UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Walt Disney Parks and Resorts U.S., Inc.,
Petitioner,

v.

Agile Journeys LLC,
Patent Owner.

IPR2024-00029
Patent 7,212,983

PETITIONER'S NOTICE OF APPEAL OF FINAL WRITTEN DECISION

Filed on behalf of Petitioner:
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Pursuant to 35 U.S.C. §§ 141(c), 142, and 319 and to 37 C.F.R. §§ 90.2 and 90.3, Petitioner Walt Disney Parks and Resorts U.S., Inc. ("Petitioner" or "Disney") hereby appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision of the Patent Trial and Appeal Board ("Board") in Case No. IPR2024-00029, entered April 14, 2025 (Exhibit A), and from all underlying orders, decisions, rulings, and opinions related thereto and included therein. This appeal is timely under 35 U.S.C. § 142, 37 C.F.R. § 90.3, Federal Rule of Appellate Procedure 15(a)(1), and Federal Circuit Rule 15(a)(1).

For the limited purpose of providing the Director with the information required by 37 C.F.R. § 90.2(a)(3)(ii) and Federal Rule of Appellate Procedure 15(a)(2)(C), the issues on appeal may include, but are not limited to:

(1) The Board's determination that Petitioner has not established by a preponderance of the evidence that claim 11 of U.S. Patent No. 7,212,983 ("the '983 Patent") is unpatentable under 35 U.S.C. § 103 as obvious over International Publication WO97/18534 ("Sim") in view of U.S. Patent No. 6,938,066 ("Doi"), and any finding supporting that decision.

(2) The Board's determination that Petitioner has not established by a preponderance of the evidence that claim 11 of the '983 Patent is unpatentable under 35 U.S.C. § 103 as obvious over U.S. Patent No. 5,978,770 ("Waytena") (alone or as modified by U.S. Patent No. 5,758,257 ("Herz")), in view of Doi, and any finding supporting that decision.

(3) The Board's determination that Petitioner has not established by a preponderance of the evidence that claim 22 of the '983 Patent is unpatentable under 35 U.S.C. § 103 over Sim in view of Doi, and any finding supporting that decision.

(4) The Board's determination that Petitioner has not established by a preponderance of the evidence that claim 22 of the '983 Patent is unpatentable under 35 U.S.C. § 103 over Waytena (alone or as modified by Herz) in view of Doi, and any finding supporting that decision.

(5) The Board's determination that Petitioner has not established by a preponderance of the evidence that claim 23 of the '983 Patent is

unpatentable under 35 U.S.C. § 103 over Sim in view of Doi, and any finding supporting that decision.

(6) The Board's determination that Petitioner has not established by a preponderance of the evidence that claim 23 of the '983 Patent is unpatentable under 35 U.S.C. § 103 over Waytena.

(7) The Board's determination that Petitioner has not established by a preponderance of the evidence that claim 23 of the '983 Patent is unpatentable under 35 U.S.C. § 103 over Waytena in view of Herz, and any finding supporting that decision.

(8) The Board's interpretation of the claim language "in conjunction with" inconsistent with the claims, the specification, and its plain and ordinary meaning, and any finding supporting that decision.

(9) The Board's failure to consider evidence of record fully and properly, the Board's findings that conflict with the evidence of record, and/or are not supported by substantial evidence.

(10) Any other Board and/or Director finding, determination, decision, ruling, judgment, or order on any issue decided adversely to Disney.

Petitioner further reserves the right to challenge any finding or determination supporting or relating to the issues above and reserves the right to address any issues that may arise on appeal or that Patent Owner may raise on appeal.

Pursuant to 35 U.S.C. § 142 and 37 C.F.R. § 90.2(a)(1), this notice is being filed with the Director of the U.S. Patent and Trademark Office, and a copy is also being filed with the Board. In addition, pursuant to Federal Circuit Rule 15(a)(1) and 37 C.F.R. § 90.2(a)(2), Petitioner also is electronically filing this notice with the Clerk of the U.S. Court of Appeals for the Federal Circuit, and paying the fee set forth in Federal Circuit Rule 52.

Dated: May 15, 2025

Respectfully submitted,

/s/ Celine J. Crowson

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Counsel for Petitioner Walt Disney Parks and Resorts U.S., Inc.

Certificate of Service

Pursuant to 37 C.F.R. § 42.6(e), this is to certify that on May 15, 2025, I caused a true and correct copy of the foregoing **PETITIONER'S NOTICE OF APPEAL OF FINAL WRITTEN DECISION** to be served upon counsel of record via e-mail:

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Pursuant to 37 C.F.R. § 90.2(a)(1), I hereby certify that in addition to being filed electronically through the Board's P-TACTS System, this Petitioner's Notice

of Appeal is being provided to the Director of the USPTO on May 15, 2025, by electronically filing to the email address as follows:

Director of the United States Patent and Trademark Office
c/o Office of the General Counsel
efileSO@uspto.gov

I hereby certify that on May 15, 2025, a true and correct a copy of the foregoing Petitioner's Notice of Appeal, along with a copy of the Final Written Decision, was filed electronically with the Clerk's Office of the United States Court of Appeals for the Federal Circuit via CM/ECF.

/s/ Jason A. Bradley
Jason A. Bradley

EXHIBIT A

Trials@uspto.gov
571-272-7822

Paper 20
Date: April 14, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WALT DISNEY PARKS AND RESORTS U.S., INC.,
Petitioner,

v.

AGILE JOURNEYS LLC,
Patent Owner.

IPR2024-00029
Patent 7,212,983 B2

Before MICHAEL L. WOODS, AMEE A. SHAH, and JASON W. MELVIN, *Administrative Patent Judges*.

SHAH, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining Some Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. BACKGROUND

Walt Disney Parks and Resorts U.S., Inc. ("Petitioner") filed a Petition pursuant to 35 U.S.C. §§ 311–319 for *inter partes* review of claims 1, 3–5, 7, 8, 10–14, and 16–25 ("the Challenged Claims") of U.S. Patent No. 7,212,983 B2 (Ex. 1001, "the '983 patent"). Paper 2 ("Pet."). Agile Journeys LLC ("Patent Owner") is identified as the owner of the '983 patent. Paper 4. Patent Owner filed a Preliminary response to the Petition. Paper 6. On April 15, 2024, we granted institution of *inter partes* review. Paper 7 ("Institution Decision" or "Inst. Dec.").

After institution, Patent Owner filed a Response to the Petition. Paper 9 ("PO Resp."). Petitioner filed a Reply. Paper 12 ("Pet. Reply"). Patent Owner filed a Sur-Reply. Paper 13 ("PO Sur-Reply"). An oral hearing was held on January 14, 2025, and the transcript is entered into the record. Paper 19 ("Tr.").

We have jurisdiction under 35 U.S.C. § 6. This is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the Challenged Claims of the '983 patent. For the reasons discussed below, we determine that Petitioner has established by a preponderance of the evidence that Challenged Claims 1, 3–5, 7, 8–10, 12–14, 16–19, 20, 21, 24, and 25, but has not established by a preponderance of the evidence that Challenged Claims 11, 22, and 23 unpatentable.

B. RELATED MATTERS

The '983 patent is the subject of the following civil action: *Agile Journeys LLC v. The Walt Disney Company and Walt Disney Parks and*

Resorts U.S., Inc., Case No. 6:22-cv-02272 (M.D. Fla.), filed December 2, 2022 ("the '2272 litigation"). Pet. 4; Paper 4, 2.

C. REAL PARTIES IN INTEREST

Petitioner certifies that the real parties in interest are "Walt Disney Parks and Resorts U.S., Inc., the Walt Disney Company, TWDC Enterprises 18 Corp., and Disney Corp Srvcs Co, LLC." Pet. 4.

Patent Owner identifies "Agile Journeys LLC" as "the real party in interest," and asserts that "Agile is the owner and assignee of all right, title and interest in and to U.S. Pat. No. 7,212,983." Paper 4, 1.

D. OVERVIEW OF THE '983 PATENT

The '983 patent is titled "METHOD AND APPARATUS FOR PROVIDING VISITORS WITH A PERSONALIZED ITINERARY AND MANAGED ACCESS TO ATTRACTIONS," and issued on May 1, 2007, from U.S. Patent Application No. 09/858,376. Ex. 1001, codes (21), (45), (54).

The '983 patent "relates generally to a system for creating a personalized itinerary, and in particular, a system to create a personalized itinerary for visitors to a facility, such as a zoo, theme park, historic area, or shopping district." Ex. 1001, 1:8–11. More specifically, "the invention relates to a system for creating a personalized itinerary for visitors to a facility that provides managed access to attractions at the facility." *Id.* at 1:12–14.

As background, the '983 patent describes that "[a] tourist wants to see and do the most interesting things available, with a minimum of inconvenience." Ex. 1001, 1:32–33. A facility having numerous attractions, such as "[i]ndividual rides, restaurants, exhibits, stores, shows, etc.[,] . . .

commonly provides collateral materials such as maps and show schedules." *Id.* at 1:42–47. The amount of information in these collateral materials "frequently amounts to information overload," particularly for visitors visiting the facility for the first time, are "outside the primary marketing region of the facility," are unfamiliar with the facility's attractions, and/or have a language difference or barrier. *Id.* at 1:52–58.

The '983 patent describes prior art systems and methods of guided and self-guided tours, queue management, and itinerary generation/route planning, and describes the disadvantages of each system. Ex. 1001, 1:59–5:10. The '983 patent summarizes six (6) "Needs Unsatisfied by Prior Art:" of a tool, method, or system that understands and considers the interests, tastes, needs, limitations, "spatial and temporal situation," and familiarity of a party of visitors and facility to create an appropriate and personalized itinerary and a viable set of reservations and that redistribute, moderate, and diffuse demand in a facility. Ex. 1001, 5:49–6:4. The '983 patent thus relates to "a system and method for creating a personalized itinerary for visitors to a facility, such as a zoo, theme park, historic area, or shopping district" and "a system and method that provides managed access to attractions at the facility." *Id.* at 6:11–15. One object of the invention is to "make[] it possible for visitors unfamiliar with a facility to make meaningful use of a queue management system" that would "normally require the user to enter or select explicitly each attraction that they wish to visit" to use to the invention's system "to create meaningful, satisfying itineraries." *Id.* at 8:65–9:6.

The '983 patent defines certain terms. "A party consists of one or more visitors operating as a coherent group for the purpose of the itinerary," that when arriving at a facility, receives a "single portable computer 100."

Ex. 1001, 11:1–4. A "facility" is "an entity having a collection of attractions that is visited by parties seeking to experience those attractions," such as a theme park, shopping district, park, zoo, or historic area. *Id.* at 10:59–63. An "[a]ttraction" includes "rides, shows, shops, restaurants, tours, trails, presentations, displays, viewpoints, picnic sites, and other specific features that are to be experienced by the facility's visitors." *Id.* at 10:64–67. An "itinerary" is "comprised of events." *Id.* at 7:31; 14:5–6. An "event" is "a visit to an attraction at a scheduled time. This is not necessarily a reservation, though it can be. It is a time at which the party is recommended to visit an attraction." *Id.* at 7:31–34; 14:4–5.

Figure 1, reproduced below, illustrates a portable computer 100 for gathering information about a party, in accordance with the '983 invention. *Id.* at 9:65–67.

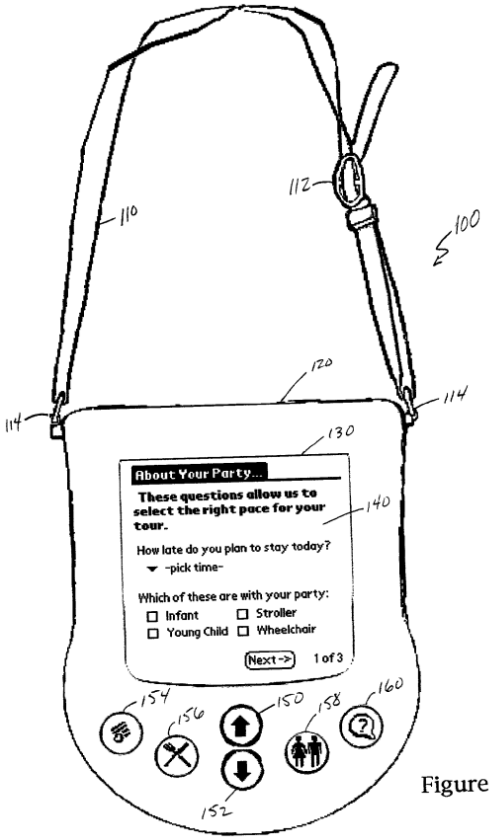
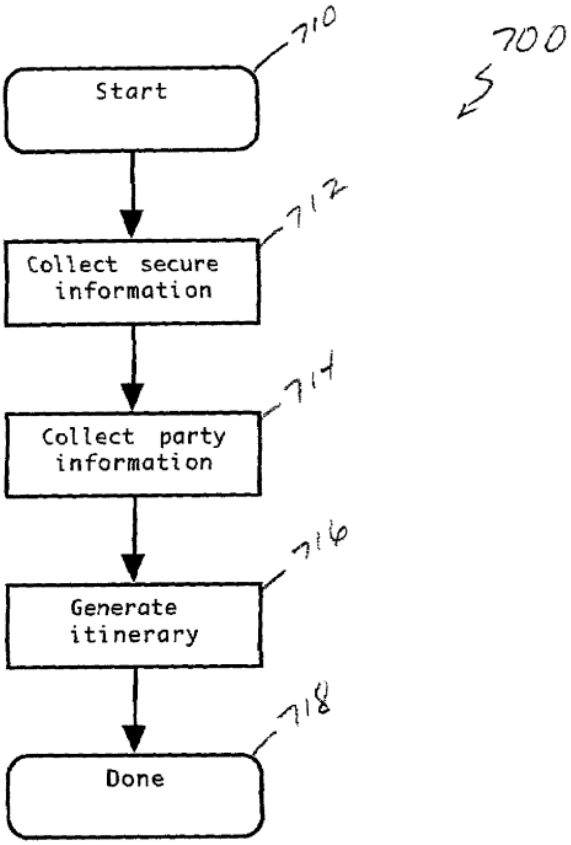


Figure 1

Figure 1 illustrates a portable computer 100 having a display screen 130 that is overlaid by a transparent, touch sensitive input surface for "asking questions of and providing information to the party" and "to present various forms for gathering or displaying information." Ex. 1001, 11:8–11; 11:33–34. An itinerary button 154 calls up the party's current itinerary. *Id.* at 11:15–32. A dining button 156 calls up a dialog concerning dining activities. *Id.* at 11:18–19. A restroom button 158 calls up information concerning restrooms. *Id.* at 11:19–21. "An information button 160 calls up other miscellaneous information such as facility operating hours, maps, database access, shopping information, etc." *Id.* at 11:21–23.

Figure 7, reproduced below, is a flowchart of basic steps involved in making an itinerary. Ex. 1001, 10:14–15.



"At the start, step 710, the portable computer [100] contains current information about the facility and its attractions." Ex. 1001, 12:42–43. In steps 712 and 714, "data are collected which comprise the party's profile." *Id.* at 12:47–48. The "secure information" may comprise the party's admission class, the party's size, prepaid meals, special tours or attractions purchased, and language preference, and is provided by the facility operator. *Id.* at 12:53–63. The "party information" is collected by the party through portable computer 100 via queries. *Id.* at 13:3–9; 13:16–58. This information may comprise the number of people in the party, whether there are any infants, children, disabled, or elderly members in the party, the party's preferences (such as an interest or aversion to specific types of rides, or to particular themes), and access class. *Id.* at 6:23–52; 13:43–58.

Once the necessary secured information and answers to mandatory questions are received, the processor of portable computer 100 executes an algorithm to generate an itinerary in step 716. *Id.* at 13:10–13; 13:64–67. Figure 14, reproduced below, "illustrates a flowchart describing in detail an exemplary method for generating an itinerary." *Id.* at 10:30–31.

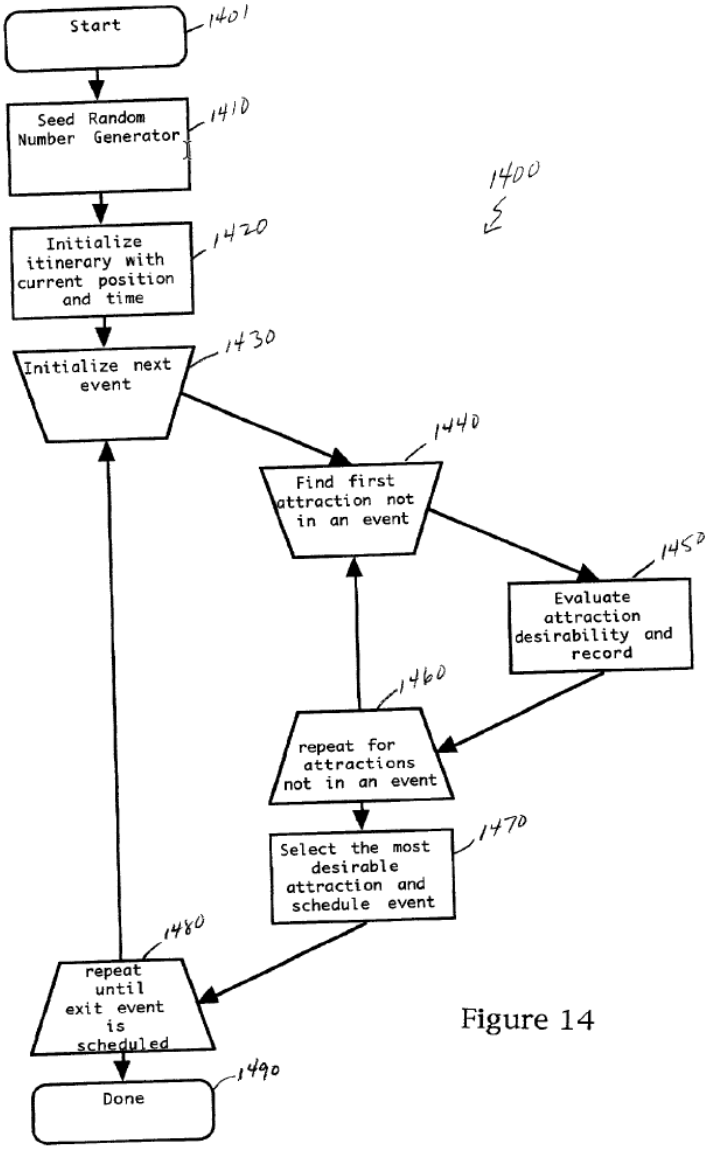


Figure 14

Figure 14's flowchart shows a method for generating an itinerary starting at step 1401 where "access is provided to the party profile gathered in [Figure 7's] steps 712 & 714, node database 800, link database 900, attraction database 1000, and profile interpretation database 1200." Ex. 1001, 25:17–24. In step 1410, "a seed unique to the portable computer 100, or unique to the party in the case of another embodiment, is acquired," such as one derived from portable computer 100's serial number, or a unique

username. *Id.* at 25:24–30. "An itinerary database 1500, shown in FIG. 15, is prepared for use in step 1420." *Id.* at 25:45–47. "In step 1440, the attraction database 1000 is scanned for the next attraction that does not appear in the attraction name field 1523 of any event in itinerary 1500," and that attraction is evaluated in step 1450 by equations and analyses. *Id.* at 26:4–28:50. "In step 1460, the next attraction not contained in the itinerary 1500 is sought," and "[i]f one exists, the process loops back to step 1440. Steps 1440 and 1460 comprise the logic of a loop iteration over all the attractions in attraction database 1000." *Id.* at 28:51–55. The last temporary event to have been copied into the current event is now the selected event that will be recorded in step 1470, and the process is repeated until the event is "Exit," whereby the itinerary is complete and the process ends at step 1490. *Id.* at 28:58–29:19.

Figure 4, reproduced below, is "a schedule form, shown on the display screen, . . . showing the next attractions in the itinerary for a party." Ex. 1001, 10:5–8.

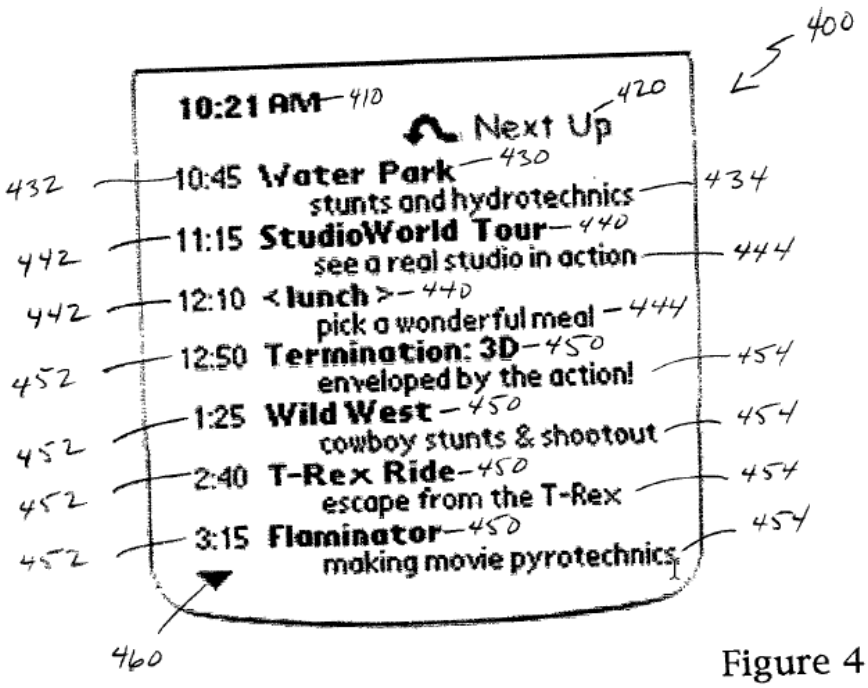


Figure 4

Figure 4 shows an itinerary generated from the results of the process depicted in Figures 7 and 14, above. Ex. 1001, 14:1–3. The itinerary displays the current time 410, the current event 420, and the current attraction name 430, shown with time 432 and a brief description 434. *Id.* at 14:10–18. In chronological order are displayed the successive attractions' names, time, and descriptions, 440, 450, 442, 452, 444, and 454. *Id.* at 14:19–31.

E. ILLUSTRATIVE CLAIM

Of the Challenged Claims, claims 1 and 3 are independent. No claim depends from claim 1. Claims 4, 5, 7, 8, 10–14, and 16–25 depend directly from independent claim 3.

Claim 1 is illustrative and is reproduced below with certain reformatting:[1]

> 1. [pre] A system for providing an itinerary to a party, said itinerary comprising a second set of attractions selected from a first set of attractions, said system comprising:
>
> [a] data regarding said first set of attractions;
>
> [b] information about said party, at least a portion of said information distinguishing among said first set of attractions with respect to said data;
>
> [c] a computer having access to said data and said information, said computer having software that selects said second set of attractions from said first set of attractions, said second set of attractions consisting of at least some of said first set of attractions for which said data substantially matches with said information;
>
> [d] a presentation means in communication with said computer, said presentation means able to receive said itinerary from said computer and present said itinerary to said party,
>
> [e] whereby said itinerary is customized for said party.

Ex. 1001, 31:50–67. Claim 3 recites similar steps. *Id.* at 32:31–51.

F. REFERENCES AND TESTIMONY

In support of its validity contentions, Petitioner relies on the testimony of Dr. Henry Houh. *See, e.g.*, Pet. 9 (citing Ex. 1003). Patent Owner relies

[1] We apply the same identifiers Petitioner uses to label the different portions of claim 1. Pet. App. A.

on the testimony of Dr. Gregory Gonsalves in support of its validity contentions of the '983 patent. *See, e.g.*, PO Resp. 1 (citing Ex. 2009).

Additionally, in the table below we identify the primary references relied upon by Petitioner and Patent Owner, as well as the exhibits corresponding to the declaration and deposition testimony in the record for Dr. Houh and Dr. Gonsalves.[2]

References and Witness Testimony	Date	Ex. No.
Leonard Sim, International Publication WO97/18534 ("Sim").	May 22, 1997	Ex. 1005
Miwako Doi, U.S. Patent No. 6,938,066 ("Doi").	Nov. 21, 2000	Ex. 1006
William Waytena et al., U.S. Patent No. 5,978,770 ("Waytena").	Nov. 2, 1999	Ex. 1007
Frederick Herz et al., U.S. Patent No. 5,758,257 ("Herz").	May 26, 1998	Ex. 1008
Declaration of Dr. Henry Houh	Oct. 11, 2023	Ex. 1003
Deposition of Dr. Gregory Gonsalves	Sept. 19, 2024	Ex. 1009
Declaration of Dr. Gregory Gonsalves	Jan. 17, 2023	Ex. 2001
Second Declaration of Dr. Gregory Gonsalves	July 8, 2024	Ex. 2009

[2] The table identifies only a select number of documents particularly pertinent to this Decision. A complete identification of the papers and exhibits that form the record of this case is available in the docket of this proceeding. *See also, e.g.*, Paper 17 (Patent Owner's Updated Exhibit List); Paper 18 (Petitioner's Updated Exhibit List).

G. ASSERTED GROUNDS OF UNPATENTABILITY ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner challenges the patentability of claims 1, 3–5, 7, 8, 10–14, and 16–25 on the following grounds (Pet. 5):

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1	1, 3, 5, 7, 8, 10–14, 16, 17, 19, 20, 22–25	103(a)[3]	Sim, Doi
2	4, 18, 21	103(a)	Sim, Doi, Waytena
3	1, 3–5, 8, 10, 12–14, 16–21, 23–25	103(a)	Waytena
4	1, 3–5, 8, 10, 12–14, 16–21, 23–25	103(a)	Waytena, Herz
5	7	103(a)	Waytena (alone or as modified by Herz), Sim
6	11, 22	103(a)	Waytena (alone or as modified by Herz), Doi

[3] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the application from which the '983 patent issued was filed before this date, the pre-AIA version of § 103 applies.

II. ANALYSIS

A. LEGAL STANDARDS

1. Petitioner's Burden

Petitioner bears the burden of establishing the unpatentability of the challenged claims by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

2. Obviousness

Whether the Challenged Claims would have been obvious over the cited references is at issue in this proceeding. A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are "such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The legal question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of obviousness or nonobviousness.[4] *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966). Whether a patent claiming the combination of prior art elements would have been obvious is determined by "whether the improvement is more than the predictable use of prior art elements according

[4] The record does not include allegations or evidence of objective indicia of obviousness or nonobviousness.

to their established functions." *KSR*, 550 U.S. at 417. One seeking to establish obviousness based on more than one reference also must articulate sufficient reasoning with rational underpinnings to combine teachings. *See Id.* at 418.

To show obviousness, it is not enough to merely show that the prior art includes separate references covering each separate limitation in a challenged claim. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). "This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." *KSR*, 550 U.S. at 418–419. Moreover, in determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 164 (Fed. Cir. 1985) ("It is elementary that the claimed invention must be considered as a *whole* in deciding the question of obviousness."); *see also Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1537 (Fed. Cir. 1983) ("[T]he question under 35 U.S.C. § 103 is not whether the differences *themselves* would have been obvious. Consideration of differences, like each of the findings set forth in *Graham*, is but an aid in reaching the ultimate determination of whether the claimed invention *as a whole* would have been obvious.").

An obviousness analysis "need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 418; *accord In re Translogic*

Tech., Inc., 504 F.3d 1249, 1259 (Fed. Cir. 2007). However, a petitioner cannot satisfy its burden of proving obviousness by employing "mere conclusory statements." *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Instead, a petitioner must articulate a reason why a person of ordinary skill in the art would have combined or modified the prior art references. *In re NuVasive, Inc.*, 842 F.3d 1376, 1382 (Fed. Cir. 2016); *see also Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1366 (Fed. Cir. 2017) ("In determining whether there would have been a motivation to combine prior art references to arrive at the claimed invention, it is insufficient to simply conclude the combination would have been obvious without identifying any reason why a person of skill in the art would have made the combination."); *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) ("[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.") (citing *InTouch Techs., Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014)). As a factfinder, we also must be aware "of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *KSR*, 550 U.S. at 421.

B. LEVEL OF ORDINARY SKILL IN THE ART

In determining the level of ordinary skill in the art, various non-exhaustive factors may be considered, including: "(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field." *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254,

1256 (Fed. Cir. 2007) (quoting *Envtl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696 (Fed. Cir. 1983).

Petitioner contends that a person of ordinary skill in the art at the time of the invention ("POSITA," "PHOSITA," or "skilled artisan") "would have the equivalent of an undergraduate degree in computer science, engineering, operations research, or similar discipline, along with one year of experience in computer programming" and that "[t]he more education one has, the less experience needed to attain an ordinary level of skill[, and] . . ., more experience in the field may serve as a substitute for formal education." Pet. 9 (citing Ex. 1003 ¶ 32).

Patent Owner does not remark on Petitioner's definition of a POSITA nor does it provide a definition. *See generally* PO Resp.

For purposes of this Decision, we find that the '983 patent and the cited prior art references reflect the level of skill at the time of the claimed invention and that the level of appropriate skill reflected in these references and in the '983 patent is consistent with the level of skill proposed by Petitioner. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). Accordingly, for purposes of this Decision, we adopt Petitioner's proposed definition for a person of ordinary skill in the art.

C. CLAIM CONSTRUCTION

In this *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415

F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc). Only those terms in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Realtime Data LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019).

In our Institution Decision, we determined that the terms "presentation means," "software that selects," "substantially matches," and "directed demand" require construction. Inst. Dec. 18–19. We substantially reproduce our reasoning and explanation provided in the Institution Decision, and elaborate to address Patent Owner's further arguments below.

1. "presentation means"

In our Institution Decision, we agreed with Petitioner's contention that "presentation means" is a means-plus-function claim term under 35 U.S.C. § 112 ¶ 6. Inst. Dec. 18. Petitioner also argued that display screen 130 of the "portable computer" is the corresponding structure for performing the recited functions. *Id.* at 5 (citing Ex. 1001, 11:1–4, 11:8–11, 11:33–42). Patent Owner did not contest Petitioner's construction, which we adopted. *Id.* at 18–19.

In Patent Owner's Response, Patent Owner proposes an alternative interpretation regarding the corresponding structure for performing the recited functions. PO Resp. 13. Patent Owner contends the following:

> The corresponding structure includes any of the following (and their equivalents): a portable hand-held computer as described at, *e.g.*, EX1001, 10:44–53; a computing device with its associated display, which is distinct from the "said computer" recited in the claims, that determines the itinerary and may be located remotely, *e.g.*, EX1001, 16:10–13; a printer that communicates with "said computer," *e.g.*, EX1001, Claim 15; and an audio interface that also has communication with "said computer," *e.g.*, EX1001, 30:61–67.

Id. at 14 (citing Ex. 2009 ¶¶ 85–87). According to Patent Owner, "[t]his interpretation aligns more closely with the support described in the specification and equivalents thereof and is crucial for the coherence of certain dependent claims, such as Claims 15 and 17. *Id*. Petitioner does not address Patent Owner's position in the Reply. *See generally* Pet. Reply.

The '983 patent provides "[t]he method of the present invention can be implemented using a general purpose computer, or a portable handheld computer, or as an Internet or other network based service." Ex. 1001, 10:44–46. The preferred embodiment used portable computer 100 having display screen 130. *Id.* at 11:8–11. The '983 patent also provides that "[w]hile the preferred embodiment is discussed in the context of present day displays and touchscreens, it is contemplated that other modes of output and input will be suitable as they are made available," such as by the next event on the itinerary being "announced audibly in the language of the party's preference." *Id.* at 30:59–67.

Claim 14 provides that the computer of claim 3 is "selected from the group consisting of a portable computer, a handheld computer, a kiosk computer, a general purpose computer, and a desktop computer." *Id.* at 34:3–7. Claim 15 provides that the "presentation means comprises a printer and in step f) at least a portion of said itinerary is presented in a printed form," and claim 17 provides that "in step f) at least a portion of said itinerary is announced audibly by said presentation means." *Id.* at 34:8–10, 34:14–16.

Based on the evidence, we construe "presentation means" as a portable computer, a handheld computer, a kiosk computer, a general purpose computer, and a desktop computer having a screen, printer, or speaker that visually or audibly presents information.

2. "software that selects"

Independent claims 1 and 3 recite, in relevant part, the "computer having software that selects said second set of attractions from said first set of attractions." Ex. 1001, 31:56–58; 32:39–41.

In our Institution Decision, we construed the term "software that selects" as meaning "the software is selecting a set of attractions from the first set but does not exclude a contemporaneous or further manual confirmation or selection." Inst. Dec. 20. We also determined that "whether there exists a clear and unmistakable disclaimer that 'software that selects' excludes a contemporaneous or further manual confirmation or selection requires further factual determinations to be addressed at trial." *Id.*

In Patent Owner's Response, Patent Owner argues that "[t]he prosecution file history 'clearly and unambiguously disclaimed or disavowed an interpretation of the claims encompassing manual selection of attractions to include in an itinerary.'" PO Resp. 9 (citing Ex. 2009 ¶ 76). In support of this contention, Patent Owner directs attention to the original applications citing of Mahoney and Kanemitsu. *Id.* (citing Ex. 1001, 3:3–7, 4:62–64). Patent Owner asserts that "it was a clearly stated goal of the ['983 Patent to avoid the need for users to select attractions." *Id.* (citing Ex. 2009 ¶¶ 72–74; Ex. 1001, 1:41–58, 3:21–35, 8:65–9:6).

Patent Owner further contends that the prosecution record supports its position because in the second and third office actions, "the Examiner interpreted Claims 1 and 3 to encompass the manual selection of attractions for an itinerary, as described in Waytena." PO Resp. 10 (citing Ex. 2009 ¶¶ 69–71; Ex. 1002, 20–23, 69–71). Patent Owner asserts that "Applicant undoubtedly intended to exclude manual selection" by replacing the claim limitation "software operable to select" with "software that selects," thus

narrowing the claim "to disclaim the manual selection of attractions" and "require[] the attractions to be selected by software on a computer." *Id.* (citing Ex. 2009 ¶¶ 69–76; Ex. 1002, 9–10).

Patent Owner argues that "[i]t is unreasonable" and "arguably even inappropriate" to conclude that "the Applicant, who cited the prior art in their application and pointed out the disadvantages they observed, to have tried their best to overcome such problems, yet ultimately draft their claim in such a way as to include, rather than exclude, the exact disadvantage" and that "the Examiner, who recognized that Waytena included a manual selection step, cited it, and initially rejected the application, to ultimately allow the application unless it was amended to exclude the manual selection step." PO Resp. 10–11 (citing Ex. 2009 ¶¶ 74, 76; Manual of Patent Examining Procedure "MPEP" § 1302.04; 37 C.F.R. § 1.104(c)).

Additionally, Patent Owner contends that "[t]o construe 'software that selects' to exclude manual selection is consistent with the plain and ordinary meaning of Claims 1 and 3." PO Resp. 11 (citing Ex. 2009 ¶¶ 81–82). Patent Owner alleges that "[t]he claim already specifies that the itinerary includes this second set, making any manual modification of such second set contradictory." *Id.* (citing Ex. 2009 ¶¶ 81–82). Further, Patent Owner alleges that "adding a step for manual selection contradicts the plain language of the claim that 'said computer having software that selects said second set of attractions' excluding any manual intervention." *Id.* (citing Ex. 2009 ¶¶ 81–82).

Patent Owner also contends that Petitioner "agrees with the Patent Owner's claim construction of 'software that selects' and in the clear and unambiguous disavowal of manual/user selection to generate the itinerary (*i.e.*, the second set of attractions) from the prosecution history." PO

Resp. 12. Patent Owner argues that Petitioner, in a Technology Tutorial in the '2272 litigation, described that "[w]hen guests are unfamiliar with the facility, they need the system, here the *software*, to select attractions suited to their tastes," that the '983 patent selects attractions without the party selecting any attractions themselves and has no correspondence to manual selection which would defeat the purpose of a customized itinerary. *Id.* at 12–13 (citing Ex. 2010, 24:21–23, 25:11–12, 29:16–18, 30:14–20, 31:7–11).

Petitioner, in its Reply, contends that the claimed "software that selects" requires only that "the software 'selects' the attractions; and it does not require that the software make any further confirmations, selections, or reservations, nor does it restrict what a user may do with the selected attractions." Pet. Reply 3. Thus, Petitioner argues, "[o]nce the software 'selects' the attractions, the limitation is met, and any further actions by the user to confirm selections or make a reservation based on the selections does not negate that the selection was made by the software." *Id.* Petitioner argues that "further user confirmation, such as making reservations, is expressly defined as separate from the selection of attractions, which need only be recommendations to the user." *Id.* at 3–4 (citing Ex. 1009, 69:15–75:19, 76:17–77:13). Further, Petitioner argues

> While the Applicants may have disavowed a manual selection of attractions during prosecution (that is, a user selecting their own attractions without the software selecting or recommending any), nothing in the prosecution history shows a similar disavowal of actions a user can take after the attractions are selected by the software.

Id. at 4 (citing PO Resp. 8–13).

Both parties agree that the software, not the user, selects the attractions for the second set, as recited in limitation 1[c]. Pet. Reply 3; PO

Resp. 8–10. The disagreement is whether the "software that selects" as recited in limitation 1[c] means that the software selects the second set with no manual selection. In other words, does the information about the party, at least a portion of which is distinguished from the data in the first set and that is used in the selection of the second set exclude specific ride/attraction data? Based on the evidence of record, we find that is does not.

As we stated in our Institution Decision, "[f]or a statement during prosecution to qualify as a disavowal of claim scope, it must be 'so clear as to show reasonable clarity and deliberateness,' and 'so unmistakable as to be unambiguous evidence of disclaimer.'" *Genuine Enabling Tech. LLC v. Nintendo Co.*, 29 F.4th 1365, 1374 (Fed. Cir. 2022) (quoting *Omega Eng'g, Inc, v. Raytek Corp.*, 334 F.3d 1314, 1323, 1325 (Fed. Cir. 2003)). Prosecution disclaimer is not established "[i]f the challenged statements are ambiguous or amenable to multiple reasonable interpretations." *Id.* The burden of "proving the existence of a clear and unmistakable disclaimer that would have been evident to one skilled in the art" is borne by the party seeking to invoke the prosecution history. *Id.* (quoting *Mass. Inst. of Tech. v. Shire Pharms., Inc.*, 839 F.3d 1111, 1119 (Fed. Cir. 2016)).

Here, Patent Owner provides a summary of the prosecution and post-issuance histories of the '983 patent. *See* PO Resp. 8–13. The prosecution history is inconclusive.

The prosecution history indicates that the Examiner first found that Waytena disclosed the step of "selecting said second set of attraction from said first set of transactions for which data substantially matches with said information." Ex. 1002, 69. In its responding Remarks of July 28, 2006, Applicant argued that Waytena "do[es] not even suggest that such data about the party is capable of distinguishing among said first set of attractions

adequately to provide an itinerary" and that "Mahoney, Kanemitsu, and Waytena and their respective et al specifically teach against" "the function of the present invention to proceed from set a), the list of all attractions, to the itinerary comprising set c) without requiring the intermediate step of manual selection of set b) by the patron." *Id.* at 45–46. In response, the Examiner disagreed that Waytena "does not have 'software operable to select' but has only a manual step of selection." *Id.* at 20 (citing Applicant's Remarks of July 28, 2006). Rather, the Examiner found, "Waytena et al ('770) at column 14, lines 13-35 discloses that if desired, the patron may be presented with a list of attractions that match preferences, which is seen to meet the language of applicant's selecting step." *Id.*

After an applicant-initiated interview held on Nov. 9, 2006, for which no summary was filed, the Examiner entered an amendment replacing "software operable to select" with "software that selects." Ex. 1002, 9. The Examiner's reason for allowance simply stated

> Waytena et al ('770) does not specifically disclose computer having access to said data and said information, said computer having software that selects said second set of attractions from said first set of attractions, said second set of attractions consisting of at least some of said first set of attractions for which said data substantially matches with said information whereby said itinerary is customized for said party.

Id. at 9–10. There was no further discussion regarding a disavowal or interpretation as to whether the Examiner agreed that the claim specifically excluded specific rides (manual selection) from the information.

Patent Owner's contention that "it was a clearly stated goal of the '983 Patent to avoid the *need* for users to select attractions" is not infringed by the possibility of users selecting desired attractions. PO Resp. 9

(emphasis added) (citing Ex. 2009 ¶¶ 72–74; Ex. 1001, 1:41-58, 3:21-35, 8:65-9:6).

Patent Owner's contention that in claim 3, "introducing a hypothetical step for manual confirmation or selection from a software-selected second set of attractions would create a redundant and purposeless *third* set," is not relevant to whether the information used by the software in selecting the second set of attraction contains a specific ride selection. PO Resp. 11 (citing Ex. 2009 ¶¶ 81, 82). We note that the claim does not recite the source of the information used, but the '983 patent indicates that it is by user input. *See, e.g.,* Ex. 1001, 6:20–41. Although the '983 patent indicates a "preference" for general inquiries, it does not exclude more specific inquiries. *Id.* at 6:33–34. "Th[e] description of a preferred embodiment, in the absence of a clear intention to limit claim scope, is an insufficient basis on which to narrow the claims." *Decisioning.com, Inc. v. Federated Dep't Stores, Inc*., 527 F.3d 1300, 1314 (Fed. Cir. 2008).

Similarly, Patent Owner's contention that Petitioner, in its Technology Tutorial in the '2272 litigation district court, agrees with Patent Owner's claim construction in stating that guests need the software to select attraction without selecting any themselves is also not relevant. PO Resp. 11–13 (citing Ex. 2010, 24:20–23, 25:11–12, 29:1–18, 30:14–20). Petitioner's acknowledgement that the software selects attractions without requiring the party to select any themselves is not an admission that the party is prohibited from selecting attractions. The claims do not exclude ride selection from the information of which only "a portion" must be distinguished from data regarding the first set of attractions.

Thus, based on the evidence of record, we find that there is not a clear and convincing disavowal of the information used to select a second set of

attractions from the first set including any attraction selection. As such, we construe "software that selects" as the software selecting a set of attractions from the first set based on information about the party, but does not exclude the information from being a specific attraction, i.e., a "manual selection." We note, however, that even under Patent Owner's overly-narrow interpretation of "software that selects" a second set as excluding a manual selection, Petitioner has, for the reasons explained below, established that the prior art renders obvious this limitation.

3. "substantially matches"

Independent claims 1 and 3 also recite, in relevant part, "said first set of attractions for which said data substantially matches with said information." Ex. 1001, 31:61–63; 32:44–46.

In our Institution Decision, we determined that claims 1 and 3 do not recite how the match is determined. Inst. Dec. 21. In other words, we determined that the claims do not recite the described utility function in determining whether there is a substantial match between data of the first set of attractions and the information. Ex. 1001, 31:60–62; 32:42–46. "Although the claims must be read in light of the specification, it is important that we 'avoid importing limitations from the specification into the claims.'" *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1218 (Fed. Cir. 2014) (quoting *Phillips.*, 415 F.3d at 1323. We also determined that claims 1 and 3 do not recite that the data must *only* "substantially" match such that an exact match is excluded, and there is no specific definition of what would be considered "substantial," nor is there an exclusion of an exact match that, by its nature, is also a "substantial" match. Inst. Dec. 21.

In Patent Owner's Response, Patent Owner argues that "substantially matches" excludes "a poor/low match, which violates some clearly identified party preferences unless nullified," and "an unalluring (*i.e.*, neutral) match." PO Resp. 14. Patent Owner contends that '"substantially matches' are matches more alluring than an unalluring match and have nothing strictly objectionable." *Id.* (citing Ex. 2009 ¶ 89; Ex. 1001, 6:50–60, 7:40–42, 22:43–49, 28:34–36). Patent Owner argues that the invention provides "extensive flexibility . . . to function designers and facility operators in deciding how matches are determined and characterized, which includes a range of factors and methods for representing and interpreting these factors." *Id.* at 14–15 (citing Ex. 2009 ¶¶ 90, 114); PO Sur-Reply 8. Patent Owner describes the approaches of "pedagogical 'binary all-or-nothing values,'" and "the 'more linear' 'fuzzy logic or weighted metrics' approaches . . . as might be obtained by regression analysis . . . or empirical correlations." PO Resp. 15 (citing Ex. 1001, 20–30). Thus, Patent Owner argues, "[t]he specification describes many implementation options, and a PHOSITA would understand the claims when read alongside the specification" to "not imply an exact match." PO Sur-Reply 8.

In its Reply, Petitioner agrees with the construction for "substantially matches" applied in our Institution Decision. Pet. Reply 4–5.

As we stated in our Institution Decision, the claims do not require that the data can *only* substantially match, nor is there a definition in the '983 patent for "substantially." Inst. Dec. 21. The portion of the '983 patent to which Patent Owner directs attention provides that facilities are rated against each other based on facts with a low rating for a poor match and a high rating for those with a strong link. Ex. 1001, 6:49–60. Outside of the

claims, the term "substantially" does not appear in the written disclosure of the '983 patent.

Thus, based on the evidence and in light of the Specification without importing limitations from the Specification into the claims, we construe "substantially matches" as matches that are "more alluring than an unalluring match," "have nothing strictly objectionable," and exclude poor or low matches. Thus, "substantially matches" does not exclude an exact match that, by its very nature, is more alluring, has nothing strictly objectionable, and is not a poor or low match.

4. "directed demand"

Dependent claim 20 recites, in relevant part, "accumulating in said storage a directed demand corresponding to at least said first attraction." Ex. 1001, 34:35–37. Similarly, dependent claim 23 recites, in relevant part, "redistributing a directed demand corresponding to said first attraction." *Id.* at 34:50–51.

The '983 patent defines "directed demand" as "the number of visitors directed to an attraction by the itineraries produced by this invention. It includes the fact that an itinerary is generated for a party, and that a party may consist of multiple visitors." Ex. 1001, 8:16–20.

In our Institution Decision, we construed the term "directed demand" as defined in the '983 patent as "the number of visitors directed to an attraction by the itineraries produced by this invention," and "[i]t includes the fact that an itinerary is generated for a party, and that a party may consist of multiple visitors." Inst. Dec. 22. In its Response and Sur-Reply, Patent Owner states that it agrees with our construction for "directed demand." PO

Resp. 15; Sur-Reply 15. Petitioner does not contest our construction for this term. *See generally* Pet. Reply.

5. Summary

To summarize, we construe the following terms:

> "presentation means" — a means-plus-function claim term under 35 U.S.C. § 112 ¶ 6, and the corresponding structure is portable computer, a handheld computer, a kiosk computer, a general purpose computer, and a desktop computer having a screen, printer, or speaker that visually or audibly presents information;
>
> "software that selects" — software selecting a set of attractions from the first set based on information about the party, but does not exclude the information from being a specific attraction, i.e., a "manual selection"
>
> "substantially matches" — matches that are "more alluring than an unalluring match," "have nothing strictly objectionable," and exclude poor or low matches, but does not exclude exact matches; and
>
> "directed demand" — the number of visitors directed to an attraction by the itineraries produced, wherein itineraries are generated for a party that may consist of multiple visitors.

Additionally, other than as discussed below for certain disputes, we apply the claims without explicit construction. *See Realtime Data*, 912 F.3d at 1375 ("The Board is required to construe 'only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. GROUND 1 — ALLEGED OBVIOUSNESS OVER SIM IN VIEW OF DOI — CLAIMS 1, 3, 5, 7, 8, 10–14, 16, 17, 19, 20, AND 22–25

1. Overview of Cited Art and Evidence

a) Overview of Sim – Exhibit 1005

Sim relates to a queue management system for managing a queue of people such as at theme parks by allowing people to join a "virtual" queue, allowing people to be free to undertake other activities. Ex. 1005, code (57), 1:5–17, 2:1–4, 3:16–22. Sim discloses portable docking stations, each having a means to display a selection of queues the person or people wish to join, of the preferred sequence, and of preferred times of joining the queues *Id.* at 7:15–21, 8:11–27, 14:31–35, Fig. 1. This data are transmitted to the queue manager/controlling computer 3 via a communication means. *Id.* at 8:19–21.

Figure 2, which is reproduced below, is a schematic diagram of a system in operation in a theme park. Ex. 1005, 14:11–13.

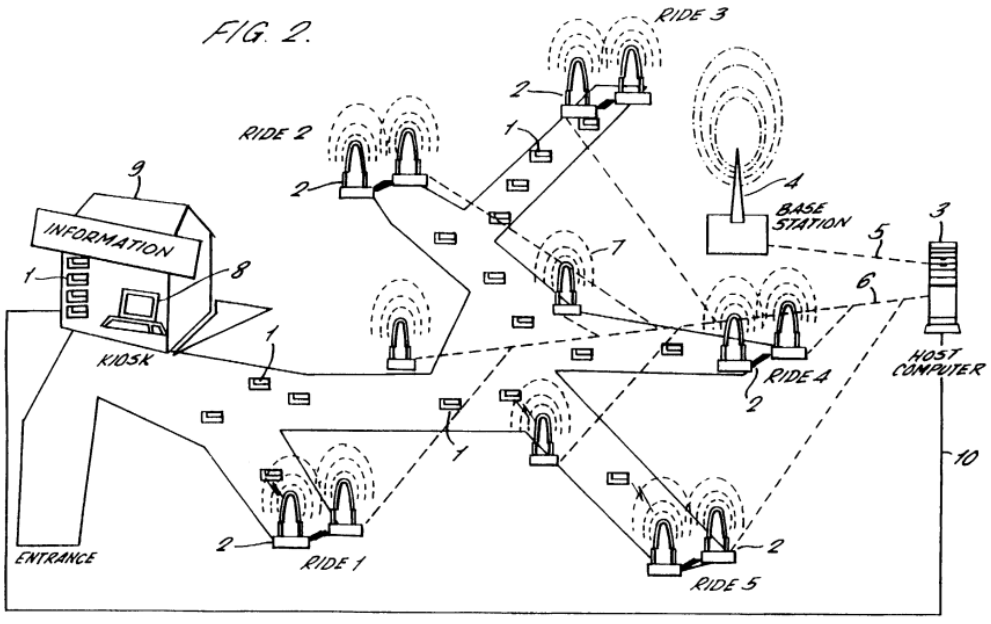


Figure 2 illustrates portable modules or prompters 1, gate units 2 positioned at various rides that detect portable modules/prompters 1, and host/controlling computer 3 that receives downloaded identification codes from gate units 2 and from module detectors 22 incorporated into locator units 7. Ex. 1005, 14:31–15:29. Computer 3 is linked to transmitter 4 by communication line 5 and linked to gate unit 2 by communication line 6. *Id.* at 15:1–7. Portable modules 1 can be inserted in a docking station 8 that is located within information kiosk 9. *Id.* at 15:18–22.

"[F]or multiple rides the user will be required to enter manually the required rides and ride sequence following the instructions on the display as shown in Figure 6," reproduced below. Ex. 1005, 17:24–27.

FIG. 6.

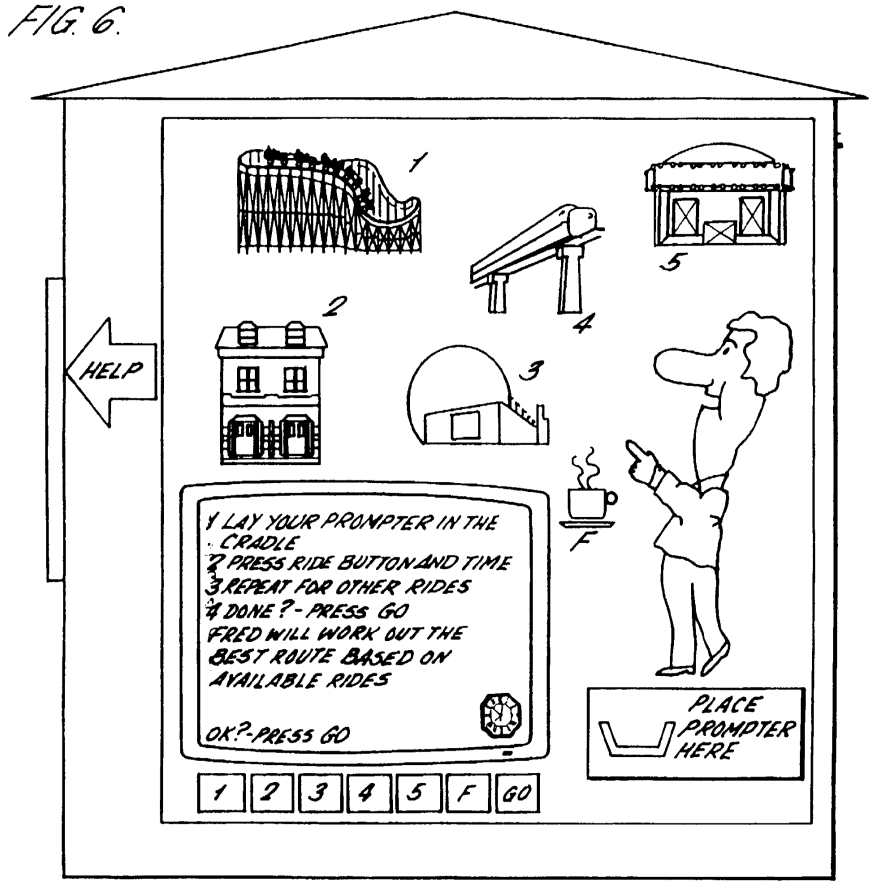


Figure 6 "is a schematic illustration of a docking station" and "illustrates the display which will allow the user to select the queues to be joined." Ex. 1005, 14:20–21, 15:23–24. In Figure 6, the portable module/prompter 1 is docked in its station and its identification code along with queues/rides for which the user has registered are sent via communication line 10 to controlling computer 3. *Id.* at 15:24–28. After receiving the preferred times and sequence of rides, computer 3 will determine the "optimum sequence and time of the rides." *Id.* at 15:29–34. Once the module 1 is removed from the docking station 8, computer 3 transmits messages to each module 1 indicating the sequence and times of rides. *Id.* at 15:34–16:3.

Sim describes that its "system would request other relevant information such as height or health status, which may be relevant in allowing access to certain rides and information such as the need for a stroller or wheelchair," and when a group of visitors share one portable module 1, the system would require information on each individual. Ex. 1005, 22:32–23:3. Computer 3 can store in a database information on each user and member of a group. *Id.* at 23:8–9. This information can comprise, for example,

> prompter serial number, relationship to other prompters or on tags, arrival time, preferred language, attract preferences, time preferences, calculated optimum route, the number in the group, attraction restriction information by individual user, other relevant information on the user, e.g. any relevant disability, baby being carried, stroller present etc., optional services activated (which might require additional user information), and credit available (where applications where individual ride tickets are used and the portable modules acts an electronic ticket).

Id. at 23:8–21.

Computer 3 can "operate to include a procedure which can ensure that a user registering late in the day would be given access to the same number of queues as a user registering earlier in the day," so that a late registering user could join queues near the front. Ex. 1005, 23:22–26. "The structuring and managing of the queues are features which can be customised to suit[] a particular situation," such that computer 3 "operate[s] in accordance with the customised algorithm to manage the queues." *Id.* at 23:27–31.

Sim further describes that "[t]he Queue Manager is the controlling software program in the host computer," and "uses a simple but fast customizable flat database which from which records are selected and processed." Ex. 1005, 34:15–18. The queue manager calculates "the actual time and sequence of attendance at queue entrances offered to the user" that is responsive to user preferences, overall system demand, and user priority to "result in effectively, a recommended route." *Id.* at 34:22–28. "The queue manager software accepts input from the various input terminals in the park," from remote terminals, and from park management. *Id.* at 35:15–23. The queue manager also accepts guests' ride preference requests and collects a guest's location information. *Id.*at 35:22–25. "This information is used to calculate and update a guest's itinerary," and to send sequenced messages instructing guests to attend the rides. *Id.*at 35:25–30.

b) Overview of Doi – Exhibit 1006

Doi relates to a customer navigation system and method for a large-scale attraction facility such as a theme park. Ex. 1006, 1:14–67. Doi describes a customer navigation terminal having a display for customer navigation. Ex. 1006, 9:52–10:24.

Doi describes a system where customer navigation information is transmitted to the customer navigation terminal and displayed to the customer to perform navigation. Ex. 1006, 9:52–58. The customer navigation can vary based on the customer's age and crowd condition. *Id.* at 9:48–52. For example, when attraction A is crowded, the navigation planner makes a plan to recommend other attractions to some of the customer queuing at that attraction, those customers being selected in consideration of their ages. *Id.* at 9:53–56. Figure 11, reproduced below, is illustrative.

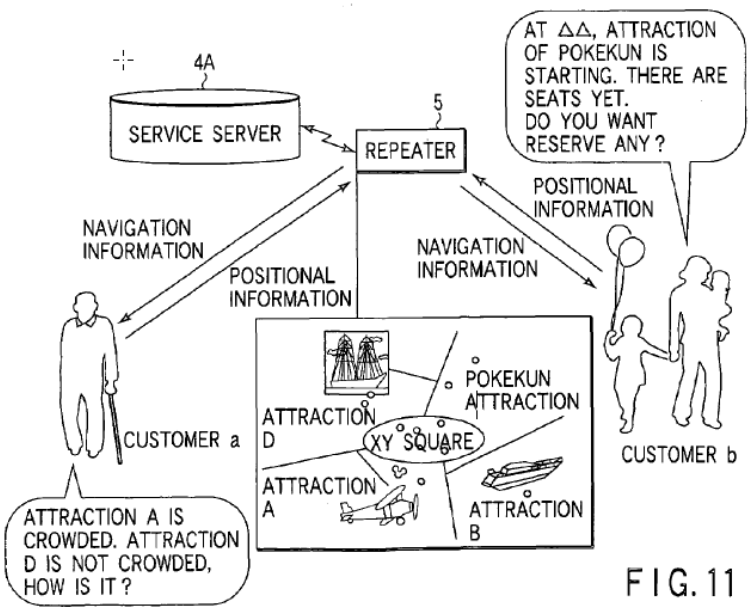


FIG. 11

Figure 11 illustrates "examples of concrete actions." Ex. 1006, 4:35–36. For example, these selected customers "a" and "b" may be provided information such as "Attraction A is crowded. Attraction D (enjoyable for aged person) is not crowded, how is it?["] *Id.* at 9:56–10:3. After viewing a displayed map based in their location, the customer is then allowed to decide whether to move to the recommended Attraction D. *Id.* at 10:4–11. The system can also recommend, when there are seats available, events suitable for ages that match the customer's age, and to recommend meal or food stops based on crowd condition. *Id.* at 10:12–19; 10:34–37.

2. Discussion

Petitioner challenges claims 1, 3, 5, 7, 8, 10–14, 16, 17, 19, 20, and 22–25 as unpatentable under 35 U.S.C. § 103 over Sim or over Sim in view of Doi. Pet. 10–41. Specifically, regarding independent claim 1, Petitioner argues Sim discloses 1[pre], 1[a], 1[b], 1[d], and 1[e] and Sim renders obvious 1[c]. Pet. 10–41. Petitioner also argues that, alternatively, Sim in combination with Doi renders obvious limitations 1[b] and 1[c]. *Id.* at 17, 19–22.

a) Claim 1

Petitioner explains in detail which disclosures and combinations of Sim and Doi allegedly teach each of claim 1's limitations. Pet. 10–23. And, Petitioner proffers explanation regarding the motivation of a person of ordinary skill to modify Sim with Doi and have a reasonable expectation of success in doing so. *Id.* at 20–22, 51–52. Petitioner also cites Dr. Houh's testimony, in which Dr. Houh details which disclosures and combinations of Sim and Doi he believes teach each of claim 1's limitations and why one of ordinary skill in the art would do so. *Id.* at 34–52; Ex. 1003 ¶¶ 53–78.

In response, Patent Owner focuses on the "software that selects" and "substantially matches" as recited in claim 1[c]. PO Resp. 15–21. More particularly, Patent Owner asserts that Sim does not disclose or render obvious "software that selects" under what it considers to be the proper construction of the term, neither of Sim and Doi discloses data that "substantially matches" a party's profile under what it considers to be the proper construction of the term, and there is no motivation to combine Sim and Doi in the manner proposed by Petitioner. *Id.*

Having reviewed all of the parties' arguments and evidence, we find that Petitioner has shown by a preponderance of the evidence that claim 1 would have been obvious over Sim and Doi. Pet. 10–23; PO Resp. 15–21; Pet. Reply 5–10; PO Sur-Reply 9–13. We turn now to a detailed discussion of the parties' disputes regarding "said computer having software that selects said second set of attractions from said first set of attractions, said second set of attractions consisting of at least some of said first set of attractions for which said data substantially matches with said information."

(1) Obviousness over Sim

(a) Petitioner's Position

Petitioner first contends that Sim renders obvious the computer having "software that selects" the second set of attractions from the first set of attractions. Pet. 17–19. Specifically, Petitioner asserts that Sim's "'controlling computer' with 'Queue Manager' software" uses the party information of limitation 1[b] and attraction data of limitation 1[a] "to create a custom itinerary for certain attractions in the park." Pet. 17–18 (citing Ex. 1005, 20:10–11, 14:31–15:7, Fig. 1; Ex. 1003 ¶¶ 68, 69). Petitioner asserts that the Queue Manager uses the received ride preference requests and the collected location information to "calculate and update a guest's itinerary" by calculating "the actual time and sequence of attendance at queue entrances offered to the party" in response to party preferences, overall system demand, and party priority to "result in effectively, a recommended route." *Id.* at 18 (quoting Ex. 1005, 35:21–30, 34:22–32 and citing Ex. 1005, 23:32–24:22). Thus, Petitioner concludes, "Sim's computer acquires party information, including preferences for rides, times, and sequences, and compares that to attraction data, including locations and

current crowding, and generates a 'recommended' sequence of rides and route (*e.g.*, itinerary)." *Id.* (citing Ex. 1005, 22:4–12, 38:27–32; Ex. 1003 ¶ 69). Petitioner reasons "Sim does this to 'maxim[ize] ride/show utilisation, ease park management issues, raise spending on secondary attractions and most importantly, greatly increase customer satisfaction.'" *Id.* at 18–19 (quoting Ex. 1005, 22:4–12 (alterations in original)).

(b) Patent Owner's Position

Patent Owner's argument relies on the interpretation of "software that selects" as excluding manual selection of the second set of attractions, including contemporaneous or further manual selections. PO Resp. 15–16. In particular, Patent Owner argues that Sim requires the users to provide a manual selection of attractions which is used to compute time and sequence. PO Resp. 16. Responding to Dr. Houh's assertion that Sim's system will re-allocate the user's sequence based on attraction closures or failures by adding or removing an attraction (Ex. 1002 ¶ 68), Patent Owner asserts that this does not "provide any basis for suggesting that the controlling computer 3 would *automatically select different attractions*" (PO Resp. 17–18).

(c) Analysis

As discussed above in Section II.D.2, we interpret claim 1 as requiring the software to selecting a set of attractions from the first set based on information about the party that does not exclude a specific attraction. Based on this interpretation, we find that Sim does not teach the controlling computer 3 selects a second set of attractions from the first set based on information substantially matching information about the party.

Sim discloses a user registering for queues or rides and preferred times and sequence for those rides. Ex. 1005, 15:29–32, 17:22–27. This information is sent to controlling computer 3 that determines optimum sequence and time of rides and sends a message with the name of the rides, the times for each, and the order. *Id.* at 15:32–16:5, 18:16–20; Fig. 3. Sim "accepts ride preference requests" and leads customers to certain areas and on secondary attractions. *Id.* at 35:23–24, 38:27–39:8. And, though Sim may remove an attraction, it does not select or recommend at alternative. Ex. 1005, 23:32–24:22.

Under our construction of "software that selects," the software selects rides to present based on information that may contain ride preferences. *See supra* § II.C.2. In Sim, however, there is no selection by the computer software of a ride. Rather, the order and timing are selected for rides that the user is required to select. *See* PO Resp. 16; Ex. 1005, 17:22–27; Ex. 2009 ¶ 62 (testifying that in Sim, "'select', 'register', and 'request' are equivalent").

Weighing all of the parties' arguments and evidence, we find Petitioner has not shown by a preponderance of the evidence that limitation 1[c] would have been obvious Sim alone.

(2) Obviousness over Sim and Doi

(a) Petitioner's Position

Petitioner alternatively argues that "[t]o the extent Sim does not disclose that its computer 'selects' particular rides when creating an itinerary, Sim in view of Doi[] renders this obvious." Pet. 19 (citing Ex. 1003 ¶¶ 70–76). Petitioner asserts that "Doi is directed to a theme park 'customer navigation system' and has the same goal of directing parties to

attractions in a way that maximizes utilization." *Id.* (citing Ex. 1006, code (57), 9:9–10:44, 10:52–62). Further, Petitioner argues that "Doi's system uses similar components to Sim," including a customer-carried navigation terminal 1C and service server 4A transmitting information to the customer terminal. *Id.* (citing Ex. 1006, 4:56–63, 8:60–9:20, Figs. 1, 10).

Petitioner asserts that Doi's customer terminal includes information regarding the customer such as nickname, height, age, and position, and that the terminal "can provide a navigation plan based on position and 'crowd condition[s],' among other things." *Id.* (citing Ex. 1006, 4:64–5:29, 9:21–58) (alteration in original). And, Petitioner contends that Doi's system collects and uses "'use data' reflecting 'use frequencies of attractions by customer ages' and attraction 'waiting times' . . . to 'select' attractions for the customer based on their information matching attraction data." *Id.* at 19–20 (citing Ex. 1006, 6:43–64, 9:52–10:44). These selected attractions are the other attractions recommended to queueing customers, the attractions being selected based on consideration of the customers' ages. *Id.* at 20 (citing Ex. 1006, 9:63–66). According to Petitioner, Doi's teaching of an exact match meets the recited "substantial match." *Id.* at 20, n. 8.

Petitioner contends "[i]t would have been obvious to apply Doi's teachings and have Sim's system 'select' attractions, with at least some of those attractions having data that 'substantially matches with [party] information,'" because both references are in the same field, disclose similar systems, and collect and use the same types of party information when determining ride access. Pet. 20 (citing Ex. 1003 ¶ 73). Petitioner asserts that "Doi simply adds that the system can further use this information to select attractions for a party where party information and attraction data match," and that this "would have been the use of a known technique to

improve a similar device." *Id.* at 21. Petitioner reasons that a person of ordinary skill in the art "would have thus been motivated to apply Doi to Sim, such that Sim's system could select attractions and times that match party information when determining a 'guest's itinerary,'" because doing so would "maximiz[e] attraction utilization, control[] crowding, offer[] parties sufficient rides for a complete day, and reduc[e] the need to later re-allocate sequences." *Id.* at 21–22 (citing Ex. 1003 ¶ 75).

(b) Patent Owner's Position

Patent Owner contends that, as with Sim, "[u]sers' manual selection of attractions to be included in an itinerary is required." PO Resp. 16; *see also id.* at 18. Patent Owner argues that "Doi clearly shows that it requires a party to make the decision—stay in the same queue or select a new attraction from the recommendations." *Id.* at 18 (citing Ex. 1006, 9:63–10:44; Ex. 2009 ¶ 103). Patent Owner asserts that "a PHOSITA would understand Doi teaches a filtering of available attractions which is not 'software that selects' taught by the '983 Patent." *Id.* (citing Ex. 2009 ¶ 103). Further, Patent Owner argues that Doi's system is "incompatible with an itinerary-generation system," because it operates in real time. *Id.* Patent Owner posits that in an example where "if a party were trying to obtain an itinerary for tomorrow morning, there is no evidence that Doi can provide any recommendations." *Id.* (citing Ex. 2009, n.15., ¶¶ 110, 126). Patent Owner further points out claim 1's recitation that the itinerary is customized *for* the party and not *by* the party "indicates that the software makes the selection of the itinerary for the party." *Id* (citing Ex. 2009 ¶¶ 117, 118).

Regarding the "substantially matches" portion of the claim limitation, Patent Owner asserts that Doi's exact match is not a substantial match

"[u]nder proper construction," i.e., not requiring an exact match. PO Resp. 19 (citing Ex. 2009 ¶¶ 89, 91, 114, 116, 119). Patent Owner asserts that because it is an exact match, it does not meet the claimed substantial match. *Id.* Patent Owner further argues that "Petitioner provides examples of *users* being selected that *match exactly* the *attraction* data, rather than *attractions* that *substantially match* the *party* information." *Id.* (citing Ex. 2009 ¶ 116). Patent Owner refers to Petitioner's statement that Doi provides for invitations to be given to selected customers matching a range of ages to an attraction that has non-reserved seats and argues this "example indicates that if the users' age does not match the age requirement of the attraction, an invitation will not be given." *Id.* (citing Ex. 2009 ¶ 116).

Further, Patent Owner argues that "there is no reasonable motivation for a PHOSITA to combine the teachings of Sim and Doi as Petitioner has proposed." PO Resp. 20 (citing Ex. 2009 ¶ 106). Patent Owner argues that Petitioner's "noting that 'Doi recognizes the same problems and provides similar solutions to achieve the same results as Sim,'" is an acknowledgement of a lack of motivation to combine. *Id.* (citing Pet. 21; Ex. 2009 ¶ 106). Patent Owner contends that the primary aim of the prior art is "to reduce physical queue times by managing virtual queues with special entrances for the most sought-after attractions," and asserts that "[g]iven that only a few attractions offer multiple entrances, it is clear why there would be little or zero motivation to develop a more complex system capable of generating itineraries that encompass *all* attractions at a venue." *Id.*

Patent Owner additionally provides three other reasons why a skilled artisan would not have combined Sim and Doi: (1) Doi selects a class of parties for an attraction instead of a selecting an attraction for a party;

(2) without overcrowding or underutilization, Doi's system "has no basis for recommendations and would be non-functional if a party tried to obtain an itinerary during stable conditions"; and (3) Doi relies on real-time user positions and crowd levels such that it does not make future recommendations, "rendering the system non-functional for advanced planning." PO Rep. 20–21 (citing Ex. 2009 ¶¶ 108–110). Thus, Patent Owner alleges that Petitioner relies on impermissible hindsight. *Id.* at 21 (citing Ex. 2009 ¶ 112; *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992)).

(c) Analysis

As discussed above in Section II.D.1, Sim presents an itinerary of rides with times and sequence based on information. *See* Ex. 1005, 23:8–21. And, as discussed above in Section II.D.2, Doi provides navigation to a customer at a facility such as a theme part based on information regarding customer's age and crowd condition. *See* Ex. 1006, 1:64–67, 9:55–66. For example, if one attraction (Attraction A) is crowded, the system looks to recommend a less crowded, age-appropriate attraction (Attraction D). *Id.* at 9:53–10:3. After presenting the recommended Attraction D and navigation information to that attraction, the customer decides whether to accept the recommendation. *Id.* at 9:56–10:11.

Petitioner asserts that Doi's recommendation teaches the software selecting an attraction based on substantially matching the information, i.e., selection Attraction D based on matching ages. Pet. 20. Petitioner's expert, Dr. Houh, testifies that Doi's navigation planner uses data regarding frequency of attractions by ages and attraction waiting times "to 'select' attractions for a customer based on information about the customer ***matching*** data about attractions." Ex. 1003 ¶¶ 71, 72. We find that

Petitioner has shown by a preponderance of the evidence that Doi's recommendation teaches software that selects at least ride based on a match with customer information, the match being more alluring, containing nothing strictly objectionable, and not a poor or low match.

Petitioner reasons that a skilled artisan would have modified Sim's system software to have Doi's ability to select attractions based on matches with the stored information at the outset to "maximiz[e] attraction utilization, control[] crowding, offer[] parties sufficient rides for a complete day, and reduc[e] the need to later re-allocate sequences." Pet. 21–22. We determine that Petitioner articulates sufficient reasoning with rational underpinning to combine the teachings of Sim and Doi such that the software selecting a second set of attractions from a first set based on information would have been obvious to a person having ordinary skill in the art.

Patent Owner's argument that Doi teaches a manual match because the user must select the recommendation is unavailing. PO Resp. 18; *see also* PO Sur-Reply 9, 11. Doi's user selects the recommendation *after* the software selects and presents the attraction. The claim does not exclude any further steps. Ex. 1001, 31:53 ("said system *comprising*"). Further, Patent Owner's argument that the prior art may have considered "filtering of attraction choices" has no bearing here. PO Resp. 18.

Similarly, Patent Owner's argument that Doi is incompatible because it operates in "real-time" such there is "no evidence that Doi can provide any recommendations" for "tomorrow morning," is not persuasive because it is not commensurate with the scope of the claim. PO Resp. 18; *see also* PO Sur-Reply 9–10. The claim does not require that the itinerary be generated in advance as opposed to "real-time." PO Resp. 18; Ex. 1001, 31:50–67.

Rather, the '983 patent specifically provides for contemporaneous, "real-time" itinerary generation. *See, e.g.,* Ex. 1001, 6:16–19 ("When a group of people *arrives* at a facility comprised of many attractions, their experience is optimized if they can proceed throughout the day directly to a next attraction of specific interest to them."), 11:3–4 ("a party *arriving* at a facility receives a single portable computer 100." (emphases added)).

We also disagree with Patent Owner that Doi's "exact" match of ages to select an attraction does not meet the claimed "substantial[]" match. PO Resp. 19. As discussed above in Section II.C.3, an "exact" match is a substantial match because it is more alluring than an unalluring match, has nothing strictly objectionable, and excludes poor or low matches. Whether Doi teaches matches based on a standard lower than exact (*see* PO Resp. 19) is not relevant because the claim does not exclude exact matches.

Regarding Patent Owner's argument that Doi's matching of data to recommend an itinerary event does not "*provid[e] an itinerary to* a party . . . whereby said itinerary is customized *for said party*," the preponderance of evidence shows that the combination of Sim's itinerary modified to select an attraction by, for example, ages renders an itinerary customized for the party. PO Sur-Reply 12.

Patent Owner's arguments why "there is no reasonable motivation for a PHOSITA to combine the teachings of Sim and Doi as Petitioner has proposed" are not supported. PO Resp. 20–21. As discussed above, we find that Petitioner has shown by a preponderance of the evidence that the combination of Sim and Doi teaches software that selects a second set of attractions based on the stored information. That Sim and Doi both recognize the same problems and have similar solutions to achieve similar results support Petitioner's position that Sim and Doi are analogous art such

that a PHOSITA would look to combine Doi with Sim. *Id.* at 20; Pet. 21. Patent Owner's argument that "there would be little or zero motivation to develop a more complex system capable of generating itineraries that encompass all attractions at a venue" does not address Petitioner's provided reasoning. *Id.* at 20.

We disagree with Patent Owner's assertion that Doi does not select an attraction for the party but selects a party for an attraction. PO Resp. 20. The evidence shows that Doi selects an attraction based on matching ages to attractions. Ex. 1006, 9:53–10:11. That Doi can also review attractions for matching to ages does not contradict Doi's teaching of selecting an attraction based on the stored information.

Patent Owner's argument that a skilled artisan would not have combined Sim and Doi because Doi's system would not be functional when there is no overcrowding, is not persuasive because Petitioner relies on Doi only for the teaching of software selecting an attraction based on substantial matches with stored information. The test for obviousness is not whether Doi's system may be bodily incorporated into the Sim's system. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Here, Petitioner modifies Sim's software to have Doi's ability to select attractions based on substantial matches with stored information. Patent Owner does not explain sufficiently why that would make Sim's modified system non-functional.

Similarly Patent Owner's argument that one of ordinary skill would not combine Doi with Sim because Doi would not be capable of future recommendations, is also unpersuasive. First, as noted above, the claim does not require future planning. Second, as also noted above, Petitioner relies on Doi for teaching selecting an attraction based on them substantially matching with stored information and is not bodily incorporating Doi's

system with Sim's system. Third, Patent Owner does not explain or provide evidence to show that the combination would not be capable of doing so nor that it would render Sim's modified system non-functional for advanced planning.

Weighing all of the parties' arguments and evidence, we find Petitioner has shown by a preponderance of the evidence that limitation 1[c] would have been obvious over the combination of Sim and Doi.

(3) Summary of Claim 1

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has not established by a preponderance of the evidence that claim 1 would have been obvious over Sim, but Petitioner has established by a preponderance of the evidence that claim 1 would have been obvious over the combination of Sim and Doi.

b) Independent Claim 3

Petitioner asserts that the preamble, limitations, and whereby clause of independent claim 3 are nearly identical to those of independent claim 1. Pet. 24. Therefore, Petitioner's contention that claim 3 is obvious over Sim in view of Doi relies on the arguments and reasons presented for claim 1. *Id.*

Patent Owner, thus, also relies on the arguments presented regarding claim 1 for claim 3. PO Resp. 22.

Having considered the parties' arguments and evidence, and given that we find that Petitioner has demonstrated by a preponderance of evidence that claim 1 would have been obvious over Sim and Doi, we also find Petitioner has demonstrated by a preponderance of evidence that claim 3 would have been obvious over Sim and Doi.

c) Dependent claim 5

Petitioner contends that claim 5, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 24–25. Specifically, Petitioner contends that claim 5 is similar to claim 1 with the difference being that "[i]t merely specifies a type of party 'information' to use, an '***attribute***'—a type already discussed above for claim 1." Pet. 24. Petitioner asserts that Sim's party information comprises attributes regarding height, health, stroller or wheelchair need, number in group, and age. *Id.* (citing Ex. 1005, 22:29–23:3, 23:8–21, 34:2–11). Petitioner also asserts that "Doi adds that its computer can use this same party 'attribute' information (*e.g.*, age), along with attraction data (*e.g.*, age interest data), to select attractions (*e.g.*, a ride and subsequent show) that are 'more desirable' to the party (*e.g.*, based on 'matching ages')." *Id.* (citing and quoting Ex. 1006, 8:20–56, 9:52–10:44, 10:12–33, Figs. 8, 9).

Petitioner contends that it "would have been obvious to combine Sim and Doi, such that Sim's party attributes and attraction data distinguish which attractions are 'more desirable' and the 'controlling computer' selects those attractions," and refers to the reasoning presented for claim 1, limitation 1[c]. Pet. 24–25 (citing Ex. 1003 ¶ 83). Petitioner also asserts that a POSITA would have looked to Doi's distinguishing of rides based on party attributes and selecting of age appropriate rides, that "[a]dding this to Sim would have been the use of a known technique to improve a similar device," and would provide the benefit to Sim of "selecting attractions parties may enjoy." *Id.* at 25 (citing Ex. 1003 ¶¶ 83, 84).

Patent Owner argues that Doi does not use the attributes of height and age "to select attractions for an itinerary; decisions about which attractions to visit remain in the hands of the users." PO Resp. 22. However, Patent

Owner argues against Doi individually when Petitioner relies on the combination of Sim and Doi for teaching this claim. As discussed above, Doi teaches using age to select at item to recommend to the user, but it is the combination of Sim and Doi that teaches the software selecting an attraction. *See* Pet. 24–25; *supra* § II.D.2.(2)(c). Patent Owner cannot show non-obviousness by attacking references individually when Petitioner relies on a combination of references. *See Keller*, 642 F.2d at 425.

Patent Owner's argument that neither Sim's nor Doi's system utilizes attributes "for the automated selection of attractions as required by Claim 5" is similarly unavailing. PO Resp. 22. Petitioner relies on the combination of Sim and Doi for teaching the software selecting attractions based on attribute information that distinguishes a portion of the first set of attractions as more desirable. Patent Owner does not provide evidence or reasoning why the proposed combination would not have been obvious.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has established by a preponderance of the evidence that claim 5 would have been obvious over the combination of Sim and Doi.

d) Dependent claim 7

Petitioner contends that claim 7, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 25–26. Specifically, Petitioner contends that "Sim contemplates 'different classes of guests depending on the fee paid,' and parties paying premiums for a "range of ***privileges***," that parties may have privileges based on arrival times, and that a party's attached priority is "taken into account when determining the queues to offer." *Id.* at 25 (citing Ex. 1005, 3:23–27, 34:22–32, 37:3–4; Ex. 1003

¶¶ 85–87). Petitioner asserts that a skilled artisan would understand that Sim's parties can have an associated privilege that gives them priority over others "when it comes to selecting attractions." *Id.* (citing Ex. 1003 ¶ 85).

Petitioner asserts that "[i]n Sim, party privilege/class is part of the party 'information' in the system," such that "selecting rides for an itinerary that match with a party having a privilege or paid-class status would have been obvious over Sim in view of Doi." Pet. 26 (citing Ex. 1003 ¶ 86). Given the teachings of Sim's privilege and Doi's selecting attractions popular for matching age groups, Petitioner contends that it would have been obvious to a POSITA "that the same selection of attractions could be made based on whether a party has a particular privilege or class status privilege attached to them as taught by Sim." *Id*. (citing Ex. 1003 ¶ 86). According to Petitioner, "[t]his would have been nothing more than providing the same itinerary selection of an event as disclosed in Doi, but with the selection based on party privilege or paid-class status as disclosed in Sim—a simple substitution." *Id.* Petitioner reasons that a "POSITA would have been motivated to modify Sim to include selecting certain attractions for parties who had privilege or paid-class status, as this would accomplish Sim's goal of increasing customer satisfaction," and would have had a reasonable expectation of success. *Id.* (citing Ex. 1003 ¶ 87).

Patent Owner argues that "Sim's system, while it offers a queue management system applicable to all guests or only those paying a premium, lacks specificity in defining what constitutes a 'privilege' beyond general access rights." PO Resp. 23 (citing Ex. 2009 ¶ 128). Patent Owner asserts that Sim does not detail how its different classes of guests based on fee paid affect desirability of specific attractions. *Id.* Patent Owner also argues that Sim's selection of attractions based on fees paid is not automated by

software. *Id.* (citing Ex. 2009 ¶¶ 129, 130). As such, Patent Owner contends that Sim "does not articulate a method where attractions are chosen or prioritized based on specific privileges linked to these fees, thus failing to meet the criteria set forth in Claim 7 where privileges dictate the selection of attractions in an itinerary." *Id.* at 23–24 (citing Ex. 2009 ¶¶ 127–131).

We first note that neither the written description nor claim 7 of the '983 patent defines a "privilege." Ex. 1001, code (57), 22:62–65, 33:4–9. Further, Patent Owner does not posit a definition or provide evidence to support its contention that one of ordinary skill in the art would exclude Sim's paid class status from being a privilege for desirable, popular (i.e., crowded) attractions.

Second, Patent Owner's arguments that Sim's software does not select desirable attractions are against Sim individually when Patent Owner relies on the combination of Sim and Doi to teach the whole of claim 7. *See* PO Resp. 23; Pet. Reply 10–11. Patent Owner does not provide evidence or reasoning why the proposed combination would not have been obvious.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has established by a preponderance of the evidence that claim 7 would have been obvious over the combination of Sim and Doi.

e) Dependent claim 8

Petitioner contends that claim 8, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 27. Specifically, Petitioner contends that Sim's queue manager calculates actual time and sequence of attendance at rides offered to the user and transmits the determined optimum sequence and times for display on a portable module as an itinerary

comprising attractions on order of scheduled times. *Id.* (citing Ex. 1005, 8:28–9:9, 15:23–16:9, 17:16–17, 34:22–32, claims 1, 22, Fig. 27).

Patent Owner contends that Sim does not provide that "the data about the attraction comprise a schedule time, *e.g.*, 'discretely scheduled times, such as theaters with specific show times'" or "the arrival time of a parade along a parade route." PO Resp. 24 (quoting Ex. 1001, 9:12–13, 18:47–56, and citing Ex. 2009 ¶ 133). Patent Owner contends that the attractions shown in Sim's Figure 27 are ones that "continuously accept riders, rather than events scheduled to start at a specific time." *Id.* (citing Ex. 2009 ¶ 133).

Claim 8 depends from claim 3 and provides that the scheduled time is part of the data regarding the first set of attractions. Ex. 1001, 33:10–12. The '983 patent provides that data regarding a first set of attractions in database 1000 can include ride capacity used to allocate demand, start times for scheduled attractions, and "[f]or those attractions which are continuously running and which are not scheduled, the showtimes field 1024 contains 'c', for continuously running." *Id.* at 19:13–28. It is not necessarily data of a discretely scheduled time, but can be data of a ride attraction that is continuously running, "c." *Id.*

Petitioner's assertion that Sim calculates and displays a scheduled time for the customer to visit a first attraction of the *second* set is accurate, but it does not address how or where Sim teaches that the data of the *first* set of attractions comprises a scheduled time corresponding to a particular attraction, as required by claim 8. We agree with Patent Owner's argument that Sim does not teach data about each attraction that includes scheduled start times.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has not established by a preponderance of the evidence that claim 8 would have been obvious over the combination of Sim and Doi.

f) Dependent claim 10

Petitioner contends that claim 10, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 28 (citing Ex. 1003 ¶¶ 89, 90). Specifically, Petitioner contends that "Sim's system adds 'scheduled times' for all attractions a party is offered, including a 'first attraction' (*e.g.*, 'Space Mt') and 'second attraction' (*e.g.*, 'Haunt Hs')." *Id.* Petitioner further asserts that Sim takes into account time for parties to physically get from one ride to another. *Id.* (citing Ex. 1005, 24:7–11). Thus, Petitioner contends, "a POSITA would have known from Sim for the 'second scheduled time' (*e.g.*, 1:45 for Haunt Hs) to be equal to the 'first scheduled time' (*e.g.*, 12:15 for Space Mt) plus a 'time required between attractions.'" *Id.* (citing Ex. 1003 ¶ 90). Petitioner also asserts that Sim's recommended itinerary would not work if it did not take into account the time required to navigate between attractions, especially when taking into account group size and guest location. *Id.* at 48–49 (citing Ex. 1005, 19:4–10, 23:8–21, 34:22–32, 35:21–30; Ex. 1003 ¶ 90). Petitioner also asserts that the claim "recites nothing about the location of other attractions that are between the two attractions being selected." Pet. Reply 12.

Patent Owner contends that a "PHOSITA would understand 'physically be able to get from one ride to another in time' refers to the minimum time between the two attractions." PO Resp. 24 (citing Ex. 2009 ¶ 135). Patent Owner argues that "Petitioner offers no evidence that Sim's

system understands the relative positions of the attractions between them, which is critical in the '983 Patent," that discloses recognizing different groups have different speeds and varying travel times based on light or heavy attendance days when the software selects attractions. *Id.* at 24–25 (citing Ex. 1001, 17:46–18:4; Ex. 2009 ¶¶ 135, 136). Thus, Dr. Gonsalves testifies that a "PHOSITA could not have possibly mistaken Sim for understanding the recited "time required between attractions.'" Ex. 2009 ¶ 136.

Claim 10 requires that the software adds to the itinerary first and second scheduled times for the first and second attractions with the times being selected "so that said second scheduled time is at least equal to said first scheduled time plus a time required between attractions." Ex. 1001, 33:30–38. Sim's Figure 3 provides times of the ride, and Figure 5 illustrates when the physical queue should be joined. Ex. 1005, 16:1–9. In creating the itinerary, Sim calculates attendance times and route and considers, among other things, the group information and location to do so. *Id.* at 19:8–9, 23:8–21, 35:24–25. Sim also provides that users' sequences are re-allocated when late users may not be physically able to get from one ride to another without some rearrangement of queues when certain rides are closed down. Ex. 1005, 24:5–11.

Dr. Houh testifies that, based on Sim's teachings, a "POSITA would have known from Sim for the 'second scheduled time' (*e.g.*, 1:45 for Haunt Hs) to be equal to the 'first scheduled time' (*e.g.*, 12:15 for Space Mt) plus a 'time required between attractions.'" Ex. 1003 ¶ 90. Dr. Gonsalves testifies that "Petitioner has offered no evidence that Sim's system understands the relative positions of the attractions or travel times between them," similar to the '983 patent's Figures 8–11, nor any recognition of different speeds of

groups. Ex. 2009 ¶ 136. However, the claim does not recite what factors are used to determine the "required time," such that a simple calculation between location and distance between rides, as performed by Sim, would not be sufficient. We find that the preponderance of the evidence supports Petitioner's position that Sim teaches calculating a required time between rides.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has established by a preponderance of the evidence that claim 10 would have been obvious over the combination of Sim and Doi.

g) Dependent claim 11

Petitioner contends that claim 11, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 28–29 (citing Ex. 1003 ¶¶ 91–93). Specifically, Petitioner contends that Doi "contemplates" interruptions, such as abnormally long wait times resulting from overcrowding, and selects replacement rides having shorter wait times and matching party information. *Id.* at 28 (citing Ex. 1006, 8:20–24, 9:36–10:11; Ex. 1003 ¶ 92). Petitioner asserts that Doi teaches the party foregoing attraction A and replacing it with newly selected attraction D. *Id.* (citing Ex. 1003 ¶ 92).

Petitioner further assert that Sim teaches a party receiving an itinerary, i.e., a third set of attractions, as it proceeds through the day. Pet. 29 (citing Ex. 1005, 23:8–21). And, when unexpected events occur, such as a closure, Sim's computer 3 re-allocates every user's sequence by removing closed rides and selecting new ride sequences for the remaining rides. *Id.* (citing Ex. 1005, 23:32–24:22, 35:21–30; Ex. 1003 ¶ 92).

Thus, Petitioner concludes, a "POSITA would have been motivated to include replacement attractions, as taught by Doi, in Sim's 're-allocated' itinerary to make up for attractions the party had to miss, *while excluding those already visited*." *Id.* (citing Ex. 1003 ¶ 93) (emphasis added). Petitioner assert that "it would have been a simple application of a known method, as taught by Doi, to select 'alternative rides' for Sim's 're-allocated' itinerary," such that "Sim as modified would continue to result in parties receiving 'reallocated' itineraries—only now with additional rides as a replacement." *Id.* at 29–30 (citing Ex. 1003 ¶ 93). Petitioner further contends that "Sim's re-allocation of an itinerary due to an interruption event would *'exclude' already visited rides* and provide substitute 'alternative rides' as taught by Doi." Pet. Reply 12 (citing Pet. 29–30) (emphasis added).

Patent Owner contends "Petitioner ignores the critical limitation "second set of attractions substantially *excludes* said already visited portion." PO Resp. 25 (citing Ex. 2009 ¶¶ 137–140). Patent Owner asserts that Doi does not exclude an already visited portion when recommending another attraction, and Sim similarly re-allocates the sequence rather than excluding attractions already visited. *Id.* (citing Ex. 2009 ¶ 139). Specifically, Patent Owner asserts, "Petitioner's claim that Sim and Doi exclude already-visited attractions mischaracterizes their functionality, as neither system autonomously selects a new set of attractions that excludes previously visited ones." PO Sur-Reply 15. Patent Owner asserts that Sim's re-allocation due to interruptions, such as ride failure, does not prevent revisiting that ride once the interruption is over. *Id.* (citing Ex. 2009 ¶¶ 137–140). Further, Patent Owner asserts that Doi specifically allows for

already visited rides in allowing users to decline the recommendations and reselect attraction A. *Id.*

Claim 11 provides for the information to comprise a third set of attractions previously selected for the party that consists of an already visited portion and a remaining portion wherein the party foregoes the remaining portion and the software selects the second set as a replacement for that remaining portion, substantially excluding the already visiting portion. Ex. 1001, 33:41–52. In other words, claim 11 requires that the information about the party includes already visited rides and a remaining portion of the previously selected rides that the party foregoes, and the second set of attractions determined for the customized itinerary replaces the remaining portion with other attractions that substantially exclude the already visited attractions.

As we understand Petitioner's position, Petitioner combines Doi's software selecting replacement attractions with Sim's re-allocation of queues due to unexpected events, such as rides being closed, large number of rides, and ride failure. Pet. 28–30. Although Doi teaches selecting replacement attractions, we agree with Patent Owner that Petitioner does not provide sufficient evidence that either Doi's or Sim's information includes *previously selected* and visited rides, and that the selection of replacement rides substantially excludes those previously visited rides, as required by claim 11. Importantly, claim 11 requires that its "second set of attractions substantially excludes said already visited portion" (Ex. 1001, 33:49–50), and we are not persuaded that a skilled artisan would have combined Doi and Sim as Petitioner has done to satisfy this language (*see* Pet. 29). Petitioner has not identified anything in the cited art that teaches excluding attractions or rides that have been previously visited. *See id.* Although

identifying a precise teaching from the prior art is not required in an obvious analysis (*see KSR*, 550 U.S. at 418), in this instance, we find Petitioner's showing here is inadequate. At best, the evidence supports Petitioner's proposed combination teaching re-selecting and re-allocating attractions, but not necessarily excluding those attractions already visited.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has not established by a preponderance of the evidence that claim 11 would have been obvious over the combination of Sim and Doi.

h) Dependent claim 13

Petitioner contends that claim 13, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 31–32 (citing Ex. 1003 ¶¶ 95, 96). Specifically, Petitioner contends that Sim's gate units positioned at various ride and in communication with computer 3 and portable modules 1 are set up at the physical queue entrances to control access to the queue. Pet. 31 (citing Ex. 1005, 14:31–15:7, 15:8-15:17, 19:28–33, Fig. 2). Petitioner asserts the gate units are instructed by computer 3 to grant or deny access based on whether the use is within a time window of the scheduled ride. *Id.* (citing Ex. 1005, 10:30–11:4, 11:35–12:2, claim 31).

Patent Owner contends that Sim's portable module with receiver 70 for receiving identifying signals from the gate unit and responding with the module's serial number does not meet the claim's "at least a portion of said itinerary corresponding to said first attraction." PO Resp. 26 (citing Ex. 2009 ¶ 142). Patent Owner argues that the '983 patent's disclosures of a banner identifying the itinerary's current event and of touching the current attraction name bringing up a pass showing a reservation/access permission

and a barcode "indicate[] that the itinerary includes such pass forms, whereas a mere serial number of a device is not part of the itinerary." *Id.* (citing Ex. 1001, 14:14–15, 14:58–64, 15:4–28, 16:65–66); Ex. 2009 ¶ 142).

Claim 13 recites further steps of providing an access control system to a first attraction of the second set of attraction and admitting the party to that attraction with the "access control system operating in response to at least a portion of said itinerary corresponding to said first attraction." Ex. 1001, 33:63-34:2. It does not recite any specific system nor any specific form of interaction or response to the itinerary. Although the '983 patent provides examples of how the access control can work, such as using a pass form or a banner on the itinerary (*id.* at 14:14–19, 14:59–63, Figs. 4, 6), the claim does not recite such a banner or a pass form.

As such, Patent Owner's arguments are not commensurate with the scope of claim 13. Patent Owner does not contest Petitioner's findings that Sim's system comprising gates, portable module, and computer 3 performs access control to a particular ride and admits the party to the attraction when the party shows up within their time window for the that specific ride. *See* Pet. 31–32; Pet. Reply 13; PO Resp. 26.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has established by a preponderance of the evidence that claim 13 would have been obvious over the combination of Sim and Doi.

i) Dependent claim 17

Petitioner contends that claim 17, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 33–34 (citing Ex. 1003 ¶ 99). Specifically, Petitioner contends that "portable units 'can be provided

without [] an alphanumeric display with a simpler ride indication arrangement for applications which do not require readable messages," such that "ride information can be provided 'audibl[y], e.g. a spoken message or a tone.'" *Id.* (citing Ex. 1005, 17:16–21, 2:5–33, 3:32–35 (alterations in original); Ex. 1003 ¶ 99). Petitioner also asserts that claim 17 "does not require any particular announcement." Pet. Reply 13.

Patent Owner contends that "the 'simpler ride indication' (even in the form of a voice message) is not the same as 'the next event indicated on the itinerary. . . might instead be announced audibly.'" PO Resp. 27 (citing Ex. 1001, 30:65–67). Patent Owner argues that this "does not correspond to Claim 17's requirement that 'at least a portion of said itinerary is announced audibly by said presentation means.'" *Id.* (citing Ex. 2009 ¶ 146). Patent Owner asserts that the '983 patent "teaches that 'at least a portion of said itinerary' can be audibly announced, such as 'the next event indicated on an itinerary form 400' being spoken in the party's preferred language." PO Sur-Reply 17 (citing Ex. 1001, 30:62–67). This, Patent Owner argues, "is distinct from the generic auditory indications (*e.g.*, tones, beeps, general voice alerts)" of Sim and that a "PHOSITA would recognize that these generic alerts, similar to a restaurant pager or a 1990s AOL 'You've got mail!' announcement, do not convey specific itinerary details, as required by claim 17." *Id.* (citing Ex. 2009 ¶¶ 146, 147).

Claim 17 recites, in its entirety, "[t]he method of claim 3 wherein in step f) at least a portion of said itinerary is announced audibly by said presentation means." Ex. 1001, 34:14–16.

Sim provides for a portable unit having, in part, "indicator means for indicating to said person or group of people when it is time to join the [sic] or each queue," the indicator means passing the indication to the user

"visually, e.g. by a display, [or] the indications could be audible, e.g. a spoken message or a tone." Ex. 1005, 2:7, 2:10–12, 3:32–35. Although Sim does not specify that the name of the event is audibly indicated, the claim does not require specific information to be announced or be announced in a preferred language. *See* Ex. 1001, 34:14–16. Rather, it only requires that "a portion of said itinerary" is announced, which can be the time to join the queue. *Id.*

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has established by a preponderance of the evidence that claim 17 would have been obvious over the combination of Sim and Doi.

j) Dependent claim 19

Petitioner contends that claim 19, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 33–35 (citing Ex. 1003 ¶¶ 100–102). Specifically, Petitioner contends that Sim uses its maintained information on demand for park resources/rides to moderate or adjust demand. Pet. 34 (citing Ex. 1005, 34:22–32, 35:1–10, 36:9–16; Ex. 1003 ¶ 100). Petitioner cites to Sim's Queue Manager having access to "resource demand information" and calculating in response to overall demand in the system. *Id.* (citing Ex. 1005, 34:22–32, 39:9–16). Further, Petitioner asserts that Sim teaches, "'[h]aving the timing and route planned by the computer reflect how busy the park is at that time' and enables the system to 'le[a]d' or 'encourage[]' parties to visit different attractions." *Id.* (quoting Ex. 1005, 38:27–32 (alterations in original) and citing Ex. 1005, 22:13–24).

Further, Petitioner contends that Doi stores data of crowd conditions and attraction waiting times, and uses this data in a "optimization algorithm"

to "moderate attraction demand," such as by guiding the user to a non-crowded attraction. Pet. 34–35 (citing Ex. 1006, 8:20–45, 9:33–51, 10:38–44, 10:48–11:27). Petitioner asserts, "[i]t would have been obvious to apply these teachings of Doi to have Sim's system select less crowded attractions for the same reasons discussed above" for claim 1, limitation 1[c]. *Id.* at 35.

Patent Owner contends that "[c]laim 19 requires that the data about a first attraction that has excessive demand causes the software to be less likely to select the first attraction." PO Resp. 27 (citing Ex. 2009 ¶ 150). Specifically, Patent Owner argues that "since Sim's patron has already selected the attractions, there is no plausible way that Sim's queue manager makes their selection less likely." *Id.* (citing Ex. 1005, 34:22–27; Ex. 2009 ¶ 151). Patent Owner also argues that "[s]imilarly, in Doi, the likelihood of an attraction being selected cannot be higher or lower since Doi's system only deals with attractions customers have already selected." *Id.* (citing Ex. 2009 ¶ 152).

Claim 19 recites that the data regarding said first set of attractions indicates a first attraction that has excessive demand, and the software being less likely to select that first attraction, "whereby demand for said first attraction is moderated." Ex. 1001, 34:26–30.

As we understand Petitioner's position, Petitioner applies Doi's teaching of recognizing the first attraction having excessive demand (is crowded) and moderating demand for that attraction by guiding the user to a non-crowded attraction to have Sim's system (as modified by Doi in claim 1) select less crowded attractions, i.e., be less likely to select the first attraction over the non-crowded attraction, to "maximiz[e] attraction utilization, control[] crowding, offer[] parties sufficient rides for a complete

day, and reduc[e] the need to later re-allocate sequences." Pet. 21–22, 34–35.

As discussed above regarding claim 1, limitation 1[c], Sim does not teach the software selecting an attraction. Thus, we agree with Patent Owner that Sim alone does not teach the software being less likely to select the first attraction that has excessive demand. However, Patent Owner's argument that Doi only deals with customer-selected attractions does not address Petitioner's proposed combination as we understand it. Rather, Patent Owner's argument is against Doi individually whereas Petitioner relies on the combination of Sim and Doi for teaching this limitation.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has established by a preponderance of the evidence that claim 19 would have been obvious over the combination of Sim and Doi.

k) Dependent claim 20

Petitioner contends that claim 20, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 35–36 (citing Ex. 1003 ¶¶ 103, 104). Specifically, Petitioner contends that Sim's computer includes storage and memory, can access databases, stores itinerary information in a database, and tracks ride demand information and predicted and actual queue rates. *Id.* (citing Ex. 1005, 8:28–9:9, 18:29–19:27, 20:7–12, 23:8–21, 34:15–35:10, 36:9–16). Petitioner asserts that "[b]y storing queue information and using it to generate itineraries, Sim is tracking 'directed demand,' *e.g.*, the number of parties its system is directing to each attraction." *Id.* at 36 (citing Ex. 1003 ¶ 104, claim 19).

Patent Owner defines "directed demand" as "the portion of the demand for an attraction that is produced by the claimed itinerary generation process." PO Resp. 28. Patent Owner contends that "Sim has no 'directed demand'," because Sim accepts the parties' selections and does not change their number, and "[g]iven the patron demand, Sim does have an opportunity to manage it and shift it to different times, but the total demand remains unaltered." *Id.* (citing Ex, 2009 ¶ 156). Patent Owner contends that "Doi, similarly, discloses no tracking of directed demand, as defined, since Doi creates no itinerary." *Id.*

Claim 20 provides:

> The method of claim 3 further comprising the steps of:
> g) providing a storage accessible to said computer; and,
> h) recording at least a portion of said itinerary corresponding to a first attraction of said first set of attractions in said storage, thereby accumulating in said storage a directed demand corresponding to at least said first attraction.

Ex. 1001, 34:31–37. As both Dr. Houh and Dr. Gonsalves testify, the '983 patent defines "directed demand" as "the number of visitors directed to an attraction by the itineraries produced." Ex. 1001, 8:16–18; Ex. 1003, ¶ 104, Ex. 2009 ¶ 156, n. 21. As defined above in Section II.C.4, "directed demand" is the number of visitors directed to an attraction by the itineraries produced, wherein itineraries are generated for a party that may consist of multiple visitors. Claim 20 provides that "directed demand" is accumulated by recording itineraries corresponding to a first attraction of the first set of attractions. *Id.*

Sim stores information on "the predicted rate at which the or [sic] each queue will move and the actual rate of queue movement." Ex. 1005, 8:32–9:1. The queue manager uses this information "to optimise the length

of the or [sic] each queue sequence and to enable the optimisation of the sequence of queues." *Id.* at 9:1–4. In the "Queue Database," Sim stores a "list of prompters queuing for each feature," and calculates attendance times and routes. *Id.* at 19:4–8. Sim's computer 3 can also store, for each user and member of group, the calculated optimum route. *Id.* at 23:8–13. Sim also provides that "[s]tatistics and other management information is available, in some cases such as resource demand information, in advance," and that the "software can carry out a varying amount of analysis on the real time information on user location that is produced by the system." Ex. 1005, 36:9–14.

Thus, Petitioner's position that Sim teaches storing records to accumulate the direct demand corresponding to a ride is supported by the evidence. Patent Owner's arguments that "Sim accepts the parties' attraction selections and does not change their number," and "[g]iven the patron demand, Sim does have an opportunity to manage it and shift it to different times, but the total demand remains unaltered" are not commensurate with the scope of the claim. PO Resp. 28 (citing Ex. 2009 ¶ 156). Claim 20 requires only that recorded portions of itineraries corresponding to the first attraction accumulate a direct demand to the first attraction. Ex. 1001, 34:31–37. There is no further recitation of managing or shifting the demand. *See id.* And, Patent Owner's argument predicated on the assertion that Sim and Doi do not teach software that selects the attraction is unpersuasive for the reasons provided above regarding limitation 1[c]. PO Sur-Reply 17.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has established by a preponderance of the

evidence that claim 20 would have been obvious over the combination of Sim and Doi.

l) Dependent claim 22

Petitioner contends that claim 22, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 36–38 (citing Ex. 1003 ¶¶ 105–107). Specifically, Petitioner contends that "[b]oth Sim and Doi disclose 'redistributing a directed demand' to mitigate attraction 'underutilization' and 'excessive demand.'" *Id.* at 36. Petitioner asserts that "Sim uses data on 'demand' for park 'resources' (*e.g.*, rides) to moderate or adjust demand for attractions." *Id.* (citing claim 19). Petitioner further asserts that "when the number of parties being directed to an attraction is low, Sim can mitigate this by closing the attraction and 're-allocat[ing] every user's sequence,' 'allow[ing] savings on ride operating costs and staffing costs.'" *Id.* (citing Ex. 1005, 24:32–11 [sic], 39:1–8). In its Reply, Petitioner asserts that "Doi uses a 'perturbation to a desirability' as recited in claim 22, as it adjusts prices with an 'expectation function value' to increase/decrease the likelihood of attractions being selected." Pet. Reply 14 (citing Ex. 1006, 10:48-11:35).

Patent Owner contends that neither Sim nor Doi teaches "software to apply a perturbation to a desirability of a first attraction of the first set of attractions," as recited in claim 22, 'where "[t]he perturbation produces a different result for the selection of attractions from the first set of attractions, *i.e.*, the second set of attractions." PO Resp. 28 (citing Ex. 1001, 24:16–25:15; Ex. 2009 ¶ 159). Patent Owner asserts that "[b]oth Sim and Doi rely on other methods to manage their queues," such as Sim's "reorder[ing] where people are in a virtual queue" and Doi's "'carrot'

approach by adjusting the price of an attraction, which may coax Doi's customer to decide the lower price is sufficiently attractive." *Id.* at 28–29 (citing Ex. 2009 ¶ 160; Paper 2, 36). Patent Owner further contends that "[b]y acknowledging that Doi's system adjusts prices to influence user selection, Petitioner concedes that Doi provides recommendations and relies on the user to make the final selection of attractions," and thus does not meet the claimed "software that selects." PO Sur-Reply 17–18.

Claim 22 provides:

> The method of claim 3 wherein in step d) said software applies a perturbation to a desirability of a first attraction of said first set of attractions, said perturbation producing a different result for said second set, thereby redistributing a directed demand corresponding to said first attraction to mitigate at least one selected from the group consisting of underutilization of said first attraction, excessive demand for said first attraction.

Ex. 1001, 34:46–53. Dr. Houh testifies that "[t]o apply a perturbation to the desirability of an attraction essentially means to take measures to influence the desirability of an attraction." Ex. 1003 ¶ 106. Thus, claim 22 requires that the software selects a second set, and that selection is based on a measure that influences the desirability of an attraction.

Patent Owner acknowledges that Doi's "carrot" approach of adjusting the price would change the desirability of the attraction, but contends that this does not meet the claim's requirement that the software selects the attraction. Petitioner does not adequately explain how the combination of Sim and Doi teaches the software applying a perturbation to the first attraction to produce a different result. Rather, Petitioner discusses moderating demand by closing an attraction and adjusting prices to change desirability, but does not explain how either of these would be used by the

software to select a different result for the second set, as required by the limitation.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has not established by a preponderance of the evidence that claim 22 would have been obvious over the combination of Sim and Doi.

m) Dependent claim 23

Petitioner contends that claim 23, which depends from claim 3, would have been obvious over Sim and Doi. Pet. 38–39 (citing Ex. 1003 ¶¶ 108–113). Specifically, Petitioner contends "Sim includes marketing, discount, or recommendation messages having 'attractions' and 'conditions' associated with them." *Id.* at 38 (citing Ex. 1003 ¶¶ 109, 110). Petitioner asserts that "Sim can issue '***zone specific*** messages promoting other utilized attractions, other ***promotional*** messages and competitions.'" *Id.* (quoting Ex. 1005, 38:8–10 and citing Ex. 1005, 15:1–3, 18:16–28, 32:18–25) (emphases in original). Petitioner asserts that Sim sends area specific messages, such as advertisement for location attractions, based on the module's location. *Id.* (citing Ex. 1005, 11:22–28; Ex. 1003 ¶ 110). Petitioner also asserts that Sim teaches that "[i]f a party is issued an itinerary with two rides in these 'zones'—ride 1 at 9 am and ride 2 at 11 am—Sim will provide the messages in conjunction with the party's itinerary" and delivered only when the party is in the correct zone. *Id.* (citing Ex. 1003 ¶¶ 111, 113). Further, Petitioner asserts that the claim only requires that the second set of messages "be in 'conjunction' is that the second set of messages are presented 'at an appropriate time' in accordance with the

itinerary, not that they are presented at the exact same time as the itinerary." Pet. Reply 15 (citing Ex. 1005, 30:4–18, claim 23).

Patent Owner contends that "Dr. Houh admits" that "Sim teaches that transmission of such messages *disables presentation of the itinerary* to present the recommendation." PO Resp. 29 (citing Ex. 2009 ¶ 169). Thus, Patent Owner argues, "Sim fails to disclose at least two of the limitations recited in Claim 23: first, said itinerary further comprising a second set of messages; second, each of said second set of messages is provided to said party *in conjunction* with said itinerary." *Id.* (citing Ex. 2009 ¶¶ 165–169). Patent Owner further contends that "Sim's system fundamentally cannot integrate these messages with the itinerary display," because Sim's "Pager Mode" that transmits messages requires up to three minutes to refresh back to the itinerary and is thus not "in conjunction" with the itinerary. PO Sur-Reply 18 (citing Ex. 2009 ¶¶ 165–169).

Claim 23 recites, in relevant part, that the second set of messages selected from the first set of marketing messages "is provided to said party *in conjunction with* said itinerary." Ex. 1001, 34:54–35:6 (emphasis added). The parties disagree as to whether "in conjunction with" means at the exact same time. Dr. Houh testifies that Sim's messages provided after the party arrives at a ride are "in conjunction with" the itinerary. Ex. 1003 ¶ 111. Dr. Gonsalves testifies that the claim requires "'said itinerary further comprising a second set of messages' which is shown in and 'each of said second set of messages is provided to said party in conjunction with said itinerary.'" Ex. 2009 ¶ 169.

The '983 patent uses the term "in conjunction with" three times outside of claim 23: (1) the invention can be used "in conjunction with other attraction access control systems. Ex. 1001, 34:54–35:6. For example, "it

could be used in parallel to a system such as Laval et al" (*id.* at 8:56–58); (2) "[t]he aspects of the present invention will be apparent upon consideration of the following detailed description taken in conjunction with the accompanying drawings" (*id.* at 9:60–62); or (3) generating an itinerary without using a portable computer "is attractive whether or not preferred access is conferred in conjunction with the itinerary" (*id.* at 16:41–54).

Based on the context of how the term "in conjunction with" is used in the written disclosure, we find that a person of ordinary skill in the art would interpret "in conjunction with" in claim 23 as being at the same time. In other words, a POSITA would understand that claim 23 requires that the second set of messages is provided to the party at the same time as the itinerary. Petitioner's assertion that the second messages are sent to the party when the party is at a specific location does not satisfy the requirement that the second messages are sent to the party at the same time as the itinerary.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has not established by a preponderance of the evidence that claim 23 would have been obvious over the combination of Sim and Doi.

n) Dependent claims 12, 14, 16, 24, and 25

Petitioner explains in detail which disclosures and combinations of Sim and Doi allegedly teach the limitations of claims 12, 14, 16, 24, and 25, each depending from claim 3. Pet. 30, 32–33, 39–40; Ex. 1001, 33:53–62, 34:3–7, 34:11–13, 35:9–36:13. Petitioner also cites Dr. Houh's testimony, in which Dr. Houh details which disclosures and combinations of Sim and Doi he believes teach each of these limitations and why one of ordinary skill

in the art would do so. Pet. 30, 32–33, 39–40; Ex. 1003 ¶¶ 94, 97, 98, 114, 115.

Patent Owner does not separately argue claims 14, 16, 24, and 25, but contends that they "are necessarily valid in light of Petitioner's failure to prove Claim 3 invalid." PO Resp. 29 (citing *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988)).

Because we find that Petitioner has demonstrated by a preponderance of evidence that claim 3 would have been obvious over Sim and Doi, we also find Petitioner has demonstrated by a preponderance of evidence that claims 14, 16, 24, and 25 would have been obvious over Sim and Doi.

3. Conclusion of Ground 1

Having considered the parties' arguments and evidence, we find, based on the record, that Petitioner has not established by a preponderance of the evidence that claims 1 and 3 would have been obvious over Sim alone. Petitioner has established by a preponderance of the evidence that claims 1, 3, 5, 7, 10, 12–14, 16, 17, 19, 20, 24, and 25 would have been obvious over Sim and Doi, but has not established by a preponderance of the evidence that claims 8, 11, 22, and 23 would have been obvious over Sim and Doi.

E. GROUND 2 — ALLEGED OBVIOUSNESS OVER SIM AS MODIFIED BY DOI IN VIEW OF WAYTENA — CLAIMS 4, 18, AND 21

1. Overview of Waytena – Exhibit 1007

Waytena relates to assigning and managing patron reservations for attractions using wireless personal communication devices (PCDs). Ex. 1007, codes (54), (57).

Figure 1, reproduced below, illustrates Waytena's system 100.

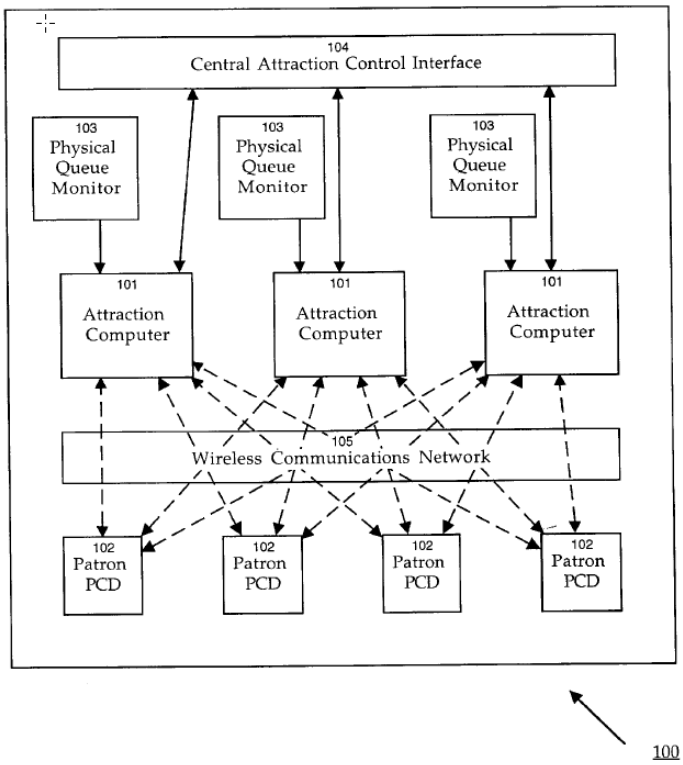


FIGURE 1

Figure 1 shows reservation system 100 having a Central Attraction Control Interface 104 communicating with Attraction Computers 101 that in turn communicate with Physical Queue Monitors 103 and wirelessly with Patrons 102. *See* Ex. 1007, 5:1–6:58.

Central Attraction Control Interface 104 is a conventional centralized computer system that allows access to all Attraction Computers 101 by staff and facilitates virtual and physical queue monitoring, reservation schedules, and other information regarding the attractions' states. Ex. 1007, 6:16–22. Interface 104 allows staff to manually change the attraction data. *Id.* at 6:22–30.

Each Attraction Computer maintains information regarding the associated attraction, such as information regarding its capacity, throughput description, height and weight requirements, geographic location, hours of operation, current state, and reservation status. *Id.* at 5:33–40. Each

Attraction Computer is also associated with Physical Queue Monitor 103 that monitors the current state of the corresponding attraction's physical queue. *Id.* at 5:41–45.

"Patron PCDs" 102 are each associated with a patron and are implemented "using conventional, small, hand-held portable computers" that include a rechargeable battery, microprocessor or CPU, display screen, auxiliary output device such as a speaker, input device such as a pen, RAM, storage, specific software, and wireless communication hardware. Ex. 1007, 5:59–6:10. "Upon activation, PCD 102 executes an initialization module 214 that prompts the patron via user interface 201 to input patron information describing his or her group, as is described below in connection with FIG. 5A," reproduced below. *Id.* at 7:2–5.

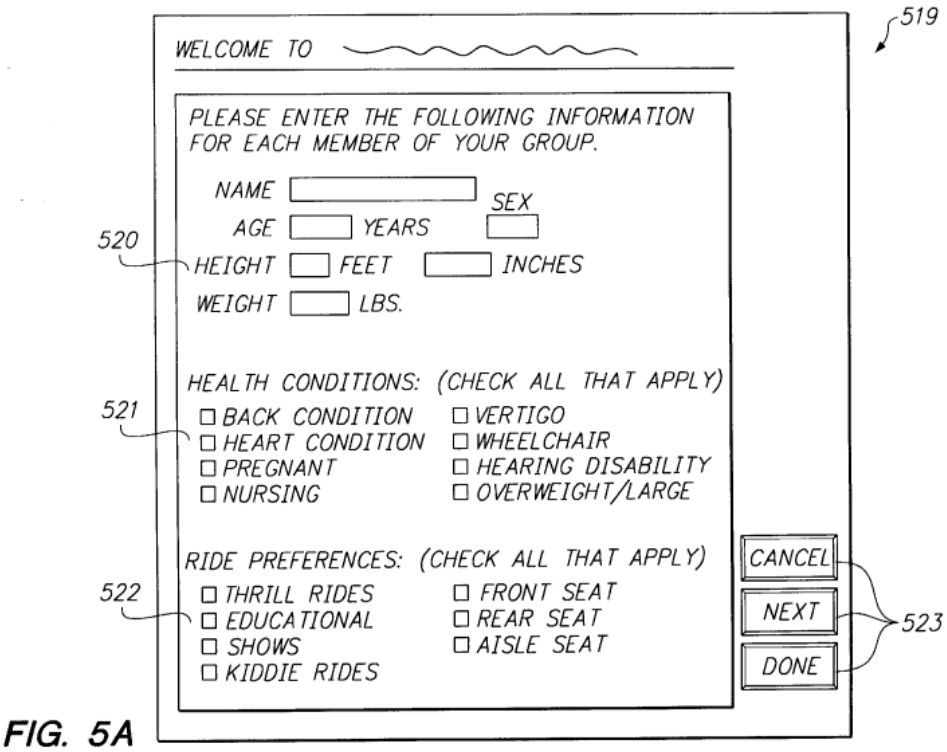


FIG. 5A

Figure 5A illustrates a sample screen 519 for entry of information describing a patron and his or her group. Ex. 1007, 4:35–37. The

information collected typically includes the number of people in the group and for each member of the group, their name, sex, age, height, and weight 520, health conditions 521, and attraction and seating preferences 522. *Id.* at 13:53–60. Other information may be included such as "such as how far in advance of an upcoming reservation to alert the patron." *Id.* at 13:60–65. This information is stored in patron information records in PCD's patron information storage 202 and can also be stored in storage 213 in Attraction Computers 101 and/or in Central Attraction Control Interface 104. *Id.* at 7:5–11; 14:1–8. Each record includes fields of guest number, name, age, sex, height, weight, and flags (information describing preferences and characteristics). *Id.* at 7:11–28.

Figure 3, reproduced below, "is a flowchart showing a method of making a reservation." Ex. 1007, 4:26–27.

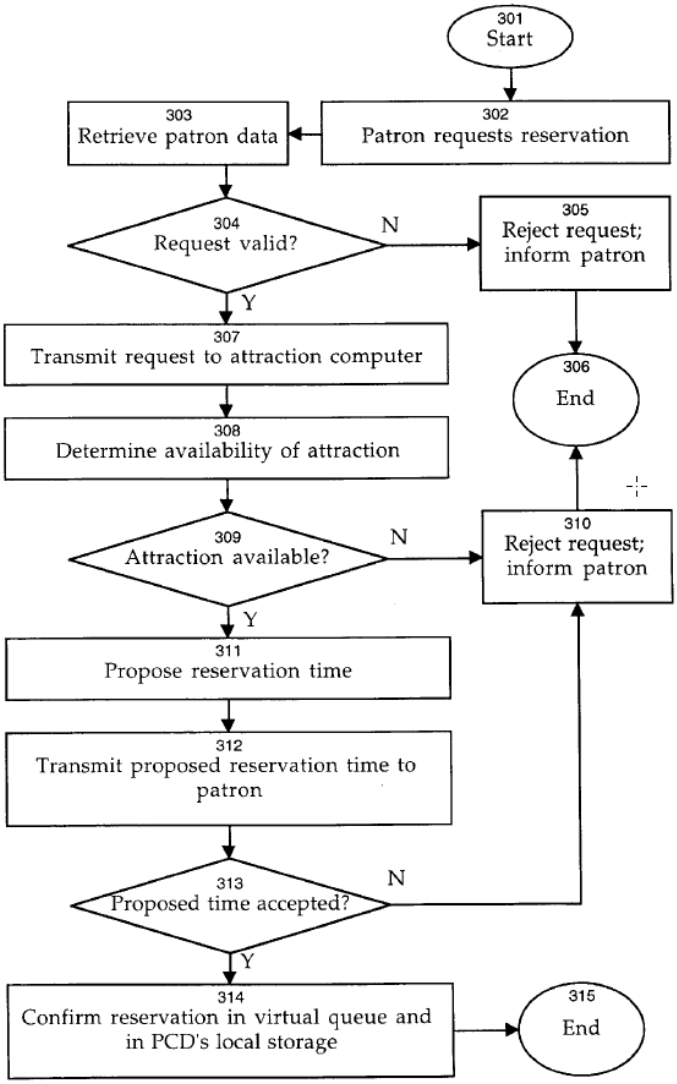


FIGURE 3

Figure 3 "show[s] a flowchart of the overall operation of system 100 in processing a reservation request from a patron." Ex. 1007, 12:18–20. First, in step 302, the patron requests a reservation for a selected attraction using the interface of PCD 102. *Id.* at 12:25–29. In step 303, the stored patron information is received, and in step 304, the request is filtered or screened to determine validity. *Id.* at 12:30–34. If the request is invalid, then in step 305, the patron is informed of the rejection and the process ends

in step 306. *Id.* at 12:35–36. If valid, then the request is transmitted to the requested attraction's Attraction Computer 101 in step 307. *Id.* at 12:36–37.

In step 308, Attraction Computer 101 determines the availability of the requested attraction based on the stored attraction information, virtual queue information, and physical queue information. Ex. 1007, 12:38–45. In step 309, processor 209 determines whether the attraction is available. *Id.* at 12:45–51. If not available, then in step 310, the request is rejected and the patron is informed of the rejection in step 310, and the process ends at step 306. *Id.* at 12:46–49. If the attraction is determined to be available, then in step 311, a reservation time or position is proposed based on multiple factors, and is transmitted to PCD 102 in step 312. *Id.* at 12:50–65.

The patron is given a fixed amount of time to accept the proposal and is not permitted to make other reservations during this time. Ex. 1007, 13:2–7. Upon transmission of rejection of the proposal in step 313, the request is released and the patron is informed of the rejection in step 310, and the process ends at step 306. *Id.* at 13:6–23. Upon an acceptance of the proposal in step 313, the reservation is confirmed and stored in local storage 206 and virtual queue 220 of Attraction Computer 101, and the patron may optionally be informed of the confirmation in step 314. *Id.* at 13:6–9; 13:24–28.

Figure 5B, reproduced below, is a sample screen for requesting reservations, obtaining information, and viewing, modifying or canceling previously-made reservations. Ex. 1007, 4:38–41.

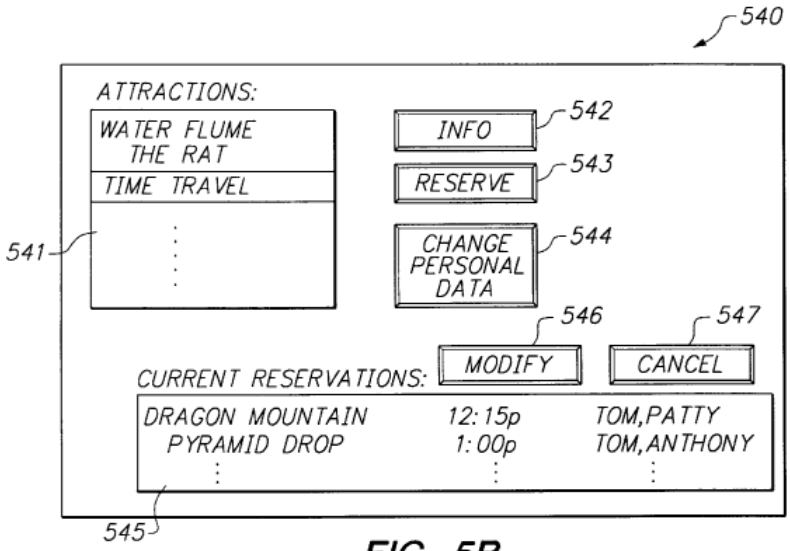


FIG. 5B

Figure 5B illustrates a list of available attractions 541 and a list of previously-made reservations 545. Ex. 1007, 14:13–35. Figure B includes

> a scrollable and/or pageable list 541 of available attractions, buttons 542 and 543 for obtaining information or generating reservation requests for selected attractions, a button 544 for changing patron information, a scrollable and/or pageable list 545 of previously-made reservations, and buttons 546 and 547 for modifying or canceling previously-made reservations.

Id. at 14:14–20. The patron can also "be presented with a list of attractions that match the particular preferences of the members of the patron's group or that are in relative proximity to the patron's current location." *Id.* at 14:20–24.

Figure 5D, reproduced below, "is a sample screen for display while awaiting a response to a reservation request." Ex. 1007, 4:44–46.

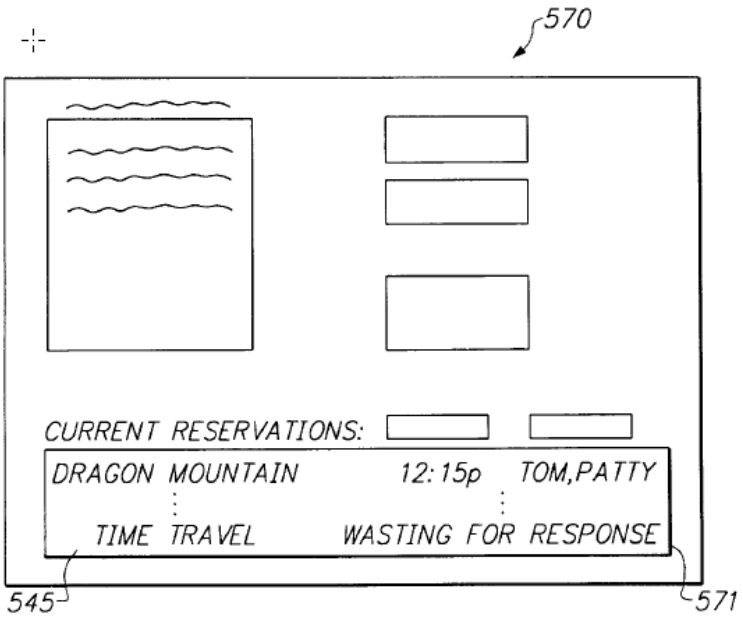


FIG. 5D

Figure 5D "is a sample screen 570 after a reservation request has been transmitted." Ex. 1007, 16:52–53. "List 545 now includes item 571 showing the reservation request with an indication that PCD 102 is waiting for a response regarding the request." *Id.* at 16:52–55.

Figure 5E, reproduced below, "is a sample screen including a dialog box for confirmation, rejection, or rescheduling of a proposed reservation time." Ex. 1007, 4:48–50.

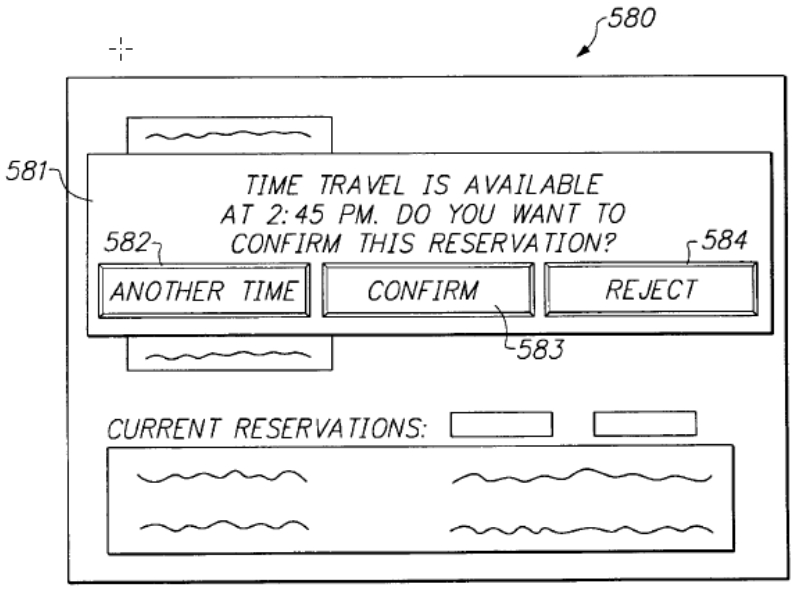


FIG. 5E

Figure 5E shows "a sample screen 580 containing a message 581 informing the patron of the availability of the selected attraction at a particular time." Ex. 1007, 17:29–32. If the patron selects the "ANOTHER TIME" button 582, the patron is prompted to "enter a new requested time," a message is sent to computer 101 of the rejection, and a new reservation request is generated with the specified time. *Id.* at 17:33–39. If the patron selects the "CONFIRM" button, a confirmation message is sent, and the reservation is stored in the PCD. *Id.* at 17:50–55. If the "REJECT" button is selected, a rejection message is sent, and the PCD returns to an idle state. *Id.* at 17:56–62. If no buttons are selected, then a "TIMEOUT" message is sent and the PCD returns to an idle state. *Id*. at 17:62–65.

2. Discussion

Petitioner challenges dependent claims 4, 18, and 21 as unpatentable under 35 U.S.C. § 103 over Sim in view of Doi and further in view of Waytena. Pet. 41–48. Having reviewed all of the parties' arguments and evidence, we find that Petitioner has shown by a preponderance of the

evidence that claims 4, 18, and 21 would have been obvious over Sim, Doi, and Waytena. Pet. 41–48; PO Resp. 30–32; Pet. Reply 13–15; PO Sur-Reply 17–18. We turn to detailed discussions of the disputes raised by the parties' arguments.

a) Dependent claim 4

Petitioner contends that "Sim in view of Doi teaches a system that selects an itinerary of attractions and attraction times for a party, based on attraction data matching party information," as discussed above, and "Waytena simply adds that additional party information, such as preferred ride types, can also be used to determine which rides to suggest to a party." Pet. 41 (citing Ex. 1007, 7:9–31, 13:44–14:35, Fig. 5A). Petitioner asserts that a person of ordinary skill in the art "would have been motivated to include Waytena's party preferences in Sim," to "allow Sim to maximize ride/show utilization and raise spending on park attractions by selecting rides that parties would enjoy but may not know about." *Id.* at 43 (citing Ex. 1005, 23:32–24:23; Ex. 1007, 14:20–24; Ex. 1003 ¶¶ 121, 122). Petitioner also asserts that "a POSITA would recognize that by having information on preferred ride types, as taught by Waytena, Sim could select alternative rides as part of its re-allocation process, increasing ride utilization and customer satisfaction." *Id.* at 43–44 (citing Ex. 1003 ¶¶ 121–122).

Petitioner further argues that "adding ride preference information would enhance the selection of rides in the Sim system as taught by Doi." Pet. 44. Petitioner explains that Doi teaches selection of recommended rides based on parties' ages matching attractions' recommended ages, and "Waytena teaches this can also be based on matching ride type preferences with ride data." *Id.* Thus, Petitioner concludes that:

> Adding party preferences to Sim would have thus been the inclusion of a known technique in a similar system—Sim (as modified by Doi) already selects a second set of attractions based on matching user age to ride age recommendations, and adding Waytena would allow the system to perform the same selection of rides when ride type preferences match ride data.

Id.

Patent Owner argues that claim 4 "is valid at least because . . . [it is] based on valid independent Claim 3." PO Resp. 30. Patent Owner also argues that "Sim in view of Doi only *recommends* attractions; the user ultimately selects these to form a proposed list." *Id.* (citing Ex. 2009 ¶ 173); *see also* PO Sur-Reply 17. Patent Owner asserts that "Doi does not consider user preferences in its selection process; it merely selects an attraction and identifies a class of parties without any preference-based criteria." PO Resp. 30 (citing Ex. 2009 ¶ 175).

Given that we find that Petitioner has demonstrated by a preponderance of evidence that claim 3 would have been obvious over Sim and Doi in that the combination of Sim and Doi teaches software that selects attractions based on information, Patent Owner's argument that the user must select the recommended attraction is unpersuasive. *See also* Pet. Reply 14.

Patent Owner's argument that Doi does not consider user preferences in also not persuasive because it is an argument against Doi individually when Petitioner relies on the combination of Sim, Doi, and Waytena for teaching the claim. *See* Pet. 41–44. Patent Owner does not disagree with Petitioner's finding that Waytena teaches including party preference as information used to select attractions. *See* PO Resp. 30–31.

Further, Patent Owner's argument that one of ordinary skill would not have found obvious the combination of Sim, Doi, and Waytena because Waytena's preferences are applied prior to selecting attractions is unpersuasive. PO Resp. 31. Petitioner is not bodily incorporating Waytena's method into the method of Sim and Doi. Rather, Petitioner is incorporating Waytena's teaching of using preference information in selecting attractions. Pet. 43.

Having considered the parties' arguments and evidence, we find that Petitioner has demonstrated by a preponderance of evidence that claim 4 would have been obvious over Sim, Doi and Waytena.

b) Dependent claim 18

Petitioner contends that Sim as modified by Doi in view of Waytena teaches this claim in that Waytena's reservation system is in communication with its attraction computers that include and maintain attraction information of the attraction's current status, e.g., "OPERATING, CLOSED, SCHEDULED MAINTENANCE, PAUSED." Pet. 44–45 (citing Ex. 1007, 5:1–12, 11:18–61). Petitioner argues that the attraction computer, upon determining that the attraction for which a reservation is requested is unavailable, responds as such and does not include it in the party's itinerary. *Id.* at 45 (citing Ex. 1007, 5:59–6:15, 7:2–8:67, 11:18–61, 12:13–63, 16:56–17:32, 19:20–60, 21:6–24, Figs. 1–4, 6–7; Ex. 1003 ¶ 126).

Petitioner asserts that it would have been obvious to modify the Sim/Doi system to include Waytena's teachings of "having attraction reservation computers with information on whether attractions are available/ unavailable," because Sim determines if an attraction is available, unavailable ones are excluded, and itineraries are re-allocated as needed, and

"Waytena discloses that such information on ride availability can be obtained via an 'attraction computer' 'associated with each attraction.'" Pet. 45 (citing Ex. 1005, 23:32–24:32, 39:1–8; Ex. 1007, 11:18–61, 12:38–49, 16:56–17:32, 19:20–60, 21:6–24, Figs. 2, 6; Ex. 1003 ¶ 127). Petitioner reasons that "modify[ing] Sim's existing gate units to include Waytena's reservation computers" would allow for each attraction to "provide its availability and alert when it becomes unavailable and itineraries need to be re-allocated." *Id.* at 46 (citing Ex. 1003 ¶¶ 128–129).

Patent Owner contends that "in combination with either Sim, Doi, or Waytena, it is a user's selection that is entered on the list of reservations, becoming a part of an itinerary," whereas claim 18 requires that software selects the itinerary attractions based on availability. PO Resp. 31 (citing Ex. 2009 ¶¶ 181–183). However, as discussed above, Petitioner has established by a preponderance of the evidence that the combination of Sim and Doi teaches the software selecting the attractions. *See supra* § II.D.2.c; *see also* Pet. Reply 14.

Patent Owner also contends that Waytena's system does not prevent unnecessary reservation attempts and Doi's system does not address unavailable attractions and "lacks a real-time alternative activity recommendation system. PO Resp. 31–32 (citing Ex. 1007, Fig. 7; Ex. 2009 ¶¶ 181, 182). However, Patent Owner's arguments are against the references individually when Petitioner relies on the combination of Sim, Doi, and Waytena. In particular, Petitioner relies on Waytena for having reservation computers providing availability information to use in determining whether to include that in the itinerary created by Sim as modified by Doi's software selecting an attraction based on a party's information. Pet. 45.

Having considered the parties' arguments and evidence, we find that Petitioner has demonstrated by a preponderance of evidence that claim 18 would have been obvious over Sim, Doi, and Waytena.

c) Dependent claim 21

Petitioner contends that Sim as modified by Doi in view of Waytena teaches this claim in that, as discussed with regards to claim 18, Waytena teaches a reservation system. Pet. 46. Petitioner asserts that the reservation system is in communication with the patron's PCDs "that allow parties to transmit reservation requests to attraction computers," the reservation being received by a request processor in the computer. *Id.* (citing Ex. 1007, 5:59–6:15, 7:2–8:67, 12:13–63, Figs. 1–4, 6–7). Referring to Waytena's Figure 5E, Petitioner argues that when request processor 209 determines the attraction is unavailable per the request, it rejects the request and may send a proposed time or position that the attraction is available for the party to confirm. *Id.* at 46–47 (citing Ex. 1007, 11:18–61, 12:38–13:28, 16:56–17:32, 20:15–21:34, 19:20–60). Petitioner asserts that upon the confirmation of the proposed time or position, Waytena's attraction computer makes the reservation for the party for that time or position. *Id.* at 47 (citing Ex. 1007, 12:50–13:28, 16:56–18:29, 20:15–21:34).

Petitioner asserts it would have been obvious to modify the Sim/Doi system to include Waytena's teachings of "having attraction reservation computers that can make and maintain reservations for attractions . . . to ensure that the current operating status and crowd conditions of each attraction are properly taken into account when reservations are requested" and refers to the rationale presented for claim 18. Pet. 48 (citing Ex. 1003 ¶ 132).

Patent Owner contends that a "PHOSITA would not have been motivated to combine the teachings of Waytena with Sim and Doi as suggested by Petitioner, expecting success" for two reasons: (1) "the term 'reservation computer' does not appear in Waytena but is a claim element in the '983 Patent, which introduces a misalignment in terminology and conceptual application" (PO Resp. 32 (citing Ex. 2009 ¶ 185)); and (2) "Dr. Houh's assertion that it would be obvious to integrate Waytena's attraction reservation capabilities into Sim to manage reservations based on the current operating status and crowd conditions is redundant," because "Sim already contains similar functionalities with its 'Queue Manager' system, which includes a host computer that controls queue sequences and manages crowd conditions effectively without any input from Waytena" (*Id.* (citing Ex. 2009 ¶¶ 188–191); *see also* PO Sur-Reply 18). Patent Owner thus concludes that "the functions that Petitioner claims would motivate a combination are already effectively implemented by Sim, making the proposed integration of Waytena unnecessary." *Id*.

Waytena teaches "attraction computer 101" maintaining data such as attraction capacity and reservation status. Ex. 1007, 5:33–40. That Waytena does not use the exact term "reservation computer" does not alone signify that it does not meet the claimed "reservation computer." The reference need not satisfy an *ipsis verbis* test. *Adasa, inc. v. Avery Dennison Corp.*, 55 F.4th 900, 910 (Fed. Cir. 2022) (quoting *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009)).

Further, Patent Owner's argument that one of ordinary skill in the art would not have combined Waytena's reservation capabilities into Sim because it is redundant is not responsive to Petitioner's proposed combination. Although Sim may have similar functionalities, Petitioner

relies on Waytena for specifying that those functionalities include making and maintaining reservations for attractions and ensuring operating status and crowd conditions are "properly" taken into account. Pet. 48; *see also* Pet. Reply 15. That Sim may have some of that functionality does not prevent improvement based on Waytena's teachings.

Having considered the parties' arguments and evidence, we find that Petitioner has demonstrated by a preponderance of evidence that claim 21 would have been obvious over Sim, Doi, and Waytena.

3. Conclusion of Ground 2

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has established by a preponderance of the evidence that claims 14, 18, and 21 would have been obvious over Sim, Doi, and Waytena.

F. GROUND 3 — ALLEGED OBVIOUSNESS OVER WAYTENA — CLAIMS 1, 3–5, 8, 10, 12–14, 16–21, AND 23–25

1. Discussion

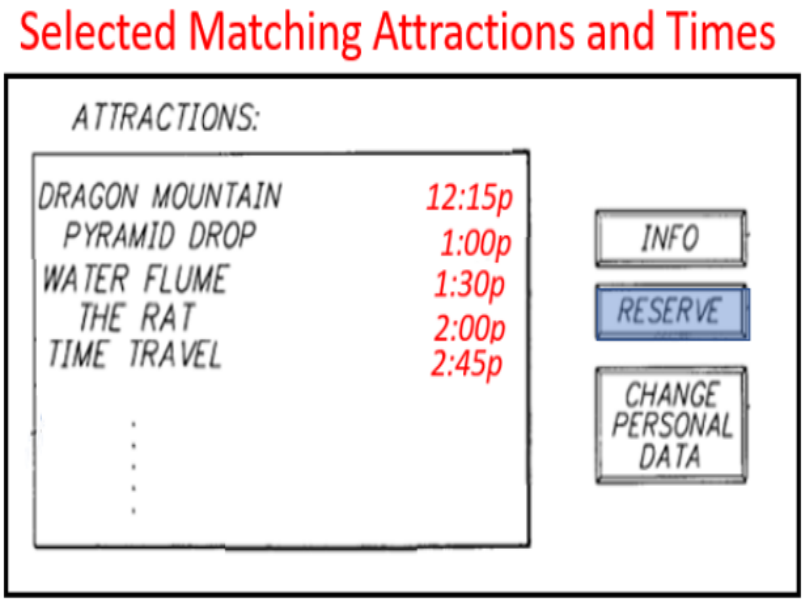
Petitioner challenges claims 1, 3–5, 8, 10, 12–14, 16–21, and 23–25 as unpatentable under 35 U.S.C. § 103 over Waytena. Pet. 48–69. Specifically, regarding independent claim 1, Petitioner argues Waytena discloses 1[pre], 1[a], 1[b], 1[d], and 1[e] and renders obvious 1[c]. Pet. 48–59. The preamble, limitations, and whereby clause of independent claim 3 are nearly identical to those of independent claim 1, and Petitioner asserts claim 3 is obvious over Waytena for the same reasons provided for claim 1. *Id.* at 59.

a) Independent Claims 1 and 3

Having reviewed all of the parties' arguments and evidence, we find that Petitioner has not shown by a preponderance of the evidence that claims 1 and 3 would have been obvious over Waytena. Pet. 48–59; PO Resp. 33–42; Pet. Reply 15–20; PO Sur-Reply 19–22. We turn now to a detailed discussion of the parties' disputes.

(1) Petitioner's Position

Petitioner contends that Waytena's "modules can cause the user interface to present 'a list of attractions that match the particular preferences of the members of the patron's group," and that this means "the software can select a list of recommended attractions to display, by determining which attractions 'match' the party's preferences computer." *Id.* at 54–55 (citing Ex. 1007, 14:33–35, Fig, 5B; Ex. 1003 ¶ 145). Alternatively, Petitioner argues that because Waytena discloses the PCD selecting and presenting attractions matching party preferences in a selectable list selectable to schedule reservations, "[a]t the very least, it would have been obvious over Waytena to simply present this list with proposed reservation times . . . for each recommended attraction." *Id.* at 55. Petitioner then provides a modified and annotated display of Waytena's Figure 5B having attraction times, reproduced below.



The above picture depicts, in red, Petitioner's annotations and proposed modification to Waytena's display.

Petitioner argues that a person skilled in the art would recognize that Waytena "could readily" "give the party the option to simply accept an entire list of attractions ***and*** proposed times (*e.g.*, an itinerary), without having to schedule reservations for each individual attraction (*e.g.*, if the user wanted to use the entire recommended list)." Pet. 56 (citing Ex. 1003 ¶¶ 147–151). Petitioner asserts that a POSITA would understand that the PCD "could simply use" the party's selected "'next available time' as a default and create a complete itinerary itself." *Id.* at 56–57. Petitioner asserts, "[t]hus, these existing processes in Waytena *could* be used to present a list of matching attractions ***and*** proposed times to visit, without the party having to click on each one." *Id.* at 57 (emphasis added); *see also* Pet. Reply 19–20 (arguing Waytena is capable of providing selected matching attractions and times).

Petitioner contends that a skilled artisan "would have recognized Waytena could readily do this" as Waytena "already selects and presents a

list of matching attractions," "can send reservation requests to attraction computers for individual attractions," "allow[s] a party to select 'next available time' for each recommended attraction," and have "the PCDs and attraction computers communicate to provide a reservation time that fits ride availability and the party's schedule." Pet. 56–57 (citing Ex. 1007, 12:25–29, 14:12–17:55, 23:3–24; Ex. 1003 ¶¶ 147–151). Petitioner further contends that there was error on the part of Examiner by not "consider[ing] whether Waytena alone renders the claims obvious." Pet. Reply 16.

(2) Patent Owner's Position

Patent Owner contends, "Waytena was already considered and rejected by the Examiner during prosecution." PO Resp. 33. Patent Owner further argues that "Petitioner's proposed reconfiguration of Waytena's mechanisms to match their hypothetical user interface would not have been obvious to a PHOSITA at the time of the invention as claimed in the '983 Patent." *Id.* at 37 (citing Ex. 2009 ¶¶ 203–216).

Specifically, Patent Owner asserts that users are not required to make reservations for every attraction Waytena's system recommends nor are they "obliged to reserve attractions in the order presented in list 541" of Waytena's Figure 5B. PO Resp. 35 (citing Ex, 2009 ¶ 199). Patent Owner argues that Petitioner presents a "hypothetical user interface" and "asserts that a 'POSITA would have recognized Waytena could readily do this.'" *Id.*at 38 (quoting Pet. 57). Patent Owner asserts "this is not the case" for numerous reasons, such as the proposed modification affecting the availability and scheduling of reservations, "leaving doubts about achieving *identical* outcomes with the proposed user interface," creating system delays and latency, feasibility issues, and increased timeouts, leading to a "high

number of unutilized reservations," overwhelming users, undermining effectiveness, and overbooking. *Id.*at 38–40 (citing Ex. 2009 ¶¶ 208–210, 212–217); *see also* PO Sur-Reply 21–22. And, Patent Owner asserts that Petitioner's hypothetical interface is "a modern interpretation that aligns more closely with the '983 Patent's FIG. 4," and "mimic[s] itinerary 400 of the '983 Patent FIG. 4 even to the extent of omitting other buttons and lists from Waytena's original FIG. 5B." *Id.* at 40 (citing Ex. 2009 ¶ 219).

(3) Analysis

As discussed above, the '983 patent defines an "itinerary" as being "comprised of events," whereby an "event" is "a visit to an attraction at a scheduled time." Ex. 1001, 7:31; 14:5–6; *supra* § 1.D. Further, as discussed above in Section II.C.2, the software must select a set of attractions from the first set based on information about the party, whereby the information can include attraction preferences.

Waytena 's Figure 5B shows, while the PCD is in an idle state, a user interface 201 presenting screen 504 including lists 541 and 545 of scrollable and/or pageable attractions and previously made reservations, and selectable buttons 542, 543, 544, 546, and 547 for obtaining information or generating reservation requests, changing patron information, and modifying or cancelling previously made reservations. Ex. 1007, 14:13–20. As discussed above in Section II.E.1, the patron must request a reservation for a selected attraction for Waytena's computer to propose a reservation time or position. Ex. 1007, 12:25–52. Thus, in Waytena, the patron, rather than the software, selects the attraction.

Petitioner contends that it would have been obvious to one of ordinary skill in the art for Waytena "to simply present this list ***with*** proposed

reservation times . . . for each recommended attraction," as depicted in Petitioner's modified and annotated Figure 5B of Waytena. Pet. 55–56. Petitioner proposes that this would have been doable based on Waytena's presentation of matching attractions, sending of reservation requests, selection by a party of "next available time," and communication between the devices "to provide a reservation time that fits ride availability and the party's schedule." *Id.* at 56. Thus, Petitioner concludes that "[a] POSITA would have thus understood that the PCD could simply use 'next available time' as a default and create a complete itinerary itself." *Id.* at 56–57.

However, Petitioner's assertion "these existing processes in Waytena *could* be used to present a list of matching attractions and proposed times to visit, without the party having to click on each one" (Pet. 57 (emphasis added) is speculative. We agree with Patent Owner that Petitioner's hypothetical interface is "a modern interpretation that aligns more closely with the '983 Patent's FIG. 4," and "mimic[s] itinerary 400 of the '983 Patent FIG. 4" PO Resp 40. In other words, Petitioner's hypothetical Figure 5B depicting what Waytena *could* do is based on knowledge gleaned only from the '983 patent's disclosure, i.e., impermissible hindsight.

(4) Summary of Claims 1 and 3

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has not established by a preponderance of the evidence that claims 1 and 3 would have been obvious over Waytena.

b) Dependent claims 4, 5, 8, 10, 12–14, 16–21, and 23–25

Petitioner's contentions regarding claims 4, 5, 8, 10, 12–14, 16–21, and 23–25, each depending directly from claim 3, are all predicated on its contention that independent claim 3 is obvious over Waytena. *See*

Pet. 60–69. Because we find Petitioner has not established by a preponderance of the evidence that claim 3 would have been obvious over Waytena, we similarly find that Petitioner has not established by a preponderance of the evidence that claims 4, 5, 8, 10, 12–14, 16–21, and 23–25 would have been obvious over Waytena.

2. Conclusion of Ground 3

Having considered the parties' arguments and evidence, we find, based on the record, that Petitioner has not established by a preponderance of the evidence that claims 1, 3–5, 8, 10, 12–14, 16–21, and 23–25 would have been obvious over Waytena alone.

G. GROUND 4 — ALLEGED OBVIOUSNESS OVER WAYTENA IN VIEW OF HERZ — CLAIMS 1, 3–5, 8, 10, 12–14, 16–21, AND 23–25

1. Overview of Herz – Exhibit 1008

Herz relates to system and method for "scheduling the receipt of desired movies and other forms of data from a network which simultaneously distributes many sources of such data to many customers, as in a cable television system" (Ex. 1008, code (57)) and for "controlling broadcast of and/or customer access to data such as video programs in accordance with objective profile data indicative of the customer's preferences for that data" (*id.* at 1:8–11). "[T]he video programming and other data most desired by the customer" are made available to the customer "by developing an 'agreement matrix' characterizing the attractiveness of each available source of video programming or data to each customer." *Id.* at 4:18–22.

The agreement matrix is used to determine, for each customer, customized "virtual channels" of data. Ex. 1008, 4:23–25. The virtual channels "include the video programming or other data which is predicted to

be most desirable to the customer based on the customer's preferences." *Id.* at 4:25–28; *see also id.* at 47:36–52. This would "minimize[] 'channel surfing'" and is "accomplished by calculating an agreement matrix which matches the characteristics desired by customers with corresponding characteristics of the video programs." *Id.* at 47:36–45. In one embodiment, programs that are liked by the same people are clustered together, and in another embodiment, customers with similar interests are clustered together. *Id.* at 47:45–52.

Also provided is "a method of scheduling customer access to data from a plurality of data sources" based on comparing customer preference profiles with available video programming. Ex. 1008, 4:32–43. Based on the comparison results, the customer's terminal "determine[s] 'virtual channels' containing a collection of only those video programs having content profiles which best match the customer's profile and hence are most desirable to the customer during the relevant time frame." *Id.* at 4:51–58.

2. Discussion

Petitioner challenges claims 1, 3–5, 8, 10, 12–14, 16–21, and 23–25 as unpatentable under 35 U.S.C. § 103 over Waytena in view of Herz. Pet. 69–73. Petitioner, discussing independent claims 1 and 3 as representative of the group of claims in this Ground, contends that "[t]o the extent Waytena is determined not to disclose or render obvious certain elements of claims 1 and 3 . . . , such would have been obvious over Waytena in view of Herz." *Id.* at 69–70.

Petitioner explains in detail which disclosures and combinations of Waytena and Herz allegedly teach each of the limitations of claims 1 and 3. Pet. 69–71. And, Petitioner proffers explanation regarding the motivation of

a person of ordinary skill to modify Waytena with Herz and have a reasonable expectation of success in doing so. *Id.* at 71–72. Petitioner also cites Dr. Houh's testimony, in which Dr. Houh details which disclosures and combinations of Sim and Doi he believes teach each of the limitations of claims 1 and 3 and why one of ordinary skill in the art would do so. *Id.* at 69–72; Ex. 1003 ¶¶ 177–186.

In response, Patent Owner contends that Herz is not analogous art and that a "PHOSITA would not have been motivated to combine the teachings of Herz with Waytena and reasonably expect success." PO Resp. 43–46.

Having reviewed all of the parties' arguments and evidence, we find that Petitioner has shown by a preponderance of the evidence that claim 1 and 3, and also dependent claims 4, 5, 8, 10, 12–14, 16–21, and 23–25, would have been obvious over Waytena and Herz. Pet. 69–73; PO Resp. 43–46; Pet. Reply 21–24; PO Sur-Reply 23–26. We turn now to a detailed discussion of the parties' disputes.

a) Analogous Art

(1) Petitioner's Position

Petitioner contends that, with regard to limitations 1[c] and 1[e] and the corresponding limitations in claim 3, the combination of Waytena and Herz "renders obvious Waytena's PCD presenting an itinerary, or schedule, of computer-selected attractions, without the party having to select which attractions to include." Pet. 70. Petitioner asserts that Waytena and Herz both relate to "assist[ing] parties in identifying and scheduling desirable attractions (*e.g.*, theme park rides in Waytena and movies or shows in Herz)." *Id.*

Petitioner asserts that "the '983 [patent] is clear it is not limited to just one type of attraction, but instead broadly relates to scheduling almost any type of attraction." Pet. Reply 22 (citing Ex. 1001, claim 12). This, Petitioner contends that "Herz is relevant, and in the same field of endeavor, as it is also directed to software for scheduling applications," and "not just directed to scheduling resources in general, but rather to scheduling resources (including shows and movies as claimed by the '983) in a manner that matches information about a party with data about attractions." *Id.* (citing Pet. 6–7, 69–72; Ex. 1008, Abstr., 4:18–5:22, 23:14–16).

Further, Petitioner contends "Herz is at least reasonably pertinent to the particular problem with which the '983 is involved," which Petitioner describes as "the need for a way to provide users with an 'appropriate itinerary' taking into account their 'interests and tastes.'" Pet. Reply 22–23 (citing Ex. 1001, 5:50–53). Petitioner asserts that "Herz is similarly concerned with assisting parties to identify and schedule desirable attractions, such as movies—one of the specific types of attractions identified and claimed in the '983" patent. *Id.* at 23 (citing Pet. 6–7, 69–73).

(2) Patent Owner's Position

Patent Owner contends that "[t]he fields of invention for Herz and Waytena are distinctly different" in that "Waytena specifically defines its field as 'scheduling patron reservations in facilities offering numerous attractions' . . . primarily focusing on theme park rides," whereas "Herz describes its domain as 'controlling broadcast of and/or customer access to data such as video programs' . . . which pertains to media content like movies or shows." PO Resp. 44 (citing Ex. 1007. 1:8–9; Ex. 1008, 1:2–3; Ex. 2009 ¶ 246). Patent Owner contends that "Waytena and the '983 Patent

both focus on *attractions* with specific *locations* and manage *travel time* and *limited attraction capacity*, aligning them within a common field of managing guest experiences at physical venues," whereas "Herz operates in a distinct domain, focusing on scheduling broadcasts of video programs *without physical location* constraints." *Id.* (citing Ex. 2009 ¶¶ 247, 248); *see also* PO Sur-Reply 23–24. Thus, Patent Owner asserts, Herz is "in a non-analogous field, primarily concerned with digital content delivery rather than physical guest management." *Id.* (citing Ex. 2009 ¶ 45). Patent Owner also contends that there are critical differences between Waytena and Herz "in identifying and scheduling desirable attractions." *Id.* at 45–46 (citing Ex. 2009 ¶¶ 251–255). According to Patent Owner, "[a] PHOSITA tasked with addressing the problems of scheduling physical attractions would reasonably search for terms such as 'attraction,' 'ride,' or 'itinerary,' not 'TV schedule' or similar terms tied to digital content delivery." PO Sur-Reply 25.

(3) Analysis

> We use "[t]wo separate tests [to] define the scope of analogous art: '(1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.' " *Airbus S.A.S. v. Firepass Corp.*, 941 F.3d 1374, 1379 (Fed. Cir. 2019) (quoting *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004)).

Netflix, Inc. v. DivX, LLC, 80 F.4th 1352, 1358 (Fed. Cir. 2023).

Petitioner asserts that field of the inventor's endeavor is "identifying and scheduling desirable attractions" (Pet. 70) or "scheduling almost any type of attraction" (Pet. Reply 22 (citing Ex. 1001, claim 12)). Patent Owner assert that field of the inventor's endeavor is "managing guest experiences at physical venues." PO Resp. 44 (citing Ex. 2009 ¶¶ 247, 248). The '983

patent, in the "FIELD OF THE INVENTION" section, describes the field generally as creating personalized itineraries, and more particularly to "creat[ing] a personalized itinerary for visitors to a facility, such as a zoo, theme park, historic area, or shopping district." Ex. 1001, 1:8–11; *see also id.* at, e.g., 2:44–47 (discussing the need to create an appropriate itinerary in a facility), 4:1 (titling a section for "Prior Art Relating to Itinerary Generation"), 6:11– 12. And, as discussed above, the '983 patent defines "itinerary" as comprised of events whereby an "event is typically a visit to an attraction at a scheduled time." Ex. 1001, 7:31–35. Thus, the field of the '983 patent's endeavor is generating personalized itineraries comprised of events at scheduled times.

The parties do not dispute that Waytena is in the same field of endeavor as the '983 patent. *See, generally*, PO Resp.; Pet. Reply. Rather, the parties disagree whether Herz is within the same field of endeavor. *See, generally*, PO Resp.; Pet. Reply. Herz describes its invention as "[a] system and method for scheduling the receipt of desired movies and other forms of data from a network which simultaneously distributes many sources of such data to many customers." Ex. 1008, code (57), Abstr., 4:32–40 ("a method of scheduling customer access to data"). Herz's "Field of the Invention" is described generally as "controlling broadcast of and/or customer access to data such as video programs in accordance with objective profile data indicative of the customer's preferences for that data," and particularly as "determining from objective profile data of the customers which data or video programming is most desired by each customer so that the customers may receive data or video programming customized to their objective preferences" and "are most desirable to the customer during the relevant

time frame." Ex. 1008, 1:8–17, 4:51–58. In other words, Herz's field of endeavor is providing a customized schedule of video programming.

We agree with Petitioner that this is in the same field of endeavor as the '983 patent, under the first test. Patent Owner's arguments that Herz is in the digital domain whereas the '983 patent is in the physical domain that has different challenges such as "real-world coordination," traveling, etc. (PO Sur-Reply 23–24; PO Resp. 44–45) do not adequately address why Herz's providing of a customized schedule of video programming, i.e., movies or shows, is not in the same field of endeavor as the '983 patent's providing a customized schedule of attractions, which can be a movie or show.

Further, under the second test, Herz is reasonably pertinent to a particular problem with which the '983 patent is involved. Petitioner asserts that Herz's "concern[] with assisting parties to identify and schedule desirable attractions, such as movies" is reasonably pertinent to the '983 patent's "satisfy[ing] the need for a way to provide users with an 'appropriate itinerary' taking into account their 'interests and tastes'" Pet. Reply 22–23 (citing Ex. 1001, 5:50–53). We agree. Patent Owner's arguments that Herz's scheduling system is distinct from and more complex than Waytena's system do not address how Herz's matching of customer preferences/characteristics to corresponding characteristics of video programs to "best meet[] the needs" of the customer is not reasonably to providing a user with an itinerary corresponding to their interests. Ex. 1008, 47:37–52.

Having considered the parties' arguments and evidence, we find Herz is analogous art.

b) Reasoning to Combine

(1) Petitioner's Position

Petitioner alleges that Herz teaches "minimiz[ing] the need for parties to manually search for and select content, with the computer automatically selecting and scheduling matching content using an 'agreement matrix.'" Pet. 70–71 (citing Ex. 1008, 1:38–47, 4:18–5:22, 19:5–65, 22:7–23:18). According to Petitioner, "Herz's computer selects programs for time slots that match a party's profile" and "generates a custom schedule of programs for parties, without the party having to select which recommended programs to include in the schedule." *Id.* at 71 (citing Ex. 1008, 2:65–3:16, 4:18–5:52, 6:53–7:55, 9:61–13:54, 19:5–65, 22:7–23:18, 24:53–25:30, Figs. 1–3; Ex. 1003 ¶¶ 178–181).

Petitioner asserts that it would have been obvious to apply Herz's teachings to Waytena to have Waytena's computer automatically select and schedule content. Pet. 71–72 (citing Ex. 1003 ¶¶ 182–184). And, Petitioner contends that a person of ordinary skill in the art would have done so in order to "no longer hav[e] to manually select each attraction they want to attend during their visit," to "enjoy automatically-scheduled content selected by the computer that matches the party's profile," and to "simply accept an entire list of attractions ***and*** proposed timed (*e.g.*, a customized itinerary) without having to schedule reservations for each individual attraction." *Id.* at 71–72 (citing Ex. 1003 ¶¶ 182–184).

(2) Patent Owner's Position

Patent Owner contends that Petitioner's argument "that both Waytena and Herz assist in identifying and scheduling desirable attractions . . . overlooks critical differences." PO Resp. 45 (citing Ex. 2009 ¶ 251). These

differences include, according to Patent Owner, Herz's more complex and advanced level of customization compared to "Waytena's more straightforward attraction scheduling," and Herz's "dynamic adaption" that sets it apart from Waytena's system. *Id.* at 45–46 (citing Ex. 2009 ¶¶ 251–259). Patent Owner argues that "[g]iven these complexities and the specific requirements of Herz's technology—particularly its reliance on time slots and viewer profiles—a PHOSITA would not have been motivated to combine Herz's broadcast-focused-technologies with Waytena's theme park attraction scheduling." *Id.* at 46 (citing Ex. 2009 ¶ 265). Patent Owner contends that these operational differences "would not translate effectively to the scheduling of physical attractions in a theme park setting where availability is more static and less dependent on individual preferences." *Id.* (citing Ex. 2009 ¶¶ 265–267). Thus, Patent Owner contends that Petitioner's failure "to appreciate these critical distinctions[] mak[es] the proposed combination of Herz and Waytena technologies unlikely to succeed." *Id.* (citing Ex. 2009 ¶ 267).

(3) Analysis

Petitioner relies on the combination of Waytena and Herz for teaching limitations 1[c], 1[e], and 3[c]-[e] reciting, in relevant part, software selecting a second set of attractions based on data regarding the first set of attractions substantially matching the information, thereby creating a customized itinerary and presenting that itinerary to the party. Pet. 70. Specifically, Petitioner modifies Waytena's system to add Herz's "generating [of] a list of recommended content matching a party profile" without the parties selecting specific content. *Id.* at 71–72 (citing Ex. 1007,

14:13–24, 15:3–6; Ex. 1008, 19:5–65, 22:7–23:18, 24:56–25:30, 2:65–3:16, 10:6–20; 4:40–5:52, 9:61–13:54; Ex. 1003 ¶¶ 179–184).

Petitioner does not bodily incorporate all of Herz's "complex" system into Waytena's system. The differences to which Patent Owner refers do not undermine Petitioner's justification that one of ordinary skill in the art would modify Waytena's system to add Herz's ability to generate recommended matching content without user selection. Patent Owner does not provide sufficient evidence why doing so would render Waytena inoperable. Further, Patent Owner does not provide sufficient evidence or explanation why adding that sole ability of Herz's to Waytena's system would not translate effectively and would be unlikely to succeed.

c) Summary of Claims 1 and 3

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has established by a preponderance of the evidence that claims 1 and 3 would have been obvious over Waytena in view of Herz.

d) Dependent claims 4, 5, 8, 10, 12–14, 16–21, and 23–25

Petitioner's contentions regarding claims 4, 5, 8, 10, 12–14, 16–21, and 23–25, each depending directly from claim 3, are all predicated on its contention that independent claim 3 is obvious over Waytena and Herz. *See* Pet. 69. Specifically, Petitioner relies on the contentions and evidence regarding Waytena as provided for Ground 3. *Id.* Patent Owner does not separately argue the dependent claims. *See* PO Resp. 43–46. Having reviewed the Petition, the cited art, and the evidence of record, including Dr. Hough's testimony, we determine that Petitioner has established by a preponderance of the evidence that claims 4, 5, 8, 10, 12–14, 16–21, 24,

and 25 would have been obvious over Waytena and Herz, but has not established by a preponderance of the evidence that claim 23 would have been obvious over Waytena and Herz.

Regarding claim 23, Petitioner contends that Waytena teaches sending messages about pending and confirmed reservations that comprise recommendations to the user and are conditioned on the reserved time approaching for a specific time. Pet. 68 (citing Ex. 1007, 3:39–55, 9:21–32, 9:59–62, 13:29–32, 18:38–19:8; Ex. 2009 ¶¶ 172–174). However, Petitioner does not explain how this meets the second set of messages being sent at the same time, i.e., in conjunction with, the itinerary as required by the claim 23. *See supra* § II.D.2.m.

3. Conclusion of Ground 4

Having considered the parties' arguments and evidence, we find, based on the record, that Petitioner has established by a preponderance of the evidence that claims 1, 3–5, 8, 10, 12–14, 16–21, 24, and 25 would have been obvious over Waytena and Herz but has not established by a preponderance of the evidence that claim 23 would have been obvious over Waytena and Herz.

H. GROUND 5 — ALLEGED OBVIOUSNESS OVER WAYTENA (ALONE OR AS MODIFIED BY HERZ) IN VIEW OF SIM — CLAIM 7

1. Discussion

Petitioner contends Waytena (alone or as modified by Herz) in view of Sim renders dependent claim 7 obvious. Pet. 73–74. Petitioner alleges that Sim teaches the party information including privileges and the parties with these privileges receiving priority over others in including certain attractions in their itinerary. Pet. 73; *see also id.* at 25–26.

Patent Owner contends that claim 7 would not have been obvious over Waytena alone or as modified by Herz because claim 7 depends from a patentable base claim and because neither Waytena, Herz, nor Sim teaches "privileges of the party that distinguish between attractions." PO Resp. 46–47 (citing Ex. 1002, 48:22–49:3; Ex. 1007, 20:51–55; Ex. 2009 ¶¶ 268–270).

Patent Owner's arguments against Waytena and Herz (PO Resp. 46–47; PO Sur-Reply 26) are not persuasive because Petitioner relies on Sim for teaching the claimed privileges (Pet. 73).

Patent Owner's argument that Sim does not teach the claimed privilege (PO Resp. 47; PO Sur-Reply 26) is unpersuasive for the reasons provided above in Section II.D.2.d. That is, neither the written description nor claim 7 of the '983 patent defines or otherwise limits the "privilege" to exclude Sim's paid class status. Ex. 1001, code (57), 22:62–65, 33:4–9. And, Patent Owner does not posit a definition or provide evidence to support its contention that one of ordinary skill in the art would exclude Sim's paid class status from being a privilege for desirable, popular (i.e., crowded) attractions.

2. Conclusion of Ground 5

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has established by a preponderance of the evidence that claim 7 would have been obvious over the combination of Waytena, Herz, and Sim.

I. GROUND 6 — ALLEGED OBVIOUSNESS OVER WAYTENA (ALONE OR AS MODIFIED BY HERZ) IN VIEW OF DOI — CLAIMS 11 AND 22

1. Dependent claim 11

Petitioner contends Waytena (alone or as modified by Herz) in view of Doi renders dependent claim 11 obvious. Pet. 74–76. Specifically, Petitioner asserts that Doi "discloses that where rides have long wait times, it will select replacement rides for parties so as 'to take a measure for the waiting time to be shorter,'" and refers to an earlier discussion for claim 11.[5] Pet. 74–75. In Ground 1, Petitioner argues that "Doi contemplates 'interruptions,' including where rides have 'abnormally long wait times' due to being overcrowded." *Id.* at 28 (citing Ex. 1006, 8:20–45, 9:36–10:11). Petitioner asserts that "[i]n Waytena, a party receives an itinerary ('third set of attractions'), and as the party proceeds through the day, some attractions will have been visited and some will remain." *Id.* at 75 (citing Ex. 1003 ¶ 191). And, Petitioner asserts that Waytena teaches that patrons may change or cancel reservations to overcome interruptions of "attraction malfunctions." *Id.* (citing Ex. 1007, 11:1–17, 19:20–60). Petitioner argues that a person of ordinary skill in the art "would have been motivated to include replacement attractions, as taught by Doi, when updating Waytena's itinerary, so as to make up for attractions a party had to miss because of the interruption, while excluding those already visited." Pet. 75–76 (citing Ex. 1003 ¶ 192).

Patent Owner contends that claim 11 would not have been obvious over Waytena alone or as modified by Herz and "in view of Doi not only

[5] Petitioner's Ground 2 does not discuss claim 11; rather, claim 11 is discussed in Ground 1. Pet. 28–30. We consider Petitioner's reference to Ground 2 as an inadvertent error and refer to Petitioner's Ground 1 instead.

because claim 7 [sic – 11] depends from a patentable base claim, but also for the additional reasons expressed below." PO Resp. 47–48. Patent Owner argues that Waytena deals only with interruptions at a single attraction, and not that replacements are made for the remaining itinerary. *Id.* at 48 (citing Ex. 1007, 11:1–3; Ex. 2009 ¶ 273). And, Patent Owner argues, "[s]imilarly, Doi does not mention replacing the entire remaining portion of an itinerary." *Id.*; *see also* PO Sur-Reply 26–27.

As we understand Petitioner's position, Petitioner combines Doi's software selecting replacement attractions when there has been an interruption in Waytena, such as long wait times, malfunctions, or other factors. Pet. 74–75. Although Doi teaches selecting replacement attractions, we agree with Patent Owner that Petitioner does not provide sufficient evidence that the combination of Waytena and Doi teaches substantially excluding those previously visited rides, as required by claim 11. Nor has Petitioner justified that a skilled artisan would have modified the combination to exclude previously visited rides. *See* Pet. 75–76. Petitioner has not identified anything in the cited art that teaches excluding attractions or rides that have been previously visited. *See id.* Although identifying a precise teaching from the prior art is not required in an obvious analysis (*see KSR*, 550 U.S. at 418), in this instance, we find Petitioner's showing here is inadequate. At best, the evidence supports Petitioner's proposed combination teaching re-selecting and replacing attractions, but not necessarily excluding those attractions already visited.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has not established by a preponderance of the evidence that claim 11 would have been obvious over the combination of Waytena, Herz, and Doi.

2. Dependent claim 22

Petitioner contends Waytena (alone or as modified by Herz) in view of Doi renders dependent claim 22 obvious. Pet. 76–77. Specifically, Petitioner asserts that Doi "discloses the additional elements of claim 22," in teaching mitigation of attraction underutilization and excessive demand by guidance to a non-crowded attraction, and Petitioner refers to the discussion in Ground 2 for claim 22. *Id.* In Ground 2, Petitioner argues that "[r]egarding the software applying a 'perturbation to a desirability' of an attraction, the '983 [patent] teaches the perturbation function can change the 'desirability of an attraction,' so that not all users are directed to the same attraction," and "Sim in view of Doi renders this obvious." *Id.* at 37 (citing Ex. 1001, 24:15–50; Ex. 1003 ¶ 106). Petitioner argues that Doi teaches selecting attractions based on age "will not always cause a customer to move as planned," and "Doi can address this by making an attraction more desirable to certain parties." *Id.* (citing Ex. 1006, 10:48–11:35; Ex. 1003 ¶ 106).

Patent Owner argues that "[c]laim 22 would not have been obvious over Waytena due to the reasons discussed above in Ground 1, claim 22." PO Resp. 49. Patent Owner argues that Doi relies on its users to select attraction and as such, "there is no software to apply a perturbation to a desirability of a first attraction of the first set of attractions." *Id.* Further, Patent Owner argues that Petitioner's reliance "on Doi's use of pricing incentives to manage the desirability of an attraction 'to change the likelihood that attraction might be selected,'" is an admission that "it is the users—being price-sensitive—who make the final selection in conjunction with Doi's system." PO Sur-Reply 27.

Similar to the discussion above in Section II.D.2.l, regarding Ground 1, Petitioner does not adequately explain how the combination of Waytena and Doi teaches the software applying a perturbation to the first attraction to produce a different result. Rather, Petitioner discusses redistributing demand by guiding a customer to another area through adjusting prices to mitigate demand (Pet. 76–77), but does not sufficiently explain how either of these would be used by the software to select a different result for the second set, as required by the limitation.

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has not established by a preponderance of the evidence that claim 22 would have been obvious over the combination of Waytena, Herz, and Doi.

3. Conclusion of Ground 6

Having considered the parties' arguments and evidence, we find, based on the record, Petitioner has not established by a preponderance of the evidence that claims 11 and 22 would have been obvious over the combination of Waytena, Herz, and Sim.

III. CONCLUSION[6]

After reviewing the evidence and arguments presented, we determine for the reasons discussed above that Petitioner has established by a preponderance of the evidence that Challenged Claims 1, 3–5, 7, 8–10, 12–14, 16–19, 20, 21, 24, and 25 are unpatentable based on Grounds 1, 2, and 4, but Petitioner has not established by a preponderance of the evidence that Challenged Claims 11, 22, and 23 are unpatentable based on any of the Grounds.

[6] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2)

The outcome for the Challenged Claims in this proceeding is set forth in summary as follows:

Claims	**35 U.S.C. §**	**Reference(s)/ Basis**	**Claim(s) Shown Unpatentable**	**Claim(s) Not shown Unpatentable**
1	103(a)	Sim, Doi	1, 3, 5, 7, 10, 12–14, 16, 17, 19, 20, 24, 25	8, 11, 22, 23
2	103(a)	Sim, Doi, Waytena	4, 18, 21	
3	103(a)	Waytena		1, 3–5, 8, 10, 12–14, 16–21, 23–25
4	103(a)	Waytena, Herz	1, 3–5, 8, 10, 12–14, 16–21, 24, 25	23
5	103(a)	Waytena (alone or as modified by Herz), Sim	7	
6	103(a)	Waytena (alone or as modified by Herz), Doi		11, 22
Overall Outcome			1, 3–5, 7, 9, 10, 12–14, 16–21, 24, 25	11, 22, 23

IV. ORDER

Upon consideration of the record before us, it is:

ORDERED that claims 1, 3–5, 7, 9, 10, 12–14, 16–21, 24, and 25 are unpatentable; and

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

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