

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,
Petitioner,

v.

ZILKR CLOUD TECHNOLOGIES, LLC,
Patent Owner.

IPR2023-00809
Patent 9,883,048 B2

Before KRISTEN L. DROESCH, KEVIN C. TROCK, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

TROCK, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background

Cisco Systems, Inc. (“Petitioner”) filed a Petition, Paper 2 (“Pet.” or “Petition”), to institute an *inter partes* review of claims 13, 14, and 17 (the “challenged claims”) of U.S. Patent No. 9,883,048 B2 (Ex. 1001, “the ’048 patent”). Zilkr Cloud Technologies, LLC (“Patent Owner”) waived the filing of a Preliminary Response. Paper 6.

An *inter partes* review may not be instituted “unless . . . 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). Upon consideration of the Petition and the evidence of record, we determine that Petitioner has not shown a reasonable likelihood that it would prevail in showing the unpatentability of at least one of the challenged claims. Accordingly, we do not institute an *inter partes* review.

B. Real Party in Interest

Petitioner identifies itself as the real party in interest. Pet. 80. Patent Owner identifies itself as the real party in interest. Paper 3, 1.

C. Related Proceedings

According to the parties, the ’048 patent is the subject of the following actions:

Zilkr Cloud Technologies, LLC v. Cisco Systems, Inc., No. 2:22-cv-00166 (E.D. Tex.) (filed May 20, 2022); and

Zilkr Cloud Technologies, LLC v. RingCentral, Inc., No. 3:21-cv-02807 (N.D. Tex.) (filed Nov. 11, 2021).

Pet. 80; Paper 3, 1.

The parties acknowledge that the '048 patent is related to other patents challenged in IPR petitions, as follows:

Case No.	U.S. Patent No.
IPR2023-00553	9,210,254
IPR2023-00663	9,998,607

See Pet. 80; Paper 3, 1.

D. The '048 Patent (Ex. 1001)

The '048 patent relates to “provisioning a plurality of applications from different application developer systems to a network provider system through a unified services platform.” Ex. 1001, 1:45–48. The '048 patent observes that even with the existence of new communications technologies and services, “telecommunications service providers still have large numbers of customers with traditional analog telephone service.” *Id.* at 1:24–26. But, “increasing numbers of customers wish to add services and applications to their existing telephone service.” *Id.* at 1:32–33. Difficulties arise, however, when third party services are to be integrated into multiple telecommunication provider systems, namely, “[t]he resulting development and maintenance responsibilities” due to the fact that “most telecommunication provider systems do not use the same APIs or communication protocols.” *Id.* at 8:44–45. Accordingly, “new techniques for integrating advanced services and applications with legacy telephone service are desired.” *Id.* at 1:39–41. The '048 patent addresses this need by disclosing a unified platform that allows a service to “become available everywhere [and] thus greatly increases the value to the service, the network provider, and/or the user.” *Id.* at 7:42–44.

Figure 3 of the '048 patent is reproduced below.

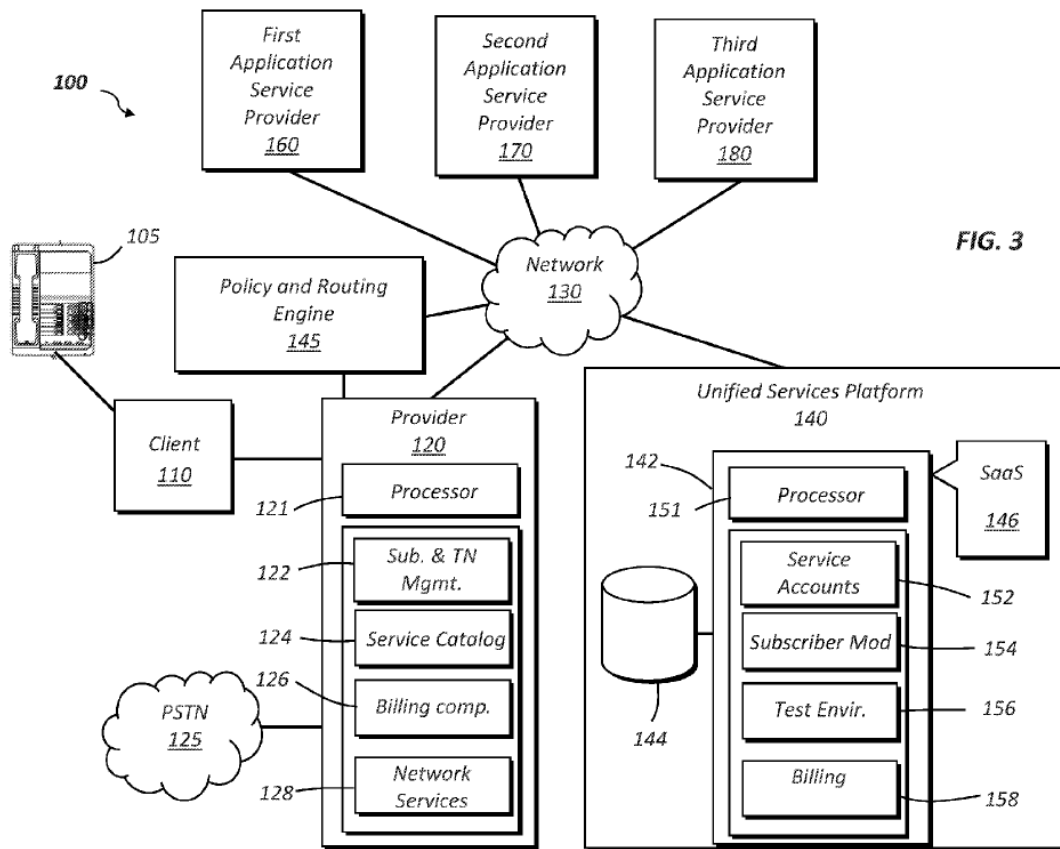


Figure 3, above, depicts “an embodiment of a system for providing a unified services platform.” *Id.* at 5:66–67. System 100 in Figure 3 includes device 110 associated with a telephone number, provider 120, unified services platform 140, policy and routing engine 145, and multiple application service providers 160, 170, 180, where platform 140, engine 145, and service providers 160, 170, 180 are all connected via network 130. *Id.* at 10:23–40. Provider 120 may be a telecommunications services provider, but could also be “a mobile carrier, a cable services provider, a network provider,” etc. *Id.* at 10:60–61. Application service providers 160, 170, 180 provide services to a subscriber through device 110, but each may be part of a different ecosystem and use a different API. *Id.* at 12:64–13:8. “[U]nified services platform 140 may unify all of the available services and

applications in a single platform and associate the services and applications with a single ID to identify the device 110.” *Id.* at 13:39–42. “[P]rovider 120 may use a single API for generating requests that are sent to unified services platform 140,” which “may aggregate a plurality of APIs for a plurality of providers.” *Id.* at 13:46–49. In particular, for providing different services to device 110 through provider 120, “unified services platform 140 may activate services using the appropriate API for the provider 120 and each application service provider 160, 170, 180 to deliver the requested service.” *Id.* at 13:56–59. As part of provisioning services to unified services platform 140, they “can be tested for use with the unified services platform, and once verified, published for selection by a provider 120.” *Id.* at 15:41–43.

Further, the ’048 patent explains that policy and routing engine 145, which may reside in unified services platform 140 or a server of provider 120, “may execute the policies selected for the services provided to a subscriber.” *Id.* at 15:17–18. For example, policy and routing engine 145 “may respond to an event or trigger, apply a policy and select the appropriate information to route the appropriate service.” *Id.* at 15:18–21.

E. Challenged Claims

Petitioner challenges claims 13, 14, and 17 of the ’048 patent. Pet. 6. Claim 13, reproduced below, is an independent claim and is generally illustrative.

13. [13.0] A method of developing and testing a new application service through a unified services platform, the method comprising:

[13.1] establishing a plurality of service accounts for a corresponding plurality of application service provider systems;

- [13.2] receiving a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different,
- [13.3] integrating each of the plurality of API interfaces with a unified services platform system API interface;
- [13.4] receiving a definition of a service for each of the plurality of application service provider systems;
- [13.5] receiving one or more definitions of actions for each service for each of the plurality of application service provider systems, wherein the actions comprise responses to triggering events occurring for a telephone number;
- [13.6] testing each triggering event and corresponding action for each service in a test environment to generate a response;
- [13.7] providing access to each service within a working environment after performing the testing; and
- [13.8] publishing, after testing, the definition of the service, the definition of the plan, and the one or more definitions of actions for each application service provider in a provisioning catalog.

Ex. 1001, 60:7–34 (numbering designated by Petitioner; *see* Pet. 26–62).

F. Evidence

Petitioner relies upon the following evidence:

- (1) U.S. Patent Application Publication No. US 2012/0016932 A1, published January 19, 2012 (“de Castro”) (Ex. 1005);
- (2) U.S. Patent No. 8,126,722 B2, issued February 28, 2012 (“Robb”) (Ex. 1006); and
- (3) Declaration of Dr. Henry Houh (Ex. 1003).

G. Asserted Ground of Unpatentability

Claims Challenged	35 U.S.C. §	References
13, 14, 17	103	De Castro/Robb

II. ANALYSIS

A. Level of Ordinary Skill

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991).

Petitioner describes a person of ordinary skill in the art as a person having “a bachelor’s degree in electrical engineering, computer science, computer engineering, or an equivalent, and two years of relevant experience in telecommunications and networking.” Pet. 11 (citing Ex. 1003 ¶¶ 32–34). Further, Petitioner asserts that “[l]ack of professional experience can be remedied by additional education, and vice versa.” *Id.*

Petitioner’s description of a person of ordinary skill appears to be consistent with the subject matter of the ’048 patent. This is supported by the testimony of Petitioner’s declarant, Dr. Houh. *See* Ex. 1003 ¶¶ 32–34. We adopt Petitioner’s assessment of a person of ordinary skill for purposes of this Decision. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995).

B. Claim Construction

For petitions filed on or after November 13, 2018, a claim shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100 (2019). Thus, we apply the claim construction standard as set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

Under *Phillips*, claim terms are generally given their ordinary and customary meaning as would be understood by one with ordinary skill in the art in the context of the specification, the prosecution history, other claims, and even extrinsic evidence including expert and inventor testimony, dictionaries, and learned treatises, although extrinsic evidence is less significant than the intrinsic record. *Phillips*, 415 F.3d at 1312–17. Usually, the specification is dispositive, and it is the single best guide to the meaning of a disputed term. *Id.* at 1315.

Only terms that are in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Matal*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (in the context of an *inter partes* review, applying *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Here, Petitioner explains that, “for the purposes of this proceeding and the grounds presented herein, no claim term requires express construction.” Pet. 11 (citing *Nidec*, 868 F.3d at 1017). Nevertheless, Petitioner identifies exemplary uses of the claim terms “definition of a service” and “definition of a plan” in the '048 patent. *See id.* at 11–12. In addition, Petitioner asserts

that the applicant for the '048 patent argued for a particular construction of the claim term “test environment” during prosecution, but that even if we construe this term consistent with applicant’s proposed construction, Petitioner should prevail on the asserted obviousness ground. *See id.* at 12–13.

For purposes of this Decision and based on this preliminary record, we determine that no claim term requires express construction at this stage of the proceeding.

C. Patentability Challenge

As indicated above, Petitioner challenges claims 13, 14, and 17 under 35 U.S.C. § 103 based on the combined teachings of de Castro and Robb. Pet. 13.

1. Principles of Law

A claim is unpatentable under 35 U.S.C. § 103 if “the differences between the subject matter sought to be patented 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 skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

The Supreme Court has made clear that we apply “an expansive and flexible approach” to the question of obviousness. *KSR*, 550 U.S. at 415.

Whether a patent claiming the combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. Reaching this conclusion, however, requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention. *Id.*

2. Relevant Prior Art

a. *de Castro* (Ex. 1005)

De Castro is a U.S. Patent Application Publication that published on January 19, 2012, more than one year before the earliest priority date of the '048 patent. Ex. 1005, code (43); Ex. 1001, codes (60), (63). Petitioner asserts that de Castro is prior art under AIA 35 U.S.C. § 102(a)(1). Pet. 14.

De Castro relates to “a system and method for providing a telephony-enabled service via a message-based API interface.” Ex. 1005 ¶ 2. De Castro reviews a number of technologies for implementing telephony and other communication applications (*see id.* ¶¶ 6–32), but notes that “[i]t is desirable to have a systematic and uniform way of working with call control and media control events, without having to deal with their low level details in the application so as to have succinct and efficient codes” (*id.* ¶ 33). Accordingly, de Castro describes “a communication application server [] provided with a unified framework for call control and media control.” *Id.* ¶ 38. Specifically, “an API server on the communication application server

defining a messaging API protocol enables an application script to pass commands remotely to the communication application server to operate it.”

Id. “[T]his way, application scripting is decoupled from the operation of the communication application server, which only needs to focus on providing basic communication services.” *Id.* ¶ 41. Customers can code application scripts in preferred programming languages, and third-party scripting engines can perform the scripting, with resulting execution codes expressed using the finite set of commands for operating the communication application server. *Id.*

Figure 14 of de Castro is reproduced below.

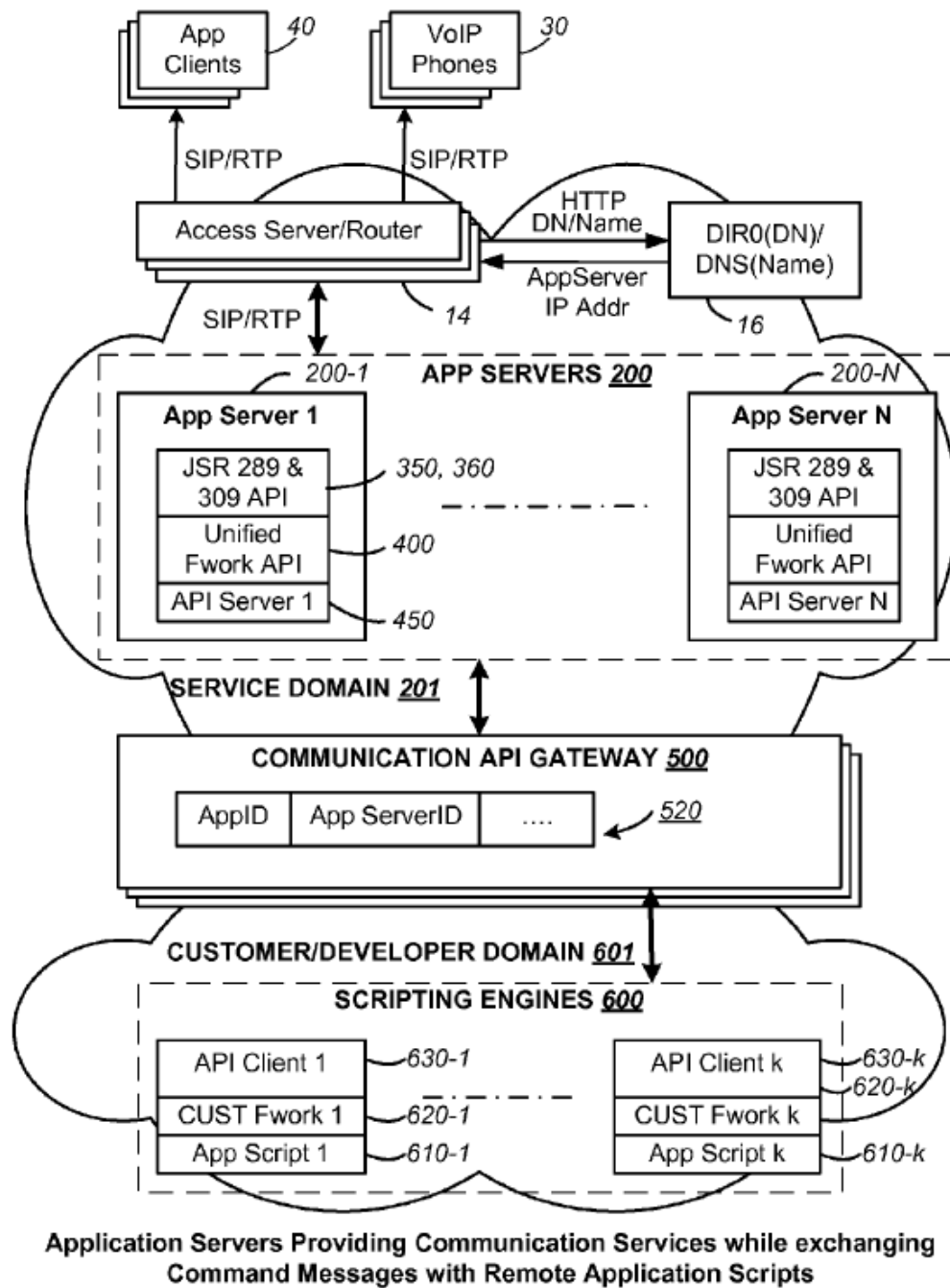


FIG. 14

Figure 14, above, depicts a network architecture according to de Castro. *Id.* ¶ 114. In general, the network in Figure 14 includes service domain 201 and customer/developer domain 601. *Id.* “In the service domain 201 is a plurality of communication application servers 200” that “provide telephony

and communication services to applications and allows application clients 40 such as, for example, VoIP phones[,] to access the applications hosted in the communication application servers.” *Id.* ¶ 115. “Each communication application server 200 comprises a virtual machine for executing codes with access to the unified communication API of the unified communication framework 400” *Id.* ¶ 117.

“[T]he customer/developer domain 601 is a plurality of scripting engines 600 for the customers to host and process the customers’ application scripts 610.” *Id.* ¶ 119. A communication API gateway 500 may be deployed as a messaging broker between application scripts in the customer/developer domain 601 and communication application servers 200 in the service domain 201. *Id.* ¶ 120.

b. Robb (Ex. 1006)

Robb is a U.S. Patent that issued on February 28, 2012, more than one year before the earliest priority date of the ’048 patent. Ex. 1006, code (45); Ex. 1001, codes (60), (63). Petitioner asserts that Robb is prior art under AIA 35 U.S.C. § 102(a)(1). Pet. 14.

Robb relates to “an Application Infrastructure Platform (AIP) providing comprehensive services including integrated Application Service Provider (ASP), Independent Service Vendor (ISV), and the like services, software and hardware.” Ex. 1006, 1:16–20. In particular, an “AIP may aggregate its own applications and services with those of both external ASPs/ISVs and its own ASPs into an AIP’s Product Catalog” for subscription by ASPs. *Id.* at 3:17–21. ASPs may pass AIP applications and services through to end customers, where the AIP “relieves the ASPs and other service providers (SPs) of the need to be experts in building an

infrastructure and allows the ASPs to focus their efforts on developing their market niche solutions.” *Id.* at 3:21–28.

Figure 6A of Robb is reproduced below.

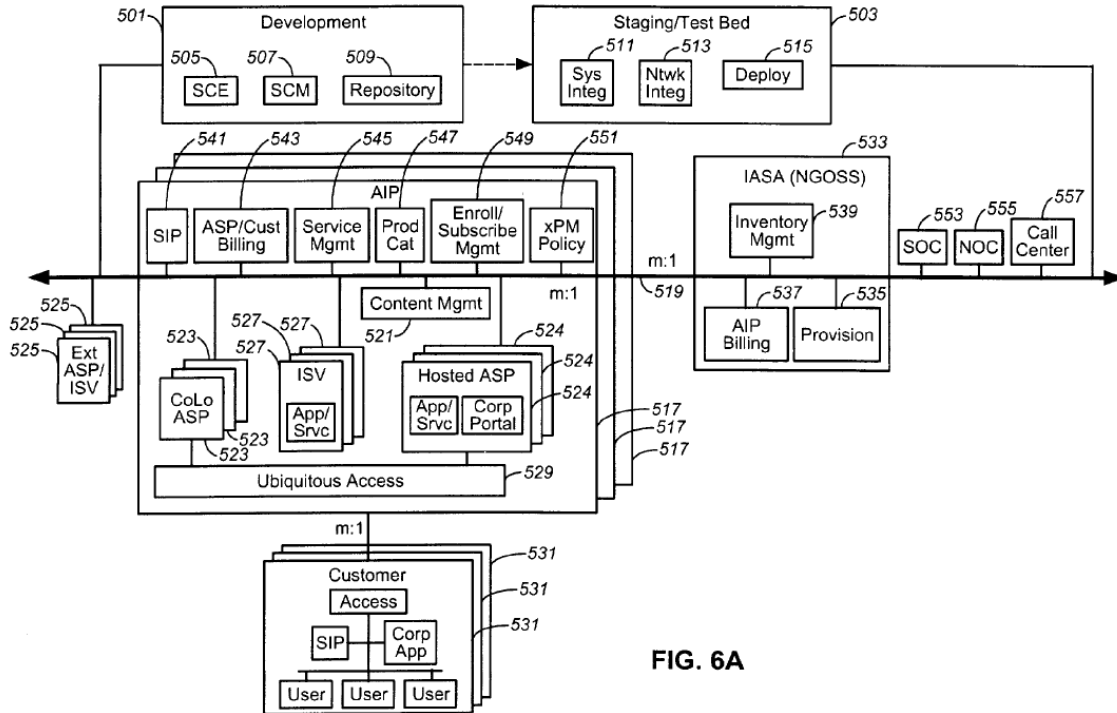


FIG. 6A

Figure 6, above, shows a block diagram “of a Distributed AIP Deployment Configuration.” *Id.* at 4:66–67. In the configuration of Figure 6, “AIP 517 may support multiple ASP/ISVs per site,” and “also provides localized ASP customer care needed for web based enrollment of new customers, setting up of service packages, subscription support,” etc. *Id.* at 17:55–58. This configuration includes development system (or environment) 501, as well as “Staging and Test Bed system environment 503 [which] may be used to integrate new applications onto systems, stage them for scaled system network test, and finally prepare them for automatic software deployment to AIP sites.” *Id.* at 16:59–17:9.

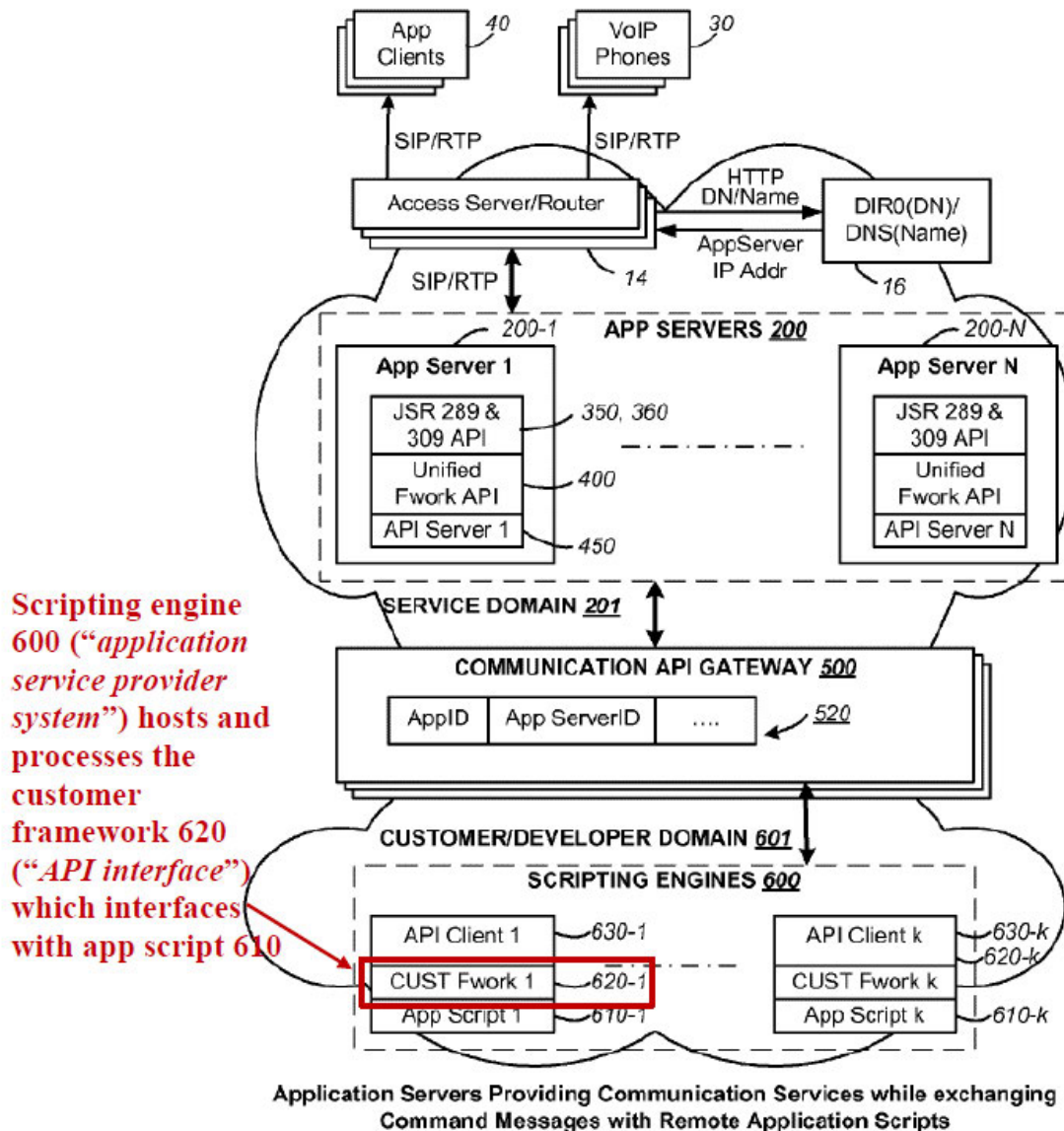
D. Obviousness Based on de Castro and Robb

Petitioner asserts that claims 13, 14, and 17 of the '048 patent are unpatentable under 35 U.S.C. § 103 as obvious over de Castro and Robb. Pet. 15–74. Claim 13 is independent, and claims 14 and 17 depend from claim 13. We determine that Petitioner has not shown that the proposed combination of de Castro and Robb teaches or suggests claim limitation 13.2.

Limitation 13.2 recites “*receiving a plurality of API interfaces from the plurality of application service provider systems, wherein at least two of the API interfaces are different.*” Ex. 1001, 60:13–15. Limitation 13.2 thus requires that the “*API interfaces*” must be received from the “*application service provider systems.*”

Petitioner maps de Castro’s scripting engines to the recited “*application service provider systems*”). See Pet. 32 (“de Castro teaches a plurality of ‘scripting engines’ (*plurality of application service provider systems*)”). Petitioner also maps de Castro’s “custom frameworks” to the recited “*plurality of API interfaces.*” See *id.* at 34 (“Each of these custom ‘frameworks’ is an ‘API’ (*a plurality of API interfaces*)”). Based upon this mapping, for Petitioner to show that the asserted prior art meets limitation 13.2, Petitioner would need to show that de Castro’s “custom frameworks” (mapped to the recited “*plurality of API interfaces*”) are received from de Castro’s “scripting engines” (mapped to the recited “*application service provider systems*”). However, Petitioner does not point to any teaching in de Castro where the customer frameworks are received from the scripting engines.

Instead, Petitioner directs our attention to how the scripting engines obtained the customer frameworks that are contained therein. Petitioner directs us to de Castro's Figure 14, shown below.



Ex.1005, Fig.14 (annotated); Ex.1003, ¶99

De Castro's Figure 14, annotated by Petitioner shown above, illustrates a network architecture comprising service domain 201 and customer/developer domain 601 that communicate through API gateway 500. Ex. 1005 ¶ 114. Petitioner explains that Figure 14 "illustrates scripting

engine 600-1 hosting and processing the customer-specific framework 620-1 API, which interfaces with app script 610-1.” Pet. 34 (citing Ex. 1005, Fig. 14, ¶ 113). Petitioner asserts that “de Castro describes the application scripts and customer framework APIs as being ‘hosted’ by the scripting engines.” Pet. 35 (citing Ex. 1005, ¶¶ 39, 110, 115, 119).

Petitioner asserts that

[b]ecause the customer framework APIs are illustrated as being located within and hosted by the scripting engines, a POSITA would have understood that the customer framework APIs were “*receiv[ed]*” by the scripting engines. . . . That is, scripting engines have customer frameworks implementing customer-specific APIs; and the scripting engines, at some point, must have “*receiv[ed]*” the customer frameworks.

Pet. 36 (citing Ex. 1003 ¶¶ 100–101). Thus, the Petition focuses on the act of the application service provider systems (scripting engines) obtaining the APIs (customer frameworks).

But this is not what limitation 13.2 requires. Limitation 13.2 requires that the recited “*API interfaces*” (mapped by Petitioner to de Castro’s “custom frameworks”) must be received from the recited “*application service provider systems*” (mapped by Petitioner to de Castro’s “scripting engines”). Limitation 13.2 is unconcerned with how the application service provider systems obtained the API interfaces, but instead requires an act of receiving the API interfaces from the application provider systems. Thus, Petitioner’s assertions that “the customer framework APIs were ‘*receiv[ed]*’ by the scripting engines,” and “the scripting engines, at some point, must have ‘*receiv[ed]*’ the customer frameworks,” fail to meet the requirements of limitation 13.2.

Dr. Houh’s testimony on this point is similarly unavailing. Dr. Houh testifies that a person of ordinary skill in the art “would have understood that

the customer framework APIs must have been “*receiv[ed]*” by the scripting engines at some prior point in time,” and that “the scripting engines must have “*receiv[ed]*” the customer frameworks in order for the scripting engines to be able to include and host these frameworks and thus customer-specific APIs.” *See* Ex. 1003 ¶ 101. But this testimony does not explain how or where de Castro teaches that its custom frameworks are received from its scripting engines. Thus, Petitioner does not show how its asserted prior art teaches receiving API interfaces from application service provider systems, as recited in limitation 13.2.

For these reasons, Petitioner has not shown sufficiently that the subject matter of independent claim 13 would have been obvious over de Castro and Robb. Claims 14 and 17 depend from claim 13. Petitioner’s arguments and evidence for dependent claims 14 and 17 do not remedy the deficiencies in Petitioner’s evidence for independent claim 13. Accordingly, Petitioner has not established that there is a reasonable likelihood that it would prevail in showing that claims 13, 14, and 17 would have been unpatentable under 35 U.S.C. § 103 as obvious over de Castro and Robb.

III. CONCLUSION

For the foregoing reasons, we determine that the Petition has not demonstrated a reasonable likelihood of prevailing in showing the unpatentability of at least one of the challenged claims of the ’048 patent.

IV. ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314(a), no *inter partes* review is instituted as to any of the challenged claims of the ’048 patent.

PETITIONER:

Theodore Foster
Samuel Drezdzon
Brett Bostrom
Eugene Goryunov
ipr.theo.foster@haynesboone.com
samuel.drezdzon.ipr@haynesboone.com
brett.bostrom.ipr@haynesboone.com
eugene.goryunov.ipr@haynesboone.com

PATENT OWNER:

Bradley Liddle
Michael Pomeroy
Scott Breedlove
Lithaw Lim
bliddle@carterarnett.com
mpomeroy@carterarnett.com
sbreedlove@carterarnett.com
hlim@carterarnett.com