

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC., SAMSUNG ELECTRONICS CO., LTD.,
and SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioner,

v.

SMART MOBILE TECHNOLOGIES LLC,
Patent Owner.

IPR2022-00979
Patent 9,049,119 B2

Before JAMESON LEE, HYUN J. JUNG, and PAUL J. KORNICZKY,
Administrative Patent Judges.

KORNICZKY, *Administrative Patent Judge.*

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

I. INTRODUCTION

Apple Inc., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. (“Petitioner”) filed a Petition for *inter partes* review of claims 1, 2, 4, 5, 15, and 20 of U.S. Patent No. 9,049,119 B2 (Ex. 1001, “the ’119 patent”). Paper 3 (“Pet.”). Smart Mobile Technologies LLC (“Patent Owner”) filed a Preliminary Response opposing institution. Paper 7.

We instituted an *inter partes* review of claims 1, 2, 4, 5, 15, and 20 of the ’119 patent on all grounds of unpatentability alleged in the Petition. Paper 11.

After institution of trial, Patent Owner filed a Response (Paper 17, “PO Resp.”), Petitioner filed a Reply (Paper 19, “Reply”), and Patent Owner filed a Sur-reply (Paper 24, “Sur-reply”).

An oral hearing was held on September 12, 2023, and the record contains a transcript of this hearing. Paper 30 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1, 2, 4, 5, 15, and 20 of the ’119 patent are unpatentable.

II. BACKGROUND

A. *Related Proceedings*

As required by 37 C.F.R. § 42.8(b)(2), Petitioner and Patent Owner identify the judicial or administrative matters that would affect or be affected by a decision in this proceeding. Petitioner and Patent Owner state the ’119 patent is the subject matter of

(1) *Smart Mobile Technologies LLC v. Samsung Electronics Co., Ltd. et al.*, 6-21-cv-00701 (W.D. Tex. July 2, 2021) and

(2) *Smart Mobile Technologies LLC v. Apple Inc.*, 6-21-cv-00603 (W.D. Tex. June 11, 2021) (hereinafter “the Texas litigations”). Pet. 98; Paper 5, 1.

Petitioner further indicates that the ’119 patent is also related to five patents that were/are the subject of the following administrative proceedings:

(1) *Apple Inc., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. v. Smart Mobile Technologies LLC*, IPR2022-00807 (PTAB) (challenging U.S. Patent No. 9,756,168 B1) (pending);

(2) *Apple Inc., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. v. Smart Mobile Technologies LLC*, IPR2022-00808 (PTAB) (challenging U.S. Patent No. 8,442,501 B1) (pending);

(3) *Apple Inc., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. v. Smart Mobile Technologies LLC*, IPR2022-00980 (PTAB) (challenging U.S. Patent No. 8,761,739 B1) (pending);

(4) *Apple Inc., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. v. Smart Mobile Technologies LLC*, IPR2022-00981 (PTAB) (challenging U.S. Patent No. 8,472,936 B2) (pending); and

(5) *Apple Inc., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. v. Smart Mobile Technologies LLC*, IPR2022-00982 (PTAB) (challenging U.S. Patent No. 8,472,937 B1) (pending).

Pet. 98.

B. Overview of the '119 Patent (Ex. 1001)

The '119 patent is titled “Dynamically Configurable Mobile Device and Cellular Phones with Functions.” Ex. 1001, code (54). The '119 patent describes a wireless communication and control system including (1) a universal wireless device (*e.g.*, hand-held computing device, wireless phone, cellular phone) and (2) a server for storing communication and control protocols. *Id.* at 1:62–63, 1:53–54. The wireless device is dynamically configurable to work in multiple different environments (*e.g.*, home, office, public). *Id.* at 2:39–56, Figs. 2A–2C. The wireless device can sense which environment it is primarily operating in while maintaining the ability to switch instantaneously to a different environment. *Id.* at 3:9–11.

The server can be used to keep functional instruction sets (“FIS”) and software for use by wireless devices. Ex. 1001, 3:61–63. For example, the server may serve as the primary repository/exchange to deliver various mode reconfiguration requests to wireless devices. *Id.* at 3:64–65.

In one embodiment, a wireless device may send a request to the server for configuration as a cell phone when it is away from home. Ex. 1001, 3:66–4:1. The server can send the appropriate FIS and software to the wireless device in response to the device’s request to enable the requested configuration change, which FIS and software are executed by the wireless device. *Id.* at 3:60–4:1. Afterwards, when the wireless device enters an office environment, the device may send a request to the server for configuration as a cordless phone capable of making interoffice phone calls and accessing a local area network. *Id.* at 4:49–52. In response, the server can send the appropriate FIS and/or protocols to the wireless device so that the device can be configured for optimal performance in the office

environment. *Id.* at 4:45–48. The wireless device configurations can be dynamically changed in real time as it changes environments. *Id.* at 6:66–7:6, 8:64–9:1.

In another embodiment, the wireless device may switch modes according to instructions and preferences stored in the wireless device itself. Ex. 1001, 4:12–20, 7:55–58. This switching may be automatic or per specific functional instruction sets and preferences stored on the server or in the wireless device itself. *Id.* at 4:17–20.

C. Illustrative Claims

As mentioned above, Petitioner challenges claims 1, 2, 4, 5, 15, and 20 of the '119 patent. Independent claims 1 and 20, the only independent claims, are reproduced below, with similar limitations aligned with each other.¹ Ex. 1001, 9:25–55, 10:40–65.

Claim 1	Claim 20
[1.0] A mobile device communication system, comprising:	[20.0] A mobile device communication system, comprising:
[1.1] a mobile device which supports voice and data communications; and	[20.1] a mobile device which supports voice and data communications, wherein the mobile device is configured for voice calls using a first wireless network; and

¹ For ease of reference, we use Petitioner's claim numbering scheme as indicated by the bracketed numbers.

[1.2] at least one memory, wherein a processor is communicatively coupled with the at least one memory,	[20.2] at least one memory, wherein a processor is communicatively coupled with the at least one memory,
[1.3] wherein the at least one memory stores functional instructions including instructions for use in providing a plurality of functions to the mobile device,	[20.3] wherein the at least one memory stores functional instructions including instructions for use in providing a plurality of functions to the mobile device,
[1.4] wherein the device is configured for switching between one or more networks including at least a first wireless network and a second wireless network, at least one wireless network using a public or carrier frequency,	[20.4] wherein the mobile device is configured for switching between one or more networks including at least the first wireless network,
	[20.5] the first wireless network operating using a FCC approved public or carrier frequency, and wherein the mobile device is configured to transmit and receive voice on the first wireless network,
[1.5] wherein the first wireless network is an Internet Protocol (IP) data network, wherein the device is configured for Internet Protocol data communication to a network accessible device using the first wireless network, and	[20.6] wherein the first wireless network is an Internet Protocol (IP) data network, and

[1.6] the second wireless network is a cellular or FCC approved frequency voice and data network wherein the device is configured for a voice call using the second wireless network; wherein the mobile device is enabled to operate on an outside or cellular network and a wireless local area network; and	
[1.7] wherein the at least one memory further stores a plurality of communication protocols, that facilitate communication between a server,	[20.7] wherein the at least one memory further stores a plurality of communication protocols, that facilitate communication between a server and the mobile device,
[1.8] wherein the server is configured to connect to an Internet network or a carrier network, and	[20.8] wherein the server is configured to connect to an Internet network or a carrier network, and
[1.9] wherein the server provides a plurality of functions to the mobile device to enable the mobile device to convert from a first function to a second function; and	[20.9] wherein the server enables conversion of the mobile device from a first function to a second function by providing a plurality of functions to the mobile device and
[1.10] wherein the mobile device is configured to communicate using Internet Protocol.	[20.10] wherein the mobile device is configured to communicate using Internet protocol.

Claim 2 is reproduced below.

2. The system of claim 1, wherein the mobile device is adapted to switch dynamically between wireless local area networks and public carrier networks.

Id. at 9:56–58.

D. Evidence and Asserted Grounds

Petitioner relies upon the following evidence:

- (1) U.S. Patent 5,949,775 (Ex. 1005, “Rautiola”);
- (2) U.S. Patent 5,689,708 (Ex. 1006, “Regnier”);
- (3) U.S. Patent 5,854,985 (Ex. 1007, “Sainton”);
- (4) U.S. Patent 5,400,246 (Ex. 1008, “Wilson”);
- (7) U.S. Patent 5,201,067 (Ex. 1011, “Grube”); and
- (8) U.S. Patent 4,989,230 (Ex. 1012, “Gillig”).

Petitioner submits two declarations from Michael D. Kotzin, Ph.D. (Exs. 1003, 1066). Patent Owner submits a declaration from Dr. Todor Cooklev (Ex. 2031).

Petitioner challenges the patentability of the ’119 patent claims on the following grounds (Pet. 14):

Ground	Claim(s) Challenged	35 U.S.C. §²	Reference(s)/Basis
1	1, 2, 5, 15, 20	103	Rautiola, Regnier, Sainton
2	4	103	Rautiola, Regnier, Sainton, Wilson
3	1, 2, 4, 5, 20	103	Grube, Gillig

² The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the ’119 patent claims priority to an application filed before this date, our citations to 35 U.S.C. § 103 in this Decision are to its pre-AIA version. Our decision is not impacted, however, by which version of the statute applies.

III. ANALYSIS

A. *Legal Standards*

Petitioner bears the burden of persuasion to prove unpatentability, by a preponderance of the evidence, of the claims challenged in the Petition. 35 U.S.C. § 316(e). This burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

As mentioned above, Petitioner’s challenge is based on obviousness. Pet. 14. A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved based on underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in the record, objective evidence of nonobviousness.³ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. *Level of Ordinary Skill in the Art*

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The person of ordinary skill in the art is a

³ Patent Owner has not directed us to any objective evidence of non-obviousness. See PO Resp.

hypothetical person presumed to have known the relevant art at the time of the invention. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In determining the level of ordinary skill in the art, we may consider certain factors, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *Id.*

Petitioner states a person of ordinary skill in the art would have had “a bachelor’s degree in electrical engineering, or equivalent training, and approximately two years of experience working in the field of networking and wireless devices. Lack of work experience can be remedied by additional education, and vice versa.” Pet. 9 (citing Ex. 1003 ¶¶ 20–22).

Patent Owner does not dispute Petitioner’s proffered level of skill discussed by Petitioner’s declarant. *See* PO Resp.

We adopt Petitioner’s definition of the level of ordinary skill for the purposes of this Decision.

C. Claim Construction

In an *inter partes* review, the claims are construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b) (2021). This claim construction standard includes construing the claim in accordance with the ordinary and customary meaning of such claims as understood by one of ordinary skill in the art. *Id.*; *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005). In construing claims in accordance with their ordinary and customary meaning, we consider intrinsic evidence such

as the specification and the prosecution history of the patent. *Phillips*, 415 F.3d at 1315–17. Extrinsic evidence, including expert and inventor testimony, dictionaries, and treatises, may also be used but is less significant than the intrinsic record. *Id.* at 1315. Usually, the specification is dispositive, and it is the single best guide to the meaning of a disputed term. *Id.* Any special definitions for claim terms must be set forth in the specification with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Additionally, only terms that are in controversy need to be construed, and these need be construed only to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Matal*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

Claim 2, which depends from claim 1, recites that “the mobile device is adapted to *switch dynamically* between wireless local area networks and public carrier networks.” Ex. 1001, 9:56–58 (emphasis added). A central issue in dispute is what is the meaning of “dynamically” as used in claim 2.

Petitioner states that “the Challenged Claims should be given their plain and ordinary meaning, and no terms require specific construction.” Pet. 10 (citing Ex. 1003 ¶ 33). Adopting the Board’s construction of “dynamic conversion” in *Apple Inc., et al. v. Smart Mobile Tech. LLC*, IPR2022-00808 (Paper 24, 10), Petitioner states that the plain and ordinary meaning of “dynamic” is “when and as needed and in real time.” Reply 8 (citing Ex. 1001, 4:54–55, 4:61–64; Ex. 1066 ¶ 9).

Patent Owner asserts the term “dynamic” should be construed as “when and as needed, responsive to variable conditions and without the need for user intervention.” PO Resp. 9; *see id.* at 9–19. Patent Owner states that

“dynamic” describes “some action or event that occurs when and as needed” (*id.* at 11 (citing Ex. 2031 ¶ 32)) but adds that the ’119 patent also teaches that “a change is ‘dynamic’ when it occurs responsive to variable environmental or other conditions” (*id.*) and that “a switch occurs ‘dynamically’ without the need for user intervention to execute the change” (*id.* at 13).

Recently, the district court in the Texas litigations determined that the terms “dynamic” and “dynamically” are not indefinite, and construed them to mean “in real-time.” Ex. 1099, 13.

Because Petitioner shows that the combined teachings of Rautiola, Regnier, and Sinton disclose “switch dynamically” as recited in claim 2 under both Petitioner’s and Patent Owner’s proposed constructions, claim construction of “dynamically” is not needed to resolve the present controversy. *See Nidec*, 868 F.3d at 1017.

D. Ground 1: Asserted Obviousness of Claims 1, 2, 5, 15, and 20 Over Rautiola, Regnier, and Sinton

Petitioner asserts that claims 1, 2, 5, 15, and 20 are unpatentable under 35 U.S.C. § 103 as being obvious over Rautiola (Ex. 1005), Regnier (Ex. 1006), and Sinton (Ex. 1007). Pet. 16–62; Reply 15–20, 21–24.

Patent Owner opposes Petitioner’s challenge of claims 1, 2, 4, 5, 15, and 20 by arguing that Regnier is not analogous art and cannot be used in Petitioner’s obviousness challenge. PO Resp. 19–33; Sur-reply 10–17. Other than this analogous art argument, which we reject for the reasons below, Patent Owner does not otherwise address Petitioner’s challenge of claims 1, 5, 15, and 20. For the reasons below, we determine Petitioner has

shown by a preponderance of the evidence that claims 1, 4, 5, 15, and 20 are unpatentable over Rautiola, Regnier, and Sainton.

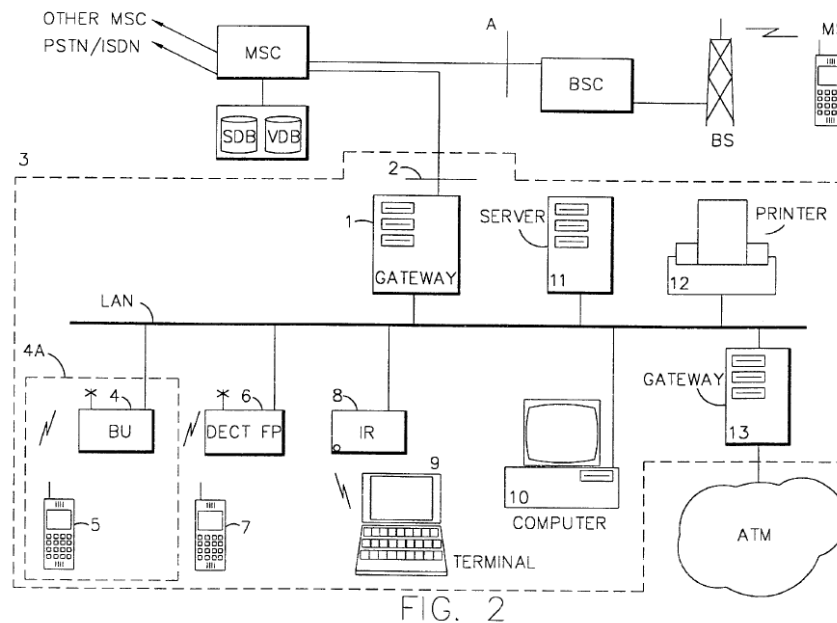
In addition to its analogous art argument, Patent Owner also opposes Petitioner’s challenge of claim 2 by arguing that Rautiola, Regnier, and Sainton do not show that “the mobile device is adapted to switch dynamically between wireless local area networks and public carrier networks.” PO Resp. 36–37; Sur-reply 20–21. For the reasons below, we do not agree with Patent Owner and determine Petitioner has shown by a preponderance of the evidence that claim 2 is unpatentable over Rautiola, Regnier, and Sainton.

Below, we present a brief overview of Rautiola, Regnier, and Sainton and then we address Petitioner’s and Patent Owner’s contentions.

1. Overview of Rautiola (Ex. 1005)

Rautiola is a U.S. patent titled “Office Communication System.” Ex. 1005, code (54). Rautiola describes an integrated office communication system employing a local area network (LAN) for intraoffice communications and a public cellular radio network for outside communications. *Id.* at Abstract.

Figure 2 of Rautiola, reproduced below, shows an integrated office communication system employing a local area network (LAN) for intraoffice communications. Ex. 1005, Abstract, 4:63–65.



In Figure 2, the office communication systems employing the LAN for intraoffice communications does not need other internal networks because computers 10 are connected to the LAN and telephones 5, 7 are either mobile or cordless phones for which there are low-power room-specific base stations 4, 6 in the LAN. *Id.* at Abstract. Connections to the outside world are made via a gateway computer 1 and public cellular radio network. *Id.* Inside the office, the coverage areas of the small base stations 4, 6, 8 are nanocells 4a of one or a few rooms. *Id.* A home or small office user has a similar small base station 14 which is connected to the LAN via a public communication network 15 and gateway equipment 13. *Id.*

Location area 3 above represents an area for an office wherein various devices located within the office (mobile devices 5, computers 10, printers 12) communicate with each other via the LAN. Ex. 1005, 5:51–55. Inside the office environment, the LAN can connect to distinct types of devices like mobile stations 5, cordless telephones 7, terminals 9 that use infrared connections (“IR terminals”), and users’ computers 10. *Id.* at 6:21–38,

6:59–65, 7:9–23. Figure 2 shows each of the mobile devices connects with the LAN via different types of base stations: mobile stations 5 connect to low power base units 4; cordless telephones 7 connect to their own base units 6; and IR terminals 9 connect to IR base units 8. *Id.* at 6:30–44, 6:59–65, 7:14–18. Rautiola explains that terminals interact with “one or more servers which take care of certain functions related to the distribution of resources, such as the database services and voice mail and e-mail services.” *Id.* at 4:30–34.

2. *Overview of Regnier (Ex. 1006)*

Regnier is a U.S. patent titled “Client/Server Computer Systems Having Control of Client-Based Application Programs, and Application-Program Control Means Therefor.” Ex. 1006, code (54). Regnier describes a resource manager in a client/server computer network which controls the availability of system resources. *Id.* at Abstract. A system administrator generates a set of profiles which specify which system resources each user may employ for each of multiple application programs. *Id.* Thereafter, individual application programs may internally configure their possible choices of such system resources according to these profiles on a dynamic basis. *Id.*

Regnier explains that “[m]ost present client/server networks implement an ‘application server’ model in which some or all application programs are split into two portions” where a “server portion executes within the server computer, while a separate client portion executes within each client computer.” Ex. 1006, 1:35–40. Regnier’s application resource

manager operates using a “control program located in the server.” *Id.* at 3:41–42, 5:16 (identifying server control module 240).

Regnier’s process begins when a user signs on at one of the client terminals 130 and the server authenticates the user’s identity. Ex. 1006, 6:35–39. The user may then choose to initiate an application. *Id.* at 6:49–53. After the user selects an application, the system consults the user’s profile to determine whether access is permitted. *Id.* If no access is permitted, the system blocks the application. *Id.* at 7:8–10. If the user is permitted partial access, a user interface for the chosen application can be dynamically modified so the interface only displays options accessible to the user. *Id.* at 7:16–20, 7:66–8:3.

3. *Whether Regnier is analogous art*

Patent Owner argues that Regnier is not analogous art and, thus, cannot be considered in Petitioner’s obviousness challenges in Grounds 1–2. PO Resp. 19–33. According to Patent Owner, Petitioner does not establish that (1) Regnier is in the same field of endeavor as the ’119 patent (*id.* at 21–28) or (2) Regnier is “reasonably pertinent to the problem identified in the ’119 Patent” (*id.* at 30; *see id.* at 28–33). For the reasons below, we do not agree with Patent Owner.

To qualify as prior art for an obviousness analysis, a reference must qualify as “analogous art,” i.e., it must satisfy one of the following conditions: (1) the reference must be from the same field of the inventor’s endeavor; or (2) the reference must be reasonably pertinent to the particular problem with which the inventor is involved. *K-TEC, Inc. v. Vita-Mix Corp.*, 696 F.3d 1364, 1375 (Fed. Cir. 2012).

Here, as to the first test, Patent Owner asserts that the '119 patent's "field of endeavor is wireless communication between wireless mobile devices and networks." PO Resp. 24 (citing Ex. 2031 ¶ 61); Sur-reply 13. Patent Owner contends that

Regnier is in a different field of endeavor [because] Regnier's abstract does not mention—in word or concept—"wireless networking." Rather, it describes its field of endeavor as, "[a] resource manager in a client/server computer network [that] controls the availability of system resources. A system administrator generates a set of profiles which specify which system resources each user may employ for each of multiple application programs." Ex. 1006, Abstract. The abstract is consistent with Regnier's self-described "Field of the Invention" as relating "to electronic data processing, and more particularly concerns the control of system resources in computer systems arranged in a client/server configuration." *Id.*, 1:7-11; *see also id.*, 1:1-6 (Title); 2:3-20, 30-5 (Background of Invention). Regnier's self-described field of endeavor does not refer to wireless devices, wireless communication systems, or wireless networks.

PO Resp. 26.

The full record shows, as Petitioner argues, that "the Regnier reference is analogous art to the '119 patent because Regnier shares the '119 patent's field of endeavor: wireless networking." Reply 16 (citing Ex. 1001, 1:51–52 ("It is an object of the present invention to provide a wireless communication and control system[.]")); Pet. 22. Regnier states that it is directed to a "client/server computer network" for "wireless devices," that is, wireless networking. Ex. 1006, Abstract, 4:28; Ex. 1066 ¶ 15.

The full record does not support Patent Owner's arguments that the '119 patent is directed to multiple networks whereas Regnier is directed to a single network. PO Resp. 27–28; Sur-reply 14. Regnier describes "a

network 100 of computers 110–140 configured in a client/server configuration” (Ex. 1006, 4:3–4) and explains that “[c]ommunications 150” between the client/server computer “may assume any of a number of conventional forms, such as cables 151–152, switched telephone lines, *wireless devices*, and many others” (*id.* at 4:26–28). Petitioner shows that a person of ordinary skill in the art would have understood that “Regnier’s client and server computers could be connected by one or multiple networks, such as public switched telephone line network (Ex. 1006, 4:27–28) connected to a cable LAN (Ex. 1006, 4:28, 4:31), which was a conventional arrangement as demonstrated by Rautiola for example (Ex. 1005, Figs. 1–3).” Reply 17–18 (citing Ex. 1066 ¶ 16).

As to the second test, Patent Owner argues that the ’119 patent addresses “the problem of configuring a single wireless mobile device to communicate with and adapt to multiple networks to avoid a ‘proliferation of mobile devices,’” but Regnier allegedly “addresses a different kind of problem.” PO Resp. 31–32.

We do not agree with Patent Owner. As an initial matter, the analogous art test is whether the Regnier prior art is reasonably pertinent to the problem with which the inventors of the ’119 patent are involved, not whether Regnier addresses a different kind of problem. *K-TEC*, 696 F.3d at 1375. Here, the full record supports Petitioner’s argument that a person of ordinary skill in the art would have known that Regnier’s smaller personal computers would include a laptop (Ex. 1066 ¶ 18 (citing Ex. 1006, Abstract, 4:28, 1:27; Ex. 1008, 8:41)), that a laptop is a wireless device that can connect to multiple networks (Ex. 1005, Figs. 1–3) and also include cellular telephony (Ex. 1007, 15:24–26) and remote control functions (Ex. 1008,

8:41, 31:13–16), and, thus, would avoid a proliferation of mobile devices. *See, e.g.*, Reply 19. We agree with Petitioner that Regnier explicitly states that a client/server network can provide a single client device with more functionality and capabilities, than would otherwise be possible by a single client device, by distributing functions onto “one or more complete computer systems functioning as multiple servers” accessible by the client device. *See* Ex. 1006, 4:24–25; Ex. 1066 ¶ 18. Thus, Regnier is reasonably pertinent to the problem with which the inventor was involved, i.e., configuring a wireless mobile device to communicate with and adapted to multiple networks to avoid a proliferation of mobile devices.

Finally, Patent Owner argues that Petitioner’s analogous art arguments and evidence are untimely because they were presented in Petitioner’s Reply rather than in the Petition. We do not agree. First, the Petition stated that Regnier is analogous art because it pertains “to the same field of endeavor, namely wireless networking.” Pet. 22, 41. Second, a “petitioner is not required to anticipate and raise analogous art arguments in its petition; instead a petitioner can use its reply to ‘respond to arguments raised in the . . . patent owner response.’” *Sanofi-Aventis Deutschland GmbH v. Mylan Pharmaceuticals Inc.*, 66 F.4th 1373, 1379 (Fed. Cir. 2023).

We determine that Petitioner has proven, by a preponderance of the evidence, that Regnier is analogous art.

4. Overview of Sinton (Ex. 1007)

Sinton is a U.S. patent titled “Adaptive Omni-Modal Radio Apparatus and Methods.” Ex. 1007, code (54). Sinton generally relates to wireless communication devices and systems for different radio frequencies,

transmission protocols and radio infrastructures. *Id.* at 1:8–12. Figure 7 is reproduced below.

FIG. 7

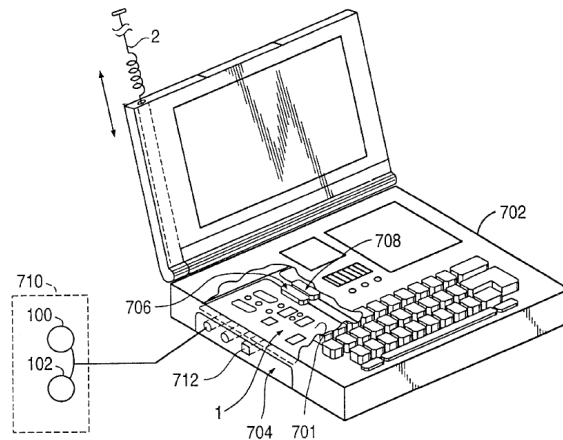


Figure 7 is a block schematic diagram of a personal computer 702 incorporating an omni-modal radio communications circuit 701. *Id.* at 4:23–25. The laptop has a Personal Computer Memory Card International Association (PCMCIA) card (*i.e.*, an omnimodal radio communication card 701). *Id.* at 15:23–26, 15:43–46. The microprocessor 110 in the PCMCIA card allows the laptop to make either a landline transmission via an external jack 712 or a cellular radio transmission via antennae 2. *Id.*

Sainton discloses that its system works on cellular telephone networks and wireless LAN systems. Ex. 1007, 5:13–29. It teaches that its system may switch between these services either manually by the user or *automatically based on preprogrammed criteria* without manual intervention by the user:

[C]ircuit 1 will be capable of utilizing any one of the wireless data services within a given geographic area. The selection of the service to be used can be made manually by the user, or *can be selected automatically*. Referring to FIG. 9, circuit 1 may have a *preprogrammed routine for selecting information*

carriers based on varying criteria. As shown in FIG. 9, the criteria for selecting a carrier may be varied by the user. Possible criteria include the cost of sending a data message; quality of transmission link (signal strength, interference actual or potential); available bandwidth on a carrier for data transmission (or transmission speed supported); potential for being bumped off the system or having transmissions delayed (that is, is the service provider at nearly full capacity); security of transmission; or other special criteria which the user or the device may establish based on the user's individual priorities.

Id. at 16:28–43 (emphasis added).

5. *Independent Claims 1 and 20*

Petitioner, relying on Dr. Kotzin's testimony, provides a limitation-by-limitation comparison of Rautiola, Regnier, and Sainton to independent claims 20 (Pet. 29–55) and 1 (*id.* at 56–59). We address both claims together because of the substantial overlap between the claim limitations and Petitioner's contentions.

Other than its analogous art argument addressed in Section III.D.3 above, Patent Owner does not separately address the preamble and limitations in claims 1 and 20. *See* PO Resp.

a) Preamble 1.0 and 20.0

Petitioner contends that Rautiola teaches the preamble of claims 1 and 20: a “mobile device communication system.” Pet. 29–30 (claim 20), 56 (claim 1). We find, as Petitioner argues, that the claimed “mobile device communication system” is disclosed by Rautiola's local area network (LAN) in the office and a cellular radio network between office units, “mobile stations” which use a wireless GSM cellular radio system outside the LAN,

and a wireless infrared link to a terminal within the LAN. Ex. 1005, 3:36–38, 4:26–27, 5:20–30; Ex. 1003 ¶¶ 82–85, 185.

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola teaches the preamble of claims 1 and 20.⁴

b) Limitations 1.1 and 20.1

Limitation 1.1 recites “a mobile device which supports voice and data communications.” Limitation 20.1 recites “a mobile device which supports voice and data communications, wherein the mobile device is configured for voice calls using a first wireless network.”

Petitioner contends Rautiola and Sainton each disclose these limitations. Pet. 30–34 (claim 20), 56 (claim 1). We agree. Rautiola teaches the recited “mobile device” by disclosing terminal 9 (i.e., laptop computer) which is portable and uses a wireless infrared connection to connect to the local area network LAN and Rautiola’s laptop (the mobile device) supports “voice and data communications” because the LAN provides “‘database services and voice mail and e-mail services’ to the mobile devices” (i.e., the data communications) and “telephone services [i.e., voice communications] are provided to the mobile devices: ‘the users may also manage the telephone services via their computer terminals connected to the local area network.’” Ex. 1005, 4:33–34, 1:37–39; Ex. 1003 ¶¶ 86–90, 186–192.

⁴ The parties do not address whether the preamble is limiting. Because Petitioner shows that the preamble is satisfied by the prior art, there is no need to determine whether the preamble is limiting. *See Nidec*, 868 F.3d at 1017.

We also find, as Petitioner argues, that Sainton provides “implementation details of a laptop that moves from a LAN to a public cellular radio network, such as the laptop of Rautiola,” and Sainton teaches that its laptop “supports voice and data communications” because it teaches a portable personal computer 702 including an “omni-modal radio communications card . . . in the form of a PCMCIA card.” Ex. 1007, 15:24–26; Ex. 1003 ¶¶ 91–95, 186–192.

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola and Sainton teach limitations 1.1 and 20.1.

c) Limitations 1.2 and 20.2

Petitioner contends Rautiola and Sainton each teach limitations 20.2 and 1.2: “at least one memory, wherein a processor is communicatively coupled with the at least one memory.” Pet. 34–36 (claim 20), 56 (claim 1).

We agree with Petitioner. Rautiola discloses a portable laptop computer having a PCMCIA card operating as a client device in a LAN. *Id.* at 34 (citing Ex. 1005, Fig. 2, 10:49–53; Ex. 1007, Fig. 7, 15:40–46; Ex. 1003 ¶¶ 96–97). Sainton teaches that its laptop computer includes a memory coupled to a processor by describing an “omni-modal circuit 1” that can be a PCMCIA card and includes microprocessor 110 coupled to memory 112. *Id.* (citing Ex. 1007, 8:19–25, 15:13–26, Fig. 3B; Ex. 1003 ¶¶ 98–101, 193).

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola and Sainton teach limitations 1.2 and 20.2.

d) Limitations 1.3 and 20.3

Petitioner contends that Rautiola and Regnier each teach limitations 20.3 and 1.3: “the at least one memory stores functional instructions including instructions for use in providing a plurality of functions to the mobile device.” Pet. 36–37 (claim 20), 56 (claim 1).

We agree with Petitioner that Rautiola teaches a laptop having a “memory” and that “services or ‘*functions*,’ such as ‘the database services and voice mail and e-mail services,’ are distributed to the laptop (and other client devices).” Pet. 36 (Ex. 1005, 4:30–34; Ex. 1003 ¶¶ 102–103). “Rautiola further explains that telephone services are also provided to the client: ‘the users may also manage the telephone services via their computer terminals connected to the local area network.’” *Id.* (citing Ex. 1005, 1:37–39) (emphasis omitted).

According to Petitioner, to the extent Rautiola does not explicitly teach that the laptop stores “functional instructions including instructions for use in providing a plurality of functions,” “Regnier teaches these well-known implementation details” by disclosing “technique[s] for providing a service to a client device in a client/server network, such as the system of Rautiola.” Pet. 36–37 (citing Ex. 1003 ¶¶ 104–107, 194). We agree. Petitioner demonstrates that Regnier teaches that “the service (*function*) comprises a server portion as well as a client portion that is stored on and executed by the client device: ‘a server portion executes within the server computer, while a separate client portion executes within each client computer from which a user can invoke the application.’” *Id.* (citing Ex. 1006, 1:35–40). Petitioner also demonstrates that one skilled in the art “would have understood that such instructions downloaded to or residing

permanently within a computer terminal would be stored in the memory.”
Ex. 1003 ¶¶ 108–113, 194.

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola and Sainton teach limitations 1.3 and 20.3.

e) Limitations 1.4 and 20.4

Petitioner contends that Rautiola and Sainton each teach limitations 1.4 and 20.4: “wherein the mobile device is configured for switching between one or more networks including at least the first wireless network.” Pet. 37–38 (claim 20), 56 (claim 1).

We agree with Petitioner that Rautiola and Sainton teach “a mobile wireless device that switches from using a wireless infrared connection when physically located in the office LAN to a public cellular radio network (*‘first wireless network’*) when moving outside the office.” Pet. 37. Sainton further teaches a laptop configured for switching between such networks by disclosing that a laptop with PCMCIA card “may have a preprogrammed routine for selecting information carriers based on varying criteria.” Ex. 1007, 16:28–34. Sainton also teaches that the laptop with PCMCIA card can use various wireless networks, including the types of cellular radio networks and wireless LANs in Rautiola’s system, such as a “U.S. cellular telephone network . . . the European Standard . . . and wireless LAN systems.” *Id.* at 5:14–29; Ex. 1003 ¶¶ 114–123, 195.

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola and Sainton teach limitations 1.4 and 20.4.

f) Limitation 20.5

Limitation 20.5 recites “the first wireless network operating using a FCC approved public or carrier frequency, and wherein the mobile device is configured to transmit and receive voice on the first wireless network.” Petitioner contends that Rautiola and Sainton teach limitation 20.5. Pet. 38–39.

We agree. As discussed above in limitation 20.1, Rautiola and Sainton teach or suggest this limitation by disclosing a laptop that is configured to transmit and receive voice on a public cellular network such as a GSM network. Ex. 1003 ¶¶ 128–132, 196. Petitioner demonstrates that it was well known to a person of ordinary skill in the art that GSM uses an “*FCC approved public or carrier frequency*.” Pet. 39 (citing Ex. 1003 ¶¶ 128–132, 196 (quoting Ex. 1042, 2:52–55 (“the [] frequency band may be the 1900 MHz ‘PCS’ band recently licensed by the FCC, which employs digital modulation according to the GSM standard”) (emphasis omitted))).

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola and Sainton teach limitation 20.5.

g) Limitations 1.5 and 20.6

Limitation 1.5 recites “wherein the first wireless network is an Internet Protocol (IP) data network, wherein the device is configured for Internet Protocol data communication to a network accessible device using the first wireless network.” Limitation 20.6 recites “the first wireless network is an Internet Protocol (IP) data network.” Petitioner contends that Rautiola and Regnier teach limitations 1.5 and 20.6. Pet. 39–40 (claim 20), 56–57 (claim 1).

We agree. Rautiola and Sainton teach or suggest these limitations by disclosing a laptop that is configured to use a public cellular network such as a GSM network (i.e., the claimed “first wireless network”). Petitioner demonstrates that it would have been obvious to a person of ordinary skill in the art to transmit Internet Protocol (IP) data over a GSM public cellular network. Ex. 1003 ¶¶ 186–192, 197–199 (quoting Ex. 1040, 9:52–58 (“[A] typical cellular network such as a GSM network provided with a data packet service . . . where the packet data are conducted directly to a data network according to the OSI or TCP/IP protocol[.]”); Ex. 1041, 8:3–4, 9:26–28).

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola and Sainton teach limitations 1.5 and 20.6.

h) Limitation 1.6

Limitation 1.6 recites “the second wireless network is a cellular or FCC approved frequency voice and data network wherein the device is configured for a voice call using the second wireless network; wherein the mobile device is enabled to operate on an outside or cellular network and a wireless local area network.” Petitioner contends that Rautiola and Sainton teach this limitation. Pet. 57–58.

We agree. Rautiola teaches that a laptop uses an “infrared connection [] directed to the local area network LAN” (i.e., the claimed “wireless local area network”). Ex. 1005, 7:14–18. Sainton teaches a laptop that is configured to transmit and receive voice and IP data on an FCC-approved, public cellular network such as a GSM network (i.e., the claimed “second wireless network is a cellular or FCC approved frequency voice and data network”). Ex. 1003 ¶¶ 128–132, 186–192, 196. Thus, Petitioner

demonstrates that Rautiola teaches a laptop that switches between an infrared office LAN and a public cellular network such as GSM, and Sainton teaches that the laptop is configured to communicate voice and data on a cellular network.

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola and Sainton teach limitation 1.6.

i) Limitations 1.7 and 20.7

Petitioner contends that Rautiola and Regnier each teach limitation 1.7 and 20.7: “the at least one memory further stores a plurality of communication protocols, that facilitate communication between a server and the mobile device. Pet. 40–46 (claim 20), 58 (claim 1).

We agree. As Petitioner explains, Rautiola’s servers “take care of certain functions related to the distribution of resources, such as the database services and voice mail and e-mail services.” Pet. 40 (citing Ex. 1005, 4:30–34) (emphasis omitted). Petitioner demonstrates that, while Rautiola teaches a server coupled to wireless client devices, Rautiola leaves it to a person of ordinary skill in the art “to appreciate how the clients interact with the server” and to look “to analogous art such as Regnier—which teaches implementation details regarding a server in a client-server (c/s) network that provides multiple functions to a client.” *Id.* at 41 (citing Ex. 1003 ¶ 135). In this regard, Petitioner shows that Regnier teaches that “server 110 has ‘many applications which can be executed’ where ‘[c]ode modules 221, 231 perform the server-resident functions of the applications’” (*id.* at 41–42 (citing Ex. 1006, 5:15–18) (alteration in original)) and “using a ‘resource manager’ that ‘controls the availability of system resources’ and operates via

a ‘c/s [client/server] control program located in the server’” (*id.* at 42 (citing Ex. 1006, Abstract, 3:41–42, 4:65–5:2) (alteration in original)).

Petitioner also demonstrates that it would have been obvious to a person of ordinary skill in the art that, “for Rautiola’s laptop to communicate with an office LAN server using the infrared link or using a cellular protocol outside the office LAN via PCMCIA card, as taught by Sainton, the laptop includes memory that ‘stores a plurality of communication protocols.’” Pet. 45–46. “To the extent Rautiola does not explicitly teach a plurality of communications protocols stored in the laptop’s memory,” Petitioner explains that a person of ordinary skill in the art “would have understood this to be obvious in view of Sainton” because “Sainton teaches storing ‘a library of command, control and data transmission protocols appropriate for each supported system’ on the laptop.” *Id.* at 46 (citing Ex. 1007, 5:52–63) (emphasis omitted).

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola and Regnier teach limitations 1.7 and 20.7.

j) Limitations 1.8 and 20.8

Petitioner contends that Rautiola teaches limitations 1.8 and 20.8: “the server is configured to connect to an Internet network or a carrier network.” Pet. 46–48 (claim 20), 58 (claim 1).

We agree. Rautiola teaches this limitation by disclosing that “a server is connected to the office LAN” and “the implementation of the local area network’ can include “[k]nown protocols includ[ing] e.g. TCP/IP [Transmission Control Protocol/Internet Protocol]” (i.e., the claimed Internet network). Ex. 1005, 4:30–34, 6:11–15.

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola teaches limitations 1.8 and 20.8.

k) Limitations 1.9 and 20.9

Limitation 1.9 recites that “the server provides a plurality of functions to the mobile device to enable the mobile device to convert from a first function to a second function.” Limitation 20.9 recites that “wherein the server enables conversion of the mobile device from a first function to a second function by providing a plurality of functions to the mobile device.” Petitioner contends that Rautiola and Regnier teach limitations 1.9 and 20.9. Pet. 48–54 (claim 20), 58–59 (claim 1).

We agree. Rautiola teaches that its server can distribute various voice, e-mail, and data services to client computers, such as laptop 9. Ex. 1005, Fig. 2, 4:31–34, 1:31–36; Ex. 1003 ¶¶ 148, 202. And, as Petitioner explains,

Regnier’s technique of a server that (i) downloads, to a client device, client-side portions of application services and (ii) dynamically controls whether the client device can use and/or access the service, discloses a server that enables converting a client between a plurality of functions (e.g., office telephone, database, e-mail).

Pet. 54 (citing Ex. 1003 ¶¶ 156–159, 202).

Thus, Petitioner demonstrates that it would have been obvious to a person of ordinary skill in the art “to combine Rautiola’s singular server that provides services, such as database, phone calls, data, fax, e-mail and voice mail services, with the implementation details of Regnier describing that a server provides services to a laptop by downloading client-side portions

(*‘providing a plurality of functions to the mobile device’*).” Pet. 48–49 (citing Ex. 1003 ¶¶ 149–150).

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola and Regnier teach limitations 1.9 and 20.9.

l) Limitations 1.10 and 20.10

Petitioner contends that Rautiola teaches limitations 1.10 and 20.10: “the mobile device is configured to communicate using Internet protocol.” Pet. 54–55 (claim 20), 59 (claim 1).

We agree. Rautiola teaches this limitation by disclosing that its laptop terminal 9 (mobile device) implements the office LAN using “TCP/IP [Transmission Control Protocol/Internet Protocol]” (*“Internet Protocol”*). Ex. 1005, 6:11–15.

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola teaches limitations 1.10 and 20.10.

m) Conclusion

Based on the record before us, we determine Petitioner demonstrates by a preponderance of the evidence that independent claims 1 and 20 are unpatentable over the combination of Rautiola, Regnier, and Sainton.

6. Claim 2

Claim 2 recites that “the mobile device is adapted to *switch dynamically* between wireless local area networks and public carrier networks.” Ex. 1001, 9:56–58 (emphasis added). Petitioner contends that

Rautiola and Sainton teach or suggest a mobile device which is adapted to switch dynamically between two networks. Pet. 59–61; Reply 21–24.

As to Rautiola, Petitioner states that Rautiola’s laptop “physically switches between an office wireless infrared LAN and public cellular networks (e.g., GSM) outside of the LAN” and “the terminal crosses the administrative border between the office communication system according to the invention and the public cellular radio network.” Pet. 59 (citing Ex. 1005, 3:36–38, 4:26–27, 5:20–23, 13:31–51) (emphasis omitted). Rautiola also describes that the wireless terminal may switch to a wireless LAN located at home. *Id.* (citing Ex. 1005, Fig. 3, 4:37–38). A person of ordinary skill in the art would have understood that “Rautiola’s laptop would need to connect to a new network after it ‘crosses the border’ of the office system (e.g., when as needed) and at the time the border is crossed without considerable delay to maintain a quality of transmission link (e.g., in real time).” Reply 22 (citing Ex. 1005, 13:32–35).

As to Sainton, Petitioner states that Sainton’s laptop is preprogrammed to switch between different available LAN and cellular networks based on changing network criteria or conditions. For instance, the laptop includes “a preprogrammed routine for selecting information carriers based on varying criteria” where “[p]ossible criteria include the cost of sending a data message” and “quality of transmission link,” among others. Ex.1007, 16:28-43; Ex.1003, ¶¶163-175 Pet. 60 (emphasis omitted, alteration in original).

Petitioner further explains that Sainton teaches a mobile device which “‘switch[es] dynamically between . . . networks’ under the additional requirements of Patent Owner’s construction: (1) responsive to variable

conditions and (2) without the need for user intervention” because Sainton teaches that

a laptop is preprogrammed to switch between different available LAN and cellular networks based on changing network criteria or conditions. For instance, the laptop includes “a preprogrammed routine for selecting information carriers based on varying criteria” where “[p]ossible criteria include . . . quality of transmission link,” which is a criteria that switches networks without user intervention.

Reply 23 (citing Ex. 1007, 16:28–43) (emphasis omitted, alterations in original).

According to Petitioner, a person of ordinary skill in the art would have understood that “Rautiola in view of Sainton also teaches dynamically switching networks without the need for user intervention.” Reply. 23–24 (citing Ex. 1066 ¶ 30). Petitioner explains that

Rautiola teaches dynamically switching networks, for instance as “the terminal crosses” network “border[s]” (Ex.1005, 13:32–35), and Sainton describes the switch occurring automatically based on external criteria such as transmission link quality (Ex.1007, 16:28–43)—which is consistent with Patent Owner’s argument that “*dynamic*” implies changes are made responsive to variable conditions and without user intervention.

Id. at 24 (alteration in original).

In response to Petitioner’s contentions, Patent Owner states that Petitioner’s analyses do not articulate why Rautiola’s or Sainton’s switch between networks is dynamic but Patent Owner does not address Sainton’s teachings. *See* PO Resp. 36; Sur-reply 20–21 (addressing Rautiola but ignoring Sainton). We do not agree with Patent Owner.

As discussed above in Section III.D.4, Sainton discloses that its system works on cellular telephone networks and wireless LAN systems.

Ex. 1007, 5:13–29. Referring to column 16, lines 28–43 cited by Petitioner in its discussion of claim 2, Sainton teaches that its system may switch between these services *automatically* based on preprogrammed routines for selecting information carriers based on varying criteria. *Id.* at 16:28–43. Possible criteria include the cost of sending a data message; quality of transmission link (signal strength, interference actual or potential); available bandwidth on a carrier for data transmission (or transmission speed supported); potential for being bumped off the system or having transmissions delayed (that is, is the service provider at nearly full capacity); security of transmission; or other special criteria which the user or the device may establish based on the user's individual priorities. *Id.*

Sainton's preprogramming routines do not require user intervention under Patent Owner's proposed definition of "dynamic" because "*pre-programming and pre-storing preferences . . . necessarily occurs before execution of a dynamic change. Such pre-programming is distinct from executing a dynamic conversion or switch.*" PO Resp. 18 (citing Ex. 2031 ¶ 47).

Thus, based upon Sainton's functional instructions/preprogrammed routines presented by Petitioner, we determine that Sainton automatically switches, without manual intervention by the user, between various networks (e.g., local networks and public carrier networks) in response to changing/variable networks or conditions. Ex. 1007, 5:13–28 (listing the U.S. cellular telephone system and wireless LAN systems), 16:28–34. We are also persuaded that Sainton's switching occurs when and as needed and in real time because the preprogrammed routine is performed immediately, based upon the detection of the set criteria, to determine whether the

switching occurs. In short, Sainton dynamically switches between a wireless local area network and a public carrier network under Petitioner's and Patent Owner's proposed constructions for "dynamic."

For the reasons above, we determine that Petitioner's proposed combination of Rautiola and Sainton shows that Sainton automatically switches, without manual intervention by a user, between wireless local area networks and public carrier networks in response to variable conditions as required by Patent Owner's proposed construction of dynamic and Petitioner's proposed construction of dynamic.

We determine that Petitioner has proven, by a preponderance of the evidence, that Rautiola, Regnier, and Sainton render obvious claim 2.

7. *Claims 5 and 15*

Claims 5 and 15 depend directly from independent claim 1. Ex. 1001, 9:64–66, 10:26–27. Petitioner, citing the supporting declaration of Dr. Kotzin, provides a limitation-by-limitation comparison of Rautiola, Regnier, and Sainton to claims 5 and 15. Pet. 61–62. Other than its non-analogous art arguments made in connection with Regnier, Patent Owner does not separately address claims 5 and 15. *See* PO Resp. 46.

We determine that Petitioner has shown by a preponderance of the evidence that claims 5 and 15 are rendered obvious by Rautiola, Sainton, and Regnier.

E. *Ground 2: Asserted Obviousness of Claim 4 Over Rautiola, Regnier, Sainton, Wilson*

Petitioner asserts that claim 4 is unpatentable under 35 U.S.C. § 103 as being obvious over Rautiola, Regnier, Sainton, and Wilson. Pet. 62–68.

Petitioner, citing the supporting declaration of Dr. Kotzin, provides a limitation-by-limitation comparison of Rautiola, Regnier, and Sainton to claim 4. *Id.*

Patent Owner does not address the substance of Petitioner's contentions but, instead, contends that Wilson is non-analogous art which cannot be used in Petitioner's obviousness challenge. PO Resp. 33–36; Sur-reply 17–18. Patent Owner argues that Wilson is not analogous art because the '119 patent's field of endeavor is “wireless communication between wireless mobile devices and networks” whereas Wilson focuses on “monitoring and controlling peripheral devices.” PO Resp. 35 (citing Ex. 1008, 1:36–51; Ex. 2031 ¶ 94). Patent Owner also argues that Wilson is not reasonably pertinent to the particular problem of the '119 patent because the '119 patent is directed towards “the problem of configuring a single wireless mobile device to communicate with and adapt to multiple networks to avoid a ‘proliferation of mobile devices’” (Ex. 2031 ¶ 95 (citing Ex. 1001, 1:24–47)) whereas Wilson seeks “to overcome problems with peripheral-device control systems that have limited monitoring abilities and undesirably require specialized knowledge for programming, operating, testing, and reconfiguring the system” (Ex. 2031 ¶ 95). PO Resp. 35. We do not agree.

We agree with Petitioner that Wilson is analogous art to the '119 patent because it is in the wireless networking field. Ex. 1066 ¶ 20. Wilson describes a home automation system where the communication network between a user's personal computer, such as a “MACINTOSH Portable” laptop, includes “a wireless or AC power-line transmission media, such as an infrared (I/R) [or] radio frequency (RF).” Ex. 1008, 8:41, 6:57–60. Petitioner also demonstrates that Wilson is pertinent to the problem

addressed by the '119 patent because it teaches the same solution recited in claims 5–6 — that is, remotely controlling a television and managing appliance power settings. *Id.* at Fig. 11, 5:42–44, 6:57–60, 7:6–10, 8:18–19, 27:68–28:1, 31:13–25, 32:16–22. Wilson is also pertinent to the '119 patent's problem as described by Patent Owner, describing a laptop serving as a remote control device that controls a TV over multiple networks via a modem connection. *Id.* at Fig. 11, 32:16–22.

We determine that Petitioner has shown by a preponderance of the evidence that claim 4 is rendered obvious by Rautiola, Sainton, Regnier, and Wilson.

F. Ground 3: Asserted Obviousness of Claims 1, 2, 4, 5, 20 Over Grube and Gillig

Petitioner asserts that claims 1, 2, 4, 5, and 20 are unpatentable under 35 U.S.C. § 103 as being obvious over Grube (Ex. 1011) and Gilling (Ex. 1012). Pet. 68–96.

Because we have determined claims 1, 2, 4, 5 and 20 are unpatentable as obvious over Rautiola, Regnier, Sainton, and Wilson, and therefore dispositive as to all challenged claims, we need not reach the grounds over Grube and Gillig for purposes of our Decision. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding that 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 the “Board need not address issues that are not necessary to the resolution of the proceeding” and, thus, agreeing that the Board has “discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

IV. CONCLUSION⁵

For the reasons discussed above, we determine Petitioner has proven, by a preponderance of the evidence, that all of the challenged claims are unpatentable, as summarized in the following table:

Claims	35 U.S.C. §	Reference(s) /Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 2, 5, 15, 20	103	Rautiola, Regnier, Sainton	1, 2, 5, 15, 20	
4	103	Rautiola, Regnier, Sainton, Wilson	4	
1, 2, 4, 5, 20	103	Grube, Gillig ⁶		
Overall Outcome			1, 2, 4, 5, 15, 20	

⁵ 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 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).

⁶ As explained above, we need not reach the ground involving Grube and Gillig because the grounds over Rautiola, Regnier, Sainton, and Wilson are dispositive of all challenged claims.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1, 2, 4, 5, 15, and 20 of U.S. Patent No. 9,049,119 B2 have been shown to be unpatentable; and

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

IPR2022-00979
Patent 9,049,119 B2

FOR PETITIONER:

Andrew S. Ehmke
Samuel Drezdzon
Adam C. Fowles
HAYNES AND BOONE, LLP
andy.ehmke.ipr@haynesboone.com
samuel.drezdzon.ipr@haynesboone.com
adam.fowles.ipr@haynesboone.com

W. Karl Renner
Jeremy J. Monaldo
Ayan Roy-Chowdhury
FISH & RICHARDSON P.C.
axf-ptab@fr.com
jjm@fr.com
roy-chowdhury@fr.com

FOR PATENT OWNER:

Rex Hwang
Todd Martin
SKIERMONT DERBY LLP
rhwang@skiermontderby.com
tmartin@skiermontderby.com

Philip J. Graves
Greer N. Shaw
GRAVES & SHAW LLP
pgraves@gravesshaw.com
gshaw@gravesshaw.com