

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASKELADDEN 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*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

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 have authority to determine whether to institute a trial under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). An *inter partes* review may be instituted only if “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

We are persuaded there is a reasonable likelihood that Petitioner would prevail in showing that the challenged claims are unpatentable. Pursuant to 35 U.S.C. § 314, we institute an *inter partes* review as to claims 1–11 of the ’297 patent.

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:

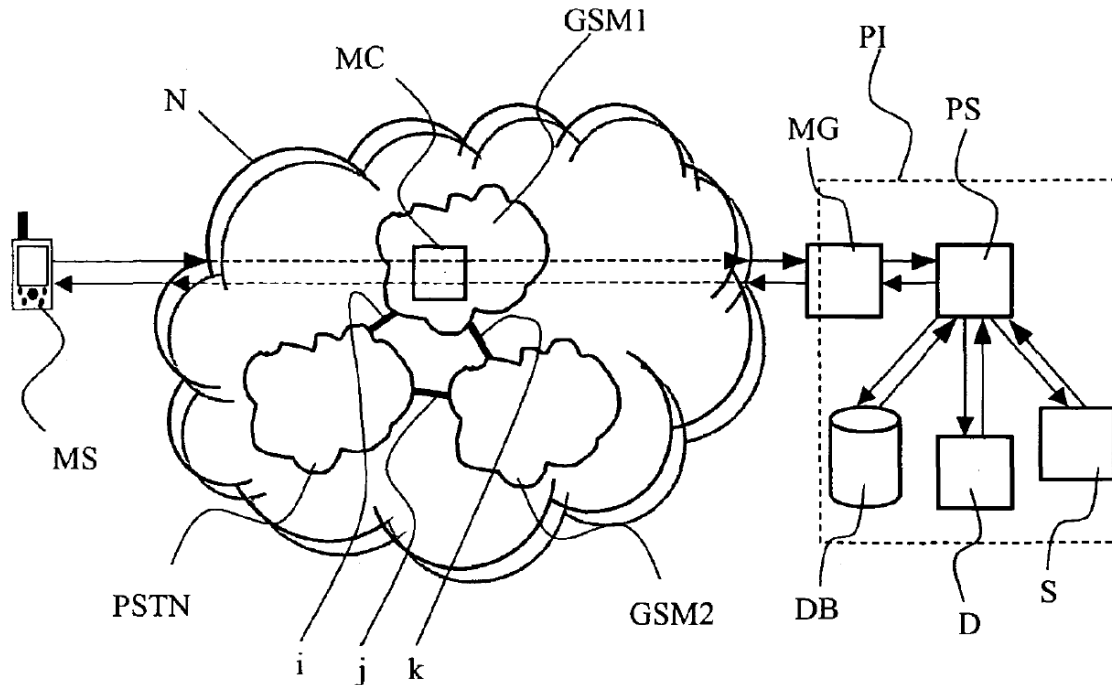


Figure 1

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

Petitioner represents that there are no related matters. *See* Pet. 3.

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. Claim 1, reproduced below, illustrates the claimed subject matter:

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.

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, 9–11 |
| 2 | § 103 | Chen, Angel, Rao, Gress | 3 |
| 3 | § 103 | Chen, Angel, Rao, Yang | 5, 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 the various contentions. *Id.* at v.

III. ANALYSIS

A. Claim Construction

As a first step in our 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)).

B. 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:

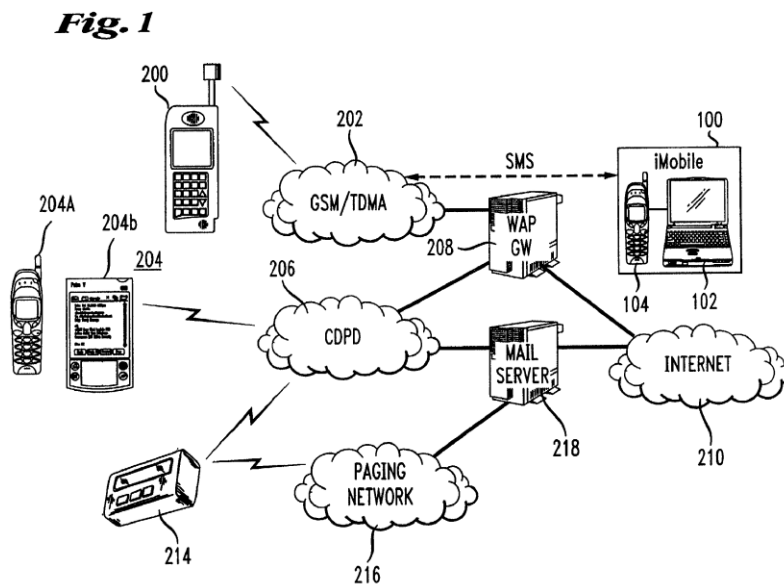


Figure 1 illustrates Chen’s mobile device server 100, which enables mobile users to communicate with a variety of devices and protocols. Ex. 1005 ¶ 35. Server 100 includes mobile phone device 104 for receiving and transmitting data, including Short Message Service (“SMS”) communications, wirelessly. *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:

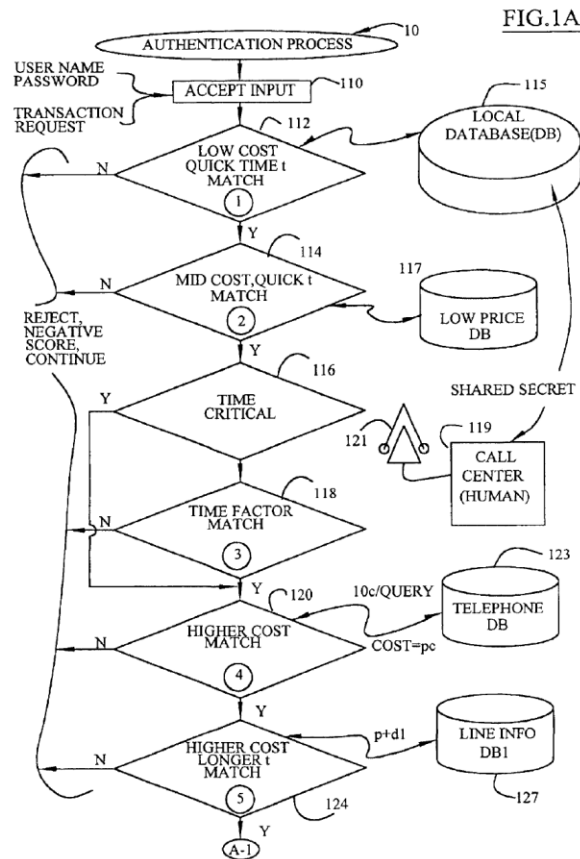


Figure 1A illustrates a multi-step process for authenticating a user to a financial institution. *Ex. 1006, 3:6–8.* At step 110, a user enters his or her username, may enter a password, and enters a financial transaction request.

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 stock information, train schedule information, and information pertaining to the delivery status of packages, for example. Ex. 1007, 51. Rao also discloses using caller ID and password information to authenticate the user. *See id.* at 50.

4. *Analysis*

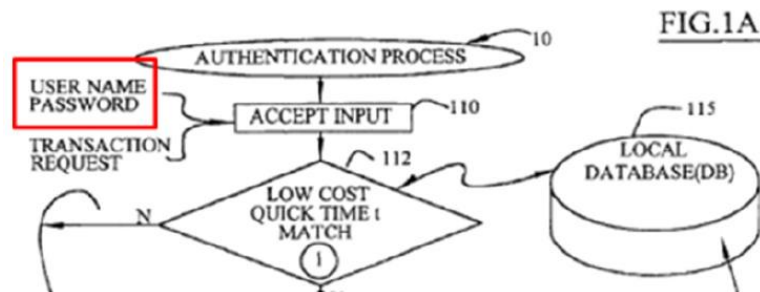
Petitioner provides detailed claim charts for each of the challenged claims. Pet. 30–50. In addition, Petitioner provides supporting testimony from its expert, Mr. Ivan Zatkovich. Ex. 1002.

For example, 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,” Petitioner relies on Chen’s disclosed method of sending an SMS message with a cellular phone to request stock information. *See* 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).

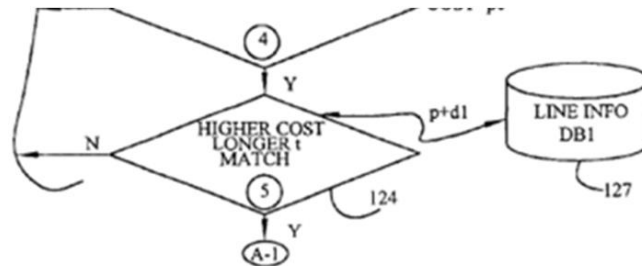
With regard to the claimed “composing a text-based response message” upon confirmation of the user’s authenticity, Petitioner relies on Chen’s disclosure that the response is sent back to the user through the same text-based message channel. Pet. 35 (citing Ex 1005 ¶ 44).

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 illustrates how Angel’s process “first checks 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):



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)).

Notwithstanding Patent Owner's arguments, discussed below, we are persuaded at this stage of the proceeding by Petitioner's asserted reasons for combining Chen, Angel, and Rao, and Petitioner's showing that the proposed combination satisfies the limitations recited in the claims.

Patent Owner argues that the Petitioner impermissibly relies on non-analogous art, as neither Angel nor Chen is in the same field of endeavor as the '297 patent. Prelim. Resp. 1, 4. In particular, Patent Owner argues that Angel's field of endeavor is for Internet-based financial transactions, unlike the SMS protocol system disclosed by Chen. *See id.* at 11. Patent Owner argues that Angel's disclosed use of cellular telephones is limited to one that is "properly configured" to access the Internet, presumably narrowing Angel's field of endeavor to exclude those that use SMS communications. *Id.* at 9.

Even if Angel discloses that cellular phones must be "properly configured" to access the Internet (Ex. 1006, 1:29–34), as Patent Owner points out, we disagree with Patent Owner's argument that this disclosure somehow limits Angel's field of endeavor to exclude those cellular phones contemplated by Chen or the '297 patent. "The identification of analogous prior art is a factual question." *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (internal citation omitted). "Th[e field of endeavor] test for analogous art requires the PTO to determine the appropriate field of endeavor by reference to explanations of the invention's subject matter in the patent application, including the embodiments, function, and structure of the

claimed invention.” *Id.* at 1325 (citations omitted). In the present case, 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. Similarly, Chen describes a “mobile device server . . . for allowing mobile devices . . . to relay message to each other and to obtain information from a range of information spaces” (Ex. 1005 ¶ 8) and that “the mobile device server . . . can rely upon a variety of authentication techniques” (*id.* ¶ 71). Angel, likewise, describes an authentication process for financial transactions (Ex. 1006, 1:5–9) that may use a variety of communication devices, including cellular telephones (*id.* at 3:59–65, 8:41–46). Although Angel discloses that cellular phones are “properly configured” for accessing the Internet (*id.* at 1:29–34), we are not persuaded that this disclosure renders Angel non-analogous art to the ’297 patent. Notably, Angel and the ’297 patent each discloses using cellular phones for accessing information. Accordingly, at this stage, we agree with Petitioner and find that Chen and Angel are in the same field of endeavor as the ’297 patent, namely, the authentication of mobile requests for information and/or transactions. Pet. 26. We further note that this finding is supported by the testimony of Mr. Zatkovich. Ex. 1002 ¶ 85.

Patent Owner also argues that the prior art teaches away from making the proposed combination. Prelim. Resp. 4–5. In particular, Patent Owner contends that Chen promotes the use of other, more secure protocols, thereby teaching away from the solution provided by the ’297 patent. *Id.* at 7. Patent Owner asserts also that Chen specifically criticizes the SMS

protocol by acknowledging its security limitations and by instead suggesting alternative protocols. *Id.* at 12 (citing Ex. 1005 ¶ 71).

We disagree. Prior art does not teach away from claimed subject matter merely by disclosing a different solution to a similar problem unless the prior art also criticizes, discredits or otherwise discourages the solution claimed. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). In the present case, Patent Owner’s argument is unpersuasive as we disagree with the assertion that Chen criticizes the SMS protocol. To the contrary, paragraph 71 of Chen—which Patent Owner cites to in support of its argument—discloses that the use of the SMS protocol is “generally acceptable.” *See* Ex. 1005 ¶ 71 (“to provide the correct cell phone id when a short message (SMS) is received is generally acceptable unless a cell phone is stolen and the user did not lock the phone with a security password.”). Accordingly, Patent Owner’s argument that Chen teaches away from the claimed subject matter is unpersuasive.

Patent Owner further argues that even if Chen and Angel were combined, the combination would not have all elements of the claimed invention. Prelim. Resp. 12. In particular, Patent Owner asserts that combining Chen and Angel would result in an Internet-based system rather than the claimed text-message based SMS system. *See id.* at 14.

Patent Owner’s argument is unpersuasive. As discussed *supra*, the proposed ground combines Chen’s SMS messaging system with Angel’s teaching of using username and caller ID for authentication purposes. Pet. 26–27 (citations omitted). Angel teaches that the person seeking to conduct a financial transaction may do so with a cellular phone. Ex. 1006, 8:42–46.

Chen teaches that a wide variety of information can be used for authentication, including usernames, user ID, and passwords. Ex. 1005 ¶¶ 70–71. To the extent that Patent Owner’s argument is premised on an assumption that Angel’s authentication (using username and caller ID) would not have been combined with an SMS-based system, such as Chen’s, we are not persuaded, as Patent Owner fails to rebut persuasively Petitioner’s evidence to the contrary. See Prelim. Resp. 12–14. Here, Petitioner’s expert, Mr. Zatkovich, testifies 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. Mr. Zatkovich further testifies 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.* Accordingly, at this stage, we find that it would have been obvious to combine Chen and Angel, as proposed in the Petition.

Patent Owner also argues that Mr. Zatkovich’s testimony should be rejected, because his reasoning for combining Chen with Angel is unsupported and conclusory. Prelim. Resp. 14–15. Patent Owner’s argument is unpersuasive, as we disagree with its characterization of Mr. Zatkovich’s testimony. To the contrary, we find that Mr. Zatkovich’s declaration includes adequate supporting citations to the record. For example, in testifying that it would have been obvious to a person of ordinary skill in the art to have combined Chen and Angel, Mr. Zatkovich’s declaration cites to Chen’s disclosure of a username in its database (Ex.

1002 ¶ 88 (citing Ex. 1005 ¶ 71)), Chen’s suggestion of using a security password for increased security (*id.* ¶ 86 (citing Ex. 1005 ¶ 71)), and Angel’s recognition of a need for authentication in mobile communications (*id.* ¶ 87 (citing Ex. 1006, 1:30–58)).

Therefore, we conclude that, on the record presented, Petitioner has demonstrated a reasonable likelihood of prevailing on its challenge to claims 1, 2, 4, 6, and 9–11 as unpatentable over Chen, Angel, and Rao.

C. 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 satisfy this claimed limitation, Petitioner relies on Gress. Pet. 53. To illustrate Petitioner’s reliance on Gress, we reproduce Figure 1 of Gress, below:

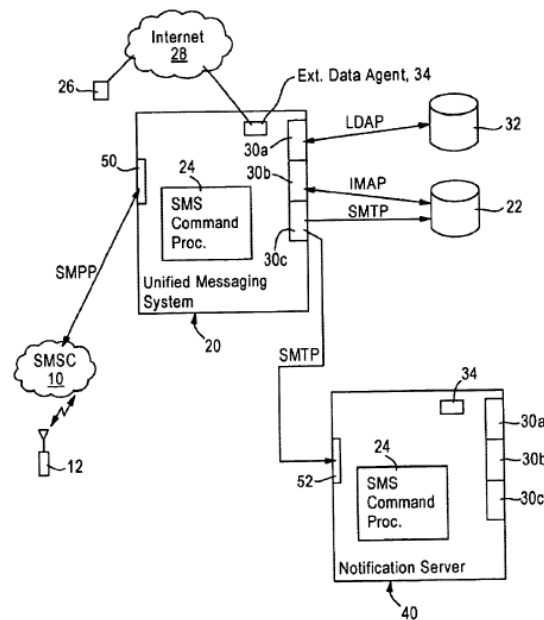


Figure 1

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 respond to this challenge.

We have considered Petitioner's analysis, and on the record presented, 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, and we determine that Petitioner has demonstrated a reasonable

likelihood it will prevail on its challenge to claim 3 as unpatentable over Chen, Angel, Rao, and Gress.

D. 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 a 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 satisfy this claimed 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 respond to this ground.

We have considered Petitioner’s analysis, and on the record presented, 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 Petitioner has demonstrated a reasonable likelihood it will prevail on its challenge to claims 5 and 7 as unpatentable over Chen, Angel, Rao, and Yang.

E. 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 respond to this challenge.

We have considered Petitioner’s analysis, and on the record presented, 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 improve security, and we determine that Petitioner has demonstrated a reasonable likelihood it will prevail on its challenge to claim 8 as unpatentable over Chen, Angel, Rao, and Serbetciouglu.

IV. CONCLUSION

For the foregoing reasons, upon review of Petitioner’s analysis and supporting evidence, we conclude that Petitioner has demonstrated a reasonable likelihood that it will prevail with regards to its challenge of claims 1–11. At this stage of the proceeding, although we exercise our

discretion and institute review, we remind the parties that we have not yet made a final determination as to the patentability of any challenged claims.

V. ORDER

For the foregoing reasons, it is:

ORDERED that pursuant to 35 U.S.C. § 314, an *inter partes* review of the '297 patent is hereby instituted for claims 1, 2, 4, 6, and 9–11 as unpatentable over Chen, Angel, and Rao;

FURTHER ORDERED that an *inter partes* review is hereby instituted for claim 3 of the '297 patent as unpatentable over Chen, Angel, Rao, and Gress;

FURTHER ORDERED that an *inter partes* review is hereby instituted for claims 5 and 7 of the '297 patent as unpatentable over Chen, Angel, Rao, and Yang;

FURTHER ORDERED that an *inter partes* review is hereby instituted for claim 8 of the '297 patent as unpatentable over Chen, Angel, Rao, and Serbetciouglu;

FURTHER ORDERED that review based on any other proposed grounds of unpatentability is not authorized; and

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

IPR2017-00083
Patent 7,197,297 B2

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