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Paper No. 8
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Apple Inc.,
Petitioner,

v.

Uniloc 2017 LLC,[1]
Patent Owner.

Case IPR2018-00884
Patent 8,539,552 B1

Before SALLY C. MEDLEY, KARL D. EASTHOM, and SEAN P. O'HANLON, *Administrative Patent Judges*.

O'HANLON, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

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[1] Per an assignment recorded on July 12, 2018, the Patent Owner is Uniloc 2017 LLC. Patent Owner may wish to consider whether an updated power of attorney is warranted.

I. INTRODUCTION

Apple Inc. ("Petitioner") filed a Petition for *inter partes* review of claims 1–25 of U.S. Patent No. 8,539,552 B1 (Ex. 1001, "the '552 patent"). Paper 2 ("Pet."), 1. Uniloc Luxembourg S.A., a predecessor in interest of Uniloc 2017 LLC ("Patent Owner"), filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

Institution of an *inter partes* review is authorized by statute only when "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). For the reasons set forth below, upon considering the Petition, Preliminary Response, and evidence of record, we conclude the information presented shows there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of claims 1–25 of the '552 patent.

A. Related Matters

The parties indicate that the '552 patent is not involved in any federal district court litigations or any other challenges before the Board. Pet. i; Paper 7, 2.

B. The Challenged Patent

The '552 patent discloses a system and method for network based policy enforcement of intelligent client features. Ex. 1001, 1:7–10.

> In packet-based networks, intelligent end-user clients with little or no support and/or knowledge of the network can deliver many features and services. For networks to retain control over the features and services used by subscribers that use intelligent end-user clients, the networks need to be able to

> recognize signaling and call control messages and transactions that implement these features and services within the network. This is particularly important in next-generation IP telephony and IP multimedia networks where many basic and advanced services may be signaled, controlled, and/or delivered by intelligent end-user clients which are not owned or controlled by the network or service providers, thereby enabling the potential bypassing by the end user of service agreements or other subscription accounting mechanisms.

Id. at 2:61–3:7.

The ’552 patent provides network-based policy enforcement to control access to and use of features and services. *Id.* at 3:20–23. A policy enforcement point within the core network, to which local networks seek access, is used to provide such enforcement. *Id.* at 7:32–34; *see also id.* at 3:48–61 (discussing an exemplary network architecture). The policy enforcement point is in the communications path of every call control and signaling message between any end-user client and any call control and signaling entity of the core network, and uses information regarding the sender and/or the intended recipient to determine whether access to the services and features of the core network is authorized. *Id.* at 7:34–52, 7:66–8:11.

Figure 3, which is a flowchart depicting one embodiment of a method of network-based policy enforcement of intelligent client features (*id.* at 2:44–46), is reproduced below:

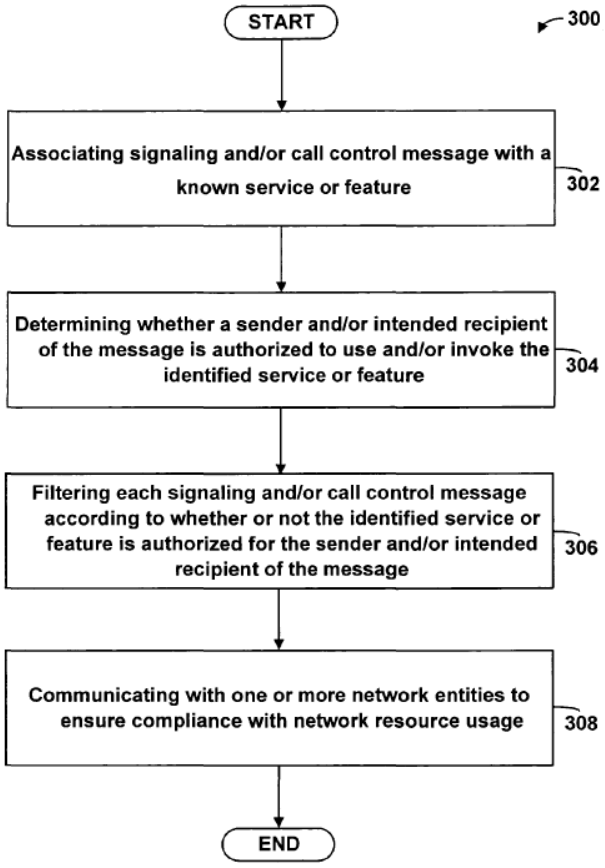

FIGURE 3

Figure 3 is a flowchart depicting one embodiment of a method 300 of network-based policy enforcement of intelligent client features. *Id.* at 8:54–56. Initially, the policy enforcement point receives or intercepts signaling and call control messages. *Id.* at 8:56–58. At block 302, the method associates each signaling and/or call control message with a known service or feature. *Id.* at 8:60–63. The policy enforcement point then determines whether the sender and/or the intended recipient of the message is authorized to use and/or invoke the identified service or feature (block 304), and filters each signaling and/or call control message according to whether or not the identified service or feature is authorized for the sender and/or intended recipient (block 306). *Id.* at 8:63–9:3. Finally, the policy enforcement point

communicates with and/or controls one or more network entities responsible for monitoring and regulating media data flow across network boundaries in order to ensure compliance with the usage authorization at block 308. *Id.* at 9:3–8.

C. The Challenged Claims

Petitioner challenges claims 1–25 of the '552 patent. Claims 1, 6, 18, 23, and 24 are independent. Claim 1 is illustrative of the challenged claims and is reproduced below:

> 1. A method for controlling a plurality of services in packet-based networks, the method comprising:
>
> [1A] a network entity intercepting a signaling message associated with a call between a sender device of the message and an intended recipient device of the message, [1B] wherein the signaling message includes an indication of one type of the plurality of services which the signaling message is intended to invoke;
>
> [1C] the network entity making a determination of whether either the sender device or the intended recipient device is authorized to invoke the type of service indicated in the signaling message based in part on a device profile maintained in part on a remote enforcement point, [1D] wherein the type of service comprises at least one of caller-ID, call waiting, multi-way calling, multi-line service, and codec specification; and
>
> [1E] the network entity filtering the signaling message based on the determination such that the signaling message is transmitted to the intended recipient device if either the sender device or the intended recipient device is authorized to invoke the type of service indicated in the signaling message.

Ex. 1001, 19:60–20:14.

D. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

No.	Reference(s)	Basis[2]	Challenged Claim(s)
1	Kalmanek[3]	35 U.S.C. § 103(a)	1–4, 6–10, 12–20, 22, and 23
2	Kalmanek and Shaffer[4]	35 U.S.C. § 103(a)	5 and 11
3	Kalmanek and Strathmeyer[5]	35 U.S.C. § 103(a)	21, 24, and 25
4	Kalmanek and Gleichauf[6]	35 U.S.C. § 103(a)	17

Pet. 6–7. Petitioner submits a declaration of Dr. Aviel Rubin (Ex. 1003, "Rubin Declaration" or "Rubin Decl.") in support of its contentions.

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends that a person having ordinary skill in the art ("POSITA") would "hav[e] at least a bachelor's degree in electrical engineering, computer science or engineering, or in a related field, with at

[2] The '552 patent was filed on September 25, 2003, prior to the date when the Leahy-Smith America Invents Act ("AIA") took effect.
[3] US 6,324,279 B1 (issued Nov. 27, 2001) (Ex. 1004, "Kalmanek").
[4] US 7,023,839 B1 (filed Aug. 19, 1999, issued Apr. 4, 2006) (Ex. 1005, "Shaffer").
[5] US 2001/0026548 A1 (published Oct. 4, 2001) (Ex. 1006, "Strathmeyer").
[6] US 7,412,598 B1 (filed Dec. 29, 2000, issued Aug. 12, 2008) (Ex. 1007, "Gleichauf").

least 2 years of industry or research experience with packet-based telecommunications systems." Pet. 5 (citing Ex. 1003 ¶¶ 31–33).

"Patent Owner does not offer a competing definition for POSITA . . . ." Prelim. Resp. 2. Patent Owner's declarant, Mr. William C. Easttom II, defines a POSITA in a manner substantially similar to that of Petitioner. *See* Ex. 2001 ¶¶ 20–21.

We find Petitioner's definition reasonable, and for purposes of this Decision, adopt it as our own.

B. Claim Construction

In an *inter partes* review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Consistent with the broadest reasonable construction, 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). The presumption may be overcome by providing a definition of the term in the specification with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a definition, limitations are not to be read from the specification into the claims. *See In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). Only those terms which are in controversy need be construed, and only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc*., 200 F.3d 795, 803 (Fed. Cir. 1999).

Petitioner proposes constructions for two claim terms. Pet. 8–10. Patent Owner asserts that no claim construction is needed and disagrees with Petitioner's proposed constructions. Prelim. Resp. 3–6. We discuss each of the terms identified by Petitioner below.

1. intercepting

Petitioner argues that the broadest reasonable interpretation of "intercepting" as used in claims 1, 6, 18, and 23 means "receiving," and that "[a] POSITA would readily understand that intercepting signaling messages, as described by the '552 Patent, is used to indicate the signaling is *received by* a network entity located between the endpoints of the call (i.e., between the caller and callee)." Pet. 8–9 (citing Ex. 1003 ¶ 35).

Patent Owner disputes Petitioner's interpretation that "intercepting" means "receiving," but does not offer a competing definition. Prelim. Resp. 4–6. Relying on its declarant, Patent Owner argues the entity intercepting a message would be a third party to the message, and would not be one of the intended recipients of that message. *Id.* at 5; *see also id.* at 9 ("the claim language makes clear the 'intended recipient' and the 'intercepting' device are not the same"). Patent Owner's declarant cites several dictionary definitions of *intercept* and states "[a]ll the definitions I found, both in standard dictionaries and in engineering and telecommunications dictionaries[,] all define intercepting as someone other than the intended recipient getting the message." Ex. 2001 ¶¶ 5–15.

Petitioner's and Patent Owner's arguments assert the same interpretation of *intercepting*, namely that "a network entity intercepting a signaling message associated with a call between a sender device of the message and an intended recipient device of the message" means that the

network entity receives the message and the network entity is not the intended end recipient device. This interpretation is consistent with the ordinary usage of term, as set forth by Patent Owner's declarant. This interpretation is consistent also with how "intercepting" is used in the '552 patent, which uses the terms interchangeably. *See, e.g.*, Ex. 1001 8:56–58 ("Initially, signaling and call control messages are *received or intercepted* by the policy enforcement point." (emphasis added)); *see also id.* at 7:32–42 (explaining that the "policy enforcement point . . . is . . . *in the communications path* of substantially each and every call control and signaling message between any end-user client and any call control and signaling entity of the network **202** (including, possibly, another client device)."). We fail to see a distinction between a network entity, positioned intermediate the sender device and the intended end recipient device, "receiving" the message (*see* Pet. 9) and "getting" the message (*see* Ex. 2001 ¶ 15).

Accordingly, for purposes of this Decision, we adopt Petitioner's proposed construction of "intercepting" a message to mean the signal is received by a network entity located between the endpoints of the call.

2. device profile

Petitioner argues that although claim 1 recites "whether either the sender device or the intended recipient device is authorized to invoke the type of service indicated in the signaling message based in part on a device profile," "there is no 'device profile' described in the '552 Patent. Instead, there is a user profile for a user of a particular device." Pet. 9. According to Petitioner, "the '552 Patent consistently describes an authorization process that is (1) based on a *user* profile and (2) wherein services authorized for a

device are in fact services authorized for the *user* of that device." *Id.* at 10. Thus, Petitioner reasons, the broadest reasonable interpretation of "device profile," as used in claim 1, refers to the profile of the user using the device such that "making a determination of whether either the sender device or the intended recipient device is authorized to invoke the type of service indicated in the signaling message based in part on a device profile" means "determining whether a user of a particular device is authorized to invoke a service based on that user's profile." *Id.* (citing Ex. 1003 ¶ 57).

"Patent Owner does not submit a competing definition." Prelim. Resp. 6; *see also* Ex. 2001 ¶ 17.

We determine that, at this stage of the proceeding, we need not explicitly construe "device profile" to resolve the parties' controversies. *See Vivid Techs.*, 200 F.3d at 803 (construing *explicitly* only those claim terms in controversy and only to the extent necessary to resolve the controversy).

C. Challenge 1 – Kalmanek

Petitioner argues that claims 1–4, 6–10, 12–20, 22, and 23 would have been unpatentable over Kalmanek. Pet. 18–56. In support of its showing, Petitioner relies upon the Rubin declaration. *Id.* (citing Ex. 1003). We have reviewed Petitioner's assertions and supporting evidence. For the reasons discussed below, and based on the record before us, Petitioner demonstrates a reasonable likelihood of prevailing in showing that the challenged claims would have been obvious over Kalmanek.

1. Overview of Kalmanek

Kalmanek discloses a communications system in which resources are reserved and committed based on an authorized quality of service. Ex. 1004,

1:26–28. Kalmanek recognizes shortcomings in the known signaling architecture H.323, which is a signaling architecture appropriate for use in networks using connectionless best-effort delivery models. *Id.* at 1:30–67. Such shortcomings include the need for equipment associated with gatekeepers to be extremely reliable, difficulty in cost-effective scalability of gatekeeper-related equipment, and possible theft of service by bypassing the gatekeeper. *Id.* at 1:56–67.

Kalmanek uses a two-phase signal process in which messages for setting up the call are exchanged in one phase and messages for connecting the call are exchanged in a separate and distinct second phase. *Id.* at 12:39–45. "By separating the messages for setting up the call from the messages for connecting the call, the [latter] messages can be exchanged end to end without being routed through the gate controllers that set up the call." *Id.* at 12:45–48. Because "the gate controllers are involved only during the initial start of the call but not during the call duration," the message load is reduced such that "the amount of memory need[ed] in the gate controllers is greatly reduced" and "the gate controllers can be constructed without the typically stringent requirements for reliability." *Id.* at 14:39–46.

Theft of service can occur when a telephone interface unit fails to acknowledge that a call has been initiated or a call has been terminated. *Id.* at 16:15–21, 43–52. Kalmanek overcomes these potential problems by using network edge devices to control call setup and termination. *Id.* at 16:21–27, 52–56.

The gate controllers can authenticate signaling messages and authorize requests for service so that communication services and certain service features are only provided to authorized subscribers. *Id.* at 6:49–52.

Upon receiving a setup request message from a calling party, the gate controller can authenticate the identity of the calling party and authorize the service sought by the calling party. *Id.* at 6:52–55.

2. Claims 1–4

a. Petitioner's Contentions

Petitioner relies on Kalmanek to teach or suggest all of the limitations of claim 1, and the Petition provides a mapping of claim 1 to Kalmanek. *Id.* at 18–41. Regarding the preamble, Petitioner argues that "*Kalmanek* discloses a method of using a 'gate controller' for controlling services such as codec specification and caller ID within 'packet telephony' networks." Pet. 18 (citing Ex. 1004, 3:40–45, 6:49–55, 10:13–19, 46:49–52). We find that the cited portions of Kalmanek support Petitioner's contentions.

Regarding limitation 1A, Petitioner argues that Kalmanek's gate controllers 110, 111 in conjunction with network edge devices ("NEDs") 120, 121 correspond to the recited network entity. *Id.* at 21–22. Petitioner argues that "[t]he NED provides access to a particular service based on authorization provided by that NED's corresponding gate controller." *Id.* at 21 (citing Ex. 1004, 5:9–28; Ex. 1003 ¶ 54). Petitioner relies on Kalmanek's originating telephone interface unit ("TIU") and terminating TIU to correspond to the recited sender device and intended recipient device, respectively. *Id.* at 22–23 (citing Ex. 1004, 9:40–43; Ex. 1003 ¶ 55). Petitioner argues that "the gate controller and NED work together to intercept or receive a message, authorize a service level for the message, and implement the service level according to the message," and identifies "a call setup message" as the message that is intercepted. *Id.* at 23 (citing Ex. 1003 ¶¶ 50, 52–56). Petitioner argues that a person having ordinary skill in the art

would understand Kalmanek's SETUP message to be a signaling message, the intended recipient of which is the device associated with the callee. *Id.* at 24 (citing Ex. 1003 ¶ 73). For the reasons set forth in section II.C.2.b below, we find that Kalmanek supports Petitioner's contentions.

Regarding limitations 1B and 1D, Petitioner argues that Kalmanek discloses that its signaling message includes an indication of codec specification and caller ID. *Id.* at 26–31, 38–39.

Regarding codec specification, Petitioner notes that, as used in Kalmanek, "quality of service" is a measurement of communication service during a call and can include the bandwidth associated with the call. *Id.* at 27 (citing Ex. 1004, 1:36–39, 3:61–64). Petitioner further notes that Kalmanek's SETUP message includes a CODING parameter that, according to Petitioner, identifies the codec. *Id.* at 27–28 (citing Ex. 1004, 21:23–29, 29:18, 30:1–8). Petitioner argues that "the chosen codec also dictates the bandwidth required for the call" because "each standardized codec utilizes a different amount of data to encode a given amount of voice data." *Id.* at 28 (citing Ex. 1003 ¶ 27).

Petitioner further notes that Kalmanek discloses a GATESETUP message that is sent from the gate controllers to the edge routers and that includes an indication of the bandwidth to be implemented by the edge routers. *Id.* at 28–29 (citing Ex. 1004, 34:46–35:22). Petitioner argues that the bandwidth specified in the GATESETUP message is "the same bandwidth dictated by the coding algorithm identified in the SETUP message sent from the BTI to the gate controller." *Id.* at 29 (citing Ex. 1003 ¶¶ 27, 53). Thus, Petitioner argues, "*Kalmanek* teaches that the SETUP message sent from the TIU/BTI to the corresponding [gate controller]

includes an indication of a service, such as a codec . . ., the SETUP message is intended to invoke." *Id.* at 31. For the reasons set forth in section II.C.2.b below, on this preliminary record, Kalmanek supports Petitioner's contentions.

Regarding caller ID, Petitioner notes that Kalmanek discloses that, upon receiving the SETUP message from the terminating gate controller, the terminating broadband telephony interface ("BTI") can request caller ID information by including a caller ID flag in its SETUPACK message that confirms receipt of the SETUP message. *Id.* at 30 (citing Ex. 1004, 56:18–24, Fig. 23). Petitioner notes that Kalmanek discloses that the terminating gate controller will then verify that the customer is subscribed to the caller ID service, and, if the customer is verified, return the caller ID to the customer. *Id.* at 30–31 (citing Ex. 1004, 56:22–24; Ex. 1003 ¶ 56). Petitioner further notes that Kalmanek discloses an alternative implementation whereby the terminating gate controller checks whether the terminating BTI subscribes to caller ID service on receipt of every call rather than waiting for the terminating BTI to request caller ID information. *Id.* at 31 (citing Ex. 1004, 56:36–44). Thus, Petitioner argues, "*Kalmanek* teaches that the SETUP message sent from the TIU/BTI to the corresponding [gate controller] includes an indication of a service, such as . . . caller ID, the SETUP message is intended to invoke." *Id.* at 31. On this preliminary record, the cited portions of Kalmanek support Petitioner's contentions.

Regarding limitation 1C, Petitioner argues that "*Kalmanek* teaches that the network entity, namely the gate controller, determines whether the user of a sender device and the user of an intended recipient device are authorized to invoke a service indicated in the signaling message based on

the users' respective profiles." *Id.* at 32. According to Petitioner, "*Kalmanek* teaches that the gate controllers have access to authentication databases with customer profile information," and "'[t]he gate controllers can authenticate signaling messages and authorize requests for service so that communication services and certain service features are only provided to authorized subscribers.'" *Id.* at 32–33 (quoting Ex. 1004, 6:51–53, citing Ex. 1004, 10:13–19). Petitioner argues that Kalmanek's SETUP message includes a CALLER field, which provides called ID information, and that Kalmanek's terminating gate controller determines whether the intended recipient line is authorized to receive caller ID information. *Id.* at 34–36 (citing Ex. 1004, 7:19–21, 21:53–61, 25:25–29, 25:37–43, 56:22–24; Ex. 1003 ¶ 59). Petitioner argues that Kalmanek's SETUP message also includes a CODING field identifying one or more coding algorithms, which correspond to a desired quality of service/bandwidth to be implemented, and that the gate controllers determine if both the sender and recipient devices are authorized to invoke the codec specification. *Id.* at 36–38 (citing Ex. 1004, 7:29–34, 9:6–21, 10:13–19, 13:55–63, 21:22–29, 22:32–53, 35:6–12; Ex. 1003 ¶ 62). Petitioner also argues that a person having ordinary skill in the art "would have understood that, to the extent not already part of the described *Kalmanek* system, both users' customer profiles could be referenced as a means of authorizing the specifically requested codec." *Id.* at 38 (citing Ex. 1003 ¶ 63). On this preliminary record, the cited portions of Kalmanek support Petitioner's contentions.

Regarding limitation 1E, Petitioner relies on Kalmanek's discussion of caller ID and called ID blocking as corresponding to the recited filtering of the signaling message. *Id.* at 39–41. Kalmanek discloses that the SETUP

message will contain a CALLER field, which "is the caller-id information," "only . . . if the customer has subscribed to some variant of caller-id service." Ex. 1004, 25:37–39; *see also* Pet. 39–40. Kalmanek further discloses that, "[i]f the originator of the call has specified caller-id blocking, the first parameter [of the CALLER field] will contain 'anonymous.'" Ex. 1004, 25:41–43. According to Petitioner, the terminating gate controller transmits the SETUP message to the terminating broadband telephony interface and filters the CALLER field of the signaling message based on whether caller ID services and caller ID blocking services have been invoked and authorized. Pet. 40–41 (citing Ex. 1003 ¶ 64). On this preliminary record, Kalmanek supports Petitioner's contentions.

b. Patent Owner's Contentions

Patent Owner argues that the gate controllers in Kalmanek do not intercept the call setup messages because the gate controllers are the intended recipients of the setup messages. Prelim. Resp. 7–10.

Kalmanek discloses that signaling messages, including setup messages, are exchanged between the sender device and the intended recipient device, and may be sent *through* the gate controller: "Signaling messages are exchanged for a call between a calling party to a called party. A setup message for the call is exchanged through at least one gate controller." Ex. 1004, 2:3–5; *see also id.* at 21:23–24 (explaining that "SETUP is the basic message sent by a BTI to initiate a connection to another *endpoint*" (emphasis added)). We additionally note that Kalmanek discusses the H.323 signaling architecture, and states that "the gatekeeper is not necessary within the H.323 standard." *Id.* at 1:49–50. However, "when a gatekeeper is present in a network, network terminals must make use of its

services" such that "all call signaling must pass *through* the gatekeepers." *Id.* at 1:50–54 (emphasis added). Patent Owner's argument is inconsistent with disclosure of Kalmanek and, therefore, is unpersuasive.

Nor are we persuaded by Patent Owner's citation to Kalmanek Figure 3 as supporting its contention that Kalmanek's gate controllers are the intended recipients of the setup messages. Prelim. Resp. 8. Figure 3 "illustrates a flow chart for performing two-phase signaling in call connection, according to an embodiment *of the present invention*." Ex. 1004, 2:17–19 (emphasis added). Thus, Figure 3 illustrates how Kalmanek's setup messages are passed through, or intercepted by, the gate controllers. At step 350, the setup message is received by the terminating telephone interface unit. *Id.* at Fig. 3, 13:27–29. Thus, Figure 3 supports Petitioner's interpretation that "the 'intended recipient device' of a call setup signaling message is the device associated with the callee." Pet. 24.

Next, Patent Owner asserts that "[t]he claim language requires that the required 'signaling message' be between a sender and intended recipient." Prelim. Resp. 11. Patent Owner argues that "*Kalmanek's* 'setup' and/or 'GATESETUP' messages are not sent by the sender to the 'intended recipient device.'" *Id.*

As explained above, Kalmanek's setup messages are exchanged between the sender device and the intended (end) recipient device. Kalmanek discloses that "[t]he GATESETUP message is sent by the Gate Controller to the Edge Router" (Ex. 1004, 34:47–49), and, thus, we agree with Patent Owner that the GATESETUP message is not sent between the sender device and the intended recipient device. This is of no import, however, because Petitioner relies on Kalmanek's SETUP message, not the

GATESETUP message, to correspond to the recited "signaling message." *See* Pet. 24–26. Petitioner refers to Kalmanek's GATESETUP message to explain how the system implements the services (i.e., bandwidth) indicated by the setup message. *See id.* at 28–29.

Next, Patent Owner argues that "the SETUP message of *Kalmanek* . . . fails to disclose the alleged 'services' in the SETUP message." Prelim. Resp. 13. Regarding caller ID, Patent Owner argues that "Petitioner merely speculates that the SETUP message of *Kalmanek* **could** contain 'caller-id blocking', but neither Petitioner nor its expert provides any of the required evidence or explanation as to *why* a person of ordinary skill in the art at the time of the invention would modify *Kalmanek* as such." *Id.* at 14–15. Continuing, Patent Owner argues that "*Kalmanek* itself states that 'caller-id blocking' is an inherent feature of the gate controllers in the *Kalmanek* system, and therefore 'caller-id blocking' is not part of the SETUP message of *Kalmanek*." *Id.* at 15 (citing Ex. 1004 7:19–21).

Kalmanek discloses that the CALLER portion of the SETUP message will contain an "anonymous" parameter if the originator has specified caller ID blocking. Ex. 1004, 25:25–43. Thus, Kalmanek discloses that the SETUP message includes an indication of caller ID blocking. Kalmanek, therefore, appears to contradict Patent Owner's argument on this preliminary record. Additionally, the portion of Kalmanek cited by Patent Owner reads "[s]ervice features that depend on the privacy of the calling information, such as caller-ID blocking, *are implemented by the gate controllers*." Ex. 1004, 7:19–21 (emphasis added). This language indicates that gate controllers *implement* the caller ID blocking service, but does not support Patent Owner's contention that the SETUP message does not include caller

ID blocking. Moreover, Patent Owner does not address Petitioner's discussion of caller ID—as opposed to caller ID blocking—as corresponding to a service that the signaling message is intended to invoke.

Regarding codec specification, Patent Owner argues that "the term 'codec' never even appears once in *Kalmanek*" and that Kalmanek's "CODING parameter is merely message originator encapsulation." Prelim. Resp. 16–17 (citing Ex. 1004, 25:54–60; Ex. 2001 ¶¶ 45–46).

The portion of Kalmanek reproduced by Patent Owner (*see id.* at 16) states that "CODING specifies a list of possible encapsulations *and coding methods* that the originator will perform." Ex. 1004, 25:54–55 (emphasis added). Thus, Patent Owner's argument that Kalmanek's CODING parameter refers to "merely originator encapsulation" is in conflict with Kalmanek's explicit disclosure that such parameter also refers to coding methods. Furthermore, the portion of Kalmanek reproduced by Patent Owner further explains that the CODING parameter includes a "third item [that] gives the coding algorithm." *Id.* at 25:58–59. Patent Owner's arguments fail to explain why Kalmanek's indication of the coding algorithm does not qualify as the recited codec specification. *See, e.g.*, Ex. 1005, 1:19–25 (equating "coding algorithms" and "codec").

Finally, Patent Owner asserts that Petitioner's failure to mention filtering of the codec specification equates to an admission that Kalmanek does not disclose codec specification as a type of service the signaling message is intended to invoke. Prelim. Resp. 19.

This argument does not address Petitioner's contentions regarding filtering of caller ID information, and, thus, fails to apprise us of error in Petitioner's contentions.

c. Conclusion

Accordingly, at this stage of the proceeding, we determine that Petitioner has established a reasonable likelihood of prevailing on its assertion that Kalmanek renders obvious claim 1.

Claims 2–4 depend from claim 1. Ex. 1001, 20:15–27. The Petition maps these challenged dependent claims to Kalmanek. Pet. 41–43. Patent Owner does not challenge separately the arguments and evidence presented for the dependent claims. Prelim. Resp. 23–24. Based on our review of the current record before us, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging claims 2–4.

3. Claims 6–10 and 12–17

Independent claim 6 recites a method for controlling a plurality of services in packet-based networks that is substantially similar to claim 1 (*see* Ex. 1001, 20:34–53), and Petitioner relies on Kalmanek in arguing the unpatentability of claim 6 in substantially the same manner as with claim 1 (*see* Pet. 43–46). Patent Owner presents the same arguments for claim 6 as with claim 1. *See* Prelim. Resp. 10, 12–13, 17–18, and 20–21.

For the reasons set forth in section II.C.2 above, at this stage of the proceeding, we determine that Petitioner has established a reasonable likelihood of prevailing on its assertion that Kalmanek renders obvious claim 6.

Claims 7–10 and 12–17 depend from claim 1. Ex. 1001, 20:54–21:7, 21:12–34. The Petition maps these challenged dependent claims to Kalmanek. Pet. 46–51. Patent Owner does not challenge separately the arguments and evidence presented for the dependent claims. Prelim. Resp.

23–24. Based on our review of the current record before us, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging claims 7–10 and 12–17.

4. Claims 18–20 and 22

Independent claim 18 recites a method for controlling a plurality of services in packet-based networks that is substantially similar to claim 1, but requires "the IP telephone services comprise at least *two* of caller-ID, call waiting, multi-way calling, multi-line service, and codec specification," and "the network entity filtering the message based on whether the user is authorized to invoke or receive *the IP telephone services*." Ex. 1001, 21:35–54 (emphases added). Thus, claim 18 requires filtering the message based on whether the user is authorized to invoke or receive *two* IP telephone services.

Petitioner relies on Kalmanek in arguing the unpatentability of claim 18 in substantially the same manner as with claim 1. *See* Pet. 51–53. Regarding the filtering step, Petitioner states "*[s]ee* mapping for claim 1[E]." *Id.* at 53. The cited mapping, however, only discusses filtering of "unauthorized caller ID information," but does not discuss the filtering of codec specification services or another IP telephone service. *See id.* at 39–41; *see also id.* at 38–39 (identifying "codec specification and caller ID" as two types of services).

Therefore, Petitioner has not made a showing of how Kalmanek teaches or suggests all of the limitations of claim 18 or its dependent claims 19, 20, and 22.

5. Independent Claim 23

Independent claim 23 recites a system for controlling a plurality of services in packet-based networks comprising: an interface that is in a communications path of signaling messages between a first end device and a second end device, wherein the interface receives messages according to a protocol; a processor; data storage; and program logic stored in the data storage and executable by the processor to perform steps similar to those recited in claim 1. Ex. 1001, 22:7–32.

Petitioner argues that "*Kalmanek* teaches several different devices that are in the communications path of signaling messages between first and second end devices," and argues that network interface units 160, 161 and gate controllers 110, 111 are examples of such devices. Pet. 54 (citing Ex. 1004, 4:57–65, 5:29–44, 21:1–29). Petitioner argues that Kalmanek's gate controllers "implement a set of service-specific control functions to support communication services," and argues that "a POSITA would readily understand the gate controllers to include processors." *Id.* at 55 (citing Ex. 1003 ¶ 69; Ex. 1004, 6:44–46). Petitioner argues that "a POSITA would also readily understand the *Kalmanek* gate controller to include data storage, i.e., memory." *Id.* (citing Ex. 1003 ¶ 69). Petitioner argues that "*Kalmanek* discloses that the gate controller performs a series of steps implemented in program logic." *Id.* at 56 (citing Ex. 1003 ¶ 69). Petitioner relies on Kalmanek to disclose or teach the steps recited in claim 23 in the same manner as set forth in section II.C.2 above regarding claim 1. *Id.*

As noted by Petitioner's declarant, Kalmanek discloses that its "TIUs contain sufficient processing and memory to perform signaling and call control functions." Ex. 1004, 5:45–46; *see also* Ex. 1003 ¶ 69 (citing same).

Petitioner's declarant opines that because Kalmanek's gate controllers also "undertake complex processing operations, . . . a POSITA would understand that these complex operations in the gate controllers could only be accomplished by way of [a] processor, in the same way Kalmanek expressly teaches the TIUs contain a processor to perform signal processing." Ex. 1003 ¶ 69. We note that Kalmanek discloses that its two-phase signal process only requires the gate controllers to be involved during the initial start of the call, which allows "the amount of *memory* need[ed] in the gate controllers [to be] greatly reduced." Ex. 1004, 14:39–46 (emphasis added). Thus, we find that the cited portions of Kalmanek support Petitioner's contentions.

Patent Owner presents the same arguments for claim 23 as with claim 1. *See* Prelim. Resp. 10, 12–13, 17–18, and 20–21.

For the reasons set forth in section II.C.2 above, at this stage of the proceeding, we determine that Petitioner has established a reasonable likelihood of prevailing on its assertion that Kalmanek renders obvious claim 23.

D. Challenge 2 – Kalmanek and Shaffer

1. Overview of Shaffer

Shaffer discloses a telecommunications system that includes a bandwidth allocation server ("BWAS") that monitors system bandwidth usage. Ex. 1005, 5:62–64. The BWAS compares the usage to a predetermined threshold value, and, if bandwidth usage exceeds the threshold, sends a command ordering the terminals connected to the system to adjust their coding hierarchies so that a lower speed codec is employed.

Id. at 5:59–6:15. Network bandwidth can be allocated based on, for example, the quality of service requirements for each call. *Id.* at 5:26–33. The BWAS can downgrade codecs being used in existing calls such that they require less bandwidth. *Id.* at 9:27–54.

2. Claims 5 and 11

Claim 5 depends from claim 1 and requires "the network entity communicating with one or more other network entities responsible for monitoring media data flow associated with the call between the sender device and the intended recipient device to ensure compliance with the authorized services and an authorized amount of bandwidth." Ex. 1001, 20:28–33. Claim 11 depends from claim 6 and requires "monitoring network resource usage to ensure that the user is only utilizing services that the user is authorized to use and is utilizing an authorized amount of bandwidth." *Id.* at 21:8–11.

The Petition maps challenged dependent claims 5 and 11 to Kalmanek and Shaffer. Pet. 57–59. Patent Owner does not challenge separately the arguments and evidence presented for the dependent claims. Prelim. Resp. 23–24. Based on our review of the current record before us, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging claims 5 and 11.

E. Challenge 3 – Kalmanek and Strathmeyer

1. Overview of Strathmeyer

Strathmeyer discloses a packet network telephony call controller that is arranged to interface with a plurality of external call processing

applications programs. Ex. 1006 ¶ 10. The call controller includes a call processing application computer and a call controller computer that perform various call control and processing application functions over a data network, and provide call information and control to a user of the applications computer. *Id.* ¶¶ 10, 12.

Although Strathmeyer describes its invention using systems based on the H.323 standard, Strathmeyer discloses that other protocols, including Session Initiation Protocol ("SIP"), can be used. *Id.* ¶ 13. Strathmeyer further describes these other protocols as being "functionally equivalent" to the H.323 protocol. *Id.*

2. Claim 21

Claim 21 depends from claim 18. Ex. 1001, 22:1–2. Petitioner relies on Kalmanek in a similar manner as with claim 1, and relies on Strathmeyer to teach that session initiation protocol is equivalent to H.323. Pet. 59–61. As explained in section II.C.4 above, Petitioner has not made a showing of how Kalmanek teaches or suggests all of the limitations of claim 18 and, thus, of its dependent claim 21.

3. Claims 24 and 25

Independent claim 24 recites a system comprising: a border element being in a communications path of session initiation protocol (SIP) signaling messages associated with a call between end devices, wherein the border element performs functions similar to those recited in claim 1; and a proxy server that provides user profile information to the border element. Ex. 1001, 22:34–54.

Petitioner relies on Kalmanek in a similar manner as with claim 1, arguing that Kalmanek's gate controllers 110, 111 in conjunction with network edge devices 120, 121 correspond to the recited border element. Pet. 61–63. Petitioner relies on Strathmeyer to teach the use of the SIP protocol. *Id.*at 61.

For the reasons set forth in section II.C.2 above, at this stage of the proceeding, we determine that Petitioner has established a reasonable likelihood of prevailing on its assertion that Kalmanek render obvious claim 24.

Claim 25 depends from claim 24. Ex. 1001, 22:55–57. The Petition maps this challenged dependent claim to Kalmanek. Pet. 64. Patent Owner does not challenge separately the arguments and evidence presented for the dependent claims. Prelim. Resp. 23–24. Based on our review of the current record before us, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging claim 25.

F. Challenge 4 – Kalmanek and Gleichauf

1. Overview of Gleichauf

Gleichauf discloses a session-based services telephony protocol ("SSTP") for use in Internet Protocol ("IP") telephony that allows a user to add services during an IP telephony call session between two clients. Ex. 1007, 1:43–53, 2:12–14, 6:48–8:9. In the event that the client initiating the call has not subscribed to a requested service prior to initiating the call, a system server authenticates the client and adds the requested service to the list of services the client is authorized to use. *Id.* at 4:54–64, 9:1–46. One or

both of the clients are then charged for use of the requested service. *Id.* at 9:47–10:2.

2. Claim 17

a. Petitioner's Contentions

Claim 17 depends from claim 6 and requires:

> wherein if the beneficiary is not authorized to invoke or receive the at least one of the plurality of services, processing the message comprises:
>
> returning an option message to the sender asking the sender if the sender wants to invoke or receive the at least one of the plurality of services.

Ex. 1001, 21:29–34.

Petitioner relies on Kalmanek in a similar manner as with claim 1, and relies on Gleichauf to teach the real time insertion of services during call setup. Pet. 64–67. The Petition maps claim 17 to Kalmanek and Gleichauf. *Id.*

b. Patent Owner's Contentions

Patent Owner argues that the two challenges to claim 17 are redundant and that "the Board need not and should not consider the merits of the redundant challenges based on obviousness." Prelim. Resp. 21–23.

This argument is unpersuasive. Recently, the Supreme Court held that a decision to institute under 35 U.S.C. § 314(b) may not institute review on less than all claims challenged in the petition. *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1355–56 (2018). Also, in accordance with USPTO Guidance, "if the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition." *See Guidance on the Impact of SAS on AIA Trial Proceedings* (April 26, 2018) (available at https://www.uspto.gov/patents-

application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial).

c. Conclusion

Based on our review of the current record before us, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging claim 17.

III. CONCLUSION

For the foregoing reasons, we determine that the information presented establishes a reasonable likelihood that Petitioner would prevail in showing that at least one of claims 1–25 of the ’552 patent is unpatentable. At this preliminary stage, we have not made a final determination with respect to the patentability of the challenged claims or any underlying factual and legal issues.

IV. ORDER

Accordingly, it is:

ORDERED that pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–25 of the ’552 patent is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this decision.

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