

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ARRIS INTERNATIONAL PLC, PACE LTD.,
PACE AMERICAS, LLC, PACE AMERICAS HOLDINGS, INC., and
PACE AMERICAS INVESTMENTS, LLC,
Petitioner,

v.

SONY CORPORATION,
Patent Owner.

Case IPR2016-00827
Patent RE38,898 E

Before JENNIFER S. BISK, BART A. GERSTENBLITH, and
CHARLES J. BOUDREAU, *Administrative Patent Judges*.

GERSTENBLITH, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

A. *Background*

ARRIS International plc, Pace Ltd., Pace Americas, LLC, Pace Americas Holdings, Inc. and Pace Americas Investments, LLC (collectively, “Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting institution of *inter partes* review of claims 41, 42, 47, and 48 of U.S. Patent No. RE38,898 E (Ex. 1001, “the ’898 patent”). Sony Corporation (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”).

Under 35 U.S.C. § 314(a), an *inter partes* review may be instituted only if “the information presented in the [P]etition . . . and any [Preliminary Response] . . . shows that there is a reasonable likelihood that the [P]etitioner would prevail with respect to at least 1 of the claims challenged in the [P]etition.” See 37 C.F.R. § 42.108(c).

For the reasons given below, on this record, Petitioner has not established a reasonable likelihood of prevailing with respect to at least one challenged claim of the ’898 patent. Accordingly, we *deny* the Petition and decline to institute an *inter partes* review of the ’898 patent.

B. *Related Proceedings*

The parties indicate that the ’898 patent is asserted against Petitioner in the United States District Court for the District of Delaware, in a case captioned *Sony Corp. v. Pace plc*, No. 1:15-cv-00288-SLR-SRF, filed April 1, 2015.¹ Pet. 2–3; Paper 5, 2. Petitioner also challenges other patents assigned to Patent Owner in IPR2016-00828, IPR2016-00834, and IPR2016-00835. Pet. 1 n.3; Paper 5, 2–3.

¹ Petitioner indicates that Pace plc no longer exists and was reorganized as Pace Ltd. Pet. 1–2.

C. Real Parties in Interest

The Petition identifies “ARRIS International plc, and its wholly-owned subsidiaries Pace Ltd., Pace Americas, LLC, Pace Americas Holdings, Inc., and Pace Americas Investments LLC” as the real parties in interest. Pet. 1. Patent Owner identifies “SONY CORPORATION” as the sole real party in interest. Paper 5, 2.

D. The References

Petitioner relies on the following references:

U.S. Patent No. 5,504,816, issued April 2, 1996 (Ex. 1007, “Hamilton”);

U.S. Patent No. 5,434,918, issued July 18, 1995 (Ex. 1008, “Kung”);

U.S. Patent No. 4,965,825, issued October 23, 1990 (Ex. 1009, “Harvey”);

U.S. Patent No. 5,509,074, issued April 16, 1996 (Ex. 1010, “Choudhury”); and

U.S. Patent No. 5,291,554, issued March 1, 1994 (Ex. 1011, “Morales”).

E. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 41, 42, 47, and 48 of the '898 patent on the following grounds:

References	Basis ²	Claims challenged
Hamilton, Kung, and Harvey	§ 103(a)	41, 42, 47, and 48
Choudhury, Hamilton, and Harvey	§ 103(a)	41, 42, 47, and 48
Morales and Harvey	§ 103(a)	41, 42, 47, and 48

Petitioner supports its challenge with a Declaration by Dr. Samuel H. Russ, executed on March 31, 2016 (Ex. 1003, “the Russ Declaration”). Patent Owner supports its arguments in its Preliminary Response with a Declaration by Bruce McNair, dated July 8, 2016 (Ex. 2002, “the McNair Declaration”).

F. The '898 Patent

The '898 patent is directed to “a video data communication system and method in which video data is transmitted between devices connected to a data bus according to a protocol which ensures the security of the transmitted video data.” Ex. 1001, 1:16–20. The '898 patent describes the steps of a method for communicating video data as follows:

transmitting a slave address of the slave device and a command from the said master device to said data bus, generating, at said

² Petitioner identifies “35 U.S.C. §§ 102 and 103” in its statement of the relief requested (*see* Pet. 4), but in the specific grounds identified in its chart (*id.*) and the discussion of each ground in the Petition (*id.* at 19–60), Petitioner relies solely upon obviousness under § 103. Accordingly, we construe the Petition as relying upon § 103 as the statutory basis for each asserted ground of unpatentability.

master device, a KEYCMD signal as a function of said command and a master security key, receiving, at said slave device from said data bus, said slave address and said command and recognizing said slave address as corresponding to said slave device, generating, at said slave device, as ACK signal as a function of said command and a slave security key, transmitting from said slave device to said data bus a master address of said master device and said ACK signal, receiving, at said master device from said data bus, said master address and said ACK signal and recognizing said master address as corresponding to said master device, comparing said KEYCMD signal generated by said master device with said ACK signal received by said master device, and executing a data transfer between said master device and said slave device if said KEYCMD signal corresponds to said ACK signal.

Id. at 2:3–24.

Figure 1 of the '898 patent is shown below:

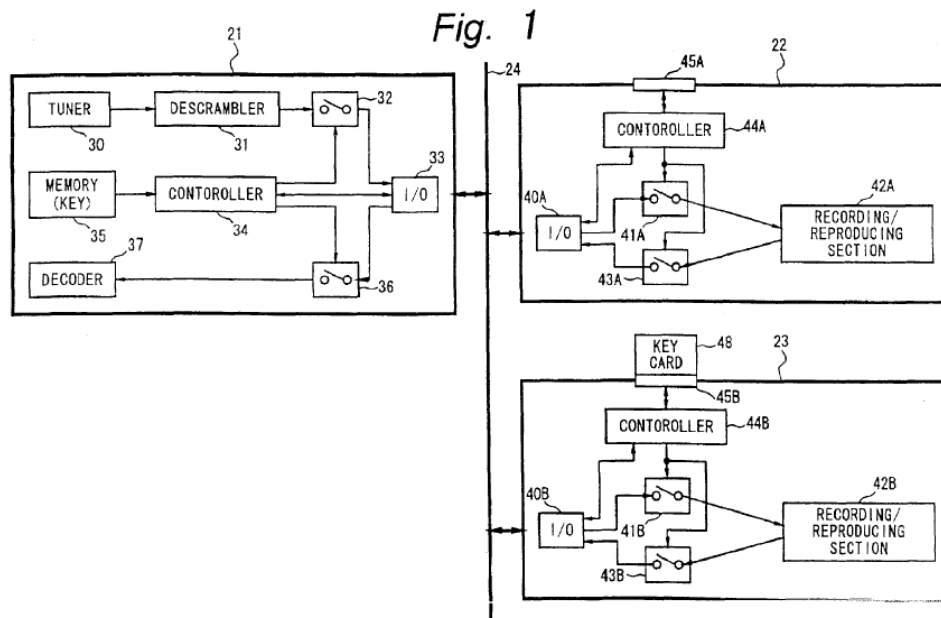


Figure 1 “is a schematic diagram of a video data communication system according to a first embodiment” disclosed in the '898 patent. *Id.* at 3:25–27. The '898 patent explains:

The video data communication system is generally comprised of a receiver 21, a data bus 24, and one or more peripheral devices. The peripheral devices, depending on their particular configurations, may transmit and/or receive control signals and/or video data through data bus 24. Two such peripheral devices are illustrated in FIG. 1, specifically, a recording/reproducing device 22 and a recording/reproducing device 23. Each of the receiver 21, device 22, and device 23 are connected to data bus 24 and are capable of transmitting and receiving control signals and video data through data bus 24.

Id. at 4:11–21.

Figure 4 of the '898 patent is shown below:

Fig. 4

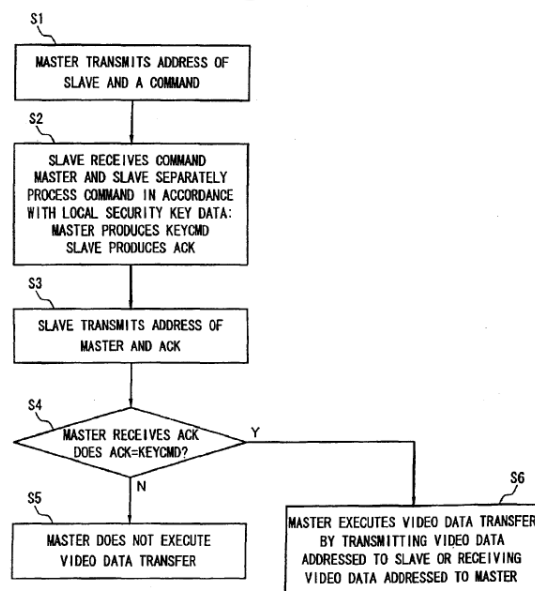


Figure 4 “is a flow diagram . . . explaining the general sequence of communication and processing conducted by the video data communication system of FIG. 1.” *Id.* at 3:34–37.

Figure 5 of the '898 patent is shown below:

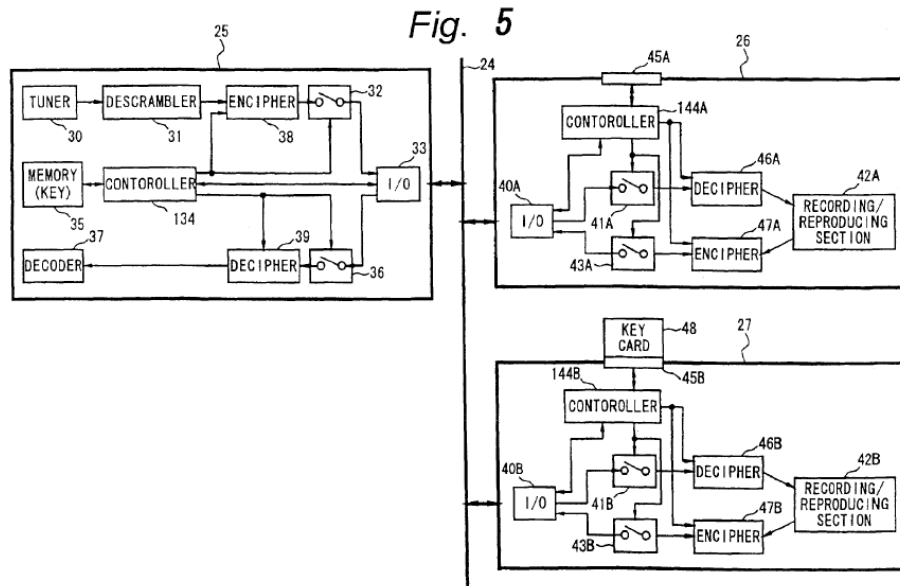


Figure 5 “is a schematic diagram of a video data communication system according to a second embodiment” disclosed in the '898 patent. *Id.* at 3:38–40. The video data communication system illustrated in Figure 5 comprises

a receiver 25, a data bus 24, and one or more peripheral devices. The peripheral devices may transmit and/or receive control signals and/or video data through data bus 24. Two such peripheral devices are illustrated in FIG. 5, specifically, a recording/reproducing device 26 and a recording/reproducing device 27. Each of receiver 25, device 26, and device 27 is connected to data bus 24 and is capable of transmitting and receiving control signals and video data through data bus 24.

Id. at 12:5–16.

Figure 8 of the '898 patent is shown below:

Fig. 8

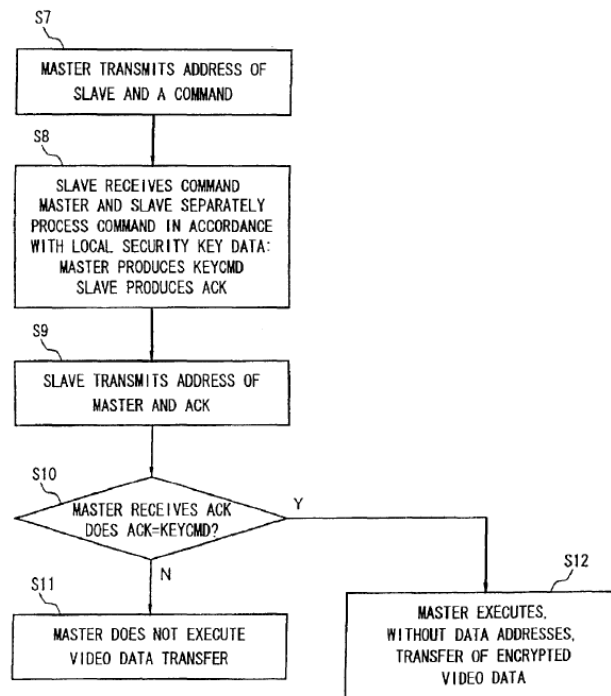


Figure 8 “is a flow diagram . . . explaining the general sequence of communication and processing conducted by the video data communication system of FIG. 5.” *Id.* at 3:48–51.

G. Illustrative Claims

Claims 41 and 47 are the independent claims challenged in this proceeding. Claim 42 depends from claim 41, and claim 48 depends from claim 47. Independent claims 41 and 47 are representative of the claimed subject matter and are reproduced below:

41. An apparatus for receiving a scrambled compressed signal, comprising:

- an input for receiving said scrambled compressed signal;
- a descrambler for descrambling said received signal;
- an encryptor for encrypting said descrambled signal; and

controller for executing an authentication procedure between the apparatus and an other device via a data bus;

wherein said controller executes a data transfer of said encrypted signal to the other device via said data bus if said authentication procedure is successfully executed.

Ex. 1001, 26:8–20.

47. An apparatus for reproducing a compressed signal recorded on a recording medium, comprising:

a reproducing circuit for reproducing said signal recorded on said recording medium;

an encryptor for encrypting said reproduced signal;

a communication interface coupled to a data bus for transmitting said encrypted signal;

a controller for executing an authentication procedure via said data bus between said apparatus and another device connected to said data bus, and for controlling said reproducing circuit and encryptor;

wherein said controller executes said reproducing and encrypting of said recorded signal if said authentication procedure is successfully executed.

Id. at 26:61–27:7.

II. CLAIM CONSTRUCTION

The '898 patent is expired. Accordingly, we construe the claims of the '898 patent in accordance with the claim construction standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* Pet. 15 (proposing to construe the claims of the '898 patent in accordance with *Phillips*); Prelim. Resp. 4 (same). Claim terms are generally given their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See Phillips*, 415 F.3d at 1312–13 (citations

omitted). Only terms that are in controversy need to be construed, and these need be construed only to the extent necessary to resolve the controversy.

Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803
(Fed. Cir. 1999).

A. “data bus”

Each of the challenged claims of the '898 patent recites a “data bus.” *See, e.g.*, Ex. 1001, 26:15–16 (claim 41 reciting, *inter alia*, “controller for executing an authentication procedure between the apparatus and an other device via a *data bus*” (emphasis added)). Petitioner proposes that we construe “data bus” to mean “a computer data communication path that allows a plurality of devices to receive the computer data.” Pet. 16. Petitioner’s primary concern appears to be distinguishing what it refers to as a “‘point-to-point’ communication path.” *Id.* at 17. Petitioner relies upon the recitations of data bus in the specification and extrinsic evidence in the form of dictionary definitions and testimony by Dr. Russ. *See id.* at 16–18.

Patent Owner asserts that Petitioner’s proposed construction and attempt to distinguish point-to-point communication paths is “clearly intended to support Petitioner[’s] non-infringement arguments in parallel litigation.” Prelim. Resp. 9. Patent Owner contends that the distinction drawn by Petitioner “is not relevant to the issues before the Board and need not be addressed for purposes of denying the petition.” *Id.* at 9–10. Putting aside the number of receiving devices, Patent Owner proposes that “data bus” be construed “as requiring a wired data communication path.” *Id.* at 10 (citing Ex. 1001, 4:11–21).

We agree with Patent Owner that, for the purposes of determining whether to institute an *inter partes* review of the '898 patent, we need not

decide whether “data bus” requires multiple receiving devices or excludes a point-to-point communication path. The apparent³ disagreement between the parties with respect to the construction of “data bus” that impacts our determination here is whether “data bus” requires a wired data communication path or whether it is broad enough to encompass a wireless data communication path.

The ’898 patent claims priority to a Japanese patent application filed May 24, 1994.⁴ The ’898 patent discusses transmitting various data to a data bus, but does not describe said data bus as wireless. *See, e.g.*, Ex. 1001, 2:3–24. When the ’898 patent refers to a data bus, the specification uses language that suggests a physical structure. *See, e.g., id.* at 2:3–6 (“a method for communicating video data via a data bus between a master device and a slave device which are each *coupled to the bus*” (emphasis added)); *see also id.* at Figs. 1 and 5 (illustrating data bus 24)). Petitioner’s extrinsic evidence is consistent with the notion that a data bus is a physical structure. Pet. 16 (“A bus is always designed *to attach* multiple devices” (quoting Ex. 1018 (emphasis added))).

³ We use the phrase “apparent disagreement” because Petitioner does not address directly the question of whether a “data bus” is limited to wired paths, but in light of Petitioner’s third ground of challenge, discussed *infra*, we understand Petitioner’s position as construing “data bus” to encompass wireless paths as well.

⁴ Petitioner relies upon May 24, 1994, as the ’898 patent’s priority date. Pet. 4.

In light of the intrinsic and extrinsic evidence in the record, we agree with Patent Owner that one of ordinary skill in the art would have understood “data bus” to mean “a wired data connection path.”⁵

B. Other Claim Terms

The parties propose constructions for several other claim terms, including “scrambled,” “descrambling,” “controller for executing an authentication procedure,” and “reproducing circuit.” Pet. 18–19; Prelim. Resp. 5–9. Although the parties may disagree as to the meaning of these terms, we need not resolve any disagreement in order to ascertain whether Petitioner has shown a reasonable likelihood of prevailing with respect to at least one challenged claim of the ’898 patent.

III. ANALYSIS

A. Obviousness over Hamilton, Kung, and Harvey

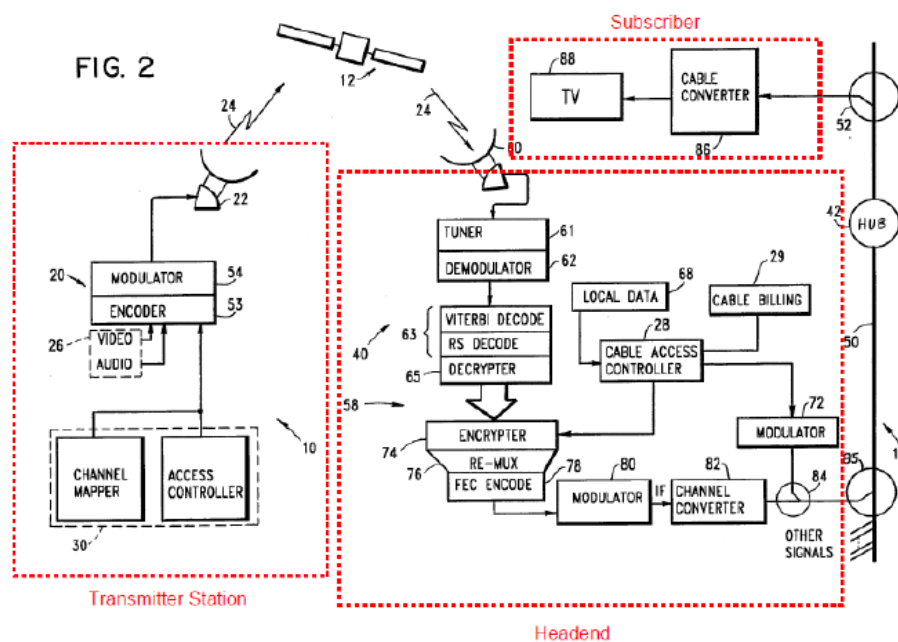
Petitioner asserts that a combination of the teachings of Hamilton, Kung, and Harvey would have rendered the subject matter of claims 41, 42, 47, and 48 obvious to one of ordinary skill in the art at the time of the invention. Pet. 19–33. The Petition includes discussion and a claim chart identifying where Hamilton, Hung, and Harvey allegedly teach or suggest the elements of each challenged claim. *Id.*

1. Hamilton

Hamilton is directed to “controlling access to digital signals distributed via a cable television (“CATV”) network or the like, and more particularly to a method and apparatus for reencrypting digital signals

⁵ For the purposes of this Decision, we need not take a position on whether “data bus” requires a plurality of receiving devices.

received from a first communication path (e.g. satellite) prior to retransmission along a second path such as a CATV network.” Ex. 1007, 1:7–12. Hamilton explains that “reencryption is used to control subscriber access to services provided via the second path, such as digital video and audio services, audio only services, data services and the like.” *Id.* at 1:12–15. Figure 2 of Hamilton, as annotated by Petitioner (*see* Pet. 19), is shown below:



Hamilton’s Figure 2 “is a block diagram of the satellite transmission system and cable network” disclosed (Ex. 1007, 3:25–26) and is annotated by Petitioner to identify a “Transmitter Station,” “Headend,” and “Subscriber” (Pet. 19).

Hamilton discloses that “a cable access controller 28 . . . provides cable access and billing information (via billing processor 29) for subscribers. In this way, the controller 28 provides an authorization data stream which includes authorization data for each subscriber such as channel

authorization and user features, e.g. parental control.” Ex. 1007, 4:9–17.

Hamilton explains:

One or more subscriber converter(s) 86 are connected to each active subscriber port 52 for receiving, decrypting and converting the digital signals 24 for reproduction on a subscriber appliance such as a television set 88. The converter 86 receives the program signals 24, authorization and control data for decryption of the program signals, and tag data (e.g., for program identification)

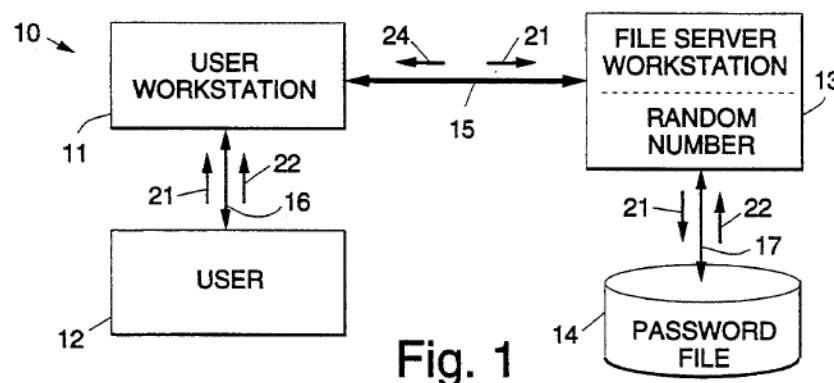
Id. at 5:66–6:6.

2. *Kung*

Kung is directed to “a mutually authenticating communication method or protocol for use in communicating between a file server workstation and a user operating a workstation connected to a network.” Ex. 1008, 1:7–11.

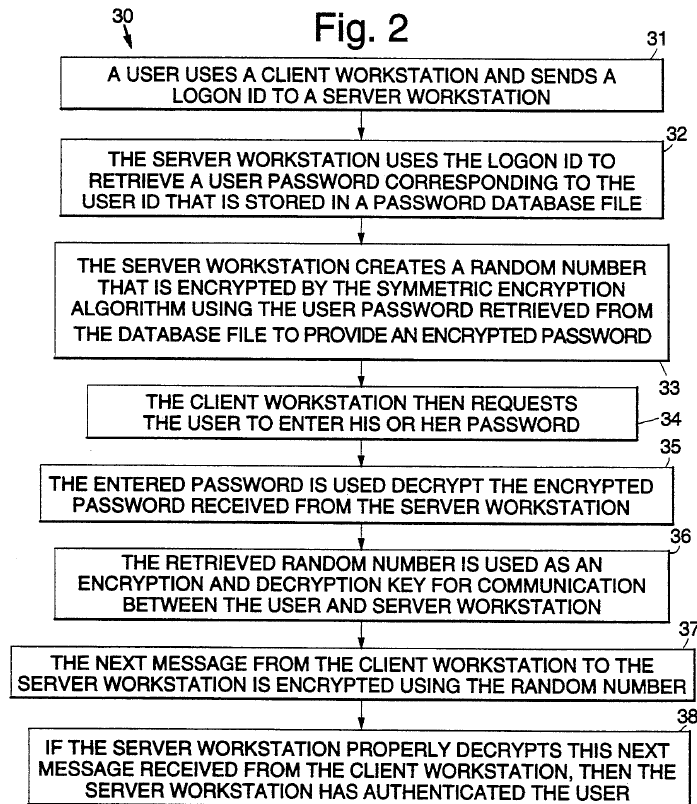
The disclosed protocol “permits a user that operates a client workstation connected to a network to authenticate himself or herself to a desired file serving workstation and the file serving workstation to authenticate itself to the user.” *Id.* at 2:5–9.

Kung’s Figure 1 is shown below:



Kung’s Figure 1 “is a diagram illustrating a networked computer system on which a mutual authentication method in accordance with the principles of” Kung’s disclosure. *Id.* at 2:35–38.

Kung's Figure 2 is shown below:



Kung's Figure 2 "is a flow diagram of the mutual authentication method."

Id. at 2:39–41.

3. Harvey

Harvey discloses:

A unified system of programming communication for use on individual computer systems with capacity for generating relevant user specific information simultaneously at each station of a plurality of subscriber stations. The system includes a transmission station which is a central control system of a system of receiver station computers controlled by the station transmission. . . . The unified system includes apparatus for restricting the combined programming so that it is available only at selected stations tuned to a given transmission station's transmission.

Ex. 1009, Abstract. Harvey describes using a “program unit identification code” to limit the receiver stations that can access specific programming as controlled by the station transmission. *Id.* at 182:62–183:14.

4. *Level of Ordinary Skill in the Art*

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

5. *Discussion*

Petitioner contends that Hamilton’s “headend” discloses many of the elements of the claims, including that the headend’s “access controller 28 . . . performs authentication algorithms by controlling the re-encryption of television programming, billing authentication, and the transmission to the subscriber devices.” Pet. 20 (citing Ex. 1003 ¶ 88; Ex. 1007, 4:9–44, 6:7–24). Petitioner asserts that the controller provides an authorization data stream that may include: (i) authorization data; (ii) tag data; and (iii) converter control data. *Id.* (citing Ex. 1003 ¶ 88; Ex. 1007, 5:1–5).

Petitioner contends that Kung

discloses an authentication method that permits devices in a system to mutually authenticate other devices on the network, permitting “a user that operates a client workstation connected to a network to authenticate himself or herself to a desired file serving workstation and the file serving workstation to authenticate itself to the user.”

Id. at 21 (citing Ex. 1008, 2:5–9, Abstract; Ex. 1003 ¶¶ 91–92). Specifically, “Kung describes that a central server and the user’s device authenticate one

another using a randomly generated random number and a user's ID/password.” *Id.* (citing Ex. 1003 ¶¶ 92–94; Ex. 1008, 2:58–3:12).

Petitioner asserts that one of ordinary skill in the art “should have been motivated to modify the access controller 28 [of Hamilton] in view of Kung to execute its authentication procedure between the headend (‘apparatus’) and a particular subscriber converter (‘another device[.]’) via cable network 14 (‘data bus’).” *Id.* at 31–32 (citing Ex. 1003 ¶¶ 135–136). Petitioner explains that “the modified controller 28 would execute Kung’s symmetric key authentication procedure to authenticate the subscriber converter.” *Id.* at 32 (citing Ex. 1003 ¶¶ 135–137; Ex. 1007, 4:11–17, 4:65–5:11; Ex. 1008, 2:58–4:11). Petitioner contends that one of ordinary skill in the art “would have been motivated to make the modification suggested by Kung in order to provide additional security and control access measures into the system of Hamilton.” *Id.* at 32–33 (citing Ex. 1003 ¶¶ 38, 137–138, 160; Ex. 1026, 1:26–35⁶).

As cited above, Petitioner relies on Dr. Russ’s testimony. Dr. Russ’s testimony, however, is largely the same as Petitioner’s argument, but does offer one additional point when stating: Kung “assigns a random number known only to both parties and established only in the context of a specific piece of premium content. . . . [S]ince a new number is established each time premium content is requested, a pirate cannot reuse old random numbers. This prevents well-known ‘replay attacks.’” Ex. 1003 ¶ 160.

⁶ Exhibit 1026 is U.S. Patent No. 4,172,213, issued October 23, 1979. Petitioner does not rely upon this patent in any of its proposed grounds challenging the claims of the ’898 patent.

Patent Owner raises several arguments in response to this challenge by Petitioner, including that “a person of ordinary skill in the art would not have had a reason to combine Kung’s authentication procedure with Hamilton.” Prelim. Resp. 15. In particular, Patent Owner contends that Hamilton already describes “an adequate user-based authentication procedure” and that Petitioner “identif[ies] no deficiency in Hamilton’s user authentication, nor . . . [does Petitioner] provide any articulable rationale as to why Hamilton would be modified to include Kung’s manual, user authentication, apart from generically providing ‘additional security.’” *Id.* at 15–16. Patent Owner asserts that “one can always add additional security processing to any device/system for the purposes of increasing security. Absent from Petitioner[’s] explanation is any **motivation** to do so in this case.” *Id.* at 16.

We agree with Patent Owner that Petitioner has not shown a reasonable likelihood of prevailing on this ground. “[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). In particular, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.* (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Here, Petitioner identified the generic reason of providing additional security and control access measures although Petitioner has not provided any evidence or argument that the security provided by Hamilton was deficient or that there was some need or problem that existed and to which one of ordinary skill in the art would have sought, and been prompted to rely

upon and apply, Kung's teachings. Were Petitioner's "reason" enough, any additional level of security would necessarily be obvious to add to Hamilton's disclosure. Without more, however, we are at a loss as to why one of ordinary skill in the art would have sought to add Kung's authentication procedure to Hamilton's disclosure when Petitioner asserts that Hamilton already discloses an authentication procedure.

Dr. Russ's testimony, although speaking of "replay attacks," does not explain what they were, as of 1994; does not provide support for his testimony that "replay attacks" were a concern to those of ordinary skill in the art as of 1994; does not indicate or explain why Hamilton's security features do not adequately prevent replay attacks; and does not explain why the alleged additional security and control access measures of Kung would have been an improvement or otherwise provide a benefit over the security features described by Hamilton.

Petitioner's discussion of the reasons to combine the teachings of the references relied upon is directed to all four of the challenged claims. *See* Pet. 27 (relying on Kung for claim element "47(d)"); *see also id.* at 28–33 (generally addressing the alleged motivation with respect to claims 41, 42, 47, and 48). Accordingly, we determine that, based on the record before us, Petitioner has not shown a reasonable likelihood that it would prevail in establishing the unpatentability of claims 41, 42, 47, and 48 as obvious over the combination of Hamilton, Kung, and Harvey.⁷

⁷ Because of Petitioner's failure with respect to Hamilton and Kung, we need not address Petitioner's arguments with respect to the elements of Harvey or why one of ordinary skill in the art allegedly would have been prompted to combine Harvey's teachings with those of Hamilton or Patent Owner's arguments in response.

B. Obviousness over Choudhury, Hamilton, and Harvey

Petitioner asserts that a combination of the teachings of Choudhury, Hamilton, and Harvey would have rendered the subject matter of claims 41, 42, 47, and 48 obvious to one of ordinary skill in the art at the time of the invention. Pet. 34–46. The Petition includes discussion and a claim chart identifying where Choudhury, Hamilton, and Harvey allegedly teach or suggest the elements of each challenged claim. *Id.*

1. Choudhury

Choudhury is directed to “methods of protecting electronically published materials using cryptographic protocols.” Ex. 1010, 1:9–11. Figure 4 of Choudhury is shown below:

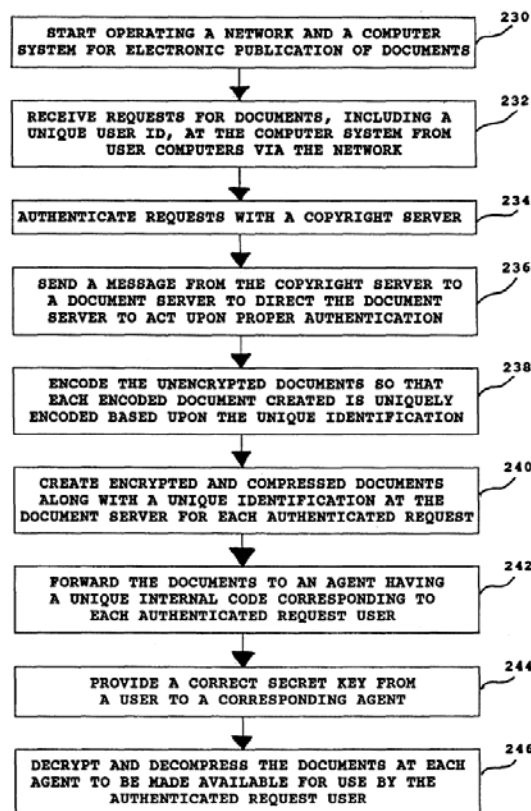
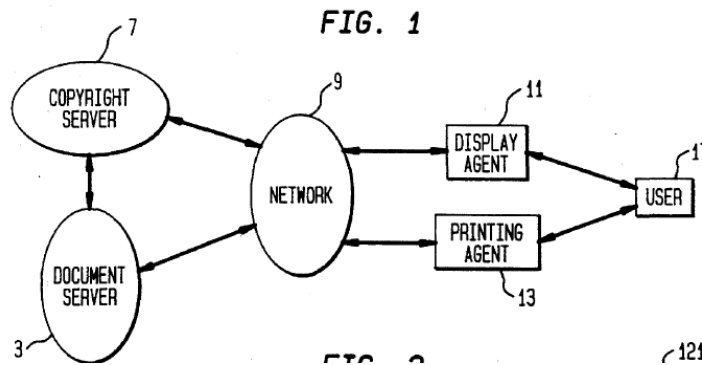


FIG. 4

Choudhury's Figure 4 "illustrates a flowchart" of the disclosed method. *Id.* at 2:8–9; *see id.* at 7:27–49 (explaining the method disclosed in Figure 4).

Choudhury's Figure 1 is shown below:



Choudhury's Figure 1 "illustrates a diagram of the overall architecture of the . . . [disclosed] method of protecting electronically published materials." *Id.* at 2:1–3. Choudhury explains:

Document Server 3 (trusted by a publisher) provides encoded, encrypted and compressed document to User 17. Copyright Server 7 authenticates requests from User 17 for obtaining documents, and this is also trusted by a publisher. Display Agent 11 includes software trusted by publisher which decrypts and displays the document obtained from Document Server 3. Printing Agent 13 includes software trusted by a publisher which decrypts and prints the document obtained from document server. Either Display Agent 11 or Printing Agent 13, or both, or a plurality of these may be available to a user.

Id. at 3:39–49.

Choudhury describes the following with respect to document transmission:

2. Document Transmission: (a) the Copyright Server 207 verifies the request and if it is valid, it arranges to send the document from the Document Server 203, (b) Document Server 203 sends the encrypted and compressed PDL version of the document to the User 217.

Id. at 5:18–29.

Choudhury describes the following with respect to document viewing and printing:

3. Document Viewing or Printing: upon receiving a request to display (or print) the document, the Display Agent 211 or the Printing Agent 213 prompts the User 217 to type in his/her secret key, S_u , upon receiving which the agent decrypts and decompresses the received PDL document, generates a bitmap and sends it to the display device 221 or printer 223.

Id. at 5:30–36.

2. *Discussion*

a. *Claims 41 and 42*

Petitioner relies upon Choudhury as disclosing most of the elements of claims 41 and 42, but recognizes that Choudhury does not disclose “an input for receiving said scrambled compressed signal” as recited by claims. Pet. 37–38. Petitioner relies upon Hamilton and Harvey as disclosing such an input. *Id.* In particular, Petitioner asserts that “[t]he practice of electronically distributing content directly from a source to an intermediate system for further distribution to user devices was a well-known practice by May 1994.” *Id.* at 43 (citing Ex. 1003 ¶ 167). Petitioner contends that one of ordinary skill in the art

would have been motivated to modify Choudhury to transmit content from an original content server to intermediate server systems (including the document and copyright servers), thereby allowing the system’s copyright and document servers to operate as an intermediate station between a number of different document sources (*e.g.*, newspaper, magazines, journals systems, or other original document sources) and the user computers.

Id. (citing Ex. 1003 ¶ 168). Petitioner explains that “[d]ocuments could be transmitted to geographically dispersed intermediate systems for

re-distribution, rather than manually inputted at each document server, thereby providing data redundancy, improving distribution speed, and reducing costs.” *Id.* at 43–44 (citing Ex. 1003 ¶ 168). Petitioner contends that “[i]t would also reduce load, and likely response time, as requests are received and processed by a plurality of intermediate systems, rather than a single system.” *Id.* (citing Ex. 1003 ¶ 168).

Patent Owner raises several arguments in response to Petitioner’s challenge including that “it would have been illogical to convert Choudhury’s document server into an intermediate system with an input from some other undisclosed system.” Prelim. Resp. 20. Rather, Patent Owner asserts that “Choudhury already serves its function of providing documents to authenticated users; there would have been no motivation to turn this well-functioning, self-contained system into an intermediate server that had to rely on an input from an outside source.” *Id.*

Petitioner’s alleged reasons as to why one of ordinary skill in the art would have modified Choudhury’s teachings to incorporate those of Hamilton and Harvey are not supported on the record before us. Petitioner cites to Paragraph 168 of Dr. Russ’s Declaration, asserting that such modification would “reduce load, and likely response time” and “provid[e] data redundancy, improv[e] distribution speed, and reduc[e] costs.” Pet. 44 (citing Ex. 1003 ¶ 168). Dr. Russ, however, does not testify that such modification would reduce cost. Dr. Russ’s testimony regarding cost is directed only to Petitioner’s third challenge, discussed *infra*. See Ex. 1003 ¶¶ 203, 227, 228. Additionally, Dr. Russ does not explain how such modification would reduce response time and presupposes that such combination would result in “a plurality of intermediate systems, rather than

a single server.”⁸ Ex. 1003 ¶ 168. Further, Dr. Russ appears to attribute many of the alleged benefits to modifying Choudhury such that it would transmit documents in a scrambled and compressed format,⁹ rather than attributing such benefits to modifying Choudhury to an intermediate system. To the extent that Dr. Russ attributes reducing load and likely response time to modifying Choudhury to an intermediate system, his testimony does not provide the underlying facts or data on which his opinion is based. See 37 C.F.R. § 42.65(a).

Accordingly, Petitioner’s evidence does not sufficiently support the argument that it would have been obvious to modify Choudhury into an intermediate system, including “an input for receiving said scrambled compressed single” as recited in claim 41, and, via dependency, claim 42.

b. Claims 47 and 48

Claim 47 is directed to “[a]n apparatus for reproducing a compressed signal recorded on a recording medium, comprising: a reproducing circuit for reproducing said signal recorded on said recording medium.” Ex. 1001, 26:61–64. The ’898 patent describes a “recording/reproducing device” as a “peripheral device[]” and points to devices 22 and 23 in a “first embodiment” as illustrated in Figure 1 (*id.* at 3:66–4:1, 4:11–21), and a

⁸ Dr. Russ does not explain why such modification would not result in a single intermediate system as opposed to a plurality of intermediate systems.

⁹ Claim 41 is directed to “[a]n apparatus for receiving a scrambled compressed signal” (Ex. 1001, 26:8–9), and Petitioner’s argument and Paragraph 168 of the Russ Declaration are also directed to alleged reasons as to why one of ordinary skill in the art would have been prompted to modify Choudhury to transmit documents in a compressed format. Pet. 44–45; Ex. 1003 ¶ 168.

“recording/reproducing section” 42A and 42B in devices 26 and 27, respectively, in a second embodiment (*id.* at 16:31–37, 16:56–62).

Petitioner asserts that Choudhury discloses the “reproducing circuit” recited in claim 47 by its disclosure of the following:

“Document Server 3 (trusted by a publisher) provides encoded, encrypted and compressed document to User 17.” Ex. 1010, 3:39–41. “Document Transmission: (a) the Copyright Server 407 verifies the request and if it is valid, it arranges to send the document from the Document Server 203, (b) . . . Document Server 203 sends the encrypted and compressed PDL version of the document to User 217.” Ex. 1010, 5:18–22; *see also*, Ex. 1010, 7:56–8:14.

Pet. 40.

Patent Owner asserts that “Choudhury describes a computer file transfer operation” and that “transferring a file does not constitute ‘reproducing’ a signal as claimed.” Prelim. Resp. 21 (citing Pet. 39–40; Ex. 1010, 5:18–22). Patent Owner contends that “Choudhury’s servers have no reason to ‘reproduce’ signals themselves, as it is the clients receiving documents from the servers that perform any arguable ‘reproduction’ of the transferred documents.” *Id.* at 21–22 (citing Ex. 1010, 5:30–36). Patent Owner argues that Petitioner fails to identify any “circuit” in Choudhury, “instead vaguely pointing to the file retrieval functionality of Choudhury’s servers.” *Id.* at 22.

Petitioner’s argument and evidence is not persuasive. First, Petitioner does not explain why Choudhury’s document server 3 meets the “reproducing circuit” limitation recited in claim 47. Second, Petitioner does not explain how Choudhury’s teaching of transferring a file teaches or suggests the recited “reproducing said signal” limitation of claim 47. Third,

Dr. Russ’s testimony fails to further elucidate how Choudhury meets this claim limitation, opining generally that:

A [person of ordinary skill in the art] would recognize that the server system includes a reproducing circuit for reproducing the document stored in its recording medium, as it includes a mechanism for reproducing a requested document based on a user device request and the authentication procedure. In response to the direction by the copyright server determining that a user device is authenticated, the document server retrieves the document from the storage medium to encrypt and transmit the documents.

Ex. 1003 ¶ 186 (citing Ex. 1010, 1:45–50).

Accordingly, Petitioner does not sufficiently show that Choudhury meets the “reproducing circuit for reproducing said signal recorded on said recording medium” limitation of claim 47 and, via dependency, claim 48.

3. *Summary*

Accordingly, we determine that, based on the record before us, Petitioner has not shown a reasonable likelihood that it would prevail in establishing the unpatentability of claims 41, 42, 47, or 48 as obvious over the combination of Choudhury, Hamilton, and Harvey.

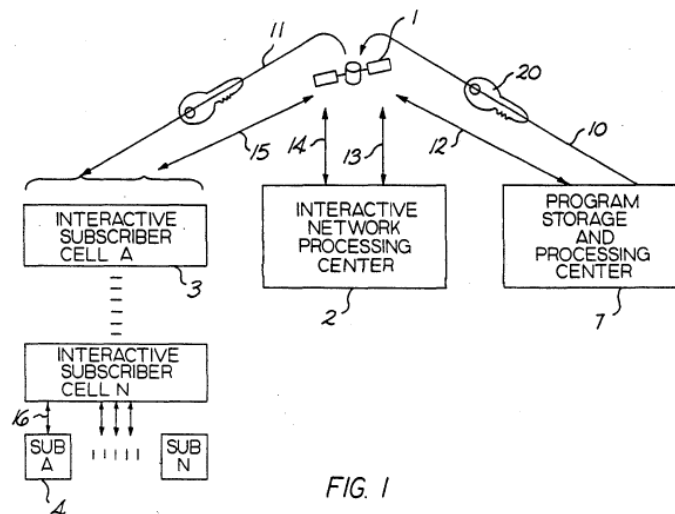
C. *Obviousness over Morales and Harvey*

Petitioner asserts that a combination of the teachings of Morales and Harvey would have rendered the subject matter of claims 41, 42, 47, and 48 obvious to one of ordinary skill in the art at the time of the invention. Pet. 46–60. The Petition includes discussion and a claim chart identifying where Morales and Harvey allegedly teach or suggest the elements of each challenged claim. *Id.*

1. *Morales*

Morales is directed to “interactive video data processing systems and more particularly . . . to rentals of video programs to home subscribers for display on a TV set.” Ex. 1011, 1:10–13. Morales explains: “Movies and other featured video programs are stored in a storage and processing rental center for encrypted electronic nationwide satellite distribution upon demand by a single subscriber, or a small group of subscribers sharing costs, for a private viewing.” *Id.* at 2:51–55.

Figure 1 of Morales is shown below:



Morales’s Figure 1 “is a general system block diagram of the video data exchange network.” *Id.* at 3:55–56. Morales explains that the system:

provides for two parallel wireless communication channels 10, 11 and 12, 13, 14, 15 over one or more satellites 1 respectively for transmitting video programs and interactive communications between the program storage and processing center 7, source of movies and like video program materials, and the subscriber stations 4, from which stored programs may be custom ordered for private viewing as unscheduled events.

Id. at 4:9–17. Additionally, Morales teaches that “[t]he communication links 10–15 may use different satellites 1A, 1B, 1C, or equivalent wireless

communication links of a single satellite to meet the needs of the various communicators and to assure enough channels in the separate satellite 1C for custom viewing without significant waiting time delays.” *Id.* at 5:51–56.

2. Discussion

As discussed *supra*, each of the challenged claims recites a “data bus.” Petitioner contends that Morales’s “processing centers 7 communicate with the response unit 4 via communication links, such as satellites.” Pet. 47 (citing Ex. 1011, 2:6–28, 4:37–55, 5:51–59). Petitioner asserts:

The communication links are a form of a “data bus,” as used in the claims of the ’898 patent, *i.e.*, “a data communication path that allows a plurality of devices to receive the data,” as the communication links include data communication paths that allow for data to be transmitted to a plurality of response units 4.

Id. (citing Ex. 1003 ¶¶ 216, 230; Ex. 1011, Abstract, 2:24–28, 2:6–8). Petitioner’s claim chart specifically correlates Morales’s “satellite channels” with the recited “data bus.” *See id.* at 52 (“The program storage and processing center 7 ‘arranges for encrypted broadcast over available satellite channels of ordered programs with notice to the customers of acceptance of the order and the broadcast time and channel.’” (quoting Ex. 1011, 3:42–49 (emphasis omitted))). Petitioner’s argument is supported by Dr. Russ, who testifies that “[t]he vendor program storage and processing centers 7 communicate with the response unit 4 via communication links, *e.g.*, satellites, which is a form of a ‘data bus,’ as used in the claims of the ’898 patent.” Ex. 1003 ¶ 216 (discussing claim 41); *see also id.* ¶ 230 (same opinion offered for claim 47).

Patent Owner asserts that “Morales fails as a primary reference because it does not operate over—or even disclose—a ‘data bus’ as claimed.” Prelim. Resp. 27. Patent Owner contends that “the ‘data bus’ of

the '898 claims should be construed as requiring a **wired** data communication path. In stark contrast Morales discloses that “[t]ransactions . . . are made **over a two-way interactive wireless satellite network** in communication with a nationwide network of subscribers and the video program storage and distribution center.” *Id.* (quoting Ex. 1011, 2:61–66).

As discussed above, we construe “data bus” to mean “a wired data connection path.” *See supra* Section II.A. Morales’s teachings, identified by Petitioner, do not disclose “a wired data connection path,” and Petitioner does not contend that a wired data connection path would have otherwise been obvious to one of ordinary skill in the art in light of Morales’s disclosure. Accordingly, we determine that, based on the record before us, Petitioner has not shown a reasonable likelihood that it would prevail in establishing the unpatentability of claims 41, 42, 47, or 48 as obvious over the combination of Morales and Harvey.

IV. CONCLUSION

For the foregoing reasons, on this record, Petitioner has not established a reasonable likelihood of prevailing with respect to claims 41, 42, 47, or 48 of the '898 patent.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied* as to the challenged claims of the '898 patent; and

FURTHER ORDERED that no *inter partes* review is instituted.

IPR2016-00827
Patent RE38,898 E

For PETITIONER:

Jennifer A. Albert
Phong T. Dinh
GOODWIN PROCTER LLP
JAlbert@goodwinprocter.com
pdinh@goodwinprocter.com

Bob Starr
ARRIS GROUP, INC.
bob.starr@arris.com

For PATENT OWNER:

Scott A. McKeown
Bradley D. Lytle
Greg H. Gardella
OBLON McCLELLAND, MAIER & NEUSTADT, LLP
CPDocketMcKeown@oblon.com
CPDocketLytle@oblon.com
CPDocketGardella@oblon.com