

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 IPR2014-01533
Patent 7,805,749

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

BRADEN, *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 2, 3, 9–13, 18, 24, 49, 52, and 53 of U.S. Patent No. 7,805,749 (Ex. 1001, “the ’749 patent”) are unpatentable. We also determine that Patent Owner has not met its burden on its Motion to Amend regarding entry of proposed substitute claims 56–67, 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 2, 3, 9–13, 18, 24, 49, 52, and 53 of the ’749 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 of claims 2, 3, 9–13, 18, 24, 49, 52, and 53 as unpatentable under 35 U.S.C. § 103 in view of Powell¹ and Guillou.² See Paper 7 (“Dec. to Inst.”), 30.

After institution of trial, Petitioner filed a request for rehearing (Paper 11), as did Patent Owner (Paper 14). The requests for rehearing were considered and denied. Papers 16, 23. Patent Owner then filed a Patent

¹ Chris Powell, *Prestel: the Opportunity for Advertising*, VIEWDATA AND VIDEOTEXT 1980–81: A WORLDWIDE REPORT, 1980 (“Powell,” Ex. 1014).

² U.S. Patent No. 4,337,483, issued June 29, 1982 (“Guillou,” Ex. 1022).

Owner Response (Paper 27, “PO Resp.”), to which Petitioner filed a Reply (Paper 38, “Reply”).

In addition, Patent Owner also filed a Motion to Amend the Claims (Paper 26), to which Petitioner filed an Opposition (Paper 39). Patent Owner then filed a Reply to Petitioner’s Opposition to the Motion to Amend the Claims. Paper 46.

Patent Owner filed observations on the cross-examination of Petitioner’s declarant (Paper 51), to which Petitioner filed a response (Paper 54). Petitioner filed observations and amended observations on the cross-examination of Patent Owner’s declarant (Papers 53, 56), to which Patent Owner filed a response and an amended response (Papers 55, 58).

An oral argument was held on Dec. 8, 2015. A transcript of the oral argument is included in the record. Paper 59 (“Tr.”).

B. Related Proceedings

Petitioner informs us that the ’749 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 41, 1. Petitioner also informs us that six patents related to the ’749 patent are the subject of concurrently-filed petitions for *inter partes* review. Pet. 1; Paper 41, 1; see IPR2014-01527, IPR2014-01528, IPR2014-01530, IPR2014-01531, IPR2014-01532, and IPR2014-01534.

C. The '749 Patent

The '749 patent discloses a system for using embedded signals to deliver personalized program content to a subscriber station. Ex. 1001, 7:47–48, 15:14–46. One embodiment of the disclosed system is illustrated in Figure 7, and is reproduced below.

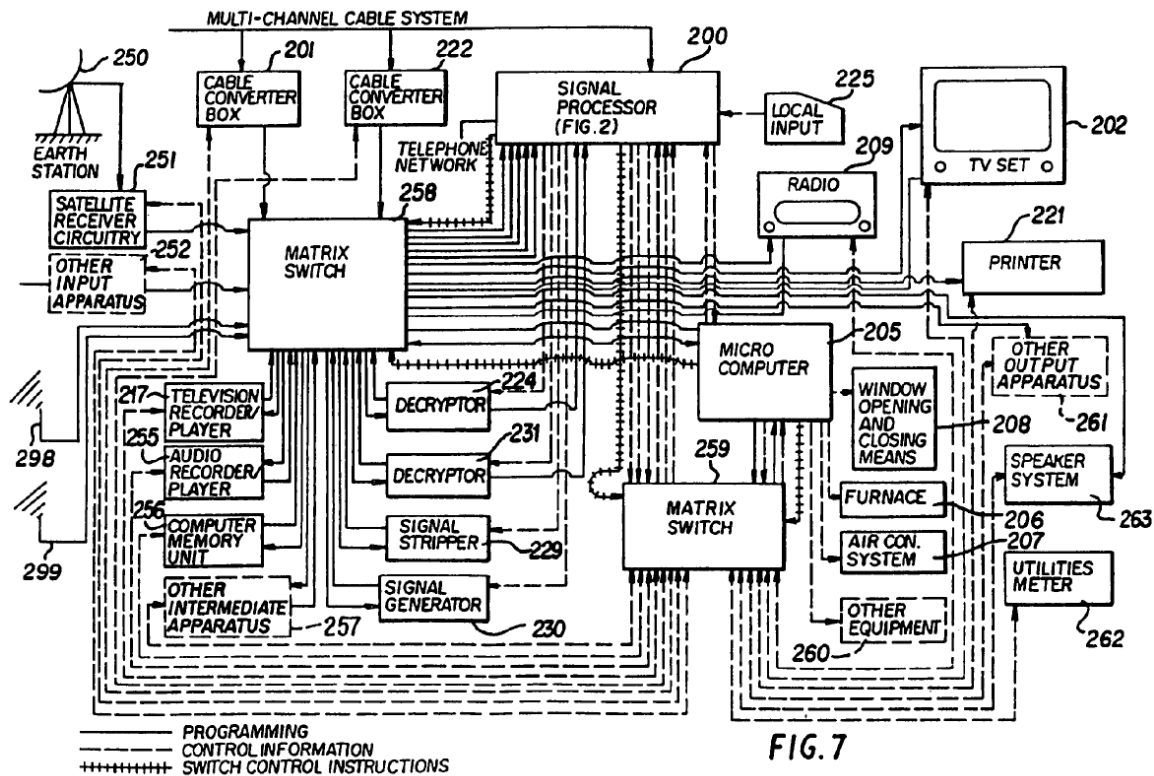


Figure 7 shows that TV set 202, printer 221, and local input device 225 are connected to a system that includes micro-computer 205 and signal processor 200. *Id.* at 242:31–59. The '749 patent describes personalized content being delivered to a subscriber substation by transmission of a message, which can be encrypted and decrypted. *Id.* at 246:26–29. The content is decrypted using a decryptor that is provided with the personalized content-containing message. *Id.* at 15:21–27. Personalized content can be

sent to and coordinated through computers, television, and printers. *Id.* at 241:57–60.

Another embodiment of the '749 patent describes a subscriber watching a television program called “Exotic Meals of India.” *Id.* at 241:50–246:58. According to the '749 patent, midway through the program “Exotic Meals of India,” subscribers are offered a printout of the recipe and shopping list for the ingredients of the meal that is being prepared on the show. *Id.* at 242:63–66. Subscribers are prompted to enter a code, TV567#, into a local input device. *Id.* at 242:63–243:23. A receiver station receives the code, and accesses preprogrammed information (including “particular program unit information and TV567# information”) that is stored in a buffer at microcomputer 205. *Id.* at 241:61–65, 243:24–56; Figs. 7, 7F. One minute later, the program-originating studio embeds a second signal that includes “unit code identification information that identifies the programming of the information segment of said message” and a computer program for generating a user-specific recipe. *Id.* at 243:60–244:3. Receipt of this second signal causes the receiver station where the TV567# code was entered to execute the program (instructions) to generate a user-specific recipe. *Id.* at 244:4–59. The '749 patent states that the information of the second message, i.e., the message containing the instructions for generating the recipe and shopping list, “can be encrypted and caused to be decrypted in any of the methods described above—for example, in the method of the first message of example #4.” *Id.* at 246:26–29.

Example #4 of the '749 patent specifically provides a process for decrypting a message in which a receiver station selects a “program unit

identification code,” selects preprogrammed key information, decrypts a message using a key, and stores the program unit information and decryption key information in a “meter record” at a recorder. *Id.* at 115:60–117:2. The information in the record is transferred to a remote billing station via a telephone connection. *Id.* at 48:45–60.

D. Illustrative Claim

As noted above, an *inter partes* review was instituted as to claims 2, 3, 9–13, 18, 24, 49, 52, and 53 of the ’749 patent, of which claims 2, 18, and 49 are the only independent claims. Claim 2 is illustrative of the challenged claims and is reproduced below:

2. A method for mass medium programming promotion and delivery for use with an interactive video viewing apparatus comprising the steps of:

receiving a first portion of said mass medium programming in a first programming signal, said first portion of mass medium programming including a video image that promotes a second portion of said mass medium programming;

displaying said video image, said interactive video viewing apparatus having an input device to receive input from a subscriber;

prompting said subscriber for a reply, during said step of displaying said video image, as to whether said subscriber wants said second portion of said mass medium programming promoted in said step of displaying of said video image, said interactive video viewing apparatus having a transmitter for communicating said reply to a remote site;

receiving said reply from said subscriber at said input device in response to said step of prompting said subscriber, said interactive video viewing apparatus having a processor for processing said reply;

processing said reply and selecting at least one of a code and a datum designating said second portion of said mass medium

programming to authorize delivery of said second portion of said mass medium programming;
communicating said selected at least one of a code and a datum to a remote site;
receiving said second portion of said mass medium programming in a second programming signal;
decrypting said second portion of said mass medium programming by using said at least one of a code and a datum in response to said step of processing said reply; and
delivering said mass medium programming to an output device.

Ex. 1001, 287:17–52.

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 sub nom. Cuozzo Speed Techs., LLC v. Lee*, 84 U.S.L.W. 3218 (U.S. Jan. 15, 2016) (No. 15-446). 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).

Petitioner proposes a construction of the term “decrypting” in the ’749 patent. Pet. 17–18. Patent Owner contests Petitioner’s proposed

construction for “decrypting” and contends that the terms “designating” and “selecting” should be construed. PO Resp. 9–18. We note that only terms which are in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999). We determine that no express constructions of these claim terms are required for our analysis as they are not necessary to resolve this proceeding. Our determination that none of the claim terms require construction is not impacted by whether we apply the broadest reasonable interpretation or the *Phillips* standard during our analysis of the claim. *See Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005).

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, Mr. Slinn, a person of ordinary skill in the art relevant to the '749 patent would have had "a Bachelor's degree in Electrical Engineering or a closely related field" and would have had between two and four years of experience in "implementation of communications systems and controlling these systems (or similar types of systems) through the use of computer technology." Ex. 1004 ¶ 24. Patent Owner does not offer any contrary explanation regarding who would have qualified as a person of ordinary skill in the art relevant to the '749 patent and appears to agree with Petitioner's characterization. See PO Resp. 5. Additionally, Patent Owner's declarant, Dr. Alfred C. Weaver ("Dr. Weaver"), uses the level of skill in the art articulated by Mr. Slinn. Ex. 2014 ¶¶ 39, 40.

Based on our review of the '749 patent, the types of problems and solutions described in the '749 patent and cited prior art, and the testimony of Petitioner's declarant, we adopt Petitioner'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 of Claims 2, 3, 9–13, 18, 24, 49, 52, and 53 in View of Powell and Guillou

Petitioner contends claims 2, 3, 9–13, 18, 24, 49, 52, and 53 of the '749 patent are unpatentable under 35 U.S.C. § 103 in view of Powell and

Guillou. Pet. 45–59; Reply 2–21. Patent Owner disputes Petitioner’s position, arguing that the cited references fail to disclose all the elements required by the challenged claims (PO Resp. 26–33, 38–50), there was no motivation to combine the cited references (*id.* at 34–38), and evidence of secondary considerations outweighs a *prima facie* finding of obviousness (*id.* at 51–56). 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. For reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that the challenged claims of the ’749 patent would have been obvious in view of Powell and Guillou.

1. Overview of Powell

Powell discloses potential advertising opportunities on an interactive videotex system known as Prestel. Ex. 1014, 233. Videotex generally referred to a point-to-point computer network system in which a user could query a host computer for “pages” of information through a telephone line using a modem, and the retrieved information would be displayed on a TV. Ex. 1004 ¶ 78. Prestel’s videotex data was transmitted via telephone or cable television lines to a computer and users were billed for time spent searching, accessing, and retrieving information. Ex. 1015, 8–12.

Powell discusses several different types of advertising as available on videotex systems, such as Prestel. One embodiment in Powell discloses that one form of advertising on videotex systems was by way of a one-line banner advertisement at the bottom of the page. Ex. 1014, 238. According

to Powell, Prestel provides the opportunity to promote related information on another page and thereby prompt the user to select that page:

Then there will be that advertising that cannot be squeezed into a single line and here I think we will have something of a “come on” advertisement slotted into related interest pages. This will be the sort of “find out more – go to Page 2617.” There has already been some development along these lines by corporate advertisers: I can imagine much more. For example, one could imagine Cadbury Schweppes taking one line on pages giving their company details offering more information and some other bonus like a Chairman’s statement on the prospects for the next year by turning to their page.

Id. at 240.

2. Overview of Guillou

Guillou teaches a method for providing and receiving encrypted content in teletext and viewdata systems. Ex. 1022, Abstract; 1:8–20, 21:23–28 (the encryption/decryption techniques can be applied to the Prestel system). Guillou teaches that, in a teletext system, the decryption key would be specific to a “magazine,” i.e., a set of teletext pages. *Id.* at 5:8–10. Guillou teaches that the control portion (heading) of a page, which includes the page number, is not encrypted, but that the information portion of the page is encrypted. *Id.* at 3:29–61, 5:17–25. The information portion is encrypted using the page number and an “operating key K.” *Id.* at 5:34–37. At the receiver station, the information portion is decrypted using the same information, i.e., the operating key K and the page number. *Id.* at 6:17–29, 7:64–69.

Guillou further teaches that a “double key system” may be used, wherein the operating key K may be encrypted using a subscriber key C_i ,

are interpreted directly to form memory 146, and the octets of columns 2 to 7, which pass through the OR-exclusive gate 46, before being interpreted and directed towards the memory 146. *Id.* at 20:13–17.

3. *Analysis*

i. *Independent Claim 2*

Petitioner contends the combined disclosure of Powell and Guillou, as summarized above, taken together with the knowledge of a person of ordinary skill in the art, teaches or suggests each limitation of independent claim 2 of the '749 patent. Pet. 45–59; Reply 2–21.

Petitioner argues that the “come on” advertising in Powell is “virtually identical to the promotion and prompting disclosed in the '749 patent, wherein a cooking show is aired and the customer is prompted to receive additional related material (the recipe) by entering a code.” Pet. 46–47. According to Petitioner, such cross-promotion was widely known. *Id.* (citing Ex. 1004 ¶ 83; Ex. 1016, 179–80; Ex. 1017, 373–75). Petitioner then explains that the only limitation in the challenged claims not found in Powell is the encrypting and decrypting of a second portion of programming. Pet. 47. Petitioner, however, argues that (i) encryption and decryption processes were well known in the 1970s, and (ii) Guillou teaches a method for providing and receiving encrypted content in teletext and viewdata systems, such as the Prestel system described in Powell. *Id.* at 48–49 (citing Ex. 1022, 21:23–28; Ex. 1004 ¶ 86).

Petitioner also contends that a person of ordinary skill in the art would have had reason to combine the teachings of Powell and Guillou, because one of the problems encountered by those providing content through

teletext/videotex systems is how to charge users for access to certain information. Ex. 1022, 4:4–7. According to Petitioner, Guillou’s system is intended to solve the problem of charging a user of a teletext system, because Guillou teaches that promoted content may be encrypted thereby providing access control and billing opportunity. *Id.* at 4:4–38. Petitioner supports its position with the Declaration of Mr. Slinn, who testifies that a person of skill in the art would have used the advertising method described in Powell to promote related content for which the service provider would charge a fee for access or for which access would be limited, in which case the related content would be encrypted and decrypted using the techniques described in Guillou. Ex. 1004 ¶ 98.

Patent Owner disagrees with Petitioner’s assertion that Powell and Guillou teach or suggest the challenged claims for several reasons. PO Resp. 19–51. First, Patent Owner argues that Petitioner’s challenge is premised on an unrealistic combination of Powell and Guillou so that a consumer would be charged a separate fee for viewing advertising. *Id.* at 26–29. According to Patent Owner, advertising has always been delivered in a manner that is easy and free. *Id.* at 27. Patent Owner also argues that the Prestel Viewdata system discussed in Powell “was a failure in the U.S. and around the world because it was prohibitively expensive for consumers.” *Id.* (citing Ex. 2037, 182–183). Patent Owner postulates that “Petitioners’ proposal for a Guillou-modified Prestel system where consumers would pay a fee each time they viewed a commercial would have only hastened the demise of Viewdata and, thus, would never have been taken seriously.” *Id.* at 28–29.

Second, Patent Owner argues that Petitioner does not undertake any analysis regarding how one of ordinary skill in the art would have gone about combining the elements, or what modifications one of ordinary skill in the art necessarily would have made in order to combine the elements. *Id.* at 29–30. Patent Owner further argues that the redesign necessary to implement Guillou’s system to operate with the Prestel Viewdata system would require substantial modification, including replacement or reconfiguration of many of the components described in the patent. PO Resp. 31 (citing Ex. 2014 ¶ 95).

Patent Owner relies on the declaration of Dr. Weaver to support its position. Dr. Weaver testifies that combining Powell with Guillou would not have been simple substitutions as the two systems are different:

Guillou’s decryption method requires the use of teletext magazine pages including an access control page with messages M_i , teletext line numbers and teletext page numbers. There is no direct equivalent for these three variables in the Viewdata system. There is also no evidence of record that suggests Prestel pages even included embedded page and line numbers. It would not be possible to decrypt content under Guillou’s scheme without embedded page and line numbers.

Ex. 2014 ¶ 94 (citation omitted); Ex. 1022, 7:65–8:4; 10:41–66; 18:60–21:14. Patent Owner asserts that because the systems of Powell and Guillou differ significantly (i.e., different transmission schemes, different hardware) and lack compatibility, there would have been no motivation for a person of ordinary skill in the art to combine Powell and Guillou. PO Resp. 31–38 (citing Ex. 2014 ¶¶ 91–93; Ex. 1022, 20:6–18).

Third, Patent Owner argues that the combination of Powell and Guillou fails to teach “decrypting [the] second portion of [the] mass medium programming by using [the] at least one of a code and a datum in response to [the] step of processing [the] reply” as recited by the challenged claim 2. PO Resp. 38. According to Patent Owner, the “Page 2617” identified by a receiver station in response to a user’s input would not be used at the receiver station of Powell and Guillou to decrypt a Viewdata page. *Id.* at 40. Patent Owner relies on the supporting testimony of Dr. Weaver, who explains that the identification of “2617” in processing the user reply has a single use at the receiver station: to operate as a request that identifies the requested Viewdata page to the Prestel transmitting station. Ex. 2014 ¶ 101. Patent Owner argues that this request identifier is distinct from the keys that are used to decrypt a Viewdata page, because Guillou provides that its receiver stations generate the decoding octets based on the operating key, as well as the page and line numbers embedded in each transmitted teletext page. PO Resp. 40 (citing Ex. 1022, 3:29–55, 22:61–66 (generating the decoding octets using “the page numbers, the line numbers of the data transmitted”)). Patent Owner then asserts that even if Guillou could have been combined in a Prestel system, the decryption of a Prestel page would have been dependent on the operating key K and the page and line numbers embedded in a transmitted Viewdata page, not the user’s input of “2617.” *Id.* at 40–41 (citing Ex. 2014 ¶ 101).

We disagree with Patent Owner’s contentions, because (1) we agree with Petitioner’s explanation of why a person of ordinary skill in the art would have combined the teachings of Powell and Guillou, and (2) we agree

with Petitioner’s arguments regarding the collective teachings of Powell and Guillou from the perspective of one of ordinary skill in the art. *See KSR*, 550 U.S. at 420 (“[F]amiliar items may have obvious uses beyond their primary purpose, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.”).

To the contrary, we agree with Petitioner’s contentions with respect to claim 2 and adopt them as our own. We specifically credit the testimony of Mr. Slinn that a skilled artisan would have looked to the teachings of Guillou in combination with Powell in an attempt to solve the problem of controlling access to content and providing billing opportunities for content (even advertising content) accessible via a videotext system and address the same problem—control and management of those communications. *See* Ex. 1004 ¶ 100. We also are satisfied that Petitioner has shown that one of skill in the art would have had the ability to apply the teachings of Guillou to Powell, because Guillou specifically states that its methods are applicable to the Prestel system discussed in Powell “without any difficulty for the man skilled in the art.” Ex. 1022, 21:23–28. Such points weigh in favor of finding that a person of ordinary skill in the art would have “fit the teachings” of Guillou and Powell together to render the challenged claims obvious. *See KSR*, 550 U.S. at 420 (“Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.”).

Moreover, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the

primary reference. *In re Mouttet*, 686 F.3d 1322, 1333 (Fed. Cir. 2012). Rather, “the test for obviousness is what the combined teachings of the references would have suggested to those having ordinary skill in the art.” *See id.* (citing *In re Keller*, 642 F.2d 413, 425 (CCPA 1981)). Thus, Patent Owner’s contentions regarding backward compatibility are not persuasive and fail to show that a skilled artisan would have been discouraged from combining the teachings of the cited references in the manner claimed.

Additionally, many of the arguments presented by Patent Owner appear to attack the references individually, rather than in combination. PO Resp. 26–37. 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). In attacking the references individually, Patent Owner both fails to address Petitioner’s actual challenges and neglects to establish an insufficiency in the combined teachings of the references, especially given the knowledge of a skilled artisan as indicated by the disclosures found in Exhibits 1015, 1019, 1020, and 1023 and explained by Mr. Slinn (Ex. 1004).

We agree that Petitioner has shown that the combination of Powell and Guillou teach “decrypting [the] second portion of [the] mass medium programming by using [the] at least one of a code and a datum in response to [the] step of processing [the] reply,” as recited by the challenged claim 2. Specifically, we are satisfied that the Viewdata page number (2617) described in Powell constitutes a “code or datum” designating the second portion of the mass medium programming. *See* PO Resp. 16–17 (construing “designating” as to “indicate, name, or specify”), 40 (admitting that the page

number “identifies” the requested Viewdata page); Reply 2. According to Petitioner, a user inputs “2617” into a controller and then the receiver station processes that reply and selects the code or datum (i.e., page number 2617), which designates the second portion of the mass medium programming the user wants. Tr. 89–90; *see* Ex. 1004 ¶ 93. Patent Owner appears to acknowledge that the page number (2617) is used in Guillou’s decryption process. Reply 2 (citing PO Resp. 40 (decryption depends on “the page and line numbers embedded in a transmitted Viewdata page”), 41). Therefore, we agree with Petitioner that Guillou discloses this limitation.

After consideration of the language recited in claim 2 of the ’749 patent, the Petition, the Patent Owner Response, and Petitioner’s Reply, as well as the relevant evidence discussed in those papers, we conclude that one of ordinary skill in the art would have considered this independent claim obvious over Powell in view of Guillou.

ii. Dependent Claims 3, 9, 10, and 13

Claims 3, 9, 10, and 13 depend from claim 2. Petitioner contends that Powell and Guillou, as summarized above, taken together with the knowledge of a person of ordinary skill in the art teaches or suggests aspects of each dependent claim. Pet. 53–55, 59. We agree with Petitioner’s contentions with respect to claims 3, 9, 10, and 13 and adopt them as our own.

Patent Owner does not provide separate contentions regarding the additional limitations recited in dependent claims 3, 9, 10, and 13. PO Resp. 41; *see* 37 C.F.R. § 42.23(a).

After consideration of the language recited in claims 3, 9, 10, and 13 of the '749 patent, the Petition, the Patent Owner Response, and Petitioner's Reply, as well as the relevant evidence discussed in those papers, we conclude that one of ordinary skill in the art would have considered these dependent claims obvious over Powell in view of Guillou.

iii. Dependent Claims 11 and 12

Claim 11 depends from claim 2 and further comprises the step of “storing, at said storage device, an instruct signal which is effective to process a subscriber reaction to a content of an information transmission which includes said mass medium programming.” Ex. 1001, 288:61–67. Claim 12 depends from claim 11 and further recites the step of “storing, at said storage device, an instruct signal which is effective to establish communications with a remote station.” *Id.* at 289:1–4.

Petitioner contends that the combined disclosure of Powell and Guillou, as summarized above, taken together with the knowledge of a person of ordinary skill in the art, teaches or suggests each limitation of claims 11 and 12 of the '749 patent. Pet. 54–55; Reply 3–6. Petitioner specifically contends that nothing in the claim requires the instruct signal to be “responsive” to the subscriber “input.” According to Petitioner, the claim simply recites that the instruct signal is effective *in any way* to allow the apparatus to process the subscriber's reaction. Petitioner explains that a key that is necessary for the decryption and display of the requested page unquestionably constitutes a signal that is “effective to process” the subscriber's reaction, i.e., carry out the user's request for the page, and that is all that is required. Reply 4 (citing Ex. 1035 ¶ 93). Petitioner further

contends that to the extent that the subscriber's "reaction" is the inputting of information at the input device, the signal that is sent from the input device to the processor also constitutes an "instruct signal" that is effective to process the subscriber's reaction, i.e., a signal that enables the processor to process the subscriber's reaction and carry out the request for the page of information. *Id.* at 4–5 (citing Ex. 1004, 71; Ex. 1035 ¶ 94). We agree with Petitioner's contentions with respect to claims 11 and 12 and adopt them as our own.

Patent Owner disagrees with Petitioner, contending that in Powell the user's request for page 2617 from a receiving station cannot constitute an instruct signal satisfying claim 11, as the user's request is not "effective to process a subscriber reaction to a content of an information." PO Resp. 48 (citing Ex. 2014 ¶ 120). According to Patent Owner, the user's request for "page 2617" *is* the user's reaction, and the user's request cannot be "effective to process" itself. *Id.* We disagree because even if the user's entry of "2617" is characterized as the user's reaction, the signal carrying the request for page 2617 is an instruct signal.

After consideration of the language recited in claims 11 and 12 of the '749 patent, the Petition, the Patent Owner Response, and Petitioner's Reply, as well as the relevant evidence discussed in those papers, we find that one of ordinary skill in the art would have considered these dependent claims obvious over Powell in view of Guillou, because the signal carrying the request for page 2617 is an "instruct signal" and it is "stored." *See* Ex. 1004, 71.

iv. *Independent Claim 18 and Dependent Claim 24*

Petitioner contends that the combined disclosure of Powell and Guillou, as summarized above, taken together with the knowledge of a person of ordinary skill in the art, teaches or suggests each limitation of claim 18 and claim 24, which depends from claim 18, of the '749 patent. Pet. 54–55; Reply 6–9.

Patent Owner contends that Guillou does not teach or suggest “passing a signal word to said processor in response to said step of processing said reply” and “decrypting said data by using information included in said signal word” as required by claim 18. PO Resp. 43. Patent Owner argues that the Guillou system does not disclose or suggest passing a signal word to the processor at a receiver station in response to the processing of a reply from a subscriber. *Id.* (citing Ex. 2014 ¶ 109). According to Patent Owner, the operating key in Guillou is generated automatically and at random every five minutes at the emitting station and is not responsive to any input received from a subscriber. *Id.* Patent Owner asserts that the operating key of Guillou is unknown to the subscriber at the receiving station and that a person of ordinary skill in the art would recognize that Guillou’s receiving station decrypts when it receives the signal(s), not in response to processing a user reply. *Id.* (citing Ex. 2014 ¶ 110).

Contrary to Patent Owner’s arguments, we find that one of ordinary skill in the art would have considered claims 18 and 24 obvious over Powell in view of Guillou, because the embedded page and line numbers constitute “signal words” that are passed to a processor “in response to said step of

processing said reply” (i.e., in response to processing the user’s request for a page) and the data is decrypted using that information. *See* Ex. 2014 ¶ 101; Ex. 1004 ¶ 94; Ex. 1035 ¶ 85. After consideration of the language recited in claims 18 and 24 of the ’749 patent, the Petition, the Patent Owner Response, and Petitioner’s Reply, as well as the relevant evidence discussed in those papers, we agree with Petitioner’s contentions with respect to claims 18 and 24 and adopt them as our own, because we find that Petitioner’s contentions are supported by the evidence of record.

v. *Independent Claim 49 and Dependent Claims 52 and 53*

Petitioner contends that the combined disclosure of Powell and Guillou, as summarized above, taken together with the knowledge of a person of ordinary skill in the art, teaches or suggests each limitation of claims 49, 52, and 53 of the ’749 patent. Pet. 56–59; Reply 9–12. Petitioner specifically contends that a control signal (e.g., message M_i) is received in a “first information transmission.” Reply 9. According to Petitioner, in the teletext embodiment, Guillou teaches that the access control page is sent cyclically, and Message M_i is passed to the processor and stored. *Id.* (citing Ex. 1022, 8:63–65, 20:40–49; Ex. 1035 ¶ 87). M_i is not updated every cycle, but typically is stored until a new M_i is obtained. *Id.* (citing Ex. 1035 ¶ 87). Thus, Petitioner argues that M_i would be received in the “first information transmission” (the first cycle of the wheel), and the encrypted page may be received during a subsequent cycle of the wheel (a second information transmission). *Id.* (citing Ex. 1004 ¶ 96).

Patent Owner argues that Powell, in view of Guillou, fails to teach or suggest the steps of sending an access control page in a first information transmission that is separate from the second information transmission with the encrypted content as required by claim 49. PO Resp. 46 (citing Ex. 2014 ¶ 114), 50–51 (arguing about limitations in claim 52). Rather, according to Patent Owner, the access control page is sent in the same information transmission as the encrypted pages. *Id.* Patent Owner further contests Petitioner’s position, arguing there would be no motivation to send the access control page before the user even requests access to an encrypted page and that providing the key to access a page prior to any request by the user to “go to Page 2617” would contradict Petitioner’s expressed motivation for combining Guillou with Powell in order to “provide for access control and billing” and for “security.” PO Resp. 47. We do not agree.

We find that one of ordinary skill in the art would have considered these claims obvious over Powell in view of Guillou, because we are persuaded that the control signal (message M_i) of Guillou is received in a first information transmission and used to decrypt material received in a second information transmission. *See* Ex. 1004 ¶ 96; Ex. 1035 ¶ 87. After consideration of the language recited in claims 49, 52, and 53 of the ’749 patent, the Petition, the Patent Owner Response, and Petitioner’s Reply, as well as the relevant evidence discussed in those papers, we agree with Petitioner’s contentions with respect to claims 49, 52, and 53 and adopt them as our own.

vi. *Secondary Considerations of Non-Obviousness*

Factual inquiries for an obviousness determination include secondary considerations based on evaluation and crediting of objective evidence of nonobviousness. *See Graham*, 383 U.S. at 17. Notwithstanding what the teachings of the prior art would have suggested to one of ordinary skill in the art at the time of the invention, the totality of the evidence submitted, including objective evidence of nonobviousness, may lead to a conclusion 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 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). In a related requirement, in order to be accorded substantial weight, 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 that there is a nexus lies with the patent

owner. *Id.*; see *In re Paulsen*, 30 F.3d 1475, 1482 (Fed. Cir. 1994). Here, Patent Owner argues that commercial success, licensing, long-felt but unresolved need, and industry praise indicates that the claims would not have been obvious to a person of ordinary skill in the art. PO Resp. 51–56.

(1) Commercial Success: Licensing

Patent Owner argues that its licensing program demonstrates commercial success, which establishes that the claims are not obvious. PO Resp. 51–52. Patent Owner asserts that “[t]he ’749 Patent along with other patents issued to the inventors have had tremendous licensing success.” *Id.* at 52 (citing Ex. 2018) (describing license agreements). Patent Owner further asserts that “[t]hese patents have been licensed in agreements providing payments exceeding \$350M and involving more than a dozen licensees.” *Id.* Patent Owner states that “[Patent Owner] has licensed the ’749 Patent to numerous industry leaders, including Cisco, Sony, DirectTV, Motorola, Scientific-Atlanta LLC, Pegasus, DISH Network Corporation, and The Weather Channel.” *Id.*

We are not persuaded. In cases in which the proffered evidence of commercial success is licenses, rather than sales of products embodying the invention, there is a danger that the licenses may have been taken only because they were a less costly alternative to defending an infringement suit. See *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 908 (Fed. Cir. 1985). In such situations, nexus between the commercial success and the patent cannot be inferred; rather, “affirmative evidence of nexus” is required. *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004). In other words, a patent owner must demonstrate “a nexus

between the *merits of the invention* and the licenses of record”; otherwise the licenses are to be accorded little weight. *In re GPAC Inc.*, 57 F.3d at 1580 (emphasis added) (citation omitted). Moreover, our reviewing court has held that “without 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).

Like the applicant in *Antor Media*, Patent Owner has done little more than cite to the declaration of Mr. Gerald Holtzman, which lists licenses and their respective sales revenue. *See* PO Resp. 52 (citing Ex. 2018). The cited testimony of Mr. Holtzman only details the revenues for each license and does not establish whether the licensing program was successful because of the merits of the claimed invention, the merits of other patented inventions, or for other economic reasons, such as to avoid litigation or because of prior business relationships. *See* Ex. 2018 ¶¶ 8–27; *see also Antor Media*, 689 F.3d at 1294 (affirming Board’s finding that evidence of existence of licenses was insufficient to overcome prima facie case of obviousness). We find that the evidence provided by Patent Owner does not establish a sufficient link between the merits of the invention claimed in the ’749 patent and the taking of the licenses. Although Mr. Holtzman notes that some of the provided licenses were taken in situations where there was pending litigation against the licensee (Ex. 2018 ¶ 14), he does not address whether litigation had been *threatened* against other licensing parties. Furthermore, evidence of \$350M in licensing revenue alone is not enough to show commercial success, because Patent Owner must relate that figure to the

overall market. *In re Baxter Travenol Labs*, 952 F.2d 388, 392 (Fed. Cir. 1991) (“Information solely on numbers of units sold is insufficient to establish commercial success.”); *see also In re Huang*, 100 F.3d at 140 (“Declining to find evidence of commercial success because ‘[a]lthough [the inventor’s] affidavit certainly indicates that many units have been sold, it provides no indication of whether this represents a substantial quantity in this market.’”). We, therefore, cannot determine whether the licenses reflect the commercial value of the invention claimed in the ’749 patent, or whether they were taken merely to avoid the cost of litigation, either pending or threatened. Absent a persuasive showing of nexus, Patent Owner’s evidence of licensing fails to establish commercial success. Accordingly, we give little weight to Patent Owner’s argument that its licensing program is evidence that the claims are not obvious.

(2) Industry Praise

Patent Owner argues that the ’749 patent has generated industry praise, because a third party (Ocean Tomo, LLC) conducted a study and evaluated the “value” of certain patents. PO Resp. 53. According to Patent Owner:

As part of this study, the firm assessed the value of each patent using a number of different value factors to determine a PatentRatings IPQ score that objectively rated each patent. Approximately 220,000 issued patents were analyzed to determine a PatentRatings IPQ score, with the median of the scores being 100. According to the study, the top rated inventor with 16 patents in the wireless field was John Harvey, inventor of the ’749 Patent. The firm found that the patents, all members of the ’749 Patent family, had an average PatentRating IPQ score of 235.7, placing them in the top 0.1% of the approximate 220,000 active U.S. utility patents granted in 2010.

Id. (citing Ex. 2032).

Patent Owner further argues that citation of a patent by other patent holders in their patent filings (i.e., “forward citations”) is a measure of recognition and value. *Id.* at 54 (citing Ex. 2033; Ex. 2034; Ex. 2035). According to Patent Owner, “[m]embers of the ’749 Patent family have been cited by several hundred U.S. and foreign patents. This recognition by others is strong objective indicia of the significance of the patent that weighs against obviousness.” *Id.* at 54–55.

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 Tech’n., Inc. v. Emtrak, Inc.*, 544 F.3d 1310, 1316 (Fed. Cir. 2008). Patent Owner does not provide any analysis explaining how the cited study (Ex. 2032) or the “forward citations” praise the invention recited in the challenged claims. Accordingly, in this case, Patent Owner has not established a sufficient nexus between the merits of the claimed invention of the challenged claims and the alleged industry praise.

(3) Long-Felt but Unsolved Need

Patent Owner argues that “[t]he inventors of the ’749 Patent recognized that there was a long-felt need to provide a communications system with expanded capabilities, while overcoming inherent limitations of existing teletext systems and related systems.” PO Resp. 55. Patent Owner also describes the differences between the prior system and the “Harvey inventions.” *Id.* at 55–56.

We are not persuaded. Patent Owner must show that any evidence of long-felt need “demonstrates both that a demand existed for the patented invention, and that others tried but failed to satisfy that demand.” *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1082 (Fed. Cir. 2012). Patent Owner’s argument is lacking as to both elements. That is, Patent Owner offers no evidence that others tried and failed.

Accordingly, we give little weight to Patent Owner’s argument that there was a long-felt but unmet need that overcomes Petitioner’s showing of obviousness in this case.

*(4) 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. Patent Owner also failed to demonstrate a long-felt but unmet need for the claimed invention. We, thus, find that the evidence of objective indicia of nonobviousness is insufficient to overcome the evidence of obviousness over Powell and Guillou

vii. Conclusion

For the foregoing reasons, Petitioner has proven by a preponderance of the evidence that Powell and Guillou teach all elements of challenged claims 2, 3, 9–13, 18, 24, 49, 52, and 53 of the ’749 patent, and that a person of ordinary skill in the art would have had reason to combine the disclosures. Furthermore, we conclude that such a combination would have been within the level of ordinary skill in the art, as evidenced by the prior art of record. We, therefore, conclude that claims 2, 3, 9–13, 18, 24, 49, 52, and 53 would

have been obvious at the time of the invention, and thus, are unpatentable under 35 U.S.C. § 103.

III. MOTION TO AMEND

Patent Owner filed a contingent Motion to Amend in order to replace the unpatentable claims with proposed substitute claims 56–67. Paper 26 (“Mot.”). Petitioner opposes Patent Owner’s Motion. Paper 39 (“Opp.”). Because we find claims 2, 3, 9–13, 18, 24, 49, 52, and 53 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 any of the proposed claims.

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

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 56–67. 37 C.F.R. § 42.20(c); *see Idle Free Sys., Inc. v. Bergstrom, Inc.*, Case IPR2012-00027, slip op. at 7 (PTAB June 11, 2013) (Paper 26) (representative). As part of this showing, 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.

We determine that 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 twelve (12) substitute claims to replace the twelve (12) claims found unpatentable, and each substitute claim adds limitations that purport to narrow the scope of the original claim it replaces. *See* Ex. 2028. Patent Owner also identifies exemplary promotion and delivery of mass medium programming using first and second communication channels disclosed in the originally-filed application that fall within the scope of proposed substitute claims 56–67. Mot. 2–9 (citing Ex. 2023, 38:16–19, 40:12–32; Ex. 2024, 295:6–13, 469:35–472:17, 476:34–477:23). Patent Owner further identifies support in the original specification for the step in substitute claim 65 of processing the message to cause the receiver station to connect to a second communication channel, the second communication channel different from the first communication channel, for receiving information transmitted from a second remote site. Mot. 8–9 (citing Ex. 2023, 38:17–19, 40:26–32, 40:12–31; Ex. 2024, 36:31–37:3, 295:6–8, 469:35–472:17, 476:34–477:23, 521:8–21); Ex. 2014 ¶ 161.

We note that further support for substitute claims 65–67 can be found in the original specification’s discussion of preprogramming of information at a second and third microcomputer (Ex. 2024, 469), which can then be automatically accessed and sent based upon a first communication from a user (*id.* at 474). The specification indicates that using information from a different location has the advantage of being relatively invulnerable to programming pirates because the location of the instruction is harder to identify without causing meter information to be transmitted to a remote metering station. *Id.* at 477. We, thus, are persuaded that there is written description support for Patent Owner’s proposed substitute claims.

Accordingly, we now focus on whether Patent Owner has met its burden of proof to show that proposed substitute claims 56–67 are patentable over the prior art of record.

B. Analysis of the Patentable Distinction of Proposed Claims Over the Prior Art

In moving to amend their claims, Patent Owner has the burden to “show patentable distinction over the prior art of record and also [the] prior art known to the patent owner.” *Idle Free Sys., Inc. v. Bergstrom, Inc.*, Case IPR2012-00027, slip op. at 7 (PTAB June 11, 2013) (Paper 26) (representative). The “prior art known to the patent owner” “should be understood as no more than the material prior art that Patent Owner makes of record in the current proceeding pursuant to its duty of candor and good faith to the Office under 37 C.F.R. § 42.11, in light of [the] Motion to Amend,” and this includes, among other things, “any material art in the prosecution history of the patent,” “any material art of record in the current proceeding, including art asserted in grounds on which the Board did not institute review,” and “any material art of record in any other proceeding before the Office involving the patent.” *MasterImage 3D, Inc. v. RealD Inc.*, Case IPR2015-00040, slip op. at 2–3 (PTAB July 15, 2015) (Paper 42) (representative).

If Patent Owner sets forth a prima facie case of patentability of narrower substitute claims over the prior art of record, the burden of production shifts to Petitioner. In its opposition, Petitioner may explain why Patent Owner did not make out a prima facie case of patentability, or attempt to rebut that prima facie case, by addressing Patent Owner’s evidence and

arguments and/or by identifying and applying additional prior art against proposed substitute claims. Patent Owner has an opportunity to respond in its reply. The ultimate burden of persuasion remains with Patent Owner, the movant, to demonstrate the patentability of the amended claims. *Id.* at 4 (citing *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1306 (Fed. Cir. 2015)); *see also Nike, Inc. v. Adidas AG*, No. 2014-1719, slip op. at 11 (Fed. Cir. Feb. 11, 2016) (stating “as we held in *Proxyconn*, the Board permissibly interpreted [37 C.F.R. § 42.20(c)] as imposing the burden of proving patentability of a proposed substitute claim on the movant: the patent owner.”).

1. Analysis of Proposed Substitute Claim 56–62

As a replacement for independent claim 2, Patent Owner proposes claim 56. Mot. 1; Ex. 2028, 1–2. Proposed independent claim 56 is identical to claim 2 but for the addition of four new limitations: (1) receiving a first portion of said mass medium programming in a first programming signal over a first communication channel, (2) receiving a message over said first communication channel, responsive to said reply; (3) processing said message to cause said interactive video viewing apparatus to connect to a second communication channel, said second communication channel different from said first communication channel, for receiving encrypted digital programming; and (4) receiving said second portion of said mass medium programming in a second programming signal over said second communication channel, said second portion including said digital programming. Ex. 2028, 1–2. Proposed dependent claims 57–62 depend

from proposed independent claim 56 and do not have any new limitations. *Id.* at 2–4.

Patent Owners argue that no prior art anticipates the proposed claim 56 and that “not a single piece of prior art” renders the claim obvious. Mot. 11–12. Patent Owner specifically argues that no single piece of prior art discloses the steps of receiving a message on a first communication channel and causing a viewing apparatus to connect to a second communication channel, wherein the second communication channel is different from the first communication channel. *Id.* at 12. Patent Owner lists several prior art references and details why each reference, taken individually, would not render the proposed claim obvious. *Id.* at 13–20.

Patent Owner then argues that although

the concept of tuning television channels was well known, it was not obvious to a person of ordinary skill in the art to design a remote source that could transmit messages to a receiver station on a first communication channel that, when processed by the receiver station, causes the receiver station to connect [to] a communication channel different from the first channel to receive encrypted programming or data.

Id. at 20–21. Patent Owner further argues that there was no motivation to combine references, because: (1) it was not common practice in 1981 to remotely control a receiver station to connect to a different communication channel; (2) with many of the systems known at the time, including traditional broadcast television, radio, and even Viewdata, teletext and variations thereof, there was no incentive at the time to control a receiver station to connect to a different communication channel, as this would disrupt the connection between the central station and receiver stations; (3)

automating a process in which a receiver station connects to a different channel in response to processing a received message to receive encrypted digital programming or data would also have been difficult and nontrivial; and (4) analog TV systems, such as found in Campbell and Block, could not be modified into a digital cable system in 1981. Mot. 20–23; PO Reply to Opp. 11 (citing Ex. 2069, 100:18–101:20).

Patent Owner argues there was no general motivation that would have led to the proposed claim; however, Patent Owner does not address any combination of prior art references or explain why a person of ordinary skill in the art would not have combined certain references. Petitioner, on the other hand, proposes several combinations of prior art references that, together, disclose the elements of proposed claim 56. Petitioner specifically argues that each of the new limitations of proposed claim 56 were well-known in 1981 and are taught by the combination of (1) Campbell and Furukawa and (2) Block and Furukawa. Opp. 10–11 (citing Ex. 2052; WO81/02961; Exs. 2031, 2031); Ex. 1035 ¶ 121. According to Petitioner, Patent Owner and its expert admit that Campbell discloses receiving a signal that causes a viewer's receiver to change channels and that Furukawa describes a television system in which a signal is received from a central facility that causes the television to tune to a different channel. Opp. 11 (citing Mot. 13, 15; Ex. 1038, 133:4–18, 137:11–24). Petitioner, thus, asserts that at least Campbell and Furukawa teach all the limitations of the proposed claim 56 and Patent Owner failed to make out a *prima facie* case of patentability over combinations of the prior art of record. *Id.*

We agree with Petitioner's position. Particularly, we credit the testimony of Petitioner's witness, Mr. Anthony J. Wechselberger, who explains that Campbell, Block, and Furukawa teach "force" or "automatic" tuning of a receiver, i.e., "sending a signal that forces a receiver to tune to a particular channel" and that such technology was well-known in 1981. Ex. 1035 ¶¶ 122–125. Patent Owner and Patent Owner's expert, Dr. Weaver, also acknowledged that Furukawa teaches that a television system in which a signal is received from a central facility that causes the television to tune to a different channel. Mot. 15 (stating that "Furukawa describes the operation of a spot channel wherein a television set receiving any channel may be forced by a central facility to receive a spot channel"); PO Reply to Opp. 3 (discussing prior art "disclosure of the 'automatic channel tuning' feature which [Patent Owner] has already acknowledged in Furukawa"); Ex. 1038, 137:11–24, 140:16–21, 145:1–11. Patent Owner's witness testified that "[a] person of ordinary skill in the art before 1981 would have known that you could send a signal to a properly equipped and responsive television and make it change channels." Ex. 1038, 136:19–24. Additionally, other references (i.e., Hartung and Cogswell) that disclose "automatic channel tuning" are cited in the prosecution history of the '749 patent. PO Reply to Opp. 3 (citing Exs. 1045, 1046). According to Patent Owner, these references describe "the state of the art." *Id.* Thus, we are satisfied that "automatic channel tuning," as taught by Campbell, Block, and Furukawa, was known to a person of ordinary skill in the art at the time of the invention of the '749 patent.

Although Patent Owner argues that applying such “automatic channel tuning” to digital television systems (rather than using analog television systems) would have been difficult and that one of ordinary skill in the art would not have been motivated to use such technology to change channels and to send encrypted digital data (Mot. 20–23; PO Reply to Opp. 10–11), we are not persuaded given the state of the art as shown by Guillou, discussed in detail previously. Guillou discloses the decryption of digital data (Ex. 2014 ¶ 85) and explains that such technology “could be applied to other systems without difficulty for the man skilled in the art, and notably to the CEEFAX or ORACLE systems or the VIEWDATA or PRESTEL systems” (Ex. 1022, 21:23–28). The Ceefax, Oracle, Viewdata, and Prestel systems are analog systems that send signals over television channels or telephone lines. Therefore, we are satisfied that a person of skill in the art would have had reason to use “automatic channel tuning” and apply digital encryption technology in order to “transmit messages to a receiver station on a first communication channel that, when processed by the receiver station, causes the receiver station to connect [to] a communication channel different from the first channel to receive encrypted programming or data.” Accordingly, we find that Patent Owner has not demonstrated the patentability of proposed substitute claims 56–62.

2. Analysis of Proposed Substitute Claim 63–64

As a replacement for independent claim 18, Patent Owner proposes claim 63. Mot. 1; Ex. 2028, 4–5. Proposed independent claim 63 is identical to claim 18 but for the addition of four new limitations: (1) receiving mass medium programming in a first programming signal over a

first communication channel, (2) receiving a message over said first communication channel, responsive to said reply; (3) processing said message to cause said interactive mass medium programming output apparatus to connect to a second communication channel, said second communication channel different from said first communication channel, for receiving encrypted digital programming; and (4) receiving a second programming signal including said data in encrypted form over said second communication channel. Ex. 2028, 4–5. Proposed dependent claim 64 depends from proposed independent claim 63 and does not have any new limitations. *Id.* at 6.

Patent Owner and Petitioner proffer the same arguments and evidence for proposed claims 63 and 64 as they did for proposed claims 56–62. Mot. 11–23; Opp. 8–14, 16–25; PO Reply to Opp. 8–11. Accordingly, we find that Patent Owner has not demonstrated the patentability of proposed substitute claims 63 and 64.

3. Analysis of Proposed Substitute Claim 65–67

As a replacement for independent claim 49, Patent Owner proposes claim 65. Mot. 1; Ex. 2028, 6–7. Proposed independent claim 65 is identical to claim 49 but for the addition of three new limitations: (1) receiving a message received over a first communication channel from a first remote site, responsive to said subscriber reply, (2) processing said message to cause said receiver station to connect to a second communication channel, said second communication channel different from said first communication channel, for receiving information transmitted from a second remote site; and (3) receiving a second information transmission including said

additional material in encrypted form over said second communication channel. Ex. 2028, 6–7. Proposed dependent claims 66 and 67 depend from proposed independent claim 65 and do not have any new limitations. *Id.* at 8.

Patent Owner and Petitioner proffer many of the same arguments and evidence for proposed claims 63 and 64 as they did for proposed claims 56–62. Mot. 11–23; Opp. 8–14, 16–25; PO Reply to Opp. 8–11. Patent Owner further argues that some of the prior art cited by Petitioner (i.e., Hartung and Campbell) fail to disclose “receiving information from a second remote site.” PO Reply to Opp. 11–12. We are not persuaded by Patent Owner. Rather, we credit the testimony of Petitioner’s witness, Mr. Wechselberger, who explains that Campbell does teach this limitation:

WO ’961 discloses sending commands to set top boxes to cause them to be auto-tuned to a special channel upon an emergency. The signal, emergency alert word, is received from a first remote site, *i.e.*, the PCS 50. This signal causes the receiver to switch to a different channel to broadcast the alert messages and signals. Ex. 1033 at 21:22–22:2; Ex. 1006 at 14:29–50; Ex. 1007 at 19:18–20:4. The content of the programming on the second channel would come, at least indirectly, from a different remote site, “to address selected groups such as city officials, police, firemen, national guard and so forth.” Ex. 1033 at 18:36–19:5; Ex. 1006 at 12:50–57; Ex. 1007 at 16:13–19.

Ex. 1035 ¶ 137. Accordingly, we find that Patent Owner has not demonstrated the patentability of proposed substitute claims 65–67.

4. Secondary Considerations of Non-Obviousness

Patent Owner does not argue that objective indicia of nonobviousness support the patentability of proposed substitute claims 56–67. Factual inquiries for an obviousness determination, however, include secondary

considerations based on evaluation and crediting of objective evidence of nonobviousness. *See Graham*, 383 U.S. at 17. Therefore, we have reviewed whether Patent Owner's arguments regarding commercial success, licensing, long-felt but unresolved need, and industry praise in connection with the challenged claims indicate that proposed substitute claims 56–67 would not have been obvious to a person of ordinary skill in the art. For the same reason as discussed previously in Section II. D.3.vii., we find that the evidence of objective indicia of nonobviousness is insufficient to overcome the evidence of obviousness as presented by Petitioner. *See generally* Opp. 8–12, 16–25.

Therefore, Patent Owner has not demonstrated the patentability of proposed substitute claims 56–67. Accordingly, Patent Owner's Motion to Amend is *denied*.

C. Analysis of the Patentable Subject Matter

We have determined that Patent Owner has not demonstrated the patentability of proposed substitute claims 56–67 in view of the prior art and the knowledge of one of ordinary skill in the art at the time of invention. Accordingly, we need not reach a decision regarding whether proposed substitute claims 56–67 encompass patentable subject matter under 35 U.S.C. § 101.

IV. CONCLUSION

For the foregoing reasons, we conclude Petitioner has shown by a preponderance of the evidence that claims 2, 3, 9–13, 18, 24, 49, 52, and 53 of the '749 patent would have been obvious in view of Powell and Guillou.

In addition, we conclude Patent Owner has not demonstrated, by a preponderance of the evidence, the patentability of proposed substitute claims 56–67.

V. ORDER

For the reasons given, it is

ORDERED that, by a preponderance of the evidence, claims 2, 3, 9–13, 18, 24, 49, 52, and 53 of the '749 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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