

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner,

v.

FINTIV, INC.,

Patent Owner.

Case No. IPR2023-00399

U.S. Patent No. 9,208,488

PATENT OWNER'S SUR-REPLY

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PATENT OWNER’S EXHIBIT LIST

Ex. 2001	Declaration of Dr. Michael I. Shamos, Ph.D., dated August 24, 2022
Ex. 2002	Resume of Michael Ian Shamos
Ex. 2003	Declaration of Dr. Michael I. Shamos, Ph.D., dated October 13, 2023
Ex. 2004	Deposition Transcript of Dr. Houh, September 22, 2023
Ex. 2005	Claim Construction Order in <i>Fintiv, Inc. v. PayPal Holdings, Inc.</i> , Case No. 6:22-cv-00288, dated January 9, 2023.
Ex. 2006	Memorandum in Support of Claim Construction Order in <i>Fintiv, Inc. v. Paypal Holdings, Inc.</i> , Case No. 6:23-cv-00490, dated July 21, 2023.
Ex. 2007	[not used]
Ex. 2008	Authoritative Dictionary of IEEE Standard Terms, 7 th Edition (2000)
Ex. 2009	<i>Web Services Architecture</i> , W3C Working Group Note (11 February 2004) https://www.w3.org/TR/ws-arch/#whatis
Ex. 2010	Q. Mohmoud, <i>Service Oriented Architecture (SOA) And Web Services: The Road to Enterprise Application Integration (EAI)</i> (2005)
Ex. 2011	R. Studer et al., <i>Semantic Web Services, Concepts, Technologies and Applications</i> (2007)
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Ex. 2015	C. Petrie et al., <i>Semantic Web And Beyond: Computing For Human Experience, Semantic Web Services Challenge, Results From The First Year</i> (2009)
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Ex. 2018	Wiktionary – definition of “handler” dated June 20, 2010; retrieved from Wayback Machine (web.archive.org/web/20100620012624/http://en.wiktionary.org:80/wiki/handler)
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Ex. 2022	GSM 11.11 - Version 5.3.0 - Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface; (GSM 11.11) (etsi.org)(July 1996)
Ex. 2023	Techopedia, “Home Location Register” definition (last updated November 17, 2011) (https://www.techopedia.com/definition/7580/home-location-register-hlr)
Ex. 2024	Techopedia, “Visitor Location Register” definition (last updated September 12, 2011) (https://www.techopedia.com/definition/9951/visitor-location-register-vlr)
Ex. 2025	The GSM Standard, An Overview Of Its Security, SANS Institute 2000-2002 (https://www.giac.org/paper/gsec/1499/gsm-standard-an-overview-security/102787) (giac.org)
Ex. 2026	Deposition Transcript of Dr. Houh, September 22, 2023 in co-pending IPR2023-00398.
Ex. 2027	Deposition Transcript of Dr. Houh, February 2, 2024 in co-pending IPR2023-00398.

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<i>Amgen Inc. v. Hoechst Marion Roussel</i> , 314 F.3d 1313 (Fed. Cir. 2003)	2, 10
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I. INTRODUCTION

Petitioner has failed to demonstrate that claims 1-22 (the “Challenged Claims”) of U.S. Patent No. 9,208,488 (“the ’488 Patent”) are unpatentable.

II. INTEGRATION TIER INCLUDING WEB SERVICES COMMUNICATION MECHANISMS

Claim Language	Patent Owner’s Proposed Construction	Petitioner’s Proposed Construction
an “integration tier ... <u>including</u> web services communication mechanisms for interfacing with ...”	an integration tier in which web services communication mechanisms <u>are included in part of the integration tier</u> (POR, at 10-11)	an integration tier where the “web services communication mechanisms” may be <u>external</u> to the integration tier (Reply, at 2-3).

In this context, the meaning of “including” is clear: the web services communication mechanisms must be included in part of the integration tier. When a claim recites an object “including” named elements, the named elements must be contained in (or part of) the object. As the Federal Circuit explained:

Amgen’s argument is based upon a misconstruction of the term “including” that evinces a misunderstanding of the plain meaning of that term, as well as the term “comprise,” which appears in the ’080 patent claims. “Comprising is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.” *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997). The word “include” means the same thing. See Hewlett-Packard Co. v. Repeat-O-Type Stencil Mfg. Corp., Inc., 123 F.3d 1445, 1451 (Fed. Cir. 1997) (“The claim term ‘including’ is synonymous with ‘comprising,’ thereby permitting the inclusion of unnamed components.”); see also Webster’s II New Riverside University Dictionary 619 (1984) (“include: 1. To have or take in as a part or member: CONTAIN; 2. To put into a group class, or total.”).

Amgen Inc. v. Hoechst Marion Roussel, 314 F.3d 1313, 1408 (Fed. Cir. 2003)(emphasis added).

Consistent with the claim language, the specification discloses the web services communication mechanisms as being included within the integration tier:

FIG. 1 illustrates an example system architecture for a cloud-based transaction platform. Integration tier **101** is configured to manage mobile wallet sessions and maintain integrity of financial transactions. Integration tier 101 can also include a communication (e.g., Web services) API and/or other communication mechanisms to accept messages from channels 111. Ex. 1001 at 9:45-51 (emphasis added).

This aspect of the disclosure is depicted in Figure 1 of the specification, reproduced below with Patent Owner's annotations:

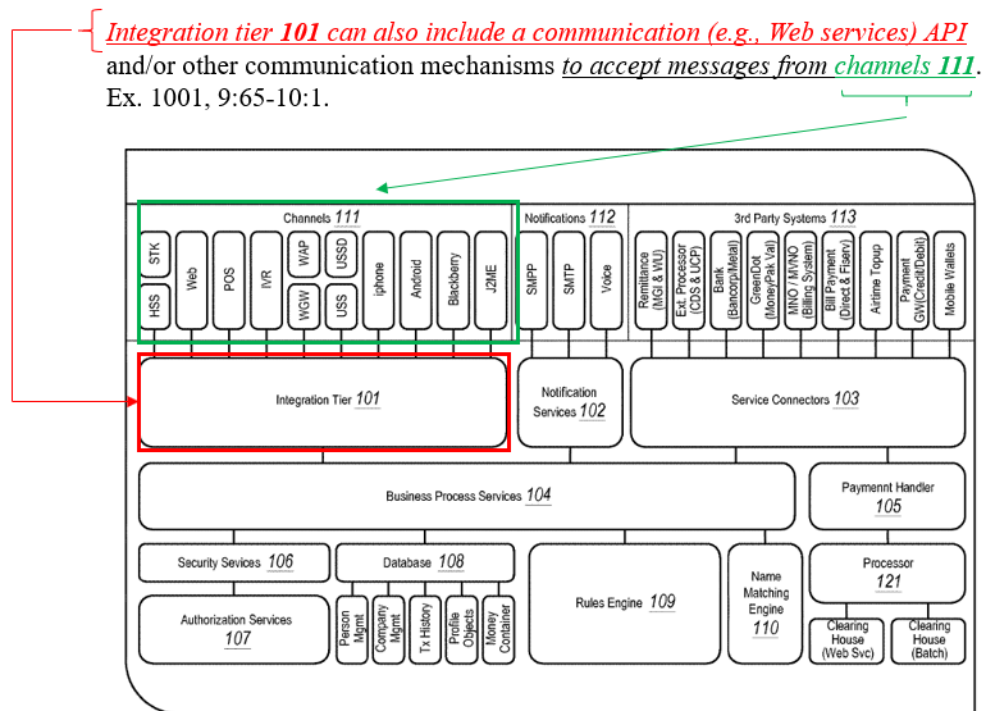


FIG. 1

During the prosecution history of the '488 Patent, the Applicant's narrowing of the claims to recite, *inter alia*, an "integration tier including web services communication mechanisms," led to the allowance of the application. Ex. 1002 at 1761, 1773. Moreover, the inclusion of the "web services communication mechanisms" in the integration tier was also emphasized during the prosecution history of the continuation of the '488 Patent (U.S. Pat. 10,438,196). There, in response to the Examiner's rejection, the Applicant stated:

The integration tier is specially configured to manage mobile wallet sessions with a mobile device. The tier includes certain web services communication mechanisms for interfacing with a mobile wallet application and multiple different device types over different communication channels. (Ex. 1002 in IPR2023-00398, at 1550) (emphasis added).

Petitioner's expert, Dr. Houh, had no recollection of the aspects of the prosecution history limiting the claims to a "specially configured" integration tier that "includes certain web services communication mechanisms" (Ex. 2027 at 52:2-5).

A. Dr. Houh's Proposed Construction Of "Including" Defies Credulity

Petitioner's expert, Dr. Houh, argues that the "plain and ordinary" meaning of "including" in the "integration tier" claim element is such that "the 'web services communication mechanisms' may be external to the integration tier." Ex. 1021 at ¶15 (emphasis added). Dr. Houh's position is groundless.

Dr. Houh does not cite to a dictionary or any other technical authority that “including” means “external to” – because there is none. Instead, Dr. Houh argues - based on the statement in the specification that ‘the integration tier 101’ “can also include a communication (e.g., Web services) API” -- that the claim does not require the web services communication mechanisms to be “included in” or “part of” the integration tier. Ex. 1021 at ¶13. Dr. Houh ignores that the permissive language in the specification providing that the integration “can also” include web services communication mechanisms is not present in the claim language. The claim language does not say that the integration tier “can” include web services communication mechanisms. Rather, the claim language requires that the integration tier does include web services communication mechanisms. See Ex. 2027 at 62:9-23, 84:3-7 (characterizing “can also include” in the specification as “permissive,” and acknowledging that “can” and “can also include” are not used in the claims).

Dr. Houh also relies on the statement in the specification that “the ‘[n]otification services 102 can be configured through a web services API.’ Ex. 1021 at ¶14. This passage is discussing the “notification services” – not the “integration tier” which, as claimed, is the element that must include the web services communication mechanisms. The fact that the specification discloses embodiments where the notification services can be configured with web services, in no way diminishes the requirement in the claims that “integration tier” itself must include

the web services communication mechanisms. To the extent Dr. Houh is arguing that the claims cover an embodiment where the integration tier does not include web services communication mechanisms, but web services communication mechanisms are instead included within the notification services external to the integration tier, his position does violence to the claim language.

Moreover, to the extent Dr. Houh premised his construction on the notion that the Challenged Claims must be interpreted to cover every embodiment disclosed in the specification, his premise was faulty. As Dr. Houh acknowledged, the specification discloses multiple embodiments, not all of which are included within the scope of the Challenged Claims. (Ex. 2027 at 42:2-6). This is especially apparent in this case, because the Examiner issued a restriction requirement¹ in the '488 application, and when the Applicant narrowed the claims in the '488 application to recite, *inter alia*, an “integration tier including web services communication mechanisms,” the Applicant made clear in Remarks that the claims were being limited to certain embodiments. Ex. 2027 at 33:10-34:4, 35:3-5, 36:17-38:7; Ex. 1002 at 1761. Accordingly, it would be an error to interpret the claims of the '196 Patent in a manner that required the claims to cover every embodiment from the specification. *See, August Tech. Corp. v. Camtek, Ltd.*, 655 F. 3d 1278, 1285 (Fed. Cir. 2011).

¹ Ex. 2027 at 22:1-23:20; Ex. 1002 at 1214-1216.

B. Dr. Houh Refused To Acknowledge During His Deposition That All Of The Claim Limitations Set Forth In The “Integration Tier” Element Need To Be Met By The Prior Art In Order To Establish Unpatentability

Dr. Houh’s unusual interpretation of “including” (i.e., that a claim that recites an object “including” named elements covers one that does not actually include the named elements) appears premised on his view that, unless the claim language explicitly specifies that a limitation “must” be present (by using the word “must” in the claim), the limitation is optional. *See*, Supplemental Houh Declaration, Ex. 1021 at ¶12 (premising opinion on lack of the use of “must” in the claim language). Dr. Houh’s view seems to be that a claim limitation is permissive (optional) even where, as here, the claim lacks permissive language (i.e., “can,” “can also include”), unless the claim goes on to say that the limitation “must” be present. Dr. Houh’s fixation on the fact that the Challenged Claims do not use the word “must” was evident during his deposition:

Q. I’d like to focus on the language that you quoted in Paragraph 11 of your declaration. Does that language include the phrase, quote, “can also include,” close quote, anywhere?

A. The claim language doesn’t use that phrase. ...

Q. The phrase can also include -- strike that. The phrase, quote, “can also include,” close quote, that you cite in the specification is part of the description of the disclosed embodiments, is it not?

A. “Can also include” is in the specification. ...

Q. Does the phrase, quote, “can also include,” closed quote, appear in the claim?

A. Those three words aren’t used – together as a phrase are not in the claim.

Q. Is the word “can” by itself used anywhere in the claim?

A. So I don't see the word "can," and, furthermore, I don't see the word "must," which Dr. Shamos says in his -- his declaration; that the mechanisms must interface with mobile wallet application.

So my point here is that it's Dr. Shamus that's importing language not even in the specification. I don't -- I don't think that discussion -- it doesn't say must. I don't know that the word must -- well, I don't know that the word "must" is used in the specification at all. Yet, that's the limitation that Dr. Shamos is importing into his understanding of the plain and ordinary meaning. ...

And now Dr. Shamus has somehow turned that into a -- a must, and -- and that's not -- it's -- the limitation, it's Dr. Shamus importing the limitation. That isn't even described in the spec as a must. (Ex. 2027 at 61:7-63:21 (emphasis added)).

Dr. Houh refused to acknowledge the basic premise that even if the claim fails to explicitly use "must," all of the elements of Claim 1 – including all the limitations of the "integration tier" – still need to be met by the prior art (i.e., no terms can be considered optional or permissive) for the claim to be invalid. Despite having ten opportunities to do so, he refused to provide a straight answer to any of the following questions, asking whether he viewed any elements of Claim 1 as optional:

Q. Now, in order for Claim 1 to be un-patentable over the prior art, all of the elements recited in the claim must be represented or suggested by the prior art; isn't that correct? (Ex. 2027 at 65:17-20)

* * *

Q. Is it your opinion that any of the elements in Claim 1 are optional? (*Id.*, 67:3-4)

* * *

Q. Doesn't the word comprising mean that all of the elements of the claim are essential? (*Id.*, 68:16-17)

* * *

Q. Looking at Claim 1 of the '196 Patent, the integration tier recitation of that claim element begins on line 64 of Column 23 and continues until line 3 of Column 24. Do you see that?

A. Yes.

Q. Is it your opinion that that integration tier, as it's described there, is optional? (*Id.*, 70:7-13)

* * *

Q. Dr. Houh, the integration tier that I'm referring to is not a hypothetical question; correct? That language is before us.

A. Yeah.

Q. And my question -- my question is: Is the integration tier, as I've identified it in Claim 1, optional? (*Id.*, 72:9-15)

* * *

Q. Dr. Houh, are you unable to answer yes or no the question of whether or not the integration tier that I've identified is optional? (*Id.*, 72:24-73:2)

* * *

Q. Dr. Houh, let me be as precise as I can. The claimed integration tier is described in Column 23, line 64, to Column 24, line 3, and when I speak about the claimed integration tier, I am referring to that language as a whole, from line -- from Column 23, line 64 to Column 24, line 3. With that definition of the integration tier, is it your opinion that the claimed integration tier is optional? (*Id.*, 74:15-24)

* * *

Q. Dr. Houh, let's focus again on the claim language that begins on Column 23, line 64, and goes to Column 24, line 3. Is any of that claim language optional? (*Id.*, 76:19-22)

* * *

Q. Does every single limitation described between line 23 -- I'm sorry, strike that. Let me start again. Does every limitation of the integration tier that's described starting at Column 23, line 64 and continuing to Column 24, line 3 need to be present or are some of those limitations optional, in your opinion? (*Id.*, 77:5-9)

* * *

Q. In the context of your supplemental declaration, are any of the limitations of the integration tier that are described starting at Column 23, line 64 and going to Column 24, line 3 optional? (*Id.*, 78:9-13)

Dr. Houh's failure to provide a responsive answer to any of these questions, combined with his unusual interpretation of "including" (to mean optional), shows that he fails to appreciate that all the limitations of the Challenged Claims are essential.

C. Dr. Houh's Understanding Of "Including" Does Not Comport With The Widely Accepted Meaning Of That Term As It Is Commonly Understood

As explained in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1327 (Fed. Cir. 2005), "[i]n some cases ... claim construction ... involves little more than the application of the widely accepted meaning of commonly understood words." When asked for his understanding of the widely accepted meaning of "including" as commonly understood, Dr. Houh demonstrated that he had no such understanding:

Q. Dr. Houh, ... What is the widely accepted meaning of, quote, "including," closed quote, as it is commonly understood?

A. I think some of the meanings that I've heard are just like that example, two sides that include an angle, which can include -- which also permits that -- that -- that usage is that it's -- the angle is not part of the side, but it bounds -- it bounds or interfaces with the side. And I think that's -- that phrase I've heard used before, you know, and -- and there may be other instances of -- of that use of the word that I've heard that people would understand.

You don't -- you don't -- you don't not understand me when I say -- talk about, in math, two sides that include an angle what I'm talking about. (Ex. 2027 at 97:24-98:15.)

Given that he lacks a basic of understanding of the widely accepted meaning of “including” as commonly understood, Dr. Houh is not qualified to interpret that term here. *See, e.g., Amgen Inc.*, 314 F.3d 1313, 1408 (“The claim term ‘including’ is synonymous with ‘comprising,’ thereby permitting the inclusion of unnamed components.”); see also Webster’s II New Riverside University Dictionary 619 (1984) (“*include*: 1. *To have or take in as a part or member*: *CONTAIN*; 2. To put into a group class, or total.”)

III. INTEGRATION TIER ... “INCLUDING WEB SERVICES COMMUNICATION MECHANISMS FOR INTERFACING WITH ... A PLURALITY OF *DIFFERENT COMMUNICATION CHANNELS*”

The “integration tier” claim element also specifies that the “web services communication mechanisms” included in the integration tier interface with a “plurality of different communication channels.” As Claim 1 recites:

an *integration tier* configured to manage mobile wallet sessions with a mobile device and *including web services communication mechanisms for interfacing* with a mobile wallet application installed on a hardware SIM card as well as with a plurality of different device types *over a plurality of different communication channels* ...

Despite *explicit* claim language requiring that *interfacing with the web services communication mechanisms* occur *over the plurality of different communication channels*, Dr. Houh takes the remarkable position that “a POSITA would have understood the plain and ordinary meaning of this term to include within its scope communication channels that *may not interface with* the “web service

communication mechanisms.” Ex. 1021 at ¶29 (emphasis added). Again, Dr. Houh has taken an essential limitation of the claim and opined that it is optional.

The “integration tier” claim element (quoted above) also specifies that the “web services communication mechanisms” *included in the integration tier* are what interfaces over the “*plurality of different communication channels*.” By contrast, Dr. Houh argues that the claim does *not* require the plurality of different communication channels to interface with “web service communication mechanisms” *included in the integration tier*; rather, he argues that the claim language would be satisfied where the plurality of different communication channels interface with “web service communication mechanisms” *included in the notification services*. Ex. 1021 at ¶28 (“Moreover, as noted above, the ’488 patent states that its “[n]otification services 102 can be configured through a web services API.” APPL-1001 at 9:62-63. As stated above, a POSITA would have understood the reference to web services API to correspond to the claimed “web services communication mechanisms.””) Again, Dr. Houh’s position cannot be reconciled with the claim language.

Finally, as shown in the annotated diagram from the specification below, it is also clear that the *plurality of different communication channels* connect the integration tier to different device types *outside* of the *integration tier* – and are therefore not subsumed within the *integration tier*:

Integration tier 101 can also include a communication (e.g., Web services) API and/or other communication mechanisms to accept messages from channels 111.
Ex. 1001, 9:65-10:1.

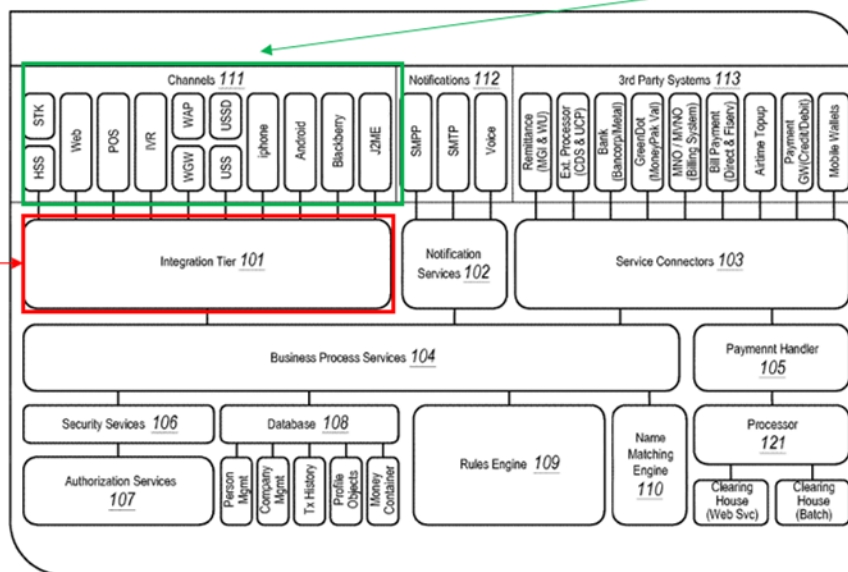


FIG. 1

A POSITA would, therefore, have understood that the “different communication channels” recited in connection with “web services communication mechanisms” cannot be completely subsumed within the integration tier itself. Ex. 2003 at ¶ 22. In one sentence, Dr. Houh states that he disagrees with this point, but provides no analysis explaining why the point is incorrect. Ex. 1021 at ¶24.

IV. PETITIONER HAS FAILED TO SHOW THAT DILL TEACHES AN INTEGRATION TIER, INCLUDING A WEB SERVICES COMMUNICATION MECHANISMS

Petitioner does not dispute that it maps the claimed “web services communication mechanisms” to Dill’s web interface 137, which is outside of Dill’s transfer options module 145 and mobile application 145 (both of which Petitioner maps to the “integration tier”). The Petition’s mappings to Dill are illustrated below:

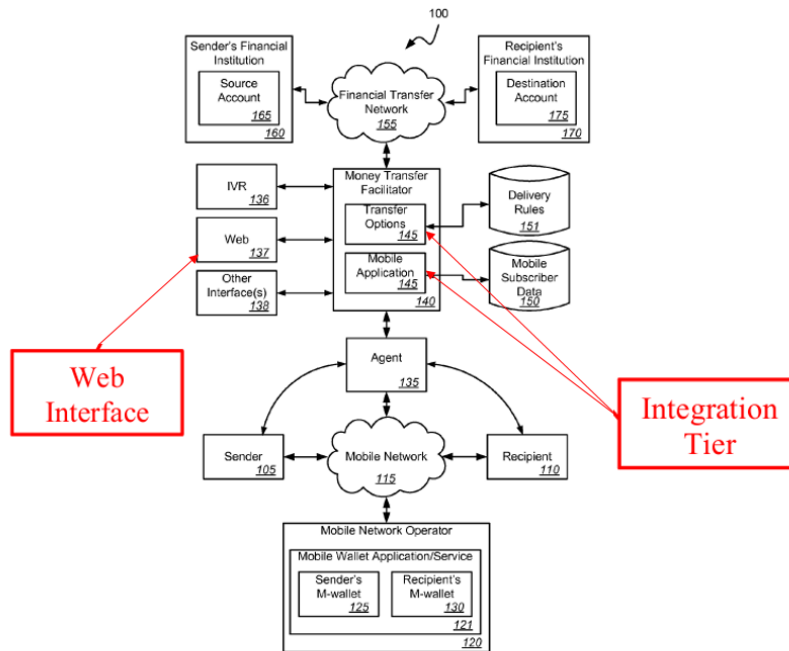


FIG. 9

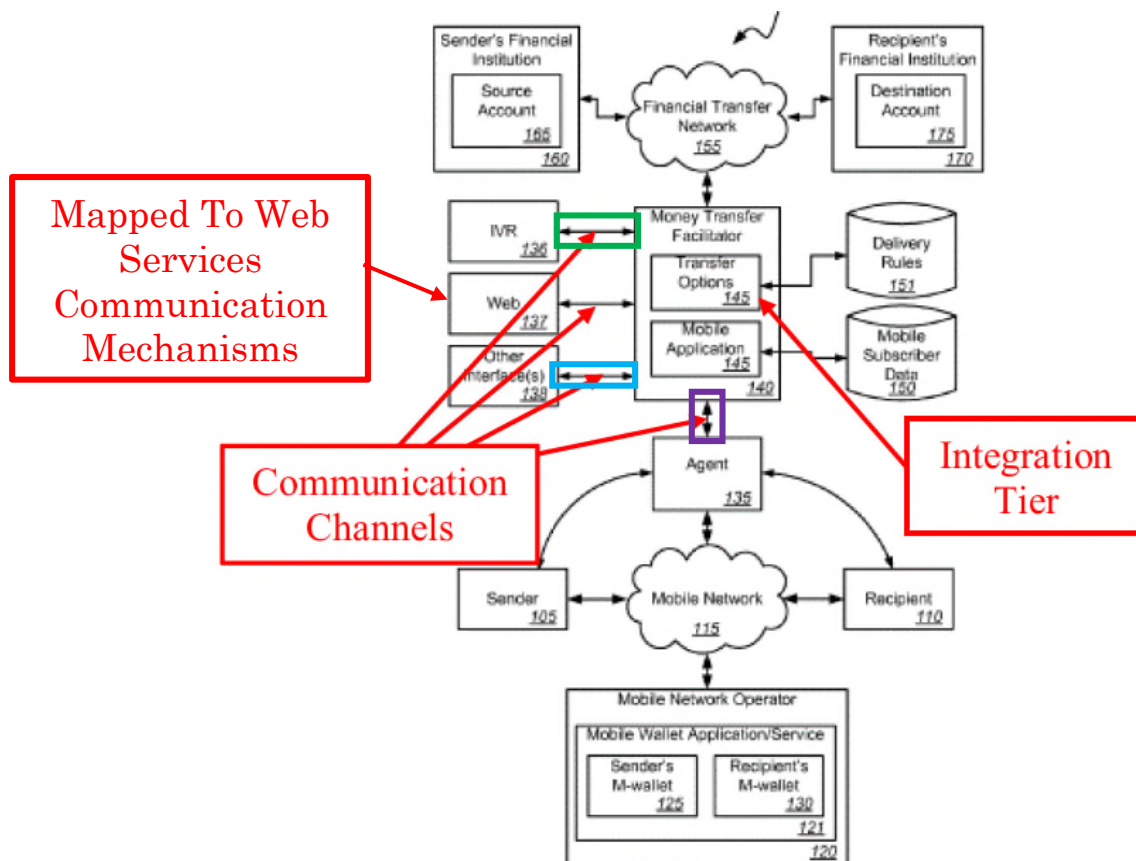
It is undisputed that web interface 137 (mapped to the “web services communication mechanisms”) is external to the transfer options module 145 and mobile application 145 (both mapped to the integration tier). Ex. 2003 at ¶¶49-51. Petitioner’s sole response to this glaring deficiency is Dr. Houh’s groundless position that the claim language “including” covers “not including.” It does not. For this reason alone, Petitioner has failed to demonstrate the unpatentability of all Challenged Claims.

V. DILL FAILS TO TEACH AN INTEGRATION TIER THAT INCLUDES WEB SERVICES MECHANISMS FOR INTERFACING WITH A PLURALITY OF DIFFERENT DEVICE TYPES OVER A PLURALITY OF DIFFERENT CHANNELS

In the Challenged Claims, the “web services communication mechanisms” in the “integration tier” are also required to interface with “a plurality of different

device types over a plurality of different communication channels.” Ex. 2003 at ¶53.

The figure below, from page 26 of the Petition, illustrates how Petitioner maps Dill to the “plurality of different communication channels”:



The Petition and Reply fail to explain: (i) how Dill’s “Web 137” (mapped to the “web services communication mechanisms”) interfaces with Dill’s “IVR 136” (interactive voice response) over the communication channel (green box above) connected to Dill’s IVR 136, or (ii) how Dill’s “Web 137” interfaces with Dill’s “Other Interfaces” 138 over the communication channel (blue box above) connected to Dill’s “Other Interfaces” 138. There is no disclosure in Dill that “Web 137” communicates (directly or indirectly) with Dill’s “IVR 136” and, absent the

disclosure of any such communication, Dill does not teach that “Web 137” interfaces with Dill’s “IVR 136” over the communication channel (green box above) connected to Dill’s IVR 136. Similarly, there is no disclosure in Dill that “Web 137” communicates (directly or indirectly) with Dill’s “Other Interfaces 138” and, absent the disclosure of any such communication, Dill does not teach that “Web 137” interfaces with Dill’s “Other Interfaces 138” over the communication channel (blue box above) connected to Dill’s “Other Interfaces” 138. Since Web 137 has not been shown to interface with IVR 136 or Other Interface 138 over the channels identified in the green and blue boxes, those channels do not qualify as ones of the “plurality of different communication channels” over which the “web services communication mechanisms” must interface with different device types, as recited in the claim.

The Petition and Reply also fail to explain how Dill’s “Web 137” interfaces with Dill’s “Agent 135” over the communication channel (purple box above) between “Dill’s Money Transfer Facilitator 140” and “Agent 135.” The Reply (at 12) relies on Dill at [0010] and [0094] for the proposition that “Web 137” interfaces with Dill’s “Agent 135” over the communication channel (purple box above) between “Dill’s Money Transfer Facilitator 140” and “Agent 135.” Neither of those paragraphs, nor any other disclosure identified in Dill, teaches that “Web 137” communicates (directly or indirectly) with Dill’s “Agent 135” and, absent the disclosure of any such communication, Dill does not teach that “Web 137” interfaces

with Dill's "Agent 135" over the communication channel (purple above) connected to "Agent 135." Since Web 137 has not been shown to interface with "Agent 135" over the channel identified in the purple box, this channel does not qualify as one of the "plurality of different communication channels" over which the "web services communication mechanisms" must interface with different device types, as recited in the claim.

The only communication channel even arguably identified in the Petition over which "web services communication mechanisms" interface with devices is the communication channel between Dill's web interface 137 and Dill's Money Transfer Facilitator 140. However, the Challenged Claims require the "web services communication mechanisms" to interface with different device types over a plurality of different communication channels. For this further reason, the Petition has failed to carry its burden of demonstrating the unpatentability of the Challenged Claims.

VI. DILL DOES NOT TEACH "*WEB SERVICES*" FOR INTERFACING WITH A MOBILE WALLET APPLICATION

As claimed, the "web services communication mechanisms" are required to interface with a mobile wallet application, which in the '488 Patent, must be installed on the mobile device. The Petition maps the "web services communication mechanism" to web interface 137. However, Dill fails to teach (explicitly or inherently) that its web interface 137 interfaces with a mobile wallet application on a wireless device.

As explained in the Patent Owner Response, to the extent Dill is teaching that a user “logs into a website” via “Web 137,” there is no basis for assuming that such a website log-in via “Web” 137 makes use of a mobile wallet application on a mobile phone. POR at 49; Ex. 2003 at ¶62. The Petition did not show or even allege that it is inherent in Dill that Dill’s “Web” 137 connects with a mobile wallet application on a mobile phone, as claimed. For example, to the extent sender 105 used a browser on her mobile phone to log-in via Web 137, that would fail to meet the claim language because a browser is not a mobile wallet application on a mobile phone. Ex. 2003 at ¶62. Significantly, the Reply does not dispute that (i) a browser is not a mobile wallet application, or (ii) Patent Owner’s position that it is not inherent in Dill that Dill’s “Web” 137 connects with a mobile wallet application on a mobile phone, as claimed. Petitioner’s failure to rebut these issues provides a still further reason that Petitioner has failed to carry its burden.

VII. DILL FAILS TO TEACH “WEB SERVICES,” AND HENCE FAILS TO TEACH “WEB SERVICES COMMUNICATION MECHANISMS”

Both sides agree that “web services” is a term of art. Ex. 2003 at ¶45; Ex. 2027 at 106: 7-13. As explained in *Phillips*, 415 F.3d 1303, 1327:

... In many cases that give rise to litigation, however, determining the ordinary and customary meaning of the claim requires examination of terms that have a particular meaning in a field of art. Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to “those sources available to the public that show what a person of skill in the art would have

understood disputed claim language to mean.” Innova, 381 F.3d at 1116. Those sources include “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” (emphasis added).

Since it is not defined in the intrinsic record (Ex. 1021 at 106:16-21), extrinsic evidence is necessary to determine the meaning of “web services.” Patent Owner produced such evidence in these proceedings (e.g., Ex. 2009-2015), and Patent Owner’s Expert supported his opinion about the meaning of “web services” in the art by citing that evidence. Despite acknowledging that it is a term of art that is not defined in the specification, Petitioner produced no evidence of the meaning of “web services.”

Petitioner’s expert, Dr. Houh, provides only a conclusory rebuttal to Patent Owner’s evidence, has no evidence of his own demonstrating the incorrectness of Patent Owner’s evidence. As explained by the Federal Circuit, “[t]o satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Dr. Houh’s conclusory statements, unsupported by evidence, are insufficient to rebut Patent Owner’s showings of (i) the meaning of “web services,” and (ii) the absence of such in Dill.

As Dr Shamos explained, web services are different than webpages. Ex. 2003 at ¶¶45-47. A service² is accessed by software agents through API calls (e.g., REST or SOAP). In contrast, webpages are accessed by users clicking on hyperlinks. This distinction is consistent with the definition of “web service” found in Ex. 2009: Ex 2009 explains that:

A Web service is a software system designed to support interoperable machine-to-machine interaction over a network. It has an interface described in a machine-processable format (specifically WSDL). Other systems interact with the Web service in a manner prescribed by its description using SOAP messages, typically conveyed using HTTP with an XML serialization in conjunction with other Web-related standards.

* * *

A Web service [p.37] is an abstract notion that must be implemented by a concrete agent [p.31] . (See Figure 1-1 [p.9]) The agent is the concrete piece of software or hardware that sends and receives messages [p.19] , while the service is the resource characterized by the abstract set of functionality that is provided. To illustrate this distinction, you might implement a particular Web service using one agent one day (perhaps written in one programming language), and a different agent the next day (perhaps written in a different programming language) with the same functionality. Although the agent may have changed, the Web service remains the same. (Ex. 2009 at 7)

Accordingly, a web service is a service accessible through a programming interface that allows requestor agent software to interact with provider agent software. This

² Ex. 2011 at 2 (“A service is an activity of value that a provider party offers to a requestor party.”)

relationship is graphically illustrated in Fig. 1-1 (reproduced below) as well as Fig. 3-2 of Ex. 2009.

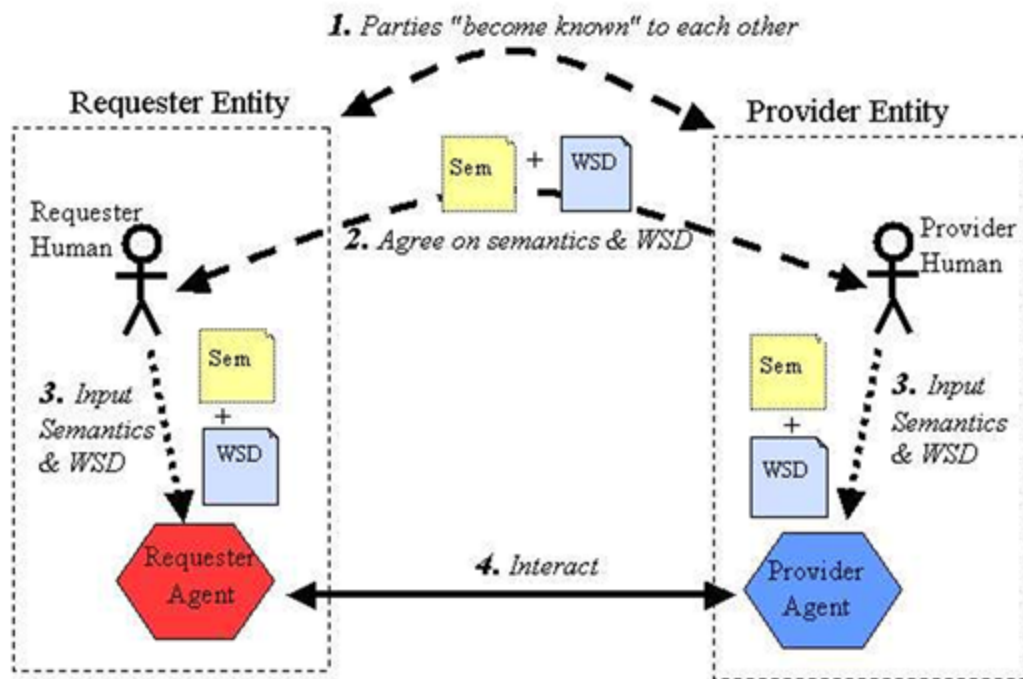


Figure 1-1. The General Process of Engaging a Web Service

As shown above, in order to implement a webservice, the following are required:

- (1) the requester and provider entities become known to each other (or at least one becomes known to the other);
- (2) the requester and provider entities somehow agree [p.67] on the service description and semantics that will govern the interaction between the requester and provider agents;
- (3) the service description and semantics are realized by the requester and provider agents; and
- (4) the requester and provider agents exchange messages, thus performing some tasks on behalf of the requester and provider entities. **(i.e., the exchange of messages with the provider agent represents the concrete manifestation of interacting with the provider entity's Web service.)** . (Ex. 2009 at 8)

Steps 1-3 are performed so that in step 4, the provider agent can exchange messages with the request agent (i.e., provide the web service). Although user input may be required at design time (“Under manual discovery, a requester human uses a discovery service (typically at design time) to locate and select a service description that meets the desired functional and other criteria.” Ex. 2009 at 70) “For computer programs to successfully interact with each other a number of conditions must be established...” Ex. 2009 at 74), at run time, there is no user interaction required for the Requestor agent (red) and the provider agent (blue) to exchange messages. If such user interaction were required, it would defeat the entire purpose of a web service, which is to “implement a particular Web service using one agent one day (perhaps written in one programming language), and a different agent the next day (perhaps written in a different programming language) with the same functionality.” Ex. 2009 at 7.

The Petition maps the claimed “web services communication mechanisms” to Dill’s web interface 137, which Dill simply describes as a website. See POR at 49. While Dr. Houh may dispute the exact contours of the meaning of “web services,” he does not dispute that the claimed “web services communication mechanisms” are different from (and certainly not inherent in) a website as shown in Dill. Thus, by merely pointing to Dill’s website, Petitioner has failed to demonstrate that the claimed “web services communication mechanisms” are taught by Dill.

VIII. DILL AND BYKOV FAIL TO TEACH A MOBILE WALLET INSTALLED ON A HARDWARE SIM CARD

“SIM Card” is a term of art. As Dr. Houh recognized, “[t]he ’488 Patent does not define a ‘hardware SIM card.’” Ex. 1021 at ¶34. Therefore, extrinsic evidence is necessary to determine the meaning of the term. Patent Owner produced such evidence in these proceedings, and Patent Owner’s Expert supported his opinion about the meaning of “SIM Card” in the art by citing that evidence. Ex. 2003 at ¶30-33; Ex. 2021-2025. Despite acknowledging that it is a term of art that is not defined in the specification, Petitioner produced no evidence of the meaning of “SIM Card.” Petitioner’s expert provides a rebuttal that is merely conclusory (i.e., unsupported by evidence), and therefore entitled to no weight. Ex. 1021 at ¶¶32-36. For example, neither Dr. Houh nor the Petitioner have offered any explanation why the GSM technical standard “Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module Mobile Equipment (SIM - ME) interface; (GSM 11.11) “ (Ex. 2022 at Pg. 1) relied upon by Dr. Shamos is incorrect or not the type of a document that a POSITA would look to in order to ascertain the meaning of a term art. Similarly, Dr. Houh nor Petitioner offered an explanation as to why the description of a SIM card found in the textbook “Mobile Application Development with SMS and the SIM Toolkit” (Ex. 2021) is incorrect or why this is not the type of document a POSITA would look to in order to understand the term “SIM card.”

The Reply (at 22) mischaracterizes the deposition testimony of Patent Owner's expert, Dr. Shamos. None of Petitioner's citations to the deposition transcript demonstrate that Dr. Shamos "agrees that if a mobile device executes a mobile wallet over a cellular network, the mobile device has a SIM card for the mobile wallet." Dr. Shamos testified (at Ex. 1022 at 29:4-7) that "[i]f a device has cellular capability, then it has a SIM Card. And it would be a mobile device with a mobile wallet." He does not state that the mobile wallet would be on the SIM Card, or that such an arrangement was conventional, as Petitioner suggests.

As a result of Petitioner's failure to address arguments directed to the hardware SIM card in the POR, it is now undisputed that:

- A mobile subscriber must have a SIM installed on his or her device in order to access a mobile network like the GSM network described in the specification (POR at 30).
- The Challenged Claims require that the mobile device must have a functioning SIM, because the claims recite that the mobile device both sends and receives SMS/text messages (POR at 30).
- Bykov's "SIM form" card does not identify the cellphone or a cellular network (or otherwise enable the cellphone to access the cellular network) – it's only purpose is to make payments by NFC (POR at 34).

- In Bykov, if original SIM card is replaced by the financial institution card, the mobile device cannot send or receive SMS messages over the cellular network (POR at 35).

Based on these undisputed facts, the relied-on references fail to meet all of the hardware SIM card limitations recited in the Challenged Claims.

IX. CONCLUSION

The Petition failed to carry its burden to demonstrate the unpatentability of the Challenged Claims.

Respectfully submitted,

Dated: February 16, 2024

By: /s/ Jonathan K. Waldrop
Jonathan K. Waldrop
USPTO Registration No. 50,334
For Patent Owner

CERTIFICATE OF COMPLIANCE WITH WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), I certify that this Sur-Reply complies with the type-volume limits of 37 C.F.R. § 42.24(b)(1) because it contains 5377 words, excluding the parts of this Patent Owner's Sur-Reply that are exempted by 37 C.F.R. § 42.24(a), according to the word processing system used to prepare this Patent Owner's Response.

Dated: February 16, 2024

By: /s/ Jonathan K. Waldrop
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CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a copy of the foregoing **PATENT OWNER’S SUR-REPLY** was served via email (as consented to by counsel) on February 16, 2024 to lead and backup counsel of record for Petitioner as follows:

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