

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COX COMMUNICATIONS, INC.,
Petitioner,

v.

AT&T INTELLECTUAL PROPERTY I, L.P.,
Patent Owner.

Case IPR2015-01227
Patent 7,907,714 B2

Before MICHAEL R. ZECHER, BRIAN P. MURPHY, and
SHEILA F. McSHANE, *Administrative Patent Judges*.

ZECHER, *Administrative Patent Judge*.

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

I. BACKGROUND

A. Introduction

Petitioner, Cox Communications, Incorporated (“Cox”), filed a Revised, Amended Petition requesting an *inter partes* review of claims 1–22 of U.S. Patent No. 7,907,714 B2 (Ex. 1001, “the ’714 patent”). Paper 9 (“Pet.”). Patent Owner, AT&T Intellectual Property I, Limited Partnership (“AT&T”), filed a Preliminary Response. Paper 12 (“Prelim. Resp.”). Taking into account the arguments presented in AT&T’s Preliminary Response, we determined that the information presented in the Petition established that there was a reasonable likelihood that Cox would prevail in challenging claims 1–7, 11–17 and 20 of the ’714 patent under 35 U.S.C. § 102(e)(2), and claims 8–10, 14, 15, 18, 19, 21, and 22 under 35 U.S.C. § 103(a). Pursuant to 35 U.S.C. § 314(a), we instituted this *inter partes* review proceeding on November 19, 2015, as to claims 1–22 of the ’714 patent. Paper 13 (“Dec. on Inst.”).

During the course of trial, AT&T filed a Patent Owner Response (Paper 40, “PO Resp.”); Cox filed a Reply to the Patent Owner Response (Paper 48, “Pet. Reply”); AT&T filed a paper identifying certain statements in Cox’s Reply that purportedly exceeded the proper scope of a reply (Paper 51); Cox filed a responsive paper identifying how certain statements in its Reply are responsive to arguments presented by AT&T in its Patent Owner Response (Paper 54); AT&T filed two Sur-replies, one pre-oral argument (Paper 55 “First Sur-reply”) and one post-oral argument (Paper 64, “Second Sur-reply”); AT&T filed a Motion for Observation regarding certain cross-examination testimony of Cox’s reply witness, Professor Nader F. Mir,

Ph.D. (Paper 56, “Obs.”); and Cox filed a Response to AT&T’s Motion for Observation (Paper 60, “Obs. Resp.”). We held a consolidated oral hearing on August 23, 2016, in relation to this proceeding and the following three proceedings involving the same parties: (1) Case IPR2015-01187; (2) Case IPR2015-01273; and (3) Case IPR2015-01536.¹ A transcript of the entire consolidated hearing is included in the record. Paper 65 (“Tr.”). In particular, the transcript at page 47, line 7 through page 87, line 19 corresponds to the morning session of the consolidated oral hearing, and pertains only to this proceeding.

We have jurisdiction under 35 U.S.C. § 6. This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims

¹ Three days prior to the oral argument held on August 23, 2016, the parties notified us of roughly one hundred unresolved objections to the parties’ demonstratives. Given the sheer volume of objections leveled by both parties, we instructed the parties to meet and confer to attempt to resolve these objections. During oral argument, counsel for AT&T indicated that the parties did not meet and confer as we instructed them to do. Tr. 5:10–18. We see no need to resolve these objections at this time for the following two reasons: (1) the demonstratives are not of record in this proceeding; and (2) demonstratives do not constitute evidence, and should not be used to introduce new argument or evidence. See Paper 59, 3 (stating “[d]emonstrative exhibits are not evidence, but merely a visual aid at the oral arguments”); Tr. 5:21 (stating “demonstratives are not evidence”); see also *St. Jude Medical, Cardiology Division, Inc. v. The Board of Regents of the University of Michigan*, Case IPR2013-00041, slip op. at 2–3 (PTAB Jan. 27, 2014) (Paper 65) (“[D]emonstrative exhibits are not evidence; as such, the exhibits cannot add new evidence to the record of the proceeding. Nor can the exhibits rely on evidence that, although it is in the record, was never specifically discussed in any paper before the Board.”).

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1–22 of the ’714 patent. For the reasons discussed below, we hold that Cox has demonstrated by a preponderance of the evidence that claims 1–7, 11, 13–17, 21, and 22 are unpatentable under §§ 102(e)(2) and 103(a). We further hold that Cox has not demonstrated by a preponderance of the evidence that claims 8–10, 12, and 18–20 are unpatentable under §§ 102(e)(2) and 103(a).

B. Related Matters

The ’714 patent has been asserted in a district court case titled *AT&T Intellectual Prop. I, L.P. v. Cox Commc’ns, Inc.*, No. 14-1106-GMS (D. Del.). Pet. 1; Paper 4, 2. In addition to this Petition, Cox filed three other petitions challenging the patentability of certain subsets of claims in the following patents owned by AT&T or one of its affiliates: (1) U.S. Patent No. 6,993,353 B2 (Case IPR2015-01187); (2) U.S. Patent No. 6,487,200 B1 (Case IPR2015-01273); and (3) U.S. Patent No. 8,855,147 B2 (Case IPR2015-01536).

C. The ’714 Patent

The ’714 patent, titled “Profile Management System Including User Interface for Accessing and Maintaining Profile Data of User Subscribed Telephony Services,” issued on March 15, 2011, from U.S. Patent Application No. 11/459,121, filed on July 21, 2006. Ex. 1001, at [54], [45], [21], [22]. The ’714 patent claims priority to the following applications: (1) U.S. Patent Application No. 10/761,382, filed on January 22, 2004—now U.S. Patent No. 7,103,165; (2) U.S. Patent Application No. 09/050,986, filed on March 31, 1998; and (3) U.S. Provisional Application No. 60/042,680

(Ex. 2039, “the ’680 provisional application”), filed on April 3, 1997. *Id.* at [63], [60].

The ’714 patent generally relates to the field of telecommunications and, in particular, to a user interface, e.g., on a personal computer (“PC”), that allows a user to access and maintain profile data associated with the user’s subscribed telephone service. Ex. 1001, 1:31–35. According to the ’714 patent, prior art systems limit a user’s ability to access and maintain its service profile data freely. *Id.* at 3:49–51. For instance, dual tone multi-frequency-based interfaces do not provide an efficient or user-friendly system that allows a user to review and revise its service profile data. *Id.* at 3:54–56. In addition, advanced intelligent network (“AIN”)-based services do not provide an effective solution for automated service management and maintenance. *Id.* at 3:56–61. Consequently, the ’714 patent asserts that a need exists for a user interface that allows a user to perform the following functions: (1) access and maintain its service profile data freely; and (2) review and update its service data without requiring the involvement of, or interaction with, service personnel. *Id.* at 3:61–67.

The ’714 patent purportedly addresses this need by providing a profile management system that includes a user interface, such as a PC interface, for accessing and maintaining profile data of a user’s subscribed telephone service. Ex. 1001, 6:62–65. The telephony service, which may be an AIN-based service, includes profile data that controls or defines the service features and parameters associated with the service subscribed to by the user. *Id.* at 6:65–7:2. The user employs the user interface to access, maintain, and modify its service profile data freely, and without the

involvement of, or interaction with, service personnel. *Id.* at 7:2–5; *see also id.* at 5:20–23, 6:8–11, 6:18–21 (disclosing the same).

D. Illustrative Claim

Of the challenged claims, claims 1 and 13 are independent. Independent claim 1 is directed to a method for managing, by a profile management system, subscriber profile data associated with a communications service subscribed to by a subscriber. Independent claim 13 is directed to a similar method. Claims 2–12 directly or indirectly depend from independent claim 1; and claims 14–22 directly or indirectly depend from independent claim 13. Independent claim 1 is illustrative of the challenged claims and is reproduced below:

1. A method for managing, by a profile management system, subscriber profile data associated with a communications service subscribed to by a subscriber, the subscriber profile data being stored on a communications network which executes the communications service in accordance with the subscriber profile data, the method comprising:
 - receiving a subscriber request to view the subscriber profile data from a client which hosts a user interface configured to allow the subscriber to view and update the subscriber profile data;
 - retrieving the subscriber profile data from the communications network based upon receiving the subscriber request to view the subscriber profile data from the client;
 - forwarding the subscriber profile data to the client;
 - receiving a subscriber request to update the subscriber profile data from the client, and
 - forwarding an update for the subscriber profile data to the communications network based upon receiving the subscriber request to update the subscriber profile data from the client.

E. Prior Art Relied Upon

Cox relies upon the following prior art references:

Inventor²	U.S. Patent No.	Dates	Exhibit No.
Buhrmann	5,903,845	issued May 11, 1999, filed June 4, 1996	1004
An	6,031,904	issued Feb. 29, 2000, filed June 19, 1997 ³	1005
Boulware	5,757,899	issued May 26, 1998, filed Aug. 28, 1997	1008
Bayless	5,754,636	issued May 19, 1998, filed Feb. 21, 1997	1009
Beck	5,883,946	issue Mar. 16, 1999, filed Nov. 27, 1996	1010

F. Instituted Grounds of Unpatentability

We instituted this proceeding based on the asserted grounds of unpatentability (“grounds”) set forth in the table below. Dec. on Inst. 41.

Reference(s)	Basis	Claim(s) Challenged
Buhrmann	§ 102(e)(2)	1–7, 12–17, and 20
Buhrmann and Boulware	§ 103(a)	8, 9, 18, and 19

² For clarity and ease of reference, we only list the first named inventor.

³ An claims the benefit of U.S. Provisional App. No. 60/028,760 (Ex. 1006, “An provisional application”), filed on October 23, 1996. Ex. 1005, at [60].

Reference(s)	Basis	Claim(s) Challenged
Buhrmann, Boulware, and Bayless ⁴	§ 103(a)	10
Buhrmann and Beck	§ 103(a)	14, 15, 21, and 22
An	§ 102(e)(2)	1–7, 11, and 13–17
An and Bayless	§ 103(a)	10
An and Beck	§ 103(a)	14, 15, 21, and 22

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms are given their broadest reasonable interpretation in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); see *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142–46 (2016) (upholding the use of the broadest reasonable interpretation standard as the claim construction standard to be applied in an *inter partes review* proceeding). Under the broadest reasonable interpretation standard, and absent any special definitions, claims terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art, in the context of the entire

⁴ As we indicated in the Decision on Institution (Dec. on. Inst. 6 n.2), Cox contends that dependent claim 10 is unpatentable under § 103(a) over the combination of Buhrmann and Bayless. Pet. 3–4, 31–40. Cox, however, contends that dependent claim 9, from which claim 10 depends, is unpatentable under § 103(a) over the combination of Buhrmann and Boulware. *Id.* Because Boulware is part of the ground asserted against dependent claim 9, we presume that Cox intended to assert that dependent claim 10 is unpatentable under § 103(a) over the combination of Buhrmann, Boulware, and Bayless.

disclosure. *In re Translogic Tech. Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

In its Petition, Cox did not present arguments or evidence as to whether the preamble of independent claim 1 is entitled to patentable weight. AT&T, however, contended that “subscriber profile data . . . the subscriber profile data being stored on a communication network which executes the communications service in accordance with the subscriber profile data,” as recited in the preamble of independent claim 1, is entitled to patentable weight because this portion of the preamble limits and provides antecedent basis for certain claim terms or phrases found in the body of independent claim 1. Prelim. Resp. 28–29. For purposes of the Decision to Institute, we agreed with AT&T that this portion of the preamble of independent claim 1 is entitled to patentable weight because it states necessary and defining aspects of the invention embodied in this claim. Dec. on Inst. 14–16.

In its Patent Owner Response, AT&T does not address separately our initial determination that the portion of the preamble of independent claim 1 identified above is limiting. Nor does Cox address our determination in this regard in its Reply. Consequently, we discern no reason to address or alter that determination for the purposes of this Final Written Decision.

B. Anticipation by Buhrmann

Cox contends that claims 1–7, 12–17, and 20 are anticipated under § 102(e)(2) by Buhrmann. *See* Pet. 31–40. In support of this asserted ground, Cox explains how Buhrmann purportedly describes the subject matter of each challenged claim (*id.*), and relies upon the Declaration of

Dr. Mir (Ex. 1014) to support its positions. In its Patent Owner Response, AT&T presents a number of arguments as to why Buhrmann does not describe certain limitations recited in independent claims 1 and 13.

PO Resp. 12–42. AT&T relies upon Declaration of Dr. Robert Akl, D.Sc. to support its positions. Ex. 2043. In its Reply, Cox does not present any counter arguments, much less address the instituted ground based on anticipation by Buhrmann at all. *See generally* Pet. Reply 1–29; *accord* Tr. 48:1–20 (confirming Cox did not address the grounds based on Buhrmann in its Reply). Based on the record develop during trial, we agree with AT&T’s arguments that Buhrmann does not describe certain limitations recited in independent claims 1 and 13.

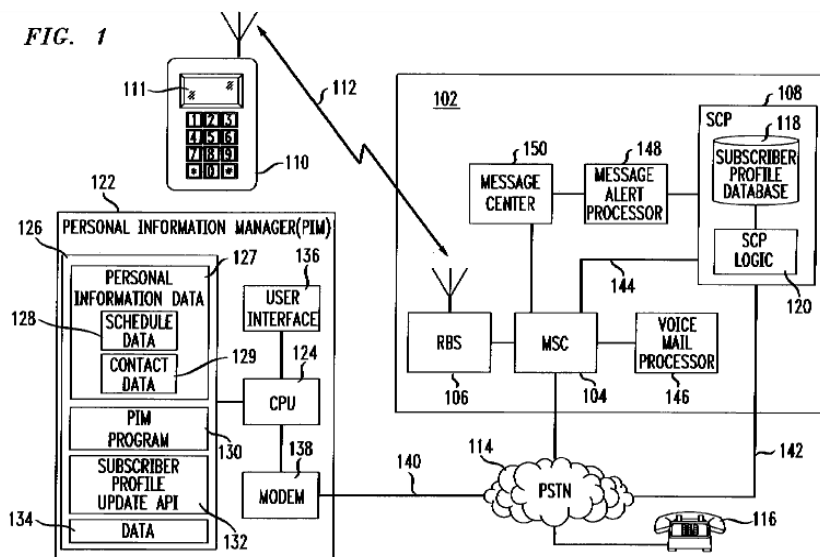
We begin our analysis with the principles of law that generally apply to a ground based on anticipation, followed by a brief overview of Buhrmann, and then we address the parties’ arguments directed to independent claims 1 and 13.

1. Principles of Law

To establish anticipation, “all of the elements and limitations of the claim must be shown in a single prior reference, arranged as in the claim.” *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). We analyze this asserted ground based on anticipation with the principles stated above in mind.

2. Buhrmann Overview

Buhrmann generally relates to personal information managers (“PIMs”) and, in particular, to updating a telecommunication subscriber profile based on information entered into a PIM. Ex. 1004, 1:13–17. Figure 1 of Buhrmann, reproduced below, illustrates a system for updating a telecommunication subscriber profile via a wired communication link and for providing telecommunications services based on the updated subscriber profile. *Id.* at 4:50–53, 5:13–15.

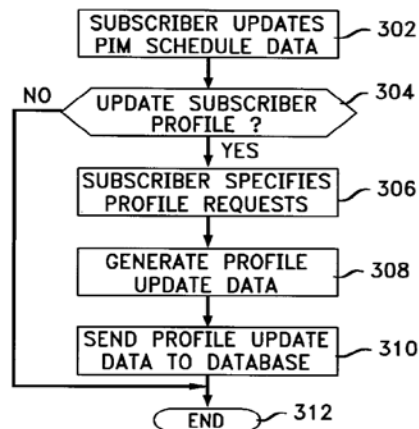


As shown in Figure 1 of Buhrmann, wireless cellular communication network 102 includes mobile switching center (“MSC”) (104), radio base station (“RBS”) (106), service control point (“SCP”) (108), voice mail processor (146), message center (150), and message alert processor (148). Ex. 1004, 5:15–20. SCP 108 contains both database 118, which stores subscriber profiles, and SCP logic 120, which is a computer processor executing stored program instructions in a manner that is old and well known in the art. *Id.* at 5:57–62.

Buhrmann further discloses that a prospective user may use PIM 122 to update its subscriber profile record stored in database 118. Ex. 1004, 6:37–39. PIM 122 includes central processing unit 124 connected to memory 126, user interface 136, and modem 138. *Id.* at 6:46–49. Memory 126 contains storage areas for storing personal information data 127, PIM program 130, subscriber profile update application program interface 132, and other data 134. *Id.* at 6:49–52. According to Buhrmann, personal information data 127 includes schedule data 128 and contact data 129 used to update the subscriber profile stored in database 118. *See id.* at Abstract, 6:52–53.

Figure 3 of Buhrmann, reproduced below, illustrates a flowchart of the steps of generating data for use in updating a subscriber profile stored in database 118. Ex. 1004, 4:56–58, 7:25–28.

FIG. 3



As shown in step 302 of Figure 3, Buhrmann discloses that the subscriber updates schedule data 128, which is part of personal information data 127, via user interface 136 on PIM 122. Ex. 1004, 7:33–36; Fig. 4. At step 304, upon entry of schedule data 128 (“the PIM entry”), PIM 122

queries the subscriber as to whether he/she would like to update his/her telecommunication subscriber profile based on the PIM entry. *Id.* at 7:55–60. At step 306, if the subscriber answers “Yes” to this query, the subscriber enters the profile request into PIM 122. *Id.* at 7:62–64. At step 308, after the subscriber enters and confirms the profile request, PIM 122 generates profile update data appropriate for updating its subscriber profile stored in database 118. *Id.* at 8:37–40, Fig. 5. At step 310, PIM 122 transmits the profile update data to database 118 located in wireless cellular communication network 102. *Id.* at 9:14–22.

3. Claim 1

Cox contends that Buhrmann describes all the limitations recited in independent claim 1. Pet. 33–35. In particular, Cox argues that Buhrmann’s PIM 122 allows a subscriber to view, enter, and update personal information data 127 associated with the subscriber’s profile stored in database 118, which is contained within SCP 108 located on wireless cellular communication network 102. *Id.* at 34 (citing Ex. 1004, 6:37–53, 7:13–39, 8:4–14, Figs. 1, 3–5; Ex. 1014 ¶ 80); *see also id.* at 13–15 (arguing the same). Based on these arguments, we understood Cox to assert that Buhrmann’s subscriber profiles stored in database 118 constitute the claimed “subscriber profile data,” and Buhrmann’s wireless cellular communication network 102 constitutes the claimed “communications network.” *See* Dec. on Inst. 19.

In its Patent Owner Response, AT&T contends that Buhrmann does not describe “retrieving the subscriber profile data from the communications network based upon receiving the subscriber request to view the subscriber

profile data from the client,” as recited in independent claim 1 (“the ‘retrieving’ step”). PO Resp. 12–14. Relying extensively on the testimony of its expert witness, Dr. Akl, AT&T argues that Buhrmann maintains personal information data 127, such as schedule data 128 and contact data 129, in memory 126 of PIM 122. *Id.* at 14 (citing Ex. 2043 ¶ 53). AT&T further argues that a prospective user may use this personal information data 127 to generate profile update data, which, in turn, PIM 122 transmits to SCP 108 located on wireless cellular communication network 102. *Id.* at 14–15 (citing Ex. 2043 ¶¶ 54, 55). AT&T then argues that SCP 108 recognizes the profile update data and uses this data to update the user’s profile stored in database 118. *Id.* at 15 (citing Ex. 1004, 9:19–22; Ex. 2043 ¶ 55). According to AT&T and Dr. Akl, this process disclosed in Buhrmann of transmitting profile update data from PIM 122 to wireless cellular communication network 102 is a one-way or blind push process that does not include the “retrieving” step recited in independent claim 1. *Id.* at 16–17 (citing Ex. 2043 ¶¶ 43, 44, 57); *see also id.* at 20–21 (arguing the same).

In addition, AT&T readily admits that Buhrmann discloses using modem 138 to send information from PIM 122 to SCP 108. PO Resp. 18 (citing Ex. 1004, 7:21–22). AT&T, however, argues that, even though modem 138 may be capable of receiving information, there is no express or inherent disclosure that this particular modem receives data from wireless cellular communication network 102, much less user profile data stored in database 118 based on a request from PIM 122, as is required by independent claim 1. *Id.* (citing Ex. 2043 ¶ 62). In other words, AT&T asserts that the presence of modem 138 in Buhrmann—conventional or

otherwise—does not alter the blind push process disclosed therein. *Id.*; see also *id.* at 32 (arguing the same).

On the record developed during trial, we agree with AT&T that the update process disclosed in Buhrmann is a blind push process. Buhrmann discloses that a prospective user interacts with user interface 136 on PIM 122 to retrieve and update personal information data 127 stored in local memory 126. Ex. 1004, 7:18–21. Buhrmann then discloses that personal information data 127, such as updated schedule data 128, are used to generate profile update data, which, in turn, are sent by modem 128 to SCP 108 to update the user’s profile stored remotely in database 118. *Id.* at 7:21–36, Fig. 3. We find this update process amounts to a blind push process because the user is retrieving personal information data 127 stored locally in memory 126 of PIM 122, using certain updates to this personal information data 127 to generate profile update data, and then transmitting or pushing the profile update data to remote database 118. At no point during the course of trial has Cox or its expert witness, Dr. Mir, specifically asserted that the update process disclosed in Buhrmann somehow includes retrieving user profile data from remote database 118 (located on wireless cellular communication network 102) based on receiving a request from a user at PIM 122 to view the user’s profile data.

We also find Dr. Akl’s unrebutted testimony on this particular issue persuasive because it is consistent with the disclosures in Buhrmann discussed above. Ex. 2043 ¶¶ 44 (stating “[t]here is no ‘pull’ or retrieval of data from the communications network in Burhrmann”), 53–57, 62. For this reason, we credit his testimony that Buhrmann does not describe the

“retrieving” step recited in independent claim 1. Based on the record developed during trial, we conclude that Cox has not demonstrated by a preponderance of the evidence that independent claim 1 is anticipated by Buhrmann.

4. Claims 2–7 and 12

By virtue of their dependency, claims 2–7 and 12 include the same limitations as independent claim 1. Therefore, for the same reasons discussed above with respect to independent claim 1, we conclude that Cox has not demonstrated by a preponderance of the evidence that dependent claims 2–7 and 12 are anticipated by Buhrmann.

5. Claim 13

Cox contends that Buhrmann describes all the limitations recited in independent claim 13. Pet. 37–38. Cox relies upon essentially the same contentions with respect to independent claim 1 to support its assertion that independent claim 13 is anticipated by Buhrmann. *Compare id.* at 33–35, *with id.* at 37–38.

In its Patent Owner Response, AT&T contends that Buhrmann does not describe “the profile management system being configured to forward the subscriber profile data to the client when the profile management system receives the subscriber profile data,” as recited in independent claim 13 (“the ‘forwarding’ step”). PO Resp. 39. AT&T argues that, because Buhrmann does not describe the “retrieving” step recited in independent claim 1, Cox’s explanation as to how Buhrmann describes the “forwarding” step recited in independent claim 13 also is insufficient. *Id.* at 39–40.

As we explained above with respect to independent claim 1, on this record we agree with AT&T that the update process disclosed in Buhrmann is a blind push process. Cox asserts that Buhrmann's PIM 122 constitutes the claimed "profile management system" (*see* Dec. on Inst. 23), but Cox does not explain adequately how PIM 122 forwards user profile data when the evidence indicates PIM 122 never receives such data from remote database 118. *See* Pet. 49. Instead, Buhrmann merely discloses that PIM 122 transmits or pushes the profile update data to remote database 118. Ex. 1004, 7:21–36, Fig. 3. Once again, at no point during the course of trial has Cox or its expert witness, Dr. Mir, specifically asserted that the update process disclosed in Buhrmann somehow includes PIM 122 forwarding user profile data to a user, as required by independent claim 13, especially when PIM 122 never receives such data from remote database 118. For this reason, Cox has not established sufficiently that Buhrmann describes the "forwarding" step recited in independent claim 13. Based on the record developed during trial, we conclude that Cox has not demonstrated by a preponderance of the evidence that independent claim 13 is anticipated by Buhrmann.

6. Claims 14–17 and 20

By virtue of their dependency, claims 14–17 and 20 include the same limitations as independent claim 13. Therefore, for the same reasons discussed above with respect to independent claim 13, we conclude that Cox has not demonstrated by a preponderance of the evidence that dependent claims 14–17 and 20 are anticipated by Buhrmann.

C. Obviousness Based, in Part, on Buhrmann

Cox contends that claims 8, 9, 18, and 19 are unpatentable under § 103(a) over the combination of Buhrmann and Boulware; claim 10 is unpatentable over the combination of Buhrmann, Boulware, and Bayless; and claims 14, 15, 21, and 22 are unpatentable over the combination of Buhrmann and Beck. *See* Pet. 31–40. By virtue of their dependency, each of claims 8–10, 14, 15, 18, 19, 21, and 22 include the same limitations as either independent claim 1 or 13. As applied by Cox, Boulware, Bayless, and Beck do not remedy the deficiencies in Buhrmann identified above. *See id.* at 33–35, 37–38. Therefore, for the same reasons discussed above with respect to independent claims 1 and 13, we conclude that Cox has not demonstrated by a preponderance of the evidence that dependent claims 8, 9, 18, and 19 would have been obvious over the combination of Buhrmann and Boulware; dependent claim 10 would have been obvious over the combination of Buhrmann, Boulware, and Bayless; and dependent claims 14, 15, 21, and 22 would have been obvious over the combination of Buhrmann and Beck.

D. Grounds Based, In Whole or In Part, on An

Cox contends that claims 1–7, 11, and 13–17 are anticipated under § 102 by An. *See* Pet. 40–52. Cox explains how An describes the subject matter of each challenged claim (*id.*), and relies upon the Declaration of Dr. Mir (Ex. 1014) to support its positions. Cox relies on the An non-provisional application filed on June 19, 1997, and the An provisional application filed on October 23, 1996, both of which pre-date the '714 patent's earliest non-provisional filing date of March 31, 1998, in support of

this asserted ground based on anticipation by An. *See* Pet. 3–4, 15–17, 42–52.

In its Patent Owner Response, AT&T contends that An does not qualify as prior art to the '714 patent for the following three reasons: (1) the '714 patent is entitled to claim the benefit of the '680 provisional application filed on April 3, 1997; (2) Cox has not demonstrated that the An provisional application provides sufficient written description support for certain limitations recited in independent claim 1 of An; and (3) even if An is entitled to claim the benefit of the filing date of the An provisional application, the invention covered by the challenged claims of the '714 patent was actually reduced to practice as of July 17, 1996. PO Resp. 44–60. AT&T relies upon evidence introduced with its Patent Owner Response to support its positions, including the Declaration of Dr. Akl. Ex. 2043.

In its Reply, Cox counters with the following arguments: (1) An qualifies as prior art to the '714 patent because there is sufficient written description support in the An provisional application to support the claims of An; and (2) AT&T does not demonstrate adequately that the invention covered by the challenged claims of the '714 patent was actually reduced to practice prior to October 3, 1996, because the weight of the evidence indicates that this invention did not work for its intended purpose as of July 17, 1996. Pet. Reply 1–29. To support these arguments, Cox relies on the Reply Declaration of Dr. Mir. Ex. 1027.

In its First Sur-reply, AT&T argues that the invention covered by the challenged claims of the '714 patent was embodied in AT&T's Positive ID system, and this system worked for its intended purpose prior to the An

provisional application filed on October 23, 1996. First Sur-reply 3–5. In its Second Sur-reply, AT&T maintains that the written description of the An provisional application does not support the “protocol conversion” limitation recited in independent claim 1 of An, as well as one other limitation recited in this claim. Second Sur-reply 1–4.

Based on the record develop during trial, we agree with Cox that An qualifies as prior art to the ’714 patent under § 102(e)(2) based on the An provisional application filed on October 23, 1996. In particular, we agree with Cox that the disclosure of the An provisional application provides sufficient written description support for at least independent claim 1 of An. We also agree with Cox that AT&T has not demonstrated that the invention covered by the challenged claims of the ’714 patent was actually reduced to practice prior to the An provisional application filed on October 23, 1996, because the weight of the evidence favors a determination that this invention did not work for its intended purpose as of July 17, 1996.

We begin our analysis with a discussion as to how An qualifies as prior art to the ’714 patent based on the An provisional application filed on October 23, 1996, then we turn to the parties’ arguments as to whether AT&T has demonstrated actual reduction to practice prior to this provisional filing date, followed by a brief overview of An, and finally we address the parties’ arguments directed to the challenged claims.

1. An Qualifies as Prior Art to The '714 Patent Under § 102(e)(2) Based on The An Provisional Application Filed on October 23, 1996

a. Development of The Issue in This Proceeding

In its Petition, Cox provides notice that it was relying on the An provisional application filed on October 23, 1996, to qualify An as prior art to the '714 patent under § 102(e)(2). *See* Pet. 17, 42–52. In particular, Cox states that “[t]he An Provisional Application, to which An claims priority, fully supports and explicitly describes An’s disclosure of the features claimed by the '714 patent, as shown at least in Table C, below.” *Id.* at 17 (emphases omitted). Table C in this statement from Cox refers to its claim chart that purports to establish anticipation of the challenged claims by both An and the An provisional application. *Id.* at 42–52. In further support of this argument, Cox directs us to the testimony of Dr. Mir. Dr. Mir testifies that “[m]y review of the An Provisional shows that it fully describes the substance of the subject matter claimed in An.” Ex. 1014 ¶ 101 (emphases omitted). This testimony is followed by an explanation from Dr. Mir as to how the An provisional application discloses the digital multiplexed switch (“DMS”) receiving a subscriber query for a service profile from a web browser, which is a feature recited in independent claim 1 of An. *See id.*

Although we recognize that the filing of a preliminary response is optional (*see* 37 C.F.R. § 42.107(a) (stating “[t]he patent owner *may* file a preliminary response to the petition”) (emphasis added)), AT&T nonetheless exercised this option. In its Preliminary Response, AT&T presented arguments that focused on (1) whether An describes certain limitations recited in independent claims 1 and 13; and (2) whether Cox provided

sufficient evidence to support its asserted rationales to combine the teachings of An with those of Bayless and Beck. *See* Prelim. Resp. 48–52. AT&T did not argue in its Preliminary Response that the position taken by Cox in its Petition was insufficient to demonstrate that An qualifies as prior art to the '714 patent.

It is undisputed that Cox must meet the “reasonable likelihood” threshold standard for institution, which includes, among other things, demonstrating that An qualifies as prior art to the '714 patent. Taking into account the arguments presented in AT&T’s Preliminary Response, we determined that Cox satisfied this threshold standard with respect to its asserted grounds based on An and instituted trial. *See* Dec. on. Inst. 31–39. Although not stated explicitly in the Decision on Institution, our determination in this regard included an implicit finding that Cox had presented sufficient argument and evidence in its Petition demonstrating that An qualifies as prior art to the '714 patent.

AT&T filed a Request for Rehearing under 37 C.F.R. § 42.71(d) seeking reconsideration of our Decision on Institution. Paper 15, “Req. Reh’g.” In its Request for Rehearing, AT&T presented arguments that focused on (1) whether we misapprehended or overlooked certain aspects of the real parties in interest argument under 35 U.S.C. § 312(a)(2) presented in AT&T’s Preliminary Response; and (2) whether we misapprehended or overlooked the purported dispositive effect of 37 C.F.R. § 42.104(b)(3) on Cox’s failure to take a position on claim construction in its Petition. Req. Reh’g 1–10. Once again, in this Request for Rehearing AT&T did not allege

or argue that the position taken by Cox in its Petition was insufficient to demonstrate that An qualifies as prior art to the '714 patent.

Although Cox indicates its reliance on the An provisional application filed on October 23, 1996, to qualify An as prior art to the '714 patent under § 102(e)(2) (*see* Pet. 4, 17, 42–52; Ex. 1014 ¶ 101), Cox also could have relied on An's actual filing date of June 19, 1997, which pre-dates the '714 patent filed on July 21, 2006, and the '714 patent's earliest non-provisional application filed on March 31, 1998. This is because there is no presumption that claims of a patent, including the '714 patent, are entitled to the effective filing date of its provisional application. *Dynamic Drinkware, LLC, v. National Graphics, Inc.*, 800 F.3d 1375, 1380 (Fed. Circ. 2015)⁵ (quoting *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1305 (Fed. Cir. 2008)). Applying this principle of law to AT&T's priority claim of the '714 patent, there is no presumption that the '714 patent is entitled to claim the benefit of the '680 provisional application filed on April 3, 1997. Therefore, even if we presume that the '714 patent is entitled to claim the benefit of the filing date of its earliest non-provisional application filed on March 31, 1998, An would qualify as prior art to the '714 patent under § 102(e)(2) based on its actual filing date of June 19, 1997.

In its Patent Owner Response, AT&T first contends that An does not qualify as prior art to the '714 patent. *See* PO Resp. 44–53. Relying on the

⁵ The U.S. Court of Appeals for the Federal Circuit issued the decision in *Dynamic Drinkware* on September 4, 2015, which was after Cox filed its Revised, Amended Petition on June 22, 2015.

testimony of Dr. Akl, AT&T argues that the '680 provisional application provides sufficient written description support for the challenged claims of the '714 patent. *Id.* at 46 (citing Ex. 2043 ¶¶ 96–99; Ex. 2039, 95–118). AT&T, therefore, asserts that the '714 patent is entitled to claim the benefit of the '680 provisional application filed on April 3, 1997. *Id.* Cox does not challenge AT&T's assertion in this regard during the course of trial. *See generally* Pet. Reply 1–29. The current situation does not require us to decide this issue because, as we explain below, An qualifies as prior art to the '714 patent based on the An provisional application filed on October 23, 1996.

Next, AT&T asserts that Cox made no attempt to demonstrate that the An provisional application provides sufficient written description support for the claims of An, in accordance with the Federal Circuit's decision in *Dynamic Drinkware*. PO Resp. 47–49. According to AT&T, this showing must be made in Cox's Petition, and because Cox made no such showing, its Petition is fatally deficient. *Id.* at 50–51. AT&T further asserts that any attempt by Cox to remedy this deficiency in its Reply would constitute new argument and evidence that should not be entitled to consideration. *Id.* at 51.

In its Reply, Cox contends that it carried its initial burden of production as to whether An is entitled to claim the benefit of the An provisional application because it asserted in its Petition that An qualifies as prior art to the '714 patent under § 102(e)(2). Pet. Reply 3–5 (citing Pet. 17, 40–52). In further support of this argument, Cox reiterates that Dr. Mir testified that “the An Provisional fully describes the substance of the subject

matter claimed in An.” *Id.* at 3 (emphases omitted) (citing Ex. 1014 ¶¶ 98–111). According to Cox, the arguments advanced by AT&T in its Patent Owner Response only shifted the burden of production back to Cox to present arguments and evidence that the claims of An are supported fully by the written description of the An provisional application. *Id.* at 5. Relying on Dr. Mir’s reply testimony, Cox identifies how the An provisional application provides sufficient written description support for the claims of An. *Id.* at 8–23 (citing Ex. 1027 ¶ 26).

After Cox filed its Reply, which includes a mapping of the written description of the An provisional application onto the claims of An, AT&T was afforded an opportunity to cross-examine Dr. Mir concerning his reply testimony on this particular issue. Ex. 2051. AT&T then filed a Motion for Observation regarding this cross-examination testimony of Dr. Mir. Obs. 2–5. During oral argument, AT&T was afforded an opportunity to further address—and indeed did argue—that the An provisional application does not provide sufficient written description support for certain limitations recited in the claims of An. *See* Tr. 74:3–76:19 (arguing that there is no support in the written description of the An provisional application for the “protocol conversion” language recited in independent claim 1 of An). Lastly, despite the fact that Cox—and not AT&T—carries the burden of demonstrating that An qualifies as prior art to the ’714 patent under § 102(e)(2) based on the An provisional application, we exercised our discretion under 37 C.F.R.

§ 42.20(d) to afford AT&T an opportunity to file a Second Sur-reply limited in scope to addressing Cox’s mapping of the original disclosure of the An

provisional application onto the claims of An. See Papers 61, 63; Second Sur-reply 1–7.

We have devoted a significant portion of this Final Written Decision to explaining how this issue developed throughout this proceeding for two reasons. First, the development of this issue helps highlight the similarities between this case and the Federal Circuit’s decision in *Dynamic Drinkware*. Second, our discussion of this issue also helps to provide context regarding the sufficiency of notice to AT&T of the argument and evidence presented by Cox, as well as the adequacy of AT&T’s opportunity to respond. We discuss each reason in turn.

b. Dynamic Drinkware Comparison

Dynamic Drinkware involved an appeal of a Board decision in an *inter partes* review proceeding. *Dynamic Drinkware*, 800 F.3d at 1377. In that case, the petitioner argued that a certain subset of claims were anticipated by U.S. Patent No. 7,153,555 (“the ’555 patent”), which claimed benefit to U.S. Provisional Application No. 60/182,490 (“the ’490 provisional application”). *Id.* The Board concluded that the petitioner failed to demonstrate that the ’555 patent was entitled to claim the benefit of the filing date of the ’490 provisional application. *Id.* In particular, the Board noted that, although the petitioner had shown where the subject matter of one of the challenged claims could be found in the ’490 provisional application, it had failed to compare the portions of the ’555 patent it was relying upon to the ’490 provisional application. *Id.*

The Federal Circuit affirmed the Board’s determination that the petitioner had failed to demonstrate that the ’555 patent was entitled to claim

the benefit of the filing date of the '490 provisional application. *Dynamic Drinkware*, 800 F.3d at 1382. In doing so, the Federal Circuit noted that the Board properly placed the burden on the petitioner “to prove that the prior art [’555] patent was entitled to the filing date of its provisional application.” *Id.* at 1379. In coming to that determination, the Federal Circuit distinguished two distinct burdens of proof—namely, (1) the burden of persuasion; and (2) the burden of production. *Id.* The “burden of persuasion ‘is the ultimate burden assigned to a party who must prove something to a specified degree of certainty;’” and in an *inter partes* review proceeding, this burden is on a petitioner to show unpatentability by a preponderance of the evidence. *Id.* (quoting *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)).

The Federal Circuit explained that the petitioner also had the burden of production to demonstrate that the '555 patent was prior art, which it satisfied by arguing that the '555 patent anticipated the challenged claims under 35 U.S.C. § 102(e)(2) based on the '555 patent's filing date. *Dynamic Drinkware*, 800 F.3d at 1379. The burden of production then shifted to patent owner “to argue or produce evidence” that the '555 patent was not prior art to the challenged claims. *Id.* at 1380. The patent owner satisfied this burden by producing evidence that the claimed invention was reduced to practice prior to the '555 patent's filing date. *Id.* The burden of production then returned to the petitioner to prove either that the claimed invention was not actually reduced to practice as argued by the patent owner, or that the '555 patent was entitled to claim the benefit of the earlier filing date of the '490 provisional application. *Id.*

The Federal Circuit noted that, in order for a patent to be entitled to the effective filing date of its provisional application, it must satisfy the requirements of 35 U.S.C. § 119(e)(1) (2006). *Dynamic Drinkware*, 800 F.3d at 1378.

In other words, the specification of the *provisional* must ‘contain a written description of the invention and the manner and process of making and using it, in such full, clear, concise, and exact terms,’ 35 U.S.C. § 112 ¶ 1, to enable an ordinarily skilled artisan to practice the invention *claimed* in the *non-provisional* application.

Id. (quoting *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1294 (Fed. Cir. 2002)).

In *Dynamic Drinkware*, the Federal Circuit determined that the petitioner failed to compare the claims of the ’555 patent to the disclosure of the ’490 provisional application, holding that “[a] reference patent is only entitled to claim the benefit of the filing date of its provisional application if the disclosure of the provisional application provides support for the claims in the reference patent in compliance with § 112, ¶ 1.” *Dynamic Drinkware*, 800 F.3d at 1381 (citing *In re Wertheim*, 646 F.2d 527, 537 (CCPA 1981)). That is, “[a] provisional application’s effectiveness as prior art depends on its written description support for the claims of the issued patent of which it was a provisional.” *Id.* at 1382.

As *Dynamic Drinkware* makes clear, the claims of the patent document must be supported by the earlier filed application to which priority is being sought, in compliance with § 112 ¶ 1. In addition, as held by the Federal Circuit in *In re Giacomini*, 612 F.3d 1380, 1383 (Fed. Cir. 2010),

“an applicant is not entitled to a patent if another’s patent discloses the same invention, which was carried forward from an earlier U.S. provisional application or U.S. non-provisional application.” Thus, the material relied upon as teaching the subject matter of the challenged claims must be carried through from that earlier filed application to the reference patent being used against the claim.

This case is similar to *Dynamic Drinkware*, particularly with respect to the shifting burden of production. Cox met its initial burden of production by providing notice to AT&T that An qualifies as prior art to the ’714 patent under § 102(e)(2). See Pet. 3–4, 17, 42–52; Ex. 1014 ¶ 101. Consequently, the burden of production then shifted to AT&T to argue or produce evidence that An does not qualify as prior art to the ’714 patent. Indeed, AT&T argued and produced evidence in its Patent Owner Response that (1) the ’714 patent is entitled to claim the benefit of the ’680 provisional application filed on April 3, 1997; (2) the An provisional application does not provide sufficient written description support for the claims of An, in accordance with the Federal Circuit’s decision in *Dynamic Drinkware*; and (3) even if An is entitled to claim the benefit of the An provisional application filed on October 23, 1996, the invention recited in the challenged claims of the ’714 patent was actually reduced to practice as of July 17, 1996. See PO Resp. 46–60.

As a result, the burden of production returned to Cox to demonstrate that An qualifies as prior art to the ’714 patent under § 102(e)(2) because An is entitled to claim the benefit of the An provisional application filed on October 23, 1996. As *Dynamic Drinkware* makes clear, this includes

demonstrating that the An provisional application provides sufficient written description support for the claims of An. *Dynamic Drinkware*, 800 F.3d at 1381. Cox provided a claim chart in its Reply mapping the written description of the An provisional application onto the claims of An. Pet. Reply 8–23 (citing Ex. 1027 ¶ 26). The remaining question, which we resolve below, is whether Cox has demonstrated that the An provisional application provides sufficient written description support for at least one claim of An. *See infra* Section II.D.1.d.

In its Patent Owner Response and Second Sur-reply, AT&T contends that Cox did not satisfy its initial burden of production in this case because Cox was required to show in its Petition how the An provisional application provides sufficient written description support for the claims of An. PO Resp. 50–51; Second Sur-reply 6–7. We do not agree with AT&T. As we explained above in our discussion of the development of this issue, just as there is no presumption that An is entitled to claim the benefit of the An provisional application filed on October 23, 1996, there also is no presumption that that '714 patent was entitled to claim the benefit of the '680 provisional application filed on April 3, 1997. Consequently, even if we were to presume that the '714 patent is entitled to claim the benefit of the filing date of its earliest non-provisional application filed on March 31, 1998, An would qualify as prior art to the '714 patent under § 102(e)(2) based on its actual filing date of June 19, 1997. In accordance with *Dynamic Drinkware*, the burden of production returned to Cox to demonstrate that An indeed qualifies as prior art to the '714 patent under § 102(e)(2) based on the An provisional application filed on October 23, 1996, only after AT&T

argued and produced evidence in its Patent Owner Response that the '680 provisional application filed on April 3, 1997, provides sufficient written description support for the challenged claims of the '714 patent.

c. Due Process

AT&T has raised the issue, particularly during the latter portions of this trial, that it was been denied its rights under due process and the Administrative Procedure Act (“APA”). For instance, during the oral argument, AT&T argues that it was denied due process because we improperly refused its initial request for authorization to file a sur-reply to address Cox’s Reply argument that includes a mapping of the written description of the An provisional application onto the claims of An. *See* Tr. 66:21–74:18. AT&T also argues that it was denied due process because we improperly refused its request to introduce and file new, testimonial evidence with its Second Sur-reply. Second Sur-reply 6–7; *see also* Paper 68 (arguing the same). We already addressed these alleged due process arguments in our Decision Denying Patent Owner’s Renewed Request for Rehearing. Paper 69. As a matter of convenience, we reproduce our analysis in that Decision below.

The Federal Circuit explained in *Genzyme Therapeutic Prods. Ltd. v. Biomarin Pharm. Inc.*, 825 F.3d 1360 (Fed. Cir. 2016) that “as long as the opposing party is given notice of the evidence and an opportunity to respond to it, the introduction of such evidence is perfectly permissible under the APA.” *Id.* at 1366. The Federal Circuit further explained that “[t]he critical question . . . is whether [a party] received ‘adequate notice of the issues that would be considered, and ultimately resolved, at that hearing.’” *Id.* at 1366–

67 (internal citation omitted). In addition, the Federal Circuit has recognized that we have discretion to consider a patent owner's position regarding purported new arguments or evidence in a motion for observation, during oral argument, or in a sur-reply. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1081–82 (Fed. Cir. 2015).

In this case, Cox put AT&T on notice in its Petition that it intended to rely upon An as prior art to the '714 patent under § 102(e)(2). *See* Pet. 3–4, 17, 42–52; Ex. 1014 ¶ 101. AT&T had the opportunity to respond to the prior art status of An in its Preliminary Response (*see generally* Prelim. Resp.) and in its Request for Rehearing on the Decision on Institution (*see generally* Paper 15), yet AT&T chose not to raise this issue until after institution of trial. Cox first became aware that the prior art status of An was in dispute only after AT&T introduced argument and evidence in its Patent Owner Response that (1) the challenged claims of the '714 patent were entitled to claim the benefit of the '680 provisional application filed on April 3, 1997; and (2) the An provisional application does not provide sufficient written description support for the claims of An, in accordance with the Federal Circuit's decision in *Dynamic Drinkware*. *See* PO Resp. 46–53.

In response, Cox presented a claim chart in its Reply mapping the written description of the An provisional application onto the claims of An. Pet. Reply 8–23 (citing Ex. 1027 ¶ 26). After Cox introduced this An claim mapping in its Reply, AT&T was afforded an opportunity to cross-examine Dr. Mir regarding his reply testimony on this issue (Ex. 2051), file its Motion for Observation regarding the cross-examination of Dr. Mir (Obs. 2–5), argue the issue at the oral argument (*see* Tr. 74:3–76:19), and file a

Second Sur-reply—albeit post-oral argument—that was limited to addressing the An claim mapping. Contrary to AT&T’s assertions, the record clearly demonstrates that AT&T was given sufficient notice of Cox’s argument that An qualified as prior art to the ’714 patent under § 102(e)(2), and it was given an adequate opportunity to respond to Cox’s mapping of the written description of the An provisional application onto the claims of An.⁶

We also take this opportunity to note that, as long as AT&T has been provided adequate notice and an opportunity to be heard on a given issue, there is no statutory or regulatory provision that provides AT&T the right to file a sur-reply. *Accord Belden*, 805 F.3d at 1081 (confirming there is “no rule [that] provides patent owners the right to file [sur-replies] to a petitioner’s Reply”). Given the absence of any statutory or regulatory provision governing a sur-reply, it follows that there also is no statutory or regulatory provision governing what, if anything, we must permit AT&T to file or introduce when we exercised our discretion under 37 C.F.R.

§ 42.20(d) to allow AT&T to file its Second Sur-reply. In our Decision Denying Patent Owner’s Renewed Request for Rehearing, we determined that AT&T was not permitted to file new, testimonial evidence, in the form

⁶ On Friday, November 11, 2016, we received an email correspondence from AT&T. AT&T requested authorization to file a Statement of Additional Authority to call our attention to the decision by the Federal Circuit in *In re: NuVasive, Inc.*, Nos. 2015-1672, 2015-1673, 2016 WL 6608999 (Fed. Circ. Nov. 9, 2016). We declined AT&T’s invitation to file such a statement, in part, because the due process concerns raised by the Federal Circuit in *NuVasive* are distinguishable from the circumstances presented here, which are governed by the Federal Circuit’s decision in *Dynamic Drinkware*.

of a new declaration by Dr. Akl, in conjunction with AT&T's Second Sur-reply. See Paper 69, 4–6.

d. An Provisional Application Provides Sufficient Written Description Support For At Least Independent Claim 1 of An

Although both Cox and Dr. Mir map the written description of the An provisional application onto all fifteen claims of An (Pet. Reply 8–23; Ex. 1027 ¶ 26), a previous Board decision has held—and we agree—that a petitioner need only show support for one claim of a referenced patent, as opposed to all claims. See *Cisco Sys., Inc. v. Capella Photonics, Inc.* Case IPR2014-01166, slip op. 18 n.8 (PTAB Jan. 28, 2016) (non-precedential) (Paper 44) (stating that the petitioner “need not show that every claim of Smith is supported by the Smith ’683 Provisional to demonstrate that [the] subject matter disclosed in both Smith and the Smith ’683 Provisional is entitled to the benefit of the filing date of the Smith ’683 Provisional”). Consequently, our written description analysis solely focuses on independent claim 1 of An, reproduced below.

1. A feature ordering system for use in connection with a telephone network which implements features for individual subscribers on the basis of a feature profile stored for each subscriber DN (directory number), the feature ordering system comprising:

a server acting directly or indirectly on the feature profiles, the server being connected to an information communications network and accessible by subscribers through the information communications network and permitting, when accessed by a subscriber, access to that subscriber's telephone feature profile for viewing and optionally changing, adding, or deleting features by the subscriber; and

a profile repository storing the feature profiles, the profile repository managed by a service manager program on a service manager node, wherein the server performs a protocol conversion dependent on the type of the service manager node.

Ex. 1005, 9:37–54.

AT&T contends that the An provisional application does not provide sufficient written description support for certain features of independent claim 1 of An. PO Resp. 51–53; Second Sur-reply 1–4. We begin our analysis with a discussion of the principles of law that generally apply to written description, and then we address AT&T’s arguments in turn.

i. Principles of Law

The test for written description support is “whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010). When examining the written description for support for a claimed invention, the exact terms appearing in the claim “need not be used in *haec verba*.” *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997). We analyze whether the An provisional application provides sufficient written description support for independent claim 1 of An with the principles stated above in mind.

ii. The Preamble

In its Patent Owner Response, AT&T contends that neither paragraph 101 nor any other portion of the Dr. Mir’s Declaration accompanying the Petition reveals how the An provisional application provides sufficient written description support for the preamble of independent claim 1.

PO Resp. 51–52. In response, both Cox and Dr. Mir map the written description of the An provisional application onto the preamble of independent claim 1 of An as follows. Pet. Reply. 8–9;⁷ *see also* Ex. 1027 ¶ 26 (providing essentially the same mapping).

Claim	Provisional Support
[1a.] A feature ordering system for use in connection with a telephone network which implements features for individual subscribers on the basis of a feature profile stored for each subscriber DN (directory number), the feature ordering system comprising:	The An Provisional discloses that “[t]he subscriber can locate his personal ‘telephone feature profile’ on the telephone service provider’s server on the Internet, access it via a password, such as his/her ‘calling card’ PIN, and see at a glance the features and options currently active on his line/number. Additionally, the subscriber may submit requests to add/change/delete features, on-line.” (<i>See, e.g.</i> , Ex. 1006, 7:2-6, 7:22-28, 8:2-7, 9:23-10:1, 13, 25, 38, 50-51.)

Based on our review of the disclosures of the An provisional application identified above, we are satisfied that that, as of the provisional filing date of An, these disclosures reasonably convey to one of ordinary skill in the art that the inventors of An possessed the features recited in the preamble of independent claim 1.

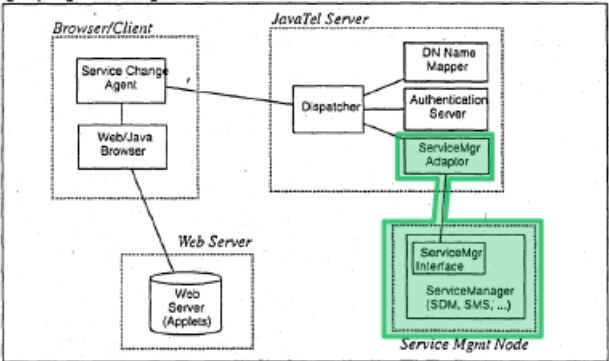
⁷ All references to the page numbers of the An provisional application in the mapping provided by Cox and Dr. Mir refer to the page numbers inserted by Cox in the bottom, right-hand corner of each page in Exhibit 1006.

iii. Protocol Conversion

In its Patent Owner Response, AT&T contends that the An provisional application lacks written description support for “the server performs a *protocol conversion* dependent on the type of the service manager node,” as recited in independent claim 1 of An. PO Resp. 52 (emphasis added) (citing Ex. 2043 ¶¶ 78–80). Relying on the testimony of Dr. Akl, AT&T argues that the An provisional application does not use the words “conversion” or “convert” and, therefore, it lacks sufficient written description support for the “protocol conversion” language of independent claim 1 of An. *Id.* (citing Ex. 2043 ¶ 81).

In response, both Cox and Dr. Mir map the written description of the An provisional application onto the “protocol conversion” language of independent claim 1 of An as follows. PO Resp. 10–11; *see also* Ex. 1027 ¶ 26 (providing essentially the same mapping).

Claim	Provisional Support
[1e.] wherein the server performs a protocol conversion dependent on the type of the service manager node.	The An Provisional discloses that the “ServiceManagerAdaptor . . . receives transactions from the Dispatcher, formats them in a ServiceManager specific protocol, and sends them to the ServiceManager.”

Claim	Provisional Support
	Figure 8 High-level Design View  (See, e.g., Ex. 1006, 11:19-25, 29, 31-35, 46, 55.)

In further support of its argument, Cox’s Reply directs us to the deposition of Dr. Akl, where he purportedly explains that “protocol conversion” merely involves “changing” or “modifying” a protocol.” Pet. Reply 7 (citing. Ex. 1026, 66:11–68:24). Cox indicates that Dr. Mir agrees with Dr. Akl’s explanation, and serves to confirm that the disclosure in the An provisional application of formatting to a specific protocol provides sufficient written description support for the “protocol conversion” language of independent claim 1 of An. *Id.* (citing Ex. 1027 ¶¶ 12–16; Ex. 1006, 11:19–25, 25, 29, 31–35, 46, 55). Cox also argues that, to the extent Dr. Akl’s interpretation of the “protocol conversion” language of independent claim 1 of An requires “multiple types of service manage nodes,” one of ordinary skill in the art would have understood that the An provisional application discloses such nodes. *Id.* at 6–7 (citing Ex. 2043 ¶ 80; Ex. 1027 ¶ 16).

In its Second Sur-reply, AT&T counters that the “protocol conversion dependent on the type of service manager node” does not flow necessarily from the disclosure in the An provisional application of formatting to a specific protocol. Second Sur-reply 1. In particular, AT&T and Dr. Akl argue that a close review of the “protocol conversion” language of independent claim 1 of An and the disclosure in the An provisional application of formatting to a specific protocol reveals little, if any, correspondence between these two disclosures, particularly because there is no mention of “service manager nodes.” *Id.* at 2 (emphasis omitted) (citing Ex. 2043 ¶¶ 86, 87). According to AT&T, the An provisional application and the language of independent claim 1 of An identifies the “server managers” and the “service manager nodes” as different components and, therefore, there is nothing in the An provisional application to support “formatting” or “conversion” to a service manager node-specific protocol. *Id.* at 2–3 (emphasis omitted) (citing Ex. 1005, 3:20–23).

AT&T’s argument regarding whether the An provisional application provides sufficient written description support for the “protocol conversion” language of independent claim 1 of An has two layers of complexity. First, we must determine if the disclosure in the An provisional application of formatting to a specific protocol provides sufficient written description support for the “protocol conversion” language recited in independent claim 1 of An. If the answer to this question is yes, then we must determine whether the disclosure in the An provisional of formatting to a specific protocol, along with its disclosure of multiple types of “ServiceManagers,” provides sufficient written description support for the “protocol conversion

dependent on the type of the service manager node” language recited in independent claim 1 of An.

Starting with the scope and meaning of the claim phrase “protocol conversion” in the context of the claims and specification of An, Cox directs us to the cross-examination testimony of AT&T’s expert witness, Dr. Akl. *See* Pet. Reply 7. In response to a question from Cox’s counsel regarding the plain and ordinary meaning of the claim phrase “protocol conversion,” Dr. Akl testifies that “[s]o an example that I gave you previously was you’re modifying the protocol. You’re changing it. You’re doing conversion on the protocol.” Ex. 1026, 67:13–68:24. Cox’s expert witness, Dr. Mir, testifies that he agrees with Dr. Akl’s assessment “that a person of ordinary skill in the art would [have understood] ‘protocol conversion,’ in the context of An’s claims, to mean ‘changing’ or ‘modifying’ a protocol.” Ex. 1027 ¶ 13.

As support for the “protocol conversion” language recited in independent claim 1 of An, both Cox and Dr. Mir direct us to the disclosure in the An provisional application of formatting to a specific protocol. *See* Pet. Reply 10–11 (citing Ex. 1006, 34); Ex. 1027 ¶ 26 (citing the same). For convenience, this cited disclosure refers to the responsibilities of the “ServiceManagerAdaptor,” and states that one responsibility includes “receiv[ing] transactions from the dispatcher, *format[ing] them in a ServiceManager specific protocol*, and send[ing] them to the ServiceManager.” Ex. 1006, 34 (emphasis added). Consistent with the understanding of both parties’ expert witnesses that the claim phrase “protocol conversion” means “changing” or “modifying” a protocol, we are

satisfied that, as of the provisional filing date of An, the disclosure in the An provisional application of formatting to a specific protocol reasonably conveys to one of ordinary skill in the art that the inventors of An possessed the “protocol conversion” language recited in independent claim 1.

Turning now to whether the An provisional application provides sufficient written support for “protocol conversion dependent on the type of the service manager node” language recited in independent claim 1 of An, we note that in addition to the disclosure in the An provisional application of formatting to a specific protocol, both Cox and Dr. Mir identify other disclosures in the An provisional application that support this disputed claim language. For instance, Cox directs us to at least one disclosure in the An provisional application that contemplates multiple types of “ServiceManagers.” Page 31 of the An provisional states that “[t]here may be many Service Managers,” “the relevant ServiceManager,” and “interacts with ServiceManagers from Service Providers.” Ex. 1006, 31. These statements clearly undermine the argument advanced by both AT&T and Dr. Akl that the An provisional application is limited to a single “ServiceManager.” See Second Sur-reply 1–2; Ex. 2043 ¶ 87.

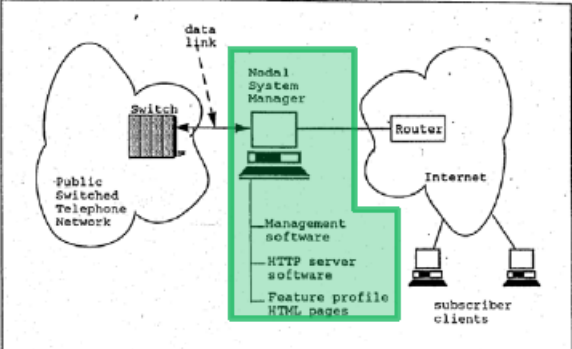
To the extent AT&T and Dr. Akl argue that the An provisional application discloses that the “ServiceManager” and “ServiceManager Node” are separate and distinct components, we do not agree. See Second Sur-reply 2–3; Ex. 2042 ¶ 86. Figure 5 of the An provisional depicts the “Service Mgmt Node” as a dotted line that surrounds the “ServiceManager.” In our view, this dotted line reasonably conveys to one of ordinary skill in the art that the “ServiceManager” is a program that operates on the “Service

Mgmt Node,” which, at a fundamental level, is nothing more than a processing platform. Ex. 1006, 31. Contrary to AT&T’s assertion, Figure 5 of the An provisional application clearly aligns with the description of the “service manager program” and “service manager node” in the claims and specification of An. *See, e.g.*, Ex. 1005, 3:23–25 (stating “[t]he service manager nodes are processing platforms for running the service managers”), claim 1 (claiming “a service manager program on a service manager node”).

In conclusion, taking into account the disclosure in the An provisional application of formatting to a specific protocol, along with the disclosure in the An provisional application of multiple types of “ServiceManagers,” we are satisfied that, as of provisional filing date of An, these disclosures reasonably convey to one of ordinary skill in the art that the inventors of An possessed the “protocol conversion dependent on the type of the service manager node” language recited in independent claim 1.

iv. Profile Repository

In its Reply, both Cox and Dr. Mir map the written description of the An provisional application onto “the profile repository managed by a service manager program on a service manager node” language of independent claim 1 of An as follows. Pet. Reply 10; *see also* Ex. 1027 ¶ 26 (providing essentially the same mapping).

Claim	Provisional Support
[1d.] a profile repository storing the feature profiles, the profile repository managed by a service manager program on a service manager node,	The An Provisional discloses that “[a]n HTTP server is placed on the machine which stores the feature profiles, or on a machine that has direct (and probably proprietary) access to the machine that does have those profiles.” FIGURE 1.  (See, e.g., Ex. 1006, 9:3-13, 11:13-25, 15, 27-28, 31, 46, 59.)

In its Second Sur-reply, AT&T contends that the An provisional application lacks written description support for “a profile repository storing the feature profiles, the profile repository managed by a service manager program on a service manager node,” as recited in independent claim 1 of An. Second Sur-reply 4. According to AT&T, Cox only provides support for the first portion of this limitation, but fails to provide any analysis in support of the second portion of this limitation—namely, “the profile repository managed by a service manager program on a service manager node.” *Id.*

AT&T either ignores, or fails to appreciate, all the disclosures in the An provisional identified by Cox and Dr. Mir that provide written description support for “the profile repository managed by a service manager program on a service manager node” language recited in independent claim

1 of An. For instance, the An provisional application discloses “storing feature profiles in a switch,” such as “a DMS (digital multiplexing switch)” that serves as “a high performance computing platform.” Ex. 1006, 11:14–22. When describing the “ServiceManager,” the An provisional application discloses that “[i]t provides the necessary interface to the profile repository,” i.e., DMS switch, which includes “provid[ing] the User Interface for accessing, browsing, and modifying subscriber service profile information.” *Id.* at 31. In our view, these cited disclosures taken together indicate that the DMS switch is managed by the “ServiceManager,” at least at some level, because this “ServiceManager” interfaces with the DMS switch to allow access, browsing, and modification to the feature profiles stored therein. Consequently, we are satisfied that, as of the provisional filing date of An, the disclosures in the An provisional application identified above reasonably convey to one of ordinary skill in the art that the inventors of An possessed the “the profile repository managed by a service manager program on a service manager node” language recited in independent claim 1.

v. Remaining Limitations

AT&T does not address separately Cox’s explanations and supporting evidence with respect how the An provisional application provides sufficient written description support for the remaining limitations recited in independent claim 1 of An. *See generally* Prelim. Resp. 51–53; Second Sur-reply 1–4. We have reviewed Cox’s explanations and supporting evidence

regarding these remaining limitations recited in independent claim 1 of An, and we agree with and adopt Cox's analysis. Pet. Reply 9.

vi. Summary

Based on the record developed during trial, and in accordance with *Dynamic Drinkware*, Cox has demonstrated that the An provisional application provides sufficient written description support for each and every limitation recited in independent claim 1 of An.

2. AT&T Has Not Demonstrated Adequately That The Challenged Claims Were Actually Reduced to Practice Prior to The An Provisional Application Filed On October 23, 1996

a. Parties' Contentions

In its Patent Owner Response, AT&T contends that, even if An qualifies as prior art to the '714 patent based on the An provisional application filed on October 23, 1996, claims 1–7, 10, 11, 13–17, 21, and 22 of the '714 patent were actually reduced to practice no later than July 17, 1996. PO Resp. 53–54. To support this argument, AT&T directs us to the following evidence: (1) a copy of a document obtained from AT&T's records entitled "Requirements Document PC User Interface" ("the Requirements Document"), which includes a revision date of July 17, 1996; (2) the testimony of its expert witness, Dr. Akl; (3) the testimony of Ms. Michelle Watson-Williams, the Marketing Manager for Southwestern Bell telephone at the time of the invention covered by the challenged claims; and (4) the testimony of Mr. John Sherman, Intellectual Property Legal Group Operations Manager for AT&T Services, Incorporated. *Id.* (citing Ex. 2044; Ex. 2039, 95–118; Ex. 2045; Ex. 2046). AT&T also provides a table that

identifies support in the Requirements Document alleging the actual reduction to practice of each and every limitation of claims 1–7, 10, 11, 13–17, 21, and 22 of the '714 patent. *Id.* at 54–59. Lastly, AT&T asserts that the invention covered by these challenged claims works for its intended purpose because the Requirements Document states that “it appears that the [Positive ID system] is useable and friendly” and “[n]o substantial problems or bugs were uncovered.” *Id.* at 60 (quoting Ex. 2044, 22⁸).

In response, Cox contends that AT&T has not demonstrated that the invention covered by claims 1–7, 10, 11, 13–17, 21, and 22 of the '714 worked for its intended purpose and, therefore, was actually reduced to practice as of July 17, 1996. Pet. Reply 24. Cox argues that the Requirements Document expressly notes that certain aspects of the invention covered by these claims, such as the “Application Manager,” had not even been tested as of July 17, 1996. *Id.* (citing Ex. 2044, 22). Cox argues that the lack of testing in this regard is not surprising, especially given that the Requirements Document shows the invention covered by these challenged claims was far from complete. *Id.* at 26–28 (citing Ex. 2044, 5, 17–19, 23). Taken as a whole, Cox asserts that the Requirements Document describes nothing more than a work in progress and, therefore, casts doubt as to whether the invention covered by claims 1–7, 10, 11, 13–17, 21, and 22 of the '714 worked for its intended purpose as of July 17, 1996. *Id.* at 28.

⁸ All references to the page numbers of the Requirements Document refer to the original page numbers in the bottom, right-hand corner of each page in Exhibit 2044.

In its First Sur-reply, AT&T counters that Cox's dispute whether the invention covered by claims 1–7, 10, 11, 13–17, 21, and 22 of the '714 patent was actually reduced to practice prior to the filing date of the An provisional application, i.e., October 23, 1996, centers on whether the system described in the Requirements Document was operable for its intended purpose. First Sur-reply 1–2. According to AT&T, Dr. Akl's supporting testimony on this issue establishes correspondence of the Positive ID system disclosed in the Requirements Document with each challenged claim. *Id.* at 2 (Ex. 2043 ¶ 95). AT&T then directs us to Ms. Watson-William's supporting testimony that the Positive ID system "was operational as of July 17, 1996, as supported by the [Requirements Document] and my personal knowledge." *Id.* at 3 (quoting Ex. 2045 ¶ 14). AT&T also argues that the record is replete with evidence that the Positive ID system operated for its intended purpose. *Id.* (citing Ex. 2044, 22). AT&T asserts that Cox's focus on the manual work-arounds and the future functionality of the Application Manager software is irrelevant because, as established by Ms. Watson-Williams, it is the Positive ID system—and not the Application Manager software—that is embodied in the challenged claims. *Id.* at 3–4 (citing Ex. 2045 ¶ 11).

We begin our analysis with a discussion of the principles of law that generally apply to actual reduction to practice, and then we address AT&T's assertion as to whether the invention covered by claims 1–7, 10, 11, 13–17, 21, and 22 of the '714 is limited to the Positive ID system disclosed in the Requirements Document.

b. Principles of Law

To demonstrate reduction to practice, a party must prove that the inventor (1) “constructed an embodiment or performed a process that met all the limitations;” and (2) “determined that the invention would work for its intended purpose.” *In re Omeprazole Patent Lit.*, 536 F.3d 1361, 1373 (Fed. Cir. 2008) (quoting *Cooper v. Goldfarb*, 154 F.3d 1321, 1327 (Fed. Cir. 1998)). “Testing is required to demonstrate reduction to practice in some instances because without such testing there cannot be sufficient certainty that the invention will work for its intended purpose.” *Id.* (quoting *Slip Track Sys., Inc. v. Metal-Lite, Inc.*, 304 F.3d 1256, 1267 (Fed. Cir. 2002)). We analyze whether claims 1–7, 10, 11, 13–17, 21, and 22 of the ’714 patent were actually reduced to practice as of July 17, 1996, with the principles stated above in mind.

c. The Evidence of Record Weighs in Favor of Determining That The Invention Covered by Claims 1–7, 10, 11, 13–17, 21, and 22 of The ’714 Patent Did Not Work for its Intended Purpose as of July 17, 1996

In its First Sur-reply, AT&T correctly notes that the dispute between the parties regarding actual reduction to practice centers on whether the system disclosed in the Requirements Document and mapped to the limitations of claims 1–7, 10, 11, 13–17, 21, and 22 of the ’714 patent worked for its intended purpose. See First Sur-reply 1–2. Indeed, based on an inquiry from the panel during oral argument, Cox’s counsel acknowledged that it was not arguing that the disclosures in the Requirements Document met each and every limitation of these challenged claims. Instead, Cox clarified that it was arguing that certain features of the

Requirements Document relied upon by both AT&T and Dr. Akl to meet various limitations of the challenged claims did not work for their intended purpose as of July 17, 1996. *See* Tr. 55:12–22.

For convenience, AT&T’s table that purports to identify support in the Requirements Document for all the limitations of independent claim 1 of the ’714 is reproduced below. PO Resp. 54–56.

Claim	Support in Exhibit 2044
[1a.] A method for managing, by a profile management system, subscriber profile data associated with a communications service subscribed to by a subscriber, the subscriber profile data being stored on a communications network which executes the communications service in accordance with the subscriber profile data, the method comprising:	“SPACE: (Service Provisioning And Creation Environment): SPACE carries a copy of the data in the ISCP. SPACE is the network element used for data queries and management by the selected users that have access to it, such as repair. The users do not access the ISCP directly, because we would not want to interfere with call processing by performing data manipulations on the same platform. Updates made through SPACE are input into the ISCP immediately.” Ex. 2044, p. 5. “The ISCP reads the Call Processing Record (CPR) for 235-5000, sees that the customer has Positive ID and checks the screening list to see if the originating number is authorized. 314 965-4122 is on the authorized list, so the ISCP sends a message back to the switch to go ahead and complete the call.” Ex. 2044, p. 4. “The following information is needed to easily and quickly access Southwestern Bell in order to establish and modify your Authorized Telephone Numbers and Access Codes. For your protection, the software was provided under separate cover.” Ex. 2044, p. 24.

Claim	Support in Exhibit 2044
[1b] receiving a subscriber request to view the subscriber profile data from a client which hosts a user interface configured to allow the subscriber to view and update the subscriber profile data;	“After the customer has successfully completed their installation process, future log-on attempts will be easier. The customer will click on the Application Manager icon in the Southwestern Bell menu. They will be prompted for their User ID and password and then they will connect their modem to Southwestern Bell and bring up their tool bar. From the tool bar, they click on Positive ID and the application will launch. Based on their User ID, the customer will be provided with a choice of Positive ID numbers to work with. The user's choices will be for the active view of each Positive ID number that they have access to, as well as a pending version if one exists.” Ex. 2044, p. 11. “User Interface Allows customer to manipulate their Auth. # and Access Codes” Ex. 2044, p. 4.
[1c] retrieving the subscriber profile data from the communications network based upon receiving the subscriber request to view the subscriber profile data from the client;	“Once the customer selects a Positive ID number, the application server will launch a query to SMS to pull down the tables (authorized number table and access code table) associated with that Positive ID number.” Ex. 2044, p. 12.
[1d] forwarding the subscriber profile data to the client;	“SMS has to send back data for either every AIN service. The server will ignore any extraneous data and only deliver the Positive ID information to the user's screen.” Ex. 2044, p. 12.
[1e] receiving a subscriber request to update the subscriber profile data from the client, and	“When the customer has created some data, they will “submit” it to Southwestern Bell and software will request an effective date on the changes.” Ex. 2044, p. 12.

Claim	Support in Exhibit 2044
[1f] forwarding an update for the subscriber profile data to the communications network based upon receiving the subscriber request to update the subscriber profile data from the client.	“Once the due date is validated the server will send the tables to SMS who will pass the data through front-end edits and save it until the due date.” Ex. 2044, p. 12.

AT&T also directs us to the testimony of Dr. Akl, who includes this same table in his Declaration. Ex. 2043 ¶ 95.

As an initial matter, although the ultimate burden of demonstrating unpatentability remains with Cox, it is undisputed that AT&T carries the burden of demonstrating that the system disclosed in the Requirements Document and mapped to the limitations of the claims 1–7, 10, 11, 13–17, 21, and 22 of the ’714 patent was actually reduced to practice as of July 17, 1996. AT&T does not state explicitly whether the circumstances presented here require evidence of testing. AT&T, however, advances arguments in both its First Sur-reply and its Patent Owner Response indicating that the Positive ID system indeed was tested. *See, e.g.*, First Sur-reply 3 (arguing that, under the heading “Usability Tests for Positive ID,” the Requirements Document states there are “[n]o substantial problems and bugs” and “it appears that the software is usable and friendly”); PO Resp. 60 (arguing the same).

We recognize that both AT&T and Dr. Akl rely upon the Positive ID system disclosed in the Requirements Document to meet various limitations recited in independent claim 1 of the ’714 patent. PO Resp. 55–56; Ex. 2043

¶ 95. The Requirements Document discloses that preliminary tests were performed on the Positive ID system and “[n]o substantial problems or bugs were uncovered and it appears that the software is usable and friendly.” Ex. 2044, 22. Contrary to AT&T’s assertion, however, both AT&T and Dr. Akl do not rely on just the Positive ID system as support for their assertion that independent claim 1 of the ’714 was actually reduced to practice as July 17, 1996. *See* First Sur-reply 2. Rather, both AT&T and Dr. Akl rely on other features disclosed in the Requirements Document to support this assertion.

For instance, with respect to certain features recited in the preamble of independent 1, which we determined were limiting based on an argument advanced by AT&T during the preliminary stage of this proceeding (*see supra* Section II.A), both AT&T and Dr. Akl direct us to “SPACE” to support their assertion that these limiting features of independent claim 1 were actually reduced to practice. PO Resp. 54–55; Ex. 2043 ¶ 95. The Requirements Document, however, casts doubt as to whether a customer sending tables that include subscribe profile data to “SPACE” worked for its intended purpose as of July 17, 1996. Under the subsection in the Requirements Document titled “Sending Tables to SPACE,” it states “[t]his procedure will involve the CNOC and a manual work-around until [September 7, 1996].” Ex. 2044, 17.

With respect to both “forwarding” steps recited in independent claim 1, both AT&T and Dr. Akl direct us to “SMS” to support their assertion that these steps recited in independent claim 1 was actually reduced to practice. PO Resp. 56; Ex. 2043 ¶ 95. The Requirements Document, however, casts

doubt as to whether “SMS” was available and worked for its intended purpose as of July 17, 1996. The Requirements Document states that, “[b]ecause SMS will not be available to pass new Positive ID accounts to the Application Server until [September 7, 1996], we need an alternative method.” Ex. 2044, 17.

With respect to the first “receiving” step recited in independent claim 1, both AT&T and Dr. Akl direct us to a discussion in the Requirements Document of future log-ins after a customer successfully installs the Positive ID system. PO Resp. 55; Ex. 2043 ¶ 95. The Requirements Document explains that the Application Manager software serves as a conduit for delivering the Positive ID system to a customer. Ex. 2044, 11. The Requirements Document, however, states, “[t]he Application Manager software was not tested . . . and . . . has not been blessed . . . as being usable and friendly. Future testing and enhancements are being coordinated.” *Id.* at 22. It is “well established that every limitation of the [claim at issue] must exist in the embodiment and be shown to have performed as intended.” *Newkirk v. Lulejian*, 825 F.2d 1581, 1582 (Fed. Cir. 1987); *UMC Elecs. Co. v. United States*, 816 F.2d 647, 652 (Fed. Cir. 1987) (“It is not sufficient for a reduction to practice that [the inventor] built and tested only a part of the later-claimed model UMC-B accelerometer.”). Here, because the Application Manager software was not tested and determined to be “usable and friendly” (*id.*), it is not clear to us how the first “receiving” step recited in independent claim 1, which is predicated on the successful installation of the Positive ID system, worked for its intended purpose as of July 17, 1996.

We also are not persuaded by Ms. Watson-Williams supporting testimony on this particular issue. Ex. 2045 ¶¶ 11, 14. Ms. Watson-Williams testifies that “[t]he Positive ID service provided a subscriber with the ability to manage the calling telephone numbers that were allowed access to the subscriber’s telephone numbers.” *Id.* ¶ 11. She also testifies that “the Positive ID service as described was operational as of July 17, 1996, as supported by the [Requirements Document] and my personal knowledge.” *Id.* ¶ 14. Ms. Watson-Williams testimony in this regard suffers from the same deficiencies noted above—namely, she focuses on the Positive ID system only and does not account for the other features in the Requirements Document relied upon by both AT&T and Dr. Akl to support their assertion that independent claim 1 of the ’714 patent was actually reduced to practice.

In conclusion, although the Requirements Document indicates that the Positive ID system was tested and determined to be both “usable and friendly” as of July 17, 1996 (Ex. 2044, 22), other features in the Requirements Document relied upon by both AT&T and Dr. Akl to support their assertion that independent claim 1 of the ’714 patent was actually reduced to practice as of that date required “a manual work-around” or “alternative method” (*id.* at 17), and were not tested and determined to be “usable and friendly” (*id.* at 22). Consequently, the weight of the evidence favors a determination that AT&T has not demonstrated that the invention covered by the challenged claims of the ’714 patent was actually reduced to practice prior to the An provisional application filed on October 23, 1996, because it did not work for its intended purpose as of July 17, 1996.

3. *Summary*

In summary, we determine that Cox has shown sufficiently that An is entitled to claim priority to the An provisional application filed on October 23, 1996, and AT&T has not shown sufficiently that the '714 patent is entitled to claim a priority date earlier than the '680 provisional application filed on April 3, 1997. Accordingly, Cox has demonstrated that An is available as prior art to the '714 patent under § 102(e)(2).

4. *Anticipation by An*

Cox contends that claims 1–7, 11, and 13–17 are anticipated under § 102(e) by An. *See* Pet. 40–52. In support of this asserted ground, Cox explains how An purportedly describes the subject matter of each challenged claim (*id.*), and relies upon the Declaration of Dr. Mir. (Ex. 1014) to support its positions. In its Patent Owner Response, AT&T does not address separately Cox's explanations and supporting evidence. *See generally* PO Resp. 43–60. Based on the record develop during trial, we agree with and adopt Cox's explanations and supporting evidence.

We begin our analysis with an overview of An, and then we turn to Cox's contentions with respect to the challenged claims.

a. An Overview

An generally relates to configuring different telephone feature profiles for different subscribers and, in particular, to a system that permits a subscriber to add, change, or delete features with respect to his/her particular telephone feature profile. Ex. 1005, 1:12–16. Figure 16 of An, reproduced

below, illustrates a high-level walk through of the embodiment illustrated in Figure 15. *Id.* at 2:61–62, 8:50–52.

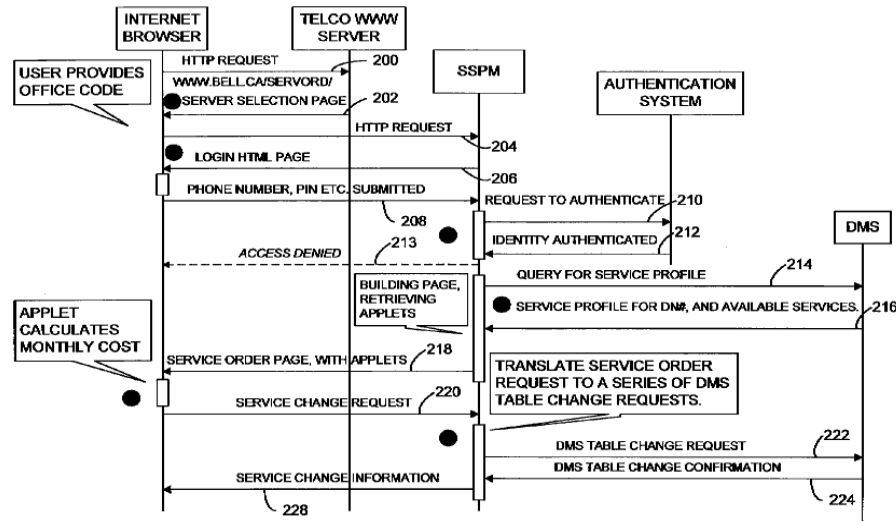


FIGURE 16

As shown in Figure 16, steps 214–222 are of particular importance to this case. Ex. 1005, Fig. 16. At step 214, a user employing an Internet browser sends a query to digital multiplexed switch (“DMS”) for the feature profile of a particular directory number (“DN”) entered by the user. *Id.* at 9:6–8. This query may be done directly through a subscriber service provisioning manager (“SSPM”). *Id.* at 9:8–11. At step 216, DMS sends back the service profile for the DN entered, as well as a list of available services. *Id.* at 9:11–13. At step 218, the SSPM uses this information to build a customized web page and then sends the customized webpage to the user’s Internet browser. *Id.* at 9:13–19. At step 220, when the user makes a change to the feature profile associated with the DN retrieved, it sends the SSPM a response that activates a “request processing” application. *Id.* at 9:22–24. At step 222, this service order request is translated into a series of

DMS table change requests that are sent to the DMS over the telephone company intranet. *Id.* at 9:24–27.

An discloses that the tables stored on the DMS contain “tuples” that indicate features active for a given DN. Ex. 1005, 8:21–22. Typical features available to subscribers include “call forward, call waiting, ring again, speed call, message waiting, 3-way conferencing, softkey programming, and 800 services.” *Id.* at 3:15–19. These tables assume the role of the profile repositories for each user. *Id.* at 8:22–23. A tuple may be read, changed, deleted, or added to the tables stored on the DMS, thereby changing a user’s feature profile. *Id.* at 8:23–25.

b. Claims 1 and 13

Cox contends that An describes all the limitations recited in independent claim 1. Pet. 42–45. In particular, Cox argues that An discloses that a user employing an Internet browser may access and manipulate a feature profile associated with a given DN by querying the DMS. *Id.* at 43 (citing 1005, 5:6–12, 9:6–8, Figs. 2–12, 16; Ex. 1014 ¶ 99); *see also id.* at 16 (arguing that DMS 160 illustrated in Figure 15 of An amounts to the claimed “communications network”). Cox relies upon essentially the same contentions with respect to independent claim 1 to support its assertion that independent claim 13 is anticipated by An. *Compare* Pet. 42–45, *with id.* at 48–50.

As we noted above in our introduction to this asserted ground, AT&T does not address separately Cox’s explanations and supporting evidence with respect to independent claims 1 and 13. *See generally* PO Resp. 43–60. We have reviewed Cox’s explanations and supporting evidence, and we

agree with and adopt Cox's analysis. Pet. 42–45, 48–50. Based on the record developed during trial, we conclude that Cox has demonstrated by a preponderance of the evidence that independent claims 1 and 13 are anticipated by An.

c. Claims 2–7, 11, and 14–17

AT&T does not address separately Cox's explanations and supporting evidence with respect to dependent claims 2–7, 11, and 14–17. *See generally* PO Resp. 43–60. We have reviewed Cox's explanations and supporting evidence, and we agree with and adopt Cox's analysis. Pet. 45–48, 50–52. Based on the record developed during trial, we conclude that Cox has demonstrated by a preponderance of the evidence that dependent claims 2–7, 11, and 14–17 are anticipated by An.

5. Obviousness Based, In Part, on An

Cox contends that claim 10 is unpatentable over the combination of An and Bayless; and claims 14, 15, 21, and 22 are unpatentable over the combination of An and Beck. *See* Pet. 40–52. With respect to claim 10, this claim depends directly from claim 9, which, in turn, depends directly from claim 8. Ex. 1001, 16:42–55. Consequently, by virtue of its dependency, claim 10 includes the same limitations as claims 8 and 9. Cox, however, does not explain how either An or Bayless teaches the limitations of claims 8 and 9. *See generally* Pet. 40–52; Pet. Reply 1–29. For instance, claim 8 recites “wherein the subscriber profile data compromises access codes and authorized telephone numbers.” Ex. 1001, 16:38–41. Cox does not argue or cite evidence that An or Bayless accounts for the “access codes” and “authorized telephone numbers,” as claimed. Based on the record developed

during trial, we conclude that Cox has not demonstrated by a preponderance of the evidence that dependent claim 10 would have been obvious over the combination of An and Bayless.

With respect to claims 14, 15, 21, and 22, Cox explains how the combination of An and Beck teaches the subject matter of these challenged claims (*id.*), asserts that a person of ordinary skill in the art would have had a sufficient reason to combine or modify the teachings of An with those of Bayless or Beck (*id.* at 41–42), and relies upon the Declaration of Dr. Mir (Ex. 1014) to support its positions. In its Patent Owner Response, AT&T does not address separately Cox’s explanations and supporting evidence. *See generally* PO Resp. 43–60. We have reviewed Cox’s explanations and supporting evidence, and we agree with and adopt Cox’s analysis. Pet. 50–52. Based on the record developed during trial, we conclude that Cox has demonstrated by a preponderance of the evidence that dependent claims 14, 15, 21, and 22 would have been obvious over the combination of An and Beck.

E. AT&T’s Motion for Observation

AT&T filed a Motion for Observation on the cross-examination testimony of Cox’s reply witness, Dr. Mir (Ex. 2051). Obs. Cox, in turn, filed a Response. Obs. Resp. To the extent AT&T’s Motion for Observation pertains to testimony purportedly impacting Dr. Mir’s credibility, we have considered AT&T’s observations and Cox’s responses in rendering this Final Written Decision, and we have accorded Dr. Mir’s rebuttal testimony appropriate weight where necessary. *See* Obs. 2–5; Obs. Resp. 1–4.

III. CONCLUSIONS

Cox has not demonstrated by a preponderance of the evidence that claims 1–7, 12–17, and 20 of the '714 patent are anticipated under § 102(e)(2) by Buhrmann; claims 8–10, 14, 15, 18, 19, 21, and 22 of the '714 patent are unpatentable under § 103(a) over Buhrmann in combination with either Boulware, Bayless, or Beck; and claim 10 of the '714 patent is unpatentable under § 103(a) over the combination of An and Bayless. Cox, however, has demonstrated by a preponderance of the evidence that claims 1–7, 11, and 13–17 of the '714 patent are anticipated under § 102(e)(2) by An; and claims 14, 15, 21, and 22 of the '714 patent are unpatentable under § 103(a) over the combination of An and Beck.

IV. ORDER

In consideration of the foregoing, it is

ORDERED that claims 1–7, 11, 13–17, 21, and 22 of the '714 patent are held to be unpatentable;

FURTHER ORDERED that claims 8–10, 12, and 18–20 have not been shown to be unpatentable; and

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

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