

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASKELOADDEN L.L.C.,
Petitioner,

v.

N5 TECHNOLOGIES, LLC,
Patent Owner.

Case IPR2017-00083
Patent 7,197,297 B2

Before THOMAS L. GIANNETTI, CARL M. DeFRANCO, and
MICHAEL L. WOODS, *Administrative Patent Judges*.

WOODS, *Administrative Patent Judge*.

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

I. INTRODUCTION

Askeladden L.L.C. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–11 of U.S. Patent No. 7,197,297 B2 (Ex. 1001, “the ’297 patent”). Pet. 1. N5 Technologies, LLC (“Patent Owner”) filed a Preliminary Response (Paper 10, “Prelim. Resp.”) to the Petition. We issued a Decision to Institute an *inter partes* review of claims 1–11 of the ’297 patent as unpatentable. Paper 11, 19–20.

After institution of trial, Patent Owner filed a Response (Paper 22, “PO Resp.”), to which Petitioner replied (Paper 25, “Pet. Reply”).

Oral argument was conducted on January 16, 2018, and a transcript of the hearing is entered in the record. Paper 35.

We have jurisdiction under 35 U.S.C. § 318(a). After considering the evidence and arguments of both parties, and for the reasons set forth below, we determine that Petitioner met its burden of showing, by a preponderance of the evidence, that claims 1–11 of the ’297 patent are unpatentable.

II. BACKGROUND

A. The ’297 patent (Ex. 1001)

The ’297 patent describes its invention as relating to “a method for authenticating a user of a mobile station for accessing to private data or services.” Ex. 1001, 1:12–13. In particular, the ’297 patent relates to a text message-based method for authenticating a user prior to providing the user with access to private data or services. *See id.* at 1:12–15.

According to the ’297 patent, the disclosed method improves security of prior art systems. *See id.* at 1:35–44. The ’297 patent purports to improve security through dual authentication, which the patent describes as

confirming the authenticity of a user's mobile phone number and the user's unique identifier (e.g., JohnSmith#1) prior to providing the requested data or service to the user. *See id.* at 2:21–26.

Figure 1 of the '297 patent is reproduced below:

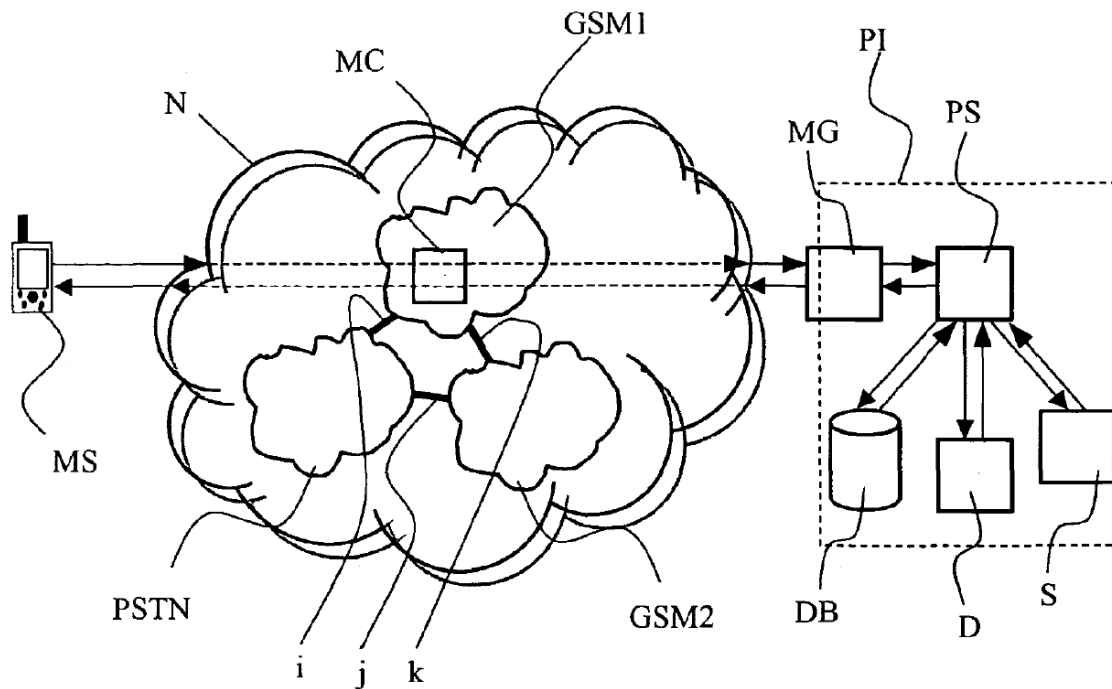


Figure 1

Figure 1 illustrates mobile station *MS* for use in composing a request message (Ex. 1001, 3:21–22), which is routed across telephone network *N* and to messaging gateway *MG*, which is an interface between network *N* and private infrastructure *PI* (*id.* at 3:30–33, 52–54). *PI* includes processing server *PS*, corporate directory database *DB*, data *D*, and service node *S*. *Id.* at 3:57–60. *PS* processes and authenticates the request message by determining if a user unique identifier is present (*id.* at 4:8–10, 19–21) and, if so, comparing the user *MS* number (e.g., phone number) with a number stored in database *DB* and assigned to the unique identifier (*id.* at 4:37–42).

If the two numbers match, *PS* fulfills the request for private data or services and composes a response message to the user via network *N*. *Id.* at 4:58–67.

B. Related Matters

The parties represent that there are no related matters. *See* Pet. 3; *see also* Paper 20.

C. Illustrative Claims

Claim 1 is the sole independent claim, with claims 2–11 depending directly or indirectly therefrom. Ex. 1001, 6:36–8:17. We reproduce claim 1, below, with emphases added to particular limitations addressed in this Decision:

1. Method for accessing private data or services from a mobile station over a public network including the step of authenticating a user of the mobile station for accessing to private data/services, comprising the steps of:

composing a text-based request message on the mobile station using a standard public text messaging protocol, said message including a request for private data, and sending said request message to a private server (MG, PS) offering the access to said private data/services, via the telephone network,

checking the authenticity of the user of the mobile station based on the request message received by the server,

if the authenticity of the user of the mobile station is confirmed, composing a text-based response message using a standard public text messaging protocol, the response message including the requested private data/services of the private server, and sending back to the mobile station said text-based response message, via the telephone network,

wherein the request message additionally includes a user unique identifier, and is received by the private server with an appended user mobile station number,

wherein the authenticity checking performed by the private server comprises the steps of:

checking whether the user unique identifier is stored in a private directory database, and

checking whether the appended user mobile station number matches with the user mobile station number allocated to the user unique identifier stored in the private directory database;

and wherein, if the user authenticity is confirmed, *an interaction between the private server and the mobile station is limited to the exchange of the text-based request message and the text-based response; and repeating the recited steps for any further interaction between the private server and the mobile station.*

Ex. 1001, 6:37–7:4 (emphases added).

D. References

Petitioner relies on the following references:

Name	Reference	Ex. No.
Chen	US 2002/0086706 A1, published July 4, 2002	1005
Angel	US 6,907,408 B2, issued June 14, 2005	1006
Rao	Herman Chung-Hwa Rao, Di-Fa Chang, and Yi-Bing Lin, <i>iSMS: An Integration Platform for Short Message Service and IP Networks</i> , IEEE Network, March/April 2001	1007
Yang	US 2003/0065738 A1, published Apr. 3, 2003	1008
Gress	US 6,813,507 B1, issued Nov. 2, 2004	1009
Serbetciouglu	US 5,719,918, issued Feb. 17, 1998	1010

E. Grounds Asserted

Petitioner contends that claims 1–11 of the '297 patent are unpatentable under the following four grounds:

Ground	Basis	Prior Art	Claim(s)
1	§ 103	Chen, Angel, Rao	1, 2, 4, 6, and 9–11
2	§ 103	Chen, Angel, Rao, Gress	3
3	§ 103	Chen, Angel, Rao, Yang	5 and 7
4	§ 103	Chen, Angel, Rao, Serbetciouglu	8

Pet. 7–8.

Petitioner also relies on the declaration testimony of Mr. Ivan Zatkovich (Ex. 1002) as support for its various contentions. *Id.* at v.

III. ANALYSIS

A. Motion to Exclude

As a preliminary matter, Petitioner filed a motion to exclude (“Motion”) Exhibits 2003–2015. Paper 27, 1. Exhibits 2003–2015 are published U.S. patent applications identified by Patent Owner during a search of the USPTO’s patent database. PO Resp. 11. Petitioner seeks to exclude Exhibits 2003–2015 for the following reasons: (1) for being irrelevant (*id.* at 2 (citing FRE 401, 402)); (2) for including information whose probative value is substantially outweighed by the danger of confusion (*id.* at 3 (citing FRE 403)); and (3) for being inadmissible as hearsay (*id.* at 3 (citing FRE 801)). Patent Owner filed an opposition to the Motion (“Opposition,” Paper 30), and Petitioner filed a reply to the Opposition (Paper 31). For the reasons discussed below, we deny Petitioner’s Motion in the entirety.

1. *Irrelevant*

Petitioner seeks to exclude Exhibits 2003–2015 for being “irrelevant to any ground upon which trial was instituted.” Motion 3. Petitioner contends that the Patent Owner failed to adequately explain the relevancy of Exhibits 2003–2015, but nevertheless acknowledges that Patent Owner submitted the patent publications in support of its non-obviousness argument. *See id.* at 2–3.

Patent Owner responds that Exhibits 2003–2015 are directly relevant as evidence describing “alternative solutions” to the problem addressed in the ’297 patent. *See* Opposition 2 (citing PO Resp. 12). In particular, Patent Owner submitted Exhibits 2003–2015 as evidence of “alternative methods to the improved authentication process claimed by the ’297 Patent.” PO Resp. 12.

Petitioner bears the burden on its Motion. 37 C.F.R. § 42.20(c). Petitioner has not shown that Exhibits 2003–2015 are irrelevant under FRE 401 and 402. Because we are satisfied that Exhibits 2003–2015 may establish that alternative authentication processes existed, an argument which is presented by Patent Owner, we find that they are relevant, and Petitioner has not persuaded us otherwise. Accordingly, we deny Petitioner’s motion to exclude Exhibits 2003–2015 for being irrelevant.

2. *Confusion*

Petitioner also argues that Exhibits 2003–2015 should be excluded because they “include information whose probative value (if any) is substantially outweighed by the danger of confusing the issues.” Motion 3.

We note that Petitioner fails to identify specifically the portions of

Exhibits 2003–2015 that it believes are confusing, or why we would be unable to weigh this evidence without confusion. *See id.* Petitioner’s objections go more to the weight that Exhibits 2003–2015 should be afforded, rather than to their admissibility. A motion to exclude is not the proper vehicle to challenge the sufficiency of evidence. It is within our discretion to assign the appropriate weight to be accorded evidence. Accordingly, we deny Petitioner’s motion to exclude Exhibits 2003–2015 under FRE 403 for being confusing.

3. *Hearsay*

Petitioner also argues that Exhibits 2003–2015 should be excluded as impermissible hearsay under FRE 801, “because Patent Owner has not presented any testimony of an expert or other individual with personal knowledge as to the truth of the matter asserted.” Motion 3.

Patent Owner responds that “Exhibits 2003–2015 are U.S. patent applications on which Patent Owner is relying for what they describe, not the truth of the matter asserted.” Opposition 3 (citing PO Resp. 12).

Hearsay is limited to a statement that a party offers in evidence to prove the truth of the matter asserted in the statement. FRE 801(c). Patent Owner does not rely on the exhibits for the truth of the matter asserted. Opposition 3. Rather, Patent Owner offers the disclosures within the exhibits as evidence that the claimed invention was not obvious, because others sought to solve problems relating to authentication of SMS messages differently from that claimed. *See* PO Resp. 11–12. Because Petitioner has not convinced us that any of Exhibits 2003–2015 are being offered to prove the truth of the matter asserted (*see* Motion 3), we deny Petitioner’s motion

to exclude Exhibits 2003–2015 as inadmissible hearsay.

B. Claim Construction

As a first step in our unpatentability analysis, we determine the meaning of the claims using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 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 approach). Under that standard, claim terms are generally given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

We determine that no claim term requires express construction for the purposes of this Decision. *See Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (“[C]laim terms need only be construed ‘to the extent necessary to resolve the controversy.’”) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

C. Ground 1: Chen, Angel, and Rao

Petitioner contends that claims 1, 2, 4, 6, and 9–11 are unpatentable over Chen, Angel, and Rao. Pet. 16.

1. Chen (Ex. 1005)

Chen discloses a system that provides information access to multiple types of mobile devices. *See* Ex. 1005, Abstr. Figure 1 of Chen is reproduced below:

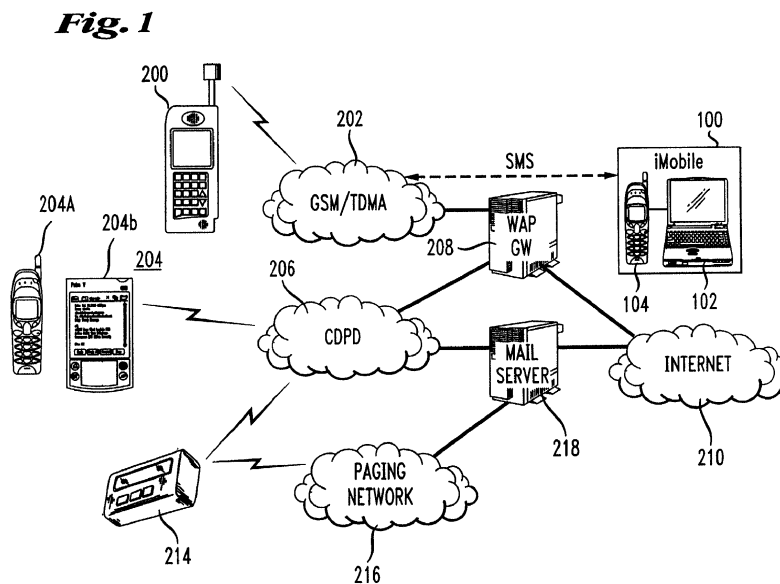


Figure 1 illustrates Chen’s mobile device server 100, which enables mobile users to communicate with a variety of devices and protocols. Ex. 1005 ¶ 35. Server 100 includes mobile phone device 104 for receiving and transmitting data, including Short Message Service (“SMS”) communications, wirelessly. *Id.* ¶ 36. Chen discloses cell phone 200 as communicating with server 100 over cellular telephone network GSM/TDMA 202. *See id.* ¶ 37. Chen further discloses that its mobile device server may rely on a variety of authentication techniques, including cell phone identification, when an SMS communication is sent. *Id.* ¶ 71.

2. Angel (Ex. 1006)

Angel discloses a method for confirming or authenticating the identity of a person seeking to perform a financial transaction—such as by purchasing goods—over the Internet. *See* Ex. 1006, 1:5–9, 24–28. To illustrate this authentication process, we reproduce Figure 1A of Angel, below:

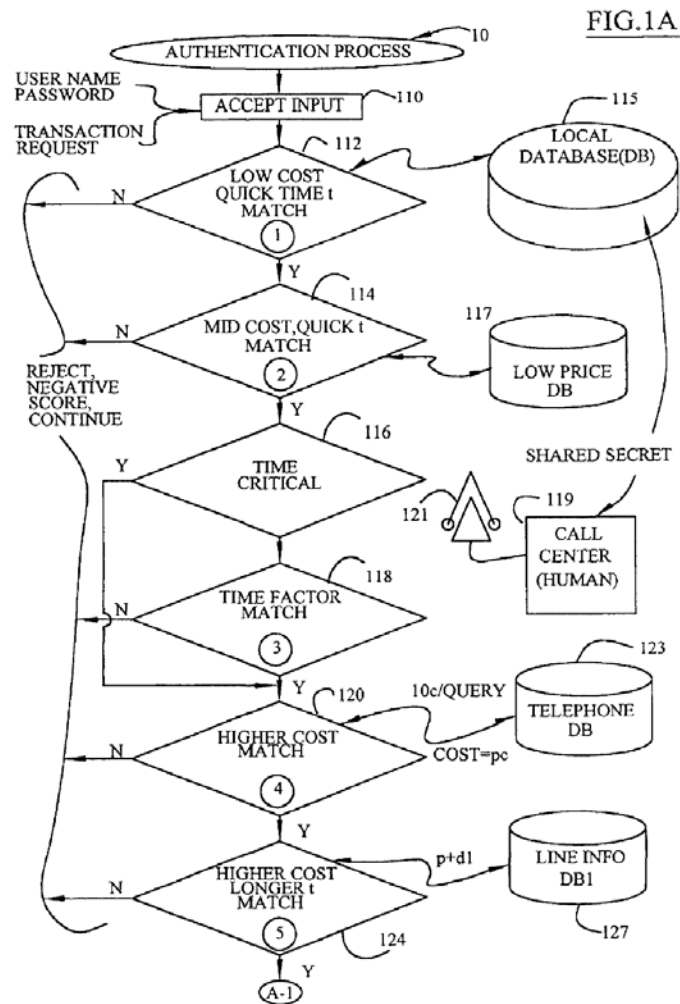


Figure 1A illustrates a multi-step process for authenticating a user to a financial institution. Ex. 1006, 3:6–8. At step 110, a user enters his or her username, may enter a password, and enters a financial transaction request. *Id.* at 3:39–45. At step 112, the first level of authentication compares the user's username with information from database 115. *Id.* at 4:1–4. If the username matches the database information, the authentication process continues and may ultimately reach step 124, which is a subsequent level of the authentication process. *See id.* at 6:20–24. At step 124, the user's telephone number (e.g., automatic number identification) may be checked

against database 115 to determine if the user is authentic, and, if so, the authentication process continues to point A-1. *See id.* at 6:42–64; *see also id.* at 3:59–60.

3. *Rao (Ex. 1007)*

Rao discloses sending information requests via text messaging (e.g., SMS messaging) to request, for example, stock information, train schedule information, and information pertaining to the delivery status of packages. Ex. 1007, 51. Rao also discloses using caller ID and password information to authenticate the user. *See id.* at 50.

4. *Summary of Petitioner’s Challenge*

Petitioner provides detailed claim charts for independent claim 1 and its dependent claims 2, 4, 6, and 9–11. Pet. 30–50. In addition, Petitioner provides supporting testimony from its expert, Mr. Ivan Zatkovich. Ex. 1002. Prior to addressing Patent Owner’s arguments and the ground of unpatentability before us, we first summarize Petitioner’s challenge, below.

a. *Independent Claim 1*

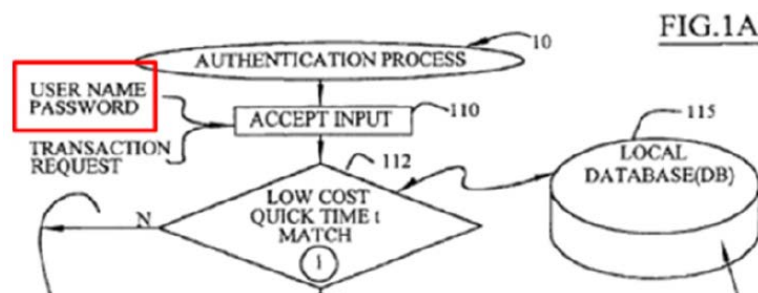
Petitioner relies on Chen’s disclosed method of sending an SMS message with a cellular phone to request stock information to meet the claimed step of “composing a text-based request . . . for private data . . . and sending said request message to a private server . . . via the telephone network.” Pet. 32 (citations omitted).

To meet the claimed “checking the authenticity of the user,” Petitioner relies on Chen’s disclosure of “limiting access to legitimate users” (Ex. 1005

¶ 70) and Chen’s disclosed use of cell phone identification and password information for authentication purposes (*id.* ¶ 71; Pet. 34, 36, 38).

With regard to the claimed “composing a text-based response message” upon confirmation of the user’s authenticity, Petitioner relies on Chen’s disclosure that the response is sent back to the user through the same text-based message channel. Pet. 35 (citing Ex 1005 ¶ 44).

With respect to the claimed “wherein the authenticity checking performed by the private server comprises . . . checking whether the user unique identifier is stored . . . and checking whether the . . . user mobile station number matches,” Petitioner relies on Angel’s teachings and reasons that it would have been obvious to combine these teachings with Chen’s system. Pet. 26–28, 38–43. In particular, Petitioner cites to Angel’s teaching of determining whether the user’s username is stored in private directory database 115 and provides a partial annotated view of Angel’s Figure 1A to illustrate this teaching, which we reproduce below:



According to Petitioner, the above figure and Angel’s accompanying description illustrate Angel’s process as “first check[ing] whether a user name is stored in a private directory database” 115. Pet. 39.

Petitioner further provides another partial view of Figure 1A, which we reproduce below, to illustrate how Angel's authentication process utilizes caller ID (*id.* at 43):

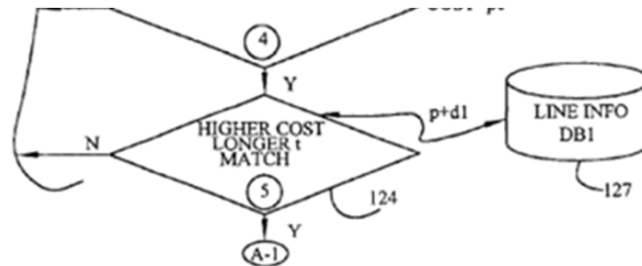


Figure 1 A of Angel diagrammatically illustrates the authentication process typically implemented as a computerized process. Ex. 1006, 3:6–8.

According to Petitioner, Angel's step 124 compares the user's caller ID with information in database 115 to determine whether the user is "authentic." Pet. 23–24 (citing Ex. 1006, 6:42–48).

From these disclosures, Petitioner reasons that a person of ordinary skill in the art would have modified Chen's system to use a username and caller ID information—as taught by Angel—to authenticate a mobile device user, and that the resulting combination would have yielded predictable results, namely, improved security. *See id.* at 26–28. Petitioner's expert, Mr. Zatkovich, testifies in support of this reasoning. Ex. 1002 ¶¶ 87–90.

In addressing the claimed "repeating the recited steps for any further interaction," Petitioner relies on the teachings of Rao. Pet. 43–45. In particular, Petitioner asserts that Rao discloses repeating the claimed authentication process. *Id.* at 44–45 (citing Ex. 1007, 50). Petitioner reasons that it would have been obvious to combine Rao's teaching of repeating the steps with Angel and Chen and that the combination would have yielded predictable results, namely, the ability to support multiple

requests in a secure fashion. *See id.* at 28–30 (citing in part *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1330 (Fed. Cir. 2009) (finding that repeating known steps in a patented method is obvious)).

b. Dependent Claim 2

Claim 2 depends from claim 1 and further recites, “wherein the user unique identifier is a data related to the user of the mobile station, said data being stored in the private directory database.” Ex. 1001, 7:5–7.

To address this limitation, Petitioner relies on Chen’s teaching that along with the request message, a user’s cell phone ID, user name, and password may also be received by the private server, and that authenticating the user utilizes stored data related to the user and the user’s cell phone ID. *See* Pet. 45–46 (citing Ex. 1005 ¶¶ 71, 72).

c. Dependent Claims 4 and 6

Claims 4 and 6 each depend from claim 1 and further recite, respectively, “wherein the *request message* is a text message based on a Short Message System (SMS)” and “wherein the *response message* is a text message of the SMS based on a Short Message System (SMS).” Ex. 1001, 7:11–13, 17–19 (emphases added).

To address these limitations, Petitioner relies on Chen’s teaching of using standard public text messaging protocol, such as SMS communications. *See* Pet. 46–47 (citing Ex. 1005 ¶¶ 36, 37, 44, 51).

d. Dependent Claim 9

Claim 9 depends from claim 1 and further recites, “wherein the requested data are stored in a private directory database.” Ex. 1001, 8:7–8.

To address this limitation, Petitioner relies on Chen’s teaching that the requested data is stored in a private directory database. See Pet. 47–48 (citing Ex. 1005, Figs. 7–9, ¶ 54).

e. Dependent Claim 10

Claim 10 depends from claim 1 and further recites, “wherein between public network and private network a gateway is installed, adapted to send and receive text-based messages and identifying the user mobile station number.” Ex. 1001, 8:9–12.

To address this limitation, Petitioner relies on Chen’s teaching of its interface devlets 302 (the claimed “gateway”) as being installed between a public and private network, and that the “gateway” is adapted to send and receive text-based messages while identifying the user mobile station number. See Pet. 48–49 (citing Ex. 1005, Fig. 3, ¶ 41); see also Ex. 1005 ¶ 41 (“[a]s shown in FIG 3, each interface devlet **302** provides a protocol interface to a given device on a particular access network.”).

f. Dependent Claim 11

Claim 11 depends from claim 1 and further recites, “wherein the request message includes a remote control command for equipment connected to the private network.” Ex. 1001, 8:14–16.

To address this limitation, Petitioner relies on Chen’s disclosure of remote control of equipment connected to a private network through X10 support, and that a user may control various devices, such as lamps and appliances, when connected to the X10 home network. *See* Pet. 49–50 (citing Ex. 1005 ¶ 61).

5. *Our Analysis*

We have considered Petitioner’s analysis as well as Patent Owner’s arguments and find Petitioner’s analysis persuasive. We address each of Patent Owner’s arguments separately, below.

a. Petitioner relies on incorrect standard for motivation to combine

Patent Owner first argues that Petitioner failed to “offer[] any evidence to show that one of ordinary skill would be motivated to combine [the art] in the manner claimed.” PO Resp. 4 (citing *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007)). In support of this argument, Patent Owner criticizes Mr. Zatkovich’s testimony as being conclusory and failing to adequately demonstrate “that one of ordinary skill in the art would be motivated to combine” the references in the manner claimed. *Id.* We disagree.

An assertion of obviousness “cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *See KSR*, 550 U.S. at 418 (citation omitted). In combining the teachings of Chen, Angel, and Rao, we determine that Petitioner does not rely merely on

conclusory statements, but instead provides reasons with rational underpinnings to support its obviousness challenge.

We agree with Petitioner that combining Chen’s SMS messaging system with Angel’s teaching of using username and caller ID for authentication purposes would have improved security. Pet. 26–28 (citations omitted). We find that Angel teaches that the person conducting a financial transaction may do so with a cellular phone. Ex. 1006, 8:42–46. We also find that Chen teaches that a wide variety of information can be used for authentication, including usernames, user ID, and passwords. Ex. 1005 ¶¶ 70–71. Based on these findings, we agree with Mr. Zatkovich that a person of ordinary skill in the art would have been motivated to modify Chen’s system to utilize username and caller ID information to authenticate a mobile device user. See Ex. 1002 ¶ 88. We also agree with Mr. Zatkovich that the addition of a username, as taught by Angel, to Chen’s SMS message is no more than the utilization of a well-known procedure to obtain predictable results, and that it would have been a natural extension of Chen to include a username as an *extra security measure*. *Id.* Patent Owner’s argument ignores this particular evidence. See PO Resp. 3–5 (failing to reference or acknowledge paragraph 88 of Mr. Zatkovich’s testimony).

We further find that Rao discloses, “[f]or security reasons, the driver authenticates the servers for communication sessions For example, passw[or]d may be required as a parameter of every command sent from the MS to the iSMS gateway.” See Pet. 44–45 (citing Ex. 1007, 50). We agree with Mr. Zatkovich’s testimony that “a POSITA would have been motivated to combine Chen and Angel with Rao” (Ex. 1002 ¶ 93) and that “repeating

the steps . . . would allow the system to obtain predictable results, namely repeated requests where each request was authenticated by a server . . . [and would] *support multiple requests in a secure fashion*” (see *id.* at ¶ 95; see also Pet. 28–30) (emphasis added). Text-based messages are generally session-less, with each message being independent of other messages. See Ex. 1002 ¶ 92 (testifying the same). If a mobile user desired to receive multiple data entries (e.g., multiple phone numbers or multiple stock quotes), that mobile user would be required to make multiple, separate requests to the private server. See *id.* To ensure secure transmission of each transaction, each request would need to be individually authenticated, and a person having ordinary skill in the art would have *repeated* the authentication process for each request to ensure the secure transmission of each transaction. See *id.*

Moreover, and *even if* Petitioner did not rely on Rao’s teaching for repeating steps, the Federal Circuit has held that repeating known steps in a patented method may be obvious as a matter of common sense. See *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1330 (Fed. Cir. 2009). We conclude that is the case here, and that it would have been obvious as a matter of common sense to one of ordinary skill to repeat the authentication steps (as recited in claim 1) to ensure the secure transmission of each transaction. Indeed, Mr. Zatkovich testifies that “designing a system to support multiple requests in a secure fashion was common-place at the time of the filing of the ’297 Patent” (Ex. 1001 ¶ 95) and that one of ordinary skill “would have understood that it may be desirable to authenticate each message individually” (*id.* ¶ 92).

Accordingly, based on the evidence of record, including Mr. Zatkovich's testimony, we conclude that one of ordinary skill would have combined Chen, Angel, and Rao in the manner advanced by Petitioner, as the combination would help ensure the secure transmission of multiple requests. *See KSR*, 550 U.S. at 418.

b. *Angel does not disclose the claimed "checking whether the appended user mobile station number matches with the user mobile station number allocated to the user unique identifier stored in the private directory database"*

Patent Owner argues that the claims require comparing a user's telephone number to the claimed "user unique identifier," and that "Angel does not disclose checking a telephone number *against a user name*." *See* PO Resp. 6 (emphasis added). Patent Owner asserts that Angel instead compares a user's telephone number with the *listed name* for that number in a telephone directory and compares the *listed name* from the telephone directory with information obtained from a local database. *See id.* at 6–7.

Patent Owner's argument is not persuasive, as it attacks Angel individually instead of addressing the combination of references. Nonobviousness cannot be established by attacking the references individually when the ground of unpatentability is predicated upon a combination of prior art disclosures. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

To satisfy the claimed limitation, Petitioner does not rely on Angel alone, but relies on a combination of Chen and Angel. *See* Pet. 26–28; Ex. 1002 ¶¶ 83–90. Petitioner cites to Angel's use of a username and ANI/caller ID to authenticate a user. *See* Pet. 27 (citing Ex. 1002 ¶ 87). We find that

Angel uses the username and caller ID to “determine whether the person on that line is an ‘authentic’ person in database 115.” Ex. 1006, 6:45–48, Fig. 1A; Ex. 1002 ¶ 87. We also find that Figure 1A of Angel (reproduced *supra*) depicts an “authentication process” 10 as including the step of accepting “USER NAME,” and subsequently checking “whether the person on that line is an ‘authentic’ person in local database 115.” Ex. 1006, 6:45–48. We further find that Chen teaches using a wide variety of information for authentication, including usernames, generic user ID, and password information (Ex. 1005 ¶¶ 70–71) and that Chen discloses an example of a buddy name on the AOL Instant Messenger to include the username “webciao” (*id.* ¶¶ 38, 67, 71). Based on these teachings, we agree with Petitioner’s reasoning that “a POSITA could have easily modified the system of Chen *to utilize a username*, in addition to caller ID information, to authenticate a mobile device user.” Pet. 27 (citing *KSR*, 550 U.S. at 421) (emphasis added). We determine that the proposed combination would result in an extra security measure to further ensure that the mobile user making the request is an authentic person in the database. See Ex. 1002 ¶¶ 87–88 (testifying the same).

Furthermore, Patent Owner asserts that the “username” described in Angel is not associated with the phone number/caller ID involved in the authentication. See PO Resp. 6–7; see also Paper 35, 29:18–21 (“So you do have two authentication steps in Angel, I’m not disputing that. But there’s nothing that links those two – that requires the phone number that’s used in step 124 to be linked or connected to the user name that’s entered in step 112. They’re completely separate.”). We find that Patent Owner’s

interpretation of Angel, however, is contradicted by the testimony of Mr. Zatkovich and by the teachings of Angel, and is otherwise not supported by the record.

For example, we note that Angel describes Figure 1A as “accepting an input from a person or a consumer in step **110** . . . [including] his or her user name, and . . . password” (Ex. 1006, 3:39–45) and at step 112, “comparing the username and the supplied password with information from a local database DB **115**” (*id.* at 4:1–4). If a match occurs, that process may ultimately proceed to step 124, “to determine whether the person on that line is an authentic person in local database **115**.” *See id.* at 6:45–48. In other words, *even if* authentication steps 112 and 124 are separate, as argued by Patent Owner (*see* Paper 35, 29:18–21), we disagree with Patent Owner’s assertion that the phone number that is used in step 124 is *not linked or connected* to the same person or username information submitted in step 110 and used in step 112. Rather, we find that the phone number is “linked and connected” to the person submitting the request, as Angel explicitly discloses that “the caller id . . . data . . . is supplied to authentication system **10** based upon the *communications device utilized by the person* entering the authentication process.” Ex. 1006, 6:48–52 (emphasis added). Further, our conclusion is supported by Mr. Zatkovich, who testifies that Angel “is performing a cross-check between the user name in step 110 and the caller ID number in step 124,” as shown in Angel’s Figure 1A. *See* Ex. 2002, 59:18–60:3; *see also* Ex. 1002 ¶ 87 (“Angel teaches the use of a username and ANI/caller ID to authenticate a user”).

Accordingly, we determine that the Petitioner's proposed combination of Chen and Angel would result in system that performs the step of "checking whether the appended user mobile station number matches with the user mobile station number allocated to the user unique identifier stored in the private directory database."

- c. Neither Chen nor Rao discloses "an interaction between the private server and the mobile station is limited to the exchange of the text-based request message and the text-based response; and repeating the recited steps for any further interaction between the private server and the mobile station"*

Patent Owner argues that independent claim 1 requires each interaction to be "limited to the exchange of a single request and a single response so that any further interaction requires repetition of the authentication process." PO Resp. 8 (citing Ex. 1001, 6:66–7:4). Patent Owner asserts that "Mr. Zatkovich . . . relied on an incorrect construction of the limitation" by "interpret[ing] the limitation to mean that a user could receive several messages from a private server in response to a single request" and that "[n]othing in Chen or Rao limits the interaction to the paired exchange of request and response messages." *Id.* at 9 (citing Ex. 2002, 43:18–44:6).

Patent Owner's argument is not persuasive, as it mischaracterizes Mr. Zatkovich's testimony regarding the claimed limitation and fails to fully address the ground of unpatentability presented by Petitioner.

Rather, we are persuaded by Mr. Zatkovich's testimony that Chen's text-based messaging protocols are "generally session-less" and that, therefore, "a POSITA would have understood that it may be desirable to

authenticate each message individually.” Ex. 1002 ¶ 92. We also find persuasive Mr. Zatkovich’s testimony that Rao “explicit[ly] teach[es] that the process of requesting data from a private server can be repeated and each message can be independently authenticated (e.g., using a password)” and that “repeating the steps of Chen and Angel, as modified by Rao, would allow the system to obtain predictable results, namely repeated requests where each request was authenticated by a server.” *Id.* ¶¶ 93–95. We also find Mr. Zatkovich’s description of Rao to be supported by Rao’s explicit disclosure. As discussed above, we find that Rao describes, “[f]or security reasons, the driver authenticates the servers for communication sessions For example, passw[or]d may be required as a parameter of every command sent from the MS to the iSMS gateway.” Ex. 1007, 50. We find Mr. Zatkovich’s testimony that “a POSITA would have been motivated to combine Chen and Angel with Rao for several reasons” (Ex. 1002 ¶ 93) persuasive, and agree with his testimony that “repeating the steps . . . would allow the system to obtain predictable results, namely repeated requests where each request was authenticated by a server . . . [and would] support multiple requests in a secure fashion.” *See id.* ¶ 95. In particular, and as discussed above (*supra* Part III.C.6.a), the proposed combination would yield a system that helps to ensure the secure transmission of multiple requests for information.

d. Other art contradicts Petitioner’s obviousness arguments

As discussed above (*supra* Part III.A), Patent Owner submits Exhibits 2003–2015 as evidence to support its argument that the claimed invention

would not have been obvious. *See* PO Resp. 10–12.

Patent Owner asserts that Exhibits 2003–2015 were identified in a U.S. patent search (over an 18-month period) that included the search terms “SMS” and “authentication” in each exhibit’s abstract. *See id.* at 11. Patent Owner argues that because only twelve (or thirteen, by our count) patent documents were identified, and not one of these documents describes the same authentication method claimed by the inventors of the ’297 patent, the claimed invention would not have been obvious. *See id.* at 12.

We give little weight to Exhibits 2003–2015 because they are not accompanied by any testimony explaining their meaning. *See id.* at 10–12; *see also* *BAE Sys. Info. et al. v. Cheetah Omni, LLC*, IPR2013-00175, Paper 45 at 11 (PTAB June 19, 2014) (finding that unsupported “attorney argument is not persuasive,” especially in light of unrebutted expert testimony regarding what “a person of ordinary skill in the art would understand.”). For this reason, Exhibits 2003–2015 themselves—without more—do not persuade us that Petitioner’s reliance on the cited art, including Chen, Angel, and Rao, is misplaced or that Mr. Zatkovich’s testimony is incorrect. Accordingly, Patent Owner’s argument is unavailing.

e. Inter partes review is unconstitutional

Patent Owner argues that *inter partes* review proceedings are unconstitutional. *See* PO Resp. 13.

We decline to consider the constitutional challenge as, generally, “administrative agencies do not have jurisdiction to decide the constitutionality of congressional enactments” where consideration of the

constitutional question would “require the agency to question its own statutory authority or to disregard any instructions Congress has given it.” *Riggin v. Office of Senate Fair Employment Practices*, 61 F.3d 1563, 1569–70 (Fed. Cir. 1995). Nonetheless, we note that our reviewing court has upheld the constitutionality of our proceedings. *See MCM Portfolio LLC v. Hewlett-Packard Co.*, 812 F.3d 1284 (Fed. Cir. 2015).

6. Summary of Ground 1

For the foregoing reasons, and as set forth in the Petition supported by the underlying evidence cited therein, we are persuaded that a preponderance of the evidence supports the conclusion that claims 1, 2, 4, 6, and 9–11 would have been obvious over Chen, Angel, and Rao.

D. Ground 2: Chen, Angel, Rao, and Gress

Petitioner contends that claim 3 is unpatentable over Chen, Angel, Rao, and Gress. Pet. 51. Dependent claim 3 further requires that the “user unique identifier” be the “lightweight directory access protocol alias of the user.” Ex. 1001, 7:8–10. Mr. Zatkovich testifies that a “lightweight directory access protocol” is referred to as an “LDAP.” Ex. 1002 ¶ 99. To meet this claim limitation, Petitioner relies on Gress. Pet. 53. We reproduce Figure 1 of Gress, below:

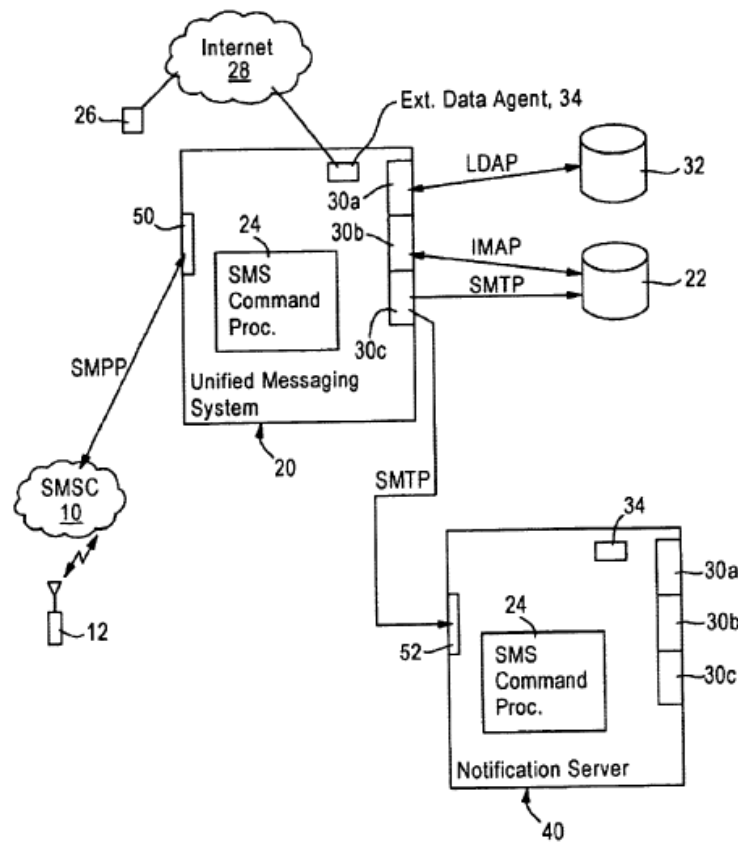


Figure 1

Figure 1 illustrates Gress's SMS command processor 24 that accesses programming interface 30a to obtain subscriber profile information from subscriber directory 32 and in accordance with LDAP protocol. Ex. 1009, 4:37–43.

In combining Gress with the other cited art, Petitioner reasons that a person of ordinary skill in the art would have used an LDAP, as taught by Gress, in connection with the messaging system of Chen, Angel, and Rao, and doing so would have yielded a predictable result, namely, a system with a standard LDAP user profile that would provide consistency with a standard generally used in the industry. Pet. 53–54.

Patent Owner does not present arguments for claim 3 apart from those presented for claim 1. *See, generally*, PO Resp.

We have considered Petitioner's analysis and find it persuasive. In particular, we agree with Petitioner's analysis that using an LDAP would have provided consistency to Chen's private directory service, leading a person of ordinary skill to combine the teachings of Gress with Chen and the other references. We therefore determine that claim 3 would have been obvious over Chen, Angel, Rao, and Gress.

E. Ground 3: Chen, Angel, Rao, and Yang

Petitioner contends that claims 5 and 7 are unpatentable over Chen, Angel, Rao, and Yang. Pet. 56. Dependent claim 5 further requires that the *request message* be a Multimedia Message System ("MMS") based message and dependent claim 7 requires that the *response message* be an MMS-based message. Ex. 1001, 7:14–8:3. MMS messages include images, video, and audio, and Mr. Zatkovich testifies that MMS messaging was widely used at the time the '297 patent was filed. Ex. 1002 ¶ 107.

To meet this claim limitation, Petitioner relies on Yang. Pet. 56. Yang discloses a system that delivers SMS and MMS messages. *See* Ex. 1008 ¶ 41. In combining Yang with the other cited art, Petitioner reasons that a person of ordinary skill in the art would have used MMS-based messaging, as taught by Yang, in connection with the messaging system of Chen, Angel, and Rao, and doing so would have yielded a predictable result, namely, a system that would be able to advantageously send messages with images and sound. Pet. 57–58 (citing Ex. 1002 ¶ 114).

Patent Owner does not present arguments for claims 5 and 7 apart from those presented for claim 1. *See, generally*, PO Resp.

We have considered Petitioner's analysis and find it persuasive. In particular, we agree with Petitioner's analysis that a person of ordinary skill in the art would have substituted Chen's SMS messages for MMS messages in order to send messages with images and sound, and we determine that claims 5 and 7 would have been obvious over Chen, Angel, Rao, and Yang.

F. Ground 4: Chen, Angel, Rao, and Serbetciouglu

Petitioner contends that claim 8 is unpatentable over Chen, Angel, Rao, and Serbetciouglu. Pet. 60. Dependent claim 8 further requires that the "request message and the response message are ciphered." Ex. 1001, 8:5–6.

To satisfy this claimed limitation, Petitioner relies on Serbetciouglu for teaching encryption of request and response messages for security purposes in a cellular phone network that utilizes SMS messaging. Pet. 61; Ex. 1010, 3:43–48, 9:26–41. In combining Serbetciouglu with the other cited art, Petitioner reasons that a person of ordinary skill in the art would have used encryption, as taught by Serbetciouglu, in connection with the messaging system of Chen, Angel, and Rao, and doing so would have yielded a predictable result, namely, a system with *additional security*. Pet. 61.

Patent Owner does not present arguments for claim 8 apart from those presented for claim 1. *See, generally*, PO Resp.

We have considered Petitioner's analysis and find it persuasive. In particular, we agree with Petitioner's analysis that a person of ordinary skill in the art would have encrypted Chen's messages to further improve

security, and we determine that claim 8 would have been obvious over Chen, Angel, Rao, and Serbetciouglu.

IV. CONCLUSION

We determine that Petitioner has shown by a preponderance of the evidence that: (1) claims 1, 2, 4, 6, and 9–11 are unpatentable over Chen, Angel, and Rao; (2) claim 3 is unpatentable over Chen, Angel, Rao, and Gress; (3) claims 5 and 7 are unpatentable over Chen, Angel, Rao, and Yang; and (4) claim 8 is unpatentable over Chen, Angel, Rao, and Serbetciouglu.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–11 of U.S. Patent No. 7,197,297 B2 are unpatentable; and

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

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