

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

GRATUITY SOLUTIONS, LLC and
GRATUITY, LLC

Plaintiffs,

v.

TOAST, INC.

Defendant.

Civil Action No. 1:22-cv-11539

DEFENDANT TOAST, INC.'S PRELIMINARY INVALIDITY CONTENTIONS

Pursuant to the October 13, 2023 Joint Motion to Extend Deadline to Exchange Infringement Contentions and Other L.R. 16.6(d)(4) Patent-Related Disclosures (“Joint Motion to Extend Deadlines”) (D.I. 77) and Local Rule 16.6(d)(4), and in response to Plaintiffs Gratuity Solutions, LLC and Gratuity, LLC’s (collectively, “Plaintiffs” or “Gratuity”) disclosure of asserted claims in their preliminary infringement contentions dated September 1, 2023, Defendant Toast, Inc. (“Toast” or “Defendant”) hereby provides its preliminary invalidity contentions regarding claims 1–13 (the “Asserted Claims”) of U.S. Patent No. 9,741,050 (the “’050 Patent”). As described herein and in the accompanying claim charts, the Asserted Claims are invalid under at least 35 U.S.C. §§ 101, 102, 103 and/or 112.

I. RESERVATION OF RIGHTS

Toast’s preliminary invalidity contentions are based on its current knowledge, understanding, and belief, as well as the information reasonably available to it at this time. Investigation regarding the ’050 Patent and potential grounds for invalidity are ongoing. Further investigation may reveal additional responsive information. Toast reserves the right to supplement these contentions with prior art not included in this disclosure, whether or not now

known to Toast, that may become relevant to invalidity as discovery progresses. This disclosure is made in good faith and is based upon Toast's present understanding of the claims being asserted by Plaintiffs. Subject to L.R. 16.6, the Joint Motion to Extend Deadlines, and 35 U.S.C. § 282(c), Toast reserves the right to amend these disclosures and document production provided herein should Gratuity amend its preliminary infringement contentions or provide any information that it failed to provide in its preliminary infringement contentions. Toast reserves the right to amend the information provided herein, including identifying, charting, and relying on additional documents, source code, and prior art. Toast reserves the right to amend any contentions herein depending on any findings as to the priority or invention date of the Asserted Claims or positions Gratuity or its experts may take concerning claim construction, infringement, or invalidity issues.

Fact discovery in this matter is ongoing, and expert discovery is not scheduled to begin until July 2024. In addition, these contentions are made without the benefit of the Court's claim construction. Moreover, particular constructions adopted by the Court may give rise to additional defenses not reflected herein, including, for example, defenses under 35 U.S.C. § 112. Nothing stated herein shall be construed as an admission or a waiver of any particular construction of any claim term. Nor should anything in these preliminary invalidity contentions be treated as an admission that any of Toast's accused products, or any component thereof, meets any limitation of any of the Asserted Claims. Toast reserves the right, without prejudice, to supplement or amend its preliminary invalidity contentions as additional research is conducted, prior art is discovered, discovery is obtained, modifications are made by Gratuity to its infringement contentions, claim construction positions are taken or orders issued, expert

discovery is obtained, its investigation progresses, and any other reason permitted under the Federal Rules of Civil Procedure, Local Rules, and/or Court's Orders.

Toast's preliminary invalidity contentions are made in a variety of alternatives, are not intended to necessarily be consistent with each other, and should not be otherwise construed. Toast's contentions herein are not, and should in no way be seen as, admissions or adoptions as to any particular claim scope or construction, or as any admission that Toast Tips Manager, Toast Payroll & Team Management, and/or Toast POS¹ (collectively, "Toast Products and Services") meet any particular claim limitation in any particular way. Toast objects to any attempt to imply claim construction from any identification or description of potential prior art. To the extent that the following preliminary invalidity contentions reflect constructions of claim limitations consistent with or implicit in Gratuity's preliminary infringement contentions, and any future amendments and supplements thereto, no inference is intended nor should any be drawn that Toast agrees with Gratuity's interpretation of any claim limitation, and Toast expressly reserves the right to contest Gratuity's interpretation of such claim limitations.

Toast further intends to rely on testimony, source code, and additional documentation to demonstrate the invalidity of the '050 Patent. Additionally, Toast intends to rely on inventor admissions concerning the scope of the prior art relevant to the Asserted Patent found in the prosecution history of the '050 Patent, the testimony of the named inventor on the Asserted Patent, and any other relevant evidence.

¹ Toast discusses the Toast Products and Services because they have been identified by Gratuity in its infringement contentions. In so doing, Toast does not concede that any of the Toast Products and Services, in whole or in part, have been properly accused in the case, particularly to the extent that they include functionality that has nothing to do with technology claimed in the Asserted Claims.

Toast contends that each of the Asserted Claims is invalid at least under 35 U.S.C. §§ 101, 102, 103 and/or 112. Toast's claim charts in Exhibits A through D cite to particular teachings and disclosures of the prior art as applied to features of the Asserted Claims. However, persons having ordinary skill in the art may view an item of prior art generally in the context of their experience, training, other publications, literature, products, and understanding. In addition, the prior art references may also be relied upon to show the state of the art in the relevant time frame. Accordingly, the cited portions are only examples, and Toast reserves the right to rely on portions of the prior art references that are not cited and on other publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context thereto, and as additional evidence that a claim limitation is known or disclosed. Further, to the extent that Toast cites to particular figures in the prior art in its charts, it should be understood that the corresponding description of those cited figures are incorporated by reference.

Toast takes no position on any matter of claim construction in these amended invalidity contentions. If they are consistent with or implicit in Gratuity's infringement contentions, no inference is intended or should be drawn that Toast agrees with such claim constructions. Any statement herein or within the accompanying exhibits describing or tending to describe any claim element is provided solely for the purposes of understanding the relevant prior art. Likewise, such statements concern the prior art and should not be understood to address validity under § 112. Toast expressly reserves the right to propose any claim construction it considers appropriate and/or to contest any claim construction it considers inappropriate.

Toast further reserves all rights to supplement or modify the positions and information disclosed in these invalidity contentions, including without limitation, the prior art and grounds

of invalidity set forth herein, in accordance with the Federal Rules of Civil Procedure, Local Rule 16.6 and/or Court Orders.

II. PRIORITY DATE

Gratuity “bears the burden of establishing that its claimed invention is entitled to an earlier priority date than an asserted prior art reference.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1376 (Fed. Cir. 2016). “To obtain the benefit of the filing date of a parent application, the claims of the later-filed application must be supported by the written description in the parent ‘in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention as of the filing date sought.’” *Anascape, Ltd. v. Nintendo of Am. Inc.*, 601 F.3d 1333, 1335 (Fed. Cir. 2010) (quoting *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997)).

The ’050 Patent is titled “System and Method for Managing Gratuities,” and 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. Gratuity identifies this as the earliest priority date in its preliminary infringement contentions. Inf. Contentions at 2. Without admitting that any asserted claim of the ’050 Patent is entitled to such priority date, Toast applies a priority date of September 4, 2012 for the purpose of these invalidity contentions and accompanying charts.

III. PRIOR ART

Toast identifies the following references as prior art to the ’050 Patent. Toast also incorporates by reference each and every prior art reference disclosed in the ’050 Patent. To the extent they exist, Toast reserves the right to rely upon the foreign counterparts of U.S. patents and U.S. counterparts of foreign patents and foreign patent applications identified below.

A. Patents and Patent Publications

Patent No./Patent Application No. (Primary Inventor)	Filing Date	Date of Issue/Publication	Title
U.S. Patent Application Publication No. 2008/0065396 (Marshall)	September 7, 2006	March 13, 2008	Systems and Methods for Managing Tips and Gratuities
U.S. Patent Application Publication No. 2014/0365322 (Phillips)	March 15, 2013	December 11, 2014	Gratuity Processing System Apparatus and Related Methods
U.S. Patent No. 4,819,612 (Webb)	February 9, 1988	April 4, 1989	Time Clock System Including Scheduling Payroll and Productivity Analysis Capability
U.S. Patent Application Publication No. 2004/0181454 (Manno)	March 12, 2003	September 16, 2004	Web-Based Point-of Sale System
U.S. Patent Application Publication No. 2008/0208696 (Olson)	February 27, 2007	August 28, 2008	Point of Sale System with Web-Based Back-Office

B. Systems in Public Use

Toast identifies the following systems in public use that potentially anticipate and/or render obvious the Asserted Claims of the '050 Patent. Discovery in this case has only just begun, and Toast continues to investigate these prior art products.

Prior Art Items in Public Use	In Public Use At Least By
Evention System	2007
GraTrack Tip Software	2008

In addition, Toast discloses that the Heartland Tip Manager, which was offered for sale and/or sold by Heartland Payment Systems by at least May 23, 2011, anticipates and/or renders

obvious one or more of the Asserted Claims. Documents evidencing the features and functionality of the Heartland Tip Manager system are produced concurrently at TOAST_0718 – TOAST_0723. Toast will supplement its contentions after receiving additional discovery.

In addition, Toast reserves the right to rely on public use, knowledge, sale, or offer for sale of other systems, methods, products, or services disclosed or described in the U.S. and foreign patents and patent applications, articles, and publications identified in Toast’s invalidity contentions.

C. Non-Patent/Background Literature

Toast identifies the following publications, and intends to rely on them either alone and/or in combination with any other prior art references as background art, and/or to illustrate the state of the art at the time of the alleged invention.

Primary Author or Publisher	Reference Title and Citation	Publication Date
Aaron Weiss	“Computing in the clouds,” in netWorker, vol. 11, no. 4, pp. 16–25	December 2007
R.L. Grossman	“The Case for Cloud Computing,” in IT Professional, vol. 11, no. 2, pp. 23–27	March/April 2009
Z. Mahmood & R. Hill	Cloud Computing for Enterprise Architectures	2011
C. Volpe	“POS Software 2011,” Hospitality Newsletter, accessed	December 2010
Levine & Van Wijk	Counting on Computers	1980
A. Liddle	“Service staffs steamed over proposed Calif. Tip-share law,” Nation’s Restaurant News, Vol. 38, No. 15	April 2004
D. Berta	“Operators tip hat to practice of holding gratuities until payday,” Nation’s Restaurant News, Vol. 38, No. 16	April 2004

Primary Author or Publisher	Reference Title and Citation	Publication Date
D. Brown	Restaurant Manager's Handbook, 3rd Edition	2003
B. Leiner	Brief History of the Internet	1996

IV. INVALIDITY OF THE ASSERTED CLAIMS UNDER 35 U.S.C. § 101

Toast maintains its contention that the Asserted Claims are invalid under 35 U.S.C. § 101, as they fail to claim patent-eligible subject matter. Toast incorporates by reference herein the Court's Memorandum and Order (D.I. 48), Toast's Memorandum of Law in Support of its Motion to Dismiss the Complaint (D.I. 14), and Toast's Reply Brief in Support of Its Motion to Dismiss the Complaint (D.I. 33). To reiterate, the claims of the '050 Patent are directed to the abstract idea of collecting, analyzing, and presenting the results of data to allocate tips or gratuities. And the claims of the '050 Patent simply recite the use of a conventional computer and network equipment to carry out the abstract idea, without an "inventive concept" to transform the abstract idea of collecting, analyzing, and presenting the results of data to allocate tips or gratuities into patent eligible subject matter. Accordingly, the Asserted Claims fail the two-part test set forth in *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014).

The framework in *Alice* and *Mayo Collaborative Servs. v. Prometheus Laby's, Inc.*, 566 U.S. 66 (2012), requires that the Court must first determine whether the claims at issue are directed to a patent ineligible concept, such as mental processes, laws of nature, and abstract ideas. If the claims are directed to those concepts, the Court must then determine whether there are additional elements in each claim, both individually and "as an ordered combination," that "transform the nature of the claim" from an abstract idea to a patent-eligible application. *See*

Alice, 573 U.S. at 217. The Court has already determined that the Asserted Claims contain an abstract idea, and Toast incorporates by reference the Court’s reasoning. D.I. 48 at 14–16.

Toast maintains its contention that there are no additional elements in the Asserted Claims that would constitute an “inventive concept” that transforms the claims into patent-eligible subject matter. At step two of the *Alice/Mayo* framework, courts must “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217. As the Federal Circuit has ruled, claim limitations that are “conventional, routine and well understood applications in the art” are not enough to “supply an inventive concept.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1378 (Fed. Cir. 2015); *see also BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1289–90 (Fed. Cir. 2018). And claims that merely implement the abstract idea “on generic computer components, without providing a specific technical solution beyond simply using generic computer concepts in a conventional way” are not inventive for the purposes of *Alice* step two. *In re Killian*, 45 F.4th 1373, 1382–83 (Fed. Cir. 2022) (citing *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350–51 (Fed. Cir. 2016)). The independent claims (claim 1 and 8) of the ’050 Patent list an assortment of generic computer parts (a “server coupled to a computer network,” “a database accessible by the server,” an “application installed on the respective client business system”), without any indication of how these elements improve the computer technologies that collect information to calculate gratuities.

To the extent that Gratuity intends to rely on the Court’s statement that the disclosure of “a cloud computing [gratuity management] system remote from the plurality of client business systems” as indicative of an inventive concept that “saves” the claims (*see* D.I. 48 at 18), the

Court's statement was made at the motion-to-dismiss phase. *Id.* at 19 (“Based on the current record, Gratuity has alleged a plausible claim that the ’050 patent claim limitations describing a remote computer system contain an inventive concept.”). The addition of a cloud computing element to the independent claims is still a generic computer function (i.e., ability to communicate with other devices over a network) that was well known as of the priority date of the ’050 Patent.

Moreover, cloud computing was a well-known and conventional concept as of 2012, the priority date of the ’050 Patent. In its order, the Court did not differentiate between cloud computing and remote computing. *See* D.I. 48 at 18. However, regardless of what computing elements are used to conduct the off-site calculation, the two different methods were well-known and conventional concepts. The act of moving computation “off-site” to a separate location for remote computing had been known for decades and was essentially in ubiquitous usage. Remote computing capabilities were known in the restaurant industry for over four decades, and cloud computing, requiring a pooled data center that performs calculations off-site was also well-known before the priority date. *See, e.g.*, U.S. Patent Application Publication No. 2004/0181454 (Manno) (titled “Web-Based Point-of Sale System”); U.S. Patent Application Publication No. 2008/0208696 (Olson) (titled “Point of Sale System with Web-Based Back-Office”); *see also* references listed in § III.C, *supra*. Hospitality management and restaurant systems were already marketing software with cloud computing elements by 2012.

V. INVALIDITY OF THE ASSERTED CLAIMS UNDER 35 U.S.C. §§ 102 AND 103

As set forth below and in the accompany claim charts, the Asserted Claims are invalid under at least 35 U.S.C. §§ 102 and 103. As a threshold matter, Toast incorporates by reference its Petition for *Inter Partes* Review of U.S. Patent No. 9,741,050 and the Declaration of Samuel H. Russ, Ph.D. in support, and all the arguments for the invalidity of the Asserted Claims therein.

Copies of the petition and Dr. Russ' declaration are being produced herewith at TOAST_0203 – TOAST_0473. *See Toast, Inc. v. Gratuity, LLC*, IPR2023-01408, Paper 1 & Exhibit 1002 (P.T.A.B. Sept. 18, 2023).²

Toast identifies the below prior art that anticipates and/or renders obvious one or more of the Asserted Claims. To the extent a reference below is not cited against a particular asserted claim, Toast nonetheless may rely on the reference as relevant background art in demonstrating the asserted claim as obvious. Toast's future productions of documents may contain additional items of prior art that render one or more of the Asserted Claims invalid. For example, Toast expects to receive documents from third parties who are believed to have knowledge, documentation, and/or corroborating evidence concerning the prior art identified below and additional prior art. Toast may rely on additional prior art references, alone or in combination with any of the references set forth herein or the accompanying charts, as well as witness testimony, to further demonstrate that the Asserted Claims are anticipated and/or obvious.

Toast intends to rely upon any additional prior art references discussed or disclosed in any expert report and/or testimony on the invalidity of the Asserted Claims in light of the prior art and/or knowledge of a person of ordinary skill in the art ("POSITA"),³ in this litigation or any other litigation or proceedings involving the Asserted Claims. Toast also intends to rely on references identified in the file histories of the '050 Patent and related patents or applications.

² Copies of Toast's IPR petition and all accompanying exhibits were previously served on Gratuity's counsel of record in this litigation.

³ 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.

Toast's future productions of documents may contain additional items of prior art that render one or more of the Asserted Claims invalid. For example, Toast expects to receive documents from third parties who are believed to have knowledge, documentation, and/or corroborating evidence concerning the prior art identified below and additional prior art.

The invalidity charts identify for each Asserted Claim where in each item of prior art each limitation of each Asserted Claim is found. Toast submits these invalidity contentions without waiving any position regarding the sufficiency of Gratuity's infringement contentions.

- Exhibit A – Claims 1–13 are anticipated and/or rendered obvious by the Evention System.
- Exhibit B – Claims 1–13 are anticipated and/or rendered obvious by the GraTrack System.
- Exhibit C – Claims 1–13 are anticipated and/or rendered obvious by Marshall, alone or in combination with Webb, Manno, and/or Olson.
- Exhibit D – Claims 1–13 are rendered obvious by Phillips in combination with Marshall, Webb, Manno, and/or Olson.

A. Invalidity of the Asserted Claims Under 35 U.S.C. § 102

To the extent the Asserted Claims are not invalid under § 101, and/or as indefinite, lacking enablement, and/or lacking written description under § 112, Toast contends that at least each of the below cited references, taking into consideration the knowledge of a person of ordinary skill in the art, renders the Asserted Claims invalid under § 102.

Anticipating Prior Art	Priority Date⁴
Evention System	In Public Use / On-Sale by 2007
GraTrack	In Public Use / On-Sale by 2008

⁴ Toast reserves the right to identify additional bases for qualification as prior art for each of the identified references in the event that it is determined that the '050 Patent is not entitled to the claimed priority date.

The table of anticipating references is exemplary, and it does not constitute an admission that any reference not listed above does not also anticipate the claims of the '050 Patent. Further, Toast contends that any prior art reference in the attached charts that is charted for each limitation of any given claim, anticipates that claim, regardless of whether that prior art reference is listed in the above table.

Claim charts included in Exhibits A to D identify specific examples of where each limitation of the Asserted Claims is found in the prior art references. The cited portions of the prior art references identified in the claim charts are exemplary in nature and representative of the content and teaching of the prior art references, and should be understood in the context of the reference as a whole and as they would be understood by a person of ordinary skill in the art. To the extent any item of prior art cited above is deemed not to disclose, explicitly or inherently, any limitation of an Asserted Claim of the '050 Patent, Toast reserves the right to argue that any difference between that prior art and the corresponding patent claim would have been either inherent in the art or obvious to a person of ordinary skill in the art, even if Toast has not specifically denoted that the art is to be combined with the knowledge of a person of ordinary skill in the art.

Toast reserves the right to supplement and/or amend these invalidity contentions based on 35 U.S.C. § 102 as discovery progresses and depending on the claim construction positions taken by Gratuity and the Court's claim construction order.

B. Invalidity of the Asserted Claims Under 35 U.S.C. § 103

To the extent the Asserted Claims are not invalid under § 101 and/or as indefinite, lacking enablement, and/or lacking written description under § 112, Toast contends the Asserted Claims are obvious under § 103 based on at least the following obviousness combinations:

- Marshall, alone or in combination with Webb, Manno, and/or Olson; and
- Phillips in combination with Marshall, Webb, Manno, and/or Olson.

In the claim charts attached as Exhibits A–D, Toast identifies examples of each prior art reference’s disclosures for the limitations of the Asserted Claims. For at least the reasons described in these contentions, it would have been obvious to one of ordinary skill in the art to combine any of a number of prior art references, including any combination of those identified below, along with the knowledge of one of ordinary skill in the art to meet the limitations of the Asserted Claims. Moreover, Toast has not yet completed its search or discovery concerning additional prior art. Thus, Toast’s inclusion of exemplary combinations does not preclude it from identifying other invalidating combinations as appropriate, and Toast reserves the right to identify additional specific combinations as well as to detail and explain such combinations.

To the extent not anticipated, the Asserted Claims represent no more than the result of ordinary variations of the prior art. Toast further believes that no showing of a specific motivation to combine prior art is required to combine the references disclosed above and in the attached charts, as each combination of art would have no unexpected results, and at most would simply represent a known alternative to one of skill in the art. *See KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 415–16 (2007) (rejecting the Federal Circuit’s “rigid” application of the teaching, suggestion, or motivation to combine test, instead espousing an “expansive and flexible” approach). Indeed, the Supreme Court held that a person of ordinary skill in the art is “a person of ordinary creativity, not an automaton” and “in many cases a person of ordinary skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 420–21. Nevertheless, in addition to the information contained elsewhere in these contentions, Toast identifies motivation and reason to combine the cited art.

One or more combinations of the prior art references identified by Toast would have been obvious because these references would have been combined using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or a teaching, suggestion, or motivation in the prior art generally. In addition, it would have been obvious to try combining the prior art references because there were only a finite number of predictable solutions and/or because known work in one field of endeavor prompted variations based on predictable design incentives and/or market forces either in the same field or a different one. Further, the combinations of the prior art references identified above would have been obvious because the combinations represent known potential options with a reasonable expectation of success.

Additional evidence that there would have been a motivation to combine the prior art references identified by Toast includes the interrelated teachings of multiple prior art references; the effects of demands known to the design community or present in the marketplace; the existence of a known problem for which there was an obvious solution encompassed by the Asserted Claims; the existence of a known need or problem in the field of the endeavor at the time of the alleged invention(s); and the background knowledge that would have been possessed by a person having ordinary skill in the art.

Thus, the motivation to combine the teachings of the prior art references disclosed herein is found in the references themselves and also in: (1) the nature of the problem being solved; (2) the express, implied and inherent teachings of the prior art; (3) the knowledge of persons of ordinary skill in the art; (4) the predictable results obtained in combining the different elements of the prior art; (5) the predictable results obtained in simple substitution of one known element for another; (6) the use of a known technique to improve similar devices, methods, or products in

the same way; (7) the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; (8) the finite number of identified predictable solutions that had a reasonable expectation of success; and (9) known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

Additionally, it would be obvious to one of skill in the art to consult and/or combine any of the prior art listed because all of these references relate to the same area of technology (automating and/or computerizing processes relating to POS systems, time management systems, and/or restaurant management computer systems) and/or are from analogous art. The Asserted Claims only unite old elements, well known in the field, with no change in their respective function. Given the interrelated teachings of the prior art, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art, it would have been obvious for one of ordinary skill in the art to combine these familiar elements, disclosed and/or embodied in the prior art listed above to practice the Asserted Claims.

The prior art could have been combined according to methods known to those of ordinary skill within the field of POS systems, time management systems, and/or restaurant management computer systems to yield predictable results. The substitution of one element in a computerized POS, time management, or restaurant management system could have been predictably achieved by one of ordinary skill at the time of the alleged invention. A POSITA would have been aware of these various applications and systems and would have been able to select appropriate attributes of one for inclusion in another. A POSITA could have employed known techniques to improve similar prior art systems in the same way as claimed in the '050 patent.

For example, a POSITA would have been motivated to combine Marshall with one or more of Webb, Manno, and Olson. 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. 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.) And Manno and Olson each disclose implementation of Web-based remote architectures for use in POS systems. (Olson, Abstract; Manno, Abstract.) Given the similarities between Marshall, Webb, Manno, and Olson, along with the implementation of well-known and available computer components as of September 2012, it would have been straightforward for a POSITA to modify Marshall's system based on the teachings of Webb, Manno, and/or Olson. 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.) 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.

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. 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. It would have been straightforward to combine various prior art elements (local servers and remote servers) to achieve these added efficiencies. 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; Manno and Olson each recognize the benefits of offloading local computing requirements through the use of Web-based POS systems. And Webb adds known details to Marshall's disclosure by demonstrating that the time and attendance server can be connected to the POS server. 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.

Similarly, a POSITA would also have been motivated to combine Phillips with one or more of Marshall, Webb, Manno, and Olson. These references are all directed to computerized POS systems. Marshall discloses interfaces between a remote gratuity allocation system and a local POS system and a local time and attendance system, and Manno and Olson similarly disclose the use of remote Web-based POS systems. 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. And Webb discloses a POS system in communication with a time and attendance server.

Based on the similarities of these systems, modifying Phillips—such as by implementing the teachings from Marshall, Webb, Manno, and/or Olson—would have been straightforward for a POSITA. 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. 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. 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, Webb, Manno, and Olson—to achieve the benefits of a remote architecture, including, for example, economies of scale and added security through the use of cloud-based systems.

Accordingly, in light of the disclosure of the prior references, among other bases, one of ordinary skill in the art would have been motivated to combine any number of the references listed above, as all of those references relate to analogous art and use common technology in various applications relating to POS systems, time management systems, and/or restaurant management computer systems.

Any reference or combination of references that anticipates or makes obvious an asserted independent claim also makes obvious any asserted claim dependent on that independent claim, as the element of each dependent Asserted Claim of the '050 patent was known by a person of ordinary skill at the time of the alleged invention, and it would have been obvious to combine those known elements with the independent claims at least as a matter of common sense and routine innovation. Accordingly, Toast contends that each Asserted Claim would have been obvious not only by the combinations described in these contentions, but also by any combination of references that renders obvious an Asserted Claim.

In addition to the specific examples of motivation provided above, Toast reserves the right to rely on the disclosures of the references listed above and in the claim charts attached as Exhibits A–D for additional motivations to combine. The above-identified examples of combinations are given merely to illustrate various motivations to combine and are not intended to provide an exhaustive list of every possible combination to which the motivation may apply.

Toast reserves the right to contend that the above-described motivations to combine apply to other combinations at the appropriate time, i.e., in expert reports regarding invalidity.

VI. INVALIDITY OF THE ASSERTED CLAIMS UNDER 35 U.S.C. § 112

Toast contends that the Asserted Claims of the '050 Patent are invalid under 35 U.S.C. § 112 for lack of indefiniteness, lack of written description, and/or lack of enablement. Toast reserves the right to amend and/or supplement these disclosures based on further investigation and discovery, including through expert discovery.

A. Lack of Enablement and/or Written Description Under 35 U.S.C. § 112, ¶ 1

The Asserted Claims of the '050 Patent are invalid under 35 U.S.C. § 112, ¶ 1 because the '050 Patent specification fails to provide adequate written description and/or fails to provide a sufficiently full and clear description that allows a POSITA to make and use the full scope of the claimed invention without undue experimentation as of the priority date of the '050 Patent. A patent specification must “reasonably convey[] to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Juno Therapeutics, Inc. v. Kite Pharma, Inc.*, 10 F.4th 1330, 1335 (Fed. Cir. 2021), *cert. denied*, 143 S. Ct. 402 (2022), *reh’g denied*, 143 S. Ct. 631 (2023). A patent specification must additionally “teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.” *MagSil Corp. v. Hitachi Glob. Storage Techs., Inc.*, 687 F.3d 1377, 1380 (Fed. Cir. 2012) (internal quotation omitted).

Based on Toast’s present understanding of Gratuity’s asserted scope of the claims of the '050 Patent, to the extent such positions can be understood from Gratuity’s infringement contentions, the Asserted Claims of the '050 Patent are invalid under § 112, ¶ 1 for reciting at least the following claim terms, phrases, or limitations that lack enablement or sufficient written description:

- “point of sale server” (claim 1, claim 8);
- “wherein the gratuity sync client application on each client business system is configured to extract transaction information and employee information from the client business system” (claim 1);
- “wherein the gratuity management system is further configured to . . . determine a gratuity allocation . . . and return the gratuity allocation to the gratuity sync client application of each respective client business system (claim 1)/ “wherein the payment management system is further configured to . . . generate payment information and return the payment information to the interface component of respective client business systems” (claim 8);
- “wherein the respective gratuity sync client business systems comprises additional devices which are connected to and accessible by the gratuity sync client application” (claim 4);
- “[a] system for providing payment management services to a plurality of clients” (claim 8);
- “a payment management computer system having a server and a database being accessible by a plurality of clients” (claim 8);
- “a plurality of business systems in electronic communication with the payment management computer system” (claim 8);
- “wherein the interface component on each client business system is configured to extract at least one of transaction information and employee information from the client business system and to initiate transfer of the extracted information to the payment management computer system” (claim 8);
- “wherein the payment management computer system is a cloud computing system remote from the plurality of client business systems and configured to receive the extracted information from the plurality of client business systems and to store the received extracted information in the database” (claim 8); and
- “wherein the respective client business system comprises additional devices which are connected to and accessible by the point of sale server” (claim 11).

These claim terms, phrases, and limitations, as apparently construed by Gratuity, fail to satisfy the enablement and/or written description requirements of 35 U.S.C. § 112, ¶ 1. This is at least because the specification of the '050 Patent demonstrates that the patentee neither conceived of nor demonstrated possession of all that Gratuity now contends the claims cover. In

addition, based on Toast's present understanding of Gratuity's infringement contentions, each of the claims of the '050 Patent in which these claim terms, phrases, and limitations appear is invalid because the specification fails to provide sufficient disclosure to enable a person of ordinary skill in the art to which it pertains, or with which it is most nearly connected to, to implement the alleged invention without undue experimentation.

B. Indefiniteness Under 35 U.S.C. § 112, ¶ 2

The Asserted Claims of the '050 Patent are indefinite under 35 U.S.C. § 112, ¶ 2 for failing to particularly point out and distinctly claim the subject matter which the applicants regard as their invention. Under 35 U.S.C. § 112, ¶ 2, "a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014).

Based on Toast's present understanding of Gratuity's asserted scope of the claims of the '050 Patent, to the extent such positions can be understood from Gratuity's infringement contentions, Toast asserts that the Asserted Claims of the '050 Patent are invalid under § 112, ¶ 2 for reciting at least the following claim terms, phrases, or limitations:

- "installed on the respective client business system" (claims 1, 8);
- "initiate transfer" (claims 1, 8);
- "the respective gratuity sync client business systems" (claims 4, 9); and
- "additional devices" (claims 4, 5, 7, 11, 12).

Based on Toast's present understanding of Gratuity's infringement contentions, at least one or more of these claim terms, phrases, and limitations are indefinite because they are inconsistent with and broader than the alleged invention disclosed in the specification and during prosecution, and given Gratuity's apparent constructions of the claims, any person of ordinary

skill in the art at the time of the invention would not understand what is claimed with reasonable certainty, even when the claims are read in light of the specification and prosecution history. Despite the indefiniteness of the claims, the prior art references described in these contentions, alone or in combination with other prior art references, render the claims invalid under any reasonable interpretation of the claims.

C. Indefiniteness Under 35 U.S.C. § 112, ¶ 6

Under 35 U.S.C. § 112, ¶ 6, “[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” In construing a means-plus-function claim, the first step is to “identify the claimed function,” and the second step is to “determine what structure, if any, disclosed in the specification corresponds to the claimed function.” *Rain Computing, Inc. v. Samsung Elecs. Am., Inc.*, 989 F.3d 1002, 1007 (Fed. Cir. 2021). If the claim term is a computer-implemented means-plus-function limitation, the “second step generally further requires that the specification disclose the algorithm that the computer performs to accomplish that function.” *Id.*; *see also Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008). Absent such structure, the claim is invalid as indefinite. *See WSOU Invs. LLC v. Google LLC*, No. 2022-1064, 2023 WL 6531525, at *1 (Fed. Cir. Oct. 6, 2023).

At least claims 1 and 8 of the '050 Patent are invalid under 35 U.S.C. § 112, ¶ 6 because the claims contain means-plus-function claim terms that have no corresponding structure. Toast identifies the following claim limitations that are invalid as lacking corresponding structure:

- “wherein the gratuity sync client application on each client business system is configured to extract transaction information and employee information from the

client business system and to initiate transfer of the extracted information to the gratuity management system” (claim 1);

- “wherein the gratuity management system is a cloud computing system remote from the plurality of client business systems and configured to receive the extracted transaction information and employee information from the plurality of client business systems and to store the received extracted information in the database” (claim 1);
- “wherein the interface component on each client business system is configured to extract at least one of transaction information and employee information from the client business system and to initiate transfer of the extracted information to the payment management computer system” (claim 8); and
- “wherein the payment management computer system is a cloud computing system remote from the plurality of client business systems and configured to receive the extracted information from the plurality of client business systems and to store the received extracted information in the database” (claim 8).

Claims 1 and 8 of the '050 Patent recite either a “gratuity sync client application” (claim 1) or an “interface component” (claim 8) that is “*configured to extract transaction information and employee information from the client business system and to initiate transfer of the extracted information.*” However, the '050 Patent specification fails to provide any support, such as an algorithm, for how the claimed function of being configured to extract and initiate transfer of extracted information occurs. *See Rain Computing*, 989 F.3d at 1006 (finding claim reciting “ending, to the user, a user identification module configured to control access of said one or more software application packages” invalid under § 112, ¶ 6, because the claim language and written description did not provide an algorithm to achieve the claimed function).

Similarly, claims 1 and 8 of the '050 Patent both recite “a cloud computing system remote from the plurality of client business systems and *configured to receive the extracted information from the plurality of client business systems and to store the received extracted information in the database.*” Again, the '050 Patent fails to provide a sufficient corresponding structure, such as an algorithm, for the cloud computing system’s claimed function of being

configured to extract and initiate transfer of extracted information. Therefore, for at least these reasons, claims 1 and 8 of the '050 Patent are invalid as indefinite under § 112, ¶ 6.

* * *

Toast reserves the right to supplement, amend, and/or modify these § 112 invalidity contentions as discovery progresses and as Gratuity provides its proposed constructions for claim terms. Toast further reserves the right to assert indefiniteness in connection with claim construction in this case.

VII. ACCOMPANYING DOCUMENT PRODUCTION

Pursuant to Local Rule 16.6(d)(4) (G), Toast will be producing copies of any prior art references that it is relying on for these invalidity contentions. Toast reserves the right to supplement this document production, should Toast later find additional responsive documents.

Dated: October 24, 2023

/s/ Andrew Ong

Srikanth K. Reddy (BBO # 669264)

Kate E. MacLeman (BBO # 684962)

Tara R. Thigpen (BBO # 707508)

Anna S. Zhou (BBO# 711776)

GOODWIN PROCTER LLP

100 Northern Avenue

Boston, Massachusetts 02210

Tel.: (617) 570-1000

Fax: (617) 523-1231

SReddy@goodwinlaw.com

KMacLeman@goodwinlaw.com

TThigpen@goodwinlaw.com

AZhou@goodwinlaw.com

Andrew Ong (admitted *pro hac vice*)

GOODWIN PROCTER LLP

601 Marshall Street

Redwood City, CA 94063

Tel.: (650) 752-3100

Fax: (617) 853-1038

aong@goodwinlaw.com

Attorneys for Defendant

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing was served by email upon Plaintiffs' counsel by consent of the parties this 24th day of October 2023.

/s/ Andrew Ong
Andrew Ong