

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOAST, INC,
Petitioner,

v.

GRATUITY, LLC
Patent Owner.

IPR2023-01408
Patent 9,741,050 B2

Before MEREDITH C. PETRAVICK, CYNTHIA L. MURPHY, and
JASON W. MELVIN, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge* MURPHY.

Opinion concurring filed by *Administrative Patent Judge* PETRAVICK.

MURPHY, *Administrative Patent Judge*.

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

I. INTRODUCTION

The parties in this proceeding are Toast, Inc. (“Petitioner”) and Gratuity, LLC (“Patent Owner”) and the challenged patent is U.S. Patent No. 9,741,050 B2 (Ex. 1001, “the ’050 Patent”). Petitioner filed a Petition to institute *inter partes* review of claims 1–13 of the ’050 Patent (Paper 2, “Pet.”) and we instituted review (Paper 11). Patent Owner filed a Response (Paper 14, “PO Resp.”), Petitioner filed a Reply (Paper 16, “Pet. Reply”), and Patent Owner filed a Sur-Reply (Paper 18, “PO Sur-Reply”). An oral hearing was held on January 10, 2025 and a transcript appears in the record (Paper 28).

We have jurisdiction under 35 U.S.C. § 6. This is a Final Written Decision under 35 U.S.C. § 318(a). For the reasons set forth below, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–13 of the ’050 Patent are unpatentable.

II. BACKGROUND

A. *Real Parties-in-Interest*

The parties identify themselves as the real-parties-in-interest. *See* Pet. 2; Paper 5, 2.

B. *Related Matter*

The parties each identify *Gratuity Solutions, LLC v. Toast, Inc.*, No. 1:22 cv11539, pending in the District Court for the District of Massachusetts (“the District Court Litigation”), as a parallel district court proceeding. *See* Pet. 2; Paper 5, 2.

III. THE '050 PATENT

The '050 Patent discloses a computer-implemented system related to the “management of gratuities.” Ex. 1001, 4:10–11; *see also id.* at 1:45–61. The system is “described with reference to a restaurant setting.” *Id.* at 4:15.

The '050 Patent is particularly concerned with the “gratuity distribution rules” used by a restaurant when a gratuity is “shared among the employees who assisted in providing service to the customer.” Ex. 1001, 1:32–35.¹ “The management of gratuities for a given business or organization may be defined by the customs and practices of the business as well as applicable regulations.” *Id.* at 5:12–14. Thus, a restaurant must tailor its gratuity distribution rules accordingly, and gratuity distribution rules differ from restaurant to restaurant. *See id.* at 2:67–3.3. Indeed, a major portion of the '050 Patent’s description is dedicated to the tailoring of gratuity distribution rules. *See, e.g., id.* at 9:13–21:9.

The system disclosed in the '050 Patent determines a gratuity allocation based on transaction information, employee information, and the gratuity distribution rules of a particular restaurant. *See*, Ex. 1001, 5:14–27, 6:15–21, 7:44–64.

As for the computer implementation of this system, Patent Owner calls our attention to Figure 2A which “is a logical view of a gratuity

¹ The '050 Patent explains, by way of background, that a restaurant customer “gives a gratuity” to their waiter/waitress, “or adds the gratuity to the amount paid for the meal.” Ex. 1001, 1:30–32. Although the customer may have primarily interacted with their waiter/waitress, “other employees” (e.g., “a host,” “a busser,” “a food runner,” “a bartender”) “assisted in varying degrees in supporting the service provided to the customer.” *Id.* at 1:21–28.

management system.” Ex. 1001, 7:44–45. In Patent Owner’s annotated version of this figure, a point-of-sale (POS) server 200 is highlighted in yellow, another server 210 is highlighted in blue, and a database 214 is highlighted in blue. *See* PO Resp. 3. Patent Owner characterizes POS server 200 as part of a “client business system.” *Id.* Patent Owner characterizes server 210 and database 214 as part of a “management computing system.” *Id.*

The ’050 Patent describes the system illustrated in Figure 2A as having an interface component 206 installed on POS server 200 that extracts the transaction information and employee information to be used in determining the gratuity allocations and facilitates the transfer of this information from the POS server 200 to management computing system 210/214. *See* Ex. 1001, 7:56–7:61, 8:54–57.

In the system shown in Figure 2A, there is only one POS server 200 that interacts with management computing system 210/214. The ’050 Patent says:

As illustrated in FIG. 2A, the processor 212 is remote from the client’s point of sale. In this manner, the processor 212 may service multiple points of sale for a client as well as multiple clients.

Ex. 1001, 8:46–49. Thus, per the ’050 Patent, the remote location of processor 212 allows management computing system 210/214 to serve multiple POS servers 200. Patent Owner indicates that, with such a multi-client (e.g., multi-restaurant) embodiment, “problems associated with calculations of gratuities based on client-specific information extracted from disparate, ad hoc client business systems” may arise. PO Resp. 27. But the

'050 Patent does not provide one with any technical direction for making and using a multi-restaurant embodiment that avoids or solves these calculation/extraction problems.

The '050 Patent says that “[i]n one embodiment, the processor 212 and the database 214 are provided in a cloud computing system 210 accessible over the Internet 208.” Ex. 1001, 8:22–24. Patent Owner indicates that there are “problems associated with scale-up and transitioning to a cloud-based system” whereby it is not “a simple modification.” PO Resp. 27. Patent Owner also indicates that there are “cost and security issues” associated with a cloud-based system. *Id.* But the '050 Patent does not provide any technical direction on how one would go about making and using a secure cloud computing system in a cost-effective manner.

IV. CHALLENGED CLAIMS

Petitioner challenges claims 1–13 of the '050 Patent. *See* Pet. 4. Claims 1 and 8 are independent; claims 2–7 depend directly or indirectly from claim 1; and claims 9–13 depend directly or indirectly from claim 8. *See* Ex. 1001, 22:38–24:41. Independent claim 1, reproduced below is illustrative.

1. A system, comprising:
 - a. a gratuity management system, comprising
 1. a server coupled to a computer network and accessible by a plurality of clients, the server being configurable to independently execute gratuity distribution rules on a client-by-client basis; and
 2. a database, accessible by the server; and

b. a plurality of client business systems in electronic communication with the server of the gratuity management system, each of the client business systems corresponding to one of the plurality of clients, each client business system comprising:

1. at least one point of sale server; and
2. a gratuity sync client application installed on the respective client business system;

wherein the gratuity sync client application on each client business system is configured to extract transaction information and employee information from the client business system and to initiate transfer of the extracted information to the gratuity management system;

wherein the gratuity management system is a cloud computing system remote from the plurality of client business systems and configured to receive the extracted transaction information and employee information from the plurality of client business systems and to store the received extracted information in the database; and

wherein the gratuity management system is further configured to execute, independently for each client, gratuity distribution rules for allocating gratuities among at least a portion of the employees and to determine a gratuity allocation based on at least the received extracted transaction information, the received extracted employee information, and the gratuity distribution rules and return the gratuity allocation to the gratuity sync client application of each respective client business system, without requiring the client business systems to execute the gratuity distribution rules.

V. ASSERTED GROUNDS OF UNPATENTABILITY

Ground	Claims Challenged	35 U.S.C. ²	Reference[s]/Basis
One	1–3, 8, 10	35 U.S.C. 103	Marshall ³
Two	4–7, 9, 11–13	35 U.S.C. 103	Marshall, Webb ⁴
Three	1–3, 8, 10	35 U.S.C. 103	Phillips, ⁵ Marshall
Four	4–7, 9, 11–13	35 U.S.C. 103	Phillips, Marshall, Webb

VI. OBVIOUSNESS

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).

A patent claim is unpatentable for obviousness 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). In *Graham v. John Deere Co.*, 383 U.S. 1 (1966), the Supreme Court set out a

² The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. We apply the pre-AIA version of § 103 here, because the application identified in the ’050 Patent was filed before the effective date of the AIA. *See* Ex. 1001, code (21).

³ US 2008/0065396 A1, published March 13, 2008 (Ex. 1004).

⁴ US 4,819,162, issued April 8, 1989 (Ex. 1006).

⁵ US 2014/0365322 A1, published December 11, 2014 (Ex. 1005).

framework for assessing obviousness that requires consideration of four factors: (1) the “level of ordinary skill in the pertinent art,” (2) the “scope and content of the prior art,” (3) the “differences between the prior art and the claims at issue,” and (4) “secondary considerations” of nonobviousness such as “commercial success, long felt but unsolved needs, failure of others, etc.”⁶ *Graham*, 383 U.S. at 17–18; *KSR*, 550 U.S. at 407.

An obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim,” and can take into account “the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418. For example, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.* at 417.

VII. LEVEL OF ORDINARY SKILL IN THE ART

The level of skill in the art is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis. *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999) (citing *Graham*, 383 U.S. at 17–18; *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991)). In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations

⁶ Patent Owner does not assert any such objective indicia of nonobviousness in this proceeding.

are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995).

“Patent Owner maintains that the relevant technical field for the asserted patents covers computer hardware and software, and that a person of ordinary skill in the art (‘POSITA’) in this technical field on September 4, 2012, would have had a Bachelor of Science in computer science, computer engineering, electrical engineering, or similar major with at least two years of experience related to research, evaluation, design, development, testing, etc. of computer hardware and software.” PO Resp. 11.

We agree with Patent Owner’s proposed definition of a POSITA, to the extent that it aligns with the level of skill portrayed by the ’050 Patent. As discussed above, the ’050 Patent does not provide one with any technical direction for making and using a multi-restaurant embodiment that avoids or solves calculation/extraction problems due to disparate client (e.g., restaurant) systems. The ’050 Patent also does not provide one with any technical direction for scaling up and/or transitioning to a cloud-based system. We infer from this that a POSITA would have the education and the experience enabling him/her to effectively and economically handle these tasks without technical direction, despite the problems associated therewith. Put another way, the actual application of these technical endeavors would not be beyond his/her skill.

Although Petitioner provides a slightly different expression for the level of ordinary skill in the art (*see* Pet. 9–10), it substantively agrees with Patent Owner’s proposed level of skill and adopting Petitioner’s precise level of ordinary skill would not change our decision.

VIII. CLAIM CONSTRUCTION

We apply the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). Under that standard, claim terms “are generally given their ordinary and customary meaning” as would have been understood by a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). In construing claims in accordance with their ordinary and customary meaning, we must take into account the specification and prosecution history. *Phillips*, 415 F.3d at 1315–17.

Patent Owner presents several pages of argument about claim construction, but offers no proposed construction for any of the claim terms. *See* PO Resp. 11–18. “Petitioner maintains that no claim construction is necessary.” Pet. Resp. 4. We determine that no express claim construction is necessary for any claim terms. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (holding that only claim terms in controversy need to be construed, and only to the extent necessary to resolve the controversy (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

IX. OVERVIEW OF PRIOR ART

A. *Marshall*

Marshall discloses “systems and methods for recording, maintaining, and reporting tips and gratuities, optionally including details such as employee, task performed, and shift.” Ex. 1004, Abstract. Marshall describes

these systems and methods with reference to a “restaurant” in which employees receive tips and gratuities. *Id.* ¶ 68.

Marshall discloses that gratuities can be attributed to a restaurant’s employees in several reasonable ways. *See e.g.*, Ex. 1004 ¶ 142. For example, in some restaurants, tips/gratuities can be attributed “to each employee based upon the number of hours worked by each employee divided by the total number of hours worked by all employees during a particular shift.” *Id.* In other restaurants, tips/gratuities can be “attributed to each employee based upon the total sales of each employee divided by the total sales of all employees for a particular shift, date, etc.” *Id.* In yet other restaurants, tips can be attributed “to a first subset of employees (e.g., servers) based upon a first method (e.g., hours worked by the employee versus hours worked by all employees) and tips are attributed to a second subset of employees (e.g., bartenders) based upon a second method (e.g., sales of each employee versus sales of all employees).” *Id.*

Marshall discloses, therefore, that a gratuity allocation is determined based upon transaction information, employee information, and gratuity distribution rules particular to a restaurant. *See* Pet. 19–28; Ex. 1002 ¶¶ 138–164.

Marshall discloses “Gratuity Reporting and Tip Allocation Software (‘GrataSoft’)” that operates on a system having a server. Ex. 1004 ¶ 105. [A]n exemplary embodiment of a simplistic system” for this operation is depicted in Figure 3A, which includes a “processing unit 302” (i.e., a server). *Id.* ¶ 97. When GrataSoft is executed on such a system for a restaurant, a gratuity allocation is determined based on transaction

information, employee information, and this restaurant's gratuity distribution rules. *See* Pet. 19–28; Ex. 1002 ¶¶ 138–164.

Marshall discloses that a point-of-sale (POS) system is “known in the art and captures data at the time and place of the sale.” Ex. 1004 ¶ 70. Marshall discloses “an Aloha POS in the form of software” that saves “transactional data” and “employee information” for transfer to the GrataSoft software. *Id.* ¶ 108. Thus, Aloha software is an interface component that extracts transaction information and employee information from the POS system and initiates transfer of the extracted information to the GrataSoft software. *See* Pet. 19–20; Ex. 1002 ¶¶ 138–143.

Marshall says that the GrataSoft software and Aloha POS software can be “co-located” on the same processing unit (e.g., processing unit 302), but also expressly says that “such embodiments are not required.” Ex. 1004 ¶ 110. Thus, Marshall discloses that a gratuity management system could comprise a server that executes GrataSoft and a separate POS server that executes Aloha. *See* Pet. Reply 8–9, 19; Ex. 1002 ¶ 138.

Marshall discloses, therefore, that when the POS server is located at a restaurant, the GrataSoft-executing server need not be co-located at the restaurant, but could instead be remote therefrom.

Marshall discloses an embodiment involving multiple employers (e.g., restaurants). *See* Ex. 1004 ¶¶ 385–392, Fig. 27. In a multi-employer scenario, a POS server would be located at each restaurant. *See id.* at Abstract, ¶¶ 107–109. As indicated above, Marshall discloses that the GrataSoft software and Aloha POS software need not be “co-located” on the same processing unit. Ex. 1004 ¶ 110. Thus, Marshall discloses that each

restaurant's POS server could be in electronic communication with a GrataSoft-executing server that is not located at the respective restaurant (i.e., a remote server). *See* Pet. 17–18; Ex. 1002 ¶¶ 123–124.

Petitioner establishes that, in a multi-restaurant scenario, it would be obvious for the restaurants' POS servers to be in electronic communication “with an overarching gratuity management system.” Pet. 17–18; *see also* Ex. 1002 ¶¶ 113, 123–125. In other words, Petitioner establishes it would have been obvious “to implement the server of Marshall's gratuity management system remotely,” rather than “having a separate server at each client location.” Pet. Reply 6.

As indicated above, Marshall discloses that transaction information and employee information are transferred from the POS server (at the restaurant) to the remote GrataSoft-executing server. *See* Ex. 1004 ¶ 110. Thus, in a multi-restaurant scenario, this information would be transferred from each restaurant's POS server to the overarching gratuity management system. *See* Pet. 15–16; Ex. 1002 ¶¶ 112–117.

As indicated above, GrataSoft determines a gratuity allocation based on transaction information, employee information, and a restaurant's gratuity distribution rules. *See* Ex. 1004 ¶¶ 126, 127, 142. As also indicated above, Marshall discloses that gratuities can be attributed to a restaurant's employees in several reasonable ways. *See id.* Thus, in a multi-restaurant scenario with an overarching gratuity management system, the GrataSoft-executing server would be configurable to independently execute gratuity distribution rules on a restaurant-by-restaurant basis. *See* Pet. 6, 22–25; Ex. 1002 ¶¶ 156–157.

B. Phillips

Phillips discloses a system involving a central processor 10 (i.e., server), multiple restaurants 15, and point-of-sale (POS) systems 20 located at the restaurants. *See* Ex. 1005 ¶¶ 32–34, Figs. 1, 2a, 2b. Tip data 25 is “uploaded” from the POS systems 20 to the central processor 10. *Id.* at 34. Upon receipt of the tip data 25, the central processor/system 10 will “confirm or adjust tip amounts if necessary” and load an appropriate tip amount onto the relevant employee’s debit card. *Id.* “In addition, tip-outs can also be automatically calculated and distributed to other employees at this time depending on location or corporate level business rules set within the system.” *Id.* Phillips also discloses that its invention “can provide extensive reporting and data extraction functionalities.” *Id.* ¶ 44.

Phillips discloses, therefore, a multi-restaurant scenario having an overarching gratuity management system that is configured to independently execute gratuity distribution rules on a restaurant-by-restaurant basis. *See* Pet. 48–49; Ex. 1002 ¶¶ 251–292.

C. Webb

Webb discloses that, in a restaurant setting, a POS system can be communicatively coupled to a time and attendance server. *See* Ex. 1006, Abstract, 24:51–60, Figs. 1A, 1B.

X. ANALYSIS

A. Ground One

Petitioner establishes that claims 1–3, 8, and 10 would have been obvious over Marshall. *See* Pet. 14–45; Pet. Reply 4–14.

In particular, Petitioner points to Marshall’s multi-restaurant embodiment, along with its disclosure that the GrataSoft software and Aloha POS software need not be “co-located” on the same processing unit. As was discussed above, Petitioner establishes that, in a multi-restaurant scenario, it would be obvious for the restaurants’ POS servers to be in electronic communication “with an overarching gratuity management system.” Pet. 17–18; *see also* Ex. 1002 ¶¶ 113, 123–125.

Petitioner also points to Marshall’s teachings about the execution of gratuity distribution rules (*see* Pet. 15–16, 22–23, 36; Ex. 1004 ¶¶ 32, 142; Ex. 1002 ¶¶ 116, 156–157, 205); the database (*see* Pet. 16–17, 29–30; Ex. 1004 ¶¶ 110, 130, 140; Ex. 1002 ¶¶ 120–121, 182); the interface component (*see* Pet. 18–19, 28–29, 31–32; Ex. 1004 ¶¶ 108–110; Ex. 1002 ¶¶ 130–135, 168, 172, 191, 193);⁷ information extracting, formatting, receiving, storing, and reporting (*see* Pet. 19–22, 32–34; Ex. 1004 ¶¶ 69, 78, 80–83, 108–110, 136–140, 224–226, Figs. 5A, 5B, 12; Ex. 1002 ¶¶ 138–164, 168, 172, 198–199, 201); payment management services (*see* Pet. 29–30; Ex. 1002 ¶¶ 177–182); and the Web portal (*see* Pet. 30–31; Ex. 1004 ¶¶ 102, 103; Ex. 1002 ¶ 183–184).

Petitioner establishes that, in a multi-restaurant scenario, it would have been obvious for an overarching gratuity management system to be a “cloud computer system.” Pet. 21; Ex. 1002 ¶¶ 146–150. Petitioner provides evidence that cloud-based systems, and their benefits were well known in

⁷ In independent claim 1, the interface component is called “a gratuity sync client application.” Ex. 1001, 22:51; *see also id.* at 7:49–56.

the art before the '505 Patent's earliest listed priority date.⁸ *See* Ex. 1002 ¶¶ 48–56, 293; Ex. 1010; Ex. 1012; Ex. 1026; Ex. 1027. Specifically, for example, Petitioner provides a 2011 textbook that states “[t]he business and technical advantages offered by the cloud provision are simply enormous, and so, its adoption and adaption are gaining unprecedented attention and acceleration.” Ex. 1012, 196. Petitioner also points out that the communication protocols disclosed by Marshall were known to support cloud-based infrastructure.⁹ *See* Pet. 21; Ex. 1002 ¶¶ 147–148.

Patent Owner's arguments to the contrary hinge heavily on an assertion that Marshall's teachings are limited to client-side tip calculations. *See* PO Resp. 19–26. Patent Owner argues that Marshall “nowhere” teaches or suggests a gratuity management system “that is “separate and distinct from any client point-of-sale (POS) server. *Id.* at 31. And Patent Owner argues “nowhere does Marshall indicate the Gratuity Reporting and Tip Allocation Software is installed anywhere but the client-side system of Figure 3.” *Id.* at 23.

Patent Owner's client-side-only arguments are overly focussed on the setup disclosed in Marshall's Figure 3, and, in any event, do not coincide with Petitioner's citations to Marshall. Petitioner points out in its Reply that Patent Owner (and its expert) fail to address Marshall's multi-employer

⁸ The '050 Patent lists a provisional application filed on September 4, 2012 as a related application. Ex. 1004, code (60).

⁹ Marshall discloses that “data transfer” can be “data transfer is performed via uploading and downloading via HyperText Transfer Protocol (‘HTTP’), Extensible Markup Language (‘XML’), and/or HTML as is known in the art.” Ex. 1004 ¶ 110.

embodiment. *See* Pet. Reply 6. Petitioner also points out in its Reply that Patent Owner (and its expert) fail to address Marshall’s disclosure that the server executing the GrataSoft software can be separate (i.e., not co-located) with the POS server executing the Aloha software. *Id.* at 10. In Patent Owner’s Sur-Reply, these topics remained undiscussed. *See* PO Sur-Reply 1–6. Both aspects of Petitioner’s contentions support that Marshall’s system does disclose a gratuity management system that is separate and distinct from the client POS servers.

Patent Owner argues that there would be problems “associated with calculations of gratuities based on client-specific information extracted from disparate, ad hoc client business systems.” PO Resp. 27–28; Ex. 2006 69–73. Patent Owner also argues that there would be “problems associated with scale-up and transitioning to a cloud-based system, and associated cost and security issue. PO Resp. 27; Ex. 2006 ¶¶ 87–91. However, as discussed above, the ’050 Patent portrays that a POSITA would have the education and experience enabling him/her to effectively handle the conversion of a single-restaurant system to a multi-restaurant system; and to transition to a safe and secure cloud system in a cost/time effective manner. Thus, these problems would not detract from the obviousness of a multi-restaurant and/or cloud-based version of Marshall’s invention.

Patent Owner does not otherwise contest Petitioner’s contention with respect to this asserted ground of unpatentability. Consequently, we conclude that, on the record before us, Petitioner has proven that claims 1–3, 8, and 10 would have been obvious over Marshall.

B. Ground Two

Petitioner establishes that claims 4–7, 9, and 11–13 would have been obvious over Marshall and Webb. *See* Pet. 36–46; Pet. Reply 14–15.

Marshall discloses that a gratuity management system can coordinate with a restaurant’s timeclock programs, time and attendance systems, and/or payroll processing systems. *See* Ex. 1004 ¶¶ 69, 108. Webb discloses that, in a restaurant setting, a POS system can be communicatively coupled to a time and attendance server. *See* Ex. 1006, Abstract, 24:51–60, Figs. 1A, 1B.

Thus, Marshall and Webb describe similar and compatible systems in the same field of art—systems for tracking employee and sales information in the hospitality business. And Petitioner provides evidence that it would have been obvious to a POSITA to combine these teachings in the claimed manner. *See* Ex. 1002 ¶¶ 207–212.

Patent Owner argues that Webb “does not cure the deficiencies” of Marshall. PO Resp. 41. However, as discussed above, we disagree with Patent Owner regarding Marshall’s deficiencies. Thus, Webb need not cure these alleged deficiencies in Marshall.¹⁰

Patent Owner does not otherwise contest Petitioner’s contention with respect to this asserted ground of unpatentability. Consequently, we conclude that, on the record before us, Petitioner has proven that claims 4–7, 9, and 11–13 would have been obvious over Marshall and Webb.

¹⁰ Patent Owner also mentions that there is “simply no motivation to combine Marshall and Webb.” PO Sur-Reply 7; *see also* PO Resp. 42. But Patent Owner does not address the arguments and evidence set forth by Petitioner.

C. Ground Three

Petitioner establishes that claims 1–3, 8, and 10 would have been obvious over Phillips and Marshall. *See* Pet. 45–59; Pet. Reply 15–18.

In particular, Petitioner points to Phillips’s disclosure of a multi-restaurant system, in which a central processor 10 is connected to multiple restaurants, each having a POS system. *See* Pet. 46–50, 58; Ex. 1005 ¶¶ 33, 34, Figs. 1, 2a, 2b; Ex. 1002 ¶¶ 262–276, 279, 319–320. Petitioner points to Phillip’s disclosure that the central processor 10, upon receipt of information from the restaurants’ POS systems, calculates tips-puts for other employees. *See* Pet. 48; Ex. 1005 ¶ 34; Ex. 1002 ¶¶ 282–283.

Petitioner also points to Phillips’s teachings about the execution of gratuity distribution rules (*see* Pet. 48–49, 59; Ex. 1005 ¶ 34; Ex. 1002 ¶¶ 269, 344); the database (*see* Pet. 49; Ex. 1005 ¶¶ 34, 44; Ex. 1002 ¶¶ 272–273); the interface component (*see* Pet. 50–52, 55–56, 58–59; Ex. 1005, Fig. 1; Ex. 1002 ¶¶ 281–289, 303, 308, 311, 330); information extracting, formatting, receiving, storing, and reporting (*see* Pet. 51–55, 58–59; Ex. 1005 ¶¶ 34–35, Fig. 2a, Fig. 3; Ex. 1002 ¶¶ 284–298, , 303, 308); payment management services (*see* Pet. 56–57; Ex. 1002 ¶¶ 322–325); and a Web portal (*see* Pet. 57; Ex. 1005 ¶¶ 73, 77; Ex. 1005 ¶ 73, 77; Ex. 1002 ¶ 322).¹¹

Petitioner establishes that it would have been obvious to implement the remote gratuity management system disclosed in Phillips as a cloud

¹¹ Petitioner contends that many of these features are also taught by Marshall. *See* Pet. 47–59. And Petitioner explains why it would a POSITA would have been motivated to combine the teachings of Phillips and Marshall. *See id.* at 45–46; Ex. 1002 ¶¶ 251–259.

computing system based on the well-known benefits of cloud-based systems. *See* Pet. 53–54; Ex. 1002 ¶ 293. Petitioner provides evidence that cloud-based systems, and their benefits were well known in the art before the ’505 Patent’s earliest listed priority date.¹² *See* Ex. 1002 ¶¶ 48–56, 293; Ex. 1010; Ex. 1012; Ex. 1026; Ex. 1027. Specifically, for example, Petitioner provides a 2011 textbook that states “[t]he business and technical advantages offered by the cloud provision are simply enormous, and so, its adoption and adaption are gaining unprecedented attention and acceleration.” Ex. 1012, 196. Petitioner also points out that the communication protocols disclosed by Marshall were known to support cloud-based infrastructure. *See* Pet. 21–22; Ex. 1002 ¶¶ 147–148. And Petitioner explains that a POSITA would have looked to the disclosure of Marshall when considering whether and how to modify Phillips, as they both directly address computerized systems for managing gratuities, and would have understood the benefits of using a cloud-based infrastructure. *See* Pet. 45–46; Ex. 1002 ¶ 294.

Patent Owner argues that Phillips does not “cure” the deficiencies of Marshall. PO Resp. 43. However, as discussed above, we disagree with Patent Owner regarding Marshall’s deficiencies. Moreover, as pointed out by Petitioner in its Reply, this ground is not based upon modifying Marshall, because Phillips itself is relied upon to disclose most of the non-cloud claim elements. *See* Pet. Reply 16–18. In the Sur-Reply, Patent Owner does not address Phillips’s cited non-cloud claim elements, but rather again asserts

¹² The ’050 Patent lists a provisional application filed on September 4, 2012 as a related application. Ex. 1004, code (60).

that “nothing in Phillips provides the requisite motivation to re-configure Marshall to be a cloud-based system.” PO Sur-Reply 8.

Patent Owner argues that “Phillips is directed to client-side tip calculations at the client’s point-of-sale system.” PO Resp. 43. However, Phillips expressly discloses that central processor 10 (i.e., server) calculates tip-outs to other employees. *See* Ex. 1005 ¶ 34.

Patent Owner argues that Phillips does not teach or suggest “a server that is separate and distinct from any client point-of-sale (POS) server.” PO Resp. 43. However, Phillip’s central processor 10 is expressly shown as separate and distinct from the restaurants’ POS servers 20. *See* Ex. 1005, Figs. 1, 2A, 2B.

Patent Owner does not otherwise contest Petitioner’s contention with respect to this asserted ground of unpatentability. Consequently, we conclude that, on the record before us, Petitioner has proven that claims 1–3, 8, and 10 would have been would have been unpatentable obvious over Phillips and Marshall.

D. Ground Four

Petitioner establishes that claims 4–7, 9, and 11–13 would have been obvious over Phillips, Marshall, and Webb. *See* Pet. 60–65.

Dependent claims 4–7, 9, and 11–13 require the respective client business system (e.g., each respective restaurant) to comprise “additional devices” (i.e., a time and attendance server or a payroll system) that are “connected to and accessible by” by either the interface component or the POS server. Ex. 1001, 23:17–29, 24:26–41.

Phillips discloses POS systems that collect information from local restaurants and transfer the information to a central server/processor. *See* Ex. 1005, Figs. 1, 2a, 2b. Marshall discloses that a gratuity management system can coordinate with a restaurant's timeclock programs, time and attendance systems, and payroll processing systems. *See* Ex. 1004 ¶¶ 69, 108. Webb discloses that, in a restaurant setting, a POS system can be communicatively coupled to a time and attendance server. *See* Ex. 1006, Abstract, 24:51–60, Figs. 1A, 1B. Thus, Phillips, Marshall, and Webb describe similar and compatible systems in the same field of art—systems for tracking employee and sales information in the restaurant business. *See* Pet. 60–61. And Petitioner provides evidence that it would have been obvious to a POSITA to combine these teachings in the claimed manner “to achieve the benefits of a remote architecture, including, for example, economies of scale and added security through the use of cloud-based systems.” *Id.*; *see* Ex. 1002 ¶¶ 346–381.

Patent Owner argues that neither Phillips nor Webb cures deficiencies of Marshall. *See* PO Resp. 41. However, as discussed above, we disagree with Patent Owner regarding Marshall's deficiencies. Thus, Phillips and/or Webb need not cure any alleged deficiencies in Marshall.

Patent Owner does not otherwise contest Petitioner's contention with respect to this asserted ground of unpatentability. Consequently, we conclude that, on the record before us, Petitioner has proven that claims 4–7, 9, and 11–13 would have been obvious over Phillips, Marshall, and Webb.

XI. CONCLUSION¹³

For the reasons discussed above, we conclude Petitioner has proven the challenged claims are unpatentable.

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–3, 8, 10	103	Marshall	1–3, 8, 10	
4–7, 9, 11–13	103	Marshall, Webb	4–7, 9, 11–13	
1–3, 8, 10	103	Phillips, Marshall	1–3, 8, 10	
4–7, 9, 11–13	103	Phillips, Marshall, Webb	4–7, 9, 11–13	
Overall Outcome			1–13	

XII. ORDER

Accordingly, it is

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 1–13 of the '550 patent are unpatentable; and

¹³ 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).

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

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOAST, INC,
Petitioner,

v.

GRATUITY, LLC
Patent Owner.

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PETRAVICK, *Administrative Patent Judge*, concurring,

I concur in the result.

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FOR PETITIONER:

Sanjeet Dutta
Andrew Ong
GOODWIN PROCTER LLP
sdutta@goodwinlaw.com
aong@goodwinlaw.com

FOR PATENT OWNER:

Timothy Devlin
Adam Woodward
DEVLIN LAW FIRM LLC
tdevlin@devlinlawfirm.com
awoodward@devlinlawfirm.com