs to be transmitted separately.

(2) *"communicate said order for a product"*

Patent Owner argues that Petitioner's proposed combination fails to teach the step of "executing said second computer program using said processor, which causes said receiver station to communicate said order for a product to a remote station" because Patent Owner argues that the word processing programs at the time of the publication of the Cookbook Guide in 1984 did not include communication capabilities. PO Resp. 33–34 (citing Ex. 2018 ¶ 108; Ex. 2013, 2). Specifically, Dr. Russ testifies that AppleWorks 1.0 program did not have any communications capability. Ex. 2018 ¶ 108 (citing Ex. 2013, 2). Dr. Russ cites an article titled "The History of Word Processing Software," as support for his statement that AppleWorks 1.0 program did not have any communications capability. See *id.* The article provides a bullet point list describing various word

processing programs and provides the following description regarding AppleWorks 1.0:

1984, AppleWorks 1.0 for Apple II: AppleWorks was one of the first integrated office suites for personal computers, featuring a word processor, spreadsheet, and database merged into a single program.

Ex. 2013, 2. The above description from the article titled “The History of Word Processing Software” does not indicate that AppleWorks 1.0 did not have the communications capability, but merely provides a general description that it “features” a word processor, spreadsheet, and database. *See id.*

Petitioner further argues that whether AppleWorks 1.0 had communications capability in 1984 is irrelevant, as the relevant inquiry for claims 18-20 of the '791 patent is the state of the art on September 11, 1987. Pet. Reply 8. According to Petitioner, neither Patent Owner nor its expert dispute that by 1987, word processing programs with communications capabilities existed. *Id.* (citing Ex. 1028, ix, 5, 133; Ex. 1044 ¶ 101). For example, Dr. Neuhauser testifies that the PaperClip II program for the Commodore 128, which supported Micro Cookbook, included word processing and communications functions. Ex. 1044 ¶ 101 (citing Ex. 1028, ix, 133–160). In fact the cited PaperClip Manuel provides 28 pages of discussion of the “Telecommunications” capabilities of its word processing program. Ex. 1028, ix, 133–160.

In addition to citing the existence of word processing programs with communications capability at the relevant time, Petitioner notes that the Cookbook Guide expressly states that the generated shopping list could be

“passed to a word processing program to . . . communicate the file over a phone line.” Pet. Reply 7 (quoting Ex. 1008, 32). Thus, Petitioner argues the prior art teaches the disputed limitation. *Id.* at 8 (citing Ex. 1044 ¶ 99). Based on the foregoing, we determine the record supports Petitioner’s contention the Cookbook Guide in view of Sedman teaches “executing said second computer program using said processor, which causes said receiver station to communicate said order for a product to a remote station,” recited in claim 18.

(3) *“generate an order for a product”*

Patent Owner argues that the Cookbook Guide in view of Sedman fails to teach “executing said first computer program using a processor at said receiver station to generate an order for a product by processing said information about a user of said receiver station,” required in claim 18. PO Resp. 34–35. Patent Owner argues that the claim element “order for a product” should be interpreted as a “buyer’s agreement to purchase a product or service sent from the buyer to the seller.” *Id.* at 35. Patent Owner further argues that the Cookbook Guide’s shopping list does not correspond to the claimed “order,” because it does not convey that the user is agreeing to purchase the item on the shopping list. *Id.* (citing Ex. 2018 ¶ 110). As discussed above, we do not adopt Patent Owner’s narrow construction of an “order” as a buyer’s agreement because, among other things, it is contrary to claim 19 express requirement that “said order comprises a shopping list.” Thus, the definition of the claimed “order” must include at least a “shopping list.” See claim 19. The Cookbook Guide discloses that the Micro Cookbook software generates a shopping list

“containing the ingredients for the selected recipes.” Pet. 28 (quoting Ex. 1008, 16–17, 22–23). Based on the foregoing, we determine the record supports Petitioner’s contention that the required “order for a product” is taught by the disclosure in the Cookbook Guide of the user’s request for a shopping list. *Id.* (citing Ex. 1008, 16–17, 22–23). Furthermore, and more generally, based on the foregoing, we determine the record supports Petitioner’s contentions that the Cookbook Guide in view of Sedman teaches or suggests the limitations of claim 18. *See* Pet. 29–30.

c. Claims 19 and 20

Claim 19 depends from claim 19 and requires that “said order comprises a shopping list.” Similar to claim 18 discussed above, Petitioner alleges that this claim limitation is taught by the disclosure discussed above in the Cookbook Guide regarding the generation of a shopping list. Pet. 29 (Ex. 1008, 17, 32). Claim 20 depends from claim 18 and recites that “said transmitter station and said remote station comprise different remote stations.” Petitioner alleges that Sedman teaches receiving software via telephone lines from a central computer. *Id.* (citing Ex. 1009, 400). Furthermore, Petitioner alleges that this transmitter station for receiving software would be different from the location to which the use of Micro Cookbook software would be sending their shopping list. *Id.* at 29–30.

Patent Owner does not present separate arguments for claims 19–20. *See* generally PO Resp. 25–36; *see* 37 C.F.R. § 42.23(a). Based on the foregoing, we determine the record supports Petitioner’s contentions that the Cookbook Guide in view of Sedman teaches or suggests the limitations of claims 19 and 20. *See* Pet. 29–30.

d. Conclusion

We have reviewed Petitioner's analysis and supporting evidence regarding the proposed ground of obviousness based on Cookbook Guide Sedman, as explained by Dr. Neuhauser, and Patent Owner's arguments contesting Petitioner's challenges. Based on the foregoing discussion and the record, including the secondary evidence of nonobviousness discussed below, Petitioner demonstrates beyond a preponderance of the evidence that claims 18–20 would have been obvious in view of Cookbook Guide and Sedman.

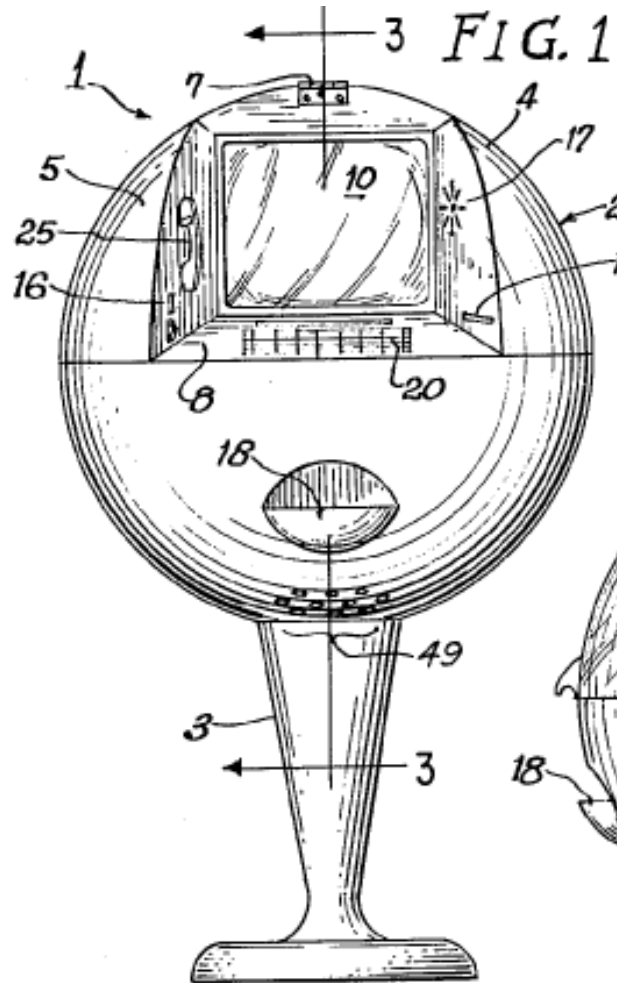
E. Asserted Obviousness In View of Lockwood and Sedman

Petitioner argues that claims 18–20 would have been obvious in view of Lockwood and Sedman. Pet. 30–39; Pet. Reply 20–23. Patent Owner disputes Petitioner's position, arguing that the cited references fail to teach or suggest all the elements required by the challenged claims. PO Resp. 36–46. We have reviewed the Petition, the Patent Owner's Response, and Petitioner's Reply, as well as the relevant evidence discussed in those papers and other record papers. We determine the record supports Petitioner's contentions discussed below and adopt Petitioner's contentions discussed below as our own. For reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 18–20 would have been obvious in view of Lockwood and Sedman.

1. Overview of Lockwood

Lockwood is titled "Self-Service Terminal" and discloses a terminal for use in viewing flight schedules, making flight reservations, and

purchasing tickets. Ex. 1015 at Abstract. Figure 1 of Lockwood, illustrating the self-service terminal, is reproduced below:



As shown above in Figure 1, Lockwood discloses self-service terminal 1 having CRT display 10, keyboard 20, and data processor 30 that operates from a variety of data sources 26. *Id.* at 2:39–3:9. Self-service terminal 1 also includes voice and audio communication unit 24 that accepts commands from data processor 30 and “connects a typical telephone handset 25 to a telephone line or similar voice grade communication technique via a modem 38.” *Id.* at 6:45–53. Lockwood discloses that self-service terminal 1

provides multiple airline ticketing services, including flight schedules, a reservations sequence, and a flight ticket delivery program. *Id.* at 7:41–8:18. The reservation sequence begins with a display on CRT display 10 requesting the flight number, number of passengers, and other information such as smoking and non-smoking section preferences. *Id.* at 7:63–66. The central processor generates a request message sent via the audio communication link to a remote reservation computer. *Id.* at 7:68–8:2. The flight ticket delivery program fetches the prices of the fare from the mass storage, displays the price, and requires payment of the fare by the customer with a credit card. *Id.* at 8:7–10. “The introduction of a credit card into the credit card reader triggers a sequence during which the account number and the amount being charged are sent to a remote credit center where the credit line is verified and the transaction is recorded.” *Id.* at 8:10–15. After an acceptance message, the CPU displays an image of the flight ticket and the corresponding ticket is printed by a hard copy printer. *Id.* at 8:15–18.

2. *Analysis of Asserted Obviousness Ground in View of Lockwood and Sedman*

a. *Claim 18*

Petitioner summarizes its challenge to the various limitations of claim 18 based on Lockwood as follows: storing information about a user (Lockwood’s desired flight number, number of passengers, smoking preferences), at the computer, storing a first computer program (Lockwood’s reservations program) in memory, executing that program to generate an order for a product (Lockwood’s flight reservation) by processing the stored information, storing a second computer program (Lockwood’s flight ticket delivery program) in memory, and executing the second computer program

to communicate the order to a remote station (Lockwood's remote credit center). Pet. 32 (citing Ex. 1003 ¶ 61). With respect to the "receiving . . . from a transmitter station" limitations in claim 18, Petitioner alleges that they would have been obvious in view of Lockwood and Sedman. Pet. 34. Similar to the challenge discussed above for the Cookbook Guide, Petitioner argues that Sedman discloses an application of the telesoftware concept, in which software is distributed via a communication medium, such as a telephone. *Id.* (citing Ex. 1009, 400). Furthermore, Petitioner argues that it would have been obvious to a person of ordinary skill in the art that the reservation program and flight ticket delivery program disclosed in Lockwood could be downloaded to the self-service terminal over its telephone line, consistent with Sedman's disclosure of telesoftware. Pet. 34 (citing Ex. 1003 ¶ 64). Specifically, Dr. Neuhauser states that Sedman discloses the concept of telesoftware, "the distribution of software via a communication medium, in this case the telephone" (Ex. 1009, 400) and given that Lockwood describes a system in which data and programs may be received from a remote computer via a telephone line (Ex. 1015, Abstract), it would have been obvious to a person of ordinary skill in the art that Lockwood's reservation program and flight ticket delivery program could be downloaded over the telephone line. *See* Ex. 1003 ¶ 64 (citing Ex. 1009, 400; Ex. 1015, Abstract). As a rationale for the combination, Petitioner argues that one of the stated purposes of the Lockwood terminal is to provide faster access to information and services, and it would have been obvious to a person of ordinary skill in the art that the loading of programs into the Lockwood terminals would have been much more efficiently done

by loading software remotely, as in Sedman. Pet. 39 (citing Ex. 1015, 1:54–56, Ex. 1003 ¶ 73).

(1) *Motivation to Combine*

Patent Owner argues that a person of ordinary skill in the art would not have been motivated to modify the Lockwood system to receive the application program via Sedman’s telesoftware system. PO Resp. 36–38 (Ex. 2018 ¶ 119). Specifically, Patent Owner argues that “[f]or the same reasons as discussed above with respect to the combination of the Micro Cookbook and Sedman systems,” a person of ordinary skill in the art would not combine Lockwood and Sedman. *Id.* at 37. More particularly, much like the arguments against the Cookbook Guide combination, Patent Owner argues that a person of ordinary skill in the art would not have been motivated to modify the specialized self-service terminal of Lockwood to conform to the Prestel terminal described in Sedman, rewrite Lockwood’s application program in MicroCobol as taught by Sedman, and download the Lockwood applications via the Prestel system as it would have been prohibitively expensive and time intensive. *Id.* (citing Ex. 2018 ¶ 115–117).

Similar to the arguments above with respect to the combination of the Cookbook Guide and Sedman, we are equally unpersuaded by these same arguments against the combination of Lockwood and Sedman. Contrary to Patent Owner’s argument, Petitioner’s proposed combination does not necessarily require that the Lockwood system be modified to implement a Prestel telesoftware system but rather that it “would have been obvious to a person of ordinary skill in the art that the ‘reservation program’ and the ‘flight ticket delivery program’ could be downloaded over the telephone

line, consistent with Sedman's disclosure of telesoftware." Pet. 34 (citing Ex. 1003 ¶ 64). As noted by Petitioner (Pet. 33), Lockwood expressly discloses that (a) the operating program can be updated remotely (Ex. 1015, claim 8), (b) information stored on the mass storage unit can be updated remotely (Ex. 1015, 3:24–25), (c) the remote interface allows the programming of additional features and capabilities (Ex. 1015, 4:67–5:6), and (d) the capabilities of the terminal could be adapted via software changes (Ex. 1015, 8:40–42). Dr. Neuhauser testifies that, in accordance with this disclosure, the Lockwood system already has the remote central system, the modem link, and the on-line mass storage; thus, the program code of Lockwood would not need to be rewritten in MicroCobol and modified to work with the Prestel format but that a person of ordinary skill in the art would have simply used the disclosure of telesoftware in Sedman as a means of downloading the program code. Ex. 1044 ¶¶ 112–113. Alternatively, Dr. Neuhauser states that there was hardware and software available at the time to convert a computer to be able to function on the Prestel system. *Id.* (citing Ex. 1035).

As to Patent Owner's arguments that downloading the Lockwood applications via telesoftware would have been prohibitively expensive and time intensive, Dr. Neuhauser testifies that there is a clear motivation to consider remote updating capability for the terminals of Lockwood because they are intended to be remotely located among thoroughfares, where use of floppy disk would require a technician visit each remote terminal. *Id.* ¶ 115. Furthermore, Dr. Neuhauser testifies that Lockwood discloses remotely updating frequently changing information like hotel occupancy,

flight schedules, and weather; thus, Dr. Neuhauser testifies that a person of ordinary skill in the art would apply the same considerations to software updates. Ex. 1044 ¶ 115 (citing Ex. 1015, 3:17–25). Upon review, we determine Petitioner has presented sufficiently an “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” and we adopt its contentions as our own. *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)) (internal quotation marks omitted).

(2) *Teaching or Suggestion of Every Claim Element*

Patent Owner argues that Lockwood in view of Sedman fails to teach or suggest the step of “executing said first computer program using a processor at said receiver station to generate an order for a product,” as recited in claim 18. PO Resp. 38. Specifically, Patent Owner argues that Lockwood reservation routine does not generate an “order for a product” because a “flight reservation does not constitute ‘an order for a product.’” PO Resp. 39. As discussed above, we do not adopt Patent Owner’s proposed narrow construction of an “order for a product” as “a buyer’s agreement to purchase a product or service sent from the buyer to the seller,” but rather construe “order for product” as “a request or commission to make or supply a product.” Petitioner argues that Patent Owner admits that the Lockwood’s reservation program generates a request for a seat. Pet. Reply 20 (citing PO Resp. 39 (“[a] reservation is simply a request for a seat.”)). Therefore, Petitioner argues that Lockwood’s flight reservation constitutes the claimed “order for a product.” *Id.* We know from claim 19, that an “order for a product” must be as broad as a “shopping list.” Patent Owner

argues that Lockwood's flight reservation is not an order because the "customer has not purchased anything." PO Resp. 39–40 (citing Ex. 2018 ¶ 122). We are not persuaded by Patent Owner's argument because an "order for a product" does not require the transaction for a purchase to be complete but rather simply that a request has been made to make or supply a product. As Dr. Neuhauser states, Lockwood's flight reservation is more of a commitment to purchase than a shopping list, as it conveys the customer's interest in purchasing a particular seat on a particular flight. Ex. 1044 ¶ 120 (citing Ex. 1015, 7:62–8:6). Based on the foregoing, we determine the record supports Petitioner's contention that the Lockwood in view of Sedman teaches "executing said first computer program using a processor at said receiver station to generate an order for a product," as recited in claim 18.

Additionally, Patent Owner argues that Sedman teaches away from combining its system with a flight reservation system because Sedman states that "Prestel is not sufficiently responsive to accept orders for items such as in a seat reservation system." PO Resp. 37–38 (Ex. 1009, 407).

Dr. Neuhauser testifies that this statement in Sedman does not teach away from the proposed combination because Lockwood would only being make use of a system like Prestel to download program code, not to execute the flight reservation program. Ex. 1044 ¶ 117. Dr. Neuhauser further states that the programs running on the Lockwood terminal would be used without telesoftware or Prestel to generate and communicate orders in a seat reservation system. A more complete context of the statement in Lockwood is provided below:

Processing Response Frames. For example, with the order entry system mentioned earlier the information provider's machine could automatically process the orders, producing invoices, dispatch notes etc and update central stock levels. Note that one should try not to develop this idea too far: Prestel is not sufficiently responsive to accept orders for individual items such as in a seat reservation system. On the other hand, it is much better than mail order.

Ex. 1009, 407. As shown above, Lockwood's statement provides that a Prestel system could be used to process orders, produce invoices, and update central stock levels automatically, but that Prestel is "not sufficiently responsive to accept orders for individual items . . . in a seat reservation system." *See id.* As identified by Dr. Neuhauser, nothing in this disclosure teaches away from using Prestel, or any other telesoftware system, for simply downloading software programs. *See id.* In fact, the premise of the Sedman reference is to highlight the benefits of using telesoftware to download software programs. Ex. 1009, 400 ("*The ideal way to achieve this is to have a means of distribution whereby the software supplier can set up a single copy of a program which is updated when necessary . . . This is precisely the facility that telesoftware can provide.*") (emphasis added). Accordingly, we are not persuaded that Sedman teaches away from using telesoftware to download computer programs.

Patent Owner also argues that Lockwood in view of Sedman fails to teach or suggest the step of "executing said second computer program using said processor, which causes said receiver station to communicate said order for a product to a remote station." PO Resp. 41. Specifically, Patent Owner argues that claim 18 requires the order communicated by the receiver station to be same order generated by executing the first program. PO Resp. 41–42.

Additionally, Patent Owner argues that what is generated by execution of the first program (the flight reservation) is not what is communicated to the remote credit center by execution of the alleged second program (the credit card account number and amount being charged). PO Resp. 43. More particularly, Patent Owner argues that the flight reservation includes the flight number, number of passengers, and other information such as smoking or non-smoking section preferences but the information sent to the remote credit center includes the account number and amount being charged. PO Resp. 44 (citing Ex. 1015, 7:62–66, 8:10–15).

Petitioner counters that a person of ordinary skill in the art would recognize that, contrary to Patent Owner's arguments, Lockwood discloses generating an order for a seat and communicating that order to the credit center. Pet. Reply 21 (citing Ex. 1044 ¶124; Ex. 1015, 8:7–15, Ex. 1003 ¶ 61). Dr. Neuhauser testifies that Lockwood discloses that the passenger can move directly from the reservation process to the ticket generation process and in the ticket generation process the passenger can request a printed ticket without entering further information. Ex. 1044 ¶ 126 (citing Ex. 1015, Figs. 9–10). As noted in the Decision on Institution, the ordered flight reservation is the subject of and, in fact, the reason for the credit card transaction disclosed in Lockwood. Ex. 1015, 8:7–15. Dr. Neuhauser testifies that a person of ordinary skill in the art would understand that at least the name and flight number from the reservation process must be passed to the credit card processor, along with payment amount and the credit card number, so that the credit card processor has sufficient information to identify the customer and the purchase to the airline so that

the payment can be applied to the correct airline and proper flight. Ex. 1044 ¶ 126. In fact, Lockwood discloses that the “remote credit center” receives sufficient information to not only verify the credit line but also such that the “transaction is recorded.” Ex. 1015, 8:13–15. Furthermore, the “order for a product” (the flight reservation) is the reason for the execution of the “flight ticket delivery program” that processes the requester’s credit card such that “the credit line is verified and the transaction is recorded” by the “remote credit center.” Ex. 1015, 8:7–15. Accordingly, we are not persuaded by Patent Owner’s argument that the flight reservation generated by execution of the first program is not what is communicated to the remote credit center by execution of the alleged second program. Based on the foregoing, we determine the record supports Petitioner’s contention that Lockwood in view of Sedman teaches “executing said second computer program using said processor, which causes said receiver station to communicate said order for a product to a remote station,” as recited in claim 18.

Patent Owner also argues that Lockwood fails to teach a first computer program and a second computer program because the Lockwood system has a single program with a reservation subroutine and a ticket subroutine. PO Resp. 45 (citing Ex. 1015, Fig. 9). Based on this argument, Patent Owner further argues that Lockwood teaches away from the use of multiple, separate programs. *Id.* As Petitioner identifies, Patent Owner’s argument is contrary to Lockwood’s express disclosure of a separate and distinct “flight schedule program” and a “flight ticket delivery program.” Pet. Reply 22 (citing Ex. 1015, 7:41–8:18, Ex. 1044 ¶ 129, Ex. 1003 ¶58). Patent Owner fails to cite to any disclosure in Lockwood to support its

arguments but merely cites to Figure 9. Therefore, we are not persuaded that Figure 9 clearly establishes that the reservation portion and ticket portion are merely subroutines of the same program. *See* Pet. Reply 22. We are not persuaded by Patent Owner's arguments that Lockwood merely discloses a single program in view of the express disclosure in Lockwood of a "flight schedule program" and a "flight ticket delivery program." Ex. 1015, 7:41–8:18. Accordingly, we determine the record supports Petitioner's contention that the Lockwood discloses a "first computer program" and a "second computer program," as recited in claim 18.

Based on the foregoing, we determine the record supports Petitioner's contentions that the Lockwood in view of Sedman teaches or suggests the limitations of claim 18.

b. Claim 19

Claim 19 depends from claim 18 and requires that "said order comprises a shopping list." Similar to claim 18 discussed above, Petitioner alleges that this claim limitation is taught by the disclosure in Lockwood of the generation of an order for airline tickets, which would include seat number, section, and quantity of tickets. Pet. 44–45 (citing Ex. 1015, 7:62–66). Furthermore, Petitioner argues that Lockwood teaches that its system could be used for generating orders for other goods. *Id.* at 45 (citing Ex. 1015, 8:42–48). Specifically, Lockwood discloses that its systems could be used to "sell a variety of services and to facilitate financial transactions," including "catalogue sales from a central warehouse." Ex. 1015, 8:42–48.

Patent Owner does not present separate arguments for claim 19. *See generally* PO Resp. 36–46; *see* 37 C.F.R. § 42.23(a). Based on the

foregoing, we determine the record supports Petitioner's contentions that Lockwood in view of Sedman teaches or suggests the limitations of claim 19.

c. Claim 20

Claim 20 depends from claim 18 and requires that "said transmitter station and said remote station comprise different remote stations." Petitioner argues that a transmitter station, the remote control center in Lockwood, would be the source of the received software updates transmitted via Sedman's telesoftware. Pet. 38 (citing Ex. 1015, 3:17–25, 4:43–47; Ex. 1013, 25–26). Furthermore, Petitioner argues that a separate remote station, the remote credit center in Lockwood, would receive the order. *Id.* (citing Ex. 1015, 8:10–15). Patent Owner does not present separate arguments for claim 20. *See generally* PO Resp. 36–46; *see* 37 C.F.R. § 42.23(a). Based on the foregoing, we determine the record supports Petitioner's contentions that Lockwood in view of Sedman teaches or suggests the limitations of claim 20.

d. Conclusion

We have reviewed Petitioner's analysis and supporting evidence regarding the proposed ground of obviousness based on Cookbook Guide Sedman, as explained by Dr. Neuhauser, and Patent Owner's arguments contesting Petitioner's challenges. Based on the foregoing discussion and the record, including the secondary evidence of nonobviousness discussed below, Petitioner demonstrates beyond a preponderance of the evidence that claims 18–20 would have been obvious in view of Lockwood and Sedman.

F. Secondary Considerations of Non-Obviousness

Factual inquiries for an obviousness determination include secondary considerations based on objective evidence of nonobviousness. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). The totality of the evidence submitted may show that the challenged claims would not have been obvious to one of ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). Secondary considerations may include any of the following: long-felt but unsolved needs, failure of others, unexpected results, commercial success, copying, licensing, and praise. *See Graham*, 383 U.S. at 17; *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

To be relevant, evidence of nonobviousness must be reasonably commensurate in scope with the claimed invention. *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011) (citing *In re Tiffin*, 448 F.2d 791, 792 (CCPA 1971)); *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998); *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000) (stating the presumption that commercial success is due to the patented invention applies “if the marketed product embodies the claimed features, *and is coextensive with them*”) (emphasis added); *Therasense, Inc. V. Becton, Dickinson & Co.*, 593 F.3d 1325, 1336 (Fed. Cir. 2010) (finding no long-felt need because the claims were broad enough to cover devices that did not solve the problem). In *MeadWestVaco Corp. v. Rexam Beauty and Closures, Inc.*, 731 F.3d 1258 (Fed. Cir. 2013), the court held that a district court erred by considering “secondary considerations of non-obvious [that] involved only fragrance-specific uses, but *the claims now*

at issue are not fragrance-specific.” Id. at 1264 (emphasis added); *see also In re Law*, 303 F.2d 951, 954 (CCPA 1961) (“Thus, assuming the affidavits are a proper showing of commercial success, they do not show commercial success of dockboards covered by the appealed claims which are not limited to the bead of claim 13.”).

In a related requirement, there must be a nexus between the merits of the claimed invention and the evidence of secondary considerations. *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995). “Nexus” is a legally and factually sufficient connection between the objective evidence and the claimed invention, such that the objective evidence should be considered in determining nonobviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). The burden of showing a nexus lies with the patent owner. *Id.* Showing nexus requires showing that any alleged success is not due to prior art or unclaimed features. *Ayst Techs., Inc. v. Emtrak, Inc.*, 544 F.3d 1310, 1316 (Fed. Cir. 2008) (“even though commercial embodiments . . . have enjoyed commercial success, Asyst’s failure to link that commercial success to the features of its invention that were not disclosed in Hesser undermines the probative force of the evidence pertaining to the success of Asyst’s and Jenoptik’s products.”); *Ormco, Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006) (“[I]f the commercial success is due to an unclaimed feature of the device, the commercial success is irrelevant. So too if the feature that creates the commercial success was known in the prior art, the success is not pertinent.”); *Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1369 (Fed. Cir. 2011) (“If commercial success is due to an element in the prior art, no

nexus exists.”); *J.T. Eaton & Co. v. Atl. Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed.Cir.1997) (“asserted commercial success of the product must be due to the merits of the claimed invention *beyond what was readily available in the prior art*”)(emphasis added). Here, Patent Owner argues that commercial success (licensing), long-felt but unresolved need, and industry praise indicates that the claims of ’791 patent at issue in this proceeding would not have been obvious to a person of ordinary skill in the art. PO Resp. 46. As discussed below, we determine that Patent Owner has not met its burden to establish a nexus between the merits of the claimed invention in claims 18–20 of the ’791 patent and the evidence of secondary considerations. Although we address the arguments made by Patent Owner’s declarant, Patent Owner’s President Mr. Holtzman, below, we note that these arguments were not set forth in Patent Owner’s briefs but merely incorporated by reference in the last paragraph of the Patent Owner’s Response. PO Resp. 46; *see* 37 C.F.R. 42.6.

1. Commercial Success: Licensing

Patent Owner’s declarant, Mr. Holtzman, states that Patent Owner’s licensing program demonstrates commercial success and thus relevant indicia of non-obviousness. Ex. 2016 ¶ 4. Mr. Holtzman states that “[t]he ’791 Patent family has been the subject of extensive licensing . . . to more than a dozen licensees in transactions generating revenue to PMC and its investors in excess of \$350M.” *Id.* at ¶ 8.

In cases in which the proffered evidence of commercial success constitutes licenses, rather than sales of products embodying the invention, the licenses may have been taken only because they were less expensive

than defending an infringement suit or for other business reasons. *See EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 908–09 (Fed. Cir. 1985) (“[I]t is not unusual to see astute businessmen capitalize on [a licensing program for an otherwise invalid patent] by erecting a temporarily successful licensing program thereon . . . They sometimes succeed because they are mutually beneficial to the licensed group or because of business judgments that it is cheaper to take licenses than to defend infringement suits, or for other reasons unrelated to the unobviousness of the licensed subject matter”).

Mr. Holtzman notes that some of the licenses to the “’791 Patent family,” or “the ’791 Patent, among other patents,” included a “substantial payment” in “settlement of litigation” or with knowledge of pending *inter partes* reviews. *See* Ex 2016 ¶¶ 16–24. Mr. Holtzman also contends that some companies made equity investments in addition to licenses, and also “many of the license amounts are orders of magnitude above the cost of defense in an infringement action.” *Id.* ¶¶ 25–26.

Similar to the license scenario characterized in *EWP Corp.*, this testimony about “substantial payments” relative to “cost of defense,” and equity investments, lacks a requisite factual support and fails to delineate anything specific to the ’791 patent family or the ’791 patent, let alone a sublicense for challenged claims of the ’791 patent. It is entitled to little weight. Even affording it some weight, the testimony does not address whether or not any settlement or license has anything to do with the particular merits of challenged claims. The testimony, at face value, at most shows that a license to the whole ’791 patent family may cost substantially

more than defending any litigation with respect to one of the patents in the '791 patent family, but it does not even mention specific litigation for the '791 patent or relative cost for a license thereto. Also, litigation typically advances with certain risk, whereas a license provides at least a temporary certain outcome, thereby producing a business incentive for a license. See *EWP Corp.*, 755 F.2d at 908–09.

The tenuous testimony fails to show “affirmative evidence of nexus.” *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004). Patent Owner must demonstrate “a nexus between the *merits of the invention* and the licenses of record,” otherwise the evidence of licenses garners little weight. *In re GPAC Inc.*, 57 F.3d at 1580 (emphasis added) (citation omitted). “[W]ithout a showing of [a] nexus, ‘the mere existence of . . . licenses is insufficient to overcome the conclusion of obviousness.’” *In re Antor Media Corp.*, 689 F.3d 1282, 1293 (Fed. Cir. 2012) (quoting *Iron Grip Barbell*, 392 F.3d at 1324).

In *In re GPAC Inc.*, 57 F.3d at 1580, the court found that “in affidavits reciting the license history of the '111 patent, GPAC did not establish which claims(s) of the patent the licensing program incorporates, GPAC has not shown that licensing of [applicant’s] invention arose out of recognition and acceptance of the subject matter claimed.” Like the applicants with licenses in *EWP Corp*, *GPAC*, and *Antor Media*, Patent Owner has not shown a nexus to the challenged “subject matter claimed”: Mr. Holtzman’s testimony generally lists patent family licenses, revenue, and settlements, but does not discuss the merits of challenged claims of the '791 patent or relate that to any particular license for the '791 patent in the portfolio of

licenses. *See* PO Resp. 46 (citing Ex. 2016). Moreover, only some claims in the '791 patent have been challenged whereas the licensing program goes to the whole '791 patent family.

The cited testimony of Mr. Holtzman does not establish whether a specific license (or sub-license) for the challenged claims of the '791 patent occurred because of the merits of the challenged claims, the merits of unchallenged claims, for other patented inventions in the family or patent, or for other economic reasons related to the whole '791 patent family. The evidence at best implies that some settlements included licenses for the '791 patent family perhaps to avoid some litigation for a patent or patents in the family, or that equity investments may have occurred based on the company itself, PMC. *See* Ex. 2016 ¶¶ 8–27. Mr. Holtzman's summary supports our conclusion: "This success is attributable not to any particular feature by itself, but rather to the combination of features of PMC's inventions." *Id.* ¶ 27.

Accordingly, Patent Owner's licensing program evidence is afforded little weight in showing that any one of the challenged claims in the '791 patent would not have been obvious.

2. Industry Praise

Industry praise for an invention may provide evidence of nonobviousness where the industry praise is linked to the claimed invention. *See Geo. M. Martin Co. v. Alliance Mach. Sys. Intern. LLC*, 618 F.3d 1294, 1305 (Fed. Cir. 2010); *Asyst Techs., Inc. v. Emtrack, Inc.*, 544 F.3d 1310, 1316 (Fed. Cir. 2008). Patent Owner asserts that "PMC has received professional acclaim and industry recognition of its inventions.

Additionally, there are numerous patents and publications that cite to the '791 Patent family.” PO Resp. 46 (citing Ex. 2016).

Petitioner replies that Patent Owner fails to provide any nexus between the supposed industry recognition and the claims 18–20 of the '791 patent. Pet. Reply 25. Petitioner’s argument is persuasive. Patent Owner’s brief statements and blanket citation to an entire exhibit, Ex. 2016, without more, does not constitute a sufficient argument showing as to how any alleged praise demonstrates unobviousness with respect to the challenged claims in the '791 patent. *See* PO Resp. 46.

Similar to its licensing argument, Patent Owner does not provide any analysis explaining how professional acclaim for the '791 patent family, including purported evidence of value or “numerous” citations, constitutes praise with nexus to a feature of the challenged claims in the '791 patent. The arguments and cited evidence fails to show how the challenged claims of the '791 patent would have been unobvious. *See* Ex. 2016 ¶¶ 28–33.

Patent Owner does not specify any acclaim or recognition in its Patent Owner Response to the '791 patent family, let alone a challenged claim in the '791 patent. *See* PO Resp. 46. Considering just the '791 patent, it includes 20 claims, 288 columns, and much background information. *See* Ex. 1001. Patent Owner’s argument fails to show how its alleged evidence of value or praise which includes the whole '791 patent family, distinguishes over many citations to, and great reviews of, popular text books or journal articles. *See* Ex. 2016 ¶¶ 28–32.

Patent Owner does not show a nexus to relevant industry praise for a product, or anything else, and also does not show that any evidence of praise

is reasonably commensurate in scope with, and covered by, a challenged claim. *See Bayer Healthcare Pharms., Inc. v. Watson Pharms., Inc.*, 713 F.3d 1369, 1377 (Fed. Cir. 2013) (finding that brief discussions of Patent Owner’s product in journal articles “fall well short of demonstrating true industry praise” and reasoning that “industry praise of what was clearly rendered obvious by published references is not a persuasive secondary consideration”). Challenged claims 18–20 do not cover all information disclosed in all the patents of the ’791 patent family—information that allegedly, at least in part, constitutes the object of praise. Any alleged praise is not linked to the claimed invention, rather, even if it does constitute industry praise, it is linked to the whole ’791 patent family. *See Geo. M. Martin Co.*, 618 F.3d at 1305.

Patent Owner has not established a sufficient nexus between the merits of the claimed invention of the challenged claims in the ’791 patent and the alleged industry praise. Accordingly, Patent Owner’s evidence of secondary considerations based on industry praise is entitled to little or no weight.

3. Summary of Analysis of Secondary Considerations of Non-Obviousness

Patent Owner failed to demonstrate a sufficient nexus between the claimed invention and any commercial success or industry praise. After considering all the cited evidence and arguments presented, the evidence of objective indicia of nonobviousness does not overcome Petitioner’s showing of obviousness.

III. MOTION TO AMEND

In an *inter partes* review, amended claims are not added to a patent as of right, but rather must be proposed as a part of a Motion to Amend.

35 U.S.C. § 316(d). As the moving party, Patent Owner bears the burden of proof in establishing that it is entitled to add proposed substitute claims 21–23. 37 C.F.R. § 42.20(c); *see also Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d at 1306–08 (patentee bears the burden of showing that its proposed substitute claims are patentable over the prior art of record); *Prolitec, Inc. v. ScentAir Techs., Inc.*, 807 F.3d 1353, 1363–64 (Fed. Cir. 2015) (same); *Idle Free Systems, Inc. v. Bergstrom, Inc.*, Case IPR2012-00027, slip op. at 7 (PTAB June 11, 2013) (Paper 26) (informative) (“For a patent owner’s motion to amend, 37 C.F.R. § 42.20(c) places the burden on the patent owner to show a patentable distinction of each proposed substitute claim over the prior art.”); *MasterImage 3D, Inc. v. RealD, Inc.*, Case IPR2015-00040 (PTAB July 15, 2015) (Paper 42) (same).

Patent Owner filed a contingent Motion to Amend in order to replace the claims 18–20 with proposed substitute claims 21–23 should claims 18–20 be determined to be unpatentable. Paper 19 (“Mot.”). Petitioner opposes Patent Owner’s Motion. Paper 29 (“Opp.”). Because we find claims 18–20 unpatentable, we address Patent Owner’s Motion to Amend. As discussed below, we determine that Patent Owner has not carried its burden of demonstrating the patentability of the proposed substitute claims.

A. Analysis of the 37 C.F.R. § 42.121 Requirements

Patent Owner must demonstrate (1) the amendment responds to a ground of unpatentability involved in the trial; (2) the amendment does not

seek to enlarge the scope of the claims of the patent or introduce new subject matter; (3) the amendment proposes a reasonable number of substitute claims; and (4) the proposed claims are supported in the original disclosure. 37 C.F.R. § 42.121.

Proposed substitute claims 21–23 are reproduced below, with underlined text indicating material inserted relative to the original claims:

21. (Substitute for claim 18, if found unpatentable) A method of controlling a receiver station, comprising:

storing information corresponding to preferences about a user of said receiver station at a memory of said receiver station;
receiving, at said receiver station, a first computer program transmitted from a transmitter station, the storage of said information about a user at the receiver station occurring prior to the receipt of said first computer program;

storing said first computer program in memory at said receiver station;

executing said first computer program using a processor at said receiver station to generate an order for a product by processing said information about a user of said receiver station;

receiving, at said receiver station, a second computer program transmitted from a said transmitter station, said second computer program being received after the first computer program generates said order;

storing said second computer program in memory at said receiver station; and

executing said second computer program using said processor, to:

present to the user information related to said product in said order, and

receive an input from the user indicating that the user wishes to place said order,

which causes said receiver station to communicate said order for a product to a remote station.

22. (Substitute for claim 19, if found unpatentable) The method of claim [[18]] 21, wherein said order comprises a shopping list.

23 (Substitute for claim 20, if found unpatentable) The method of claim [[18]] 21, wherein said transmitter station and said remote station comprise different remote stations.

Mot. 1–3.

We determine Patent Owner has satisfied the burden with respect to the above-discussed requirements of 37 C.F.R. § 42.121. For example, Patent Owner seeks to add one substitute claim to replace each claim found unpatentable, and substitute claim 21 adds limitations that purport to narrow the scope of the original claim it replaces (substitute dependent claims 22 and 23 are the same as dependent claims 19 and 20, and are simply amended to depend from substitute independent claim 21). Mot. 1–3. Furthermore, Patent Owner argues that substitute claims 21–23 find “Section 112 support in the parent application Ser. No. 07/096,096 (Ex. 2020), filed Sept. 11, 1987, now U.S. Patent No. 4,965,825 (hereinafter the ’096 application).” *Id.* at 3. Patent Owner identifies support in the original specification for the recitation in claim 21 of an “the storage of said information about a user at the receiver station occurring prior to the receipt of said first computer program,” in which the ’096 application discloses that executing the generate-recipe-and-shopping-list instructions causes microcomputer, 205, to generate information of the specific fish curry recipe and fish curry shopping list of the family of the subscriber. *Id.* at 4 (citing Ex. 2020, 471:6–473:13; 474:2–476:7). Furthermore, Patent Owner identifies support in the original specification for the recitation in claim 21 of a requirement to

“present to the user information related to said product in said order,” including the disclosure that audio information can be presented to the subscriber regarding the personal Exotic Meals of India fish curry recipe. Mot. 5–6 (citing Ex. 2020, 503:34–505:30, 506:32–508:18). Additionally, Patent Owner identifies support in the original specification for the recitation in claim 21 of a requirement to “receive an input from the user indicating that the user wishes to place said order,” including the disclosure that the subscriber can enter “TV568*” at the keyboard of the local input to transmit the process-local-input instruction and the “TV568*” information to the controller. *Id.* at 5–6 (citing Ex. 2020, 503:34–505:30, 506:32–508:18).

We, thus, are persuaded that there is written description support for Patent Owner’s proposed substitute claims 21–23. Accordingly, we now focus on whether Patent Owner has met its burden of proof to show that proposed substitute claims 21–23 encompass patentable subject matter under 35 U.S.C. § 101.

B. Analysis of the Patentable Subject Matter

An *inter partes* review cannot be instituted using 35 U.S.C. § 101 as the basis for a challenge brought by a petitioner. *See* 35 U.S.C. § 311(b) (“A petitioner in an *inter partes* review may request to cancel as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.”). In a motion to amend, however, the patent owner has the burden of demonstrating the patentability of the claims. *See* 37 C.F.R. § 42.20(c) (“The moving party has the burden of proof to establish that it is entitled to the relief requested.”). In a case such as this, where the

challenged claims have been determined to be invalid under 35 U.S.C. § 101 by a District Court (see Memorandum Opinion, Ex. 1041, 16–18), we will consider whether Patent Owner has explained how the proposed amendments addressed the District Court’s concerns regarding the validity of the challenged claims and whether Patent Owner has shown that its proposed amended claims encompass patent eligible subject matter. See *Ariosa Diagnostics v. Isis Innovation Ltd.*, IPR2012-00022, Paper 166, slip op. at 51–52, 2014 WL 4381564, at *29–*30 (PTAB Sept. 2, 2014).

We begin our analysis with the principles of law that generally apply to a ground based on § 101, and then we turn to the arguments presented by the parties.

1. Principles of Law

A patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. The Supreme Court has held that this statutory provision contains an important implicit exception: laws of nature, natural phenomena, and abstract ideas are not patentable. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.”). Notwithstanding that a law of nature or an abstract idea, by itself, is not patentable, the practical application of these concepts may be deserving of patent protection. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293–94 (2012).

In *Alice*, the Supreme Court reaffirmed the framework set forth previously in *Mayo* “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355. The first step in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 132 S. Ct. at 1297–98). In other words, the second step is to “search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* (quoting *Mayo*, 132 S. Ct. at 1294) (brackets in original). The prohibition against patenting an abstract idea “cannot be circumvented by attempting to limit the use of the formula to a particular technological environment or adding insignificant postsolution activity.” *Bilski v. Kappos*, 561 U.S. 593, 610–11 (2010) (citation and internal quotation marks omitted).

Accordingly, using this framework, we analyze Patent Owner’s proposed substitute claims 21–23.

2. Whether Proposed Substitute Claims 21–23 Are Directed to an Abstract Idea

In the first step of our analysis, we determine whether the challenged claims are directed to a patent-ineligible concept, such as an abstract idea. *See Alice*, 134 S. Ct. at 2355. Petitioner contends that proposed substitute

claim 21 is directed to the abstract idea of receiving and following instructions for placing an order based on customer preferences. Opp. 5–6 (citing August 10, 2015 Memorandum Opinion of the District Court for the District of Delaware (“Delaware District Court Opinion”), Ex. 1041, 15–16). In the Delaware District Court Opinion, the Court analyzed the ’791 patent claims, including original claims 18–20, and found them to be directed to unpatentable subject matter, namely the “abstract idea of receiving instructions for ordering.” *Id.* at 15–16. Patent Owner argued to the District Court that the claim 18 of ’791 patent is not abstract because it is directed at controlling a receiver station, not providing instructions for ordering, and Patent Owner argued to the District Court that claim 18 contains meaningful limitations because it requires receiving two separate computer programs from a transmitter station and then executing each of those programs. Ex. 1041, 15. Specifically, the District Court reviewed claim 18 held the following:

I agree with Defendant that the claim is abstract and provides no inventive concept. Without the generic computer and network components, the method consists of (1) receiving instructions for completing an order and instructions for sending the order, (2) adding personal information to the order, and (3) sending the order per the instructions provided. *This has long been done with a pencil and paper.* Plaintiff's argument with respect to the abstract idea is semantic. Controlling the station that receives instructions for ordering is no less abstract than providing the instructions. *The claim here does nothing more than apply the abstract idea to the Internet.* In addition, the preemption concern is enormous. Plaintiff contends that the patent is infringed essentially every time a purchase is made over the Internet. (D.I. 138 at p. 15).

The '791 patent claims the abstract idea of receiving instructions for ordering and lacks an inventive concept. It is not patent eligible.

Ex. 1041, 15–16 (emphasis added).

Petitioner argues that Patent Owner’s amendments presented in substitute claims 21–23 do not further limit the abstract idea identified by the District Court. Opp. 5. Petitioner argues that the pre-storing of personal preferences, one of the amended limitations added by the Patent Owner to proposed substitute claim 21, is inherent in the abstract ordering process. *Id.* For example, Petitioner argues that a person’s preferences (e.g. clothing size, shipping address, quantity) are stored in his/her mind before receiving any instructions. *Id.* Accordingly, Petitioner argues that such a person would receive instructions for placing an order, follow those instructions to generate the order, then receive instructions for sending the order to the merchant, and follow those instructions. *Id.* Petitioner, therefore, argues that the District Court’s analysis applies to proposed substitute claims 21–23. *Id.*

Additionally, Petitioner contends regarding preemption that during the District Court litigation, Patent Owner contented that the claims of ’791 patent would be infringed anytime someone makes an online purchase. Opp. 5–6. Furthermore, Petitioner argues that proposed substitute claims 21–23 do not reduce the preemption concerns. *Id.* As the District Court noted with respect to original claim 18, “the preemption concern is enormous,” as the Patent Owner “contends that the [’791] patent is infringed essentially every time a purchase is made over the Internet.” Ex. 1041, 16.

In response, Patent Owner relies upon the United States Court of Appeals for the Federal Circuit’s decision in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), to support its position that the challenged claims are not directed to an abstract idea. PO Reply 4–5. According to Patent Owner, the proposed substitute claims are directed to a problem rooted in computing and communication technologies, including providing intelligent transmitter and receiver stations. PO Rely 4. (Ex. 2057 ¶ 51). Patent Owner states that “the technical problem addressed by the substitute claims is accommodation of personalized shopping over a computer network.” PO Reply 4.

In *DDR Holdings*, the Federal Circuit determined that, although, the patent claims at issue there involved conventional computers and the Internet, the claims addressed the problem of retaining website visitors who, if adhering to the routine, conventional functioning of Internet hyperlink protocol, would be transported instantly away from a host’s website after “clicking” on an advertisement and activating a hyperlink. *DDR Holdings*, 773 F.3d at 1257. The Federal Circuit held that “the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *Id.*

Patent Owner states that the “district court recast claim 18 as a method consisting of ‘(1) receiving instructions for completing an order and instructions for sending the order, (2) adding personal information to the order, and (3) sending the order per the instructions received.’” PO Reply 5 (quoting Ex. 1041, 15). Patent Owner argues that the District Court disregarded the claim requirements that receiver station receive two

computer programs, each to perform different functions, and that a receiver station communicate an order to a remote station. *Id.*

Based on our independent assessment of the proposed claims, we do not agree with Patent Owner that the steps recited in proposed substitute claims are “necessarily rooted in computer technology” and “specifically aris[e] in the realm of computer networks.” *See DDR Holdings*, 773 F.3d at 1257. Rather, we agree that the subject matter of the challenged claims as framed by Petitioner—namely, “receiving and following instructions for placing an order based on customer preferences”—is not different fundamentally from the kinds of commonplace commercial methods and processes that were the subjects of recent decisions from the United States Supreme Court, as discussed below.

The Supreme Court held that the claims in *Alice* were drawn to the abstract idea of intermediated settlement and that “the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *Alice*, 134 S. Ct. at 2352, 2358. *Alice* involved “a method of exchanging financial obligations between two parties using a third-party intermediary to mitigate settlement risk.” *Id.* at 2356. Like the method of hedging risk in *Bilski*, 561 U.S. at 628, which the Supreme Court deemed “a method of organizing human activity,” *Alice*’s “concept of intermediated settlement” was held to be “a fundamental economic practice long prevalent in our system of commerce.” *Alice*, 134 S. Ct. at 2356. Similarly, the Supreme Court found that “[t]he use of a third-party intermediary . . . is also a building block of the modern economy.” *Id.* Thus, the Supreme Court held that “intermediated settlement . . . is an

‘abstract idea’ beyond the scope of § 101.” *Id.* With respect to the first step of the patent-eligible analysis under the *Mayo* framework, the Supreme Court concluded that in *Alice* “there is no meaningful distinction between the concept of risk hedging in *Bilski* and the concept of intermediated settlement” in *Alice*, and that “[b]oth are squarely within the realm of ‘abstract ideas’ as we have used that term.” *Alice*, 134 S. Ct. at 2357. On this record, we determine that, similar to the concept of intermediated settlement in *Alice* and the concept of risk hedging in *Bilski*, the concept at issue here—namely, “generating personalized recommendations for acquiring a product or service”—is a “practice long prevalent in our system of commerce,” and “squarely within the realm of ‘abstract ideas.’” *Alice*, 134 S. Ct. at 2356–57; *Bilski*, 561 U.S. at 611.

In the present case, “receiving and following instructions for placing an order based on customer preferences,” such as receiving and following instructions for placing an order for a shopping list of foods for an “Exotic Meal of India” (*see* Mot. 4–6 (citing Ex. 2020, 471:6–473:13, 474:2–476:7, 478:6–483:35, 503:34–505:30, 506:32–509:5)), is similar to commercial practices long found in commerce. In the analogous case of *Morsa v. Facebook, Inc.*, the court found that the concept of “*matching consumers with a given product or service ‘has been practiced as long as markets have been in operation.’*” 77 F. Supp. 3d 1007, 1013 (C.D. Cal. 2014) (finding the asserted claims invalid under 35 U.S.C. § 101 as drawn to patent-ineligible subject matter) (quoting *Tuxis Technologies, LLC v. Amazon.com, Inc.*, No. CV 13–1771–RGA, 2014 WL 4382446, at *5 (D. Del. Sept. 3, 2014)). Additionally, as this District Court for the District of Delaware held

in analyzing claim 18 of the '791 patent at issue in this matter, the concept of receiving and following instructions for placing an order based on customer preferences “has long been done with a pencil and paper” and the “claim here does nothing more than apply the abstract idea to the Internet.” Ex. 1041, 15–16. Based on the foregoing, we determine that Patent Owner does not meet its burden on its Motion to Amend of showing that, even with the added claim elements in the proposed substitute claims, the commercial practice of placing tailored orders has not “long been done with a pencil and paper.”

We determine that the District Court’s logic is equally applicable to proposed substitute claims 21–23. Therefore, in view of the foregoing, we are persuaded that proposed substitute claims 21–23 are directed to a patent-ineligible abstract idea.

3. Whether the Proposed Substitute Claim Includes Limitations That Represent Inventive Concepts

Turning to the second step in the analysis, we look for additional elements that can “transform the nature of the claim” into a patent-eligible application of an abstract idea. That is, we determine whether the claims include an “inventive concept,” i.e., an element or combination of elements sufficient to ensure that the patent in practice amounts to significantly more than a patent on the abstract idea itself. *Alice*, 134 S. Ct. at 2357. The relevant inquiry here is whether “additional substantive limitations . . . narrow, confine, or otherwise tie down the claim so that, in practical terms, it does not cover the full abstract idea itself.” *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1344–45 (Fed. Cir. 2013) (internal quotations and citation omitted). The Supreme Court in *Alice*

cautioned that merely limiting the use of abstract idea “to a particular technological environment,” or implementing the abstract idea on a “wholly generic computer,” is not sufficient.” *Alice*, 134 S. Ct. at 2358 (citation and internal quotation marks omitted).

In other words, the limitations of the claims must be examined to determine whether the claims contain an “inventive concept” to “transform” the claimed abstract idea into patent-eligible subject matter. *Alice*, 134 S. Ct. at 2357. “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Alice*, 134 S. Ct. at 2357 (quoting *Mayo*, 132 S. Ct. at 1297) (alterations in original). Those “additional features” must be more than “well-understood, routine, conventional activity.” *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (internal quotation marks omitted) (citing *Mayo*, 132 S. Ct. at 1298).

Petitioner contends that proposed substitute claims 21–23 fail to recite any meaningful limitations on the abstract idea. Opp. 5. Petitioner specifically argues that the sequence of steps added by Patent Owner in the proposed substitute claims are merely a part of the abstract idea that the District Court already held is not patent-eligible. *Id.* Furthermore, Petitioner argues that the proposed substitute claims merely recite the implementation of an abstract idea using generic components (e.g. receiver station, memory, transmitter station, processor, and remote station) to perform well-understood and routine functions (storing, receiving,

executing, processing, presenting, and communicating), over an unspecified network. *Id.*

As in *Alice*, the relevant question is “whether the claims here do more than simply instruct the practitioner to implement the abstract idea of intermediated settlement on a generic computer.” *Alice Corp.*, 134 S.Ct. at 2359. We conclude that they do not. More particularly, we are not persuaded that what Patent Owner argues constitutes “concrete and physical operations by computing and communication hardware” provided in the amendments presented in substitute claims 21–23 incorporate enough meaningful limitations to ensure that it claims more than just an abstract idea. *See Alice Corp.*, 134 S.Ct. at 2357 (quoting *Mayo*, 132 S. Ct. at 1297). The computer hardware elements recited in proposed substitute claim 21 amount to “a mere instruction to ‘implemen[t]’ an abstract idea ‘on . . . a computer.’” *Id.* at 2358 (internal citation omitted). More particularly, we conclude that when considered individually and “as an ordered combination,” the claim elements appear to be steps to perform the abstract concept of “receiving and following instructions for placing an order based on customer preferences” on a computer, which is not sufficient to transform an abstract idea into a patent-eligible invention. *See Alice*, 134 S. Ct. at 2359–60 (citing *Mayo*, 132 S. Ct. at 1297–98). Therefore, we find that Patent Owner has not demonstrated the patentability of proposed substitute claims 21–23. Accordingly, Patent Owner’s Motion to Amend is *denied*.

C. Analysis of the Patentable Distinction of the Proposed Claim Over the Prior Art

We have determined that Patent Owner has not demonstrated the patentability of proposed substitute claims 21–23 under 35 U.S.C. § 101. Accordingly, we need not reach a decision regarding whether proposed substitute claims 21–23 are patentable in view of the prior art.

IV. CONCLUSION

For the foregoing reasons, we conclude Petitioner has shown by a preponderance of the evidence that (1) claims 18–20 are unpatentable under 35 U.S.C. § 103 in view of Cookbook Guide and Sedman and (2) claims 18–20 are unpatentable under 35 U.S.C. § 103 in view of Lockwood and Sedman.

In addition, we conclude Patent Owner has not met its burden to show proposed substitute claims 21–23 are patentable.

V. ORDER

For the reasons given, it is

ORDERED that, based on Petitioner’s showing by a preponderance of the evidence, claims 18–20 of the ’791 patent are unpatentable;

FURTHER ORDERED that Patent Owner’s Motion to Amend is *denied*; and

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

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