

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

YMAX CORPORATION,
Petitioner,

v.

FOCAL IP, LLC,
Patent Owner.

Case IPR2016-01256
Patent 8,155,298 B2

Before SALLY C. MEDLEY, JONI Y. CHANG, and
BARBARA A. PARVIS, *Administrative Patent Judges*.

CHANG, *Administrative Patent Judge*.

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

I. INTRODUCTION

YMax Corporation (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1 and 20 of U.S. Patent No. 8,155,298 B2 (Ex. 1001, “the ’298 patent”) and a Declaration of Tal Lavian, Ph.D. (Ex. 1002). Paper 1 (“Pet.”). Focal IP, LLC (“Patent Owner”) filed a Preliminary Response and a Declaration of Mr. Regis J. Bates Jr. (Ex. 2001). Paper 7 (“Prelim. Resp.”). Upon consideration of the parties’ contentions and supporting evidence, we instituted an *inter partes* review pursuant to 35 U.S.C. § 314, as to claims 1 and 20 of the ’298 patent. Paper 13 (“Dec.”).

Subsequent to institution, Patent Owner filed a Patent Owner Response (Paper 25, “PO Resp.”) and a second Declaration of Mr. Bates (Ex. 2022). Petitioner filed a Reply. Paper 30, “Reply.” A transcript of the oral hearing held on September 19, 2017, has been entered into the record as Paper 65 (“Tr.”).¹

This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 1 and 20 of the ’298 patent are unpatentable.

¹ The oral arguments in the following cases were consolidated: Cases IPR2016-01256, IPR2016-01258, and IPR2016-01260. Paper 47.

A. Related Matters

The parties indicate that the '298 patent is involved in *Patent Asset Licensing LLC v. Bright House Networks, LLC*, No. 3:15-cv-00742-J-32MCR (M.D. Fla.), and identify other related proceedings. Pet. 1–2; Paper 4, 2–3. There are other petitions challenging the '298 patent (IPR2016-01259 and IPR2016-01263) and two related patents:

- (1) U.S. Patent No. 7,764,777 B2 (“the '777 patent”), which issued from a divisional application of the '298 patent’s parent application; and
- (2) U.S. Patent No. 8,457,113 B2 (“the '113 patent”), which issued from a continuation application of the '777 patent. A final written decisions is entered currently in each of the following proceedings: IPR2016-01259 and IPR2016-01263.

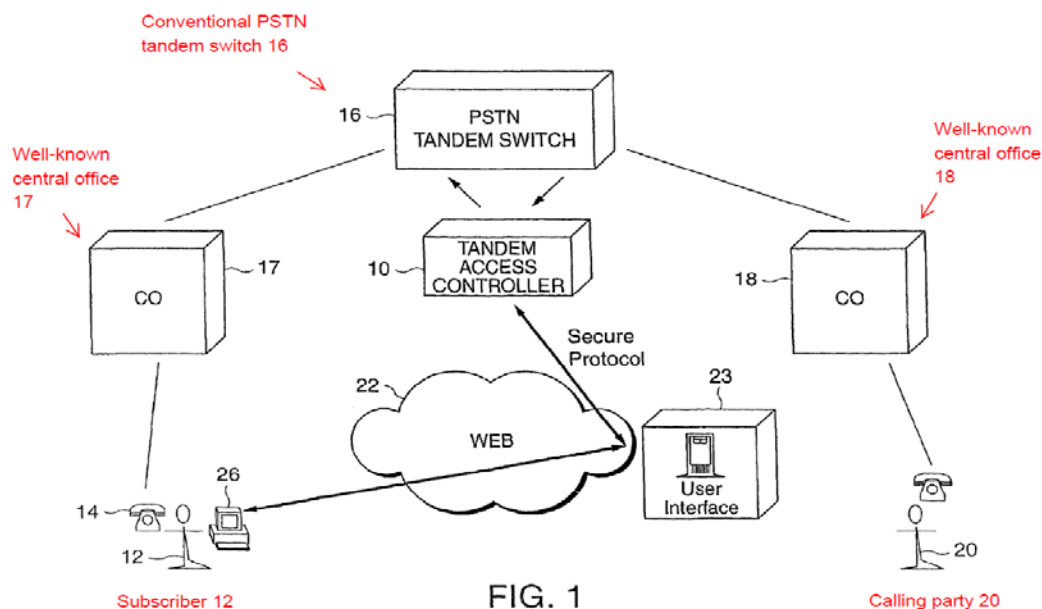
B. The '298 Patent

The '298 patent relates to telephone services. Ex. 1001, 1:20. In the background section, the '298 patent explains that the Public Switched Telephone Network (PSTN) consists of a plurality of edge switches connected to telephones on one side and to a network of tandem switches on the other. *Id.* at 1:42–44. The tandem switch network allows connectivity between all of the edge switches, and a signaling system is used by the PSTN to allow calling and to transmit both calling and called party identity. *Id.* at 1:44–48; Ex. 2022 ¶ 36; Ex. 1002 ¶¶ 36–43.

According to the '298 patent, at the time of the invention, there were “web-based companies managing 3rd-party call control, via the toll-switch

network, which allow users to enter call control information through a web portal.” Ex. 1001, 1:31–34. “Edge devices such as phones and PBXs that include voice mail, inter-active voice response, call forwarding, speed calling, etc., have been used to provide additional call control.” *Id.* at 2:38–41.

The ’298 patent discloses a system for allowing a subscriber to select telephone service features. *Id.* at 1:20–23. Figure 1 of the ’298 patent is reproduced below (with annotations).



Annotated Figure 1 illustrates tandem access controller 10 connected to conventional PSTN tandem switch 16. *Id.* at 4:60–64. According to the ’298 patent, “[d]etails of the operation of the existing phone network,” including directing of phone calls by “existing” PSTN tandem switch 16 to central offices 17, 18 are further described in a publication incorporated by

reference, as well as “numerous books describing the PSTN.” *Id.* at 4:60–5:4. The call flow in the network illustrated in Figure 1 with tandem access controller 10 remains the same as that in a conventional network, “except that additional 3rd-party features are applied to the call.” *Id.* More specifically, in the network illustrated in Figure 1, a call from calling party 20 to subscriber’s phone 14 is directed to tandem access controller 10, which places a second call, subject to 3rd party control information to subscriber 12. *Id.* at 5:5–20. The second call is placed “to the subscriber’s ‘private’ phone number,” without terminating the first call. *Id.* When subscriber 12 answers the call, tandem access controller 10 connects the first call to the second call so as to connect calling party 20 to subscriber 12. *Id.*

Figure 1 also shows web server 23 within World Wide Web 22, which is connected to tandem access controller 10. *Id.* at Fig. 1. Subscriber 12 specifies 3rd-party call control features via web server 23 and these features are then relayed via World Wide Web 22 to tandem access controller 10. *Id.* at 5:33–41.

C. Illustrative Claim

Petitioner challenges independent claims 1 and 20 of the ’298 patent in this proceeding. Claim 1 is reproduced below.

1. A method for providing user control selections for routing of one or more communications between users of one or more communications networks, wherein the users either 1) initiate a communication, 2) receive a communication, or 3) control a communication, the user control selections provided by a user via access to *a web server of a web-enabled processing system*

connected to operate at least in part with the one or more communication networks, wherein at least one of the communication networks is *a network comprising edge switches for routing calls from and to users within a local geographic area and switching facilities for routing calls to other edge switches or other switching facilities local or in other geographic areas*,

the web server of web-enabled processing system facilitating direct access by a user for providing user control selections to the at least one of the switching facilities, the user having a communications device with which to communicate with the web server of the web-enabled processing system, the method comprising the steps of:

facilitating access by authorized users to the web-enabled processing system, via the web server,

the web-enabled processing system coupled to at least one of the switching facilities of the network, the web-enabled processing system configured to route a communication from a specific one of the users to an intended recipient of the users;

executing control criteria, via the web-enabled processing system, to control the routing of the one or more communications via the web-enabled processing system, the control criteria predetermined by the users control selections via the web server before the control criteria are executed via the web-enabled processing system,

wherein the *web-enabled processing system* is configured to perform the following operations to execute the control criteria:

first, receive a message indicating a communication request from a user initiating a communication for an intended recipient user, wherein the message request is transmitted using a [signaling] protocol of the at least one communication network;

second, validate and acknowledge said communications request without first forwarding said request to a terminating edge switch

within the geographic area of the intended recipient of the users;
third, determine the control criteria for access to the intended recipient of the users;
fourth, facilitate selection of a routing path over the at least one communication network in accordance with the control criteria for the intended recipient user;
fifth, route the communication in accordance with the control criteria; and
sixth, *complete a communications link* between the user initiating the communication and the intended recipient of the users, when the intended recipient of the users accepts the communication from the user initiating the communication.

Ex. 1001, 12:46–13:35 (emphases added).

D. Prior Art Relied Upon

Petitioner relies upon the following prior art references:

O’Neal	US 6,463,145 B1	Oct. 8, 2002	(Ex. 1003)
Chang	US 5,958,016	Sept. 28, 1999	(Ex. 1004)
McMullin	US 5,809,128	Sept. 15, 1998	(Ex. 1005)

Admitted Prior Art (*see, e.g.*, Ex. 1001, 1:27–55).

E. Instituted Grounds of Unpatentability

We instituted this trial based on the following grounds of unpatentability (Dec. 19):

References	Basis	Challenged Claim
O’Neal, McMullin, and the Admitted Prior Art	§ 103(a) ²	1
O’Neal, Chang, and the Admitted Prior Art	§ 103(a)	20

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Under this standard, claim terms are presumed to have their ordinary and customary meaning as understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

1. “switching facility”

The preamble of claim 1 recites “a network comprising edge switches for routing calls from and to users within a local geographic area and *switching facilities* for routing calls to *other edge switches or other*

² Because the claims at issue have a filing date prior to March 16, 2013, the effective date of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), we apply the pre-AIA version of 35 U.S.C. § 103 in this Decision.

switching facilities local or in other geographic areas.”³ Ex. 1001, 12:54–12:58 (emphasis added). Apart from the claims, the term “switching facility” does not appear in the Specification. Nor does the term appear in the original disclosure of the application that issued as the ’298 patent. Rather, the term was introduced into the claims by amendment during prosecution. Ex. 1020, 104–109.

At institution, we adopted Petitioner’s proposed construction, as it is consistent with the intrinsic evidence and the plain and ordinary meaning of “switching facility,” construing the term as “any switch in the communication network.” Dec. 7–9; Pet. 21; Paper 11, 1 (Reply to Preliminary Response); Ex. 2005, 82, n.1 (Applicants defined a “switching facility” as “[a]ny point in the switching fabric of converging networks”); TELECOMMUNICATIONS: GLOSSARY OF TELECOMMUNICATION TERMS, THE FEDERAL STANDARD 1037C, S-35 (1996) (Ex. 1008, 391) (defining “switching center” and “switching facility” as synonyms that mean “a facility in which switches are used to interconnect communications circuits on a circuit-, message-, or packet-switching basis”); NEWTON’S TELECOM DICTIONARY, (15th ed. 1999) (Ex. 1009) (defining “switching centers” to refer to all five classes of switches in the PSTN)). We rejected Patent

³ In this proceeding, the parties agree that the preamble should be given patentable weight. Pet. 39; Prelim. Resp. 34; PO Resp. 31. For purposes of this Decision, we proceed on the assumption that the preamble should be given patentable weight.

Owner's proposed construction because it would improperly import limitations into the claim. Dec. 7–9.

In its Response, Patent Owner maintains that “switching facility” does not include an edge switch or edge device, and requires the claimed “web-enabled processing system” or “controller” to be connected *directly* to a tandem switch rather than an edge switch or edge device. PO Resp. 1–37. Patent Owner argues that the claim expressly distinguishes that a “switching facility” is not an “edge switch,” and that construing “switching facility” to include “edge switch” would render the claim terms superfluous. *Id.* at 30–35. In Patent Owner's view, Applicants of the '298 patent “unequivocally disclaimed controllers that applied call control features through an edge switch, or controllers that were themselves an edge device, from the scope of their inventions.” *Id.* at 1–37. We disagree and address below each of Patent Owner's arguments in turn.

First, based on the evidence before us, we decline to adopt Patent Owner's proposed claim construction, as it would import limitations—“connecting the Tandem Access Controller (‘TAC’) to a PSTN tandem switch, rather than edge switches and edge devices”—from a preferred embodiment into the claim. *Id.* at 2, 9–10, 14–20; Ex. 1001, 1:65–66, 3:7–8, 4:15–19. Significantly, neither “Tandem Access Controller” nor “tandem switch” appears in claims 1 and 20. In fact, Patent Owner admits that Applicants used “switching facility” in the claim instead of “tandem switch” to indicate that “switching facility” has broader scope than “tandem switch.” Prelim. Resp. 36.

A person of ordinary skill in the art would have understood that “switching facility” and “tandem switch” have different meanings. In the context of telecommunication and network communication, the plain and ordinary meanings of these terms are clear—“tandem switch” refers to class 4 switches in the PSTN (Ex. 1002 ¶ 41; Ex. 2022 ¶ 36), whereas “switching facility” refers to all five classes of switches in the PSTN (Ex. 1009) or “a facility in which switches are used to interconnect communications circuits on a circuit-, message-, or packet-switching basis” (Ex. 1008, 391). This is consistent with Applicants’ definition of “switching facility”—“[a]ny point in the switching fabric of converging networks”—submitted with the Amendment that introduced the term. Ex. 2005, 82, n.1. Moreover, “the general assumption is that different terms have different meanings.” *Symantec Corp. v. Comput. Assoc. Int’l, Inc.*, 522 F.3d 1279, 1289 (Fed. Cir. 2008).

Importantly, even if we were to interpret “switching facility” as a “tandem switch,” it would not affect our obviousness analysis below because neither claim 1 nor claim 20 requires a *direct* connection between the web-enabled processing system and a switching facility. Indeed, claim 1 recites “the web-enabled processing system *coupled to* at least one of the switching facilities of the network.” Ex. 1001, 12:65–67 (emphasis added). For the reasons stated below, we decline to construe “coupled to” restrictively to require the processing system to be connected *directly* to a tandem switch in the network, as urged by Patent Owner. In addition, claim 20 recites “a controller *with access to* at least two communication networks

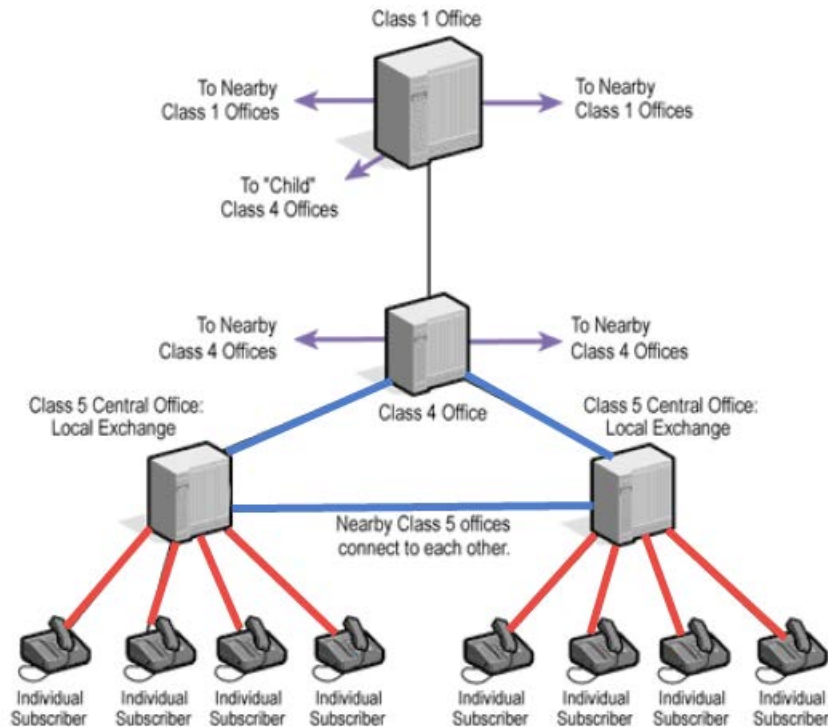
. . . and the second network is coupled to *a switching facility*.” Ex. 1001, 14:63–15:5 (emphases added). We also decline to construe “with access to” a network restrictively to require a controller to be connected *directly* to a tandem switch in the network, as urged by Patent Owner.

As our reviewing court has explained, “each claim does not necessarily cover every feature disclosed in the specification,” and “it is improper to limit the claim to other, unclaimed features.” *Ventana Med. Sys., Inc. v. BioGenex Labs., Inc.*, 473 F.3d 1173, 1181 (Fed. Cir. 2006). Furthermore, the court “has repeatedly cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1346–47 (Fed. Cir. 2015); *Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (noting that “it is important not to import into claim limitations that are not a part of the claim”). “[I]t is the *claims*, not the written description, which define the scope of the patent right.” *Williamson*, 792 F.3d at 1346–47; *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (noting that “[i]t is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude”).

Second, we are not persuaded by Patent Owner’s arguments that the claims expressly distinguish that a “switching facility” is not an “edge switch,” and that construing “switching facility” to include “edge switch” would render the claim terms superfluous. PO Resp. 30–35; Ex. 2022 ¶¶ 61–65. Patent Owner’s arguments fail to appreciate that each of claims 1

and 20 sets forth two separate functional requirements: (1) “edge switches for *routing calls from and to users* within a local geographic area”; and (2) “switching facilities for *routing calls to other edge switches or other switching facilities* local or in other geographic areas.” Ex. 1001, 12:54–58 (emphases added). The evidence before us shows that edge switches can perform the function recited in the first claim element, as well as “routing calls to other edge switches or other switching facilities local” geographic areas, as recited in the second claim element. Ex. 1002 ¶¶ 37–43. The two terms, “edge switches” and “switching facilities,” are not mutually exclusive, but rather “switching facilities” encompasses all five classes of switches in the PSTN, including an edge switch. Ex. 1008, 391; Ex. 1009; Ex. 2005, 82, n.1.

Notably, an ordinarily skilled artisan would have recognized that an edge switch can route calls to other edge switches directly or indirectly through a tandem switch, and to other switching facilities (e.g., a tandem switch). Ex. 1002 ¶¶ 37–43. Dr. Lavian’s testimony regarding the basic architecture of the PSTN (Ex. 1002 ¶¶ 37–43) provides the following diagram (reproduced below with red and blue highlighting added).



As shown in highlighted Figure from Dr. Lavian’s testimony above, an edge switch (a class 5 switch) can route calls from and to users within local geographic area (highlighted in red). An edge switch also can route calls to a tandem switch and to other edge switches directly or indirectly through a tandem switch (highlighted in blue). Ex. 1002 ¶¶ 37–43.

The aforementioned functional claim elements map to the switches in the PSTN. The first claim element takes into account routing calls from and to users within a local geographic area. For the second claim element, the claim language “switching facilities for routing calls to *other edge switches*” takes into account routing calls *from an edge switch to other edge switches*. The claim language “switching facility for routing calls to other switching facility” takes into account routing calls *from an edge switch to a tandem*

switch, as well as from a tandem switch to other switches, including edge switches, in the network. Therefore, construing “switching facility” to include “edge switch” would *not* render the claim terms superfluous.

More significantly, interpreting “switching facility” to exclude an edge switch, as urged by Patent Owner, would read out important claimed functions—namely, *routing calls from an edge switch* to other edge switches and to tandem switches (highlighted in blue above in Dr. Lavian’s Figure, Ex. 1002 ¶¶ 37–43). The claimed network would be incomplete.

Probably recognizing this problem in its proposed construction, Patent Owner attempts to show that a tandem switch is capable of performing those functions, arguing that a tandem switch can “interconnect end office switches to other geographic areas” and that “a tandem switch may be ‘local’ (or nearby) to other tandem switches.” PO Resp. 31–34; Ex. 2022 ¶¶ 61–65. However, those assertions address *the connection*, a physical line, between the switches. Neither Patent Owner nor Mr. Bates explains sufficiently how those functions—e.g., *routing calls from an edge switch* to other edge switches—can be performed by a tandem switch without an edge switch. PO Resp. 31–34; Ex. 2022 ¶¶ 61–65.

Patent Owner also attempts to show that an edge switch is not capable of performing the recited functions in the second claim element, arguing that “an edge switch cannot ‘interconnect end office switches to other geographic areas that are *not local* to an end office switch.’” PO Resp. 32–34; Ex. 2022 ¶¶ 63–65 (emphasis added). However, that argument is not commensurate with the scope of the claim. Neither claim 1 nor claim 20 requires every

switching facility to perform that function. In fact, the claims use the term “or” rather than “and”—e.g., “switching facilities for routing calls to other edge switches *or* other switching facilities *local or* in other geographic areas.” Ex. 1001, 12:56–58 (emphasis added). Patent Owner does not identify, nor can we discern, a reason to read “or” as “and.” As discussed above, an edge switch is capable of routing calls to other edge switches and other switching facilities within local geographic areas. Ex. 1002 ¶¶ 37–43.

In light of the foregoing, Patent Owner’s arguments (PO Resp. 30–35) and Mr. Bates’ testimony (Ex. 2022 ¶¶ 61–65) that the claim language expressly distinguishes that a “switching facility” is not an “edge switch,” and that construing “switching facility” to include “edge switch” would render the claim terms superfluous, are unavailing.

Third, we are not persuaded by Patent Owner’s argument and its expert testimony that the Specification sets forth an unmistakable disclaimer that the claimed controller must be *directly connected to a tandem switch*, rather than an edge switch or edge device. PO Resp. 1–3, 9–20, 28–35. There is a presumption that a claim term carries its ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). To overcome this presumption, the patentee must “clearly set forth” and “clearly redefine” a claim term away from its ordinary meaning. *Bell Atlantic Network Servs., Inc. v. Covad Commc’ns Grp., Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001). The disavowal must be “unmistakable” and “unambiguous.” *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1322 (Fed. Cir. 2012).

Claims 1 and 20 do not recite “tandem switch,” but rather “switching facility.” Our construction for “switching facility” is consistent with its plain and ordinary meaning, encompassing all five classes of switches in the PSTN, including edge switches. Ex. 1008, 391; Ex. 1009; Ex. 1002 ¶ 68.

Turning to the Specification, the term “switching facility” is not found anywhere in the Specification. Accordingly, there is not much, if anything, intrinsically in the Specification that explicitly defines or informs a person of ordinary skill in the art at the time of the invention the meaning of “switching facility.” As discussed above, Patent Owner, in fact, admits that Applicants introduced the term “switching facility” into the claims by Amendment to indicate that “switching facility” has *broader* scope than “tandem switch.” Prelim. Resp. 36; Ex. 2005, 82, n.1.

We note that Patent Owner’s arguments and Mr. Bates’ testimony rely on the discussions in the Specification regarding *both edge switches and edge devices* (Ex. 1001, 1:34–37, 1:56–64), to support their assertion that Applicants disparage the application of call control features at an *edge switch*. PO Resp. 14–15; Ex. 2022 ¶ 47. In any event, the Specification clearly states that connecting a controller directly at a tandem switch, rather than an *edge switch*—to eliminate the problems regarding the provision of call features through the local service telephone company (telco) business office—is *a preferred embodiment*. Ex. 1001, 1:65–66 (“A preferred embodiment of the inventive system described herein connects at the tandem, thereby eliminating these problems.”), 3:7–8 (“In one embodiment, the system includes a processor, referred to herein as a tandem access

controller (TAC).”), 4:15–19 (“FIG. 1 illustrates the tandem access controller (TAC) in one embodiment of the present invention connected to the existing PSTN tandem switch.”). In other embodiments, the Specification explains that the *web-enhanced services* should be connected locally or “coexist with and overlay the local phone service at the local level.” *Id.* at 3:29–43. As Mr. Bates confirms, edge switches “serve end users through local loop connections,” and “interconnect subscriber lines within a local area.” Ex. 2022 ¶ 38; Ex. 2002, 159; Ex. 2003, 102.

The Specification also does not support Patent Owner’s position regarding *edge devices*. PO Resp. 14–17; Ex. 2022 ¶¶ 46–50. The allegedly disparaging statements are directed to only *certain types of edge devices*, such as phones, PBXs, and edge devices that reside in the PSTN central offices and “offer an extremely limited number of features.” Ex. 1001, 1:34–37, 2:1–13; 2:37–51. Notably, nothing in the Specification disparages a unified messaging system connecting to both an IP network and a PSTN that is not residing within a PSTN central office, as taught in O’Neal. Ex. 1003, Fig. 1. Therefore, if there is a disclaimer, such a disclaimer, at most, is limited to those prior art edge devices (e.g., phones and PBXs) discussed specifically in the Specification.

More importantly, recognizing the advantages of a preferred embodiment over the prior art systems does not amount to an unmistakable disclaimer. As our reviewing court has explained, “patentees [are] not required to include within each of their claims all of [the] advantages or features described as significant or important in the written description.”

Golight, Inc. v. Wal-Mart Stores, Inc., 355 F.3d 1327, 1331 (Fed. Cir. 2004). “An invention may possess a number of advantages or purposes, and there is no requirement that every claim directed to that invention be limited to encompass all of them.” *E-Pass Techs., Inc. v. 3com Corp.*, 343 F.3d 1364, 1370 (Fed. Cir. 2003).

Here, each challenged claim is directed to a *web-enabled* processing system. In the “web-enhanced services” embodiments, the Specification does not describe requiring a controller to be connected to a tandem switch *directly*. Ex. 1001, 3:29–43. Although the *preferred embodiment* includes a tandem access controller *directly connected* to a PSTN tandem switch, Applicants were not required to claim this feature and they did not do so in claims 1 and 20. See *Ventana*, 473 F.3d at 1181–82. Even in cases where the specification describes only a single embodiment, our reviewing court consistently has not construed the claim as being limited to that embodiment. *Thorner v. Sony Computer Entm’t Am. L.L.C.*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (holding that it is not enough that the only embodiment, or all of the embodiments, contain a particular limitation to limit a claim to that particular limitation.); *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1117 (Fed. Cir. 2004).

In light of the foregoing, we do not agree with Patent Owner that the Specification sets forth an unmistakable disclaimer.

Finally, we also are not persuaded by Patent Owner’s argument that the prosecution history confirms the alleged disclaimer set forth in the Specification. PO Resp. 20–28; Ex. 2022 ¶¶ 55–59. As an initial matter, no

unmistakable disclaimer is found in the Specification for the reason stated above. Therefore, Patent Owner's assertion that Applicants did not rescind the clear disclaimer is misplaced.

Further, in the Institution Decision, we rejected Patent Owner's argument that the prosecution history makes clear that "switching facility" cannot include an edge switch. Dec. 7–9. We noted that the remarks made during prosecution are equivocal, and do not persuade us of a disavowal or disclaimer of the scope of the term "switching facility" to exclude an edge switch. *Id.* For example, the portion of the prosecution history that Patent Owner cites includes a footnote for defining a "switching facility" as:

Any point in the switching fabric of converging networks, also referred to in industry as a signal transfer point (STP), signal control point (SCP), session border controller (SBC), gateway, access tandem, class 4 switch, wire center, toll office, toll center, PSTN switching center, intercarrier connection point, trunk gateway, hybrid switch, etc.

Ex. 2005, 82, n.1.

The above description does not explain that a switching facility excludes an edge switch. Indeed, "[a]ny point in the switching fabric of converging networks" appears broad. These examples provided by Applicants (*id.*) include a "wire center," "PSTN switching center," or "hybrid switch," which includes an edge switch. Indeed, "hybrid switches" are both an edge switch and a tandem switch. Ex. 2002, 4. Mr. Bates also admits in his cross-examination testimony that "wire centers" were known to be used in a "central office" and in a "class 5" (edge) switch. Ex. 1027,

62:15–63:2. Applicants clearly uses the term “switching facilities” to include edge switches.

Patent Owner now argues that we “misread” the Applicants’ definition, suggesting that the Applicants’ remarks should be read without that definition. PO Resp. 26–27. Relying on Mr. Bates’ testimony, Patent Owner argues the Applicants’ remarks “make clear that they have always consistently distinguished edge switches and tandem switches throughout the prosecution history.” *Id.* at 26–28; Ex. 2022 ¶¶ 58–59.

However, as discussed above, the Applicants’ definition, which is a part of the intrinsic evidence in this record, is consistent with the term’s plain and ordinary meaning (Ex. 1008, 391; Ex. 1009) and the usage of the term in claims 1 and 20 (Ex. 1001, 12:46–13:35, 14:60–15:28), as well as the general knowledge of a person with ordinary skill in the art (Ex. 1002 ¶ 68). Mr. Bates’ testimony (Ex. 2022 ¶¶ 58–59), which is extrinsic evidence, merely repeats Patent Owner’s arguments. Moreover, “extrinsic evidence may be used only to assist in the proper understanding of the disputed limitation; it may not be used to vary, contradict, expand, or limit the claim language from how it is defined, even by implication, in the specification or file history.” *Bell Atl. Network*, 262 F.3d at 1269. Our reviewing court also has explained that “extrinsic evidence consisting of expert reports and testimony is generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence.” *Phillips*, 415 F.3d at 1318.

In any event, the portions of the prosecution history relied upon by Patent Owner are ambiguous, and do not amount to an unmistakable disclaimer that limits the scope of “switching facility” to *exclude* an edge switch. Notably, Patent Owner and Mr. Bates (PO Resp. 26–27; Ex. 2022 ¶ 58) cite to the following Applicants’ remarks for support:

The PSTN is a configuration of *switching facilities for routing calls from calling parties to called parties*, comprising a plurality of end office switches (also referred to as central office switches or edge switches (e.g., a class 5 switch)) and a plurality of *interconnected switching facilities (also referred to as tandem switches)*. The end office switches connect calling parties to called parties only within a local geographic area. The *tandem switching facilities* route calls received via end office switches or other tandem switching facilities to called parties within other geographic areas (national or international, beyond the local geographic area that a subscriber is in). Typically, a telephone call involves an originating end office switch, a plurality of tandem switches, and a terminating end office switch.

Ex. 2005, 82 (emphases added).

The phrase “switching facilities for routing calls from calling parties to called parties” in the first sentence makes clear that “switching facilities” encompasses edge switches. As discussed above, edge switches, not tandem switches, route calls from and to users. Ex. 1002 ¶¶ 37–43. The above paragraph also makes clear that “switching facilities” encompasses tandem switches, calling this type of “switching facilities” sometimes, as “interconnected switching facilities” and “tandem switching facilities.” Applicants’ usage of “switching facilities” in this paragraph is consistent with our claim construction, and the term’s plain and ordinary meaning,

encompassing all five classes of switches in the PSTN, including edge switches. Ex. 1008, 391; Ex. 1009; Ex. 1002 ¶¶ 37–43, 68. Therefore, the Applicants’ remarks do not support Patent Owner’s position that “switching facilities” *excludes* edge switches.

Patent Owner also maintains that Applicants distinguished their claimed controller from Schwab, the prior art asserted by the Examiner. PO Resp. 20–28. As support, Patent Owner cites to the record of Applicants’ in-person interview with the Examiner that states:

Applicant explained the differences between Schwab et al and their apparatus. The major difference being that the subscriber is allowed to connect to *a tandem access switch directly through a tandem access controller* without any modification to the network. Applicant is going to file an RCE stressing this difference.

PO Resp. 22 (citing Ex. 2005, 110) (emphasis added by Patent Owner). However, notwithstanding this agreement between Applicants and Examiner during the prosecution history of the ’777 patent, the claims at issue in the ’298 patent do not recite that limitation. Neither a “tandem access controller” nor a “tandem switch” is recited in claims 1 and 20, let alone reciting a *direct connection* between these two devices. Applicants of the ’298 patent deliberately chose to use broader claim language—*not* claiming such a *direct connection*. Therefore, the purported disclaimer in the prosecution history of the ’777 patent regarding Schwab does not apply to claims 1 and 20. *See Ventana*, 473 F.3d at 1182 (holding that the alleged disclaimer made with respect to another claim limitation did not apply to the assert claims that used different claim language).

Upon consideration of the entire trial record, we maintain that the remarks made during prosecution are equivocal, and do not persuade us of a disavowal or disclaimer that limits the scope of “switching facility” to exclude an edge switch.

In light of the foregoing, we are not persuaded by Patent Owner’s argument and Mr. Bates’ testimony that Applicants of the ’298 patent “unequivocally disclaimed controllers that applied call control features through an edge switch, or controllers that were themselves an edge device, from the scope of their inventions.” PO Resp. 1–35; Ex. 2022 ¶¶ 46–65. For the reasons stated above, in light of the Specification, the relevant prosecution history, and the knowledge of an ordinarily skilled artisan, we decline to construe “switching facilities” to exclude “edge switches.”

For this Decision, we discern no reason to modify our claim construction set forth in the Institution Decision with respect to “switching facility,” construing the term as “any switch in the communication network,” which, as discussed above, is consistent with its plain and ordinary meaning as understood by a person of ordinary skill in the art in the context of the ’298 patent (Ex. 1008, 391; Ex. 1009; Ex. 1002 ¶¶ 37–43, 68), the usage of the term in claims 1 and 20 (Ex. 1001, 12:46–13:35, 14:60–15:28), and the intrinsic evidence (Ex. 2005, 82, n.1).

2. “coupled to”

Claim 1 recites “the web-enabled processing system *coupled to* at least one of the switching facilities of the network.” Ex. 1001, 12:65–67 (emphasis added). Petitioner argues that the broadest reasonable

interpretation of “coupled to” means “connected directly or indirectly.” Pet. 27–28. In the Institution Decision, we adopted Petitioner’s proposed construction as it is consistent with the plain and ordinary meaning of “coupled to,” and rejected Patent Owner’s proposal that requires the processing system be *connected to a tandem switch directly*. Dec. 9–10.

In its Response, Patent Owner maintains that the web-enabled processing system must be *connected directly to a tandem switch* because the configuration of an indirect connection of these elements through an edge switch was allegedly disclaimed by Applicants, relying on its disclaimer arguments presented in connection with the term “switching facility.” PO Resp. 35–37.

As we noted in the Institution Decision (Dec. 9), Patent Owner does not dispute that the plain and ordinary meaning of the term “coupled to” does not require a direct connection between the web-enabled processing system and the switching facility. Indeed, as Petitioner points out (Reply 16), it is settled that “coupled to” generally means that direct connection is not required. *See, e.g., Bradford Co. v. Conteyor N. Am., Inc.*, 603 F.3d 1262, 1270–71 (Fed. Cir. 2010).

Again, Patent Owner improperly attempts to import limitations from a preferred embodiment into the claim. *Williamson*, 792 F.3d at 1346–47. As discussed above, neither “tandem access controller” nor “tandem switch” is recited in claims 1 and 20. Ex. 1001, 12:46–13:35. The Specification clearly discloses that connecting a tandem access controller *directly* to a tandem switch is *a preferred embodiment*. *Id.* at 1:65–66, 3:7–8, 4:15–19.

In other embodiments that disclose web-enhanced services, the Specification does not disclose such a connection. *Id.* at 3:29–43.

We have considered and addressed Patent Owner’s disclaimer arguments and the evidence before us. As discussed above, we are not persuaded by those disclaimer arguments. Furthermore, the portions of the prosecution history additionally cited by Patent Owner for support (e.g., Ex. 2005, 66) are, at most, ambiguous. The Amendment that added the limitation “coupled to a switching facility for routing calls to edge switches or other switching facilities in local or other geographic areas” is silent as to whether “coupled to” requires a direct connection between the elements. *Id.*

For this Decision, we discern no reason to modify our claim construction set forth in the Institution Decision with respect to “coupled to,” interpreting the term to include direct or indirect coupling.

3. “controller”

Claim 20 recites a “controller.” Ex. 1001, 14:64. Patent Owner alleges that a “controller” cannot be an edge device or a system that applies call control features through an edge switch, relying on its disclaimer arguments. PO Resp. 38. In particular, Patent Owner argues that the claimed “controller is analogous to the ’298 Patent’s disclosure of a TAC (Tandem Access Controller).” *Id.*

Once again, Patent Owner attempts to import limitations from a preferred embodiment into the claim. As discussed above, neither “tandem access controller” nor “tandem switch” is recited in the claim itself.

Ex. 1001, 14:60–15:5. The Specification clearly discloses that connecting a

controller *directly* to a tandem switch device, is a *preferred embodiment*. *Id.* at 1:65–66, 3:7–8, 4:15–19. In other embodiments that disclose web-enhanced services, the Specification does not disclose such a connection. *Id.* at 3:29–43.

We have considered and addressed Patent Owner’s disclaimer arguments and the evidence before us. As discussed above, we are not persuaded by those disclaimer arguments. In light of the claim language and Specification, we determine that the plain and ordinary meaning of “controller” does not require a controller that is connected *directly to a tandem switch*.

B. Principles of Law

A patent 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. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness.⁴ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

⁴ Neither party introduced any objective evidence of nonobviousness in this proceeding.

C. Level of Ordinary Skill

In determining the level of ordinary skill in the art, various factors may be considered, 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.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted). Petitioner’s declarant, Dr. Lavian testifies that a person with ordinary skill in the art “would have a bachelor’s degree in electrical engineering, computer science, or the equivalent thereof and approximately 2 years of professional experience within the field of telecommunications or network communications.” Ex. 1002 ¶ 19. Mr. Bates, Patent Owner’s declarant, agrees with this assessment. Ex. 2022 ¶ 22.

Therefore, we adopt Dr. Lavian’s assessment of a person with ordinary skill in the art. We further note that the prior art of record in the instant proceeding reflects the appropriate level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1354–55 (Fed. Cir. 2001) (“the prior art itself reflects an appropriate level” of ordinary skill in the art).

D. Obviousness

Petitioner asserts that claim 1 is unpatentable under § 103(a) as obvious over O’Neal in view of McMullin and the Admitted Prior Art, and that claim 20 is unpatentable under § 103(a) as obvious over O’Neal in view of Chang and the Admitted Prior Art. Pet. 36–69. For each asserted prior art combination, Petitioner explains how the combination describes all of the

claim limitations and articulates a reason to combine the prior art teachings, citing to Dr. Lavian's testimony for support. *Id.* (citing Ex. 1002).

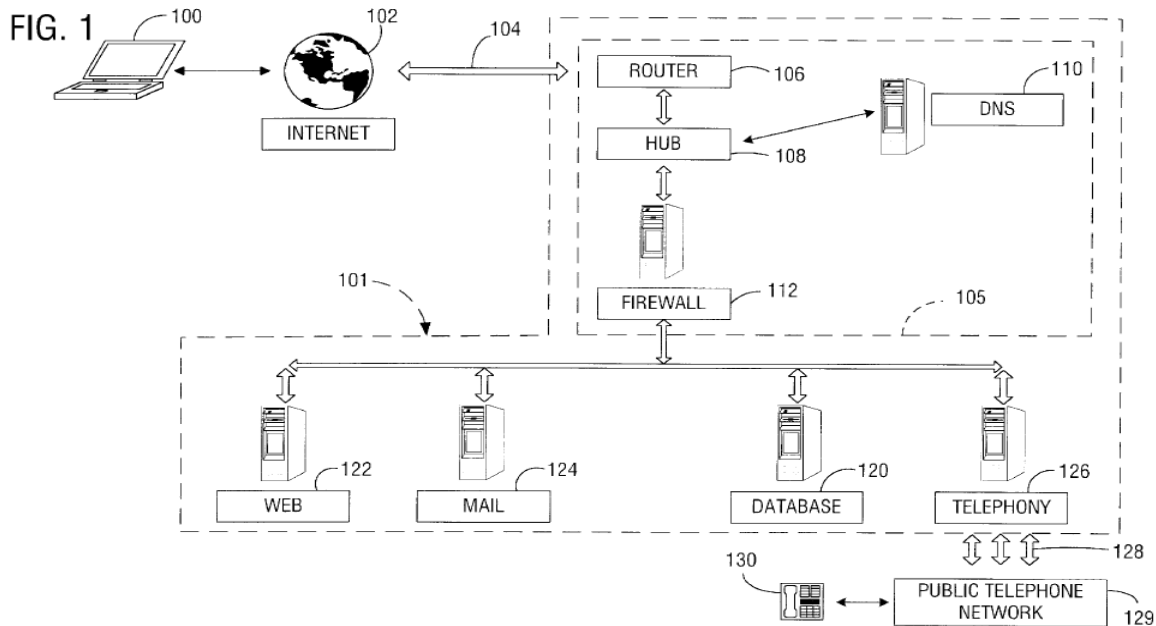
Relying on Mr. Bates' testimony (Ex. 2022), Patent Owner opposes, arguing that O'Neal alone or in combination with other asserted prior art references does not disclose: (1) a web-enabled processing system, or a controller, *coupled to a switching facility*, as required by claims 1 and 20; and (2) the step of "complet[ing] a communications link between the user initiating the communication and the intended recipient," as recited in claim 1. PO Resp. 47–53. Patent Owner did not proffer any evidence of secondary consideration this proceeding.

We begin our discussion below with an overview of O'Neal, McMullin, and Chang, and then we address the parties' contentions in turn.

1. Overview of O'Neal

O'Neal describes communication services available via a data-centric network and a telephony-centric network. Ex. 1003, 1:48–50. A subscriber of various communication services reviews and customizes communication options, in an interactive and simplified manner, via either the data-centric network or the telephony-centric network. *Id.* at 1:52–57.

Figure 1 of O'Neal is reproduced below.



As illustrated in Figure 1 of O'Neal, unified messaging system 101 is connected to a public telephone network 129, such as the PSTN through telephone link 128. *Id.* at 9:9–30, Fig. 1. Unified messaging system 101 includes telephony server 126 that receives calls made to a subscriber and reroutes the call in accordance with a subscriber's communication option setting by forwarding the call to the subscriber via an alternate number. *Id.* at 9:55–58, 11:40–51, 15:14–43.

The subscriber may use user computer 100 to access the unified messaging system through a website over a data-centric network 102 such as the Internet. *Id.* at 16:35–17:10, 5:41–60, Fig. 1. Website access allows the subscriber to review and/or modify their communication options. *Id.* at 16:36–64, 7:45–8:22, Fig. 1. For example, with regard to call forwarding, the subscriber is “able to check whether it is enabled, verify the forwarding

number, select a number from a preprogrammed list, add a new number to a preprogrammed list, or enter a temporary number.” *Id.* at 5:62–6:9. When a caller calls the subscriber, the call is routed over public telephone network 129 and received by the telephony server of the unified messaging system. *Id.* at 8:41–62, 9:20–30, 15:14–43, 17:11–49, Fig. 1. The telephony server then uses the subscriber’s communication option settings to “decide how to handle the message.” *Id.* at 8:41–9:9. If the subscriber has enabled “call forwarding,” the “telephony server receives the forwarding number from the database server and initiates an outgoing call (step 706) to the forwarding number on another port (e.g., one of the outgoing lines as seen in FIG. 2).” If “the call is accepted” by the subscriber, the telephony server completes the call by “connect[ing] the port of the incoming call with the port of the outgoing call.” *Id.* at 17:11–49, 11:40–51, Figs. 1, 3–4, and 7. In this manner, the telephony server may route the call back through the public telephone network to the subscriber “in accordance with a subscriber’s communication option setting.” *Id.* at 8:41–62, 9:20–30, 9:55–58, 11:40–51, 15:14–43, 17:11–49, Fig. 1.

O’Neal further discloses that the subscriber could be using a computer “enable[d] [with] digital/Internet telephony.” *Id.* at 19:1–8. The telephony server can re-route the call to the subscriber through the Internet “in accordance with a subscriber’s communication option setting.” *Id.* at 9:55–58, 18:19–23, 19:1–8, Fig. 1.

2. Overview of McMullin

McMullin discloses an interactive voice response system for providing automatic redirection of an incoming telephone call from a caller. Ex. 1005, Abstract, 5:11–16. The redirection allows the system to receive a call made to a subscriber, and then redirect the call to a voice mail system or to another destination on the PSTN. *Id.* at 8:1–4. The system also receives information about the original destination of the call, known as Dialed Number Identification Service (DNIS) information, and validates the DNIS information against the subscriber records located in the customer record file to ensure that the subscriber number is a valid subscriber authorized to use the service. *Id.* at 6:64–7:14.

3. Overview of Chang

Chang discloses a system that has a web browser interface for allowing subscribers to control call features. Ex. 1004, Abstract, 4:45–58, 7:9–16. Figure 1 of Chang is reproduced below.

Ex. 1001, 1:42–55. The tandem switch network allows connectivity between all of the edge switches, and a signaling system is used by the PSTN to allow calling and to transmit both calling and called party identity. *Id.* People had used various means for limiting interruptions due to the telephone, such as voice mail systems. *Id.* at 1:27–31. There were web-based companies managing third party call control, via the toll-switch network, which allow users to enter call control information through a web portal. *Id.* at 1:31–34. “Edge devices such as phones and PBXs that include voice mail, inter-active voice response, call forwarding, speed calling, etc., have been used to provide additional call control.” *Id.* at 2:38–41.

5. System/Controller Coupled to a Switching Facility

Claim 1 recites “a network comprising edge switches for routing calls from and to users within a local geographic area and switching facilities for routing calls to other edge switches or other switching facilities local or in other geographic areas.” Ex. 1001, 12:53–58. Claim 1 also recites that “the web-enabled processing system coupled to at least one of the switching facilities of the network.” *Id.* at 12:65–67. Claim 20 requires a controller *with access* to a network that “is coupled to a switching facility.” *Id.* at 14:63–67.

For these “switching facility” limitations, the parties’ dispute centers on whether O’Neal discloses a system/controller “coupled to a switching facility.” PO Resp. 51–52; Reply 17–18. As discussed above, we construe “switching facility” as “any switch in the communication network,” rejecting Patent Owner’s narrow construction that excludes edge switches.

We also interpret “coupled to” and “controller” consistent with their plain and ordinary meanings, rejecting Patent Owner’s narrow construction that requires a *direct* connection between the system/controller and a *tandem switch*. *See supra*, Section II. A.

Petitioner takes the position that O’Neal, in combination with other asserted prior art, teaches or suggests these limitations. Pet. 36–66. In particular, Petitioner alleges that O’Neal discloses telephony-centric network 129—e.g., the PSTN that is a network that comprises edge switches and tandem switches (switching facilities). *Id.* at 39 (citing Ex. 1003, 9:10–19, Fig. 1). Petitioner contends that an ordinarily skilled artisan would have recognized that the PSTN “consists of a plurality of edge switches connected to telephones on one side and to a network of tandem switches on the other.” *Id.* at 40 (citing Ex. 1001, 1:42–51; Ex. 1019, 5 (“It is well known that a conventional PSTN includes edge switches (commonly referred to as central office switches . . .) that originate and terminate calls for connected subscribers, and tandem switches which route these calls internally within the PSTN (i.e. tandem switches are not capable of originating or terminating PSTN calls, but rather directs calls to/from an edge switch or another tandem switch).”); Ex. 1002 ¶¶ 98–99).

Petitioner also explains that O’Neal discloses a “web-enabled processing system coupled to at least one of the switching facilities of the network” in that O’Neal’s unified messaging system 101 is connected to the PSTN 129 through tandem switches of the PSTN 129. *Id.* at 42–43 (citing Ex. 1003, 9:10–19, Fig. 1; Ex. 1002 ¶¶ 105–06; Ex. 1019, 5). For claim 20,

Petitioner also contends that O’Neal’s telephony server 126 is a “controller” because, by forwarding a call to the user selected forwarding number, it is causing the switches of the PSTN to route the call to the desired number. *Id.* at 54 (citing Ex. 1003, 5:62–6:4, 8:8–22, 9:55–58, 11:40–51, 15:14–43, 16:35–64, Figs. 1, 3–4).

Patent Owner argues that O’Neal alone, or in combination with other asserted prior art references, does not disclose a web-enabled processing system/controller coupled to a “switching facility” *directly* because, O’Neal’s system is connected to an edge switch, and the claimed “switching facility” cannot be an edge switch. PO Resp. 51–53.

Patent Owner’s arguments are premised on its narrow interpretations of “switching facility,” “coupled to,” and “controller.” *Id.* As discussed above, we decline to construe “switching facility” to exclude an edge switch, and decline to require a *direct connection* between the claimed system/controller and a switching facility. *See supra*, Section II.A. Accordingly, we are not persuaded by Patent Owner’s arguments and its expert’s supporting testimony, as they are not commensurate with the claim’s scope, improperly importing limitations from the preferred embodiment into the claims. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (noting that it is well established that limitations not appearing in the claims cannot be relied upon for patentability).

Based on the evidence in this full trial record, we determine that Petitioner has shown sufficiently that O’Neal describes a web-enabled processing system/controller coupled to a switching facility of the PSTN.

O’Neal’s unified messaging system 101 (a web-enabled processing system), which includes web server 122 and telephony server 126 (a controller), is connected to the PSTN. Ex. 1003, 9:10–30, Fig. 1. Dr. Lavian testifies that “[b]eing connected to the PSTN inherently means being connected to one of the PSTN’s switches.” Ex. 1002 ¶ 105. It is undisputed that O’Neal unified messaging system 101 is coupled to a PSTN switch—connecting directly to an edge switch, or indirectly to a tandem switch of the PSTN. PO Resp. 51–52; Pet. 43; Reply 17–18. As discussed above, a “switching facility” encompasses all five classes of switches in the PSTN including an edge switch. Ex. 1008, 391; Ex. 1009; Ex. 2005, 82, n.1.

Based on the evidence in the entire trial record, we determine that Petitioner has demonstrated by a preponderance of the evidence that O’Neal, in combination with McMullin and the Admitted Prior Art, and O’Neal in combination with Chang and the Admitted Prior Art, teach or suggest the aforementioned “switching facility” limitations recited in claims 1 and 20.

6. Web-Enabled Processing System Completes a Communication Link

Claim 1 requires the web-enabled processing system is configured to *complete a communications link* between the user initiating the communication and the intended recipient of the users, *when the intended recipient of the users accepts* the communication from the user initiating the communication.

Ex. 1001, 13:30–35 (emphases added).

Petitioner asserts that O’Neal teaches this “link” limitation. Pet. 52. In particular, Petitioner notes that when the outgoing call to the subscriber is accepted in O’Neal, telephony server 126 then connects the port of the

incoming calls with the port of the outgoing call, shown as step 710 in Figure 7 of O’Neal, to complete the end-to-end connection in step 712. *Id.* (citing Ex. 1003, 17:29–42). Dr. Lavian testifies that “[t]his completion of the end-to-end connection completes a communication link between the caller and the intended recipient.” Ex. 1002 ¶ 121. We are persuaded by Petitioner’s explanation and Dr. Lavian’s testimony, as they are supported by O’Neal disclosure. Ex. 1003, 17:29–42, Fig. 7.

Patent Owner counters that O’Neal does not disclose completing a communication link between the caller and recipient *when* the recipient accepts the communication from the caller, as recited in claim 1, because O’Neal discloses completing the link *before* the intended recipient accepts the call. PO Resp. 47–51. According to Patent Owner, it is clear that “connecting” the calls, in O’Neal, is something different than and occurs *before* the recipient accepts the call because O’Neal first indicates successfully “connecting” the outbound call to the telephony server and then, discusses that the call forwarding will be deemed successful when the call is “accepted” (answered). *Id.*

However, Patent Owner’s argument is premised on an erroneous interpretation of O’Neal that squarely contradicts both O’Neal and the cross-examination testimony of its own declarant, Mr. Bates, as to how O’Neal works. As Petitioner notes (Reply 20), Mr. Bates’ cross-examination testimony includes the following discussion regarding O’Neal (Ex. 1027, 82:14–84:11 (emphases added)):

[Mr. Bates' answer:] Then the dialogic board dials out across the PSTN, and when somebody picks up, the call is considered to be forwarded.

Q. And it's at that point that the incoming call gets connected to the outgoing call?

[Mr. Bates' answer:] Correct.

Q. Okay. And that's *when there can be voice communication from the caller to the called party*?

[Mr. Bates' answer:] *When that party answers*. But I have still created the path inside that dialogic board, a full path and threw it out.

The testimony of Mr. Bates makes clear that, in O'Neal, the voice communication link between the caller and the intended recipient is completed *after* the intended recipient answers (or accepts) the call. *Id.* Mr. Bates' cross-examination testimony is consistent with Figure 7, boxes 708 and 710, and the accompanying description of Figure 7, in O'Neal. Ex. 1003, 17:29–42.

After considering the entirety of the full trial record, we are persuaded that Petitioner has established by a preponderance of the evidence that O'Neal, in combination with McMullin and the Admitted Prior Art, teaches or suggests a web-enabled processing system that is configured to complete a communications link between the caller and recipient, as required by claim 1.

7. *Reasons to Combine*

For claim 1, Petitioner asserts that to the extent that it is argued that O'Neal does not expressly disclose the limitation “validate and acknowledge

said communication request,” it is disclosed by McMullin. Pet. 62–66. Petitioner notes that McMullin discloses an interactive voice response system (IVRS) for providing automatic redirection of an incoming telephone call from a caller. *Id.* at 63 (citing Ex. 1005, Abstract, 5:11–16). The IVRS receives information about the original destination of the call, known as Dialed Number Identification Service (DNIS) information, and validates the DNIS information against the subscriber records located in the customer record file to ensure that the subscriber number is a valid subscriber authorized to use the service. Ex. 1005, 6:64–7:14. If the DNIS information is validated, the IVRS transmits a message over the signaling channel to the central office acknowledging and accepting the call. *Id.*

Citing to Dr. Lavian’s testimony for support, Petitioner asserts that one of ordinary skill in the art would have implemented McMullin’s validation and acknowledgement technique in O’Neal’s unified messaging system 101 because it would allow O’Neal’s telephony server 126 to determine whether the subscriber still has an active account and not accept the telephone call if the subscriber account is cancelled or suspended. Pet. 64–66 (citing Ex. 1002 ¶¶ 145–47).

For claim 20, Petitioner asserts that to the extent that it is argued that O’Neal does not expressly disclose the limitation “facilitating certain of the users to sign up to become subscribers of the communication networks through the entry of user personal data through the website,” this limitation is disclosed by Chang. Pet. 66–69. Petitioner notes (*id.*) that Chang discloses a system that has a web browser interface for allowing subscribers

to control call features. Ex. 1004, 7:9–12. Chang describes that its platform could “advertise services to new subscribers, obtain trial or purchase order subscriptions, take subscriber information and provision new services, all via the web page based Internet access.” *Id.* Specifically, the system “executes a registration procedure to obtain the validation information for a new subscriber, and then the system conducts an interactive session with the user to select desired services.” *Id.*

Citing to Dr. Lavian’s testimony for support, Petitioner asserts that an ordinarily skilled artisan would have implemented Chang’s registration procedure in O’Neal’s unified messaging system to allow users to subscribe to services through web pages because it would avoid cumbersome requests to the local telephone company’s business office and provide a “simplified, convenient, and cost effect manner” of operation, aligning with stated goals in Chang and O’Neal. Pet. 67–69 (citing Ex. 1004, 2:54–67; Ex. 1003, 3:43–46; Ex. 1002 ¶¶ 153–55).

Neither Patent Owner nor Mr. Bates challenges Petitioner’s articulated reasons to combine the prior art teachings in each of the asserted combinations. PO Resp. 42–53; Ex. 2022 ¶¶ 73–84. Upon consideration of Petitioner’s analysis and supporting evidence including Dr. Lavian’s testimony, we are persuaded that Petitioner has articulated sufficient reasons to combine the prior art teachings in each of the asserted combinations.

8. Remaining Limitations

We also have fully considered Petitioner’s explanations and supporting evidence. *See, e.g.*, Pet. 35–69; Ex. 1002 ¶¶ 92–155; Ex. 1003;

Ex. 1004; Ex. 1005. Patent Owner does not submit separate, specific arguments for the remaining claim limitations recited in claims 1 and 20. PO Resp. 42–53. Nor does Patent Owner proffer any evidence of secondary consideration in this proceeding.

Based on the entirety of the record before us, we determine that Petitioner has established sufficiently that O’Neal, in combination with McMullin and the Admitted Prior Art, teaches or suggests all of the remaining limitations of claim 1, and O’Neal, in combination with Chang and the Admitted Prior Art, teaches or suggests all of the remaining limitations of claim 20. For example, for the limitation “facilitating access by authorized users to the web-enabled processing system, via the web server” recited in claim 1 and similarly recited in claim 20, Petitioner explains that O’Neal’s web server 122 facilitates access to a subscriber by the use of a username and password, ensuring they are authorized users, before allowing the subscriber to review or modify their communication options via the web page provided by web server 122 of unified messaging system 101. Pet. 42, 57–58 (citing Ex. 1003, 16:36–64, 7:45–8:22, Fig. 1; Ex. 1002 ¶ 104). Petitioner also notes that the authentication procedure of O’Neal requires the subscriber to enter authentication data, e.g., an alphanumeric password. *Id.*

As another example, for the limitation “executing control criteria, via the web-enabled processing system, to control the routing of the one or more communications” recited in claim 1 and similarly recited in claim 20, Petitioner notes that, in O’Neal, once the communication option settings

(control criteria), such as enabling forwarding call option, are reflected in the subscriber communication profile database stored in database server 120, the new option settings are consulted each time a message needs to be handled by unified messaging system 101, such as forwarding the call to the caller's forwarding number in the PSTN. Pet. 44–45, 59–62 (citing Ex. 1003, 7:45–65, 8:41–9:9, 11:26–12:65, 13:10–15, 17:11–49, Figs. 1, 3–4, 7; Ex. 1002 ¶¶ 108–09).

We agree with Petitioner's explanations and Dr. Lavian's unrebutted testimony. We credit Dr. Lavian's testimony (Ex. 1002 ¶¶ 92–155) as it is consistent with the prior art of record, and adopt Dr. Lavian's analysis, as our own. In light of the foregoing, we determine that Petitioner has demonstrated by a preponderance of the evidence that O'Neal, in combination with McMullin and the Admitted Prior Art, renders claim 1 obvious, and that O'Neal, in combination with Chang and the Admitted Prior Art, renders claim 20 obvious.

9. Conclusion on the Obviousness Grounds

Based on the evidence in the entire trial record, we determine that Petitioner has demonstrated by a preponderance of the evidence that claim 1 is unpatentable under § 103(a) as obvious over O'Neal, in combination with McMullin and the Admitted Prior Art, and that claim 20 is unpatentable under § 103(a) as obvious over O'Neal, in combination with Chang and the Admitted Prior Art.

III. CONCLUSION

For the foregoing reasons, we determine that Petitioner has established by a preponderance of the evidence that claims 1 and 20 of the '298 patent is unpatentable based on the following grounds:

Reference(s)	Basis	Challenged Claim(s)
O'Neal, McMullin, and the Admitted Prior Art	§ 103(a)	1
O'Neal, Chang, and the Admitted Prior Art	§ 103(a)	20

IV. ORDER

Accordingly, it is

ORDERED that claims 1 and 20 of the '298 patent are held 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.

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Patent 8,155,298 B2

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