

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOAST, INC.
Petitioner

v.

GRATUITY, LLC
Patent Owner

IPR2023-01408

U.S. Patent No. 9,741,050

Issue Date: August 22, 2017

Title: SYSTEM AND METHOD FOR MANAGING GRATUITIES

**PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 9,741,050**

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Patent Trial and Appeal Board
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1001	U.S. Patent No. 9,741,050 (the “’050 patent”)
1002	Declaration of Dr. Samuel H. Russ
1003	Curriculum Vitae of Dr. Samuel H. Russ
1004	U.S. Patent Application Publication No. 2008/0065396 (“Marshall”)
1005	U.S. Patent Application Publication No. 2014/0365322 (“Phillips”)
1006	U.S. Patent No. 4,819,612 to Webb (“Webb”)
1007	Plaintiff’s Preliminary Infringement Contentions, <i>Gratuity Solutions, LLC v. Toast Inc.</i> , No. 1:22-cv-11539 (D. Mass.) (“Infringement Contentions”)
1008	Prosecution History of the ’050 patent (“prosecution history”)
1009	eN-Touch 1000 datasheet
1010	Aaron Weiss. “Computing in the clouds,” in <i>netWorker</i> , vol. 11, no. 4, pp. 16–25 (December 2007)
1011	R.L. Grossman, “The Case for Cloud Computing,” in <i>IT Professional</i> , vol. 11, no. 2, pp. 23–27, March/April 2009
1012	Mahmood, Z., & Hill, R. (Eds.). (2011). <i>Cloud computing for enterprise architectures</i> (2011th ed.). Springer. pp. 3–4.

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1013	Minneapolis-based TimeManagement teams with Agilysys, March 3, 2010.
1014	Christina Volpe, “POS Software 2011”, Hospitality Technology Newsletter, Dec. 19, 2010. Accessed via https://hospitalitytech.com/pos-software-2011 on Aug. 17, 2023
1015	https://web.archive.org/web/20120506043919/http://www.agilysys.com/home/Hospitality/Solutions/infogenesis_pos.htm
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1017	https://web.archive.org/web/20120506042637/http://www.agilysys.com/home/Hospitality/Solutions/eatec.htm
1018	https://web.archive.org/web/20101226144359/http://www.agilysys.com/home/Hospitality/Solutions/TMx.htm
1019	https://web.archive.org/web/20120504124828/http://download2.pc-america.com/info/RPE%20--%20Quick%20Service.pdf
1020	Levine and Van Wijk, Counting on Computers, Chain Store Publishing Company, 1980
1021	Alan Liddle, “Service staffs steamed over proposed Calif. Tip-share law”, Nation’s Restaurant News, Vol. 38, No. 15, April 12, 2004
1022	Dina Berta, “Operators tip hat to practice of holding gratuities until payday”, Nation’s Restaurant News, Vol. 38, No. 16, April 19, 2004
1023	D. Brown, Restaurant Manager’s Handbook, Atlantic Publishing Group, 3rd Edition, 2003, pp. C16-14 to C16-20.

Exhibit No.	Description of Document
1024	Amended Joint Case Management Statement, <i>Gratuity Solutions, LLC v. Toast Inc.</i> , No. 1:22-cv-11539, Dkt. No. 73 (D. Mass. Aug. 8, 2023)
1025	Electronic Order re Joint Motion to Modify the Schedule, <i>Gratuity Solutions, LLC v. Toast Inc.</i> , No. 1:22-cv-11539, Dkt. No. 74 (D. Mass. Aug. 23, 2023)
1026	Barry M. Leiner et al., Brief history of the internet, Internet Society, 1997
1027	https://home.cern/science/computing/birth-web/short-history-web
1028	https://web.archive.org/web/20120506082635/http://www.agilysys.com/home/Hospitality/Solutions/SaaS.htm
1029	https://web.archive.org/web/20120506043142/http://www.agilysys.com/home/Hospitality/Solutions/

LISTING OF CHALLENGED CLAIMS

Claim	Limitation
1[pre]	A system, comprising:
1[a]	a gratuity management system, comprising
1[a.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
1[a.2]	a database, accessible by the server; and
1[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[b.1]	at least one point of sale server; and
1[b.2]	a gratuity sync client application installed on the respective client business system;
1[c]	wherein the gratuity sync client application on each client business system is configured to (i) extract transaction information and employee information from the client business system and (ii) to initiate transfer of the extracted information to the gratuity management system;

Claim	Limitation
1[d]	wherein the gratuity management system is a cloud computing system remote from the plurality of client business systems and configured to (i) receive the extracted transaction information and employee information from the plurality of client business systems and (ii) to store the received extracted information in the database; and
1[e]	wherein the gratuity management system is further configured to (i) execute, independently for each client, gratuity distribution rules for allocating gratuities among at least a portion of the employees and (ii) 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 (iii) 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.
2	The system of claim 1, wherein the gratuity sync client is further configured to format the extracted transaction and employee information into an XML file before communicating the extracted information to the gratuity management server.
3	The system of claim 1, wherein the gratuity sync client application is installed on the point of sale server of the respective client business system.

Claim	Limitation
4	The system of claim 1, wherein the respective client business system comprises additional devices which are connected to and accessible by the gratuity sync client application.
5	The system of claim 4, wherein at least one of the additional devices comprises a time and attendance server.
6	The system of claim 5, wherein the employee information extracted from the respective client business system comprises employees' working hours.
7	The system of claim 4, wherein at least one of the additional devices comprises a payroll system, and the gratuity sync client application communicates the returned gratuity allocations to the payroll system.
8[pre]	A system for providing payment management services to a plurality of clients, comprising:
8[a]	a payment management computer system having a server and a database and being accessible by a plurality of clients, the server being configurable by each client of the plurality of clients via a web portal to execute payment distribution rules independently on a client-by-client basis; and

Claim	Limitation
8[b]	a plurality of client business systems in electronic communication with the payment management computer system, each of the client business systems corresponding to one of the plurality of clients, each client business system comprising:
8[b.1]	at least one point of sale server; and
8[b.2]	an interface component installed on the respective client business system;
8[c]	wherein the interface component on each client business system is configured to (i) extract at least one of transaction information and employee information from the client business system and (ii) to initiate transfer of the extracted information to the payment management computer system;
8[d]	wherein the payment management computer system is a cloud computing system remote from the plurality of client business systems and configured to (i) receive the extracted information from the plurality of client business systems and (ii) to store the received extracted information in the database; and

Claim	Limitation
8[e]	wherein the payment management system is further configured to (i) execute, independently for each client, payment distribution rules based on at least the received extracted information and the independently configured payment distribution rules to generate payment information and (ii) return the payment information to the interface component of respective client business systems, without requiring the respective client business systems to execute the payment distribution rules.
9	The system of claim 8, wherein the respective client business system comprises a payroll system in communication with the interface component, such that the payroll system prepares payrolls without requiring the client business system to execute the payment distribution rules.
10	The system of claim 8, wherein the payment distribution rules comprise gratuity allocation rules.
11	The system of claim 8, wherein the respective client business system comprises additional devices which are connected to and accessible by the point of sale server.
12	The system of claim 11, wherein at least one of the additional devices comprises a time and attendance server.

Claim	Limitation
13	The system of claim 12, wherein the employee information extracted from the respective client business system comprises employees' working hours.

I. INTRODUCTION

Petitioner Toast, Inc. (“Petitioner”) seeks *inter partes* review (“IPR”) and cancellation of claims 1-13 (“Challenged Claims”) of U.S. Patent No. 9,741,050 (“’050 patent,” Ex.1001), assigned to Gratuity, LLC (“Patent Owner”). Petitioner’s request is supported by the Expert Declaration of Dr. Samuel H. Russ (“Decl.,” Ex.1002), and other exhibits submitted herewith.

The Challenged Claims are directed to computer systems used to allocate gratuities or tips among employees (e.g., restaurant employees) based on defined parameters. Allocating gratuities and tips using computers, was known in the service industry well before the filing of the ’050 patent as was the notion that gratuity distributions could be performed on one or more computers physically located outside of a specific restaurant for efficiency.

As explained below and in the Russ Declaration, each element or combination of elements in the Challenged Claims was disclosed in the prior art and known to a person having ordinary skill in the art (“POSITA”) prior to the ’050 patent’s September 4, 2012 priority date. The Board should institute review because there is a reasonable likelihood that Petitioner will prevail on one or more of the grounds set forth herein.

II. MANDATORY NOTICES**A. Real Parties-in-Interest (37 C.F.R. § 42.8(b)(1))**

The Petitioner, Toast, Inc., is the real party-in-interest.

B. Related Matters (37 C.F.R. § 42.8(b)(2))

The '050 patent is at issue in *Gratuity Solutions, LLC v. Toast Inc.*, No. 1:22-cv-11539, pending in the District Court for the District of Massachusetts (“District Court Action”). The Complaint was filed on September 19, 2022. The case remains at a very early stage. Discovery is just beginning, and the parties have not yet begun the claim construction process. Patent Owner recently identified the asserted claims of the '050 patent on September 1, 2023. Trial is set for March 24, 2025.

Petitioner is not aware of any other judicial or administrative matter that would affect or be affected by a decision in this IPR.

C. Lead And Back-Up Counsel (37 C.F.R. § 42.8(b)(3))

Petitioner provides the following designation of counsel.

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D. Service Information (37 C.F.R. § 42.8(b)(4))

This Petition is being served by Federal Express Next Business Day Delivery to the attorney of record for the '050 patent, Nixon & Vanderhye, PC, at its correspondence address on record, 901 North Glebe Road, 11th Floor, Arlington, VA 22203. A courtesy copy is also being emailed to Patent Owner's litigation counsel in the District Court Action.

Counsel agrees to service by mail as detailed above, and to electronic service by email at the following addresses: sdutta@goodwinlaw.com; sreddy@goodwinlaw.com; aong@goodwinlaw.com. A Power of Attorney executed by Petitioner accompanies this Petition.

III. PAYMENT OF FEES (37 C.F.R. § 42.15)

Petitioner authorizes the U.S. Patent & Trademark Office to charge Deposit Account No. 506989 for the fee set in 37 C.F.R. § 42.15(a) for this Petition and further authorizes any additional fees to be charged to this Deposit Account.

IV. REQUIREMENTS UNDER 37 C.F.R. §§ 42.104**A. Grounds for Standing**

Petitioner certifies that the '050 patent is available for IPR and that Petitioner is not barred or otherwise estopped.

B. Identification of Challenge and Statement of Relief Requested

Petitioner respectfully requests that the Challenged Claims be canceled based on the following grounds:

Ground	Statute	References	Claims
1	§ 103	Marshall	1–3, 8, 10
2	§ 103	Marshall in view of Webb	4–7, 9, 11–13
3	§ 103	Phillips in view of Marshall	1–3, 8, 10
4	§ 103	Phillips in view of Marshall and Webb	4–7, 9, 11–13

V. THE '050 PATENT**A. Overview**

The '050 patent is titled “System and Method for Managing Gratuities.” It issued from Application No. 13/834,466, which was filed on March 15, 2013 and

claims priority to Provisional Application No. 61/696,569, filed September 4, 2012. Patent Owner identifies this as the earliest priority date. (Infringement Contentions, Ex.1007, 2.)

The '050 patent claims systems for managing gratuity allocations. The gratuity management system 100 of the '050 patent is shown below.

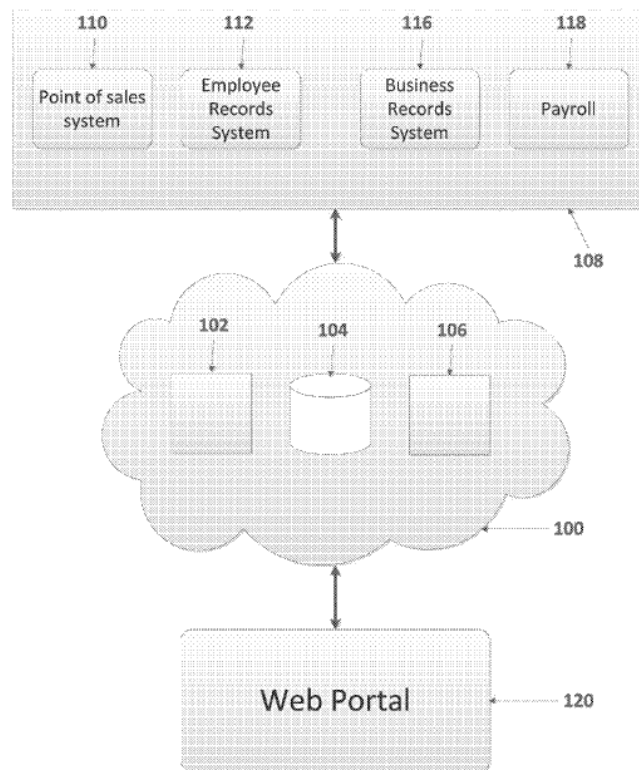


Figure 1

('050 patent, Fig. 1.) System 100 includes a processor 102, a database 104, and a configuration module 106 for applying gratuity distribution rules provided by a client (a restaurant). (Decl., ¶69.) System 100 interfaces with restaurant management system 108 to acquire information—such as transaction and employee information. (*Id.*)

System 100 determines the allocation of gratuities based on the distribution rules for each business. (*Id.*, ¶70.) Subsequently, “the system 100 may communicate with a payroll system so that the determined gratuity allocation is added to the employee’s next paycheck.” (’050 patent, 6:28-30; Decl., ¶70.)

Further, “the gratuity management system includes an interface component 206 that integrates with the business’s systems to extract the transaction information and employee information to be used in determining the gratuity allocations.” (’050 patent, 7:49-53; Decl., ¶72.) For example, interface component 206, labeled “Grat Sync Client Application” in Figure 2A, resides on restaurant management system 108 shown in Figure 1 and is configured to extract transaction information from point of sale system 110 and employee information from employee record system 112. (Decl., ¶72.)

The system of the ’050 patent may be implemented as a cloud computing system interfaced with a cloud-based point of sale and/or employee record system and may be configured to serve multiple clients. (*Id.*, ¶73.)

B. Prosecution History (Ex.1008)

The Examiner entered several office actions rejecting the pending claims based on a number of prior art references, including Marshall (Ex.1004) and Phillips (Ex.1005). (Decl., ¶74.) The applicant amended original claims 1-29 several times

(Ex.1008, 124-409) before canceling them and replacing them with new claims 30-33, 36-39, and 41-45 (*id.*, 396-409)—which issued as claims 1-13. (Decl., ¶75.)

Marshall was first introduced on October 16, 2015 and directed to original claims 1–4, 6–9, 17–19, and 21. (Ex.1008, 203-36.) The Examiner noted that Marshall demonstrated that “the processor executing computer executable instructions stored in a memory to perform the acts” was well-known. (*Id.*, 211, 214.) Marshall was asserted only to establish that the following limitations in the original dependent claims were known: (i) claim 6 (“the at least one processor comprises a cloud computing system”); (ii) claims 7 and 8 (“receiving a computer-readable file ... and storing ... in a database” and “receiving the computer readable file ... via the Internet”); (iii) claim 17 (“communicating the determined gratuity allocation ... to an employer payroll system and distributing ... through a payroll check”); (iv) claims 18-19 (“a web-portal”); and (v) claim 21 (“receiving gratuity distribution rules form at least one employer”). (Ex.1008, 215-218.) Marshall is mentioned for the last time in the Final Action of August 19, 2016. (*Id.*, 323-353; Decl., ¶¶76-77.)

The Examiner did not assert Marshall against claims 30–33, 36–39, and 41–45, despite the fact that the new claims inherited limitations recited in canceled claims 6, 18–19, and 21, which Marshall was previously found to disclose. For example, the new claims recited, at least, “a cloud computing system” and

“distribution rules,” and independent claim 8 further recites “a web portal.” Despite this, the Examiner did not reject the newly pending claims in view of Marshall. This was an error. (Decl., ¶¶77-78.)

The Examiner’s failure to reject the new claims based on Marshall is particularly suspect because, through an Examiner’s amendment, the Examiner added subject matter to the claims that the Examiner had already determined were disclosed by Marshall (Ex.1008, 418-34). Specifically, the Examiner added to independent claims 30 and 39 the limitation “wherein the gratuity system is a cloud computing system remote from the plurality of client business system[.]” (*Id.*, 425, 427.) Notably, the applicant never addressed, nor challenged, the Examiner’s assertions regarding Marshall’s teachings. (Decl., ¶¶77-78.)

Thus, the Examiner (i) did not assert Marshall against any of the limitations of the canceled independent claims, and (ii) decided not to assert Marshall against the new claims even though he previously considered it for limitations that were included in claims 30 (issued claim 1) and 39 (issued claim 8). (*Id.*, ¶79.)

For at least these reasons, the Examiner erred in his decision not to assert Marshall against the claims that issued as claims 1–13. (*Id.*, ¶80.) Therefore, the arguments presented in this Petition are not the same or substantially the same to those presented by the Office when the ’050 patent was prosecuted. (*Id.*)

The Examiner used Phillips as a secondary reference for rejecting the original

claims. (Ex.1008, 145.) The applicant attempted to swear behind Phillips and other prior art, but the Examiner found that the applicant's evidence failed to demonstrate diligence justifying an earlier priority date for the application. (*Id.*, 206.) The Examiner applied Phillips as a secondary reference against new claims 30–36. (*Id.*, 346-52.) After holding an interview with the applicant and proposing amendments to the claims, the Examiner issued the Notice of Allowability for claims 30-33, 36-39, and 41-45. (*Id.*, 423-35.) The Examiner never considered Phillips in view of Marshall's disclosures for those claims. (Decl., ¶81.) The Examiner thus did not consider this argument raised in the Petition, and he erred in failing to do so. (*Id.*)

Webb is listed on the face of the '050 patent, but was never used for any ground for rejection during prosecution. (*Id.*, ¶82.)

C. The Challenged Claims

Petitioner challenges claims 1–13 of the '050 patent. Claims 1 and 8 are independent claims. Claims 2–7 depend from claim 1, and claims 9–13 depend from claim 8. The language of claims 1–13 is set forth in the separate Listing of Challenged Claims above.

D. Level of Ordinary Skill in the Art

A POSITA as of September 2012 would have had an undergraduate degree in electrical engineering, computer engineering, computer science, or an equivalent degree with two to three years of experience in point of sale systems, time

management systems, and/or restaurant management computer systems, and in networking and client-server architectures. To the extent necessary, a POSITA may collaborate with one or more other persons of skill in another art for one or more aspects with which the other person may have expertise, experience, and/or knowledge that was obtained through his/her own education, industrial or academic experience. (Decl., ¶34.)

VI. CLAIM CONSTRUCTION

Claim terms should be given “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” 37 C.F.R. §42.100(b); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). Petitioner does not currently believe that it is necessary for the Board to construe any terms. *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (noting that “only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”).

VII. OVERVIEW OF THE PRIOR ART

A. Marshall (Ex.1004)

U.S. Patent Publication No. 2008/0065396 to Marshall is titled “Systems and Methods for Managing Tips and Gratuities.” Marshall published on March 13, 2008 from Application No. 11/517,550, filed September 7, 2006. Marshall is prior art to

the '050 patent under at least pre-AIA 35 U.S.C. § 102(b) because it was published more than one year before the earliest priority date of the '050 patent.

Marshall discloses “systems and methods for recording, maintaining, and reporting tips and gratuities, optionally including details such as employee, task performed, and shift.” (Marshall, Abstract; Decl., ¶89.)

Marshall also discloses Gratuity Reporting and Tip Allocation Software (“GrataSoft”) that can be used to input declared tip and/or gratuity information and tipout information via a standard PC interface. (Marshall, ¶¶95, 105-06; Decl., ¶91.) This software includes tools to allocate tips “to individual employees based upon criteria such as hours worked, employee’s gross sales, task performed and meal period worked.” (Marshall, ¶213.)

Marshall’s system “interfaces to third party systems such as POS systems, payroll systems, and the like,” and can “be implemented in a Web-based manner.” (*Id.*, Abstract, ¶102.) Such internet applications “facilitate upload of employee information such as declared tips, contributed and/or received tipouts, 4070 forms, 4070A forms, and the like to the employee’s employer(s).” (*Id.*, ¶104.) The “4070 forms” are tax forms required by the US IRS, specifically “Employee’s Report of Tips to Employer.” (Decl., ¶93.)

Although Marshall describes its system using “embodiments,” the recited embodiments merely describe different features or facets of Marshall’s GrataSoft

system that provide a detailed overview of Marshall's system. (*Id.*, ¶94.) In other words, the embodiments described in Marshall are complementary and the combination of different features would result in a fully functional system. (*Id.*)

B. Phillips (Ex.1005)

U.S. Patent Publication No. 2014/0365322 to Phillips is titled "Gratuity Processing System Apparatus and Related Methods." Phillips was published on December 11, 2014 from Application No. 14/281,763, filed on May 19, 2014, which claims priority to Provisional Application No. 61/611,123 filed on March 15, 2012. Phillips is prior art to the '050 patent pursuant to at least pre-AIA 35 U.S.C. § 102(e)(1) because it was described in an application for a patent, published under § 122(b), by another filed in the United States prior to the invention of the '050 patent.

Phillips discloses apparatuses and methods "to improve the administration of tip monitoring, collection and distribution, and related reporting needs (such as for U.S. tax reporting)." (Phillips, Abstract.) Tip information is "uploaded from the POS system(s) 20 to a central processing system 10." (*Id.*, ¶34.) "[T]he system of the invention preferably calculates the tips owed to each member of each team/group, based on the rules and data that have been input." (*Id.*, ¶68.)

C. Webb (Ex.1006)

U.S. Patent 4,819,162 to Webb is titled "Time Clock System Including

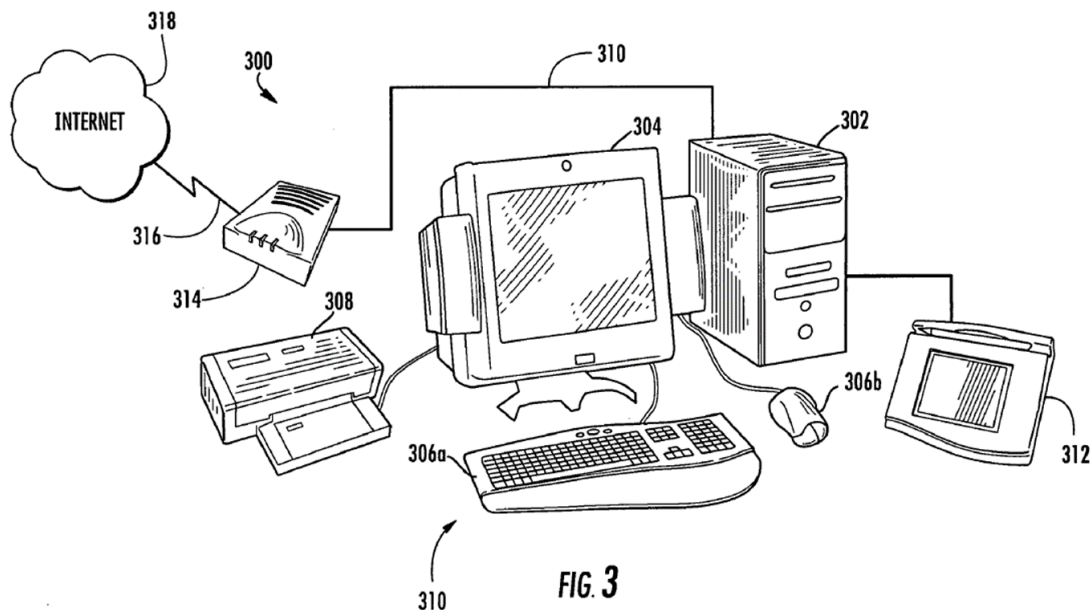
Scheduling Payroll and Productivity Analysis Capability.” Webb issued April 4, 1989. Webb is prior art to the ’050 patent pursuant to at least pre-AIA 35 U.S.C. § 102(b) because its issue date predates the earliest priority date of the ’050 patent by more than one year.

Webb discloses that a computerized time clock 10 communicates with a dedicated personal computer 20. (Decl., ¶100.) The time clock 10 of Webb is a dedicated computer with access to payroll information. (*Id.*, ¶101.) The personal computer 20 maintains records such as pay period files, timecard files, and sales files. (Decl., ¶102.) The computer 20 also has an interface to an electronic cash register 30, an early form of a POS system. (*Id.*) The time clock 10 receives updated information from the personal computer 20 and keeps track of employee time. The time information is periodically sent to the personal computer 20. (Webb, 4:16–22; Decl., ¶103.)

Webb is also used to maintain tip records for employees. For example, employees may enter tips received into the terminal. (Webb, 12:7-23.) The employee management system includes a place to designate which employees typically receive tips and which do not. (*Id.*, 4:33-43; Decl., ¶105.)

VIII. GROUND 1 – CLAIMS 1–3, 8, 10 ARE OBVIOUS IN VIEW OF MARSHALL**A. Independent Claim 1****1. 1[pre]: “A system, comprising:”**

Marshall discloses “systems and methods for recording, maintaining, and reporting tips and gratuities, optionally including details such as employee, task performed, and shift.” (Marshall, Abstract; Decl., ¶108.) Marshall’s system 300 is below.



(Marshall, Fig. 3.)

2. 1[a]: “a gratuity management system, comprising”

Marshall discloses “systems and methods for recording, maintaining, and reporting tips and gratuities[.]” (Marshall, Abstract, Fig. 3; Decl., ¶109.)

3. 1[a.1]: “a server coupled to a computer network and accessible by a plurality of clients ...”

Marshall discloses that “[p]rocessing unit 302 may be a standard PC or server as is known in the art.” (Marshall, ¶98.) Marshall further states that “[c]onnection of system 300 to Internet 318 allows the systems and methods of the present invention to be implemented in a Web-based manner.” (*Id.*, ¶102.) Thus, Marshall’s system 300 and its processing unit 302 (i.e., “the server” of the ’050 patent) may be “a Web server or similar apparatus that interacts with one or more users via an Internet connection.” (*Id.*) Further, a POSITA would understand that Marshall’s web-based system may independently interface with multiple clients (restaurants). (Decl., ¶¶112-13; Marshall, ¶106.)

Marshall also discloses a “multi-employer” embodiment which a POSITA would understand requires a server accessible to a plurality of clients. (Marshall, Fig. 27, ¶¶385-92; Decl., ¶113.) And the web-based implementation of Marshall allows for devices at multiple restaurants to access the system. (Decl., ¶113.) Accordingly, Marshall discloses “a server coupled to a computer network and accessible by a plurality of clients.” (*Id.*, ¶106.)

Marshall further discloses that the server is configurable to independently execute gratuity distribution rules on a client-by-client basis. For example, Marshall discloses a processing unit 302 that executes software to perform the recited operations. (Marshall, ¶32; Decl., ¶115.) In particular, the processes shown in

Figures 4 through 25 of Marshall “are implemented as software,” known as GrataSoft. (Marshall, ¶105; Decl., ¶116.)

In referring to process 400 (one process disclosed in the figures), Marshall identifies default settings of GrataSoft that a restaurant may configure. (Decl., ¶117.) Marshall’s GrataSoft is “configurable to independently execute gratuity distribution rules on a client-by-client basis,” as that phrase is used in the ’050 patent. (*Id.*) For example, a restaurant may configure whether “the system automatically attributes tips to all employees participating in the ATIP program[,]” whether “the system will automatically increase the tips and/or gratuities declared by the employee to meet IRS Form 8027 criteria[,]” or whether “the system will automatically increase the tips and/or gratuities declared by the employee to meet TRDA criteria or to achieve an acceptable difference between credit card and cash tip and/or gratuity percentages....” (*Id.*) These are all “gratuity distribution rules on a client-by-client basis” executed by Marshall’s server. (*Id.*)

4. 1[a.2]: “a database, accessible by the server”

Marshall discloses a database accessible by the GrataSoft server. Marshall discloses that variables such as “date, mealPeriod, and employeeID are initialized to the current date, to the first meal period ... of the initialized date, and to the first employee identification number as such numbers are stored in the GrataSoft system.” (Marshall, ¶130.) Such variables are stored “**in the form of a database**

or the like such as a Microsoft® Access® database.”¹ (*Id.*, ¶141.)

Additionally, one collection of data (the Aloha POS data) “may be local or remote to the server.” (*Id.*, ¶110.) If it “is remotely located, it must be configured as a mapped drive on the local server ... via an Internet connection.” (*Id.*) In other words, Marshall discloses that databases can be local or remote (and thus accessible by a server). (Decl., ¶¶120-21.)

5. 1[b]: “a plurality of client business systems in electronic communication with the server of the gratuity management system...”

As discussed above, Marshall discloses or renders obvious “a server coupled to a computer network and accessible by a plurality of clients.” (§VIII.A.3.) A POSITA would have understood that each restaurant would have its own client business system, including POS systems or payroll systems, to track sales and employee information and that each restaurant is in electronic communication with the server of the gratuity management system. (Decl., ¶123.) Because Marshall’s GrataSoft system is a “gratuity management system” configured to interface with the underlying client business systems at individual restaurants, Marshall discloses or renders obvious 1[b]. (*Id.*) Even if this limitation is not expressly disclosed, it would have been obvious to a POSITA to implement the Marshall system with local systems located at each restaurant along with an overarching gratuity management

¹ All emphases added unless otherwise noted.

system. (*Id.*, ¶124.) For example, such a system enables the owner of a restaurant chain to manage gratuities in a consistent manner across all units of the chain. (*Id.*)

6. 1[b.1]: “at least one point of sale server; and”

Marshall states, “In one aspect of the present invention, processing of non-cash transactions at 106 occurs via a POS system. A POS system, as is known in the art, captures data at the time and place of the sale (e.g., at the cash registers).” (Marshall, ¶70.) Marshall further discloses that “many POS systems are networked or otherwise linked together such that data from each collection point is transferred to one central location analysis, reporting, and the like.” (*Id.*) The networked POS system disclosed in Marshall is a “point of sale server.” (Decl., ¶¶127-28.)

7. 1[b.2]: “a gratuity sync client application installed on the respective client business system;”

As discussed above, Marshall discloses that interface systems (such as POS systems) include computers and are networked or otherwise linked together. (§VIII.A.6.) A software platform (the “gratuity sync client application”) is necessary to control the operation of the interface system in Marshall, and a POSITA would know that this software platform is installed on the client business system. (Decl., ¶¶132-33.) In Marshall, this software could be, for example, in the form of an interface system that links the client business system to the GrataSoft system. (*Id.*)

Marshall discloses software on the client business system that interfaces with

GrataSoft for uploading employee and transaction information: “In our exemplary embodiment, one such IS [interface system] is an Aloha POS in the form of software....” (Marshall, ¶108.) “When a POS or similar type of system is interfaced to a system or process of the present invention such as the exemplary GrataSoft embodiment,” information can be uploaded to the GrataSoft system so that “the same information is present on both systems.” (*Id.*, ¶109.) Further, a POSITA would have realized the advantages of locating POS, timekeeping, and payroll functions locally and processing gratuity management remotely. (Decl., ¶135.) In such a system, there would need to be software for transmitting information, such as tips received, from the local system to the remote system. (*Id.*)

8. 1[c]: “wherein the gratuity sync client application on each client business system is configured to

(i) extract transaction information and employee information ...

(ii) to initiate transfer ...”

With respect to 1[c](i), Marshall explains that the interface system, including the Aloha POS, collects and saves data from the client business system into files in a .DBF or dBase file structure, which are subsequently made accessible to the GrataSoft system. (Marshall, ¶108.) The files include transactional data like “payments” and “sales” as well as “employee information such as name, address, social security number, etc.” (*Id.*) According to Marshall, the transferred Aloha POS files may reside on a remote server. (Marshall, ¶110; Decl., ¶138.) Marshall

further discloses that its remote gratuity management system may interface with time and attendance software from the POS system. (Marshall, ¶69, Decl., ¶138.) Marshall thus discloses extracting transaction and employee information. (Decl., ¶139.)

With respect to 1[c](ii), Marshall discloses that the interface system initiates data transfer to the GrataSoft system (the “gratuity management system”) by collecting and storing the data from the client business system, as discussed above. (Decl., ¶140.)

Once the data files have been created, they are uploaded to the GrataSoft system. (Marshall, ¶109; Decl., ¶141.) A POSITA reading this portion of Marshall would understand it to disclose that the interface system “initiate[s] transfer of the extracted information to the gratuity management system” by directing the GrataSoft system to the proper file location to download the necessary information over the Internet. (Marshall, ¶110; Decl., ¶142.)

To the extent that Marshall does not expressly disclose 1[c](ii), a POSITA would have understood that there are two paths for transferring of data over a network—for the server to request it or for the client to send it. (Decl., ¶143.) Having the client write the file is an instance where the claimed “gratuity sync client application is configured to ... initiate transfer.” (*Id.*)

9. 1[d]: “wherein the gratuity management system is a cloud computing system ... configured to

(i) receive the extracted transaction information and employee information ...

(ii) to store the received extracted information ...”

Marshall discloses or renders obvious “wherein the gratuity management system is a cloud computing system remote from the plurality of client business systems.” (Decl., ¶145.)

Marshall discloses that the GrataSoft system is remote from the client business systems. (Marshall, ¶400 (noting that “the present invention has been discussed herein as **an independent system** capable of interfacing to **third-party systems such as POS systems, time and attendance systems, etc.**”; Decl., ¶146.) Marshall also explains that common communication protocols may be used—“HyperText Transfer Protocol (‘HTTP’), Extensible Markup Language (‘XML’), and/or HTML as is known in the art.” (Marshall, ¶110.) HTTP, XML, and HTML all support cloud-based infrastructures; thus, a POSITA would understand that Marshall’s GrataSoft system could be implemented as a cloud-based system. (Decl., ¶148.) The Examiner recognized this during prosecution: “With respect to the processor comprising a ‘cloud computing system,’ **Marshall shows that it is well known for processing resources/processors/servers to be embodied as/include:** a single system, a multi system (co- located or distributed), **cloud computing system**, or a combination of the above” (Ex.1008, 215; Decl., ¶149.)

Marshall discloses or renders obvious “receive the extracted transaction information and employee information from the plurality of client business systems.” (Decl., ¶151.) As discussed for 1[c](ii) above, Marshall discloses that, once information from the client business system is extracted and saved into appropriate file structures, it is uploaded to the GrataSoft system. (§VIII.A.8.)

Marshall also discloses or renders obvious “store the received extracted information in the database.” (Decl., ¶152.) As discussed for 1[a.2], the server of the GrataSoft system is capable of storing data to one or more databases communicatively coupled to the server. (§VIII.A.4.) Because the GrataSoft system receives the extracted transaction and employee information, a POSITA would understand that such information is stored in the database. (Decl., ¶152.)

10. 1[e]: “wherein the gratuity management system is further configured to

(i) execute, independently for each client, gratuity distribution rules ...

(ii) to determine a gratuity allocation ...

(iii) return the gratuity allocation ...”

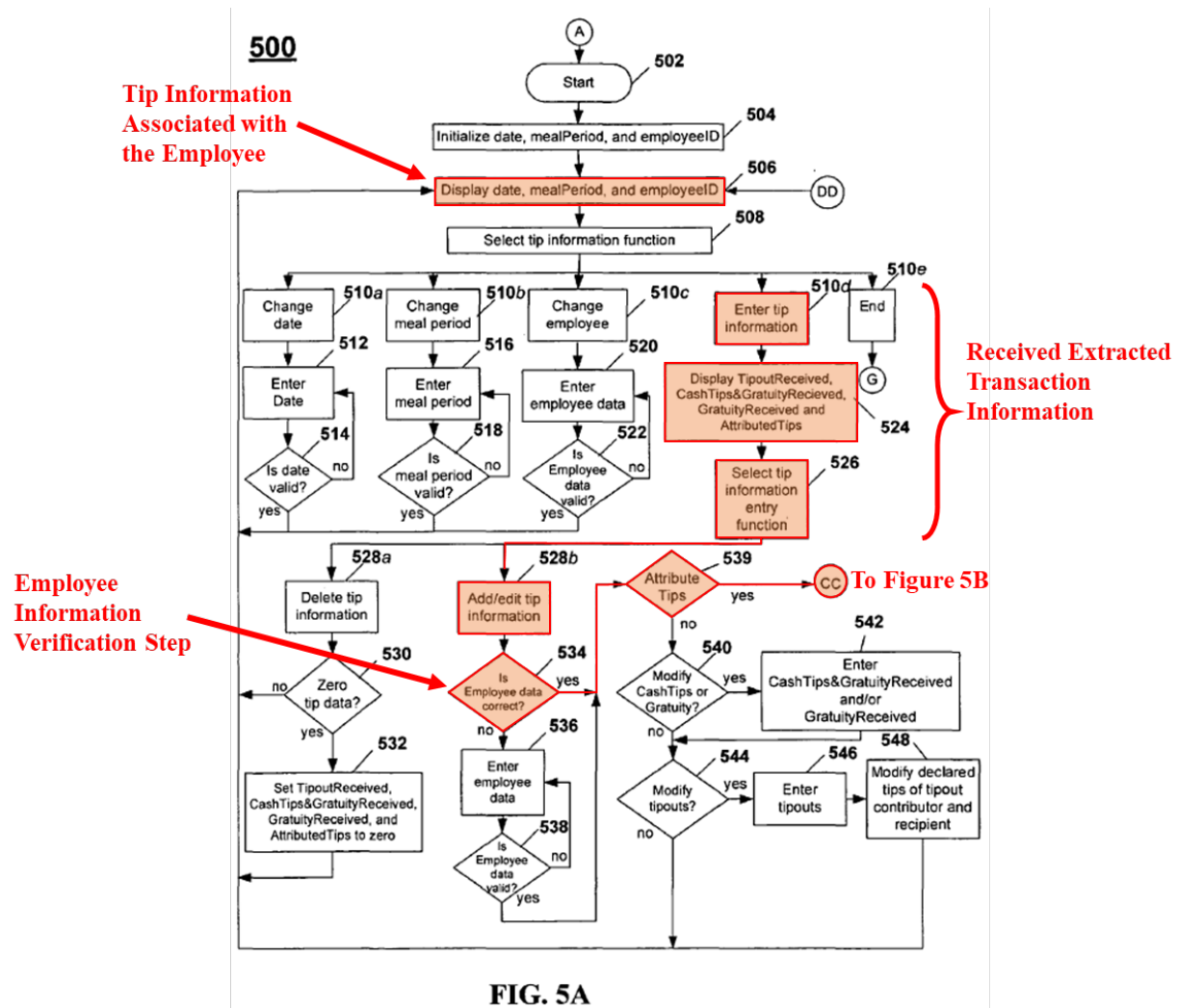
Regarding 1[e](i), Marshall discloses that its GrataSoft system is configured to “independently execute gratuity distribution rules on a client-by-client basis,” as discussed above in 1[a.1]. (§VIII.A.3.)

Additionally, Marshall explains in Figures 5A and 5B how a client may use the GrataSoft system to enter tip information, peripheral tip information, and/or

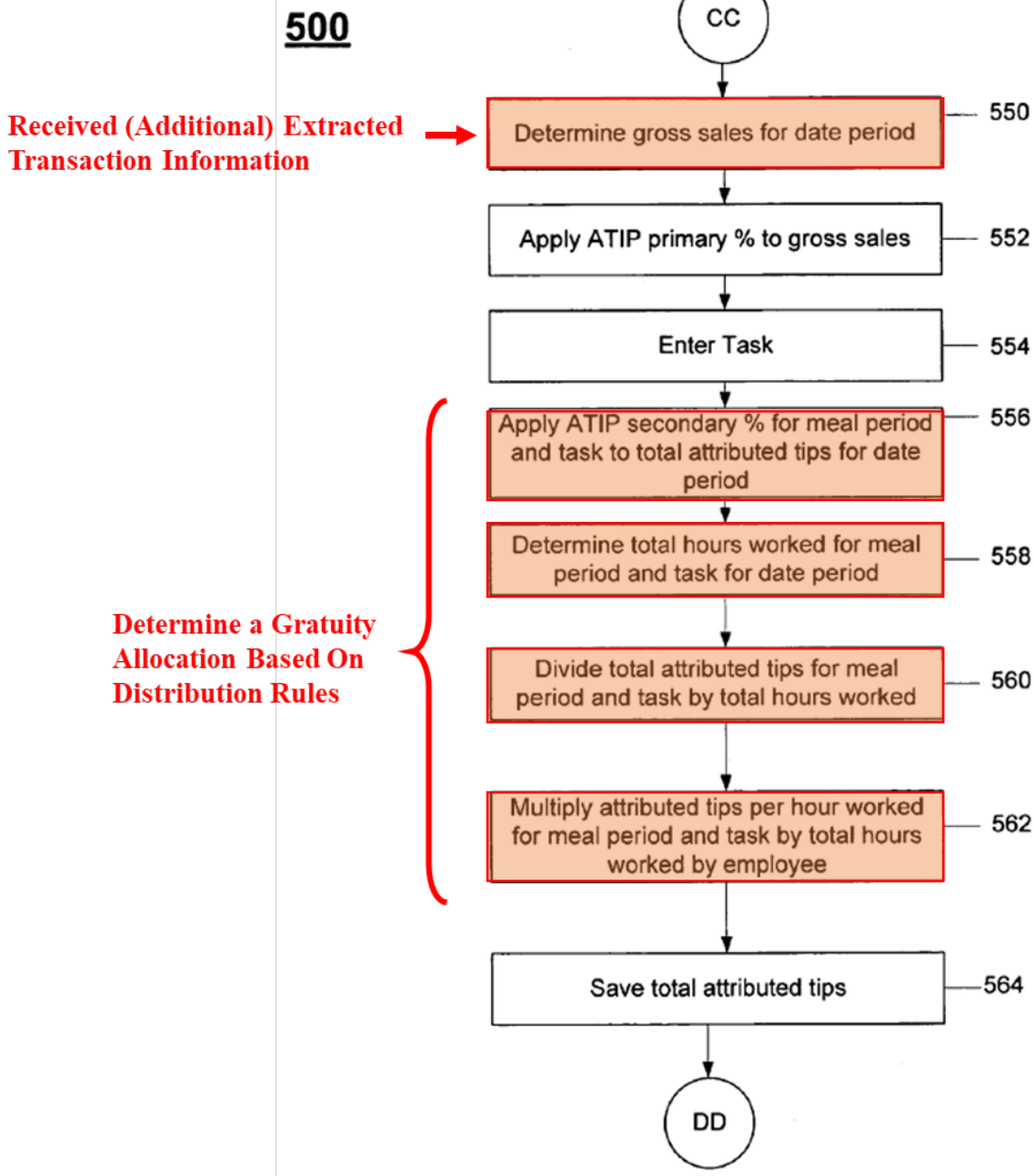
allow the GrataSoft system to automatically allocate tips to an employee according to predetermined gratuity distribution rules. (Decl., ¶156.) Marshall discloses that, in one example, “tips are attributed to a first subset of employees (e.g., servers) based upon a first method (e.g., hours worked by 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). That is, a combination of attribution methods may be used for different subsets of employees.” (Marshall, ¶142.) Marshall thus discloses that the GrataSoft system (the “gratuity management system”) is configured to “execute ... gratuity distribution rules for allocating gratuities among at least a portion of the employees.” And because the GrataSoft system is available to more than one business (*id.*, Figure 27), with each client (restaurant) being able to make independent gratuity allocation choices based on its needs, Marshall discloses or renders obvious 1[e](i). (Decl., ¶157.)

Marshall also discloses or renders obvious 1[e](ii). As discussed above with respect to 1[d], the GrataSoft system receives and stores the extracted transaction and employee information from files initially stored locally on the client business systems. (§VIII.A.9.) Subsequently, the GrataSoft system “determine[s] a gratuity allocation based on at least the received extracted transaction information, the received extracted employee information, and the gratuity distribution rules” as

described in Figures 5A and 5B shown below.



(Marshall, Fig. 5A; annotated.)

**FIG. 5B**

(*Id.*, Fig. 5B; annotated.)

A POSITA would have understood that at least the information provided at steps 506 and 526 correspond to “received extracted transaction information” and

“received extracted employee information,” which, as explained earlier, have been uploaded to the GrataSoft system from the client business system. (Decl., ¶¶160-61.)

At step 526, the user selects a tip information entry function. (Marshall, ¶136.) If the user elects to proceed with the add/edit function at 528b, GrataSoft prompts the user to verify the employee information (“received extracted employee information”). (*Id.*, ¶138.) The process proceeds to step 539, a tip attribution step, and transitions to Figure 5B and step 550 where additional “extracted transaction information” is inputted. (*Id.*, ¶139.) In Figure 5B, GrataSoft uses a set of predetermined distribution rules along with transaction and employee information in steps 556-562 to “determine a gratuity allocation” at step 564. (*Id.*, Fig. 5B.) Notably, GrataSoft may use a different combination of rules to determine a gratuity allocation at step 564. Accordingly, Marshall discloses or renders obvious 1[e](ii). (Decl., ¶161.)

Marshall also discloses or renders obvious 1[e](iii). The GrataSoft system is “designed to automatically generate desired reports with little or no input from a user.” (Marshall, ¶78.) GrataSoft is also configured to “allocat[e] gratuities among at least a portion of the employees,” and this information is automatically included in the generated forms as shown Figure 12. (Decl., ¶163.)

1200

1204 1208 1212 1206 1214 1210

ACTIVITY SUMMARY REPORT - PERIOD: [02/05/06 - 02/18/06] [GRATUITY ON]

Printed: 02/23/2006 at 09:54:43 GRATA ver 3.01

1220a

EMP NUMBER	EMPLOYEE NAME	NON CASH SALES WITH TIP	NON CASH TIPS	CASH SALES	CASH TIPS	GROSS s/s GRAT s/s	Gr Tips Gral	+Tip +Gral	-Tip -Gral	[DECL] [GRAT]	IRS Alloc
154	Mario Gold	3576.90	708.24 19.80%	1260.50	83.76 6.64%	4837.40 768.35	792.00 138.30	0.00 0.00	-157.00 0.00	635.00* 138.30	
171	Donnie Mills	5610.86	1020.96 18.20%	2188.68	274.27 12.53%	7799.54 397.80	1295.23 71.60	0.00 0.00	-139.00 0.00	1156.23 71.60	
518	Earl Merritt	0.00	0.00 ***%	0.00	0.00 ***%	0.00 0.00	0.00 0.00	416.00 0.00	0.00 0.00	416.00 0.00	
1399	Adin Hatcher	0.00	0.00 ***%	0.00	0.00 ***%	0.00 0.00	0.00 0.00	130.00 0.00	0.00 0.00	130.00 0.00	
1786	Jen Rucker	0.00	0.00 ***%	0.00	0.00 ***%	0.00 0.00	0.00 0.00	652.00 0.00	0.00 0.00	652.00 0.00	
1830	John Prewitt	1266.40	232.62 18.37%	319.65	24.07 7.53%	1586.05 0.00	256.69 0.00	0.00 0.00	-55.00 0.00	201.69 0.00	
1940	Adam Harding	2182.50	396.64 18.17%	819.45	104.44 12.75%	3001.95 188.45	501.08 33.92	0.00 0.00	-98.00 0.00	403.08 33.92	
3140	Philip Howse	0.00	0.00 ***%	0.00	0.00 ***%	0.00 0.00	0.00 0.00	55.00 0.00	0.00 0.00	55.00 0.00	
488	Lauren Polascak	4924.20	886.28 18.00%	1893.66	279.82 14.78	6817.86 0.00	1166.10 0.00	0.00 0.00	-105.00 0.00	1061.10 0.00	

1222

1220

1224a

1224b

1218

(Marshall, Figure 12; annotated.) The tip and gratuity information is highlighted with red squares. Allocated gratuities, along with additional information, may also be included in such report. (*Id.*, ¶¶224-26; Decl., ¶163).

Marshall discloses that these forms are reported back to the user via “the client business system.” For example, Marshall discloses that the generated reports are distributed to the service provider/business establishment. (Marshall, ¶¶80-83.) A POSITA would have understood that these forms would be reported back from the

GrataSoft system to the user via the client's business system. And because the GrataSoft system allocates gratuities automatically based on the "gratuity distribution rules," the client business system would not need to conduct such calculation. (Decl., ¶164.)

B. Claim 2: "wherein the gratuity sync client is further configured to format ..."

Marshall discloses or renders obvious claim 2, which depends from claim 1. Marshall discloses that the interface system (the "gratuity sync client application") including the Aloha POS receives and stores data from the client business system into files in a .DBF or dBase file structure, which are subsequently made accessible to the GrataSoft system. (Decl., ¶168.) Marshall also discloses that other file formats known in the art, including XML, can be used. (Marshall, ¶110; Decl., ¶168.) Given these disclosures, a POSITA would have understood that the interface system could be "configured to format the extracted transaction and employee information into an XML file before communicating the extracted information" (Decl., ¶168.)

C. Claim 3: "wherein the gratuity sync client application is installed on the point of sale server ..."

A POSITA would have understood that Marshall's interface system comprising the Aloha POS is installed on the POS server where all the transaction and employee information is stored. (Decl., ¶172.) Advantageously, this

arrangement would allow the interface system to have direct access to the stored information without the need to rely on external networks, which makes this option safer and reliable. (*Id.*) That is, a POSITA would have understood the benefits of a local POS system (e.g., keeping transaction, payment, and time and attendance functions local) and, given the motivation for an externally managed gratuity system, understand the need for the POS system (i.e., the system with the relevant data) to send the data to the external gratuity server. (*Id.*)

D. Independent Claim 8

1. 8[pre]: “A system for providing payment management services to a plurality of clients, comprising:”

A POSITA would have understood that “payment management services” refer to services that allow an employer (a restaurant) to manage financial transactions, including, for example, managing tip and/or gratuity allocation as part of doing payroll. (*Id.*, ¶176.) Marshall discloses such a system because it discloses “systems and methods for recording, maintaining, and reporting tips and gratuities” (Marshall, Abstract; Decl., ¶177.) Also, Marshall discloses a web-based system that may independently interface with multiple clients. (§VIII.A.3.)

2. 8[a]: “a payment management computer system having a server and a database ...”

The limitations of 8[a] are substantively identical to those recited in 1[a], 1[a.1], and 1[a.2], as shown below. (Decl., ¶181.)

Element 8[a]	Elements of claim 1
a payment management computer system having a server and a database and being accessible by a plurality of clients, the server being configurable by each client of the plurality of clients via a web portal to execute payment distribution rules independently on a client-by-client basis; and	1[a]: a gratuity management system, comprising: 1[a.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 1[a.2]: a database, accessible by the server

The main difference between 8[a] and 1[a] is that 8[a] recites “a payment management computer system” while 1[a] recites “a gratuity management system.” In the ’050 patent, these two systems are similar in functionality. (Decl., ¶182.) Accordingly, for at least the same reasons Marshall discloses or renders obvious 1[a], 1[a.1], and 1[a.2], Marshall also discloses the corresponding limitations of 8[a]. (§VIII.A.2-4.)

Marshall also discloses or renders obvious “the server being configurable by each client of the plurality of clients via a web portal.” As discussed above, system 300 is remote from the client business systems—e.g., it can be a cloud-based system—and supports multiple clients. (§VIII.A.9.) Accordingly, the clients could communicate with remote system 300 via “a web-portal,” i.e., a dedicated website.

Marshall discloses that users may gain access to the system from virtually anywhere via web programming tools, web-browsers, and the like. (Marshall, ¶¶102-03; Decl., ¶183.) And because the clients' employees input information and change the default settings of the system, it is the clients that configure web-based system 300 in Marshall according to their needs. Thus, Marshall discloses or renders obvious "the server being configurable by each client of the plurality of clients via a web portal." (Decl., ¶¶183-84.)

3. 8[b]: "a plurality of client business systems in electronic communication with the payment management computer system ..."

8[b] is identical to 1[b], except 8[b] recites "the payment management computer system" rather than "the server of the gratuity management system." Because these two terms are equivalent, Marshall discloses or renders obvious 8[b] for at least the same reasons as for 1[b]. (§VIII.A.5.)

4. 8[b.1]: "at least one point of sale server; and"

8[b.1] is identical to 1[b.1]. Accordingly, Marshall discloses or renders obvious 8[b.1] for at least the same reasons as for 1[b.1]. (§VIII.A.6.)

5. 8[b.2]: "an interface component installed on the respective client business system;"

8[b.2] is identical to 1[b.2], except 8[b.2] recites "an interface component" rather than "a gratuity sync client application." (Decl., ¶191.) An "interface component" is substantively the same as the "gratuity sync client application,"

because the gratuity sync client application is merely an interface component that allows the client business system to interact with the payment management computer system. (*Id.*) Accordingly, Marshall discloses or renders obvious 8[b.2] for at least the same reasons as for 1[b.2]. (§VIII.A.7.)

6. 8[c]: “wherein the interface component on each client business system is configured to

(i) extract at least one of transaction information and employee information ...

(ii) to initiate transfer ...”

8[c] is substantively identical to 1[c], except in 8[c] the “interface component” replaces the “gratuity sync client application.”

Element 8[c]	Element 1[c]
wherein the interface component on each client business system is configured to i. extract at least one of transaction information and employee information from the client business system and ii. to initiate transfer of the extracted information to the payment management computer system;	wherein the gratuity sync client application on each client business system is configured to i. extract transaction information and employee information from the client business system and ii. to initiate transfer of the extracted information to the gratuity management system;

A POSITA would understand the “interface component” and the “gratuity sync client application” to be equivalent. (Decl., ¶193.) Accordingly, Marshall

discloses or renders obvious 8[c] for at least the same reasons as for 1[c].
(§VIII.A.8.)

7. **8[d]: “wherein the payment management computer system is a cloud computing system ...**

(i) receive the extracted information ...

(ii) to store the received extracted information ...”

8[d] is substantively identical to 1[d], except 8[d] recites “the payment management computer system” instead of “the gratuity management system.”

Element 8[d]	Element 1[d]
wherein the payment management computer system is a cloud computing system remote from the plurality of client business systems and configured to i. receive the extracted information from the plurality of client business systems and ii. to store the received extracted information in the database; and	wherein the gratuity management system is a cloud computing system remote from the plurality of client business systems and configured to i. receive the extracted transaction information and employee information from the plurality of client business systems and ii. to store the received extracted information in the database; and

A POSITA would understand “the payment management computer system” and “the gratuity management system” to be equivalent. (Decl., ¶195.)

Accordingly, Marshall discloses or renders obvious 8[d] for at least the same reasons as for 1[d]. (§VIII.A.9.)

8. 8[e]: “wherein the payment management system is further configured to

(i) execute, independently for each client, payment distribution rules ...

(ii) return the payment information ...”

8[e] is substantively identical to 1[e]. The similarities between 8[e] and 1[e] are shown below.

Element 8[e]	Element 1[e]
wherein the payment management system is further configured to	wherein the gratuity management system is further configured to
i. execute, independently for each client, payment distribution rules based on at least the received extracted information and the independently configured payment distribution rules to generate payment information and	i. execute, independently for each client, gratuity distribution rules for allocating gratuities among at least a portion of the employees and ii. 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
ii. return the payment information to the interface component of respective client business systems, without requiring the respective client business systems to execute the payment distribution rules.	iii. 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.

The “payment management system” recited in claim 8 is equivalent to the “gratuity management system” of claim 1. (Decl., ¶198.) Additionally, the “payment distribution rules” and the “payment information” in 8[e](i) are equivalent to the “gratuity distribution rules” and “gratuity allocation” in 1[e]. (*Id.*, ¶199) And the “interface component” in 8[e](ii) is equivalent to the “gratuity sync client

application” in 1[e](iii). (*Id.*, ¶201) Given these similarities, Marshall discloses or renders obvious 8[e] for at least the same reasons as for 1[e]. (§VIII.A.10.)

E. Claim 10: “wherein the payment distribution rules comprise gratuity allocation rules.”

A POSITA would have understood that “payment distribution rules” recited in 8[e] includes “gratuity distribution rules” recited in 1[e]. (§VIII.A.10.) The “gratuity allocation rules” of claim 10 are the same thing as “gratuity distribution rules.” (Decl., ¶205.) Accordingly, Marshall discloses or renders obvious claim 10. (*Id.*)

IX. GROUND 2 – CLAIMS 4–7, 9, 11–13 ARE OBVIOUS IN VIEW OF MARSHALL AND WEBB

A. Motivation to Combine Marshall and Webb

A POSITA would have been motivated to combine Marshall and Webb. (Decl., ¶207.)

First, 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. (Decl., ¶208; Marshall, Abstract; Webb, Abstract.) Marshall discloses interfaces between a remote gratuity allocation system and a local POS system and a local time and attendance system (Marshall, ¶¶69, 108), while Webb discloses a similar system, including a time and attendance server (personal computer 20) connected directly to cash registers (an early POS system). (Webb, 24:51–60; Decl., ¶¶209–10.) Given the similarities between Marshall and Webb, it would have been

straightforward for a POSITA to modify Marshall's system based on the teachings of Webb. (Decl., ¶210.) For example, Marshall discloses that its GrataSoft system interfaces with local interface systems, such as a POS system and a time and attendance server. (Marshall, ¶¶69, 108.) Webb discloses that a POS system can be communicatively coupled to a time and attendance server. (Webb, Figs. 1A, 1B; Decl., ¶210.) A POSITA reading Marshall would have understood that a remote gratuity management system can interface with a local POS system and a time and attendance server, and that the POS system can further communicate with the time and attendance server as taught by Webb. (Decl., ¶210.)

Second, Marshall discloses a hybrid architecture that would have been both easy and desirable for a POSITA to modify by adding additional devices to achieve the most efficient results. (*Id.*, ¶211.) A POSITA reading Marshall would know that some functions, such as a POS system, must take place locally at a restaurant, while other functions, such as tip allocation or other payroll processing, would be performed more efficiently at a central server (such as in the cloud) so that various policies can be enforced consistently across restaurants located in different areas. (*Id.*) It would have been straightforward to combine various prior art elements (local servers and remote servers) to achieve these added efficiencies. (*Id.*, ¶212.) Indeed, a POSITA would have known that remote processing, such as in cloud-based systems, can provide a number of benefits, including economies of scale and added

security. (*Id.*, ¶211.) And Webb adds known details to Marshall’s disclosure by demonstrating that the time and attendance server can be connected to the POS server. (*Id.*) By doing so, only one of the servers (the POS server in the case of Marshall) needs to connect to the outside world and can aggregate data from other local servers. (*Id.*)

B. Claim 4: “wherein the respective client business system comprises additional devices ...”

Claim 4 depends from claim 1, which Marshall discloses or renders obvious. (§VIII.A.) Marshall, alone or in combination with Webb, discloses or renders obvious claim 4. (Decl., ¶214.)

Marshall’s interface system, which is software within the client business system, comprises one or more standalone hardware systems—such as POS systems (cash registers), time and attendance systems (time cards to clock in), payroll processing systems, and the like. (Marshall, ¶69; Decl., ¶215.) Each system collects information related to its respective operations. (Decl., ¶215.) For example, the POS system would collect sales and gratuity information, the time and attendance system would collect working hour information, etc. The interface system software then aggregates all the information collected by each individual hardware system and saves the information to a centralized location within the client business system so it can be sent to the central gratuity management system. (*Id.*)

To the extent that such functionality is not explicitly disclosed in Marshall, a

POSITA would have been motivated to modify the Marshall system using the teachings in Webb. Webb discloses interconnected restaurant systems, specifically, a point of sale system and time and attendance system. (*Id.*, ¶216.) A POSITA would have recognized that there would be a large number of equally easily implemented combinations of systems. (*Id.*) And it would have been known or obvious to a POSITA reading Marshall that each of these interconnected systems could communicate with one another through the interface system (i.e., the “gratuity sync application”). (*Id.*, ¶217.) Accordingly, Marshall discloses or renders obvious claim 4.

Webb reinforces this understanding because it discloses a specific implementation in which a POS system (the “electronic cash register”) interfaces with a personal computer operating as a separate time and attendance system, which tracks employee hours and payroll while the point of sale system tracks sales and transactions. (Decl., ¶218.) A POSITA would have been motivated to combine the teaching of Webb with Marshall because Webb expressly discloses a particular arrangement of components (a POS system connected to a separate time and attendance system) that a POSITA would find practical and readily implementable in Marshall. (*Id.*)

C. Claim 5: “wherein at least one of the additional devices comprises a time and attendance server.”

Claim 5 depends from claim 4, which Marshall in view of Webb discloses or

renders obvious. (§IX.B.) Marshall, alone or in combination with Webb, discloses or renders obvious claim 5. (Decl., ¶221.)

Marshall discloses a number of “additional devices which are connected to and accessible by the gratuity sync client application,” as recited in claim 4. (*Id.*, ¶222.) Marshall discloses that the additional devices contemplated for use in its disclosed system include “time and attendance systems.” (Marshall, ¶69.) Marshall thus expressly discloses “a time and attendance server.” (Decl., ¶223.) To the extent Marshall does not expressly disclose a “time and attendance server,” it would have been obvious in light of Webb. A POSITA would understand that each of the interface systems listed above, including the “time and attendance system,” could operate on a separate server. (*Id.*)

D. Claim 6: “wherein the employee information extracted from the respective client business system comprises employees’ working hours.”

Claim 6 depends from claim 5, which Marshall in view of Webb discloses or renders obvious. (§IX.C.) Marshall, alone or in combination with Webb, discloses or renders obvious claim 6. (Decl., ¶225.)

Marshall discloses “receiving at least one primary peripheral tip data”—such as “**data regarding hours worked by at least one employee**”—“and generating at least one report analyzing at least one first declared value and at least one second declared value in relation to at least one primary peripheral tip data.” (Marshall,

¶29; *id.*, ¶32; Decl., ¶226.) The peripheral tip data is received from the client business systems by the GrataSoft system. (Decl., ¶227; Marshall, ¶¶129, 141.)

Webb further demonstrates that it would have been well-known to a POSITA for a client business system to store employee information, like employees' working hours. (Decl., ¶228.) In particular, Webb disclosed the use of a time and attendance system to track employee hours. (*Id.*)

E. Claim 7: “wherein at least one of the additional devices comprises a payroll system ...”

Claim 7 depends from claim 4, which Marshall in view of Webb discloses or renders obvious. (§IX.B.) Marshall in view of Webb discloses or renders obvious claim 7. (Decl., ¶230.)

As discussed with respect to claims 4-6, Marshall in view of Webb discloses or renders obvious that sub-components of Marshall's interface system that include, for example, a payroll processing system as part of a time and attendance system. (§IX.B-D.) Such systems include respective hardware components making them functional “devices.” (*Id.*) Marshall in view of Webb discloses that the GrataSoft system interfaces with the time and attendance system—via the interface system (the “gratuity sync client application”)—“to transmit payroll data, as well as data regarding tips and/or gratuities to be paid as wages, to the time and attendance system.” (Marshall, ¶347; Decl., ¶231.)

Additionally, Webb discloses that the POS system can interface directly to the

time and attendance server and that the time and attendance server can also carry out payroll functions, as explained above. (Decl., ¶232.)

Thus, while Marshall separately identifies a payroll processing system and a time and attendance system, Marshall's time and attendance system corresponds to the '050 patent's "payroll system" because they perform the same functionality, i.e., paying employees for hours worked along with received tips and gratuities. (Decl., ¶233.) Webb supports this understanding because it discloses a time and attendance system with payroll functions. (*Id.*, ¶234.) At a minimum, a POSITA would have understood that payroll functions were routinely carried out by time and attendance systems. (*Id.*, ¶235.)

F. Claim 9: "wherein the respective client business system comprises a payroll system in communication with the interface component ..."

Claim 9 depends from claim 8, which Marshall discloses or renders obvious. (§VIII.D.) Marshall in view of Webb discloses or renders obvious claim 9. (Decl., ¶237.)

As discussed regarding claims 4–7 above, Marshall in view of Webb discloses that Marshall's interface system ("the interface component" of claim 8) includes at least a time and attendance system ("a payroll system"). (§IX.B–E.) The time and attendance system is part of the interface system (which is part of the client business system), so the "client business system comprises a payroll system in

communication with the interface component.” (Decl., ¶238.) Webb further supports this understanding, because it discloses a time and attendance server that carries out payroll functions interfacing with a POS system. (*Id.*)

Additionally, Marshall discloses that the GrataSoft system interfaces with the time and attendance system “to transmit payroll data, as well as data regarding tips and/or gratuities to be paid as wages, to the time and attendance system.” (Marshall, ¶347.) This means that the preparation of payroll data, including based on payment distribution rules, is performed by the GrataSoft system (the “payment management system”) and not the respective client business systems. (Decl., ¶239.) The time and attendance system of Marshall then uses this data to “prepare[] payrolls without requiring the client business system to execute the payment distribution rules,” as required for claim 9. (*Id.*, ¶240.)

G. Claim 11: “wherein the respective client business system comprises additional devices which are connected to and accessible by the point of sale server.”

Claim 11 depends from claim 8, which Marshall discloses or renders obvious. (§VIII.D.) Marshall in view of Webb discloses or renders obvious claim 11. (Decl., ¶242.)

The limitation of claim 11 is the same as the limitation of claim 4, except claim 11 recites that the additional devices are connected to and accessible by “the point of sale server,” rather than “the gratuity sync client application.” Claim 3 of

the '050 patent recites that “the gratuity sync client application is installed on the point of sale server of the respective client business system.” A POSITA would understand “the point of sale server” of claim 11 and “the gratuity sync client application” of claim 4 to be equivalent. (Decl., ¶245.) Accordingly, Marshall in view of Webb discloses or renders obvious claim 11 for at least the same reasons as for claim 4. (§IX.B.)

H. Claim 12: “wherein at least one of the additional devices comprises a time and attendance server.”

Claim 12 depends from claim 11, which Marshall in view of Webb discloses or renders obvious. (§IX.G.) Marshall in view of Webb discloses or renders obvious claim 12. (Decl., ¶247.)

The limitation of claim 12 is identical to the limitation in claim 5. Accordingly, Marshall in view of Webb discloses or renders obvious claim 12 for at least the same reasons as for claim 5. (§IX.C.)

I. Claim 13: “wherein the employee information extracted from the respective client business system comprises employees’ working hours.”

Claim 13 depends from claim 12, which Marshall in view of Webb discloses or renders obvious. (§IX.H.) Marshall in view of Webb discloses or renders obvious claim 13. (Decl., ¶249.)

The limitation of claim 13 is identical to the limitation in claim 6. Accordingly, Marshall in view of Webb discloses or renders obvious claim 13 for at

least the same reasons as for claim 6. (§IX.D.)

X. GROUND 3 – CLAIMS 1–3, 8, 10 ARE OBVIOUS IN VIEW OF PHILLIPS AND MARSHALL

A. Motivation to Combine Phillips and Marshall

A POSITA would be motivated to combine the teachings of Phillips with Marshall. (Decl., ¶¶251-59.)

A POSITA as of September 4, 2012 would have been motivated to use Phillips’ “[a]pparatus and methods ... to improve the administration of tip monitoring, collection, and distribution, and related reporting needs” (Phillips, Abstract), and to modify it to (i) improve the nature of the connection between the client business system and the remote tip allocation system and (ii) improve the interface system through which the client business system communicates with the remote system. Each of these modifications would have involved the use of known techniques to improve similar tip allocation in the same way, and further would produce predictable results. (Decl., ¶¶254-56.)

First, a POSITA would have been motivated to improve the connection between the client business system and the remote tip allocation system in the Phillips system by exploring web-based architectures such as those disclosed in Marshall. (*Id.*, ¶254.) A web-based architecture would allow an end-customer to formulate and deploy tip and gratuity allocation rules from a central server, while

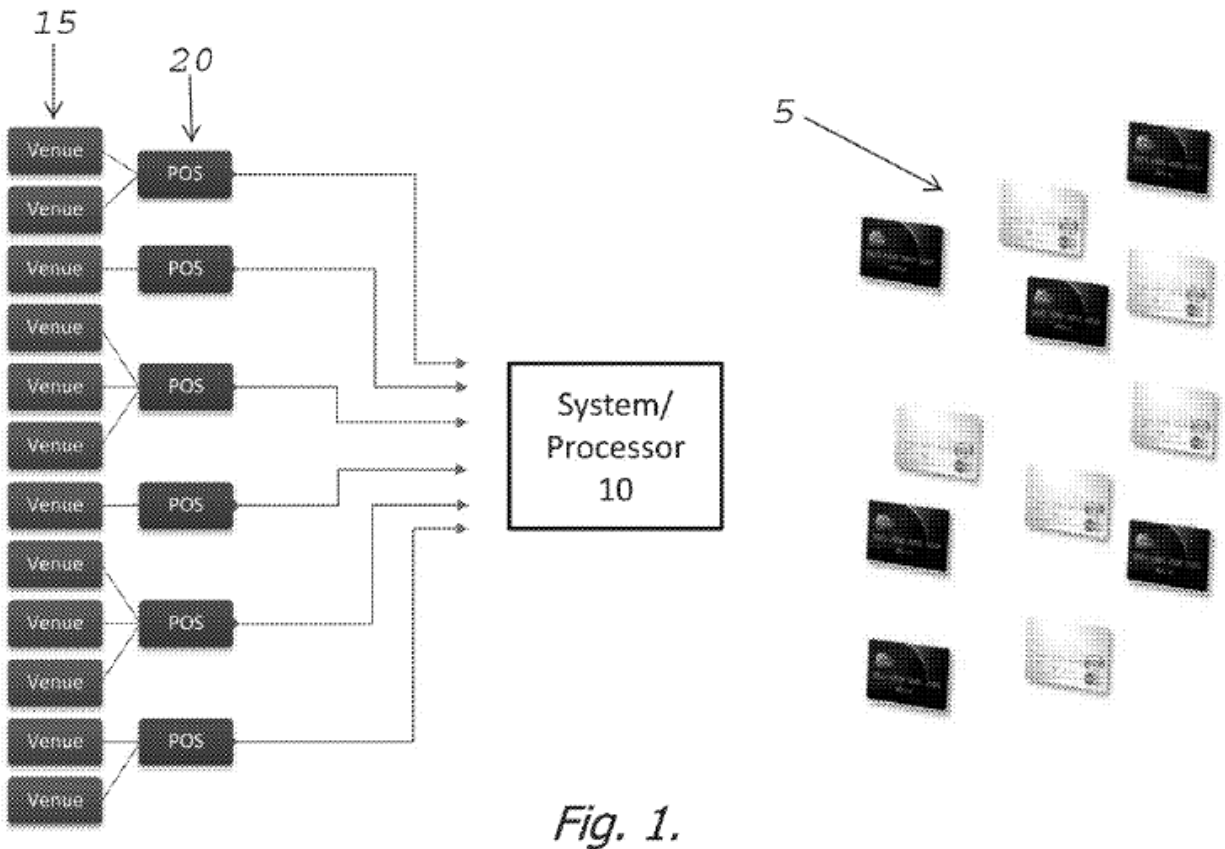
also yielding the multiple, well-known efficiencies associated with a cloud-based implementation. (*Id.*, ¶255.)

Second, a POSITA would have been motivated to add the interface system disclosed in Marshall (which includes the Aloha POS system), to facilitate the flow of data between the POS system disclosed in Phillips and a remote computer. (*Id.*, ¶256.) Such an interface system would create a system that achieves the benefits of a web-based architecture discussed above. (*Id.*, ¶255.) A POSITA would likewise be motivated to modify Phillips to add the Marshall POS system in order to allow files of any type to be passed from the POS system to the remote computer. (*Id.*, ¶257.)

B. Independent Claim 1

1. 1[pre]: “A system, comprising:”

Phillips discloses the system shown below in Figure 1 wherein tips and gratuities are collected from a POS system and allocated and processed by a central server, with the monies placed onto a debit card:



(Phillips, Fig. 1.) “FIG. 1 illustrates a basic structure/**system**, with one or more venues 15 (restaurants/other businesses) shown on the left, each using multiple POS systems 20.” (*Id.*, ¶33; Decl., ¶262.)

Marshall also discloses or renders obvious a system covered by claim 1. (§VIII.A.1.)

2. 1[a]: “a gratuity management system, comprising”

Phillips discloses a gratuity management system. For example, Phillips is titled “**Gratuity Processing System Apparatus** and Related Methods.” (*See also* Phillips, Abstract; Decl., ¶265.)

Marshall also discloses or renders obvious a gratuity management system.

(§VIII.A.2.)

3. 1[a.1]: “a server coupled to a computer network and accessible by a plurality of clients ...”

Phillips discloses or renders obvious “a server coupled to a computer network and accessible by a plurality of clients.” In Figures 1, 2a, and 2b, Phillips discloses a central processing system 10, which a POSITA would understand to be a computer “server.” (Decl., ¶268.) The server 10 is connected to multiple venues 15 (or restaurants). (*Id.*) Phillips further discloses that information may be uploaded to the server 10 from each of the POS systems 20 connected to the venues 15: “As illustrated in FIG. 2a, at the end of the work shift (or at any other convenient or useful interval), the tip totals 25 or other information/data are **uploaded from the POS system(s) 20 to a central processing system 10.**” (Phillips, ¶34.) A POSITA would understand that uploading information from the POS systems to the central system 10 requires that all of the devices be coupled to a computer network. (Decl., ¶268.) Accordingly, Phillips discloses “a server coupled to a computer network and accessible by a plurality of clients.” (*Id.*)

Phillips also discloses or renders obvious “the server being configurable to independently execute gratuity distribution rules on a client-by-client basis.” Phillips discloses that “tip-outs can ... be automatically calculated and distributed to other employees at this time **depending on location** or corporate level business rules set within the system.” (Phillips, ¶34.) In other words, each restaurant in Phillips

may have its own gratuity distribution rules that vary from rules used by other restaurants. (Decl., ¶269.)

Marshall also discloses or renders obvious 1[a.1]. (§VIII.A.3.)

4. 1[a.2]: “a database, accessible by the server; and”

Phillips states, “As illustrated in FIG. 2a, at the end of the work shift (or at any other convenient or useful interval), the tip totals 25 or other information/data are uploaded from the POS system(s) 20 to a central processing system 10.” (Phillips, ¶34.) In order for central processing system 10 (the “server”) to store uploaded data, the server must have access to a database in which to store data. (Decl., ¶272.) Phillips also discloses that “embodiments of the invention can provide extensive reporting and **data extraction functionalities**. In addition to allowing easy selection of criteria for data to be included in the report, embodiments can generate reports in separate windows, can **export the data into multiple formats**, etc., can distribute same via email or otherwise, and can have many other helpful functionalities.” (Phillips, ¶44.) Databases allow for data extraction functionalities and for exporting of data. (Decl., ¶272.)

To the extent this limitation is found not to be expressly disclosed by Phillips, using a database to store and extract information would have been obvious to a POSITA before September 2012, as databases had been used in computer systems for decades by that time. (Decl., ¶273.)

Marshall also discloses or renders obvious 1[a.2]. (§VIII.A.4.)

5. 1[b]: “a plurality of client business systems in electronic communication with the server ...”

Phillips discloses “a plurality of client business systems in electronic communication with the server of the gratuity management system” in the form of multiple venues 15 being connected to a central processor 10 via POS systems 20. (Phillips, Figs. 1, 2a, 2b.) Each POS system 20 connected to one or more venues 15 forms a “client business system” “in electronic communication with the server of the gratuity management system.” (Decl., ¶276.) In order for data to be transferred from the venues (and their respective POS systems) to the server 10, a network connection, which is a form of “electronic communication,” is required. (*Id.*)

Marshall also discloses or renders obvious 1[b]. (§VIII.A.5.)

6. 1[b.1]: “at least one point of sale server; and”

Phillips discloses that a venue 15 may have its own POS system 20, or multiple venues 15 may share a POS system 20. (Decl., ¶279.) The POS system 20 is part of the “client business system.” Accordingly, Phillips discloses “at least one point of sale server” in the form of POS system 20. (*Id.*)

Marshall also discloses or renders obvious 1[b.1]. (§VIII.A.6.)

7. 1[b.2]: “a gratuity sync client application installed on the respective client business system;”

Phillips shows in Figure 1 that each client business system includes one or more venues 15 connected to a POS system 20. Each POS system 20 collects

information and communicates it to the central processor/system 10 (i.e., the “gratuity management system”). (Phillips, Fig. 1.) In order for the POS system 20 to perform its various functions, it has to contain software to perform those functions; this software is the “gratuity sync client application” installed at each client business system. (Decl., ¶282.)

Marshall also discloses or renders obvious 1[b.2]. (§VIII.A.7.)

8. 1[c]: “wherein the gratuity sync client application on each client business system is configured to
 - (i) extract transaction information and employee information ...
 - (ii) to initiate transfer ...”

With respect to 1[c](i), Phillips discloses:

As illustrated in FIG. 2 a, at the end of the work shift (or at any other convenient or useful interval), **the tip totals 25 or other information/data are uploaded from the POS system(s) 20 to a central processing system 10.** As shown in FIG. 2 b, **upon receipt of that tip data 25, the central processor/system 10 preferably uses that information to either instantly “load” the appropriate tip amounts onto each relevant employee’s prepaid debit card 5 (or other similar prepaid/fundable/re-loadable card), or confirm or adjust tip amounts if necessary before being “loaded” onto the card 5.**

(Phillips, ¶34.)

The tip totals 25 constitute “transaction information” extracted by the POS system in Phillips. (Decl., ¶286.) In order for the POS system to extract information

and upload it to the system 10, the POS system must have software, i.e., the “gratuity sync client application,” to perform these functions. (*Id.*)

Additionally, the POS system 20 must also extract and transmit employee information (such as in the form of a person’s name or a employee number) in order for the system to know which employee receives how much tip. (*Id.*, ¶287.) The extraction and transmission of employee information must also be performed by software on the POS system. (*Id.*)

With respect to 1[c](ii), Phillips discloses that “the tip totals 25 or other information/data are uploaded from the POS system(s) 20 to a central processing system 10.” (Phillips, ¶34.) In other words, the POS system initiates the transfer of information to central processing system (the “gratuity management system”). (Decl., ¶288.) Again, initiating the transfer of data must be performed by software on the POS system, i.e., the “gratuity sync client application.” (*Id.*)

To the extent that “the gratuity sync client application on each client business system is configured to ... initiate transfer of the extracted information to the gratuity management system” is found to not be expressly disclosed by Phillips, it would have been obvious to do so. (*Id.*, ¶289.) A POSITA would have understood that there are just two ways to effect the transfer of data over a network—for the server to request it or for the client to send it. (*Id.*)

Marshall also discloses or renders obvious 1[c]. (§VIII.A.8.)

9. **1[d]: “wherein the gratuity management system is a cloud computing system ...**

i. **receive the extracted transaction information and employee information ...**

ii. **to store the received extracted information ...”**

Phillips discloses that the central processor 10 (the “gratuity management system”) is remote from the venues 15 that are using various POS systems 20. (Phillips, Figs. 1, 2a, 2b, ¶34.) It would have been obvious to a POSITA to implement the remote gratuity management system disclosed in Phillips as a “cloud computing system” because the benefits of cloud-based systems were well known in the art before September 2012. (Decl., ¶293.)

In fact, Marshall disclosed or rendered obvious using a cloud-based gratuity management system years before September 2012, including through its discussion of HTTP, XML, and HTML, all of which were well known to support a cloud-based infrastructure. (*Id.*, ¶294.) The Examiner also recognized that cloud computing systems like Marshall were known: “With respect to the processor comprising a ‘cloud computing system,’ **Marshall shows that it is well known for processing resources/processors/servers to be embodied as/include:** a single system, a multi system (co- located or distributed), **cloud computing system**, or a combination of the above” (Ex.1008, 215; Decl., ¶294.) 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. (Decl., ¶294.)

As discussed for 1[c](ii) above, Phillips discloses that tips data and other information are uploaded from the POS systems (“client business systems”) to the central processor 10 (“gratuity management system”). (§X.B.8.) Accordingly, Phillips discloses or renders obvious “receive the extracted transaction information and employee information from the plurality of client business systems.” (*Id.*)

As discussed for 1[a.2], Phillips discloses or renders obvious that the central processor 10 (“gratuity management system”) receives and stores data in a database. (§X.B.4.) Because the central processor 10 “receive[s] the extracted transaction information and employee information from the plurality of client business systems,” the extracted information is stored in the database(s) used by the central processor 10. (*Id.*)

Marshall also discloses or renders obvious 1[d]. (§VIII.A.9.)

10. 1[e]: “wherein the gratuity management system is further configured to

(i) execute, independently for each client, gratuity distribution rules ...

(ii) to determine a gratuity allocation ...

(iii) return the gratuity allocation ...”

Regarding 1[e](i), Phillips discloses the central processor 10 is configured to “independently execute gratuity distribution rules on a client-by-client basis,” as discussed above with respect to 1[a.1]. (§X.B.3.) Additionally, Phillips discloses

that its gratuity management can be performed among groups of employees. (Phillips, ¶66.) Accordingly, Phillips discloses that its system is configured to “execute ... gratuity distribution rules for allocating gratuities among at least a portion of the employees.” (Decl., ¶301.)

Phillips also discloses or renders obvious 1[e](ii). The central processor 10 receives and stores the extracted transaction and employee information that is communicated from various POS systems 20 on client business systems. (*Id.*, ¶302.) Once the extracted information is received, central processor 10 “independently execute[s] gratuity distribution rules on a client-by-client basis,” as discussed in 1[a.1]. (§X.B.3.)

With respect to 1[e](iii), Phillips discloses that “the tip funds [30] can be further segregated and disbursed to each venue 15 (or each property or other metric), as illustrated by the separate location/property Tip Accounts 45 in FIG. 3.” (Phillips, ¶35.) And because each venue communicates with processor 10 via the software loaded to its POS system 20 (i.e., the “gratuity sync client application”), Phillips discloses or renders obvious 1[e](iii). (Decl., ¶303.)

Marshall also discloses or renders obvious 1[e]. (§VIII.A.10.)

C. Claim 2: “wherein the gratuity sync client is further configured to format ...”

Phillips discloses that “the tip totals 25 or other information/data are uploaded from the POS system(s) 20 to a central processing system 10.” (Phillips, ¶34.) In

other words, the operating software of Phillips' POS system (e.g., "the gratuity sync client") prepares and initiates the transfer of data to the central processing system 10. (Decl., ¶308.) A POSITA would have understood that the data transmitted from the POS systems 20 would be in the form of one or more digital files, as this would have been the only way to transmit digital information between two computer devices—e.g., the POS systems 20 and the system/processor 10. (*Id.*) A POSITA would have been further informed by Marshall, that the transmitted digital files could be stored in different formats, including an XML file format. (*Id.*)

D. Claim 3: "wherein the gratuity sync client application is installed on the point of sale server ..."

Phillips discloses that each POS system 20 in Figure 1 belongs to a respective client business system. (Decl., ¶311.) Each such POS system (i.e., a "point of sale server") requires software (i.e., the "gratuity sync client application") to perform the required functions, such as collecting and transmitting data. (*Id.*)

Marshall also discloses or renders obvious claim 3. (§VIII.C.)

E. Independent Claim 8

**1. 8

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[pre]: "A system for providing payment management services to a plurality of clients, comprising:"
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A POSITA would have understood Phillips to disclose a "system for providing payment management services." (Decl., ¶316.) And the Phillips system provides services to a plurality of clients, i.e., venues 15. (Phillips, Figs. 1, 2a, 2b.)

Marshall also discloses or renders obvious the preamble of claim 8.

(§VIII.D.1.)

2. 8[a]: “a payment management computer system having a server and a database ...”

The limitations of claim 8[a] are substantively identical to those recited in 1[a], 1[a.1], and 1[a.2]. For at least the same reasons Phillips in view of Marshall discloses or renders obvious 1[a], 1[a.1], and 1[a.2], Phillips in view of Marshall also discloses the corresponding limitations of 8[a]. (§X.B.2-4.)

Phillips in view of Marshall also discloses or renders obvious “the server being configurable by each client of the plurality of clients via a web portal.” Phillips states that its invention preferably includes “[b]rowser based software application/interface,” (Phillips, ¶77), which is the same thing as a “web portal.” (Decl., ¶322.) Phillips discloses that multiple restaurant owners (“clients”) can configure the system to manage their employees’ tips, among other things. (*Id.*)

Marshall also discloses or renders obvious 8[a]. (§VIII.D.2.)

3. 8[b]: “a plurality of client business systems in electronic communication with the payment management computer system ...”

Aside from the recitation of “the payment management computer system” (as opposed to “the server of the gratuity management system”), 8[b] is identical to 1[b]. (Decl., ¶325.) The “payment management computer system” of claim 8 is equivalent to the “server of the gratuity management system” of claim 1. (*Id.*) Accordingly, Phillips in view of Marshall discloses or renders obvious 8[b] for at

least the same reasons as for 1[b]. (§X.B.5.)

4. 8[b.1]: “at least one point of sale server; and”

8[b.1] is identical to 1[b.1]. Accordingly, Phillips in view of Marshall discloses or renders obvious 8[b.1] for at least the same reasons as for 1[b.1]. (§X.B.6.)

5. 8[b.2]: “an interface component installed on the respective client business system;”

8[b.2] is identical to 1[b.2], except 8[b.2] recites “an interface component” rather than “a gratuity sync client application.” Because an “interface component” is the same thing as the “gratuity sync client application,” Phillips in view of Marshall discloses or renders obvious 8[b.2] for at least the same reasons as for 1[b.2]. (Decl., ¶330; §X.B.7.)

6. 8[c]: “wherein the interface component on each client business system is configured to

(i) extract at least one of transaction information and employee information ...

(ii) to initiate transfer ...”

8[c] is substantively identical to 1[c]. (Decl., ¶332.) Accordingly, Phillips in view of Marshall discloses or renders obvious 8[c] for at least the same reasons as for 1[c]. (§X.B.8.)

7. 8[d]: “wherein the payment management computer system is a cloud computing system ...

(i) receive the extracted information ...

(ii) to store the received extracted information ...”

8[d] is substantively identical to 1[d]. (Decl., ¶334.) Accordingly, Phillips in view of Marshall discloses or renders obvious 8[d] for at least the same reasons as for 1[d]. (§X.B.9.)

8. 8[e]: “wherein the payment management system is further configured to

(i) execute, independently for each client, payment distribution rules ...

(ii) return the payment information ...”

8[e] is substantively identical to 1[e]. (Decl., ¶337.) Accordingly, Phillips in view of Marshall discloses or renders obvious 8[e] for at least the same reasons as for 1[e]. (§X.B.10.)

F. Claim 10: “wherein the payment distribution rules comprise gratuity allocation rules.”

A POSITA would have understood that the “payment distribution rules” recited in claim 8[e] can include “gratuity distribution rules” recited in 1[e], which are equivalent to “gratuity allocation rules.” (Decl., ¶344.) Accordingly, Phillips in view of Marshall discloses or renders obvious “wherein the payment distribution rules comprise gratuity allocation rules.”

XI. GROUND 4 – CLAIMS 4–7, 9, 11–13 ARE OBVIOUS IN VIEW OF PHILLIPS, MARSHALL, AND WEBB

A. Motivation to Combine Phillips, Marshall, and Webb

A POSITA would have been motivated to combine the teachings of Phillips, Marshall, and Webb to produce a combined system. (Decl., ¶346.)

Phillips, Marshall, and Webb are all drawn to computerized systems for managing gratuities with similar architectures . (*Id.*, ¶347; Phillips, Abstract; Marshall, Abstract; Webb, Abstract.) As noted above, Marshall discloses interfaces between a remote gratuity allocation system and a local POS system and a local time and attendance system. (Decl., ¶348.) Phillips discloses the use of very similar system components, including POS systems that collect information from local restaurants and transfer the information to a central server/processor. (Decl., ¶348; Phillips, Figs. 1, 2a, 2b.) And Webb discloses a POS system in communication with a time and attendance server. (Decl., ¶348; Webb, 24:51–60.)

Based on the similarities of these systems, modifying Phillips—such as by implementing the teachings from Marshall and Webb—would have been straightforward for a POSITA. (Decl., ¶349.) For example, Phillips discloses individual restaurants with POS servers, whereas Marshall discloses restaurants with both POS servers and additional systems, such as time and attendance systems. (*Id.*) Webb further discloses that the local POS system can interface with co-located time and attendance systems, and that payroll functions can be mapped to the time and

attendance system. (*Id.*) It would have been obvious to a POSITA to combine various known prior art elements (local servers and remote servers), as disclosed in Phillips, Marshall, and Webb, 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.*, ¶350.)

B. Claim 4: “wherein the respective client business system comprises additional devices ...”

Claim 4 depends from claim 1, which Phillips in view of Marshall discloses or renders obvious. (§X.B.) Phillips in view of Marshall and Webb discloses or renders obvious claim 4. (Decl., ¶354.)

Phillips discloses that its client business systems include at least a POS system 20 connected to one or more venues 15, where each POS system 20 collects information and communicates it to the central processor/system 10 (the “gratuity management system”). (Phillips, Fig. 1, ¶34; Decl., ¶355.) As discussed above, Marshall and Webb disclose, to a POSITA reading Phillips, that a client business system can include additional devices interconnected with one another, with such additional devices being accessible by the interface system of Marshall (i.e., the “gratuity sync client application). (Decl., ¶355.) Further, a POSITA would have known based on his/her own knowledge of the art that having an interconnected set of devices or systems to manage restaurants was well known and established in the restaurant business well before the filing of the ’050 patent. (*Id.*)

C. Claim 5: “wherein at least one of the additional devices comprises a time and attendance server.”

Claim 5 depends from claim 4, which Phillips in view of Marshall and Webb discloses or renders obvious. (§XI.B.) Phillips in view of Marshall and Webb discloses or renders obvious claim 5. (Decl., ¶357.)

Phillips discloses that its client business systems include at least one POS system 20. (Phillips, Fig. 1.) It would have been obvious to a POSITA in view of Marshall and Webb for client business systems in restaurant settings to include additional “devices” or systems for additional operational functionality and flexibility. (Decl., ¶358.) Indeed, Marshall discloses that a client business system may include, in addition to a POS system, “electronic cash register systems, timeclock programs, time and attendance systems, payroll processing systems, and other similar systems ... known in the art.” (Marshall, ¶69; Decl., ¶358.) Webb further discloses a time and attendance server in the form of a dedicated personal computer that is interfaced to a timeclock. (Decl., ¶358.) In other words, a POSITA would have known based on Phillips, Marshall, and Webb that client business systems can include additional devices beyond a POS system, including, but not limited to, a time and attendance server. (*Id.*)

D. Claim 6: “wherein the employee information extracted from the respective client business system comprises employees’ working hours.”

Claim 6 depends from claim 5, which Phillips in view of Marshall and Webb

discloses or renders obvious. (§XI.C.) Phillips in view of Marshall and Webb discloses or renders obvious claim 6. (Decl., ¶360.)

Phillips expressly discloses that “Start date/time and End date/time of the shift” may be used to set up tip-sharing among shifts or teams of employees. (Phillips, ¶64). Employees’ start and end times constitute “employees’ working hours.” (Decl., ¶363.) Accordingly, Phillips discloses that the client business system extracts “employees’ working hours.” (*Id.*)

Marshall and Webb also disclose or render obvious claim 6. (*Id.*)

E. Claim 7: “wherein at least one of the additional devices comprises a payroll system ...”

Claim 7 depends from claim 4, which Phillips in view of Marshall and Webb discloses or renders obvious. (§XI.B.) Phillips in view of Marshall and Webb discloses or renders obvious claim 7. (Decl., ¶364.)

A POSITA reading Phillips would have known from Marshall and Webb that it is common practice for client business systems in restaurants to include additional devices for additional operational functionality and flexibility. (*Id.*, ¶365.) Moreover, as discussed above, in light of the disclosures of Marshall and Webb, a POSITA would have been well informed at the time of the filing of the ’050 patent that functions, such as payroll management, were routinely carried out in the art of the era by time and attendance systems (i.e., “a payroll system”), such as the one disclosed in Webb and Marshall. (*Id.*, ¶366.)

Thus, a POSITA would have known, based on the disclosures from Phillips, Marshall, and Webb, that business systems could be equipped with additional devices such as a system tasked to distribute wages to employees (“a payroll system”), and further that the gratuity sync client of the client business system would communicate the returned gratuity allocations from a remote gratuity management system to the payroll system. (*Id.*, ¶367)

F. Claim 9: “wherein the respective client business system comprises a payroll system in communication with the interface component ...”

Claim 9 depends from claim 8, which Phillips in view of Marshall discloses or renders obvious. (§X.E.) Phillips in view of Marshall and Webb discloses or renders obvious claim 9. (Decl., ¶369.)

As discussed above in connection with claim 7, a POSITA would have known, based on the disclosures of Phillips, Marshall, and Webb, that business systems are equipped with additional devices such as “a payroll system” and further that the gratuity sync client (in this instance “the interface component”) of the client business system would communicate the returned gratuity allocations (in this instance “the payment information”) from a remote gratuity management system (“the payment management computer system”) to the payroll system. (Decl., ¶370.) Therefore, Phillips in view of Marshall and Webb discloses or renders obvious “wherein the respective client business system comprises a payroll system in communication with

the interface component.”

Also as discussed above, Marshall and Webb disclose or render obvious that the time and attendance system of Marshall (i.e., the “payroll system”) uses payroll data generated by the gratuity management system to “prepare[] payrolls without requiring the client business system to execute the payment distribution rules,” as required for claim 9. (*Id.*, ¶¶371-72) It would have been obvious to a POSITA reading Phillips to apply these teachings of Marshall and Webb. (*Id.*, ¶¶371-72)

G. Claim 11: “wherein the respective client business system comprises additional devices ...”

Claim 11 depends from claim 8, which Phillips in view of Marshall discloses or renders obvious. (§X.E.) Phillips in view of Marshall and Webb discloses or renders obvious claim 11. (Decl., ¶374.)

The limitation of claim 11 is substantively identical to claim 4. Accordingly, Phillips in view of Marshall and Webb discloses or renders obvious claim 11 for at least the same reasons as for claim 4. (§XI.B.)

H. Claim 12: “wherein at least one of the additional devices comprises a time and attendance server.”

Claim 12 depends from claim 11, which Phillips in view of Marshall and Webb discloses or renders obvious. (§XI.G.) Phillips in view of Marshall and Webb discloses or renders obvious claim 12. (Decl., ¶379.)

The limitation of claim 12 is identical to the limitation in claim 5.

Accordingly, Phillips in view of Marshall and Webb discloses or renders obvious claim 12 for at least the same reasons as for claim 5. (§XI.C.)

I. Claim 13: “wherein the employee information extracted from the respective client business system comprises employees’ working hours.”

Claim 13 depends from claim 12, which Phillips in view of Marshall and Webb discloses or renders obvious. (§XI.H.) Phillips in view of Marshall and Webb discloses or renders obvious claim 13. (Decl., ¶381.)

The limitation of claim 13 is identical to the limitation in claim 6. Accordingly, Phillips in view of Marshall and Webb discloses or renders obvious claim 13 for at least the same reasons as for claim 6. (§XI.D.)

XII. NO SECONDARY CONSIDERATIONS

Petitioner is unaware of any secondary considerations that may support the patentability of the Challenged Claims. Petitioner expressly reserves the right to respond to any allegations of secondary considerations that may be asserted by Patent Owner.

XIII. DISCRETIONARY ISSUES

A. The Board Should Not Deny Institution Under *Advanced Bionics*

According to the framework set forth in *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, the Board considers “(1) whether the same or substantially the same art previously was presented to the Office or whether the same

or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.” IPR2019-01469, 2020 WL 740292, at *3 (P.T.A.B. Feb. 13, 2020) (precedential).

With respect to part one of *Advanced Bionics*, Marshall and Phillips were applied by the Examiner during prosecution, while Webb was cited in an IDS by the applicant. The Board should find that part one is not satisfied because Petitioner’s obviousness arguments rely on Marshall in a substantially different way than was considered by the Examiner during prosecution. First, Marshall was never considered by the Examiner against claims 30–33, 36–39, and 41–45, which were added late during prosecution and then issued as claims 1–13 of the ’050 patent. (Decl., ¶77.) Second, even when the Examiner considered Marshall against the original claims that were all subsequently canceled, he considered Marshall only as a secondary reference and only for basic computer processing limitations; for example, the Examiner found that Marshall disclosed limitations such as “the at least one processor comprises a cloud computing system” or “receiving a computer-readable file ... and storing ... in a database.” (*Id.*, ¶76.) The Examiner did not treat Marshall as a primary reference, and the applicant never attempted to distinguish

Marshall at any point during prosecution. (*Id.*, ¶77.) Nor did the Examiner consider the expert opinions of Dr. Russ regarding a POSITA's understanding of Marshall.

As for Petitioner's other two references, the Examiner never addressed Webb in any ground of rejection, nor did he consider Phillips in combination with Marshall and Webb. Part one is therefore not met here, and the Board should not discretionarily deny the Petition. *CrowdStrike, Inc v. Open Text Inc.*, IPR2023-00289, 2023 WL 5166826, at *8-9 (P.T.A.B. July 21, 2023) (finding that first part of *Advanced Bionics* framework was not met where petitioner's argument based on art presented during prosecution was "different in character" from the rejection considered by the examiner).

Even if the Board considers part two of *Advanced Bionics*, it still should not discretionarily deny institution because the Examiner erred by failing to consider Marshall (alone and with Phillips and Webb) when addressing the claims added during prosecution that ultimately issued as the Challenge Claims. As demonstrated above, when the full disclosure of Marshall is properly considered against the Challenged Claims (and not just against basic computer processing limitations as was done during prosecution), each and every limitation of those claims is disclosed or rendered obvious by the prior art of record in this Petition. Accordingly, the Board should institute review based on Marshall, Phillips, and Webb.

B. The Board Should Not Deny Institution Under *Fintiv*

The Board should not discretionarily deny this Petition under *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, 2020 WL 2126495, at *3 (P.T.A.B. Mar. 20, 2020) (precedential). Under the Director’s Interim Procedures, “the PTAB will not rely on the *Fintiv* factors to discretionarily deny institution in view of parallel district court litigation where a petition presents compelling evidence of unpatentability.” Director’s Interim Procedures at 2. The grounds in the Petition present compelling evidence of unpatentability of the Challenged Claims, so the Board should not exercise discretionary denial for this reason alone. The *Fintiv* factors also weigh against denial.

Factor 1—a potential stay of the district court litigation—is neutral because neither party has requested a stay. *VMWare, Inc. v. Intell. Ventures I LLC*, IPR2020-00470, 2020 WL 4873198, at *7 (P.T.A.B. Aug. 18, 2020) (“This factor, therefore, does not weigh for or against discretionary denial in this case.”).

Factor 2—the district court trial date and the Board’s statutory deadline—weighs slightly against discretionary denial. In the District Court Action, the Court set trial for March 24, 2025. (Ex.1024, 7.) Based on the filing date of the Petition, an institution decision is likely to issue by March 15, 2024, with a final written decision issuing on March 15, 2025, just before the trial date in the District Court Action.

Factor 3—under factor 3, the early stage of this case weighs heavily against discretionary denial. Patent Owner only recently served its infringement contentions, identifying the asserted claims, on September 1, 2023. (Ex.1007, 6.) Petitioner’s invalidity contentions are not due until October 13, 2023. (Ex.1025). The claim construction hearing has not yet occurred and is scheduled for March 18, 2024. (Ex.1024, 6). Under these circumstances, the district court is unlikely to invest significant resources or issue substantive orders related to the challenged patent prior to the issuance of an institution decision. *Fintiv*, 2020 WL 2126495, at *4; *DISH Network L.L.C. v. Broadband iTV, Inc.*, IPR2020-01280, 2021 WL 406916, at *8-9 (P.T.A.B. Feb. 4, 2021).

Factor 4—regarding the overlap between issues raised in the Petition and the District Court Action—weighs against a discretionary denial. Given the estoppel provisions of 35 U.S.C. § 315(e)(2), if the Board institutes IPR here, Petitioner will be estopped from raising in the District Court Action “any ground that the petitioner raised or reasonably could have raised” in this proceeding. Thus, there is no risk of overlapping and conflicting findings. *Google LLC v. Wildseed Mobile, LLC*, IPR2023-00247, 2023 WL 3846399, at *11 (P.T.A.B. June 6, 2023) (finding factor 4 weighs against exercising discretion because § 315(e)(2) “preclude[es] any overlapping and conflicting findings with respect to the instant proceeding” and the pending district court litigation).

Factor 5—the fifth factor regarding the identity of the parties is neutral and only becomes relevant when the district court defendant and the petitioner are unrelated entities. *See Fintiv*, 2020 WL 2126495, at *6.

The final *Fintiv* factor addressing other considerations weighs against discretionary denial. As detailed herein, the merits of this Petition are strong, and the Challenged Claims are invalid. In addition, this is the first IPR petition challenging the '050 patent. This factor weighs against discretionary denial.

For these reasons, the Board should decline to exercise its discretion under *Fintiv* and should instead institute trial.

XIV. CONCLUSION

For the reasons set forth above, Petitioner respectfully submits that it has demonstrated a reasonable likelihood that it will prevail on one or more of the grounds set forth herein, and the Board should institute review.

Date: September 18, 2023

Respectfully submitted,

/Sanjeet Dutta/

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CERTIFICATE OF COMPLIANCE

Petitioner certifies that the word count in this Petition is 13,987 words, as counted by the word-processing program (Microsoft Word for Office 365) used to generate this Petition, where such word count excludes the table of contents, table of authorities, listing of challenged claims, mandatory notices, certificate of service, appendix of exhibits, and this certificate of word count. This Petition is in compliance with the 14,000 word limit set in 37 C.F.R. § 42.24(a)(1)(i).

Dated: September 18, 2023

By: /Sanjeet Dutta/
Sanjeet Dutta

CERTIFICATE OF SERVICE

The undersigned certifies that a true and correct copy of the foregoing Petition together with Exhibits 1001-1029 has been served on the Patent Owner via Federal Express Next Business Day Delivery at the following correspondence address:

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