

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC,
Petitioner,

v.

WSOU INVESTMENTS, LLC
d/b/a BRAZOS LICENSING AND DEVELOPMENT,
Patent Owner.

IPR2021-01191
Patent 7,333,770 B2

Before BRIAN J. McNAMARA, JO-ANNE M. KOKOSKI, and
JOHN A. HUDALLA, *Administrative Patent Judges*.

HUDALLA, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

Petitioner, Unified Patents, LLC (“Petitioner”), filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1, 2, 4–6, and 16–18 (“the challenged claims”) of U.S. Patent No. 7,333,770 B2 (Ex. 1001, “the ’770 patent”). Petitioner filed a Declaration of Jon B. Weissman, Ph.D. (Ex. 1002) with its Petition. Patent Owner, WSOU Investments, LLC d/b/a

Brazos Licensing and Development (“Patent Owner”), filed a preliminary response (Paper 7). With our authorization (Paper 8), Petitioner filed a preliminary reply (Paper 9) and Patent Owner filed a preliminary sur-reply (Paper 10) directed to the issue of discretionary denial under 35 U.S.C. § 314(a). Taking into account the arguments presented by Patent Owner in the preliminary record, we determined that the information presented in the Petition established that there was a reasonable likelihood that Petitioner would prevail with respect to its unpatentability challenges. Pursuant to 35 U.S.C. § 314, we instituted this proceeding on January 11, 2022, as to all challenged claims and all grounds of unpatentability. Paper 12 (“Dec. on Inst.”).

During the course of trial, Patent Owner filed a Patent Owner Response (Paper 16, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response (Paper 17, “Pet. Reply”). Patent Owner also filed a Sur-reply. Paper 18 (“PO Sur-reply”).

An oral hearing was held on October 12, 2022, and a transcript of the hearing is included in the record. Paper 30 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 1, 2, 4–6, and 16–18 of the ’770 patent. For the reasons discussed below, Petitioner has demonstrated by a preponderance of the evidence that claims 1, 2, 4–6, and 16–18 of the ’770 patent are unpatentable.

I. BACKGROUND

A. *Real Parties-in-Interest*

Petitioner identifies Unified Patents, LLC, as the real party-in-interest. Pet. 60. Patent Owner identifies WSOU Investments, LLC d/b/a Brazos Licensing and Development as the real party-in-interest. Paper 3, 1.

B. *Related Proceeding*

The parties identify the following proceeding related to the '770 patent (Pet. 60; Paper 3, 2):

WSOU Invs., LLC v. TP-Link Tech. Co., No. 6:20-cv-01019 (W.D. Tex. filed Oct. 31, 2021).

C. *The '770 patent*

The '770 patent is directed to a device for optimum broadcasting of information in a telecommunication system. Ex. 1001, 1:7–8. According to the '770 patent, techniques for sending information over a telecommunication network at the time of the invention conformed to, *inter alia*, the “pull” technique. *Id.* at 1:17–19. With the “pull” technique, a content provider makes information that it wishes to transmit available in a database and customers access the information after finding out the address of the database. *Id.* at 1:19–22. But this technique is not suitable for broadcasting, so the '770 patent aims to solve the problem of providing a device for broadcasting information that enables advertisers to direct information to the most receptive population segment. *Id.* at 2:3–6.

Figure 1 of the '770 patent is reproduced below.

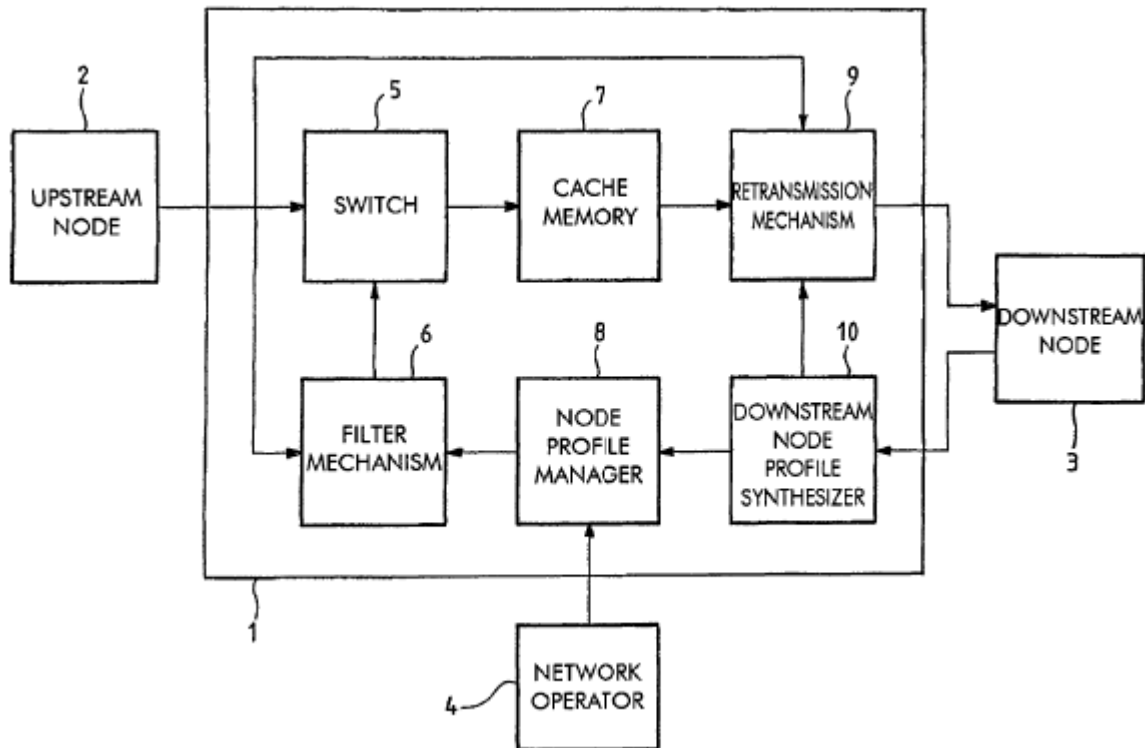


Figure 1 depicts “the installation of a device according to the invention in an access network node which can be an input node, an output node, or an intermediate node of an access network.” *Id.* at 3:9–12. Node 1 of the network is connected to another network node 2 on its upstream side and to one or more further network nodes 3 on its downstream side. *Id.* at 3:20–24. Node 1 receives as input streams of information coming from upstream node 2. *Id.* at 3:27–28. Mechanism 10 synthesizes profiles of the downstream nodes and supplies its results to node profile management circuit 8 for managing the node profiles. *Id.* at 3:39–42. Node 1 includes filter mechanism 6, which receives as input a node profile established by node profile management circuit 8 and broadcasting criteria and routing constraints associated with the information items in the streams of information. *Id.* at 3:42–47. Filter mechanism 6 controls switch 5 for

storing information items in cache memory 7. *Id.* at 3:48–49.

Retransmission mechanism 9 retransmits stored information items to downstream node 3. *Id.* at 3:49–51.

The '770 patent issued from a PCT application filed on January 3, 2002, and claims priority to a French patent application filed on January 4, 2001. Ex. 1001, codes (22), (30). As discussed below, Petitioner applies the January 3, 2002, PCT application filing date for qualifying the asserted references as prior art. *See* Pet. 2–3, 11, 13–14.

D. Illustrative Claim

Of the challenged claims of the '770 patent, claims 1 and 16 are independent. Claims 2 and 4–6 depend from claim 1, and claims 17 and 18 depend from claim 16. Claim 1 is illustrative of the challenged claims and recites:

1. A device for broadcasting information in an access network comprising a plurality of interconnected nodes configured for conveying streams of information items between information content providers and receiver terminals, characterized in that said device is installed in one or more network nodes and comprises a node profile management circuit configured by an operator of the network or an operator of the node as a function of objective or subjective criteria and a mechanism configured for filtering broadcast information items that controls a switch to filter said information items.

Ex. 1001, 6:30–40.

E. Prior Art

Petitioner relies on the following prior art:

U.S. Patent No. 6,047,327, filed Feb. 16, 1996, issued Apr. 4, 2000 (Ex. 1005, “Tso”);

Patent Cooperation Treaty (PCT) Patent Application Publication No. WO 97/41654, published Nov. 6, 1997 (Ex. 1006, “Ericsson”); and

U.S. Patent No. 5,896,379, filed Aug. 26, 1996, issued Apr. 20, 1999 (Ex. 1007, “Haber”).

F. The Instituted Grounds

We instituted *inter partes* review of claims 1, 2, 4–6, and 16–18 of the ’770 patent on the following grounds (Dec. on Inst. 39), which are all the grounds presented in the Petition (Pet. 15):

Claims Challenged	35 U.S.C. §	References
1, 2, 4–6, 16–18	103(a) ¹	Tso, Haber
1, 2, 4–6, 16–18	103(a)	Tso, Ericsson, Haber

II. ANALYSIS

A. Legal Standards

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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. *See 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

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102, 103, and 112. Because the ’770 patent was filed before March 16, 2013 (the effective date of the relevant amendments), the pre-AIA versions of §§ 102, 103, and 112 apply.

differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations.² *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We also recognize that prior art references must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)).

B. Level of Ordinary Skill in the Art

Citing testimony from Dr. Weissman, Petitioner contends a person of ordinary skill in the art “would have had a bachelor’s degree in electrical engineering, computer engineering, computer science, or a similar field and approximately two years of experience in telecommunications, computer networking, or computer programming for network-based applications.” Pet. 16 (citing Ex. 1002 ¶¶ 26–28). Patent Owner does not dispute Petitioner’s definition. *See* PO Resp. 3.

We adopt Petitioner’s definition of the level of ordinary skill in the art. We are satisfied that this definition comports with the level of skill necessary to understand and implement the teachings of the ’770 patent and the asserted prior art.

C. Claim Interpretation

In an *inter partes* review, we construe each claim using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C.

² The trial record does not include any evidence of secondary considerations of nonobviousness.

[§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b) (2020). Accordingly, our claim construction standard is the same as that of a district court. *See id.* Under the standard applied by district courts, claim terms are generally given their plain and ordinary meaning as would have been 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. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). “There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

1. Whether the Preamble of Claim 1 is Limiting

In our Decision on Institution, we analyzed the initial recitation in the preamble of claim 1, “[a] device for broadcasting information,” and determined that this recitation provides antecedent basis for limitations in the body of the claim about where the device is disposed and what it comprises. Dec. on Inst. 8–9. As such, we determined preliminarily that the preamble of claim 1—and by extension the entirety of claim 1—is limiting. *Id.* at 9 (citing Ex. 1001, 6:30, 6:34–40). Given the unusual structure of claim 1, we invited the parties address the scope of the preamble (i.e., where the preamble ends in the claim) to the extent it is relevant to the disposition of this case. *Id.* at 8 n.3.

In post-institution briefing, Patent Owner did not address these issues. *See* PO Resp. 5. Petitioner declines to address the scope of the preamble, but states that it “presumes that ‘installed in one or more network nodes’ is limiting.” Pet. Reply 17. Under these circumstances, we discern no reason to change our preliminary determination that all of claim 1 is limiting. Thus, we apply this determination in the instant Final Written Decision. We need not address the scope of the preamble in order to dispose of the instituted grounds.

2. “*Access Network*”

In our Decision on Institution, we addressed a claim interpretation issue pertaining to the recitations “[a] device for broadcasting information in an access network comprising a plurality of interconnected nodes . . . characterized in that said device is installed in one or more network nodes.” Dec. on Inst. 9–11 (quoting Ex. 1001, 6:30–35). As noted by Petitioner (Pet. 17), these recitations are susceptible to two interpretations: (1) that the device must be disposed in an access network node; or (2) that the device can be disposed in a network node that merely broadcasts into the access network. In the Decision on Institution, we reviewed the Specification of the ’770 patent and determined preliminarily that the “access network comprising a plurality of interconnected nodes” includes all nodes connected to an access network, including input and output nodes. Dec. on Inst. 10–11 (citing Ex. 1001, 3:9–19, Fig. 1). We also determined preliminarily that the “device” recited in claim 1 may be disposed in an input node of the “access network.” *Id.*

In post-institution briefing, Petitioner states that “further resolution of the claim construction issue is not required to reach a Final Written Decision of unpatentability” given that Patent Owner did not dispute Petitioner’s “alternative theories of how the limitations involving an access network were present in, or obvious over the prior art.” Pet. Reply 17 (citing Pet. 16–18). Notwithstanding, Petitioner states that “the Board’s logic in its construction is sound.” *Id.* (citing Dec. on Inst. 10–11). Patent Owner contends that “the Board need not expressly construe any claim term in a particular manner in order to arrive at the conclusion that the Petition is substantively deficient.” PO Resp. 4. Patent Owner also does not squarely address our preliminary interpretation in its post-institution papers, but Patent Owner does dispute Petitioner’s unpatentability showing regarding the “device” being “installed in one or more network nodes.” *Id.* at 5–6; PO Sur-reply 1–6. At the oral hearing, Patent Owner’s counsel stated the following regarding our preliminary interpretation: “I do not have an opinion on that. I don’t think -- I think for the purposes of this proceeding I don’t think it’s wrong, but we don’t have any position one way or another on the correctness of that construction.” Tr. 21:4–14.

Because Patent Owner disputes that Petitioner’s asserted prior art teaches a “device” that is “installed in one or more network nodes,” we still have good reason to interpret how the recited “device” relates to the recited “access network” in claim 1. Furthermore, given that Petitioner agrees with the logic of our preliminary interpretation (Pet. Reply 17), and given that Patent Owner at least does not dispute it (*see* Tr. 21:4–14), we discern no reason to change our preliminary interpretation. Thus, we maintain our determination that the “access network comprising a plurality of

interconnected nodes” in claim 1 includes all nodes connected to an access network, including input and output nodes. We also maintain our determination that the “device” recited in claim 1 may be disposed in an input node of the “access network.”

3. *Whether the Recited “Mechanisms” of Claims 1 and 16 Should Be Construed Under 35 U.S.C. § 112 ¶ 6*

In our Decision on Institution, we addressed whether the “mechanisms” recited in claims 1 and 16 should be construed under § 112 ¶ 6. Dec. on Inst. 11–12 (quoting Ex. 1001, 6:38–40, 8:15–19). Because these terms do not recite the word “means,” we applied rebuttable presumption that § 112 ¶ 6 does not apply. *Id.* (citing *Diebold Nixdorf, Inc. v. Int’l Trade Comm’n*, 899 F.3d 1291, 1298 (Fed. Cir. 2018)). Neither party addressed this issue after institution. Thus, we maintain our initial determination and apply the plain and ordinary meaning to these limitations.

4. *Other Limitations*

We determine that no other aspects of the challenged claims require explicit construction. *See, e.g., Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. *Obviousness Ground Based on Tso and Haber*

Petitioner contends the subject matter of claims 1, 2, 4–6, and 16–18 would have been obvious over the combination of Tso and Haber. Pet. 15–

59; Pet. Reply 2–16. Patent Owner disputes Petitioner’s contentions. PO Resp. 5–9; PO Sur-reply 1–11.

I. Tso

Tso is a U.S. patent directed to the automatic distribution of information to different users based on a set of selected criteria. Ex. 1005, 1:8–10. Figure 1 of Tso is reproduced below.

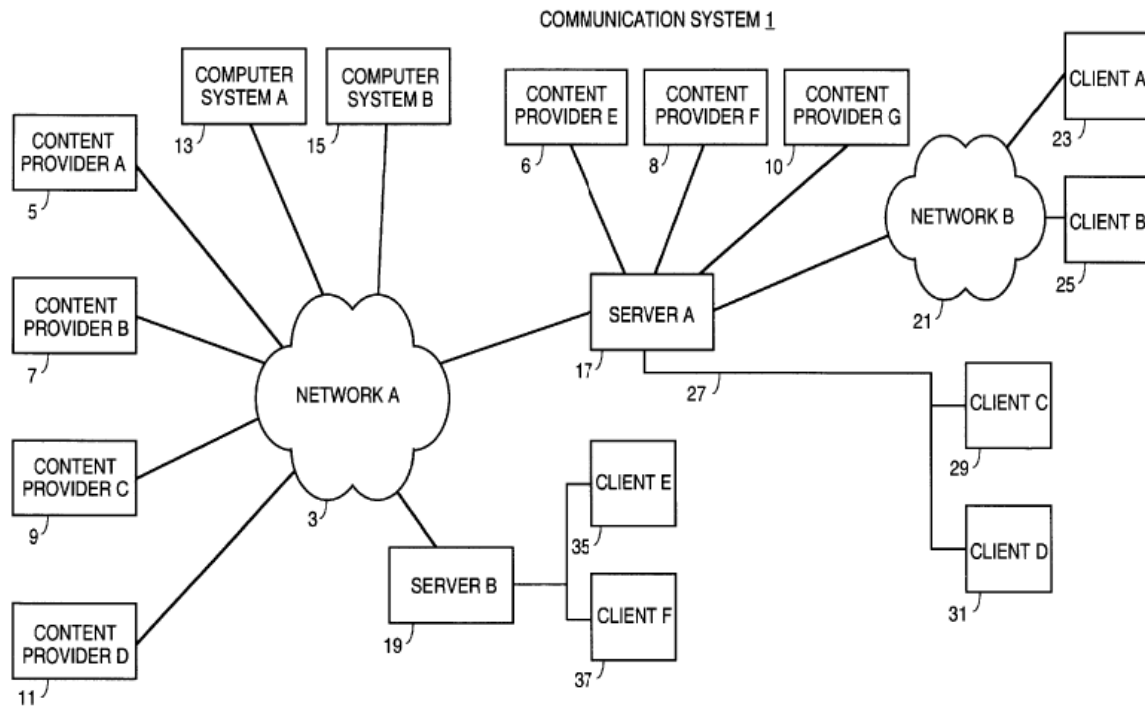


FIG. 1

Figure 1 depicts communication system 1 for automatically distributing electronic information to a targeted group of users. *Id.* at 2:40–42, 2:54–55. Communication system 1 includes network A 3, which is a wide area network such as the Internet, and network B 21, which is a cellular communication system. *Id.* at 2:55–58, 2:64–66. Network A 3 is connected to content providers A 5, B 7, C 9, and D 11; computer systems A 13 and B 15; and servers A 17 and B 19. *Id.* at 2:58–63. Server B 19 is connected

to clients E 35 and F 37 through local area network 33. *Id.* at 3:5–7. Server A 17 is connected to network B 21 and content providers E 6, F 8, and G 10. *Id.* at 2:66–3:2. Server A 17 is further connected to clients A 23 and B 25 through network B 21; and to clients C 29 and D 31 through local area network 27. *Id.* at 3:2–5.

Servers A 17 and B 19 are known as InfoCast servers. *Id.* at 2:64, 3:5–6. Content providers send information, known as “InfoCasts,” to the InfoCast servers. *Id.* at 7:17–19. An InfoCast can consist of either a data file containing one or more separate articles or a video/audio feed. *Id.* at 7:19–21. For each item in an InfoCast, an InfoFeed interface (not shown) within the InfoCast servers creates an “InfoBite,” which can be sent to a user in lieu of the full item. *Id.* at 7:30–32. Each InfoBite includes, *inter alia*, summary information for the associated item in the InfoCast and data necessary for a user to obtain the associated item. *Id.* at 7:32–39. A schedule/resource controller (not shown) within the InfoCast servers filters the InfoBites that are sent to a user based on the user’s profile. *Id.* at 10:41–46.

Petitioner contends Tso qualifies as prior art under, *inter alia*, 35 U.S.C. § 102(b) based on its issue date. Pet. 11. Patent Owner does not contest the prior art status of Tso. We determine that Tso qualifies as prior art under 35 U.S.C. § 102(b) because Tso’s issue date of February 16, 1996, is more than one year before the PCT filing date of application that led to the challenged claims, which is January 3, 2002. Ex. 1001, code (22); Ex. 1005, code (45).

2. *Haber*

Haber is a U.S. patent directed to network packet switching nodes that selectively perform data processing functions on data conveyed in packets.

Ex. 1007, 1:7–10. Figure 1 of Haber is reproduced below.

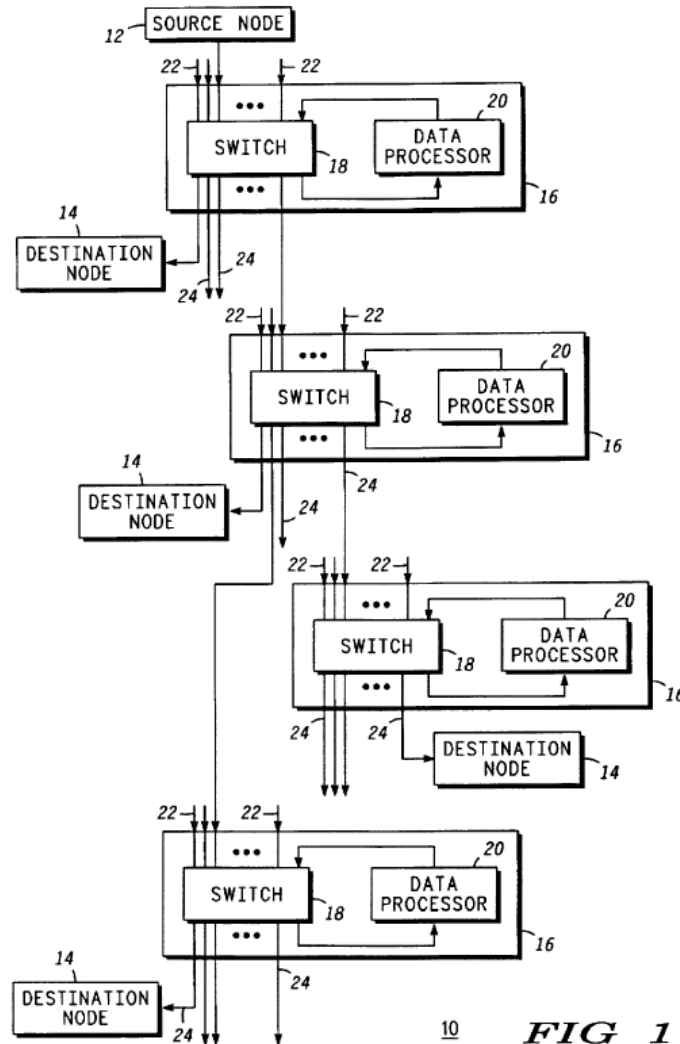


Figure 1 is a layout diagram of packet switching communication network 10. *Id.* at 2:45–46. Network 10 includes any number of user nodes, such as source nodes 12 and destination nodes 14, and any number of intermediate switching nodes 16. *Id.* at 2:46–49. Each switching node 16 includes switch 18 and data processor 20. *Id.* at 2:66–3:1. Switches 18 perform a switching or routing function for network 10. *Id.* at 3:14–15. Data

processor 20 performs a non-switching network processing function, such as a broadcast data network processing function, which applies to user data conveyed by packets. *Id.* at 3:21–23, 3:34–35. Haber also discloses a “broadcast data processor process” for routing selected data packets to defined groups by manipulating switches 18, among other things. *See id.* at 6:58–7:53, Fig. 6.

Petitioner contends Haber qualifies as prior art under, *inter alia*, 35 U.S.C. § 102(b) based on its issue date. Pet. 14. Patent Owner does not contest the prior art status of Haber. We determine that Haber qualifies as prior art under 35 U.S.C. § 102(b) because Haber’s issue date of April 20, 1999, is more than one year before the PCT filing date of the application that led to the challenged claims, which is January 3, 2002. Ex. 1001, code (22); Ex. 1007, code (45).

3. *Claim 1*

Claim 1 recites “[a] device for broadcasting information in an access network comprising a plurality of interconnected nodes configured for conveying streams of information items between information content providers and receiver terminals.” Ex. 1001, 6:30–34. Regarding the recited “device for broadcasting information,” Petitioner cites Tso’s InfoCast servers (e.g., server A 17) and contends that they receive an “InfoCast broadcast” from a content provider and then send out “InfoBites,” which are based on the InfoCasts, to client terminals via short message service (SMS). Pet. 16 (citing Ex. 1005, Abstr., 2:23–24, 7:30–32, 7:41–44, 12:26–28). For the “access network,” Petitioner cites Tso’s teaching of broadcasting data using SMS in a GSM access network (e.g., network B 21) via a base station.

Id. at 17 (citing Ex. 1005, 3:65–4:3, 11:23–26, 12:26–28, Fig. 2). For the recited “plurality of interconnected nodes configured for conveying streams of information items between information content providers and receiver terminals,” Petitioner cites content provider nodes A–G, InfoCast servers A and B, and clients A–F in Tso’s Figure 1. Pet. 19 (citing Ex. 1002 ¶ 98; Ex. 1005, 2:1–3, 2:54–3:7, Fig. 1). Petitioner contends that these nodes carry InfoCasts from content providers to InfoCast servers then on to clients as InfoBites. *Id.* at 20–21 (citing Ex. 1005, 7:17–21, 7:30–32, 7:41–44, 10:53–61, Fig. 5). Patent Owner does not dispute Petitioner’s analysis for this limitation.

We are persuaded that Tso’s InfoCast server A 17 is a “device for broadcasting information in an access network” because it broadcasts InfoBites via SMS. *See, e.g.*, Ex. 1005, 3:65–4:3, 12:26–28. We also are persuaded that the nodes in Tso’s Figure 1 are configured to convey InfoCasts from content providers A–G through InfoCast servers A 17 and B 19 and onto clients A–F as InfoBites. *See, e.g.*, Ex. 1005, 7:17–21, 7:30–32, 7:41–44, 10:53–61, Fig. 5. Furthermore, as discussed above (*see supra* § II.C.2), we determine that an input node of an access network is part of the “plurality of interconnected nodes” that make up the access network. As such, we are persuaded by Tso’s teaching that InfoCast server A 17 is an input node to the cellular communication system (network B 21), which teaches the “in an access network” limitation. *See, e.g.*, Ex. 1005, 2:64–66. Petitioner also shows persuasively that Tso’s InfoCast server broadcasts information using SMS in a GSM access network via a base station. *See, e.g.*, Ex. 1005, 3:65–4:3, 12:26–28. For these reasons, we are persuaded that Tso teaches “[a] device for broadcasting information in an access network

comprising a plurality of interconnected nodes configured for conveying streams of information items between information content providers and receiver terminals.”

Claim 1 further recites that the “device is installed in one or more network nodes.” Ex. 1001, 6:34–35. For this limitation, Petitioner contends Tso’s “InfoCast servers—such as servers A and B—are located in network nodes defining connection points between various networks (*e.g.*, server A is in a node between network A and network B, and between content providers E-G and clients A-D).” Pet. 21 (citing Ex. 1002 ¶ 105; Ex. 1005, Fig. 1). Petitioner further contends that an ordinarily skilled artisan “would have understood that Tso’s InfoCast functionality was implemented in computer code for execution on hardware at the network node.” *Id.* at 22 (citing Ex. 1002 ¶ 106). In its analysis for another limitation of claim 1,³ Petitioner proposes a modification based on Haber “to implement Tso’s InfoCast server so that it is executed by a processor administering broadcast processing functions within a switching node including a switch.” *Id.* at 35 (citing Ex. 1002 ¶¶ 134–135); *see also* Pet. Reply 2–6 (citing same to show that the “device” is installed in a network node). Petitioner further cites Haber’s teaching of switching node 16 that includes data processor 20, which can be “configured to perform a broadcast data network processing function.” Pet. 34–35 (quoting Ex. 1007, 3:34–35) (citing Ex. 1007, Abstr., 2:40–42, 6:58–60, 7:22–24, 7:29–34, 7:40–53).

³ The limitation is “a mechanism configured for filtering broadcast information items that controls a switch to filter said information items.” We analyze Petitioner’s analysis for this limitation below.

Patent Owner argues that Petitioner does not establish that Tso's InfoCast server A 17, which Petitioner maps to the recited "device," is "*installed* in on[e] or more network nodes." PO Resp. 5–6; *see also* PO Sur-reply 1–6. Patent Owner criticizes Petitioner's argument about "the *functionality* provided by Tso [being] *instantiated* on some form of hardware in order to execute" because "'hardware and software' is the entirety of Tso's server A 17" and because "server A 17 is not 'installed' anywhere, it is standalone." PO Resp. 6 (emphasis by Patent Owner) (quoting Pet. 21–22); *see also* PO Sur-reply 2 (same argument). According to Patent Owner, the '770 patent describes examples of nodes in which the "device" may be installed, including a base station node and a satellite gateway. PO Resp. 6 (citing Ex. 1001, 5:49–6:19); *see also* PO Sur-reply 2 (same argument). Patent Owner argues that merely implementing functionality on a processor that already exists in a switching node does not teach the recited "device" being installed in a network node. PO Sur-reply 2–5.

We are persuaded by Petitioner's analysis because (1) Petitioner establishes that Tso's InfoCast server A 17 (the recited "device") is located between content providers and clients, and server A 17 is an input node of—and thus a part of—access network B 21 (*see, e.g.*, Ex. 1005, 2:64–3:5; Fig. 1; *supra* § II.C.2); and (2) Petitioner persuasively shows that an ordinarily skilled artisan would have implemented Tso's InfoCast server A 17 in data processor 20 within Haber's switching node 16⁴ (*see, e.g.*, Ex. 1002 ¶¶ 134–135). Together, these contentions result in the device (an InfoCast server) running within the processor of a switching node, which

⁴ As we discuss in further detail below, we are persuaded by Petitioner's reasons for the combination of Tso and Haber.

is located at a point of connection between Tso's networks A 3 and B 21, the latter being an access network. *See, e.g.*, Pet. 21–22 (citing Ex. 1002 ¶¶ 105–106; Ex. 1005, Fig. 1); Pet. Reply 10 (citing same); Ex. 1005, 2:64–66. Thus, Petitioner persuasively shows the device “installed in” a switching node of an access network under a plain and ordinary meaning of “installed.”

We do not agree with Patent Owner's contrary arguments because Patent Owner has not put forth *any* particular construction of “installed in,” let alone one that would exclude implementing server functionality in a switching node. Nor do the examples cited by Patent Owner (PO Resp. 6; PO Sur-reply 2) of nodes in which the device may be installed (e.g., a base station node and a satellite gateway (*see* Ex. 1001, 5:49–6:19)) compel a different result, because they describe where, but not how, the device may be installed. We do not view these examples as being limiting in any way, and the trial record does not establish as much. Petitioner also puts forth Dr. Weissman's testimony that Tso's InfoCast server is a combination of hardware and software (Pet. 21–22 (citing Ex. 1002 ¶ 106)), which is not countered by any other record evidence. In our view, Petitioner's proposal to implement Tso's InfoCast server functionality in the processor and hardware of Haber's switching node within the topology of Tso's Figure 1 establishes that the “device” is “installed in” a network node.

Claim 1 further recites that the device comprises “a node profile management circuit configured by an operator of the network or an operator of the node as a function of objective or subjective criteria.” Ex. 1001, 6:34–38. For this limitation, Petitioner cites Tso's subscriber database (supported by associated hardware) and schedule/resource controller 61

within InfoCast server A 17. Pet. 22–24 (citing Ex. 1002 ¶¶ 110–115; Ex. 1005, 4:65–5:1, 5:18–30, 15:41–44, Fig. 3). Petitioner contends these elements, which are implemented at least in part on hardware circuitry, “maintain[] and manage[] user profiles for all users served by the InfoCast server.” *Id.* Petitioner contends that the node profile management circuit is “configured by the operator” based on Tso’s teaching of a subscriber database and an open database connectivity (ODBC) application programming interface (API). Pet. 26–30. In particular, Petitioner contends an ordinarily skilled artisan “would have understood that the database including the user’s record with their interests and other information would have been defined by the database administrator, because that is the entity that defines the schema for the database.” *Id.* at 26–27 (citing, *inter alia*, Ex. 1002 ¶¶ 117–118; Ex. 1005, 4:34–41, 21:33–37) (internal quotations omitted). Petitioner further contends that an ordinarily skilled artisan considering the API “would have known that writing applications for reading into a database required a known schema and would have required the application to be coded to read and write into the known database using appropriate indices.” *Id.* at 27–30 (quoting Ex. 1002 ¶ 121) (citing, *inter alia*, Ex. 1005, 4:43–49, 6:41–43). Petitioner additionally contends the node profile management circuit is configured “as a function of objective or subjective criteria” based on Tso’s teaching of using “positional information [i.e., *objective criteria*] of all users located in the domains served by server A 17” and information regarding interests (i.e., subjective criteria) in the subscriber database.” Pet. 30–31 (quoting Ex. 1005, 4:34–36) (citing *id.* at 4:36–41) (alteration by Petitioner).

Patent Owner does not dispute Petitioner’s analysis of the “node profile management circuit.” We are persuaded that Tso’s subscriber database includes “the records of all users . . . who are currently in the territory serviced by server A 17.” Ex. 1005, 4:65–5:1. This includes information regarding “interests,” i.e., “subjective criteria,” which an ordinarily skilled artisan would have known to include data compiled by a database administrator (i.e., “configured by an operator of the network”). *See, e.g.*, Ex. 1002 ¶¶ 117–118; Ex. 1005, 4:36–41, 21:33–37. Moreover, Tso’s schedule/resource controller 61 filters information sent to subscribers based on user profiles in the subscriber database. *See, e.g.*, Ex. 1005, 13:28–31. Thus, we are persuaded that Tso teaches the recited “node profile management circuit.”

Claim 1 further recites that the device comprises “a mechanism configured for filtering broadcast information items that controls a switch to filter said information items.”⁵ Ex. 1001, 6:34–40. For this limitation, Petitioner cites Tso’s teaching of a filter in schedule/resource controller 61 that filters InfoBites and information transmitted to users. Pet. 31 (citing Ex. 1005, 7:30–55, 10:53–61). Petitioner concedes, however, that “Tso does not explicitly describe the filter as controlling a switch to filter information items.” *Id.* at 34. Thus, Petitioner relies on Haber for teaching switching nodes 16 that include switch 18. *Id.* (citing Ex. 1007, Abstr.). Petitioner contends data processor 20 in Haber’s switching nodes 16 may be “configured to perform a broadcast data network processing function.” *Id.* (quoting Ex. 1007, 3:34–35) (citing *id.* at 2:40–42, 6:58–60). Petitioner

⁵ As stated above, we apply the plain and ordinary meaning of this limitation. *See supra* § II.C.3.

explains that Haber's broadcast data processor process 74 "receives a packet at the data processor 20, duplicates the packet and inserts an appropriate routing code from a broadcast table, and transmits the processed packet to the input port 22 of switch 18, which then routes the packet to the correct destination." Pet. Reply 15 (internal quotations omitted) (citing Ex. 1007, 7:22–24, 7:29–34, 7:40–45, Figs. 1–2); Pet. 34 (same analysis). As such, Petitioner combines Haber with Tso such that Tso's schedule/resource controller controls a switch within Haber's switching node to filter information items by selectively routing them to connected nodes that are intended recipients of the messages, while not routing them to nodes that are not intended recipients. Pet. 35 (citing Ex. 1002 ¶ 134).

Patent Owner argues that Petitioner's proposed combination does not teach a filter mechanism that controls a switch, and instead merely teaches transmission of a packet to Haber's switch for broadcasting.⁶ PO Resp. 9; PO Sur-reply 10. We do not agree with Patent Owner because Petitioner relies on Tso's InfoCast server functionality executing in the processor of Haber's switching node. *See, e.g.*, Pet. 40 (citing Ex. 1002 ¶¶ 141–145). Tso teaches the filtering aspect because Tso's schedule/resource controller 61 filters InfoBites and information transmitted to users. *See, e.g.*, Ex. 1005, 7:30–55, 10:53–61. Tso's filtering is implemented in the processor of Haber's switching node, which results in the processor controlling the switch according to the logic running in the processor. *See, e.g.*, Ex. 1002 ¶¶ 134–145.

⁶ Patent Owner also disputes Petitioner's rationale for combining Haber with Tso, as discussed immediately below.

More specifically, “the data processor in Haber’s switching nodes ‘performs a non-switching data processing function, and that network processing function applies to user data conveyed by packets.’” Pet. 36 (alteration omitted) (quoting Ex. 1007, 3:21–23). In Petitioner’s combination, Tso’s InfoCast server runs in Haber’s processor, and the output of Tso’s schedule/resource controller controls the switch to filter information items. *See, e.g.*, Ex. 1002 ¶ 140. And Petitioner explains how broadcast processing is implemented in Haber’s switch based on the output of Tso’s schedule/resource controller. Pet. 34; Pet. Reply 15 (both describing how Haber’s broadcast process receives a packet, generates a processed packet with new routing information, and transmits the processed packet to the switch for transmission). With these combined teachings, Petitioner persuasively shows the recited filtering mechanism that controls Haber’s switch.

Regarding its reasons for the combination, Petitioner notes that improved network efficiency can be gained by placing Haber’s data processing function in switching nodes because it avoids transporting redundant user information in the network. Pet. 35 (citing Ex. 1007, 8:20–31). Thus, according to Petitioner, an ordinarily skilled artisan “would have found it obvious to employ the combined teachings of Tso and Haber such that Tso’s InfoCast server logic and system was implemented in a data processor within a switching node to route data in a packet-switched data network, such as that disclosed by Haber.” *Id.* at 35–36 (citing Ex. 1002 ¶¶ 134–145). Petitioner contends that “[b]y implementing Tso’s InfoCast server functionality in processors within switching nodes as expressly suggested by Haber, the overall traffic flowing over a packet-switched

network can be reduced by applying Tso's filtering, thereby improving network efficiency." *Id.* at 38–39 (citing Ex. 1002 ¶ 140; Ex. 1005, 13:27–34, 13:59–64; Ex. 1007, 7:22–24); *see also id.* at 40 (citing Ex. 1002 ¶¶ 142–143) ("By applying Tso's InfoCast servers at the point of switching, the data routed through those switches would have decreased due to Tso's content filtering."). Petitioner further contends that "[i]mplementing Tso so as to have the filter control a switch for filtering information items would have merely applied Haber's technique in a Tso packet switching network to yield predictable results—namely the ability to control a switch based on filtered data to be routed to downstream nodes." *Id.* at 40 (citing Ex. 1002 ¶¶ 141, 143, 145). Petitioner contends an ordinarily skilled artisan would have expected success in making the combination because it only "would have required routine programming techniques as Haber suggests." *Id.* at 41 (citing Ex. 1002 ¶ 141; Ex. 1007, 6:61–62).

Patent Owner argues that "Petitioner and its declarant fail to address why one of ordinary skill in the art would expend cost and resources in implementing 'Tso's server' in Haber's switch 18 when Haber's 'broadcast data processor process 74' already performs determining of what data needs to be broadcast." PO Resp. 7; PO Sur-reply 6. Yet we agree with Petitioner (Pet. Reply 11–12) that Patent Owner's arguments seem to conflate the concepts of broadcasting and content filtering. Petitioner puts forth evidence that Haber's "data processor is designed to perform broadcasting functions," whereby "a group definition is received and stored as a broadcast table, and when broadcast packets arrive, they are duplicated, addressed, and transmitted to the switch input port for transmitting to the address reflected in the packet." *Id.* at 12 (citing Ex. 1007, 6:63–8:6, Fig. 6). In contrast,

Tso's schedule/resource controller 61 filters "InfoBites that are sent to a user based upon the user's profile as contained in the user's record and subscriber database 53—i.e., a subscriber profile filter." *Id.* at 11–12 (quoting Ex. 1005, 10:41–46). In light of these differences, we are persuaded that an ordinarily skilled artisan would have combined Haber with Tso to obtain the efficiencies of Tso's InfoCast server functionality (i.e., reducing the transport of redundant information in the network via filtering) in the data processor of Haber's switching nodes. *See, e.g.*, Ex. 1002 ¶¶ 142–143. We do not agree with Patent Owner's arguments to the contrary because they are not supported by any record evidence.

Patent Owner further argues that "there is not the requisite motivation to modify at least because there is no related flaw identified in Tso or Haber themselves." PO Resp. 8; PO Sur-reply 7. Patent Owner also cites the Manual of Patent Examining Procedure § 2143 I.A and *In re Omeprazole Patent Litigation*, 536 F.3d 1361 (Fed. Cir. 2008), for the proposition that "there was no reason to modify the references as the Petition hypothesizes, even assuming that the modification could have been done." PO Resp. 8; PO Sur-reply 7–8. We do not agree with Patent Owner's arguments, however, because, as discussed above, Petitioner's rationale for the combination is based on increased efficiency. *See, e.g.*, Ex. 1002 ¶¶ 142–143. It need not start from an apparent flaw. We find Petitioner's rationale to be consistent with *KSR*, 550 U.S. at 401, because it amounts to "the mere application of a known technique to a piece of prior art ready for the improvement."

Additionally, as noted by Dr. Weissman, "implementing broadcasting programs in switching nodes would have merely placed such a functionality

at a known location for implementing broadcast data filtering.” Ex. 1002 ¶ 141. Haber also states that the switching node processor can implement a process for broadcasting selected data packets with routine programming techniques (*see* Ex. 1007, 6:58–62), which supports Dr. Weissman’s testimony that an ordinarily skilled artisan would have predicted success in implementing Tso’s InfoCast server in such a processor—a known location for a data broadcasting application fulfilling its intended purpose. *See, e.g.*, Ex. 1002 ¶ 141. For these reasons, we are persuaded by Petitioner’s rationale for combining Haber with Tso.

Based on the entire trial record, we are persuaded that the combination of Tso and Haber teaches all of the limitations of claim 1. We also are persuaded that an ordinarily skilled artisan would have had reasons to combine Tso and Haber with a reasonable expectation of success. Thus, we determine that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 1 would have been obvious over the combination of Tso and Haber.

4. *Claim 2*

Claim 2 depends from claim 1 and recites that the broadcasting device further comprises “a mechanism configured for synthesizing downstream node profiles configured for automatically updating the node profile management circuit in which said broadcasting device is installed as a function of subjective criteria.” Ex. 1001, 6:41–45. Petitioner cites Tso’s scheduler for teaching the recited mechanism. Pet. 44–47. In particular, Petitioner cites Tso’s teaching of a user performing an “InfoAction,” such as requesting more information, after receiving an InfoBite. *Id.* at 44 (citing

Ex. 1005, 15:4–8). The InfoAction is then logged “for notifying schedule/resource controller 61 of the user’s request” and to update the user’s profile in the subscriber database. *Id.* (quoting Ex. 1005, 15:12–16) (citing Ex. 1005, 15:41–45).

Petitioner also notes that user interactions with InfoBites cause updates to keywords associated with user interests (i.e., “subjective criteria”) stored for that user. *Id.* (citing Ex. 1005, 23:51–64); *see also id.* at 47 (citing Ex. 1005, 15:65–16:1, 23:27–50) (noting that these updates are automatic). As such, Tso teaches that “the scheduler of the InfoCast server will be able to refine the subscriber profile of the user, and thereby refine the user’s InfoCast filter, based on the user’s response.” *Id.* at 44–45 (quoting Ex. 1005, 23:65–24:3). Petitioner contends the scheduler’s refinement of user profiles results in “synthesizing the profile of the entire node, which is defined by the collection of user records for users connected to that InfoCast server.” *Id.* at 45–46 (quoting Ex. 1002 ¶ 147). Patent Owner does not dispute Petitioner’s analysis for claim 2.

We are persuaded that a user performing an InfoAction or interacting with an InfoBite causes Tso’s scheduler (i.e., the recited “mechanism”) to update user profiles in the subscriber database. *See, e.g.*, Ex. 1005, 15:4–8, 15:12–16, 15:41–45, 15:65–16:1, 23:27–24:3. This results in synthesizing the profile of the entire node. *See, e.g.*, Ex. 1002 ¶ 147. Thus, we determine that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 2 would have been obvious over the combination of Tso and Haber.

5. *Claim 4*

Claim 4 depends from claim 1 and recites that the broadcasting device is “characterized in that it is applied to any type of access network.” Ex. 1001, 6:50–51. Petitioner contends that Tso’s InfoCast server supports “the transfer of information over the nodes of many types of communications networks such as cellular data networks, local area networks, and wide area networks.” Pet. 47 (quoting Ex. 1005, 2:1–4). In light of this, Petitioner contends an ordinarily skilled artisan “would have understood that the InfoCast server would be *applied to any type of access network*.” *Id.* (citing Ex. 1002 ¶¶ 153–154). Patent Owner does not dispute Petitioner’s analysis for claim 4. We are persuaded that Tso’s InfoCast server can be applied to access networks. *See, e.g.*, Ex. 1002 ¶¶ 153–154; Ex. 1005, 2:1–4. Thus, we determine that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 4 would have been obvious over the combination of Tso and Haber.

6. *Claim 5*

Claim 5 depends from claim 1 and recites that the broadcasting device is “characterized in that it is applied to a mobile radio network access network.” Ex. 1001, 6:52–54. Petitioner presents evidence that Tso’s system may be used in “cellular data networks” and that InfoCast server 17 serves Network B, which is “a cellular communication system.” Pet. 48 (citing Ex. 1005, 2:1–4, 2:64–66, 3:49–52, Figs. 1, 2). Petitioner contends that an ordinarily skilled artisan would have understood that “a cellular network, such as a GSM network included *a mobile radio network access network*, thus demonstrating that Tso’s device is *applied to* such a network

by passing InfoBites into such a network and receiving data from clients in such a network.” *Id.* (citing Ex. 1002 ¶ 156; Ex. 1005, 14:19–21, 15:12–18, 15:41–44; Ex. 1008, 2:55–56; Ex. 1009, 4:38–39). Patent Owner does not dispute Petitioner’s analysis for claim 5. We are persuaded that Tso’s teaching of the InfoCast sever being used with cellular networks teaches applying the recited broadcasting device to “a mobile radio network access network.” *See, e.g.*, Ex. 1002 ¶ 156; Ex. 1005, 2:1–4, 2:64–66, 3:49–52, Figs. 1, 2. Thus, we determine that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 5 would have been obvious over the combination of Tso and Haber.

7. *Claim 6*

Claim 6 depends from claim 1 and recites that the broadcasting device is “characterized in that it is applied to a mobile radio network access network using a space segment.” Ex. 1001, 6:55–57. Petitioner relies on its analysis of Tso’s GSM network from claim 5 (*see supra* § II.D.6) and further cites Tso’s teaching of a content provider providing InfoCast data through a satellite communications network (i.e., a “space segment”). Pet. 48 (citing Ex. 1002 ¶ 158; Ex. 1005, 3:42–46). Patent Owner does not dispute Petitioner’s analysis for claim 6. We are persuaded that Tso teaches the use of a “space segment.” *See, e.g.*, Ex. 1002 ¶ 158; Ex. 1005, 3:42–46. We also are persuaded that Tso teaches the “mobile radio network access network” for the same reasons discussed above. *See supra* § II.D.6. Thus, we determine that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 6 would have been obvious over the combination of Tso and Haber.

8. *Claim 16*

Claim 16 recites “[a] broadcast network having a plurality of nodes.” Ex. 1001, 8:8–9. Petitioner contends this recitation is broader than the “device for broadcasting information in an access network” recited in claim 1, and Petitioner relies on the same analysis based on Tso from claim 1. Pet. 49. Patent Owner does not dispute Petitioner’s analysis. For the same reasons discussed above for the “device for broadcasting information in an access network” of claim 1, we are persuaded that Tso teaches “[a] broadcast network having a plurality of nodes.” *See supra* § II.D.3.

Claim 16 further recites “a node configured to receive input information streams from an upstream node and output processed information to a downstream node.” Ex. 1001, 8:10–12. Petitioner contends that Tso’s InfoCast server A 17 is a node that receives information streams from content provider nodes A–H. Pet. 49–50 (citing Ex. 1005, 7:17–25, Figs. 1, 4). For “output[ting] processed information,” Petitioner cites the InfoCast server transmitting InfoBites to downstream clients. *Id.* at 50–51 (citing Ex. 1005, 7:30–40, 19:41–59, Fig. 7). Patent Owner does not dispute Petitioner’s analysis for this limitation. We are persuaded that Tso’s InfoCast server (i.e., the recited “node”) receives information streams from content provider nodes and sends InfoBites to clients. *See, e.g.*, Ex. 1005, 7:17–25, 7:30–40, 19:41–59, Figs. 1, 4, 7.

Claim 16 further recites that the node comprises “a circuit configured to manage profile information of said downstream node.” Ex. 1001, 8:13–14. Petitioner cites the same analysis from claim 1 for the “node profile management circuit” and from claim 2 for the “mechanism configured for

synthesizing downstream node profiles.” Pet. 51. For the same reasons discussed above, we are persuaded that Tso teaches “a circuit configured to manage profile information of said downstream node.” *See supra* § II.D.3–4.

Claim 16 further recites that the node comprises “a filter mechanism configured to receive said managed profile information from said circuit and broadcasting information and routing information associated with said input information streams.” Ex. 1001, 8:15–19. Petitioner cites the same analysis from claim 1 for the “mechanism configured for filtering broadcast information items.” Pet. 51–52. Petitioner further contends that an ordinarily skilled artisan would have known that Tso’s filter (used by the schedule/resource controller) obtains “profile information from the subscriber database through the ODBC API or other data management system” in order to “determine which InfoBites to transmit to which subscribers.” *Id.* at 52 (internal quotation omitted) (citing Ex. 1002 ¶ 167; Ex. 1005, 6:36–45, 15:52–56, 21:61–22:48). Regarding “broadcasting information,” Petitioner contends that, for example, Tso’s InfoBites include a “Packet_ID” field indicating whether the message is a control message. *Id.* at 52–53 (citing Ex. 1005, 8:12–47). For “routing information,” Petitioner cites Tso’s “Location_Bit,” which indicates whether an InfoBite is location specific and can include location information used for filtering and routing. *Id.* at 53 (citing Ex. 1005, 8:12–14, 10:41–46, 13:31–34). Patent Owner does not dispute Petitioner’s analysis for this limitation.

We are persuaded that an ordinarily skilled artisan would have known that Tso’s filter uses profile information to determine the InfoBites to transmit to certain subscribers. *See, e.g.,* Ex. 1002 ¶ 167; Ex. 1005, 6:36–45,

15:52–56, 21:61–22:48. We also are persuaded that Tso’s Packet_ID and Location_Bit teach “broadcasting information” and “routing information,” respectively. *See, e.g.*, Ex. 1005, 8:12–47; 10:41–46, 13:31–34. For all other aspects of this limitation, we are persuaded by Petitioner’s analysis for the same reasons mentioned above. *See supra* § II.D.3.

Claim 16 further recites that the node comprises “a switch, controlled by said filter mechanism, said switch configured to control retransmission of information items of said input information streams whose broadcasting criteria correspond to criteria of the profile of the downstream node.” Ex. 1001, 8:20–24. Petitioner cites its analysis from claim 1 with respect to implementing Tso’s InfoCast server in a switching node based on Haber. Pet. 53–54. Petitioner also relies on the same rationale for combining Haber with Tso. *Id.* at 55. Additionally, Petitioner contends that an ordinarily skilled artisan

would have found it obvious to have a *switch controlled by the filter mechanism* when the filter mechanism “transmits the processed packet to the input port 22 of the switch 18” thereby controlling *retransmission of the InfoCast information items*, such as an InfoBite and associated information items like a news story.

Id. at 54 (quoting Ex. 1007, 7:42–45) (citing Ex. 1005, 10:51–57).

Petitioner also notes Tso’s teaching that, when bandwidth is not constrained, scheduler/resourced controller 61 (as implemented in Haber’s switch in Petitioner’s combination) will send a complete news story with an associated InfoBite. *Id.* at 55 (citing Ex. 1005, 10:53–57). Patent Owner does not dispute Petitioner’s analysis for this limitation.

We are persuaded by Petitioner’s analysis for the same reasons mentioned above with respect to the recitation “a mechanism configured for

filtering broadcast information items that controls a switch” in claim 1. *See supra* § II.D.3. Petitioner also shows persuasively that the switch in the Tso–Haber combination retransmits information items, per Haber’s teaching of moving processed packets to the input of a switch, and per Tso’s teaching of sending along complete news stories with InfoBites. *See, e.g.*, Ex. 1005, 10:53–57; Ex. 1007, 7:42–45.

Based on the entire trial record, we are persuaded that the combination of Tso and Haber teaches all of the limitations of claim 16. We also are persuaded that an ordinarily skilled artisan would have had reasons to combine Tso and Haber with a reasonable expectation of success. Thus, we determine that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 16 would have been obvious over the combination of Tso and Haber.

9. *Claim 17*

Claim 17 depends from claim 16 and recites that “if broadcasting criteria of an information item does not correspond to the criteria of the profile of the downstream node, the filter mechanism commands the switch to discard the information item.” Ex. 1001, 8:25–29. Petitioner cites Tso’s teaching that InfoCast servers sometimes receive “an InfoCast containing traffic information for areas which are not served by the InfoCast server,” and that “only the traffic information relevant to the areas served by the InfoCast server” is sent along as an InfoBite. Pet. 55–56 (quoting Ex. 1005, 13:53–58). Petitioner contends that, when traffic information is not relevant, “Tso’s filtering mechanism implemented in a switching node based on Haber’s teachings would have obviously commanded the switch to discard

the information item rather than route it to the downstream nodes.” *Id.* at 56 (citing Ex. 1002 ¶ 178). Petitioner further contends that “it would have been obvious to transmit a notification to a switch to instruct the switch to discard the InfoCast (information item) because it will not be broadcast to downstream nodes.” *Id.* at 56–57 (citing Ex. 1002 ¶ 179; Ex. 1007, Fig. 6). Patent Owner does not dispute Petitioner’s analysis for claim 17.

We are persuaded that Tso contemplates that certain information will not be relevant to downstream nodes such that InfoCast servers only send along relevant information. *See, e.g.*, Ex. 1005, 13:53–58. In light of this, we are persuaded by Petitioner’s contention that an ordinarily skilled artisan would have known to have Tso’s filtering mechanism discard non-relevant information, such as by instructing Haber’s switch to discard the information. *See, e.g.*, Ex. 1002 ¶ 179. Thus, we determine that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 17 would have been obvious over the combination of Tso and Haber.

10. Claim 18

Claim 18 depends from claim 16 and recites that the broadcasting network further comprises “a synthesizing mechanism that receives profile information about the downstream node, and is configured to synthesize said profile information and supply said synthesized information to said circuit, and automatically update the circuit in which the device is installed as a function of subjective criteria.” Ex. 1001, 8:30–37. Petitioner cites the same analysis from claim 2 for teaching the recited “synthesizing mechanism.” Pet. 57–59. Patent Owner does not dispute Petitioner’s analysis for claim 18. We are persuaded by Petitioner’s analysis for the

same reasons discussed above for claim 2. *See supra* § II.D.4. Thus, we determine that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 18 would have been obvious over the combination of Tso and Haber.

E. Obviousness Ground Based on Tso, Ericsson, and Haber

Petitioner contends the subject matter of claims 1, 2, 4–6, and 16–18 would have been obvious over the combination of Tso, Ericsson, and Haber. Pet. 15–59. Because the Tso–Haber obviousness ground is dispositive as to all challenged claims, we do not reach Petitioner’s challenge based on Tso, Ericsson, and Haber. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”); *Bos. Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App’x 984, 990 (Fed. Cir. 2020) (non-precedential) (recognizing that “[t]he Board has the discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

III. CONCLUSION⁷

Petitioner has shown, by a preponderance of the evidence, that the subject matter of claims 1, 2, 4–6, and 16–18 of the ’770 patent would have been obvious over the combination of Tso and Haber.

⁷ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent

IV. ORDER

Accordingly, it is

ORDERED that claims 1, 2, 4–6, and 16–18 of the '770 patent are unpatentable; and

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

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1, 2, 4–6, 16–18	103(a)	Tso, Haber	1, 2, 4–6, 16– 18	
1, 2, 4–6, 16–18	103(a)	Tso, Ericsson, Haber ⁸		
Overall Outcome			1, 2, 4–6, 16– 18	

Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

⁸ We do not reach this ground because we have determined these claims to be unpatentable under the other ground. *See supra* § II.E.

IPR2021-01191
Patent 7,333,770 B2

PETITIONER:

Andrew Sommer
GREENBERG TRAURIG, LLP
sommer@gtlaw.com

Alyssa Holtslander
Jordan M. Rossen
UNIFIED PATENTS, LLC
alyssa@unifiedpatents.com
jordan@unifiedpatents.com

PATENT OWNER:

Ryan Loveless
Jeffrey Stephens
James Etheridge
Brian Koide
Jeffrey Huang
ETHERIDGE LAW GROUP
ryan@etheridgelaw.com
jstephens@etheridgelaw.com
IPTeam@etheridgelaw.com
brian@etheridgelaw.com
jeff@etheridgelaw.com

Brett Mangrum
MANGRUM LAW GROUP PLLC
brett@mangrumlawgroup.com