

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTUIT INC.,

Petitioner,

v.

IQX CORP.,

Patent Owner.

Inter Partes Review No. IPR2027-00018
Patent 12,368,799 B2

**DECLARATION OF BENJAMIN B. BEDERSON, PH.D. IN SUPPORT
OF PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT 12,368,799**

TABLE OF CONTENTS

	Page
I. Introduction.....	7
II. Background and Qualifications	7
III. Compensation and Relationship with Parties	16
IV. Materials Considered	16
V. Basis of Opinions Formed	20
A. Level of Ordinary Skill in the Art	20
VI. The '799 Patent.....	22
A. Purported Invention of the '799 Patent	22
B. Prosecution History	34
C. Effective Filing Date of the Challenged Claims	38
VII. Claim Construction.....	43
A. Legal Standard for Claim Construction	43
VIII. Obviousness Standard.....	43
IX. Analysis of the Technical Basis Underlying the Grounds of Rejection Set Forth in the Petition for <i>Inter Partes</i> Review	48
A. State of the Art	48
1. Third-Party Content and Sign-Up Forms Embedded in Merchant Web Pages	49
2. Permission-Based E-Mail and Text-Message Marketing	52
3. Personalized Links and Dynamically Generated Web Pages	54

4.	Tracking Recipient Engagement and Segmenting Recipients.....	56
5.	Mobile Messaging Formats: SMS, EMS, MMS, and RCS	59
6.	Machine Learning for Targeting and Recommendations.....	62
B.	Specific References that Render the Claims Obvious	63
1.	U.S. Patent Application Publication No. 2007/0150588 to Ghadialy et al.	63
2.	U.S. Patent Application Publication No. 2012/0310752 to Gaddis	68
3.	U.S. Patent Application Publication No. 2018/0365723 to Lentz	72
4.	U.S. Patent Application Publication No. 2005/0228899 to Wendkos et al.....	76
5.	U.S. Patent Application Publication No. 2005/0278231 to Teeter	80
6.	Motivation to Combine Ghadialy with Gaddis.....	83
7.	Motivation to Combine Ghadialy and Gaddis with Lentz.....	87
8.	Motivation to Combine Wendkos with Teeter	91
9.	Motivation to Combine Wendkos and Teeter with Lentz.....	93
10.	Secondary Considerations.....	95
C.	Ground 1: Claims 1-30 Are Rendered Obvious by Ghadialy in View of Gaddis, Lentz, and the General Knowledge of a POSITA	95
1.	Independent Claim 1	95

a.	Ghadyaly Discloses 1[pre]	95
b.	Ghadyaly Discloses 1[a].....	99
c.	Ghadyaly Discloses 1[b]	99
d.	Ghadyaly Discloses 1[c].....	100
e.	Ghadyaly in View of Gaddis Discloses 1[d].....	105
f.	Ghadyaly in View of Gaddis Discloses 1[e]	110
g.	Ghadyaly in View of Gaddis Discloses 1[f]	113
h.	Ghadyaly in View of Gaddis Discloses 1[g].....	116
2.	Independent Claims 12 and 22.....	119
3.	Dependent Claims	122
a.	Ghadyaly in View of Gaddis and Lentz Discloses Claims 2, 13, and 23.....	122
b.	Ghadyaly in View of Gaddis and Lentz Discloses Claims 3, 14, and 24.....	126
c.	Ghadyaly in View of Gaddis and Lentz Discloses Claim 4	128
d.	Ghadyaly in View of Gaddis and Lentz Discloses Claims 5, 15, and 25.....	133
e.	Ghadyaly in View of Gaddis and Lentz Discloses Claims 6 and 16.....	135
f.	Ghadyaly in View of Gaddis and Lentz Discloses Claims 7, 17, and 26.....	137
g.	Ghadyaly in View of Gaddis Discloses Claims 8, 18, and 27	140
h.	Ghadyaly in View of Gaddis Discloses Claims 9, 19, and 28	142

i.	Ghadialy in View of Gaddis Discloses Claims 10, 20, and 29	144
j.	Ghadialy in View of Gaddis and Lentz Discloses Claims 11, 21, and 30.....	146
D.	Ground 2: Claims 1-30 Are Rendered Obvious by Wendkos in View of Teeter, Lentz, and the General Knowledge of a POSITA	151
1.	Independent Claim 1	151
a.	Wendkos Discloses 1[pre].....	151
b.	Wendkos Discloses 1[a]	152
c.	Wendkos Discloses 1[b]	153
d.	Wendkos Discloses 1[c]	154
e.	Wendkos Discloses 1[d]	157
f.	Wendkos in View of Teeter Discloses 1[e].....	159
g.	Wendkos in View of Teeter Discloses 1[f]	162
h.	Wendkos in View of Teeter Discloses 1[g]	164
2.	Independent Claims 12 and 22.....	168
3.	Dependent Claims	169
a.	Wendkos in View of Teeter and Lentz Discloses Claims 2, 13, and 23.....	169
b.	Wendkos in View of Teeter and Lentz Discloses Claims 3, 14, and 24.....	172
c.	Wendkos in View of Teeter and Lentz Discloses Claim 4	174
d.	Wendkos in View of Teeter and Lentz Discloses Claims 5, 15, and 25.....	176

e.	Wendkos in View of Teeter and Lentz Discloses Claims 6 and 16.....	178
f.	Wendkos in View of Teeter and Lentz Discloses Claims 7, 17, and 26.....	179
g.	Wendkos in View of Teeter Discloses Claims 8, 18, and 27	180
h.	Wendkos in View of Teeter Discloses Claims 9, 19, and 28	182
i.	Wendkos in View of Teeter Discloses Claims 10, 20, and 29	183
j.	Wendkos in View of Teeter and Lentz Discloses Claims 11, 21, and 30.....	185
X.	Conclusion	187

I, Benjamin B. Bederson, Ph.D., declare as follows:

I. INTRODUCTION

1. I have been asked by the party requesting this review, Intuit Inc. (“Petitioner”), to provide my expert opinions in support of the above-captioned petition for *inter partes* review of U.S. Patent No. 12,368,799 (the “’799 patent” or the “challenged patent”), challenging the patentability of claims 1-30 of the ’799 patent.

2. I currently hold the opinions set forth in this declaration.

3. In summary, it is my opinion that the references cited and discussed below render obvious the challenged claims of the ’799 patent. My detailed opinions on the claims are set forth below.

II. BACKGROUND AND QUALIFICATIONS

4. In the paragraphs below, I provide a summary of my qualifications. My curriculum vitae, which includes a more detailed summary of my background, experience, and publications, is attached as EX1004.

5. I received a Bachelor of Science degree in Computer Science with a minor in Electrical Engineering from Rensselaer Polytechnic Institute (“RPI”) in 1986. I received a Master of Science degree and a Ph.D. in Computer Science from New York University (“NYU”) in 1989 and 1992, respectively.

6. Since 1998, I have been a Professor of Computer Science at the University of Maryland (“UMD”), where I have had joint appointments at the Institute for Advanced Computer Studies and the College of Information Studies (Maryland’s “iSchool”) and am currently Professor Emeritus. I was also Associate Provost of Learning Initiatives and Executive Director of the Teaching and Learning Transformation Center from 2014 to 2018. I am a member and previous director of the Human-Computer Interaction Lab (“HCIL”), the oldest and one of the best known Human-Computer Interaction (“HCI”) research groups in the country.

7. For more than 30 years, I have studied, designed, and worked in the field of computer science and human-computer interaction. My experience includes 30 years of teaching and research, with research interests in human-computer interaction and the software and technology underlying today’s interactive computing systems. This includes the design and implementation of user interfaces and software applications using a wide range of technologies including web servers and websites, databases, embedded systems, and mobile devices, including smart phones and PDAs.

8. I was co-founder and Chief Scientist of Zumobi, Inc. from 2006 to 2014, a Seattle-based startup that is a publisher of content applications and advertising platforms for smartphones. Zumobi was a VC-funded startup for mobile apps and advertising. I served as its VP Client Technologies from

September 2006 to January 2008 and as its Chief Scientist from January 2008 to October 2014. Zumobi created its own advertising platform called Zumobi Brand Integration (ZBi) that included both the ability to incorporate third party advertisements as well as include its own. The platform included the ability to have links from ads to associated content as well as links to ads. Users could share advertisements with friends and include user generated content with the ads. All of these user engagement interactions were tracked.

9. I am also co-founder and co-director of the International Children's Digital Library ("ICDL"), a web site launched in 2002 that provides the world's largest collection of freely available online children's books from around the world with an interface aimed to make it easy for children and adults to search and read children's books online. I was also co-founder and prior Chief Technology Officer of Hazel Analytics from 2014 to 2023, a data analytics company. In addition, I have for more than 25 years consulted for numerous companies in the area of user interfaces, including EPAM, Lockheed Martin, Logitech, Microsoft, NASA Goddard Space Flight Center, the Palo Alto Research Center, and Sony.

10. At UMD, my research has been in the area of HCI, a field that relates to the development and understanding of computing systems to serve users' needs. Researchers in this field are focused on making universally usable, useful, efficient, and appealing systems to support people in their wide range of activities.

My approach is to balance the development of innovative technology that serves people's practical needs. I have combined my hardware and software skills throughout my career in HCI research, building various interactive electrical and mechanical systems that couple with software to provide an innovative user experience. Example systems that I have built include Pad++ (1994 software for zoomable user interfaces), KidPad (1997 software to support children collaboratively writing stories), PadPrints (1998 software to graphically show interactive web browsing histories), PhotoMesa (2001 software for end users to browse personal photos), Pocket PhotoMesa (2004 software for browsing of personal photos on a mobile device), DateLens (2002 software for end users to use their mobile devices to efficiently access their calendar information), LaunchTile (2005 "home screen" software for mobile devices to allow users to navigate apps in a zoomable environment), SpaceTree (2001 software for end users to efficiently browse very large hierarchies), ICDL (as described above), and StoryKit (a 2009 iPhone app for children to create stories).

11. My work on mobile devices includes software that I have publicly deployed. For example, DateLens, a calendar program for PDAs, was put on the Web in July 2002, and StoryKit, an iPhone app for children and their elders to create new books, was put in the iPhone App Store in August 2009. I am a named inventor on U.S. patents relating to mobile devices and third party content,

including U.S. Patent No. 9,778,810 (“Techniques to modify content and view content on mobile devices”), U.S. Patent No. 11,061,524 (“Techniques to modify content and view content on a mobile device”), and U.S. Patent No. 10,019,963 (“Systems and methods for adaptive third party content”). I have also given invited talks on mobile topics, including “Designing for Usability” at the Mobile Marketing Association (New York, June 2007), “Mobile Technology Trends” (Knight Center for Specialized Journalism, September 2007), “Mobile Widget Design” (Widget Summit, October 2007), and “Next Generation Mobile UI” (Web 2.0 Expo, April 2008).

12. Pad++ included a custom web browser that I built from scratch and distributed as open source software at the Pad++ web site. That web browser was described in numerous publications including “Pad++: A Zoomable Graphical Interface for Exploring Alternate Interface Physics.” I implemented a rendering engine from scratch for that web browser which supported the version of HTML available at the time (HTML 1.0) as well as an embedded scripting language. That web browser included the ability to display embedded web pages created by the scripting language that could be zoomed along with the rest of the pages.

13. By 1998, my team had combined Pad++ with Netscape Navigator (a standard web browser of the time) to offer a graphical web history, visually showing what pages a user had visited with an application we called “PadPrints.”

We did this by implementing a web “proxy,” which was a standard way at the time to modify the built-in behavior of web browsers. Some proxies work by intercepting all web traffic coming from and going to a web browser. Once intercepted, the proxy can do whatever it wants with the traffic, caching it for better performance, simply passing the traffic through and monitoring it, modifying the data itself, or holding that connection and opening new connections. PadPrints’ proxy worked by monitoring the traffic and letting PadPrints know what the user was doing so PadPrints could display the web history.

14. At the International Children’s Digital Library (ICDL), I have since 2002 been the technical director responsible for the design and implementation of the web site, www.childrenslibrary.org (originally at www.icdlbooks.org). In particular, I have been closely involved in designing the user interface as well as the software architecture for the web site since its inception in 2002.

15. The ICDL GUI was designed for children to be able to construct searches consisting of combining multiple query terms including pre-defined metadata as well as open keywords. The GUI, as illustrated in the screenshot below included buttons around the periphery. When multiple buttons were pressed (or a keyword was entered), those terms would be ANDed together, sent to the server to perform the query, and the results were displayed in the center where the covers of the books were displayed, eight at a time. Pressing the right arrow used AJAX web

technology to dynamically retrieve and display the next 8 book covers from the server without having to reload the entire page. We switched from a similar-looking version of this interface to this AJAX-based approach in about 2006. The ICDL included URL parameters that were used to customize the page and to control navigation and search results.



Screenshot of Int'l Children's Digital Library,
<http://www.childrenslibrary.org/icdl/SimpleSearchCategory?ids=25&langid=1&pnum=1&cnum=1&text=&lang=English&ilang=English> (screenshot taken Feb. 19, 2017).

16. Beginning in the mid-1990s, I have been responsible for the design and implementation of numerous other web sites in addition to the ICDL. For example, I designed and built my own professional web site when I was an Assistant Professor of Computer Science at the University of New Mexico in 1995, and I have continued to design, write the code for, and update both that site (which I moved to the University of Maryland in 1998) and numerous project web sites, such as Pad++. *See* Benjamin B. Bederson, Personal Web Site, <http://www.cs.umd.edu/~bederson/> (last visited Oct. 18, 2026); Pad++ Project Web Site, <http://www.cs.umd.edu/hcil/pad++/> (last visited Oct. 18, 2026).

17. I started a new web-based project in 2009 to bring people together on a website to collaboratively translate text for children's books from one language to another. This resulted in numerous publications, including a 2011 paper that described a second generation of this work. In the numerous versions of this project, we used several web-based collaboration techniques, including by synchronous and asynchronous collaboration—allowing people to see the work of others on their own views of our website either immediately as others were doing the work (synchronously) or later after they had completed the work (asynchronously).

18. My work has been published extensively in more than 160 technical publications, and I have given about 100 invited talks, including 9 keynote

lectures. I have won a number of awards including the Brian Shackel Award for “outstanding contribution with international impact in the field of HCI” in 2007, and the Social Impact Award in 2010 from Association for Computing Machinery’s (“ACM”) Special Interest Group on Computer Human Interaction (“SIGCHI”). ACM is the primary international professional community of computer scientists, and SIGCHI is the primary international professional HCI community. I have been honored by both professional organizations. I am an “ACM Distinguished Scientist,” and I am a member of the “CHI Academy,” an honorary group of individuals who have made substantial contributions to the field of human-computer interaction. I have received two “Test of Time” awards from IEEE InfoVis for my 2001 and 2002 work on visualizing hierarchies, including those containing digital photos. I received the Janet Fabri Memorial Award for Outstanding Doctoral Dissertation for my Ph.D. work in robotics and computer vision.

19. I have appeared on radio shows numerous times to discuss issues relating to user interface design and people’s use and frustration with common technologies, web sites, and mobile devices. My work has been discussed and I have been quoted by mainstream media around the world over 120 times, including by the New York Times, the Wall Street Journal, the Washington Post, Newsweek,

the Seattle Post-Intelligencer, the Independent, Le Monde, NPR's All Things Considered, New Scientist Magazine, and MIT's Technology Review.

20. I have designed, programmed, and publicly deployed dozens of user-facing software products that have cumulatively had millions of users. I am the co-inventor of 14 U.S. patents and 20 U.S. patent applications.

21. Since 2009, I have consulted as an expert witness, largely for patent infringement cases, for a range of clients.

III. COMPENSATION AND RELATIONSHIP WITH PARTIES

22. I am being compensated for my time. This compensation is not contingent upon my performance, the outcome of this matter, or any issues involved in or related to this matter.

23. I have no financial interest in Petitioner or any related parties. I have been informed that iQX Corp. ("iQX" or "Patent Owner") owns the challenged patent. I have no financial interest in the outcome of this proceeding. I similarly have no financial interest in the challenged patent.

IV. MATERIALS CONSIDERED

24. I have reviewed and considered, in the preparation of this declaration, the following documents related to the challenged patent:

- the '799 patent (EX1001);
- the prosecution file history of the '799 patent, Application No. 18/984,041 (EX1002);

- U.S. Provisional Patent Application No. 62/737,315 (EX1005);
- International Publication No. WO 2020/068911 A1 (EX1006);
- U.S. Patent No. 11,765,262 (EX1007); and
- U.S. Patent No. 12,126,752 (EX1008).

25. I have also reviewed and understand various references as discussed herein, including the following:

- U.S. Patent Application Publication No. 2007/0150588 to Ghadialy et al. (“Ghadialy”) (EX1009);
- U.S. Patent Application Publication No. 2012/0310752 to Gaddis (“Gaddis”) (EX1010);
- U.S. Patent Application Publication No. 2018/0365723 to Lentz (“Lentz”) (EX1011);
- U.S. Patent Application Publication No. 2005/0228899 to Wendkos et al. (“Wendkos”) (EX1012); and
- U.S. Patent Application Publication No. 2005/0278231 to Teeter (“Teeter”) (EX1013).

26. I understand that the paragraph immediately above lists references that form the basis for the grounds for invalidity set forth in the Petition for *Inter Partes* Review of the challenged patent.

27. I understand that, for purposes of determining whether a reference will qualify as prior art, the relevant date is the effective filing date of the claimed

invention, which is determined claim by claim. I understand that no claim of the '799 patent is entitled to an effective filing date earlier than September 27, 2018, the filing date of Provisional Application No. 62/737,315. As I explain in Section VI.C, in my opinion claims 2-5, 7, 9-11, 13-15, 17, 19-21, 23-26, and 28-30 are not entitled to an effective filing date earlier than September 25, 2024, and claims 8, 18, and 27 are not entitled to an effective filing date earlier than September 25, 2019. The three references on which Ground 1 relies, Ghadially, Gaddis, and Lentz, were each filed before September 27, 2018, Wendkos and Teeter, on which Ground 2 relies together with Lentz, were each published in 2005. EX1009, Cover; EX1010, Cover; EX1011, Cover; EX1012, Cover; EX1013, Cover.

28. Additionally, I am aware of prior and contemporary information relevant to the subject matter of the challenged patent and generally available to, and relied upon by, a person of ordinary skill in the art (a "POSITA") to describe the state of the art as of the effective filing date of the challenged patent, including technical dictionaries, articles, and other technical reference materials (including, for example, textbooks, manuals, technical papers, articles, and relevant technical standards), such as:

- ETSI TS 123 040 V3.5.0 (2000-07), Universal Mobile Telecommunications System (UMTS); Technical realization of the Short Message Service (SMS) (3G TS 23.040 version 3.5.0 Release 1999) (EX1014);

- U.S. Patent Application Publication No. 2003/0040300 to Le Bodic et al. (EX1015);
- GSMA RCC.71, RCS Universal Profile Service Definition Document, Version 2.0 (June 28, 2017) (EX1016);
- Google Messages Help, “Turn on RCS chats in Google Messages” (Internet Archive capture dated March 3, 2024) (EX1017);
- Google, RCS Business Messaging Developer Docs, “Events” (Internet Archive capture dated May 27, 2022) (EX1018);
- U.S. Patent No. 9,298,844 to Graff et al. (EX1019);
- U.S. Patent No. 11,720,919 to Longo et al. (EX1020);
- Yotpo Support, “Setting User Actions with Yotpo SMS & Email Texts as Rules in Segments” (Internet Archive capture dated April 20, 2024) (EX1021);
- Daniel Billsus & Michael J. Pazzani, Learning Collaborative Information Filters, *in* Recommender Systems: Papers from the 1998 AAAI Workshop, AAAI Technical Report WS-98-08, at 24-28 (AAAI 1998) (EX1022);
- Xiaoyuan Su & Taghi M. Khoshgoftaar, A Survey of Collaborative Filtering Techniques, *Advances in Artificial Intelligence*, vol. 2009, Article ID 421425 (2009) (EX1023);
- U.S. Patent Application Publication No. 2016/0342997 to De Tella et al. (EX1024);
- Facebook for Developers, Messenger Platform Documentation, “Checkbox Plugin” (Internet Archive capture dated February 23, 2017) (EX1025);

- U.S. Patent Application Publication No. 2015/0100483 to Schoenberg (EX1026);
- Shopify Help Center, “Abandoned checkouts” (Internet Archive capture dated August 26, 2019) (EX1027);
- Postscript, “Guide to Abandoned Cart Automations” (Internet Archive capture dated November 29, 2021) (EX1028);
- Tyche Softwares, “Woocommerce Abandon Cart Pro” (Internet Archive capture dated September 21, 2014) (EX1029);
- U.S. Patent No. 12,200,165 (EX1030); and
- U.S. Application No. 18/896,197, as filed September 25, 2024 (EX1031).

29. I reserve the right to supplement my opinions to address any information obtained, or positions taken, based on any new information that comes to light throughout this proceeding.

V. BASIS OF OPINIONS FORMED

A. Level of Ordinary Skill in the Art

30. It is my understanding that the challenged patent is to be interpreted based on how it would be understood by a POSITA at the time of the effective filing date of the application. It is my understanding that factors such as the education level of those working in the field, the sophistication of the technology, the types of problems encountered in the art, the prior art solutions to those

problems, and the speed at which innovations are made may help establish the level of skill in the art.

31. I am familiar with the technology at issue and the state of the art at the effective filing date of the challenged patent, which, as I explain in Section VI.C, is no earlier than September 27, 2018 for any claim, no earlier than September 25, 2019 for claims 8, 18, and 27, and no earlier than September 25, 2024 for claims 2-5, 7, 9-11, 13-15, 17, 19-21, 23-26, and 28-30.

32. In my opinion, a POSITA would have had a bachelor's degree in computer science, computer engineering, electrical engineering, or a comparable discipline, together with approximately two years of professional experience in the design, development, or implementation of web-based or mobile messaging, electronic commerce, or online transaction systems. Additional education could have substituted for professional experience, and significant work experience could have substituted for formal education.

33. I consider myself to have at least such ordinary skill in the art with respect to the subject matter of the challenged patent at the time of the effective filing date.

VI. THE '799 PATENT

34. The '799 patent is entitled “Automated Silent Network Authentication Protocol.” The '799 patent includes claims 1-30, all of which are challenged in the Petition for *Inter Partes* Review.

A. Purported Invention of the '799 Patent

35. The '799 patent states that it “relates generally to the field of security and access control for cellular handheld devices,” and more specifically to “techniques for performing transactions using dynamically generated customized webpages.” EX1001, 1:29-36.

36. According to the '799 patent specification, the prior art had two shortcomings. First, the popularity of online transactions “resulted [in] increased incidents of fraud and other criminal activity,” which “undermines people’s trust.” *Id.*, 1:40-45. Second, “many webpages or websites have largely static content that is presented or served to all visitors,” and this “one-size-fits-all approach” “often results in a cumbersome user experience.” *Id.*, 1:46-57.

37. The '799 patent describes a computer that “receives information specifying activation of a hosted field in a document associated with a third party (or potential client), where the information specifies a willingness to receive one or more messages from the computer and specifies a telephone number.” *Id.*, 7:32-37. In response, the computer “dynamically generates a customized second

document that includes information about one or more transactions (such as one or more upcoming events) of interest to an individual (or potential subscriber customer) associated with the telephone number.” *Id.*, 7:37-42. The computer then “sends a message to an address corresponding to the telephone number, where the message includes a link to the customized second document,” and, when it “receives information specifying activation of the link from an electronic device,” it “provides information specifying the customized second document to the electronic device for display.” *Id.*, 7:42-49.

38. One of the stated objectives of the ’799 patent is to “simplify the user experience, thereby increasing the likelihood that the individual (or potential subscriber customer) conducts the given transaction.” *Id.*, 7:50-61.

39. Figure 1 of the ’799 patent shows the components of the system: electronic devices 110 (such as a computer, a cellular telephone, or a tablet computer), a computer 112 (such as a cloud-based server), and a hosting computer 114, which communicate over a network 116 such as the Internet and, optionally, a cellular-telephone network 118. *Id.*, 8:34-51, Fig. 1. Computer 112 “may inject a hosted field into a document provided by hosting computer 114,” for example by providing the hosted field “for inclusion in a webpage associated with a third party (i.e., that is other than a provider of the communication technique).” *Id.*, 8:52-58. The hosted field allows a user “to indicate a willingness to receive one or more

messages from computer 112 and that specifies a telephone number.” *Id.*, 8:64-9:1.

40. When the user activates the hosted field and provides a telephone number, that information reaches computer 112, which “may dynamically generate a customized second document (such as a webpage)” and “may send a message to an address corresponding to the telephone number, where the message includes a link to the customized second document.” *Id.*, 9:2-20. The message “may include an SMS message (which is sometimes referred to as a ‘text message’).” *Id.*, 9:22-24. When the user activates the link, computer 112 provides the customized second document to the user’s device for display. *Id.*, 9:25-37. Computer 112 may also provide “authentication information (such as an authentication cookie)” to the device “to authenticate completion of a given transaction.” *Id.*, 9:37-45.

41. Figure 2 of the ’799 patent, reproduced below, is a flow diagram of “method 200 for dynamically generating a customized document.” *Id.*, 12:18-21, Fig. 2. The computer receives information specifying activation of the hosted field (operation 210), dynamically generates the customized second document (operation 212), sends a message with a link to that document (operation 214), receives information specifying activation of the link (operation 216), and provides the customized second document to the electronic device for display (operation 218). *Id.*, 12:21-48.

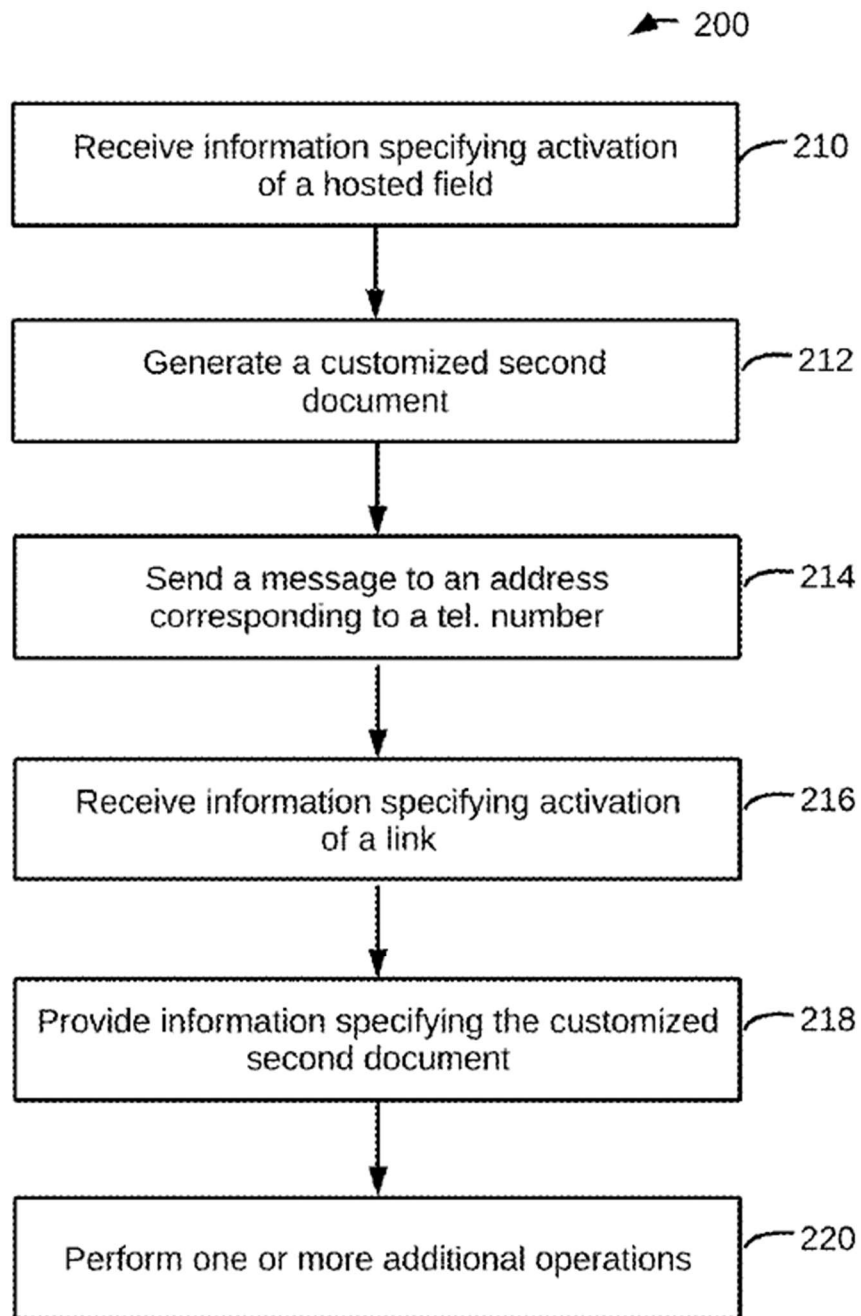


FIG. 2

The customized second document “may allow completion of a given transaction in the one or more transactions, such as purchasing one or more tickets to an upcoming event.” *Id.*, 12:49-53. Figure 3 shows the same sequence as

communications among computer 112, hosting computer 114, and electronic device 110-1, ending when the device “displays customized second document 322 on display 328.” *Id.*, 13:29-14:7, Fig. 3.

42. The specification describes the message as an SMS message, but states that “different communication channels may be used in other embodiments, e.g., email, Enhanced Messaging Service (EMS), and/or MMS.” *Id.*, 14:18-21. The specification says nothing more about EMS.

43. The specification explains that the customized webpage “may be created de novo for each subscriber customer or individual,” and that “[a] given subscriber customer cannot hit their webpage without a specific link that is provided to the given subscriber customer.” *Id.*, 14:27-32. If the link is shared with a second individual, that individual “may browse content customized for the first individual but will be prohibited from accessing a profile of the first individual and/or executing a transaction unless the second individual subscribers [sic] and provides his/her telephone number.” *Id.*, 14:35-41.

44. Figures 4 through 7 describe a commercial implementation that the specification calls “Amplify,” in which the hosted field is injected “into client web-purchase forms generated by the third-party API platform 402,” and a message is sent with “a link to purchase tickets or view a customized webpage.” *Id.*, 16:13-18, 16:39-45, 16:63-67.

45. Beginning at column 22, the specification turns to subject matter that the earlier applications in the '799 patent's family do not describe (see Section VI.C), under headings such as "Silent Network Authentication," "Automated Messaging Distribution," "Abandoned Journey/Abandoned Cart," and "Rich Communication Service (RCS)." *Id.*, 22:4-45:24. This portion describes sending messages over "SMS/MMS (e.g., text messages), Rich Communication Services (RCS) platforms, and Over-the-Top (OTT) platforms" with "real-time typing indicators, read receipts, and interactive elements," and using "ML/AI technologies" for "personalized and targeted messaging campaigns as well as automated scheduling determination." *Id.*, 23:11-31. It describes sorting message recipients into "tier 1 buyers," "tier 2 link clickers," and recipients "that have not clicked through any of the received compiled and encoded short links." *Id.*, 23:61-24:43. It also describes a link that enables a user "to return to an abandoned journey or cart," using "a hot cookie on the mobile device belonging to the user." *Id.*, 37:47-60.

46. I refer now to the claims of the '799 patent. The '799 patent has 30 claims. Claims 1, 12, and 22 are independent and are directed to a system, a computer-implemented method, and a non-transitory computer-readable storage medium, respectively. The claims, and the labels I use for the elements of the independent claims, are reproduced below. EX1001, 46:52-50:36.

Claim	Claim Language
1[pre]	A system comprising:
1[a]	a processor; and
1[b]	memory configured to store program instructions, wherein, when executed by the processor, the program instructions cause the processor to perform operations comprising:
1[c]	providing a hosted input field for inclusion in a first document associated with a third party;
1[d]	receiving, information indicating activation of the hosted input field in the first document, wherein the information comprises an electronic address associated with an electronic device and an indication of a willingness to receive one or more messages;
1[e]	generating, a second document that includes information about one or more events of interest for a user associated with the electronic address, the second document being customized to the user;
1[f]	sending a message to the electronic address, wherein the message comprises a link to the second document, the link being configured to enable the user to access the second document to execute one or more transactions associated with the one or more events; and
1[g]	in response to determining activation of the link has occurred, causing provision of the second document to the electronic address, wherein the second document is configured to facilitate completion of a given transaction in the one or more transactions.
2	The system of claim 1, wherein the message comprises a Rich Communication Services (RCS) message provided to the electronic address according to a schedule generated based at least in part on a determined classification of the user.
3	The system of claim 2, wherein the classification of the user comprises criteria corresponding to an application, a website, or a service associated with the electronic address.

Claim	Claim Language
4	The system of claim 2, wherein the classification of the user indicates whether the user is: a message recipient that has selected a link provided by the system to the electronic address and completed at least one prior transaction; a message recipient that has selected a link provided by the system to the electronic address, but has not completed a transaction; or a message recipient that has not selected a link provided by the system to the electronic address.
5	The system of claim 1, wherein the message comprises a Rich Communication Service (RCS) message and the operations further comprise: requesting and receiving authorization data corresponding to an identity of the user before causing provision of the second document to the electronic address.
6	The system of claim 1, wherein the message is an Enhanced Messaging Service (EMS) message.
7	The system of claim 1, wherein the message comprises content including send and receive indicators provided in a user interface of a mobile computing device associated with the electronic address, the indicators depicting real time typing between a message provider and the mobile computing device or between another computing device and the mobile computing device.
8	The system of claim 1, wherein the link is further configured to: allow users other than the user to access the second document to browse the second document while prohibiting execution of the one or more transactions through the link for the users other than the user.
9	The system of claim 1, wherein the link is further configured with a security layer to provide augmented access or navigation attributes to the user.
10	The system of claim 1, wherein the link is further configured to enable the user to resume an online user journey associated with the given transaction.
11	The system of claim 1, wherein the second document comprises user-targeted content based on one or more prior engagement characteristics associated with the electronic address, wherein the prior engagement characteristics are determined using machine learning.

Claim	Claim Language
12[pre]	A computer-implemented method comprising:
12[a]	providing a hosted input field for inclusion in a first document associated with a third party;
12[b]	receiving, information indicating activation of the hosted input field in the first document, wherein the information comprises an electronic address associated with an electronic device and an indication of a willingness to receive one or more messages;
12[c]	generating, a second document that includes information about one or more events of interest for a user associated with the electronic address, the second document being customized to the user;
12[d]	sending a message to the electronic address, wherein the message comprises a link to the second document, the link being configured to enable the user to access the second document to execute one or more transactions associated with the one or more events; and
12[e]	in response to determining activation of the link has occurred, causing provision of the second document to the electronic address, wherein the second document is configured to facilitate completion of a given transaction in the one or more transactions.
13	The computer-implemented method of claim 12, wherein the message comprises a Rich Communication Services (RCS) message provided to the electronic address according to a schedule generated based at least in part on a determined classification of the user.
14	The computer-implemented method of claim 13, wherein the classification of the user comprises criteria corresponding to an application, a website, or a service associated with the electronic address.
15	The computer-implemented method of claim 12, wherein the message comprises a Rich Communication Service (RCS) message and the method further comprises: requesting and receiving authorization data corresponding to an identity of the user before causing provision of the second document to the electronic address.
16	The computer-implemented method of claim 12, wherein the message is an Enhanced Messaging Service (EMS) message.

Claim	Claim Language
17	The computer-implemented method of claim 12, wherein the message comprises content including send and receive indicators provided in a user interface of a mobile computing device associated with the electronic address, the indicators depicting real time typing between a message provider and the mobile computing device or between another computing device and the mobile computing device.
18	The computer-implemented method of claim 12, wherein the link is further configured to: allow users other than the user to access the second document to browse the second document while prohibiting execution of the one or more transactions through the link for the users other than the user.
19	The computer-implemented method of claim 12, wherein the link is further configured with a security layer to provide augmented access or navigation attributes to the user.
20	The computer-implemented method of claim 12, wherein the link is further configured to enable the user to resume an online user journey associated with the given transaction.
21	The computer-implemented method of claim 12, wherein the second document comprises user-targeted content based on one or more prior engagement characteristics associated with the electronic address, wherein the prior engagement characteristics are determined using machine learning.
22[pre]	A non-transitory computer-readable storage medium for use in conjunction with a processor, the computer-readable storage medium storing program instructions that, when executed by the processor, cause the processor to carry out operations comprising:
22[a]	providing a hosted input field for inclusion in a first document associated with a third party;
22[b]	receiving, information indicating activation of the hosted input field in the first document, wherein the information comprises an electronic address associated with an electronic device and an indication of a willingness to receive one or more messages;
22[c]	generating, a second document that includes information about one or more events of interest for a user associated with the electronic address, the second document being customized to the user;

Claim	Claim Language
22[d]	sending a message to the electronic address, wherein the message comprises a link to the second document, the link being configured to enable the user to access the second document to execute one or more transactions associated with the one or more events; and
22[e]	in response to determining activation of the link has occurred, causing provision of the second document to the electronic address, wherein the second document is configured to facilitate completion of a given transaction in the one or more transactions.
23	The non-transitory computer-readable storage medium of claim 22, wherein the message comprises a Rich Communication Services (RCS) message provided to the electronic address according to a schedule generated based at least in part on a determined classification of the user.
24	The non-transitory computer-readable storage medium of claim 23, wherein the classification of the user comprises criteria corresponding to an application, a website, or a service associated with the electronic address.
25	The non-transitory computer-readable storage medium of claim 22, wherein the message comprises a Rich Communication Service (RCS) message and the operations further comprise: requesting and receiving authorization data corresponding to an identity of the user before causing provision of the second document to the electronic address.
26	The non-transitory computer-readable storage medium of claim 22, wherein the message comprises content including send and receive indicators provided in a user interface of a mobile computing device associated with the electronic address, the indicators depicting real time typing between a message provider and the mobile computing device or between another computing device and the mobile computing device.
27	The non-transitory computer-readable storage medium of claim 22, wherein the link is further configured to: allow users other than the user to access the second document to browse the second document while prohibiting execution of the one or more transactions through the link for the users other than the user.

Claim	Claim Language
28	The non-transitory computer-readable storage medium of claim 22, wherein the link is further configured with a security layer to provide augmented access or navigation attributes to the user.
29	The non-transitory computer-readable storage medium of claim 22, the link is further configured to enable the user to resume an online user journey associated with the given transaction.
30	The non-transitory computer-readable storage medium of claim 22, wherein the second document comprises user-targeted content based on one or more prior engagement characteristics associated with the electronic address, wherein the prior engagement characteristics are determined using machine learning.

47. I use the same element labels as the Petition. Claims 12 and 22 recite the same five operations as elements 1[c] through 1[g]; elements 12[a]-12[e] and 22[a]-22[e] correspond to elements 1[c]-1[g], respectively. EX1001, 46:52-50:36.

48. The dependent claims add features such as delivering the message as an RCS message on a schedule based on a classification of the user (claims 2-4, 13-14, 23-24); requesting authorization data before providing the second document (claims 5, 15, 25); delivering the message as an EMS message (claims 6, 16); typing indicators (claims 7, 17, 26); a link that lets others browse but not transact (claims 8, 18, 27); a link with a security layer (claims 9, 19, 28); a link that lets the user resume an online journey (claims 10, 20, 29); and content based on engagement characteristics determined using machine learning (claims 11, 21, 30). EX1001, 47:15-64, 48:21-65, 49:27-50:36.

49. As I explain in Section IX.A, each of these functions was known before the '799 patent. The claims thus add nothing novel and are not combined in any way that would have been non-obvious to a POSITA.

B. Prosecution History

50. I reviewed the prosecution history of the '799 patent. I understand that statements made during prosecution of a patent may influence the meaning of terms in the claim of that patent, as well as terms in other claims in the same patent family.

51. The '799 patent issued from Application No. 18/984,041 ("the '041 application"), filed on December 17, 2024 as a continuation of Application No. 18/896,197. EX1001, 1:5-18; EX1002, 172.

52. The Examiner allowed claims 1-30 in a first action, issuing a Notice of Allowance and a Notice of Allowability mailed April 9, 2025. EX1002, 172, 176. The Examiner reasoned that the prior art "fails to teach generating, a second document that includes information about one or more events of interest for a user associated with the electronic address, the second document being customized to the user; sending a message to the electronic address, wherein the message comprises a link to the second document, the link being configured to enable the user to access the second document to execute one or more transactions associated

with the one or more events,” and that “[a]ll dependent claims are therefore allowed under same reasons set forth above.” *Id.* at 177.

53. On April 14, 2025, the applicant filed a request for continued examination with an information disclosure statement citing U.S. Patent No. 11,170,380 to Long et al. (“Long”). *Id.* at 288-89, 291. The Examiner’s summary of an April 21, 2025 interview states that “Applicant discussed discovered art via RCE, reference US 11170380.” *Id.* at 311.

54. On May 1, 2025, the Examiner issued a non-final Office Action rejecting claims 1, 7-12, 17-22, and 26-30 under 35 U.S.C. § 102(a)(2) as anticipated by Long, and claims 2-6, 13-16, and 23-25 under 35 U.S.C. § 103 as obvious over Long in view of U.S. Patent No. 10,298,739 to Lee et al. (“Lee”). *Id.* at 300-02, 306. At that time, claim 1 recited “providing an input field for inclusion in a first document associated with a third party.” *Id.* at 302, 417.

55. The Examiner addressed several dependent claims individually. For claim 9, the Examiner found the security-layer limitation met by Long’s statement that “the click-to-text server can authenticate the user based on a user identifier,” such as “a user phone number, a sender phone number, a device identifier of the user mobile device.” *Id.* at 304-05. For claim 10, the Examiner relied on Long’s “dynamic application deeplinking,” by which the user’s interaction “via a first user interface of the mobile device continues to a second user interface of the mobile

device.” *Id.* at 305. The Examiner also found claims 7 and 11 anticipated by Long, and relied on Lee for the RCS limitation of claim 2. *Id.* at 304-06.

56. Following a May 14, 2025 interview, after which the Examiner noted that “[i]t appears the amendment overcomes the prior art; however, further search is required,” the applicant amended independent claims 1, 12, and 22 on May 19, 2025, changing “an input field” to “a hosted input field.” *Id.* at 417-420, 423-24, 448, 454. The dependent claims were not amended. *Id.* at 417-22.

57. The applicant made three arguments for claim 1. First, it argued that “the input field in Long is not ‘hosted’ nor for inclusion in a ‘document associated with a third party.’” *Id.* at 424. Second, it argued that in its own system an electronic address is “physically entered into the provided ‘hosted input field’ in a ‘first document associated with a third party,’” and that “[t]his submission constitutes an explicit indication of the user’s ‘willingness to receive one or more messages.’” *Id.* at 425. Third, it argued that “[t]he Long disclosure makes no reference to a second document,” and that in Long “the user interaction concludes immediately following either of these confirmations, without offering further navigation or interaction through any subsequent documents.” *Id.* at 426.

58. The applicant separately argued only claims 2 and 3 among the dependent claims, contending that “Lee does not ‘schedule’ the RCS message” and that in Lee “there is no mapping of users to websites, apps, or services.” *Id.* at 428.

For the remaining dependent claims, including claims 6, 7, and 9, the applicant relied on their dependence from claim 1. *Id.* On May 19, 2025, the applicant amended independent claims 1, 12, and 22, arguing that Long's input field “is not 'hosted' nor for inclusion in a 'document associated with a third party,'“ does not indicate a “willingness to receive one or more messages,” and “makes no reference to a second document.” EX1002, 424-26.

59. The Examiner then allowed claims 1-30 in a Notice of Allowance mailed June 9, 2025. *Id.* at 449, 453. The reasons for allowance repeated the limitations identified in the first allowance and added the “receiving” limitation of the independent claims, and again stated that “[a]ll dependent claims are therefore allowed under same reasons set forth above.” *Id.* at 454-55. The applicant responded that it “does not necessarily agree that patentability resides in the feature(s) referenced in the Statement of Reasons for Allowance.” *Id.* at 570. Every limitation on which the Examiner based allowance is a limitation of the independent claims, and the Examiner did not identify any dependent claim as allowable because of the limitation that claim adds. *Id.* at 454-55.

60. Ghadially, Gaddis, Lentz, Wendkos, and Teeter were not cited by the applicant or the Examiner during prosecution of the '799 patent. EX1001, References Cited.

C. Effective Filing Date of the Challenged Claims

61. I understand that a claim is entitled to the filing date of an earlier application in its priority chain only if that earlier application, and each application between it and the claim, describes the claimed subject matter. I understand that the earlier application must describe the claimed invention in enough detail that a POSITA would recognize that the inventor was in possession of the claimed invention as of the earlier date, and that all the limitations of the claim must appear in it. It is not enough that the claimed subject matter would have been obvious from what the earlier application expressly discloses.

62. The '799 patent claims priority through a chain of applications. The application that issued as the '799 patent is a continuation of Application No. 18/896,197, filed September 25, 2024, now U.S. Patent No. 12,200,165, "which is a continuation-in-part of" Application No. 18/483,670, filed October 10, 2023, now U.S. Patent No. 12,126,752. EX1001, 1:5-9, Cover. The '670 application is a continuation of Application No. 18/193,163, filed March 30, 2023, now U.S. Patent No. 11,876,924, which is a continuation of Application No. 17/279,188, the national stage of International Application No. PCT/US2019/052847, filed September 25, 2019, now U.S. Patent No. 11,765,262, which claims the benefit of Provisional Application No. 62/737,315, filed September 27, 2018. Id., 1:9-18, Cover.

63. I compared the '799 patent with four earlier documents in that chain: the provisional application (EX1005); the PCT application as published, WO 2020/068911 (EX1006); U.S. Patent No. 11,765,262 (EX1007); and U.S. Patent No. 12,126,752 (EX1008). I also reviewed the '197 application as filed on September 25, 2024 (EX1031), and U.S. Patent No. 12,200,165, which issued from it (EX1030).

64. All four earlier documents describe the same basic technique as the first half of the '799 patent: a hosted field in a third party's document that captures a telephone number and a willingness to receive messages, a dynamically generated customized second document, a message with a link to that document, and provision of the document when the link is activated. EX1005, Abstract; EX1006, Abstract; EX1007, 3:38-56; EX1008, 3:42-60. Each describes Figures 1 through 8 and no others, and each states that "different communication channels may be used in other embodiments, e.g., email, Enhanced Messaging Service (EMS), and/or Multimedia Messaging Service (MMS)." EX1005, ¶65; EX1006, ¶66; EX1007, 10:27-31; EX1008, 10:27-31.

65. The PCT publication and the two patents are substantially the same as one another. The provisional is an earlier and shorter version. Notably, the passage stating that a second individual with whom the link is shared "may browse content customized for the first individual but will be prohibited from ... executing

a transaction” first appears in the PCT publication. EX1006, ¶68; EX1007, 10:45-51; EX1008, 10:45-51. The corresponding paragraph of the provisional says only that the webpage “may be created de novo for each customer” and that “[a] given customer cannot hit their webpage without a specific link.” EX1005, ¶67.

66. None of the four earlier documents describes the subject matter that the ’799 patent adds beginning at column 22. None uses the terms “Rich Communication,” “RCS,” “typing,” “read receipt,” “machine learning,” “security layer,” “augmented,” “navigation attribute,” “authorization data,” or “tier,” or any form of “classify,” “schedule,” “journey,” “abandon,” or “resume,” other than “Classification” in bibliographic headings. EX1005; EX1006; EX1007; EX1008. The ’799 patent, by contrast, uses “RCS” more than 80 times, “journey” more than 80 times, and “tier” more than 40 times.

67. That material entered the chain with the ’197 application on September 25, 2024. It comprises the Summary, Figures 9 through 18 and their descriptions, the opening of the Detailed Description, and the description from the heading “Silent Network Authentication” through column 45. EX1001, 1:60-4:36, 4:64-5:32, 5:38-7:30, 22:4-45:24, Figs. 9-18. That added description includes sections on silent network authentication, automated message distribution, an access and security automation layer, abandoned user journeys, and Rich Communication Services, as well as processes 1700 and 1800. EX1031, ¶¶6-26,

35-44, 46-53, 138-217, Figs. 9-18. Its application data sheet claims benefit as a continuation-in-part of the '670 application. *Id.* at 97. Every passage of the '799 patent that I identify above as added material appears in the '197 application as filed, and none of the earlier documents contains it. The '165 patent, which issued from the '197 application, likewise contains Figures 9 through 18 and uses the terms listed above. EX1030, Figs. 9-18.

68. Each of the following dependent claims recites a limitation that appears only in that added material: claims 2-4, 13-14, and 23-24 (an RCS message scheduled based on a classification of the user, its criteria, and its three tiers), EX1001, 6:54-59, 23:11-31, 23:61-24:43, 39:32-40:4, 41:10-19, 41:58-42:39; claims 5, 15, and 25 (authorization data), *id.*, 40:58-41:9; claims 7, 17, and 26 (typing indicators), *id.*, 23:22-24, 39:41-51, 41:52-57; claims 9, 19, and 28 (a security layer providing augmented access or navigation attributes), *id.*, 22:8-11, 31:26-35; claims 10, 20, and 29 (resuming an online user journey), *id.*, 37:47-60, 40:38-42; and claims 11, 21, and 30 (engagement characteristics determined using machine learning), *id.*, 36:46-56.

69. By contrast, claims 6 and 16 (an EMS message) find a counterpart in all four earlier documents, including the provisional, each of which names EMS as an alternative channel. Claims 8, 18, and 27 (a link that lets others browse but not

transact) find a counterpart in the PCT publication and the two patents, but not in the provisional.

70. Thus, in my opinion, the limitations added by claims 2-5, 7, 9-11, 13-15, 17, 19-21, 23-26, and 28-30 are described only in material first filed on September 25, 2024, and the limitation added by claims 8, 18, and 27 is described in the September 25, 2019 PCT application but not in the September 27, 2018 provisional. For claims 2-5, 7, 9-11, 13-15, 17, 19-21, 23-26, and 28-30, I therefore consider the knowledge of a POSITA as of September 25, 2024.

71. My opinions below do not depend on these later dates. Even if any challenged claim were entitled to September 27, 2018, each reference on which the grounds rely predates that date, and the background knowledge on which I rely for the dependent claims was available by then, including the GSMA Universal Profile for RCS, which by 2017 required “is typing” notifications and described RCS as a channel for businesses to reach customers (EX1016, 45-46, 152-53); Lentz’s identification of RCS and its machine-learning targeting and send-time recommendations (EX1011, ¶¶33, 39-40); Ghadialy’s per-user engagement tracking, frequency adjustment, and segmentation analysis (EX1009, ¶¶22-23, 30, 37); and commercial cart-recovery links that returned a shopper to the shopper’s own cart (EX1029, 5). The later documents I cite, such as EX1017, EX1018,

EX1020, EX1021, and EX1028, confirm the state of the art as of September 25, 2024, but my conclusions would be the same without them.

VII. CLAIM CONSTRUCTION

A. Legal Standard for Claim Construction

72. It is my understanding that “[i]n an *inter partes* review proceeding, a claim of a patent . . . shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b).

73. I am not a patent attorney and my opinions are limited to what I believe a POSITA would have understood the meaning of certain claim terms to be, based on the patent specifications and prosecution histories.

74. A POSITA would have no difficulty applying the plain and ordinary meanings of the terms used in the claims.

75. For purposes of this Petition, I have interpreted the terms of claims 1-30 of the ’799 patent according to their plain and ordinary meaning.

VIII. OBVIOUSNESS STANDARD

76. It is my understanding that obviousness is a question of law based on underlying factual issues including (1) the scope and content of the prior art, (2) the differences between the prior art and the asserted claim, (3) the level of

ordinary skill in the pertinent art, and (4) the existence of secondary considerations such as commercial success, long-felt but unresolved needs, failure of others, etc. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

77. I understand that for a single reference or a combination of references to render obvious the claimed invention, a POSITA must have been able to arrive at the claim by altering or combining the applied references.

78. I understand that an obviousness evaluation can be based on a combination of multiple prior art references. I understand that the prior art references themselves may provide a suggestion, motivation, or reason to combine, but other times the nexus linking two or more prior art references is simple common sense. I further understand that obviousness analysis recognizes that market demand, rather than scientific literature, often drives innovation, and that a motivation to combine references may be supplied by the direction of the marketplace. *KSR*, 550 U.S. at 418-21.

79. I understand that if a technique has been used to improve one device or product, and a POSITA would recognize that it would improve similar devices or products in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Id.* at 417.

80. I also understand that practical and common sense considerations should guide a proper obviousness analysis, because familiar items may have obvious uses beyond their primary purposes. I further understand that a POSITA looking to overcome a problem will often be able to fit together the teaching of multiple references. I understand that obviousness analysis therefore takes into account the inferences and creative steps that a POSITA would employ under the circumstances. *Id.* at 418, 420-21.

81. I understand that a particular combination may be proven obvious merely by showing that it was obvious to try the combination. For example, when there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a POSITA has good reason to pursue the known options within his or her technical grasp because the result is likely the product not of innovation but of ordinary skill and common sense. *Id.* at 421.

82. I also understand that the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. When a work is available in one field of endeavor, design incentives and other market forces can prompt variation of it, either in the same field or a different one. If a POSITA can implement a predictable variation, the patent claims are likely obvious. *Id.* at 416-17.

83. It is further my understanding that a proper obviousness analysis focuses on what was known or obvious to a POSITA, not just the patentee. Accordingly, I understand that any need or problem known in the field of endeavor before the effective filing date of the claimed invention and addressed by the patent can provide a reason for combining the elements in the manner claimed. *Id.* at 419-20.

84. I understand that a claim can be obvious in light of a single reference, without the need to combine references, if the elements of the claim that are not found explicitly or inherently in the reference can be supplied by the common sense of one of skill in the art. In addition, a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including nonpreferred embodiments. Disclosed examples and preferred embodiments do not teach away from a broader disclosure or nonpreferred embodiments.

85. I understand that a reference may be relied on in an obviousness analysis only if it is analogous art to the claimed invention. I understand that a reference is analogous art if it is from the same field of endeavor as the claimed invention, regardless of the problem it addresses, or, if it is not, if it is reasonably pertinent to the particular problem with which the inventor was involved.

86. I understand that secondary indicia of non-obviousness may include (1) a long felt but unmet need in the prior art that was satisfied by the invention of the patent; (2) commercial success of processes covered by the patent; (3) unexpected results achieved by the invention; (4) praise of the invention by others skilled in the art; (5) taking of licenses under the patent by others; (6) deliberate copying of the invention; (7) failure of others to find a solution to the long felt need; and (8) skepticism by experts.

87. I also understand that there must be a relationship between any such secondary considerations and the invention. I further understand that contemporaneous and independent invention by others is a secondary consideration supporting an obviousness determination.

88. In sum, my understanding is that prior art teachings are properly combined or modified where a POSITA having the understanding and knowledge reflected in the prior art and motivated by the general problem facing the inventor, would have been led to make the combination of elements recited in the claim. Under this analysis, the prior art references themselves, or any need or problem known in the field of endeavor before the effective filing date of the claimed invention, can provide a reason for combining the elements of multiple prior art references in the claimed manner.

IX. ANALYSIS OF THE TECHNICAL BASIS UNDERLYING THE GROUNDS OF REJECTION SET FORTH IN THE PETITION FOR *INTER PARTES* REVIEW

A. State of the Art

89. The '799 patent states that its disclosure relates to “security and access control for cellular handheld devices” and to “techniques for performing transactions using dynamically generated customized webpages.” EX1001, 1:29-36.

90. The challenged claims recite providing a hosted input field for inclusion in a third party’s document, receiving an electronic address and an indication of willingness to receive messages, generating a document customized to the user, sending a message with a link to that document, and providing the document when the link is activated; the dependent claims add particular message formats (RCS and EMS), typing indicators, scheduling based on a classification of the user, restrictions on a shared link, a security layer, resuming a user journey, and machine learning. *Id.*, 46:52-50:36. In the subsections below I describe what the documents I reviewed show about each of these subjects before the '799 patent.

91. I address the state of the art as of two dates. I understand that Petitioner treats September 27, 2018 as the earliest date to which any challenged claim could be entitled, does not dispute for this proceeding that claims 1, 6, 8, 12, 16, 18, 22, and 27 are entitled to at least September 25, 2019, and contends that the

remaining dependent claims are entitled to a date no earlier than September 25, 2024. For each document below I note its date.

92. As I explain below, each of these functions was known, and was described in published patents, standards, and product documentation, before the '799 patent. The claims implement them with the ordinary building blocks of web and mobile marketing: a sign-up field that a service places in a merchant's page, a consumer's opt-in, a message carrying a link that is personal to its recipient, a page generated for the person who follows that link, and records of who clicked and who bought.

1. Third-Party Content and Sign-Up Forms Embedded in Merchant Web Pages

93. Placing content that is served by one company inside a web page that belongs to another was a well-known practice long before the '799 patent.

94. A web page is assembled by the visitor's browser from the instructions in the page's HTML, and those instructions need not all point to the same server. *See, e.g.*, EX1024, ¶¶22; EX1025, 2. An inline frame, or "iframe," tells the browser to fetch a second document from whatever address the page specifies and to display it in a region of the page. *See, e.g.*, EX1009, ¶¶21; EX1024, ¶¶14, 19. A script tag tells the browser to fetch program code from a specified address and run it, and that code can in turn add fields, buttons, or frames to the page. *See, e.g.*, EX1024, ¶¶14, 22; EX1025, 2. In either case the visitor sees a

single page, while the embedded portion is delivered by, and reports back to, a different server. *See, e.g.*, EX1009, ¶¶39; EX1024, ¶¶6, 14. The “iframe” was part of the HTML 4.01 standard at least since December 1999 where it was described as “allow[ing] authors to insert a frame within a block of text. Inserting an inline frame within a section of text is much like inserting an object via the OBJECT element: they both allow you to insert an HTML document in the middle of another, they may both be aligned with surrounding text, etc. The information to be inserted inline is designated by the src attribute of this element.” This section of the standard further describes that the src attribute may be any “%URI;”, which includes URLs of third party servers. *See* Dave Raggett et al., HTML 4.01 Specification § 16.5 (W3C Recommendation Dec. 24, 1999), <https://www.w3.org/TR/html40/present/frames.html#h-16.5>. I have worked with these mechanisms since the 1990s; the web browser I built at that time could display web pages embedded within other pages, and I have designed and implemented web sites ever since. *See supra* Section II.

95. Marketing services used this technique to collect sign-ups on merchants’ sites. Ghadialy, published in 2007, describes a consumer marketing service whose “sign-up” page “can be incorporated within the source web page, such as via iframe,” so that the page “is provided by a consumer marketing service

208, but is integrated with the web site 204 so as to appear seamless from the standpoint of the consumer.” EX1009, ¶¶21, 39.

96. Payment companies used the same technique for the most sensitive fields on a merchant’s page. De Tella, a PayPal patent application published in 2016, explains that merchants outsourced payment functions to third-party processors, but that a third party’s form “may not be consistent with the appearance and behavior of the on-line merchant’s website.” EX1024, ¶6. De Tella’s answer was to have the third party supply the individual fields. The merchant adds “a minimal amount of code to its web page,” including “a JavaScript file provided and hosted by the third party payment processor,” and each field is then “provided as a separate inline frame (iframe)” within the merchant’s checkout page. *Id.*, ¶¶19-20, 22. As De Tella puts it, the fields “are therefore hosted by the third party, and not the organization.” *Id.*, ¶14.

97. Messaging platforms likewise gave merchants ready-made opt-in fields to drop into their own forms. By early 2017, Facebook offered a “Checkbox Plugin” that “has a checkbox that fits naturally with existing forms” and “could be used for just about any form-based flow on a site, including ecommerce websites where you wish to send receipts and order updates to the user, for event RSVPs, or even signup forms.” EX1025, 1. The merchant rendered the plugin by loading Facebook’s JavaScript code in its page, and once the visitor opted in, the merchant

could “start messaging the user.” *Id.*, 2, 4. Although the checkbox appeared within the merchant’s page, Facebook, not the merchant, supplied and controlled it: the plugin rendered only on a domain the merchant had whitelisted with Facebook, displayed in a frame within the merchant’s page, and reported the opt-in to Facebook, which then posted a webhook event to the merchant’s server. *Id.*, 2-4.

98. Thus, a field that is supplied and hosted by one party, displayed within another party’s web page, and used to collect a visitor’s information and consent was a familiar part of web development well before the ’799 patent.

2. Permission-Based E-Mail and Text-Message Marketing

99. Marketing to consumers who have asked to receive messages, by e-mail and by text message, was also well established before the ’799 patent.

100. To send such a message, the sender needs two things from the consumer: an address at which the consumer can be reached—an e-mail address for e-mail, a mobile telephone number for a text message—and the consumer’s agreement to be contacted. *See, e.g.*, EX1009, ¶¶20, 23-24; EX1010, ¶¶48, 54; EX1025, 1. Sign-up forms collected both at once. *See, e.g.*, EX1009, ¶40, Fig. 4; EX1025, 1.

101. Ghadially described this in 2007. Its consumers sign up for alerts on topics of interest, choose “a desired delivery option, such as via E-Mail, IM, RSS,

SMS, or a Web portal,” and are given “a set of options to allow the user to opt out of receiving further messages.” EX1009, ¶¶20, 23-24.

102. By 2012, Gaddis could describe online direct advertising as an industry that “has exploded over the past few years becoming a multi-billion dollar industry,” in which “[a]dvertisements can be sent directly to potential buyers (i.e. Users) via email, SMS-text, Instant Messaging, Tweets, Facebook posts, and other emerging formats.” EX1010, ¶3. Gaddis sends its offers to users who “have previously indicated that they would be interested in receiving correspondence from the merchant,” and it notes that a service provider sending a text message needs only “a cell phone number.” *Id.*, ¶¶48, 54.

103. The same practice was built into the commercial platforms on which merchants ran their stores. Shopify’s checkout recorded “[w]hether the customer would like to receive email updates from the shop,” as indicated by a checkbox at checkout, along with “[t]he customer’s phone number for receiving SMS notifications.” EX1027, 2, 5. Facebook’s checkbox showed the visitor which identity “will be opted into communication with the business.” EX1025, 1. And text-message marketing platforms tracked which customers had “confirmed their subscription to receive marketing messages.” EX1021, 1.

104. Thus, collecting a consumer's electronic address together with the consumer's consent to receive marketing messages, and then sending those messages by e-mail or text, was a routine practice years before the '799 patent.

3. Personalized Links and Dynamically Generated Web Pages

105. Sending a consumer a link that is unique to that consumer, and answering a click on that link with a page built for that consumer, were likewise standard techniques.

106. A link in a message is simply a URL, and a URL can carry more than the address of a page. It can include parameters, typically after a "?" character, that the web server reads when the request arrives. *See, e.g.*, EX1010, ¶¶57, 64 ("?deal=123"); EX1027, 1. If one of those parameters identifies the recipient, the server knows who clicked, can look up what it knows about that person, and can generate a page for that person on the spot rather than returning the same page to everyone. *See, e.g.*, EX1010, ¶¶57-59; EX1019, 3:3-8. The server can also redirect the browser to another address, and it can place a cookie on the browser so that it recognizes the same visitor on later requests. *See, e.g.*, EX1010, ¶59; EX1019, 3:3-8; EX1009, ¶21. These are basic tools of web programming. *See, e.g.*, EX1010, ¶¶57-58. In 1998, my team built a web proxy that monitored the requests a browser sent and the pages it received. In 2001, my team used personalized URLs in the International Children's Digital Library. I have used all

these techniques in the web sites I have built since the early 2000s. *See supra* Section II.

107. Gaddis described exactly this arrangement in 2012. Its link carries “parameters passed in URL,” including “the User identification (encrypted),” and a click on the link takes the user to a page “created specifically for the merchant’s advertisement and the User.” EX1010, ¶¶57, 59. Gaddis treats the page-building as routine, stating that the service provider can create a webpage specific to each user “by methods well known in the art.” *Id.*, ¶58.

108. Others described the same thing for text messages in particular. Schoenberg, published in 2015, describes a text message containing a URL “personalized to uniquely identify the customer,” which opens a mobile web page that is displayed “without the customer logging in.” EX1026, ¶7. Graff, issued in 2016, describes a system in which “[e]ach intended message recipient will receive a different unique URL,” and the unique URL “references a web page that will dynamically route the web browser to a specific webpage” based on what the server learns when the link is accessed. EX1019, 2:57-62, 3:3-8.

109. Online stores applied these techniques to shoppers who left without buying. As one vendor put it in 2014, “nearly 70% of all online shopping carts are abandoned,” and its plugin let customers “[r]ecover their abandoned carts in a single click,” with a “Cart page link” in the reminder e-mail and automatic log-in

of registered customers. EX1029, 5. Shopify gave each abandoned checkout its own “recovery URL that’s sent to a customer so they can recover their checkout.” EX1027, 1. And by 2021 text-message platforms offered “a dynamic abandoned cart link that will allow the subscriber to click right back into their shopping cart from your text message.” EX1028, 3.

110. Thus, a message containing a link that identifies its recipient, and a web page generated for that recipient when the link is followed—including a page that returns a shopper to an unfinished purchase—were well known before the ’799 patent.

4. Tracking Recipient Engagement and Segmenting Recipients

111. Marketers have long measured how each recipient responds to a message and have used those measurements to decide what to send next.

112. The measurements follow directly from the techniques described above. When each recipient’s link is different, the server that receives a click knows which recipient clicked. *See, e.g.*, EX1019, 2:57-3:8; EX1010, ¶¶34, 64. A small image embedded in a message or a page, often called a web beacon, tells the server when the message was opened or the page was viewed. *See, e.g.*, EX1009, ¶¶22-23. And the store’s own records show whether a purchase followed. *See, e.g.*, EX1010, ¶64; EX1011, ¶60. Tied together by the recipient’s identifier, these records show, for every person a campaign reached, whether that person opened

the message, clicked the link, and bought. *See, e.g.*, EX1020, 7:22-28; EX1028, 4; EX1029, 5.

113. Ghadially described this in 2007. Its service uses a web beacon to detect when “the user adds a product to a shopping cart” and when “the user completes an on-line purchase,” measures “a rate at which the user opens previously sent messages,” and gives the merchant reports that include “segmentation analysis.” EX1009, ¶¶22-23, 37. Gaddis, in 2012, defined its link as one with “special capabilities to both properly direct User to offer as well as track and report on User actions.” EX1010, ¶34.

114. Commercial tools reported the same measurements. In 2014, the Tyche cart-recovery plugin gave store owners “statistics about the emails sent like number of emails opened, number of links clicked from email.” EX1029, 5. Graff, in 2016, described tracking “whether or not the desired activity has been completed” by each message recipient and sending reminders by SMS to those who had not completed it. EX1019, 18:64-19:5. Lentz, in 2018, assigned each consumer’s purchase a status such as “pending,” “fulfilled,” or “abandoned.” EX1011, ¶60. And by 2021, text-message platforms reported, for each campaign, how many subscribers “Clicked” the link and how many “Ordered.” EX1028, 4.

115. Marketers used these records to treat recipients differently. Ghadially reduced the frequency of messages to users who opened them at a lower rate than

average. EX1009, ¶¶23, 30. Longo, a Twilio patent filed in 2020, trained a model on the “responses of users to previous communications”—for example, whether a message was not opened, was read, or was read and its link clicked—to determine “the best frequency to send communications to the selected recipient (e.g., 3 times a week, 5 times a month, every Monday).” EX1020, 3:26-31, 7:22-28, 12:54-58.

116. By early 2024, sorting recipients by whether they had clicked and whether they had purchased was a built-in feature of text-message marketing platforms. Yotpo’s platform let a merchant build a segment of “customers that have made a purchase after clicking on link sent in a marketing message,” and a separate segment of customers “who have clicked on a link in a marketing message but have not made a purchase,” whom the merchant could motivate “by sending them a unique discount offer.” EX1021, 1, 3. For any past campaign, the merchant could also select recipients according to “whether or not the customer has clicked on a link and made an order during the campaign by selecting Yes or No.” EX1021, 3.

117. Thus, well before September 25, 2024, it was ordinary practice to record whether each recipient of a marketing message clicked its link and whether that recipient went on to purchase, to group recipients accordingly, and to send the groups different messages at different frequencies.

5. Mobile Messaging Formats: SMS, EMS, MMS, and RCS

118. The message formats recited in the dependent claims were standard formats that the industry had defined before the '799 patent.

119. The Short Message Service, or SMS, is the text-messaging service defined for mobile telephone networks. Its standard explains that SMS “provides a means of sending messages of limited size to and from GSM/UMTS mobiles,” using a service centre “which acts as a store and forward centre for short messages.” EX1014, Introduction. A text message is addressed to the recipient’s mobile telephone number. EX1015, ¶6; *see also* EX1010, ¶54.

120. The Enhanced Messaging Service, or EMS, was defined as an extension of SMS in the same standard, in a version published in July 2000. The standard states that EMS “is based upon the standard SMS, but with formatting added to the text,” and that “[t]he formatting permits the message to contain simple animations, small pictures, small melodies and formatting of the text, everything mixed together into one message.” EX1014, § 3.10. EMS does not use a separate network or a separate address. It relies on the “standard mechanism in GSM SMS messaging,” a header within the message that “makes it possible to include binary data in a normal SM prior [to] the text message itself.” EX1014, § 9.2.3.24.10.1. An EMS message is therefore an SMS message with additional data in it, sent

through the same service centre to the same telephone number. *See* EX1014, §§ 3.10, 9.2.3.24.10.1; EX1015, ¶¶6, 64.

121. EMS was not new in 2018. Le Bodic, an Alcatel patent application filed in 2002 and published in 2003, reported that “the development of Enhanced Message Service (EMS) short messages has recently expanded and has led to the issuing of a recommendation on this subject in the form of the SMS standard 3GPP TS 23.040.” EX1015, ¶7. By then even inexpensive handsets handled it: Le Bodic explains that “[l]ow-cost terminals and terminals of an older generation” could not run the newer Multimedia Messaging Service, “although they can exchange SMS and EMS messages,” and that “different versions of EMS messages have already been developed.” EX1015, ¶¶10, 12. Le Bodic also confirms that an EMS message is “transferred directly to the SMS server for delivery.” EX1015, ¶64.

122. Rich Communication Services, or RCS, is the industry’s successor to SMS, specified by the GSM Association. EX1016, cover; *see also* EX1017, 1; EX1001, 39:36-38. The GSMA’s Universal Profile for RCS, published in 2017, requires the features that users of modern messaging applications know well. It requires that “[t]he other party shall be able to see an ‘is typing’ notification whenever the creator of a message is typing,” and that the sender see when a message has been delivered and when it “has been displayed in the messaging thread on the receiving device.” EX1016, 45-46 (R5-5-1-3, R5-5-1-4, R5-7-1).

The typing notification works by one device signaling the other that a message is being composed. EX1016, 61 (R5-28-27).

123. From the start, RCS was intended for businesses as well as individuals. The 2017 Universal Profile describes “[o]ffering RCS as a delivery channel for businesses to communicate with their staff, existing and potential customer base,” and requires that “[u]sers shall have the ability for a richer communication with Businesses ... beyond just plain voice calls and SMS/MMS.” EX1016, 152-53. Lentz, filed in June 2018, accordingly lists “a Rich Communication Service (RCS) message” alongside SMS, MMS, and e-mail as an ordinary way to deliver an offer to a consumer’s device. EX1011, ¶33.

124. Businesses that sent RCS messages used the same typing and read indicators. Google’s documentation for its RCS Business Messaging service, last updated in October 2021, instructs that a business’s messaging agent “sends read and typing events to approximate the human interactions that the users are used to.” EX1018, 1, 5. When the agent sends a typing event, “[t]o a user, this event appears as a typing indicator and lets them know that your agent is composing a message”; when the user types, the agent is notified that “a user is typing.” EX1018, 1.

125. By early 2024, Google described RCS to consumers as “a modern industry standard for messaging,” and its Messages application let users choose

whether to “[l]et others know you’ve read their messages” and to “[s]how others when you’re typing in a conversation with them.” EX1017, 1-2.

126. Thus, EMS was a long-established extension of SMS well before September 2018, and by September 25, 2024, RCS messaging, including typing indicators and read receipts shown in conversations between a business and a consumer, was standardized and described in published product documentation.

6. Machine Learning for Targeting and Recommendations

127. Using software that learns from records of consumers’ past behavior to decide what to show or send them was also well known before the ’799 patent.

128. The best-known example is collaborative filtering, which recommends items to one person based on the recorded preferences of other people. EX1023, 1. By 1998, researchers described it as “a well-established strategy adopted by many recommendation services on the Internet.” EX1022, 1. That same year, Billsus and Pazzani explained that “[c]ollaborative filtering can be seen as a classification task” and showed how to represent it so as to allow “the application of virtually any machine learning algorithm.” EX1022, 1-2. A 2009 survey of the field describes “model-based” collaborative filtering techniques that use the rating data “to estimate or learn a model to make predictions,” where “[t]he model can be a data mining or machine learning algorithm.” EX1023, 2.

129. Marketing systems adopted these techniques. Ghadialy, in 2007, used “a collaborative filtering technique” both to infer a user’s preferences from browsing behavior and to generate product recommendations. EX1009, ¶¶22, 27. Lentz, in 2018, described “one or more machine learning algorithms”—including “naive Bayes, Bayesian networks, decision trees, neural networks,” and others—applied to a consumer’s transaction and viewing history to select offerings and to choose the time of day to send them. EX1011, ¶¶39-40, 52. And Longo, filed in 2020, trained “a machine-learning program” on recipients’ responses to earlier messages to set the timing and frequency of later ones. EX1020, 3:13-31.

130. Thus, applying machine learning to records of consumers’ prior engagement, in order to select the content they are shown and to time the messages they are sent, was well known before the ’799 patent.

131. The claims of the ’799 patent combine these known concepts. As the discussion above shows, each of them was well known before the ’799 patent.

B. Specific References that Render the Claims Obvious

1. U.S. Patent Application Publication No. 2007/0150588 to Ghadialy et al.

132. U.S. Patent Application Publication No. 2007/0150588, titled “Apparatus and Method for Providing a Marketing Service” to Ghadialy et al. (“Ghadialy”), was filed on December 8, 2006, and published on June 28, 2007. EX1009, Cover. I understand Ghadialy is therefore prior art to the ’799 patent

under at least 35 U.S.C. § 102(a)(1). Ghadially was not cited by the applicant or the Examiner during prosecution of the '799 patent. EX1001, References Cited.

133. Ghadially identified a problem in the art much like the one the '799 patent describes: traditional marketing campaigns “often involve sending standardized advertising material to a group of consumers, such as via mass Electronic-Mail,” and “the lack of personalization or tailoring of advertising material is sometimes a key factor” in their failure. EX1009, ¶4.

134. Figure 1 of Ghadially depicts a client-server system in which a merchant operates one server computer 104 “as a web site for selling products,” and a separate server computer 106 “is operated to facilitate the design and execution of marketing campaigns to reach out to existing or potential customers of the merchant.” *Id.*, ¶¶14-17, Fig. 1. Server computer 106 stores a preferences module 140, a monitoring module 142, a notification module 144, a consumer interface module 146, and a merchant interface module 148, which together “provide an improved consumer marketing service that allows personalized or tailored advertising material to be sent to consumers.” *Id.*, ¶¶17-18.

135. The preferences module collects each consumer’s preferences “regarding products, events, sales, or any other topics of interest.” *Id.*, ¶19. It does so through sign-up pages on the merchant’s site; Ghadially explains that “an appropriate Hypertext Markup Language (‘HTML’) tag can be incorporated in a

source web page that forms the web site,” and that the “sign-up” page “can be incorporated within the source web page, such as via iframe.” *Id.*, ¶21. The module “can use a set of HTTP cookies to track the identity of the user.” *Id.* Sign-up topics include “[p]roducts in a user’s shopping cart that go on sale” and a “[r]eminder about a shopping cart in a particular number of days/weeks.” *Id.*, ¶20, Table 1.

136. The preferences module can also infer preferences from browsing behavior, such as when “the user adds a product to a shopping cart” or “completes an on-line purchase,” using a Web beacon incorporated in the merchant’s pages and “a collaborative filtering technique.” *Id.*, ¶22. It records the consumer’s “desired delivery option, such as via E-Mail, IM, RSS, SMS, or a Web portal,” and “desired message frequency,” measures “a rate at which the user opens previously sent messages,” and lets the user “opt out of receiving further messages.” *Id.*, ¶¶23-24. Ghadialy's Web beacon is “a 1 by 1 pixel element sometimes referred to as a 'dart,'” and Ghadialy places it both in its outgoing messages and in the merchant's pages. *Id.*, ¶¶22-23.

137. The monitoring module then identifies “relevant content that matches those individual preferences,” and the notification module alerts the consumer by message. *Id.*, ¶¶26-29. The notification module “can dynamically generate a message by incorporating relevant content into a message template” and “can

incorporate a navigation link into the message, such that, when the user clicks on the navigation link, the user can be navigated to the merchant's web site.” *Id.*, ¶29. It can select among recommendations using “configurable rules,” and “can dynamically change either of, or both, a message format and a delivery option for subsequent messages.” *Id.*, ¶¶30, 32. Ghadialy also provides a consumer Web portal “which presents relevant content that is personalized or tailored for the user,” and a merchant Web portal with reports including “segmentation analysis.” *Id.*, ¶¶34-37. Ghadialy can also present its recommendations while the consumer is on the merchant's site, including “after or during checkout” and “after or while adding a product to a shopping cart.” *Id.*, ¶33.

138. Figure 2 of Ghadialy, reproduced below, depicts an operational scenario in which a consumer 202 visiting a merchant's web site 204 signs up through a “sign-up” page 206 that “is provided by a consumer marketing service 208, but is integrated with the web site 204 so as to appear seamless from the standpoint of the consumer 202.” *Id.*, ¶¶38-39, Fig. 2. The service then sends the consumer a personalized message 210, and “[w]hen the consumer 202 clicks a navigation link incorporated into the message 210, the consumer 202 is navigated to the web site ... so as to complete an on-line purchase.” *Id.*, ¶¶41-42.

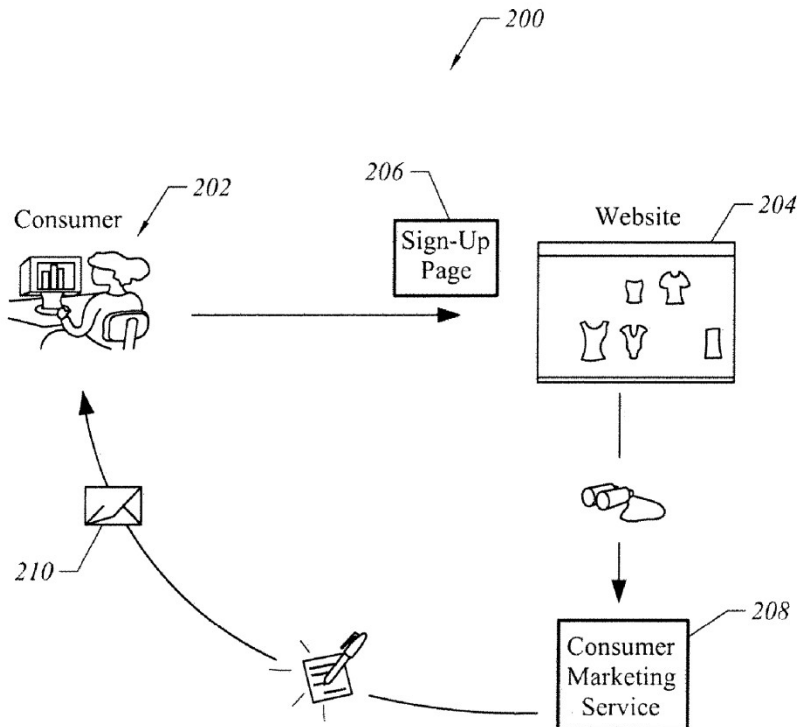


FIG. 2

139. Ghadially also describes a single consumer marketing service operating “on behalf of the first merchant and the second merchant,” collecting preferences on both merchants’ sites. *Id.*, ¶¶44-46, Fig. 5.

140. Ghadially thus describes a third-party marketing service that places a sign-up field in a merchant’s web page, captures a consumer’s address and consent, and sends the consumer personalized messages with links back to the merchant’s site to complete a purchase, in much the same manner as the ’799 patent.

2. U.S. Patent Application Publication No. 2012/0310752 to Gaddis

141. U.S. Patent Application Publication No. 2012/0310752, titled “System, Method, and Computer Program Product for Data Entry Free Electronic Purchasing” to Gaddis (“Gaddis”), was filed on June 6, 2011, and published on December 6, 2012. EX1010, Cover. I understand Gaddis is therefore prior art to the ’799 patent under at least 35 U.S.C. § 102(a)(1). Gaddis was not cited by the applicant or the Examiner during prosecution of the ’799 patent. EX1001, References Cited.

142. Gaddis, like the ’799 patent, addresses marketing messages sent to consumers’ electronic accounts. Gaddis explains that advertisements are sent “via email, SMS-text, Instant Messaging, Tweets, Facebook posts, and other emerging formats” by “Offer Providers (OP), who are either merchants or third party service providers representing merchants,” and that responding to them on a smartphone “is very difficult, particularly when alpha numeric data input from a mobile keyboard is required.” EX1010, ¶¶3-4. Gaddis therefore sought a way for a user to buy from the advertisement “without entering any alpha numeric data.” *Id.*, ¶¶6-8.

143. Gaddis is directed to users whose information the Offer Provider already holds. The Offer Provider “is required to have the User’s following information on file prior to sending the advertisement: contact information (e.g.

email addresses), shipping information if required, and billing information sufficient to complete a financial transaction.” *Id.*, ¶8. Gaddis repeats that “[i]n all of the methods of the present invention,” the user “must have a ‘pre-existing account with the merchant.’” *Id.*, ¶51.

144. The advertisement contains a “Promotionally Enabled Link or PEL (e.g., email link, SMS link, or link posted on a User’s social media site ...).” *Id.*, ¶8. The PEL is “encrypted before sending to User and decrypted by OP,” and “has special capabilities to both properly direct User to offer as well as track and report on User actions.” *Id.*, ¶34. Users “are assigned a unique User ID” that is “encrypted by methods well known in the art,” and the link passes parameters that include “the User identification (encrypted).” *Id.*, ¶¶52, 57. A third-party service provider sending the advertisement needs only the address for the channel, such as “a cell phone number if sending an SMS/Text.” *Id.*, ¶54.

145. Clicking the PEL opens a page built for the user. The information passed to the service provider “enables the service provider to create a webpage specific to a merchant comprising the merchant’s identifying information, such as logos or trademarks, and the User’s name,” and the service provider “can also create a webpage specific to each User’s requirements ... by methods well known in the art.” *Id.*, ¶58. The page “addresses them by their name or a unique greeting, describes the product or service, and optionally, the quantity that may be

purchased,” and the user completes the purchase in a few clicks “while not being required to (log in or) enter any of their personal data.” *Id.*, ¶¶48-49, Figs. 2A-2B.

146. Gaddis's PEL is unique to each user. Each user is “assigned a unique User ID that may be provided to third party service providers,” and “[t]his unique User ID is encrypted by methods well known in the art.” EX1010, ¶52. The link carries parameters identifying the deal, the merchant, and the user; in Gaddis's example, “'custhash=9098788492' is the encrypted User identification (UserId) specific to the User,” and the programming code “include[s] a module for the merchant or Offer Provider to encrypt and decrypt the UserIds as needed.” *Id.*, ¶¶57, 59-60; *see also id.*, ¶53, claim 19 (“encrypted links unique to each User”), claim 5.

147. Figure 4B of Gaddis, reproduced below, depicts the sequence in its preferred embodiment. The service provider sends an advertisement to established users; “[i]f the User clicks (click 1) on the PEL embedded within the communication 430, then they will be re-directed to a webpage hosted by the service provider and created specifically for the merchant’s advertisement and the User”; the user places and confirms the order; and the service provider notifies the merchant “so that they may process the User’s order and payment.” *Id.*, ¶59, Fig. 4B.

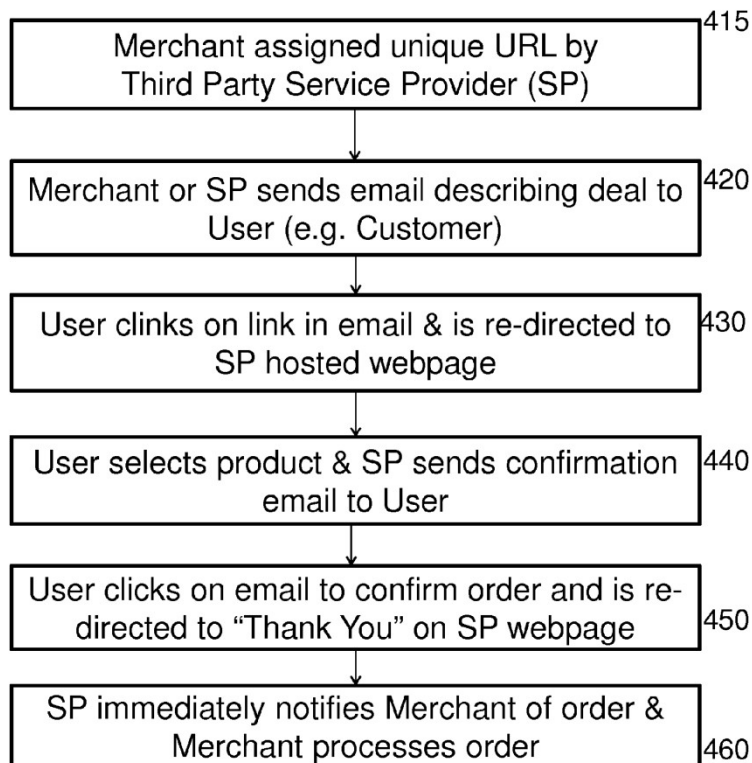


FIG. 4B

148. Gaddis also protects the user when the advertisement is forwarded. When a friend who received a forwarded advertisement “attempts to place an order, they will be directed to the Offer Provider’s other venues for electronic purchasing,” and a confirmation is sent to the original user’s account, “wherein the User would decline the purchase by not clicking on the embedded link.” *Id.*, ¶10; see also *id.*, ¶¶49-50, 59.

149. Finally, Gaddis describes an alternative in which the PEL takes the user to the merchant’s own webpage, *id.*, ¶60, an “ECA Single Click Method” for a user “whose identity has been previously verified by the Offer Provider,” such as a user who “has already logged into the merchant’s website,” *id.*, ¶61, and a “double

opt-in confirmation” in which the user chooses to confirm by email, SMS, or telephone call, *id.*, ¶¶12, 62-63.

150. Gaddis thus describes sending a consumer, by email or text message, a link that is unique to that consumer and opens a page created for that consumer, from which the consumer completes a purchase.

3. U.S. Patent Application Publication No. 2018/0365723 to Lentz

151. U.S. Patent Application Publication No. 2018/0365723, titled “Integrated Value Exchange and Referral System” to Lentz (“Lentz”), was filed on June 15, 2018, and published on December 20, 2018. EX1011, Cover. I understand Lentz is therefore prior art to the ’799 patent under at least 35 U.S.C. § 102(a)(2). Lentz was not cited by the applicant or the Examiner during prosecution of the ’799 patent. EX1001, References Cited.

152. Lentz identified a problem in the art: consumers “are presented with a wide variety of buying options,” and, “faced with perhaps a confusing array of choices, an average consumer may not be incentivized to select one product and/or service over another.” EX1011, ¶3.

153. Lentz describes an “Integrated Value Exchange and Referral (IVER) system” through which merchants and other affiliate providers present “product-service offerings” to consumers in “a consumer portal of an IVER application.”

Id., Abstract, ¶¶26-27. Each offering carries “a product-service link through which the product-service offering may be accessible.” *Id.*, ¶28.

154. Figure 1 of Lentz, reproduced below, depicts the IVER system 102, the affiliate providers’ electronic storefronts 108, and the consumers’ client devices 116 running the IVER application 114. *Id.*, ¶¶55-58, Fig. 1. Each product-service link “re-directs a client device 116 from a presentation of the IVER application 114 to a presentation of an electronic storefront associated with the product-service offering,” and “provides a unique and shareable association between the consumer and product-service offering.” *Id.*, ¶58.

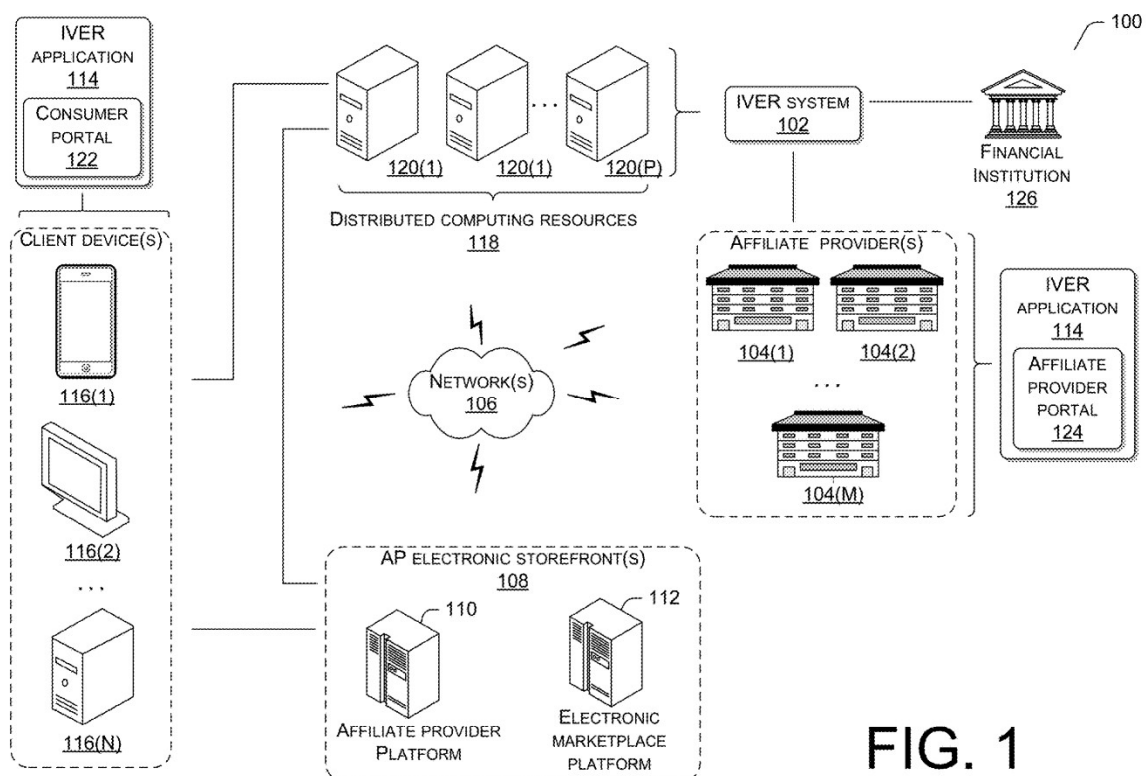


FIG. 1

155. Lentz delivers offerings to consumers’ devices over a choice of messaging channels. When one consumer refers an offering to another, the offering may be delivered “as a Short Message Service (SMS) message, a Multimedia Message Service (MMS) message, a Rich Communication Service (RCS) message, an electronic mail (e-mail) message, a voice message (i.e. voicemail), or any other known communication medium capable of transmitting and presenting multimedia content.” *Id.*, ¶¶33, 73. The offering is accompanied by “a referral data packet” that “facilitates tracking progress of a transaction (i.e. purchase event).” *Id.*, ¶¶34, 74.

156. Lentz applies machine learning to the consumer’s prior activity. The IVER system “may employ one or more machine learning algorithms to identify a product-service offering that is likely to trigger a consumer to initiate and/or complete a corresponding purchase agreement,” using techniques such as “naive Bayes, Bayesian networks, decision trees, neural networks,” and others. *Id.*, ¶39. It builds a “consumer analysis model” from “a record of historical product-service transaction data executed by the consumer, a record of product-service offerings viewed ... by the consumer, profile data associated with the consumer, or the storefront selection of preferred categories/campaigns.” *Id.*, ¶¶52, 90. The model yields a consumer-applicability score used to “selectively prioritize a presentation of product-service offerings.” *Id.*, ¶¶53, 176-177.

157. Lentz clusters consumers by geographic area or by correlations within their profile data, which includes “demographic data, categories of product interest, categories of service interest, or any combination thereof,” and gathers environmental data including “product-service search data performed by a consumer via an IVER application” and “a time of day, or day of the week that purchase transactions are most often initiated and completed.” *Id.*, ¶¶37, 49.

158. Lentz also uses the consumer’s behavior to time and target delivery. It may recommend sending an offering “at a time of day or day of the week that is most likely to trigger the consumer to initiate and/or complete a corresponding purchase agreement,” and it groups consumers into subsets “based on a frequency of visits or residence within a geographic area ... or a degree of correlation between consumer profile data and product-service offerings.” *Id.*, ¶¶40-41.

159. Lentz tracks each consumer’s progress toward a purchase. When a consumer selects an offering, the system generates a purchase event and assigns it a status “such as, a ‘pending,’ ‘fulfilled,’ ‘approved,’ or ‘abandoned’ status.” *Id.*, ¶60; *see also id.*, ¶¶91, 143-144.

160. Lentz thus describes delivering merchants’ offerings to consumers’ devices by SMS, MMS, or RCS message with links to the merchants’ storefronts, using machine learning on each consumer’s prior activity to select and time those offerings, and tracking whether each consumer completes a purchase.

4. U.S. Patent Application Publication No. 2005/0228899 to Wendkos et al.

161. U.S. Patent Application Publication No. 2005/0228899, titled “Systems and Methods for Producing, Managing, Delivering, Retrieving, and/or Tracking Permission Based Communications” to Wendkos et al. (“Wendkos”), was filed on February 28, 2005, claiming the benefit of a provisional application filed on February 26, 2004, and published on October 13, 2005. EX1012, Cover. I understand Wendkos is therefore prior art to the ’799 patent under at least 35 U.S.C. § 102(a)(1). Wendkos was not cited by the applicant or the Examiner during prosecution of the ’799 patent. EX1001, References Cited.

162. Wendkos addresses problems that legitimate senders of permission-based e-mail faced. It explains that their messages were lost among unsolicited messages, blocked or blacklisted by Internet service providers, and difficult to track, so that “accurate tracking and reporting of deliveries, bounces, opens, and clicks associated with emails has been difficult or impossible to achieve.” EX1012, ¶¶5-10. Wendkos’ solution “requires the establishment of indisputable permission arrangements between senders and recipients.” *Id.*, ¶14. Wendkos thus addresses, with permission and secure delivery, a concern that the ’799 patent also identifies, the erosion of trust in network communications and transactions. *See* EX1001, 1:40-45.

163. Figure 1 of Wendkos depicts “a communications system 100” in which a recipient’s computer 102, a sender 106, and “PMP servers 108” are connected to an IP network such as the Internet. EX1012, ¶¶81-83, Fig. 1. Computer 102 may be “a laptop or other personal computer, a mobile (cellular) telephone, a personal digital assistant (PDA),” or another device “capable of using a Web browser program.” *Id.*, ¶82. As Figure 2 shows, PMP servers 108 may include download servers 202, campaign management servers 204 that “host and manage the various administrative tools used by senders,” subscriber management servers 206, and polling servers 208. *Id.*, ¶84, Fig. 2. The PMP servers “may be owned, maintained, and/or operated independently of the senders and recipients using them.” *Id.*, ¶135.

164. Wendkos describes three ways of delivering a sender’s communications, shown in Figure 3. *Id.*, ¶85, Fig. 3. Its “BrowserMail” application “is used to enable a recipient to view a received communication using his Web browser”; its “WebPager” application enables a recipient “to receive an update alert and to view an updated Web page or Web site using his Web browser”; and “a traditional email application” enables a recipient “to view a received email (in an inbox) using his email reader.” *Id.*

165. Senders obtain recipients’ permission through subscription forms. Wendkos provides “an apparatus that senders can use to craft online subscription

forms which their target audience uses to subscribe to communications and simultaneously grant their permission to receive the communications.” *Id.*, ¶18. In the subscription process, recipients “provide required and optional profile information such as name, email address, phone number etc and agree to receive the communication they are subscribing to.” *Id.*, ¶19. A sender “publishes a subscription form on its Web site,” and “[a]n entry is created in a database for each recipient” to store “profile data about the recipient, his communications preferences, and response metrics associated with the recipient.” *Id.*, ¶24. Figures 5B and 5C show example opt-in forms, and Wendkos explains that its subscription forms “can be easily integrated into the HTML of your website pages.” *Id.*, ¶¶92-93, 467, Figs. 5B-5C.

166. Wendkos’ platform publishes each communication as a Web page at a recipient-specific address. When a new communication is available, the recipient receives “an encrypted, recipient-specific URL where the recipient’s communication is published.” *Id.*, ¶23. When communications differ among recipients, “the URL will also be personalized (recipient-specific) so that each recipient will be able to view a personalized version of the BrowserMail communication.” *Id.*, ¶103. Communications “can include personalized text and images by merging recipient-specific data that exists in an sender’s list.” *Id.*, ¶28; *see also id.*, ¶¶118, 506-508. The platform also “automatically hosts and generates

the unique URL” of a message for use as a landing page, including for “order forms.” *Id.*, ¶¶272, 337.

167. Wendkos tracks the performance of each campaign “down to the recipient level,” including the number of “opens,” the number of “clickthroughs,” and the number of “specific ‘clickthroughs’ (how many recipients clicked on a specific link in the communication).” *Id.*, ¶31; *see also id.*, ¶122. Its Target Activity Report lists “each email respondent on your open list, the number of links they clicked on and which links in your message they clicked on.” *Id.*, ¶563. The platform can “automatically update mailing lists with response data generated from a communications campaign” to “help evaluate performance and profile the recipient,” and its campaign scheduler lets a sender “[s]chedule the launch day and time for your campaign.” *Id.*, ¶¶114, 250.

168. Wendkos’ communications are not limited to newsletters. A sender may use the platform to disseminate “sales bulletins, pricing schedules, image galleries, promotional offers,” and other communications, *id.*, ¶81, and a communication may include an element “that must be purchased (or rented),” for which the recipient may “provide payment (e.g., credit card) information or provide permission (explicitly or implicitly) to bill a previously established financial account with the PMP servers,” *id.*, ¶91.

169. Wendkos thus describes a third-party platform that supplies subscription forms for senders' websites, collects each subscriber's address together with the subscriber's permission, sends that subscriber personalized communications whose links lead to platform-hosted, recipient-specific pages, and tracks which recipients open those communications and click their links.

5. U.S. Patent Application Publication No. 2005/0278231 to Teeter

170. U.S. Patent Application Publication No. 2005/0278231, titled "Method of Recovery of Electronic Shopping Cart Information for Reinitiation of the Check-Out Process" to Teeter ("Teeter"), was filed on June 14, 2005, claiming the benefit of a provisional application filed on June 15, 2004, and published on December 15, 2005. EX1013, Cover. I understand Teeter is therefore prior art to the '799 patent under at least 35 U.S.C. § 102(a)(1). Teeter was not cited by the applicant or the Examiner during prosecution of the '799 patent. EX1001, References Cited.

171. Teeter addresses abandoned online shopping carts. It explains that "between 25 and 78 percent of online shoppers abandon their online shopping carts before making purchases," and that earlier proposals each "attempt[] to minimize or prevent shopping cart abandonment but ignore[] the abandoned shopping cart itself and ways to recover those lost sales." EX1013, ¶¶4-5.

172. Teeter's method saves the shopping cart and the consumer's information and, if the cart is abandoned, "automatically prompt[s] the abandoned shopper with an e-mail message or other electronic communication to reinitiate the checkout process from a hyperlink in the e-mail message or other form of communication." *Id.*, ¶6. The consumer's e-mail address may be captured "from the e-commerce website's checkout or site registration e-mail address collection form field," from a cookie or a prior login, or "from a data collection panel presented during the session via a pop up window or hidden <div> element block hosted by either the e-commerce website or a 3rd party application service provider (ASP)." *Id.*, ¶13; *see also id.*, ¶12.

173. Figures 1A through 1D of Teeter show the process. *Id.*, ¶¶10-16, Figs. 1A-1D. If the e-mail address was captured, "a personalized e-mail is sent to the consumer . . . containing the shopping cart information which was stored on the session server and a hypertext link to initiate the checkout process," and "[i]f the consumer clicks on the hypertext link, the shopping cart is reinitiated on the e-commerce web site." *Id.*, ¶14. If the link is not selected, Teeter sends a second and then a third e-mail, each with a link to initiate checkout. *Id.*, ¶¶15-16. Figure 1C shows that when a link is selected, Teeter checks whether the consumer has already purchased ("Previous purchase?"), displays an "already purchased"

message if so, and otherwise sends the consumer to the landing page. *Id.*, Fig. 1C (blocks 68-84).

174. The merchant configures the landing page and the e-mails. “The landing page URL address 120 is the web page where the shopper will be redirected from the hyperlink within the e-mail to retrieve their shopping cart,” and “[t]he cartid is used in the link to retrieve the shopper’s cart information.” *Id.*, ¶23, Fig. 2. The landing page “usually will be the shopping cart review page so that the contents of the abandoner’s shopping cart may be recovered and the order placed.” *Id.* The merchant also sets “the number and timing of the e-mails,” for example 3 hours, 48 hours, and 7 days after abandonment, and the e-mails may provide “[a] link to view the contents of the abandoned shopping cart 212 or proceed to checkout 214” and “an incentive such as a special offer or coupon.” *Id.*, ¶¶24-25, Fig. 3.

175. Teeter tracks consumers with a line of JavaScript placed in the merchant’s pages, which calls back to a session server that “records a unique customer id, the page currently being viewed, and the time initiated.” *Id.*, ¶¶26-29. The information collected may include a “unique cart identifier, unique order identifier and successful order completion.” *Id.*, ¶18. Teeter’s system “may be implemented on a merchant’s server, or may be implemented and managed by a third party as a service to the merchant,” which may be compensated based on

recovered sales, “the number of emails sent or the number of clicks from an email.” *Id.*, ¶30.

176. Teeter thus describes sending a consumer a personalized message with a link that returns the consumer to the consumer’s own shopping cart to complete an abandoned purchase, a service that a third party may provide to the merchant.

6. Motivation to Combine Ghadially with Gaddis

177. A POSITA would have been motivated to combine Ghadially with Gaddis. Both are directed to solving problems in the art regarding turning a marketing message delivered to a consumer’s electronic account into a completed online sale. *See* EX1009, ¶4 (explaining that “[i]n an effort to enhance sales,” merchants “have implemented marketing campaigns to reach out to existing or potential customers”), ¶¶18, 42; EX1010, ¶4 (explaining that “the reading and responding to these promotional messages by the User is very difficult, particularly when alpha numeric data input from a mobile keyboard is required”), ¶¶6-7, 39.

178. Each reference is also in the same field of endeavor as the ’799 patent, electronic marketing communications that facilitate online transactions, and each is reasonably pertinent to the problem the ’799 patent addresses, converting a marketing message into a completed online transaction. EX1001, 1:34-56, 9:11-

37, 12:28-48; EX1009, ¶¶4, 18, 42; EX1010, ¶¶4-7, 39. In my opinion, Ghadialy and Gaddis are therefore analogous art to the '799 patent.

179. A POSITA seeking to convert marketing messages delivered to consumers' electronic accounts into completed online purchases would therefore have sought out the various available solutions for doing so, and would have considered combining Ghadialy's personalized alerts with the user-specific link and page that Gaddis describes for that same purpose. *See* EX1009, ¶42; EX1010, ¶¶4, 6-8.

180. Furthermore, Ghadialy and Gaddis describe the same basic arrangement: a service, acting for one or more merchants, that holds a consumer's contact information and sends the consumer messages containing a link. Ghadialy's consumer marketing service runs on a server separate from the merchant's web site and sends each consumer personalized alerts over the consumer's "desired delivery option, such as via E-Mail, IM, RSS, SMS, or a Web portal." EX1009, ¶¶16-18, 23, 29. Gaddis's advertisements likewise come from "Offer Providers (OP), who are either merchants or third party service providers representing merchants," and are sent to the user's email or SMS account with a link embedded. EX1010, ¶¶3, 8, 39, 53-54.

181. Ghadialy's stated goal for its alert is a purchase. When the consumer "clicks a navigation link incorporated into the message 210, the consumer 202 is

navigated to the web site ... so as to complete an on-line purchase.” EX1009, ¶42. Ghadialy does not describe in detail how the page the consumer reaches is tailored to that consumer, or how the purchase that follows is completed. Gaddis supplies that detail. Its link carries “the User identification (encrypted),” and a click on the link brings the user to “a webpage hosted by the service provider and created specifically for the merchant’s advertisement and the User,” from which the user completes the purchase “while not being required to (log in or) enter any of their personal data.” EX1010, ¶¶49, 57, 59.

182. A POSITA would have recognized that Ghadialy’s navigation link could be implemented as Gaddis’s user-specific link, directing the consumer to a user-specific page, using conventional web programming techniques. Ghadialy’s notification module already generates the link that goes into each message, and Ghadialy’s service already identifies each consumer, using “a set of HTTP cookies to track the identity of the user.” EX1009, ¶¶21, 29. The most natural way to make that link identify the consumer who clicks it is to include an identifier as a parameter in the URL, as Gaddis does. EX1010, ¶¶57, 64. When the consumer clicks, the request arrives at the service’s web server, which reads the parameter, identifies the consumer, and returns a page generated for that consumer. Web servers are designed to do exactly this, and Gaddis itself describes creating the

user-specific page “by methods well known in the art.” *Id.*, ¶58; *see* Section IX.A.3.

183. A POSITA would have had good reason to make this combination. Building the destination page as Gaddis describes furthers Ghadialy’s own objective of navigating the consumer to the merchant’s site “so as to complete an on-line purchase.” EX1009, ¶42. Ghadialy sends its alerts by SMS among other channels, to client devices that include “a cellular telephone,” *id.*, ¶¶15, 23, and Gaddis explains that completing a purchase from a promotional message on such a device is “very difficult” when data must be typed on a mobile keyboard, EX1010, ¶4. Gaddis’s user-specific link and page remove that obstacle. *Id.*, ¶¶6-8, 49.

184. A POSITA would also have had a reasonable expectation of success in making the combination. Both references describe the same architecture, a service that sends messages with links over the same channels, including email and SMS. EX1009, ¶¶18, 23, 29; EX1010, ¶¶8, 39, 53-54. Gaddis describes both the encryption of the user identifier and the creation of the user-specific page as done “by methods well known in the art.” EX1010, ¶¶52, 58. The result would be a combination of prior art elements according to known methods to yield predictable results: Ghadialy’s personalized alert, delivered over the consumer’s chosen channel, with a link that opens a page built for that consumer.

185. Moreover, the combination would not require departing from Ghadialy's design of bringing the consumer to the merchant's web site. Gaddis also describes an alternative embodiment in which its user-specific link re-directs the user "to the Offer Provider's or merchant's webpage wherein the User sees details of the product or service being offered and a link or button." *Id.*, ¶60; *see* EX1009, ¶¶29, 42.

186. Nor does the combination depend on Gaddis's stored payment information. The combination uses Gaddis's user-specific link and user-specific page. A consumer for whom the service holds no stored payment information would complete the purchase through the merchant's ordinary checkout, as Gaddis provides for recipients other than the established user. EX1010, ¶59.

7. Motivation to Combine Ghadialy and Gaddis with Lentz

187. A POSITA would also have been motivated to combine Ghadialy and Gaddis with Lentz. Lentz, like Ghadialy and Gaddis, is directed to presenting a consumer with merchants' offerings selected for that consumer, delivering them to the consumer's device, and bringing the consumer through a link into a purchase at the merchant's storefront. EX1011, Abstract, ¶¶3, 25-28, 33, 40, 49-53, 58; EX1009, ¶¶18, 42; EX1010, ¶¶7-8, 39.

188. Lentz is also in the same field of endeavor as the '799 patent, electronic marketing communications that facilitate online transactions, because it

delivers merchants' offerings to consumers' devices over messaging channels with links to the merchants' storefronts. EX1011, Abstract, ¶¶28, 33, 58. And Lentz is reasonably pertinent to the problem the '799 patent addresses, converting a marketing message into a completed online transaction, because it selects and times offerings to "trigger the consumer to initiate and/or complete a corresponding purchase agreement." EX1011, ¶40; EX1001, 1:34-56. In my opinion, Lentz is therefore analogous art to the '799 patent.

189. Ghadialy, Gaddis, and Lentz each describe delivering a merchant's offer to a consumer over a set of alternative channels. Ghadialy lists "E-Mail, IM, RSS, SMS, or a Web portal." EX1009, ¶23. Gaddis lists "email, SMS-text, Instant Messaging, Tweets, Facebook posts, and other emerging formats." EX1010, ¶3. Lentz lists "a Short Message Service (SMS) message, a Multimedia Message Service (MMS) message, a Rich Communication Service (RCS) message, an electronic mail (e-mail) message, a voice message (i.e. voicemail), or any other known communication medium capable of transmitting and presenting multimedia content." EX1011, ¶33. The channels for delivering such an offer were thus a known and limited set, and a POSITA choosing a channel for the combined system's message would have chosen from that set. A POSITA would therefore have sought out the various available solutions within that known set, and would have considered Lentz's RCS channel among them.

190. Although Lentz lists these media in describing one consumer's referral of an offering to another, the media are the same whoever initiates the message. Lentz treats them as interchangeable carriers for the same offering content. EX1011, ¶¶33-34, 73. The RCS standard likewise contemplates "[o]ffering RCS as a delivery channel for businesses to communicate with their staff, existing and potential customer base," so a POSITA would have understood that a business-originated RCS message travels over the same channel, to the same telephone number, as Lentz's referred offering. EX1016, 152-53. And Ghadialy itself treats the delivery channel as a variable: its notification module "can dynamically change either of, or both, a message format and a delivery option for subsequent messages." EX1009, ¶30.

191. Furthermore, to the extent Ghadialy and Gaddis address targeting and timing only generally, a POSITA would have recognized the benefit of incorporating Lentz's machine-learning techniques into the combined system. Ghadialy selects the content of its alerts by matching recommendations to each consumer's preferences and behavior and by "a set of configurable rules," and it adjusts message frequency by comparing the consumer's open rate with "an average or typical rate." EX1009, ¶¶23, 26-27, 30, 32. Lentz performs the same functions with "one or more trained machine learning algorithms" applied to the consumer's history of transactions and viewed offerings, both to identify the

offering most likely to lead to a purchase and to recommend sending it “at a time of day or day of the week that is most likely to trigger the consumer to initiate and/or complete a corresponding purchase agreement.” EX1011, ¶¶39-40, 52. Using Lentz’s trained models in place of Ghadialy’s rules is the use of a known technique to improve a similar system in the same way.

192. Lentz also records each consumer’s engagement with a delivered offering as a discrete status, such as “pending,” “fulfilled,” or “abandoned.” EX1011, ¶60. That per-offering status complements the message open rates and on-site events that Ghadialy already tracks with its Web beacon, including when “the user adds a product to a shopping cart” and when “the user completes an on-line purchase.” EX1009, ¶¶22-23.

193. A POSITA would have had a reasonable expectation of success in making these additions. Adding RCS to the combined system’s channels required only selecting another standardized messaging format that, by the time of the claims that recite it, had been specified for messaging between businesses and consumers. *See* Section IX.A.5; EX1016, 152-53. And applying trained models to the consumer data that Ghadialy already collects required only known machine-learning techniques of the kind Lentz lists. EX1011, ¶39; *see* Section IX.A.6. The result would be a combination of prior art elements according to known methods to

yield predictable results, such as adding RCS to Ghadialy's set of channels and substituting Lentz's machine-learning targeting for Ghadialy's configurable rules.

8. Motivation to Combine Wendkos with Teeter

194. A POSITA would have been motivated to combine Wendkos with Teeter. Both give merchants a way to market to consumers through personalized electronic communications, and both obtain the consumer's e-mail address for those communications through a form on the merchant's website: Wendkos through the sender's subscription form, together with the subscriber's express permission, and Teeter through the website's registration or checkout field or a capture panel. EX1012, ¶¶18, 24, 92; EX1013, ¶¶12-14, 17, Fig. 1B.

195. Each reference is also in the same field of endeavor as the '799 patent, permission-based electronic marketing communications, and each is reasonably pertinent to the problem the '799 patent addresses, obtaining a consumer's authorization to receive messages and using those messages to drive online transactions. EX1001, 1:34-56, 7:33-37, 8:54-58, 9:11-37. In my opinion, Wendkos and Teeter are therefore analogous art to the '799 patent.

196. Wendkos' communications may include "promotional offers" and content "that must be purchased (or rented)." EX1012, ¶¶81, 91. A merchant using Wendkos' platform to market its products would have recognized Teeter's abandoned-cart e-mail, whose link reloads the consumer's previously chosen

products for purchase, as a known kind of promotional communication for completing exactly such a sale. EX1013, ¶¶6, 14, 17.

197. A POSITA would have had good reason to make the combination. Wendkos promotes its platform on the ground that “your response and conversion rates will be significantly higher than with email,” EX1012, ¶237, and Teeter’s recovery e-mails give merchants “a second chance to get consumers to complete their sales,” EX1013, ¶17. Adding Teeter’s cart-recovery communications to the communications a merchant sends through Wendkos’ platform adds further opportunities to convert a subscriber’s interest into a completed purchase, which furthers Wendkos’ own objective.

198. A POSITA would also have had a reasonable expectation of success. Both references deliver recipient-specific links: Wendkos publishes communications at recipient-specific URLs and makes each link in a message trackable, and Teeter’s link carries the cart identifier that retrieves the consumer’s cart. EX1012, ¶¶23, 85, 103, 293; EX1013, ¶¶14-15, 23, Fig. 2. Teeter’s recovery system “may be implemented and managed by a third party as a service to the merchant,” EX1013, ¶30, which is the role that Wendkos’ independently operated PMP servers already play, EX1012, ¶135. Implementing Teeter’s cart-recovery e-mail on Wendkos’ platform required only conventional web programming: storing the cart identifier with the subscriber’s record, including it in the link, and serving

the cart page when the link is followed. *See* Section IX.A.3. The result would be a combination of prior art elements according to known methods to yield predictable results. EX1012, ¶293; EX1013, ¶¶6, 23.

9. Motivation to Combine Wendkos and Teeter with Lentz

199. A POSITA would also have been motivated to combine Wendkos and Teeter with Lentz. Lentz, like Wendkos and Teeter, is directed to presenting a consumer with merchants' offerings selected for that consumer, delivering them to the consumer's device, and bringing the consumer through a link into a purchase. EX1011, Abstract, ¶¶25-28, 33, 40, 49-53, 58; EX1012, ¶¶14, 23-24; EX1013, ¶¶14, 17.

200. For the reasons I give in Section IX.B.7, Lentz is analogous art to the '799 patent.

201. Wendkos delivers its communications by e-mail and BrowserMail, identifies "a mobile (cellular) telephone" as a recipient device, and collects each subscriber's "phone number." EX1012, ¶¶82, 85, 92. Lentz identifies RCS expressly, alongside SMS, MMS, and e-mail, as a known medium for delivering a product-service offering to a consumer's device. EX1011, ¶¶33, 73. For the reasons I give in Section IX.B.7, the delivery channels for such an offering were a known and limited set, and Lentz's media are interchangeable carriers for the same content whoever initiates the message. Wendkos itself treats the channel as a

variable: a sender selects the delivery method for each campaign, and a subscriber may switch delivery from one method to another. EX1012, ¶¶26, 256.

202. Wendkos also profiles each recipient from campaign responses. It can “automatically update mailing lists with response data generated from a communications campaign” to “help evaluate performance and profile the recipient,” and it lets senders “[c]reate targeted mailings to your subscribers based upon their demographic profile, campaign activity or other relevant segmentation requirement.” EX1012, ¶¶114, 395. Lentz performs the same kind of profiling with “one or more trained machine learning algorithms” applied to the consumer’s history, both to identify the offering most likely to lead to a purchase and to recommend sending it “at a time of day or day of the week that is most likely to trigger the consumer to initiate and/or complete a corresponding purchase agreement.” EX1011, ¶¶37-40, 52, 90.

203. A POSITA would have had good reason to use Lentz’s techniques in the combined system, because a completed purchase is the outcome that Wendkos’ promotional communications and Teeter’s recovery e-mails seek, and Lentz’s per-offering purchase statuses (“pending,” “fulfilled,” “approved,” or “abandoned”) complement the open and click data that Wendkos already tracks. EX1011, ¶¶40, 60, 91; EX1012, ¶¶31, 122-124, 237, 395, 558-559, 563; EX1013, ¶¶4-6.

204. A POSITA would have had a reasonable expectation of success in making these additions. Adding RCS to the platform's delivery methods required only selecting another standardized messaging format that, by the time of the claims that recite it, had been specified for messaging between businesses and consumers. *See* Section IX.A.5; EX1016, 152-53. And applying Lentz's trained models to the subscriber response data that Wendkos already collects required only known machine-learning techniques of the kind Lentz lists. EX1011, ¶39; EX1012, ¶¶114, 395; *see* Section IX.A.6. The result would be a combination of prior art elements according to known methods to yield predictable results.

10. Secondary Considerations

205. I am unaware of any secondary considerations that would render the claims of the challenged patent non-obvious.

C. Ground 1: Claims 1-30 Are Rendered Obvious by Ghadially in View of Gaddis, Lentz, and the General Knowledge of a POSITA

1. Independent Claim 1

a. Ghadially Discloses 1[pre]

206. Ghadially discloses “[a] system comprising.”

207. The '799 patent describes its system 100 as including electronic devices 110, a computer 112 such as “a cloud-based computer or server,” and a hosting computer 114, which communicate over a network. EX1001, 8:34-51, Fig.

1. Ghadially describes a corresponding system. Figure 1 of Ghadially, reproduced

below, “illustrates a computer system 100,” which “is a client-server computer network that includes at least one client computer 102 and multiple server computers, including server computers 104 and 106,” connected by “a set of one or more communication channels 110, which can include any wire or wireless communication channel.” EX1009, ¶14, Fig. 1.

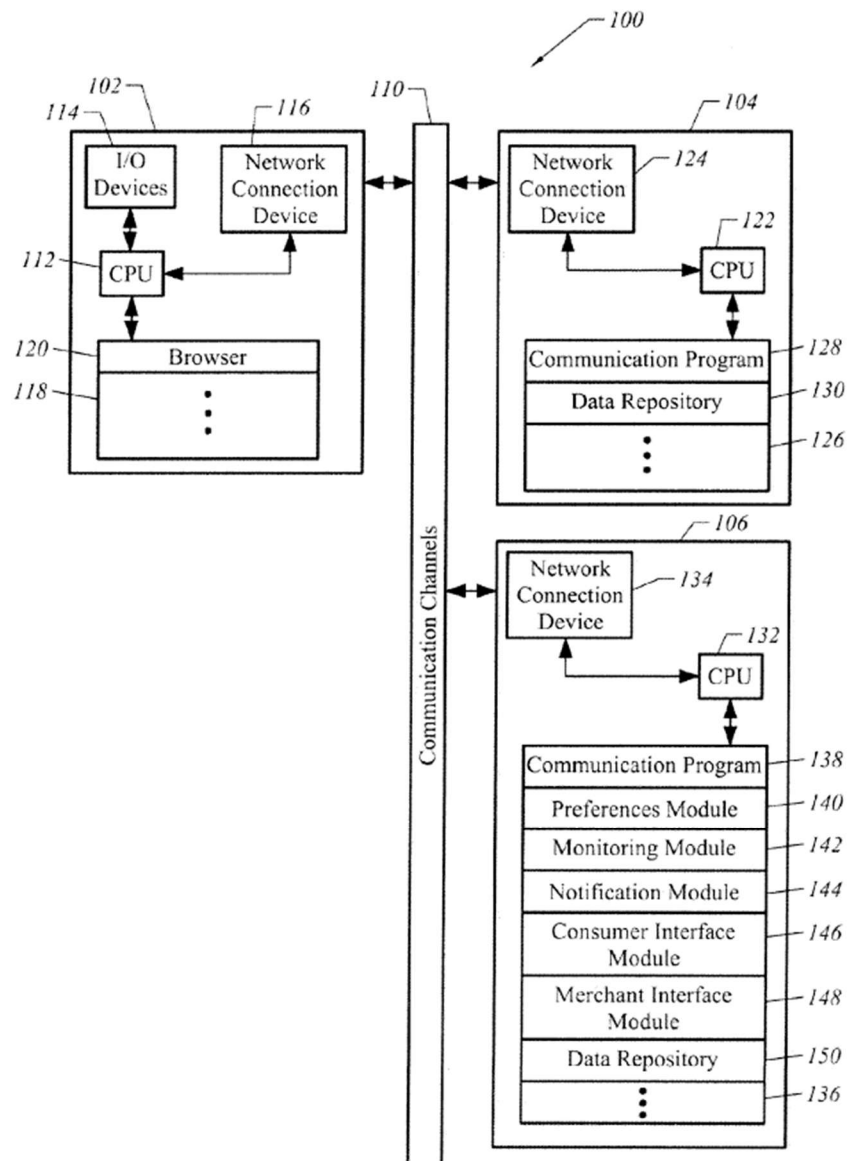


FIG. 1

208. In Ghadialy's system, "the server computer 104 is operated by a merchant as a web site for selling products," while "the server computer 106 is operated to facilitate the design and execution of marketing campaigns to reach out to existing or potential customers of the merchant." *Id.*, ¶¶16-17. Figure 5 of Ghadialy, also reproduced below, shows a similar system in which a single consumer marketing service on server computer 506 serves the web sites of two merchants. *Id.*, ¶¶44-46, Fig. 5.

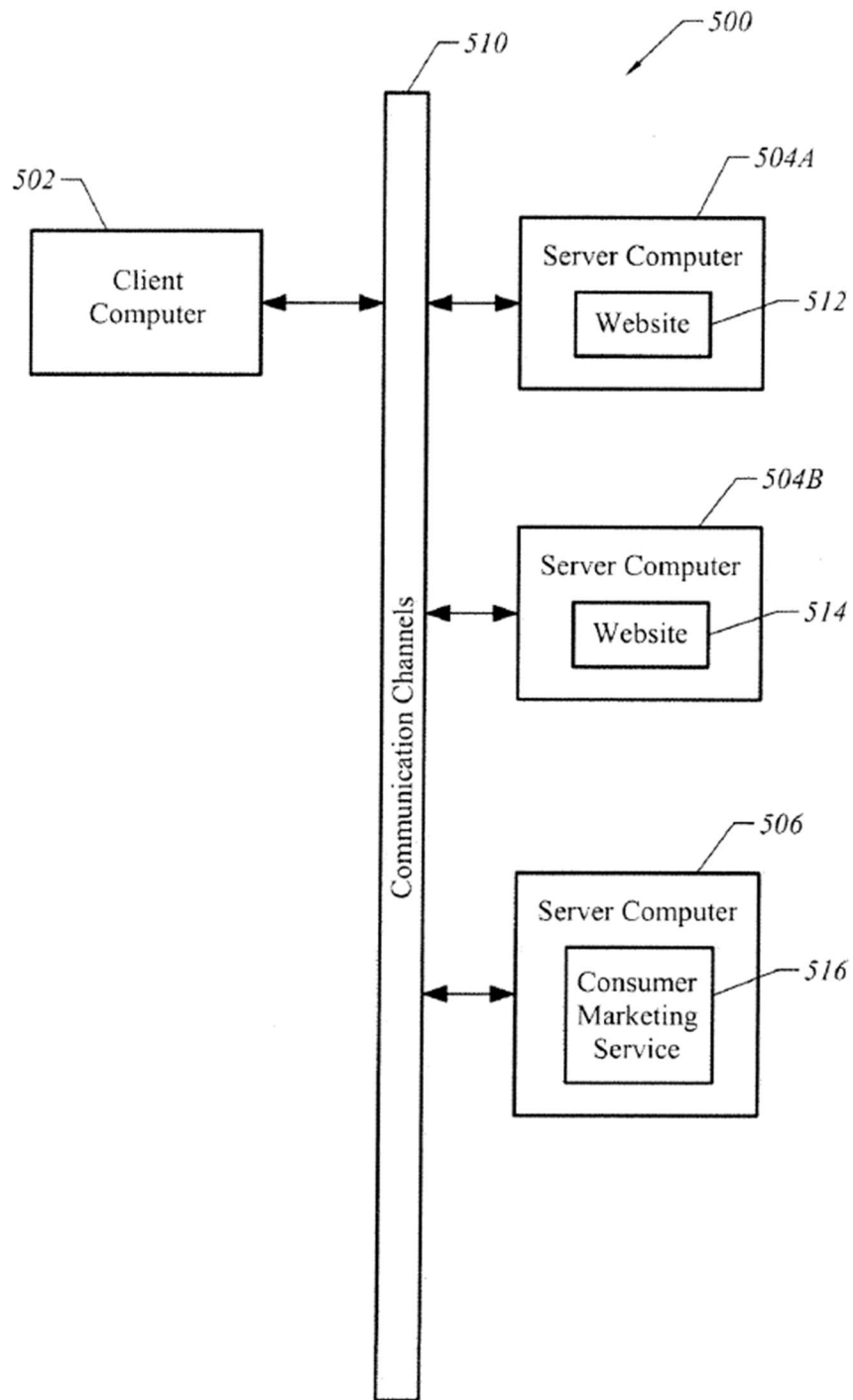


FIG. 5

A POSITA would have understood that Ghadialy's client-server computer network, which includes a client computer and multiple server computers

connected by communication channels, is “[a] system.” EX1009, ¶¶14-17, Figs. 1, 5.

b. Ghadialy Discloses 1[a]

209. Ghadialy discloses **“a processor.”** The server computer 106 that carries out Ghadialy’s marketing operations “includes conventional server computer components, including a CPU 132 that is connected to a network connection device 134 and a memory 136.” EX1009, ¶17, Fig. 1. The client computer 102 and the merchant’s server computer 104 likewise include CPUs 112 and 122. *Id.*, ¶¶15-16.

210. A CPU, or central processing unit, is the processor of a computer. A POSITA would therefore have understood that Ghadialy’s CPU 132 is “a processor.”

c. Ghadialy Discloses 1[b]

211. Ghadialy discloses **“memory configured to store program instructions, wherein, when executed by the processor, the program instructions cause the processor to perform operations comprising”** the operations recited in elements 1[c] through 1[g]. Ghadialy explains that “[t]he memory 136 stores a number of computer programs,” including “a set of computer programs implementing the operations described herein,” namely “a preferences module 140, a monitoring module 142, a notification module 144, a consumer

interface module 146, and a merchant interface module 148.” EX1009, ¶17, Fig. 1. Memory 136 is connected to CPU 132, which executes those programs. *Id.*

212. Ghadialy also describes these modules as executable instructions stored on a computer-readable medium, describing “a computer storage product with a computer-readable medium having executable instructions or computer code thereon for performing various computer-implemented operations.” *Id.*, ¶53; *see also id.*, ¶6, claims 1, 11.

d. Ghadialy Discloses 1[c]

213. Ghadialy discloses **“providing a hosted input field for inclusion in a first document associated with a third party.”**

214. The ’799 patent explains that its computer “may inject a hosted field into a document provided by hosting computer 114,” for example by providing the hosted field “for inclusion in a webpage associated with a third party (i.e., that is other than a provider of the communication technique).” EX1001, 8:52-58.

During prosecution, the applicant distinguished an input field that “exists explicitly within ‘a text message’ application on a mobile device,” arguing that such a field is not “hosted” nor “for inclusion in a ‘document associated with a third party.’”

EX1002, 424.

215. Ghadialy describes a field of the kind the ’799 patent describes. Ghadialy’s consumer marketing service runs on server computer 106, separate

from the merchant's server computer 104, which the merchant operates "as a web site for selling products." EX1009, ¶¶16-17, Fig. 1. The service supplies the sign-up interface for the merchant's web page: "[t]o allow faster and easier integration with the merchant's web site, an appropriate Hypertext Markup Language ('HTML') tag can be incorporated in a source web page that forms the web site," and "the 'sign-up' page can be incorporated within the source web page, such as via iframe." *Id.*, ¶21.

216. Figure 2 of Ghadialy, reproduced below, illustrates this arrangement. The "'sign-up' page 206 is provided by a consumer marketing service 208, but is integrated with the web site 204 so as to appear seamless from the standpoint of the consumer 202." *Id.*, ¶39, Fig. 2.

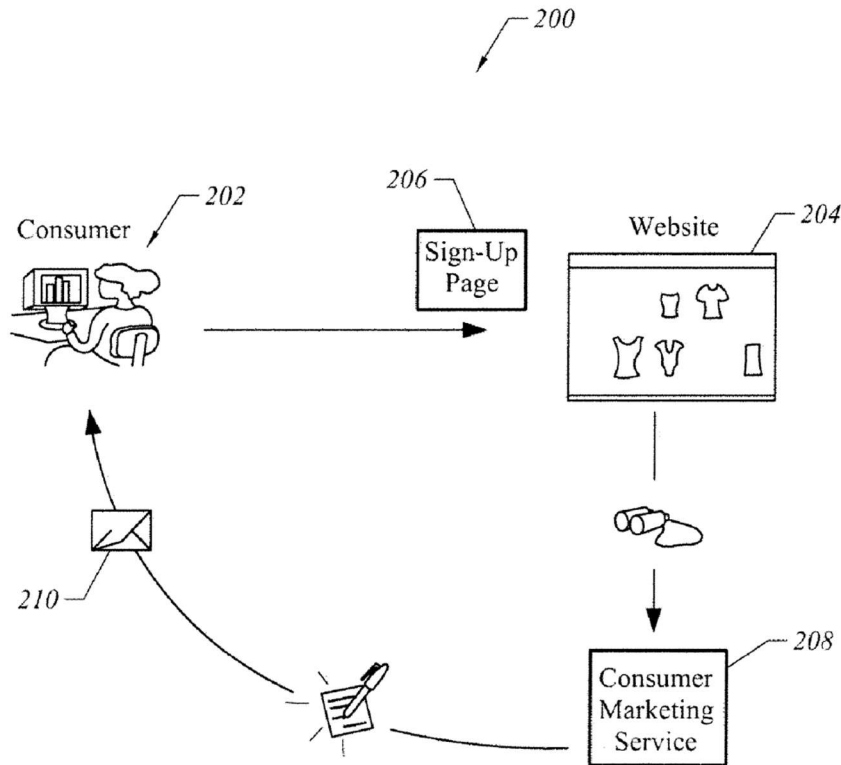


FIG. 2

217. Figures 3 and 4 of Ghadially, reproduced below, show examples of the sign-up interface on a merchant’s product page. *Id.*, ¶¶39-40, Figs. 3-4. Figure 4 includes a text box labeled “Send my wine.com alerts to,” in which the consumer enters an email address, within a sign-up form marked “Powered by RubiconSoft” that appears on the wine.com page. The form opens on the merchant’s product page from a control labeled “alert me about wines like this,” directly beneath the page’s “add to cart” button. *Id.*, ¶40, Fig. 4.

300

Inventory Alert

Unavailable	
	Men's Regular GORE-TEX Slicker Size: L. Item # 9377AF4 Were sorry, this item is temporarily unavailable. You may be interested in a similar item or sign up for a back-in-stock reminder below: ☒ Notify me when back in stock online ☐ Notify me when back in stock in a store near zip: OK

FIG. 3

400

1 ▾ add to cart

Item No. 79525

? alert me about wines like this ▾

Please alert me about new wines:

vine type Cabernet Sauvignon ▾	region Napa Valley, California ▾
--	--

402

points 0 to 100	price \$ 0 to \$ 25
---	---

add search criteria to your alert listing (optional)

enter a winery name, year, or even a tasting description
 example: Fransiscan
 example: "red berry" 2004

Send my wine.com alerts to:

☒ ☐ [Privacy Policy](#)

Verify: name@example.com

☐ MY YAHOO! Home Page ([What is this?](#))
☐ MY MSN Home Page ([What is this?](#))
☐ Reader ([What is this?](#))

404

☐ Powered by RubiconSoft

FIG. 4

218. The service that supplies this form is separate from the merchant. It provides the merchant a “merchant Web portal” through which the merchant configures how preferences are captured, *id.*, ¶35, and in Ghadially’s Figure 5 a single service collects preferences on two merchants’ web sites and performs its operations “on behalf of the first merchant and the second merchant,” *id.*, ¶¶45-46, Fig. 5; *see also id.*, ¶49 (the service generates “marketing opportunities for a group

of merchants without requiring cooperation between members of the group of merchants”).

219. A POSITA would have understood that Ghadialy’s sign-up field, which the marketing service provides and which is incorporated in the merchant’s source web page by an HTML tag or iframe so as to “appear seamless from the standpoint of the consumer,” is a hosted input field for inclusion in a first document associated with a third party. *Id.*, ¶¶21, 39. The field is hosted by the marketing service, whose server supplies it, rather than by the merchant, as I explain in Section IX.A.1. The merchant’s web page is a first document associated with a third party, the merchant, which is other than the provider of the service. And unlike the field the applicant distinguished during prosecution, Ghadialy’s field is not part of a messaging application on the consumer’s device; it is a field in the merchant’s web page. *See* EX1002, 424; *see also* EX1024, ¶14 (describing form fields in a merchant’s web page that “are therefore hosted by the third party, and not the organization”).

e. Ghadialy in View of Gaddis Discloses 1[d]

220. Ghadialy in view of Gaddis discloses **“receiving, information indicating activation of the hosted input field in the first document, wherein the information comprises an electronic address associated with an electronic device and an indication of a willingness to receive one or more messages.”**

221. In Ghadially, the consumer activates the hosted field by signing up. Ghadially explains that “as the user is visiting the merchant’s web site, the user can be allowed to sign-up for messages at different points,” and that if a product is out of stock, “the user can be prompted to sign-up for a ‘Back-in-Stock’ notification.” EX1009, ¶20. The service stores what it captures “in a preference profile that is stored in the data repository 150.” *Id.*, ¶19.

222. The information captured at sign-up includes both the consumer’s willingness to receive messages and the address to which they are sent. In Figure 4, reproduced above, the consumer asks to be alerted (“Please alert me about new wines”), specifies the content of interest, enters an email address in the field labeled “Send my wine.com alerts to,” and submits the form. *Id.*, ¶40, Fig. 4. Figure 3, also reproduced above, shows opt-in checkboxes reading “Notify me when back in stock online” and “Notify me when back in stock in a store near zip.” *Id.*, ¶39, Fig. 3. Ghadially also provides “a set of options to allow the user to opt out of receiving further messages,” confirming that sign-up establishes the permission that opting out revokes. *Id.*, ¶24; *see also id.*, ¶¶22 (“prior consent”), 47 (“permission-based marketing methodology”).

223. The ’799 patent describes a comparable sign-up step, although its examples use a mobile telephone number rather than an email address as the electronic address. During prosecution, the applicant explained that in its system

an electronic address “is physically entered into the provided ‘hosted input field’ in a ‘first document associated with a third party,’” and that “[t]his submission constitutes an explicit indication of the user’s ‘willingness to receive one or more messages’ from that third party.” EX1002, 425.

224. The consumer’s address is associated with an electronic device. The consumer uses client computer 102, which “can be, for example, a desktop computer, a laptop computer, a palm-sized computer, a personal digital assistant, or a cellular telephone.” EX1009, ¶15. The service sends the requested alerts to the address the consumer designated, by the consumer’s “desired delivery option, such as via E-Mail, IM, RSS, SMS, or a Web portal.” *Id.*, ¶¶23, 29-30.

225. I understand that Patent Owner’s infringement contentions has asserted that an “email address and/or mobile phone number” meets the “electronic address” limitation. EX1032, 4. I have been asked to consider whether Ghadially’s email address discloses this limitation under that interpretation. In that case, a POSITA would have understood that the consumer’s email address is “an electronic address associated with an electronic device,” and that the consumer’s affirmative request for alerts, submitted with that address, is “an indication of a willingness to receive one or more messages.” EX1009, ¶¶15, 20, 23-24, 39-40, Figs. 3-4.

226. To the extent “electronic address” requires a telephone number, Ghadially in view of Gaddis discloses one. Ghadially’s client computer 102 may be “a cellular telephone,” and its communication channels “allow transmission of information via any of a number of delivery options, such as Hypertext Transfer Protocol (‘HTTP’), E-Mail, Instant Messaging (‘IM’), Really Simple Syndication or Rich Site Summary (‘RSS’), and Short Message Service (‘SMS’),” with the consumer able to choose SMS as the delivery option for alerts. EX1009, ¶¶14-15, 23. An SMS message is addressed to the recipient’s mobile telephone number, which identifies both where the message is sent and the device that receives it. EX1015, ¶6. Gaddis confirms that a messaging service sends to a user at a telephone number: Gaddis’s service provider holds “an email address if they are sending email, the User’s AccountID if they are posting to a social network site ... or a cell phone number if sending an SMS/Text.” EX1010, ¶54. Gaddis’s confirmation screen likewise offers to “SMS/Text me at xxx-xxx-x987.” *Id.*, ¶62, Fig. 6A. Figure 7 of Gaddis, reproduced below, shows the merchant’s message and a confirmation request, with its link, arriving in the user’s “Mobile SMS inbox.” *Id.*, ¶¶62-63, Fig. 7. A POSITA would have been motivated to capture the consumer’s mobile telephone number when the consumer selects Ghadially’s SMS delivery option, because SMS delivery requires it: an SMS alert cannot reach the consumer without the number to which it is addressed. EX1009, ¶¶14, 23;

EX1010, ¶54; EX1015, ¶6. A POSITA would also have had a reasonable expectation of success, because collecting a cell phone number for SMS delivery was a known practice, as Gaddis shows, and would have required only adding a telephone number entry to Ghadialy's sign-up interface alongside its existing address field. EX1009, ¶¶20, 40, Fig. 4; EX1010, ¶¶54, 62, Fig. 6A. The same telephone number is the electronic address for the dependent claims that recite RCS and EMS messages, which are also addressed to a mobile telephone number. *See* Sections IX.C.3.a, IX.C.3.d, IX.C.3.e.

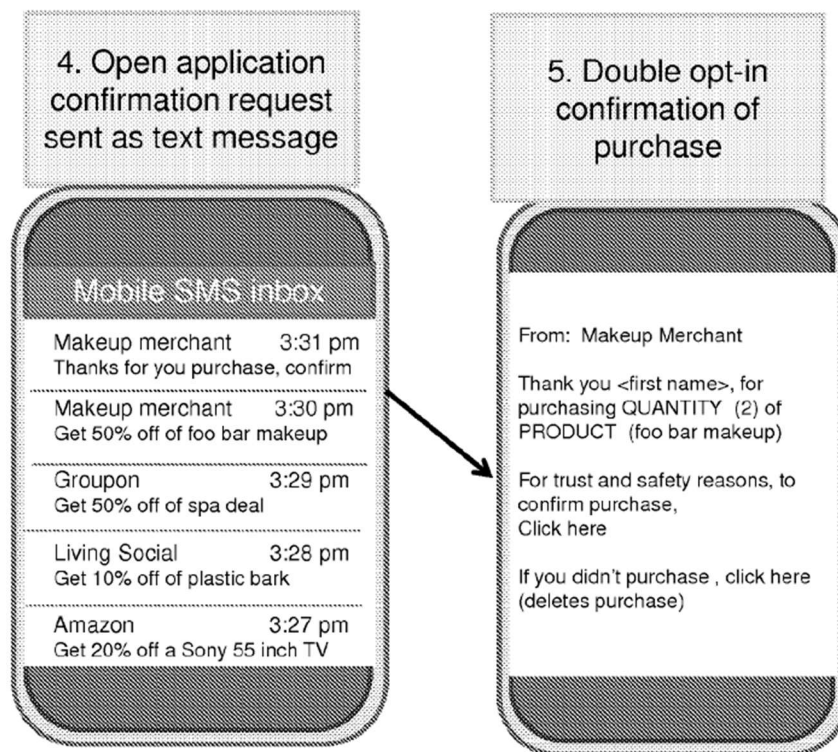


FIG. 7

227. A POSITA would have been motivated to capture the consumer's mobile telephone number in Ghadialy's sign-up form whenever the consumer selects Ghadialy's SMS delivery option. An SMS message is addressed to a telephone number, EX1015, ¶¶6; EX1010, ¶¶54, and Ghadialy's form already captures the address appropriate to the delivery option the consumer selects, EX1009, ¶¶14, 23, 40, Fig. 4. *See* Section IX.B.6.

f. Ghadialy in View of Gaddis Discloses 1[e]

228. Ghadialy in view of Gaddis discloses **“generating, a second document that includes information about one or more events of interest for a user associated with the electronic address, the second document being customized to the user.”**

229. The '799 patent describes the second document as a webpage that “includes information about one or more transactions (such as one or more upcoming events) of interest to the individual,” and that “may be created de novo for each subscriber customer or individual.” EX1001, 9:11-16, 14:27-29.

230. Ghadialy generates content for each consumer in response to the sign-up. Its monitoring module analyzes information “based on individual preferences of the user so as to identify relevant content that matches those individual preferences,” where those preferences concern “products, events, sales, or any other topics of interest to the user.” EX1009, ¶¶19, 26. The sign-up topics in

Ghadialy's Table 1 include "[g]eneral events in a particular neighborhood," "Pre-Sale days in a store near a particular zip-code," an "[o]nline sale in a particular product category," and "[p]roducts in a user's shopping cart that go on sale." *Id.*, ¶20, Table 1. Ghadialy also presents tailored content in a document generated for the individual user, "a consumer Web portal, which presents relevant content that is personalized or tailored for the user." *Id.*, ¶34.

231. To the extent Ghadialy does not expressly describe generating a separate webpage customized to the individual consumer as the destination of the message's link, Gaddis does. Gaddis explains that the information exchanged with the merchant "enables the service provider to create a webpage specific to a merchant comprising the merchant's identifying information, such as logos or trademarks, and the User's name," and that "[t]he service provider can also create a webpage specific to each User's requirements (e.g., web browser, electronic communications device and account) by methods well known in the art." EX1010, ¶58. That page addresses the user "by their name or a unique greeting" and "describes the product or service." *Id.*, ¶48. Figures 2A and 2B of Gaddis, reproduced below, show the user opening the message on a mobile device, clicking to buy, and reaching that page. *Id.*, ¶48, Figs. 2A-2B.

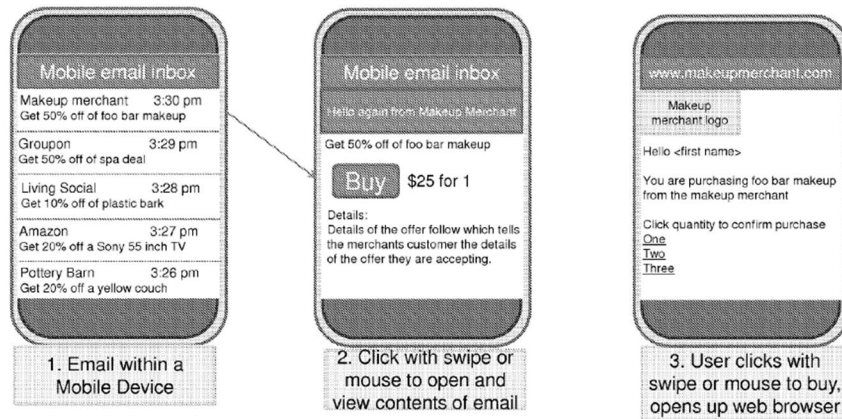


FIG. 2A

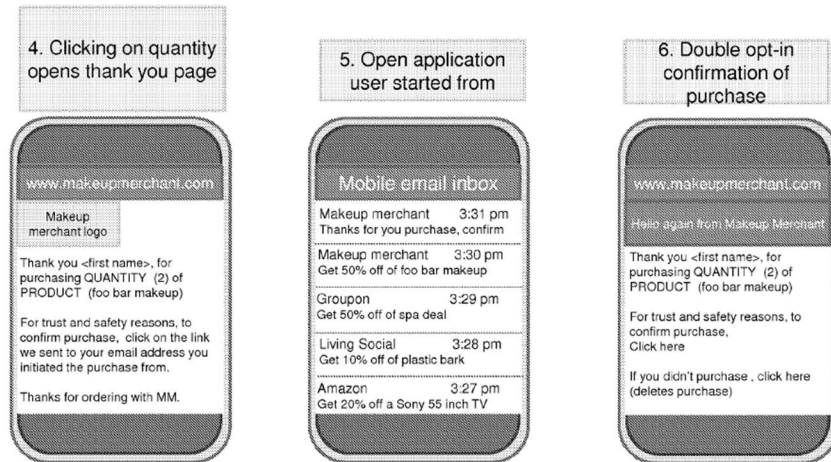


FIG. 2B

232. In the combined system, the second document presents the content that Ghadially's service identified for the consumer, such as the sale or event that matched the consumer's preferences, on a page customized to that consumer in the manner Gaddis describes. Events are an express subject of Ghadially's alerts, as Table 1 shows. EX1009, ¶¶19-20, Table 1. A sale, or a product's return to stock, is also an "event" under the plain meaning of that term, and the '799 patent itself

describes the content of the second document as information about “transactions (such as one or more upcoming events).” EX1001, 9:13-16.

233. A POSITA would have generated Gaddis’s user-specific page when the alert is generated, so that the link in the alert identifies it, and would have understood that this page is “a second document that includes information about one or more events of interest for a user associated with the electronic address, the second document being customized to the user.”

234. A POSITA would have been motivated to use Gaddis’s user-specific page as the destination of Ghadialy’s personalized alert, because Ghadialy already tailors the alert to the individual consumer and directs the consumer onward “so as to complete an on-line purchase,” and Gaddis’s user-specific page is a known means of presenting that content and enabling the purchase without further data entry. EX1009, ¶¶29, 42; EX1010, ¶¶49, 58-59; *see* Section IX.B.6.

g. Ghadialy in View of Gaddis Discloses 1[f]

235. Ghadialy in view of Gaddis discloses **“sending a message to the electronic address, wherein the message comprises a link to the second document, the link being configured to enable the user to access the second document to execute one or more transactions associated with the one or more events.”**

236. Ghadialy's notification module "operates to alert or notify the user of relevant content," which "can be performed by generating a set of messages and transmitting the messages to the user" by the delivery option the consumer selected, such as "E-Mail, IM, RSS, SMS, or a Web portal." EX1009, ¶¶23, 28-29. The message carries a link: the notification module "can incorporate a navigation link into the message, such that, when the user clicks on the navigation link, the user can be navigated to the merchant's web site," where the consumer can "complete an on-line purchase." *Id.*, ¶¶29, 42.

237. Gaddis describes the same step with the user-specific page as the destination of the link. Gaddis transmits the promotional message to the user's email or SMS account with an embedded link that "has been customized to specifically provide sufficient information to enable the processing and charging of their purchase to financial accounts stored on a computer database accessible only by the Offer Provider." EX1010, ¶39. As Figure 4B of Gaddis, reproduced below, shows, activating the link redirects the user "to a webpage hosted by the service provider and created specifically for the merchant's advertisement and the User." *Id.*, ¶59, Fig. 4B.

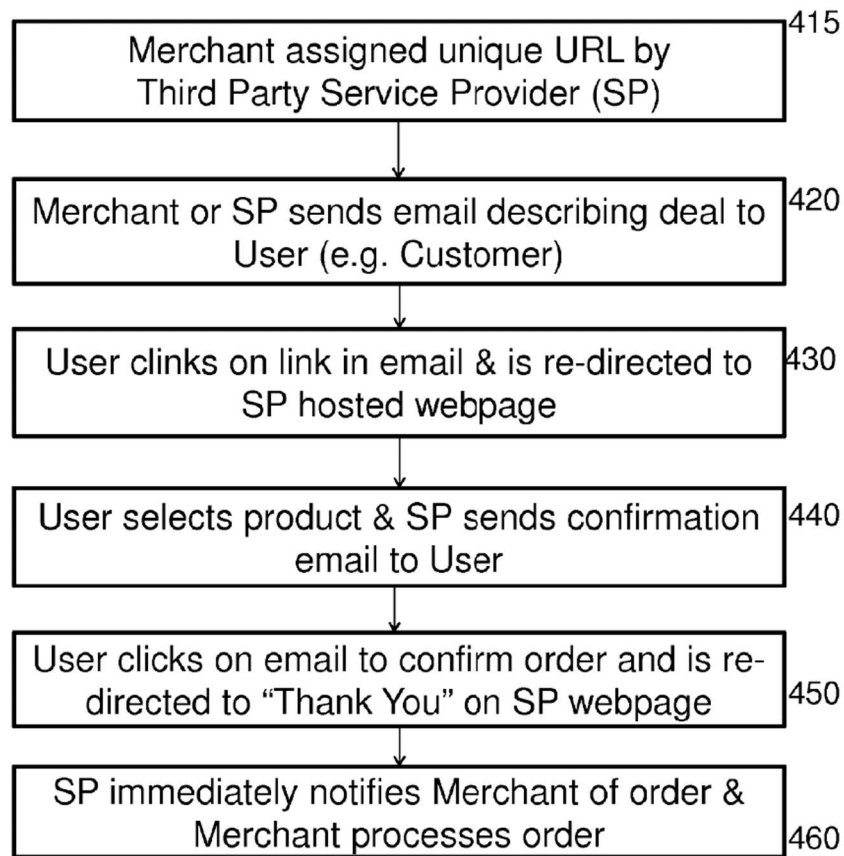


FIG. 4B

238. A POSITA combining the references would have sent Ghadialy's personalized alert over the consumer's chosen channel with Gaddis's user-specific link to the user-specific page, for the reasons I give in Section IX.B.6, and would have understood that this message "comprises a link to the second document, the link being configured to enable the user to access the second document to execute one or more transactions associated with the one or more events."

239. The link also opens a continuing path to a transaction. After reaching Gaddis's page, "[t]he User subsequently clicks (click 2) 440 to place the order," and then confirms the purchase. EX1010, ¶59, Fig. 4B. That is unlike the

arrangement the applicant distinguished during prosecution, in which “the user interaction concludes immediately following either of these confirmations.”

EX1002, 426.

h. Ghadialy in View of Gaddis Discloses 1[g]

240. Ghadialy in view of Gaddis discloses **“in response to determining activation of the link has occurred, causing provision of the second document to the electronic address, wherein the second document is configured to facilitate completion of a given transaction in the one or more transactions.”**

241. The ’799 patent describes this step as follows: when the computer “receives information specifying activation of the link from electronic device 110-1,” it provides “information specifying the customized second document to electronic device 110-1 for display,” and the device “displays customized second document 322 on display 328.” EX1001, 9:31-37, 14:1-7.

242. Gaddis discloses this step. The link embedded in Gaddis’s message is a service-provider link that carries parameters identifying the deal and the merchant, together with the parameter that “is the encrypted User identification (UserId) specific to the User.” EX1010, ¶64; *see also id.*, ¶57. Gaddis gives the example of “a PEL that redirects to the service provider webpage,” and defines the PEL as a link with “special capabilities to both properly direct User to offer as well as track and report on User actions.” *Id.*, ¶¶34, 64.

243. Activation of that link is received and acted on by the service provider. “If the User clicks (click 1) on the PEL embedded within the communication 430, then they will be re-directed to a webpage hosted by the service provider and created specifically for the merchant’s advertisement and the User.” *Id.*, ¶59, Fig. 4B. Because the link leads to the service provider and the destination page is hosted by the service provider and created for the user, the service provider necessarily receives the request generated by the user’s click, identifies the user from the parameters the link carries, and responds by serving that user’s page. That is how a web server responds to a request for a URL, as I explain in Section IX.A.3.

244. A POSITA would have understood that the service provider’s receipt of the click-generated request is “determining activation of the link has occurred,” and that serving the user-specific page in response is “causing provision of the second document.”

245. The second document is provided to the electronic address. Gaddis delivers the link to the user’s Electronic Communications Account (an email address, or the cell phone number used for SMS), and the user activates the link from that account on the device that received the message, which opens the user-specific page on that device. EX1010, ¶¶54, 59, Fig. 2A. The ’799 patent describes the same operation, in which the customized second document is

provided to the device from which the link was activated. EX1001, 9:31-37, 14:1-7. A POSITA would therefore have understood that serving the page to the device on which the user activated the link delivered to the electronic address is “causing provision of the second document to the electronic address.”

246. A POSITA would have been motivated to route Ghadialy’s navigation link through the marketing service in the manner Gaddis describes, so that the service receives the click and serves the consumer’s page in response. Ghadialy’s service already authors the link, as “the notification module 144 can incorporate a navigation link into the message,” and already tracks how each consumer handles its messages, using a Web beacon and “a set of HTTP cookies to track the identity of the user.” EX1009, ¶¶21-23, 29. Routing the link through the service lets the service identify the clicking consumer and serve that consumer’s page, which is the use of a known technique to improve a similar system in the same way. EX1010, ¶¶57-59; *see* Section IX.B.6.

247. The page provided is configured to facilitate completion of the transaction. Ghadialy’s destination is a merchant “web site for selling products,” and the consumer who clicks the link “is navigated to the web site ... so as to complete an on-line purchase.” EX1009, ¶¶16, 42. Gaddis’s page “addresses them by their name or a unique greeting, describes the product or service, and optionally, the quantity that may be purchased,” and after the user places and

confirms the order, the service provider notifies the merchant “so that they may process the User’s order and payment.” EX1010, ¶¶48, 59, Figs. 2A-2B. Gaddis adds that “[a]ny attribute that does not require alpha numeric data entry can be enabled for the User to click on, such as the quantity of items or services purchased, shipping preference, product color, product size or a combination of these attributes.” EX1010, ¶59.

248. A POSITA would have understood that serving Gaddis’s user-specific page in response to the consumer’s activation of the link in Ghadialy’s personalized alert is “causing provision of the second document,” where “the second document is configured to facilitate completion of a given transaction in the one or more transactions.”

2. Independent Claims 12 and 22

249. Claim 12 recites “[a] **computer-implemented method**” comprising the same five operations that claim 1 recites, and claim 22 recites “[a] non-transitory computer-readable storage medium for use in conjunction with a processor, the computer-readable storage medium storing program instructions that, when executed by the processor, cause the processor to carry out operations comprising” those same five operations. EX1001, 47:65-48:20, 48:66-49:26. The body limitations of claims 12 and 22 are word-for-word identical to elements 1[c] through 1[g] of claim 1.

250. Accordingly, for the reasons I give for claim 1, Ghadially in view of Gaddis discloses elements 12[a] and 22[a] (*see supra* Section IX.C.1.d, element 1[c]); elements 12[b] and 22[b] (*see supra* Section IX.C.1.e, element 1[d]); elements 12[c] and 22[c] (*see supra* Section IX.C.1.f, element 1[e]); elements 12[d] and 22[d] (*see supra* Section IX.C.1.g, element 1[f]); and elements 12[e] and 22[e] (*see supra* Section IX.C.1.h, element 1[g]).

251. To the extent the preamble of claim 12 is limiting, Ghadially discloses “[a] computer-implemented method.” Ghadially describes its operations as a method carried out by the consumer marketing service in “an operational scenario 200,” in which the consumer signs up on the merchant’s web site, the service monitors the site for relevant content, the service generates and sends a personalized message, and the consumer follows the link in that message to “complete an on-line purchase.” EX1009, ¶¶38-43, Fig. 2 (reproduced in Section IX.C.1.d above).

252. Those operations are carried out by the modules stored in memory 136 and executed by CPU 132 of server computer 106. *Id.*, ¶¶17-18, Fig. 1. A POSITA would have understood that operations performed by computer programs executed by a server’s CPU are “[a] computer-implemented method.”

253. To the extent the preamble of claim 22 is limiting, Ghadially discloses “[a] non-transitory computer-readable storage medium for use in conjunction with

a processor, the computer-readable storage medium storing program instructions that, when executed by the processor, cause the processor to carry out operations comprising,” for the reasons I give for elements 1[pre] through 1[b]. *See supra* Sections IX.C.1.a-c.

254. In addition, Ghadially states that “[i]n one aspect, the invention relates to a computer readable storage medium” that includes its preferences, monitoring, and notification modules. EX1009, ¶6; *see also id.*, claims 1, 11. Ghadially describes “a computer storage product with a computer-readable medium having executable instructions or computer code thereon for performing various computer-implemented operations,” and explains that “[e]xamples of computer-readable media include computer-readable storage media such as: magnetic media such as hard disks,” optical media such as CD-ROMs, and hardware devices such as “Read Only Memory (‘ROM’) devices, and Random Access Memory (‘RAM’) devices.” *Id.*, ¶53.

255. Each of the storage media Ghadially lists holds the program instructions as stored data, not as a propagating signal. A POSITA would have understood that each of them, and Ghadially’s memory 136, which stores the program modules that CPU 132 executes, is “[a] non-transitory computer-readable storage medium.” EX1009, ¶¶17, 53.

256. Thus, in my opinion, Ghadialy in view of Gaddis discloses or renders obvious each element of claims 12 and 22.

3. Dependent Claims

a. Ghadialy in View of Gaddis and Lentz Discloses Claims 2, 13, and 23

257. Claims 2, 13, and 23 depend from claims 1, 12, and 22, respectively, and add that **“the message comprises a Rich Communication Services (RCS) message provided to the electronic address according to a schedule generated based at least in part on a determined classification of the user.”** EX1001, claims 2, 13, 23. Ghadialy in view of Gaddis and Lentz discloses these limitations.

258. The '799 patent describes RCS messages as messages “generated and provided according to the RCS messaging protocol to enhance and modernize an SMS or an MMS communication.” EX1001, 39:33-38. It describes determining “a classification of the at least one authorized recipient,” where “[t]he classifications may include criteria associated with an application, website, or service,” and then “scheduling, using a machine learning model and based on the determined classification, delivery of the RCS message.” *Id.*, 41:10-19, 41:58-61.

259. Ghadialy discloses generating a delivery schedule for each consumer. It collects “a desired message frequency, such as a particular number of messages per day, a particular number of messages per week, a particular number of

messages per month, any number of messages but restricted to particular days of a week, or any number of messages with no restrictions.” EX1009, ¶23.

260. Ghadially adjusts that schedule based on a determined classification of the consumer. Its preferences module “can monitor a rate at which the user opens previously sent messages, and can compare this rate with respect to an average or typical rate.” *Id.*, ¶30; *see also id.*, ¶23. “If the user opens the previously sent messages at a lower rate than the average rate, the notification module 144 can throttle back a frequency at which subsequent messages are sent to the user,” and “[t]his throttling back can be performed in a series of incremental stages until a desired message frequency is obtained.” *Id.*, ¶30. Ghadially thus sorts each consumer, by comparison with the average, into one who engages with its messages at or above the average rate or one who engages below it, and sets the frequency of that consumer’s messages accordingly.

261. A POSITA would have understood that Ghadially’s comparison of the consumer’s open rate with the average rate is “a determined classification of the user,” and that the resulting delivery pattern, such as a number of messages per day, week, or month, or messages “restricted to particular days of a week,” is “a schedule generated based at least in part on” that classification. EX1009, ¶¶23, 30.

262. Lentz discloses the RCS channel. An offering may be delivered “as a Short Message Service (SMS) message, a Multimedia Message Service (MMS)

message, a Rich Communication Service (RCS) message, an electronic mail (e-mail) message, a voice message (i.e. voicemail), or any other known communication medium capable of transmitting and presenting multimedia content.” EX1011, ¶33; *see also id.*, ¶73. A POSITA would have been motivated to deliver the combined system’s scheduled messages over Lentz’s RCS channel, because Ghadialy treats the channel as a variable, explaining that the notification module “can dynamically change either of, or both, a message format and a delivery option for subsequent messages.” EX1009, ¶30; *see* Section IX.B.7.

263. Lentz also confirms that a POSITA would have timed delivery based on a classification of the consumer. Lentz builds a “client analysis model” from data gathered as the system monitors “the consumer’s use of the IVER application,” including “a time of day or day of the week that the product-search was initiated,” and applies “one or more trained machine learning algorithms” to identify an offering for the consumer. EX1011, ¶40. Lentz may then recommend transmitting the offering “at a time of day or day of the week that is most likely to trigger the consumer to initiate and/or complete a corresponding purchase agreement.” *Id.* Lentz also groups consumers, explaining that “[t]he IVER system may cluster subsets of consumers together based on geographic areas that are frequently visited or a place of residence,” or based on correlations within their profile data. *Id.*, ¶49; *see also id.*, ¶41.

264. A POSITA would have been motivated to use Lentz’s recommended send time, together with Ghadially’s engagement-based frequency, in generating the delivery schedule for the combined system’s messages, and to generate that schedule for each group of consumers Lentz identifies, because Ghadially and Lentz pursue the same goal: timing messages so that the consumer acts on them. EX1009, ¶¶23, 30; EX1011, ¶¶40-41, 49. Setting message frequency from recipients’ responses to earlier messages was a known technique. *See* Section IX.A.4 (discussing EX1020). My understanding that a POSITA would read “a schedule generated based at least in part on a determined classification of the user” to cover such engagement-based scheduling is confirmed by the prosecution history, in which the applicant distinguished Lee on the ground that it “does not ‘schedule’ the RCS message” at all. EX1002, 428.

265. RCS was also a known medium for such messages at the relevant time. As I explain in Section VI.C, claims 2, 13, and 23 are entitled to an effective filing date no earlier than September 25, 2024. Lentz identified RCS in 2018 as a medium for delivering an offering to a consumer’s device, and by September 25, 2024, RCS had been standardized by the GSMA, including for messaging between businesses and consumers, and was offered in consumer messaging applications. EX1011, ¶33; *see* Section IX.A.5; EX1016, 152-53; EX1017, 1-2; EX1018, 1.

266. Claims 13 and 23 recite the same limitation as claim 2. For the same reasons, Ghadialy in view of Gaddis and Lentz discloses claims 13 and 23.

b. Ghadialy in View of Gaddis and Lentz Discloses Claims 3, 14, and 24

267. Claims 3, 14, and 24 depend from claims 2, 13, and 23, respectively, and add that **“the classification of the user comprises criteria corresponding to an application, a website, or a service associated with the electronic address.”** EX1001, claims 3, 14, 24. Ghadialy in view of Gaddis and Lentz discloses these limitations.

268. The '799 patent explains that “[t]he classifications may include criteria associated with an application, website, or service,” and that “the criteria may be based on a level of engagement with particular content.” EX1001, 41:13-19.

269. *Service.* The classification on which Ghadialy bases its schedule, the consumer’s rate of opening previously sent messages relative to an average rate, is measured on the messages delivered through the consumer’s chosen delivery service, “such as via E-Mail, IM, RSS, SMS, or a Web portal,” using “an appropriate Web beacon that is incorporated in one or more of those messages.” EX1009, ¶¶23, 30. The criterion is thus a level of engagement with content delivered through the messaging service, for example the email account or SMS service, associated with the electronic address to which the messages are sent.

270. *Website.* In Ghadialy’s multi-merchant embodiment, when a user visiting the first merchant’s web site expresses interest in a product, the consumer marketing service “can perform segmentation analysis to determine that the user may also be interested in purchasing a complementary or cross-selling set of products from the second merchant.” EX1009, ¶47. That segmentation classifies the user by the user’s activity at a particular merchant’s web site. The service identifies the user with “a set of HTTP cookies to track the identity of the user,” *id.*, ¶21, and keeps the user’s preferences in a preference profile tied to the address the user supplied at sign-up, *id.*, ¶¶19, 40, Fig. 4.

271. *Application.* Lentz’s client analysis model, with which it pairs its recommended send time, is built from data gathered as the system monitors “the consumer’s use of the IVER application,” including “product search terms” and “a time of day or day of the week that the product-search was initiated.” EX1011, ¶40. The IVER application is installed on, or accessed from, the consumer’s client device. *Id.*, ¶¶26-27.

272. A POSITA would have understood that each of these criteria (engagement with the messaging service, activity at a merchant’s web site, and activity within the IVER application) is a criterion “corresponding to an application, a website, or a service associated with the electronic address,” because each classifies the user by the user’s own engagement with an application, a

website, or a service. That understanding is consistent with, and confirmed by, the prosecution history, in which the applicant distinguished Lee on the ground that it had “no mapping of users to websites, apps, or services.” EX1002, 428.

273. Claims 14 and 24 recite the same limitation as claim 3. For the same reasons, Ghadialy in view of Gaddis and Lentz discloses claims 14 and 24.

c. Ghadialy in View of Gaddis and Lentz Discloses Claim 4

274. Claim 4 depends from claim 2 and adds that the classification of the user indicates whether the user is **“a message recipient that has selected a link provided by the system to the electronic address and completed at least one prior transaction; a message recipient that has selected a link provided by the system to the electronic address, but has not completed a transaction; or a message recipient that has not selected a link provided by the system to the electronic address.”** EX1001, claim 4. Ghadialy in view of Gaddis and Lentz discloses this limitation.

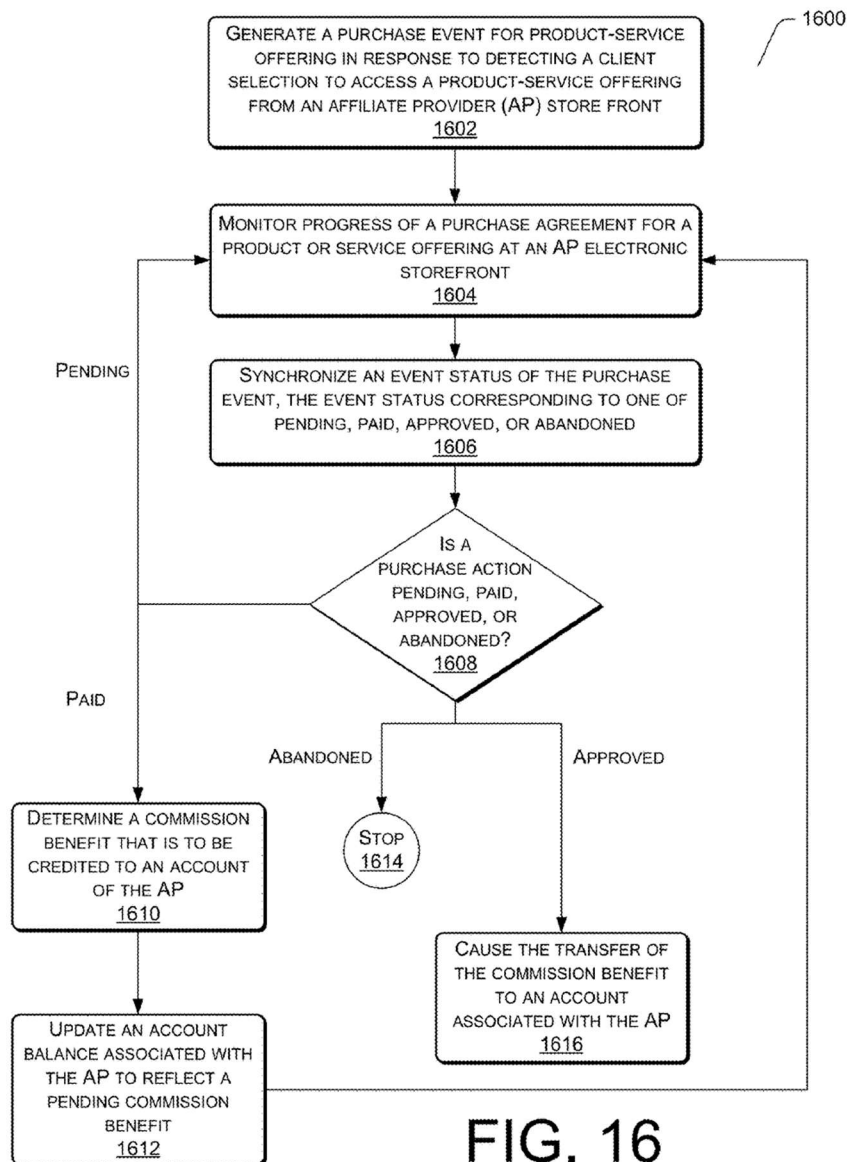
275. The '799 patent describes these three groups as “a first tier that includes authorized recipients that have selected or performed one or more actions or links provided in prior RCS messages ... and in which such recipients have completed one or more transactions,” “a second tier including authorized recipients that have selected or performed the one or more actions or links provided in the prior RCS messages, but have not used the one or more actions or links to perform

a transaction,” and “a third tier including authorized recipients that have not selected or performed the one or more actions or links provided in the prior RCS messages.” EX1001, 42:12-27; *see also id.*, 23:61-24:43.

276. The combined system receives, for each recipient, the information needed to place that recipient in one of these groups. In Gaddis, the link carries the recipient’s encrypted user identifier, and each click on it is received by the service provider, which serves the user-specific page and then learns whether the user places and confirms an order. EX1010, ¶¶57, 59, 64, Figs. 4B, 10. Gaddis describes the link as having “special capabilities to both properly direct User to offer as well as track and report on User actions.” *Id.*, ¶34. For each purchase, the service provider passes to the merchant “the User identification number (UserID)” and “which link channel the purchase was made from.” *Id.*, ¶64. The service provider thus knows, for each user to whom it sent a link, whether the user clicked the link and completed a purchase, clicked the link but did not complete a purchase, or never clicked the link. Ghadially’s service likewise uses Web beacons and cookies to observe, for each identified user, whether the user opened its messages, added a product to a shopping cart, and completed an on-line purchase. EX1009, ¶¶21-23.

277. Lentz confirms that a POSITA would have tracked recipients in these groups. When an offering is delivered to a consumer’s device by SMS, MMS,

RCS, or e-mail, Lentz sends with it a referral data packet that “facilitates tracking progress of a transaction (i.e. purchase event).” EX1011, ¶¶33-34, 73-74. Lentz generates a purchase event upon a client selection to access an offering, a selection that “may correspond to selection of a URL associated with the product-service offering,” and assigns the event a status such as “pending,” “fulfilled,” “approved,” or “abandoned,” where “fulfilled” indicates that the client has paid and a purchase event “may be considered abandoned if left unpaid for predetermined time interval.” *Id.*, ¶¶60, 137, 152. Figure 16 of Lentz, reproduced below, shows that process. *Id.*, ¶¶143-144, Fig. 16. A recipient for whom the system has generated no purchase event is one who has not selected the link.



278. A POSITA would have been motivated to use these three groups as the classification on which the claim 2 schedule is based. Ghadially already generates its schedule from how each user engages with its messages, throttling frequency for users who open messages “at a lower rate than the average rate,” and whether a recipient has clicked the link and purchased is a more direct measure of the same engagement. EX1009, ¶¶23, 30. Lentz, in turn, times its offerings to

“trigger the consumer to initiate and/or complete a corresponding purchase agreement,” a goal that calls for treating a consumer who has already purchased, one who started but did not complete a purchase, and one who has not engaged at all differently. EX1011, ¶40. Using those groups to set the frequency and timing of later messages is the use of a known technique to improve a similar system in the same way.

279. Classifying recipients this way was also an ordinary marketing practice by the effective filing date of claim 4. As I explain in Section VI.C, the three-tier classification appears only in material added on September 25, 2024, so claim 4 is entitled to an effective filing date no earlier than that date. By then, marketing platforms tracked, for each recipient, whether the recipient clicked the link in a message and whether the recipient purchased, and grouped recipients on that basis. *See* Section IX.A.4. For example, Yotpo’s text-message platform let a merchant build a segment of “customers that have made a purchase after clicking on link sent in a marketing message,” a segment of customers “who have clicked on a link in a marketing message but have not made a purchase,” and, for any campaign, a selection by “whether or not the customer has clicked on a link and made an order during the campaign.” EX1021, 1, 3. A POSITA would have recognized claim 4’s classification as that conventional grouping, applied to the click and purchase data the combined system already collects.

**d. Ghadialy in View of Gaddis and Lentz Discloses
Claims 5, 15, and 25**

280. Claims 5, 15, and 25 depend from claims 1, 12, and 22, respectively, and add that the message comprises an RCS message and the operations further comprise **“requesting and receiving authorization data corresponding to an identity of the user before causing provision of the second document to the electronic address.”** EX1001, claims 5, 15, 25. Ghadialy in view of Gaddis and Lentz discloses these limitations. Lentz discloses the RCS channel, and a POSITA would have been motivated to use it, for the reasons I give for claim 2. *See* Section IX.C.3.a; EX1011, ¶¶33, 73.

281. The ’799 patent describes “requesting authorization data corresponding to the at least one authorized recipient, responsive to receiving an indication associated with selecting the at least one action,” and then “verifying that the authorization data correlates to an identity of the at least one authorized recipient or an identity of the mobile computing device.” EX1001, 40:58-41:9.

282. Gaddis discloses requesting and receiving identity-based authorization data before serving the user-specific page. Gaddis identifies the need: “There is a need within the art for a method to authenticate the User prior to sending the advertisement, and then re-verify the authenticity of the User after they have placed a purchase.” EX1010, ¶5. Its “ECA Single Click Method” “is applicable for a User whose identity has been previously verified by the Offer Provider,”

where “[p]rior verification occurs in situations wherein the User has already logged into the merchant’s website, has saved their username and password on their electronic communications device, and/or is verified by cookies or other method well known by the skilled artisan.” *Id.*, ¶61; *see also id.*, ¶11. Gaddis explains that “a credential is a data structure or an electronic document which has a defined structure known to all involved parties, and is issued by an authority.” *Id.*, ¶61.

283. That verification comes before, and governs, the page the user is served. Gaddis transmits the advertisement “to established, verified Users,” and a verified user who clicks the link is redirected to the user-specific page confirming the order, whereas a user “whose network credentials have not been verified” must separately confirm the purchase. *Id.*, ¶¶39, 64, Fig. 10. Gaddis defines each “User” as a person “who receives promotional offers due to authentication through previous registration, account creation and opt in for promotions from Offer Provider.” *Id.*, ¶37. Verification is therefore complete before the link is activated and the user-specific page is served. The link itself also carries the user’s identity, as “the encrypted User identification (UserId) specific to the User,” which the Offer Provider decrypts to process the purchase. *Id.*, ¶¶59-60, 64.

284. A POSITA would have understood that a user’s login at the merchant’s website, which requests and receives the user’s credentials, together with the encrypted user identifier carried in the link, before the user-specific page

is served, is “requesting and receiving authorization data corresponding to an identity of the user before causing provision of the second document.” Verifying a user by a saved username and password, or by a cookie, as Gaddis describes, likewise involves the server requesting and receiving those credentials or that cookie from the user’s browser. EX1010, ¶¶11, 61. A POSITA would have been motivated to include that step in the combined system for the reason Gaddis gives, authenticating the user before a purchase is charged to the user’s accounts. EX1010, ¶¶5, 10, 39.

285. Claims 15 and 25 recite the same limitation as claim 5. For the same reasons, Ghadialy in view of Gaddis and Lentz discloses claims 15 and 25.

e. Ghadialy in View of Gaddis and Lentz Discloses Claims 6 and 16

286. Claims 6 and 16 depend from claims 1 and 12, respectively, and add that **“the message is an Enhanced Messaging Service (EMS) message.”** EX1001, claims 6, 16. Ghadialy in view of Gaddis, Lentz, and the general knowledge of a POSITA renders these claims obvious.

287. Ghadialy treats the channel for its personalized alert as a consumer-selected variable and lists text messaging among the options: “a desired delivery option, such as via E-Mail, IM, RSS, SMS, or a Web portal.” EX1009, ¶23. Gaddis likewise delivers its message, with its user-specific link, to the user’s text-

messaging account, and its Figure 7 shows the offer and the confirmation request arriving in the user's "Mobile SMS inbox." EX1010, ¶39, Fig. 7.

288. The '799 patent describes its technique using SMS and then states that "while SMS messaging was used in the preceding discussion, different communication channels may be used in other embodiments, e.g., email, Enhanced Messaging Service (EMS), and/or MMS." EX1001, 14:18-21. The patent says nothing more about EMS and identifies no change to any other recited operation when EMS is used. The 2018 provisional application contains the same statement. EX1005, ¶65. During prosecution, the applicant did not argue claim 6 separately. EX1002, 428.

289. EMS was a standardized extension of SMS long before the '799 patent. As I explain in Section IX.A.5, the SMS standard defines EMS as "based upon the standard SMS, but with formatting added to the text," carried in the user data header of an ordinary short message. EX1014, §§ 3.10, 9.2.3.24.10.1. By 2003, EMS had been standardized in 3GPP TS 23.040, "terminals of an older generation" could "exchange SMS and EMS messages," and EMS messages were delivered through the SMS server. EX1015, ¶¶7, 10, 64. An EMS message is therefore addressed to the same telephone number, and travels over the same service, as an SMS message.

290. A POSITA would have found it obvious to deliver Ghadially's alert, with its link, as an EMS message. Doing so required only the substitution of one known text-messaging format for another, with the predictable result of delivering the same alert and the same link to the same telephone number. No other element of the combined system changes. A POSITA would have had a reasonable expectation of success for the same reasons, and for the reasons I give in Section IX.B.6.

291. Claim 16 recites the same limitation as claim 6. For the same reasons, Ghadially in view of Gaddis, Lentz, and the general knowledge of a POSITA renders claim 16 obvious.

f. Ghadially in View of Gaddis and Lentz Discloses Claims 7, 17, and 26

292. Claims 7, 17, and 26 depend from claims 1, 12, and 22, respectively, and add that **“the message comprises content including send and receive indicators provided in a user interface of a mobile computing device associated with the electronic address, the indicators depicting real time typing between a message provider and the mobile computing device or between another computing device and the mobile computing device.”**

EX1001, claims 7, 17, 26. Ghadially in view of Gaddis and Lentz discloses these limitations.

293. The '799 patent describes these indicators as a feature of RCS messaging. It explains that when a user “enable[s] RCS through a messaging app or mobile device carrier settings,” “a phone number of the user may be registered with an RCS server,” and “[u]sers may generate and/or receive RCS messages that include text, rich media ..., and/or interactive elements ..., read receipts, and typing indicators.” EX1001, 39:41-51. It describes those messages as “generated and provided according to the RCS messaging protocol.” *Id.*, 39:36-38.

294. Lentz discloses delivering the message as an RCS message, and a POSITA would have been motivated to do so, for the reasons I give for claim 2. *See* Section IX.C.3.a; EX1011, ¶¶33, 73. The RCS standard itself requires that “[t]he other party shall be able to see an ‘is typing’ notification whenever the creator of a message is typing.” EX1016, 46 (R5-7-1). And RCS business messaging presents the same indicators in conversations between a business and a consumer: when a business’s agent sends a typing event, “[t]o a user, this event appears as a typing indicator and lets them know that your agent is composing a message.” EX1018, 1; *see* Section IX.A.5.

295. A POSITA implementing Lentz’s RCS delivery in the combined system would have presented the message in the RCS messaging interface, with the typing indicators and read receipts that accompany RCS messaging, because they are a standard feature of that medium and including them required no change

to any other element of the combination. That is so even for messages a business sends automatically: Google’s RCS Business Messaging documentation instructs that a business’s messaging agent “sends read and typing events to approximate the human interactions that the users are used to,” and that the agent is notified when “a user is typing.” EX1018, 1, 5. A POSITA would therefore have had reason to send those events with the combined system’s messages, so that a consumer replying to an offer sees the same conversational cues as in any other RCS conversation. A POSITA would have understood that those indicators are “send and receive indicators ... depicting real time typing between a message provider and the mobile computing device.”

296. The relevant time frame confirms the point. Typing indicators appear nowhere in the earlier applications, so these claims are entitled to an effective filing date no earlier than September 25, 2024. *See* Section VI.C. The GSMA had required typing notifications in RCS since at least 2017, Google’s RCS business messaging documentation described typing indicators between a business and a user by 2021, and by early 2024 Google’s consumer messaging application let users “[s]how others when you’re typing in a conversation with them.” EX1016, 46; EX1018, 1, 5; EX1017, 2.

297. Claims 17 and 26 recite the same limitation as claim 7. For the same reasons, Ghadialy in view of Gaddis and Lentz discloses claims 17 and 26.

g. Ghadially in View of Gaddis Discloses Claims 8, 18, and 27

298. Claims 8, 18, and 27 depend from claims 1, 12, and 22, respectively, and add that the link is further configured to **“allow users other than the user to access the second document to browse the second document while prohibiting execution of the one or more transactions through the link for the users other than the user.”** EX1001, claims 8, 18, 27. Ghadially in view of Gaddis discloses these limitations.

299. The '799 patent describes this feature as follows: “If the link for the customized second document is shared with a second individual, the second individual may browse content customized for the first individual but will be prohibited from accessing a profile of the first individual and/or executing a transaction unless the second individual subscribers [sic] and provides his/her telephone number.” EX1001, 14:35-41.

300. Gaddis discloses the same arrangement. Gaddis addresses the case in which a user forwards the advertisement containing the link “to a Non-User entity,” and explains that “[w]hen the receiver clicks on the hyperlink, the same webpage will open as for the original intended User.” EX1010, ¶59. The forwarded recipient may thus browse the page built for the original user.

301. Transacting through that link, however, is reserved to the original user. The page displays “a personally identifiable statement in the webpage such

as ‘Hello User FirstName, if you are not {User First Name}, then click here to purchase the product,’” and the “click here” link takes the receiver “to a page where the receiver can start the authentication and payment process via the merchant’s normal Internet purchase procedure.” *Id.* Gaddis also explains that when the friend who received a forwarded advertisement “attempts to place an order, they will be directed to the Offer Provider’s other venues for electronic purchasing,” and that if a non-user attempts to bill the original user, “an electronic communication is sent to the original User account confirming the purchase, wherein the User would decline the purchase by not clicking on the embedded link.” *Id.*, ¶10; *see also id.*, ¶¶49-50.

302. A POSITA would have understood that a link through which a forwarded recipient may view the user-specific page, but must leave it and separately authenticate through the merchant’s ordinary checkout to buy anything, is a link configured to “allow users other than the user to access the second document to browse the second document while prohibiting execution of the one or more transactions through the link for the users other than the user.”

303. Claims 18 and 27 recite the same limitation as claim 8. For the same reasons, Ghadialy in view of Gaddis discloses claims 18 and 27.

h. Ghadially in View of Gaddis Discloses Claims 9, 19, and 28

304. Claims 9, 19, and 28 depend from claims 1, 12, and 22, respectively, and add that **“the link is further configured with a security layer to provide augmented access or navigation attributes to the user.”** EX1001, claims 9, 19, 28. Ghadially in view of Gaddis discloses these limitations.

305. The '799 patent describes a system that “may assess client device (e.g., electronic device 110-1) credentials and provide access, for the client device, to a security layer,” and a user journey “enabled with the specific augmented access and unique navigation attributes made available through the SNAP access and security automation layer 1100.” EX1001, 22:5-12, 31:26-35.

306. Gaddis discloses a link configured with a security layer. Gaddis’s link is not a bare URL. Each user is “assigned a unique User ID” that “is encrypted by methods well known in the art,” and that encrypted identifier travels in the link itself, as “the encrypted User identification (UserId) specific to the User.” EX1010, ¶¶52, 64. The programming code “include[s] a module for the merchant or Offer Provider to encrypt and decrypt the UserIds as needed,” and the merchant system sends “electronic messages to Users comprising encrypted links unique to each User.” *Id.*, ¶¶53, 60.

307. That security layer gives the identified user access that others do not have. Because the encrypted identifier is decrypted and resolved before the

purchase proceeds, the original user reaches a page addressed to that user by name and can purchase “without entering any alpha numeric data, such as account login and password, personal contact or financial account information,” while anyone else presenting the same link is sent to the merchant’s ordinary purchase procedure. *Id.*, ¶¶8, 48, 59.

308. A POSITA would have understood that Gaddis’s encrypted, user-specific link, which gives the identified user a purchase path without data entry while diverting others to ordinary authentication, is a link “configured with a security layer to provide augmented access or navigation attributes to the user.” EX1010, ¶¶11, 34, 59-61, 64, claim 15. My understanding of how a POSITA would read this limitation is consistent with the Examiner’s, and is confirmed by the prosecution history: in rejecting claim 9 over Long, the Examiner read this limitation on a server that can “authenticate the user based on a user identifier,” such as “a user phone number, a sender phone number, a device identifier of the user mobile device,” and the applicant did not contest that reading. EX1002, 304-05, 428.

309. Claims 19 and 28 recite the same limitation as claim 9. For the same reasons, Ghadialy in view of Gaddis discloses claims 19 and 28.

i. Ghadially in View of Gaddis Discloses Claims 10, 20, and 29

310. Claims 10, 20, and 29 depend from claims 1, 12, and 22, respectively, and add that **“the link is further configured to enable the user to resume an online user journey associated with the given transaction.”** EX1001, claims 10, 20, 29. Ghadially in view of Gaddis discloses these limitations.

311. The '799 patent describes “a link or actionable item customized to the journey of the user” that “may be provided to enable the user to return to an abandoned journey or cart,” where “a hot cookie on the mobile device belonging to the user” triggers a security check that “enables the browser (or application) to open up to the last page in which the subscriber was navigating at a time of abandoning a particular user journey.” EX1001, 37:47-60.

312. Ghadially discloses messages that return a consumer to an unfinished purchase. Among the topics for which Ghadially’s consumer may sign up are a “[r]eminder about a shopping cart in a particular number of days/weeks” and “[p]roducts in a user’s shopping cart that go on sale.” EX1009, ¶20, Table 1. Each concerns an online shopping journey that the consumer began but did not finish, in which the consumer placed products in a cart on the merchant’s site without buying them. Ghadially’s service observes both steps of that journey, using its Web beacon to detect that “the user adds a product to a shopping cart” and that “the user

completes an on-line purchase,” and identifies the consumer with “a set of HTTP cookies to track the identity of the user for subsequent processing.” *Id.*, ¶¶21-22.

313. Ghadially’s message carries a link back into that journey. The notification module “can incorporate a navigation link into the message, such that, when the user clicks on the navigation link, the user can be navigated to the merchant’s web site,” where the consumer can “complete an on-line purchase.” *Id.*, ¶¶29, 42. Gaddis, in turn, describes a link that carries the user’s identity so that the user completes the purchase “while not being required to (log in or) enter any of their personal data.” EX1010, ¶¶49, 59.

314. A POSITA would have understood that a link in a shopping-cart reminder, which returns the identified consumer to the merchant’s site to complete the purchase of the products in that cart, is a link “configured to enable the user to resume an online user journey associated with the given transaction.” At a minimum, a POSITA would have found it obvious to direct the link to the consumer’s cart, since returning the consumer to the cart is the reminder’s evident purpose, and to carry the consumer’s identity in the link as Gaddis does, so that the consumer returns to the in-progress purchase without re-entering information. EX1009, ¶¶20, 42; EX1010, ¶¶39, 49, 59. By 2014, a commercial cart-recovery tool described links that return a shopper to the shopper’s own cart. *See* Section

IX.A.3; EX1029, 5 (customers can “[r]ecover their abandoned carts in a single click”).

315. The combination discloses this limitation even if “resume an online user journey” were read to require returning the consumer to the page at which the earlier session ended. In Ghadialy’s shopping-cart scenario, the consumer’s journey stopped at the cart, because the consumer added products to the cart and did not complete the purchase. EX1009, ¶¶20, 22. A link that returns the identified consumer to that cart therefore returns the consumer to the point at which the journey stopped. And Ghadialy’s service already tracks, for each consumer, the pages the consumer visits, including product detail pages, product category pages, and additions to the cart, using its Web beacon and cookies, so directing the link to the last page the consumer visited would have been a routine design choice. *Id.*, ¶¶21-22, 33. The ’799 patent’s own mechanism relies on the same kind of tool, a cookie that identifies the user. EX1001, 37:47-60.

316. Claims 20 and 29 recite the same limitation as claim 10. For the same reasons, Ghadialy in view of Gaddis discloses claims 20 and 29.

j. Ghadialy in View of Gaddis and Lentz Discloses Claims 11, 21, and 30

317. Claims 11, 21, and 30 depend from claims 1, 12, and 22, respectively, and add that **“the second document comprises user-targeted content based on one or more prior engagement characteristics associated with the electronic**

address, wherein the prior engagement characteristics are determined using machine learning.” EX1001, claims 11, 21, 30. Ghadialy in view of Gaddis and Lentz discloses these limitations.

318. The '799 patent describes content “generated through real time machine learning analysis” that is “targeted content relative to the subscriber vault subscriber(s) 908 campaign message recipient(s) prior engagement characteristics.” EX1001, 36:46-56.

319. Lentz discloses each element. Lentz’s consumer module “may also employ one or more machine learning algorithms to generate a consumer analysis model associated with the consumer,” built from the consumer’s prior engagement: “a record of historical product-service transaction data executed by the consumer, a record of product-service offerings viewed via an IVER application (i.e. consumer portal) by the consumer, profile data associated with the consumer, or the consumer storefront selection of preferred categories/campaigns of product-services.” EX1011, ¶¶90, 175; *see also id.*, ¶52. The algorithms Lentz lists include “naive Bayes, Bayesian networks, decision trees, neural networks, fuzzy logic models, multiclass decision forest, and/or probabilistic classification models.” *Id.*, ¶39.

320. Lentz uses that model to target the content of the document presented to the consumer. The system “generate[s] a consumer-applicability (CA) score for

each product-service offering” based on the consumer analysis model and generates a consumer storefront that “may selectively prioritize a presentation of product-service offerings based at least in part on their respective CA scores,” presenting high-scoring offerings first. *Id.*, ¶¶53, 176-177. Figure 20 of Lentz, reproduced below, shows that process. *Id.*, Fig. 20.

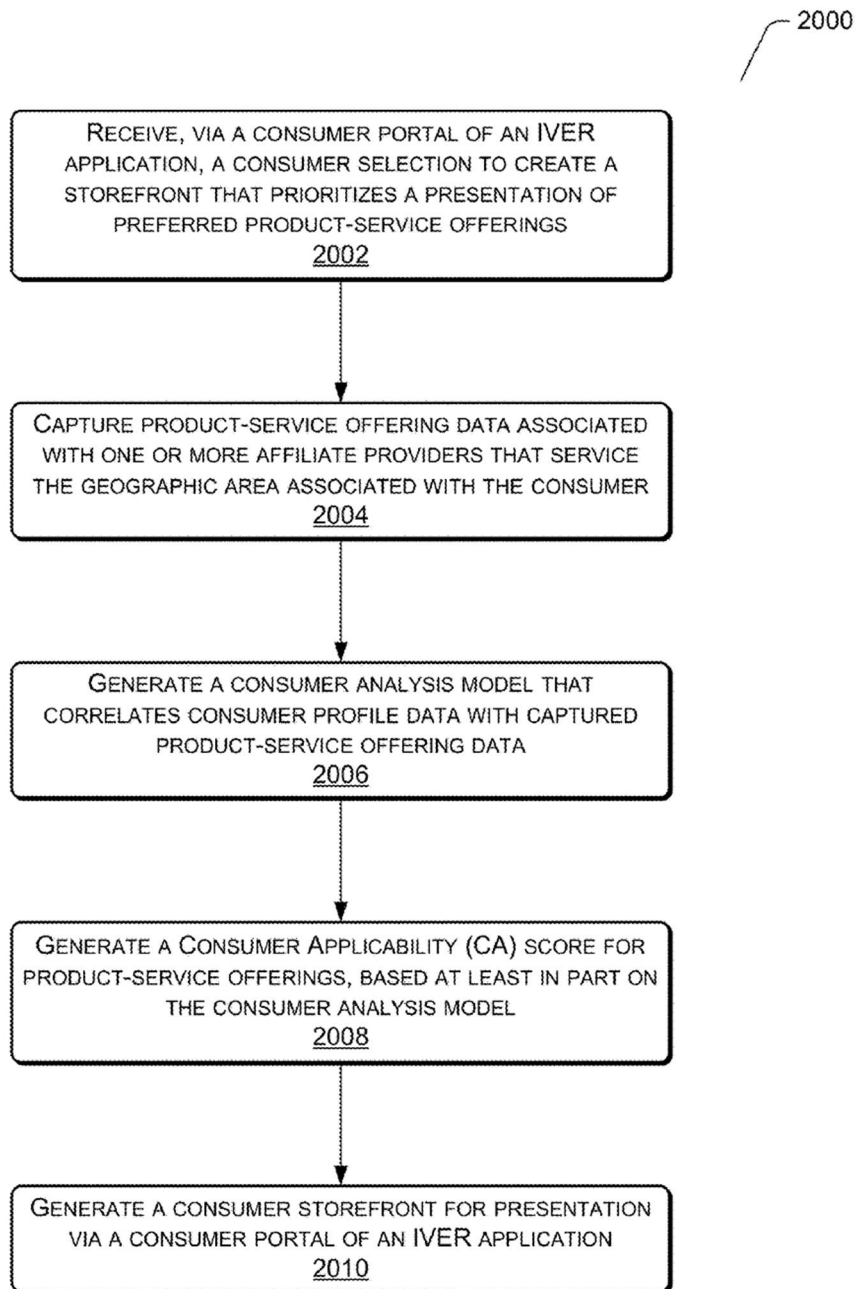


FIG. 20

321. A POSITA would have been motivated to generate the customized second document of claim 1 using Lentz's machine-learning-based prioritization,

because Ghadially already selects the content of its personalized communications by ranking candidate recommendations against the consumer's preferences and behavior, and Lentz's trained model is a known and more capable means of performing that ranking. EX1009, ¶¶26-27, 31-33; EX1011, ¶¶52-53; *see* Section IX.B.7.

322. Ghadially itself determines a user's preferences by applying a learning technique to the user's prior engagement. Its preferences module infers "individual preferences of the user based on browsing behavior or other activities of the user" using "a collaborative filtering technique," and its monitoring module "can implement a collaborative filtering technique to generate an initial set of results." EX1009, ¶¶22, 27. By 1998, researchers had shown how to treat collaborative filtering as a machine-learning task, and model-based collaborative filtering uses "a data mining or machine learning algorithm." EX1022, 1-2; EX1023, 2. Among the model-based techniques the survey describes are Bayesian collaborative filtering algorithms, including one that uses "a naïve Bayes (NB) strategy," and clustering algorithms. EX1023, 8-9. Naive Bayes is one of the algorithms Lentz lists. EX1011, ¶39. A POSITA would therefore have understood that model-based collaborative filtering is a machine-learning technique, and that Lentz's trained models are known means of performing the same function as Ghadially's collaborative filtering. *See* Section IX.A.6.

323. In the combined system, those prior engagement characteristics are associated with the electronic address, because Ghadialy keeps each user's preferences in a preference profile tied to the user who supplied that address at sign-up. EX1009, ¶¶19, 40, Fig. 4. A POSITA would therefore have understood that the combined system's second document "comprises user-targeted content based on one or more prior engagement characteristics associated with the electronic address, wherein the prior engagement characteristics are determined using machine learning."

324. Claims 21 and 30 recite the same limitation as claim 11. For the same reasons, Ghadialy in view of Gaddis and Lentz discloses claims 21 and 30.

D. Ground 2: Claims 1-30 Are Rendered Obvious by Wendkos in View of Teeter, Lentz, and the General Knowledge of a POSITA

325. In my opinion, claims 1-30 of the '799 patent are rendered obvious by Wendkos in view of Teeter, Lentz, and the general knowledge of a POSITA. Wendkos in view of Teeter discloses or renders obvious each element of independent claims 1, 12, and 22 and of dependent claims 8-10, 18-20, and 27-29, and Lentz and the general knowledge of a POSITA supply the remaining limitations of the other dependent claims, as I explain below.

1. Independent Claim 1

a. Wendkos Discloses 1[pre]

326. Wendkos discloses "[a] system comprising."

327. Figure 1 of Wendkos “is a simplified illustration showing a communications system 100,” which includes a recipient’s computer 102, a sender 106, and PMP servers 108, each connected to an IP network such as the Internet. EX1012, ¶¶81-83, Fig. 1. Using PMP servers 108, “sender 106 is able [to] send electronic communications in accordance with the invention to one or more recipients.” *Id.*, ¶83. Figure 2 shows that PMP servers 108 may include download servers 202, campaign management servers 204, subscriber management servers 206, and polling servers 208. *Id.*, ¶84, Fig. 2.

328. A POSITA would have understood that Wendkos’ communications system 100, which includes computers and servers connected by a network, is “[a] system.” EX1012, ¶¶81-84, Figs. 1-2.

b. Wendkos Discloses 1[a]

329. Wendkos discloses “**a processor.**” PMP servers 108 perform computing functions. Download servers 202 “provide and manage the PMP utility program”; campaign management servers 204 “host and manage the various administrative tools used by senders”; subscriber management servers 206 “host and manage the various subscription management tools”; and polling servers 208 “receive and manage the private communications with recipients.” EX1012, ¶84. Wendkos further explains that its “BrowserMail servers are Linux/MySQL/Apache platforms,” running applications “coded in PHP, C++ and Objective C.” *Id.*, ¶233.

330. A server that runs an operating system, a database, and a web server, and that executes applications written in those programming languages, necessarily includes a processor, such as a central processing unit, that executes that software. A POSITA would therefore have understood that PMP servers 108 include “a processor.”

c. Wendkos Discloses 1[b]

331. Wendkos discloses **“memory configured to store program instructions, wherein, when executed by the processor, the program instructions cause the processor to perform operations comprising”** the operations recited in elements 1[c] through 1[g]. PMP servers 108 store both the data and the software that the platform uses. The server is “configured to receive information associated with the generation of the electronic communication and to at least temporarily store the electronic communication once it is generated.” EX1012, ¶54; *see also id.*, claim 19. Communications “are being maintained (e.g., stored) on the PMP servers,” *id.*, ¶114; senders log onto “a private account that is hosted by the PMP servers,” *id.*, ¶117; each recipient’s authorized sender list “is typically stored and maintained by the PMP servers,” *id.*, ¶96; and personalized communications merge “recipient-specific data that is stored by the PMP servers,” *id.*, ¶118. “Software updates can also be managed by polling servers 208.” *Id.*, ¶84. Wendkos also offers an “enterprise solution where you would install a

BrowserMail server in your own facility,” which confirms that the server functions are software installed on server hardware. *Id.*, ¶240.

332. A POSITA would have understood that PMP servers 108 include memory, such as RAM, ROM, and disk storage, that stores the program instructions which, when executed by the servers’ processors, cause the servers to perform the operations that I map to elements 1[c] through 1[g] below.

d. Wendkos Discloses 1[c]

333. Wendkos discloses **“providing a hosted input field for inclusion in a first document associated with a third party.”**

334. As I explain for Ground 1, the ’799 patent describes providing the hosted field “for inclusion in a webpage associated with a third party (i.e., that is other than a provider of the communication technique).” EX1001, 8:52-58; *see* Section IX.C.1.d. In Wendkos, the provider of the communication technique is the operator of PMP servers 108, which “may be owned, maintained, and/or operated independently of the senders and recipients using them.” EX1012, ¶135. A sender “(e.g., a business or organization) publishes a subscription form on its Web site.” *Id.*, ¶24. The sender is therefore a third party relative to the operator of PMP servers 108, and the sender’s Web page is a “first document associated with a third party.”

335. The subscription forms include input fields. Figure 5B shows “one example of an opt-in form 512 that a recipient can use in order to subscribe to communications from a particular sender,” with fields labeled “First Name,” “Last Name,” and “Email” and a box to select delivery by BrowserMail; Figure 5C shows “one example of an opt-in form 514 that a recipient can use in order to subscribe to communications from more than one sender.” EX1012, ¶¶92-93, Figs. 5B-5C.

336. PMP servers 108 provide that input field for inclusion in the sender’s Web page. Wendkos explains that its subscription forms “can be easily integrated into the HTML of your website pages,” and that a sender may “[u]se provided code to do your own forms or surveys,” code that takes “the content from the form and send[s] it to a rich list in your account.” EX1012, ¶¶281, 467. The form code identifies the sender’s list on the platform by its “unique ID number,” so that the subscriber’s data “is deposited into your account.” *Id.*, ¶¶476, 489-490. Wendkos also lets the sender “post your form to a landing page” that the platform itself hosts, using the “Landing Page URL tool [that] automatically hosts and generates the unique URL of your message that you can use to link to your form or survey.” *Id.*, ¶¶272, 504; *see also id.*, ¶¶277-279.

337. I understand that Patent Owner reads this limitation on a platform-supplied signup form whose HTML embed code the merchant is instructed to

“[p]aste . . . into your website where you want the form to appear.” EX1032, 1-3.

Under that reading, Wendkos discloses this limitation: Wendkos’ subscription form is supplied by the platform as form code, included in the sender’s Web page, and routes the subscriber’s submission to PMP servers 108, which are operated by a party other than the sender. EX1012, ¶¶135, 281, 467, 476, 489-490. And unlike the field the applicant distinguished during prosecution, Wendkos’ field is not part of a messaging application on the recipient’s device; it is a field in the sender’s Web page. *See* EX1002, 424.

338. To the extent “hosted” is read to require that the field itself be served by the platform rather than by the sender’s web server, a POSITA would have found it obvious to deliver Wendkos’ subscription form into the sender’s page as an inline frame or a script served from PMP servers 108, in the same sense in which Ghadialy’s sign-up field is hosted by its marketing service. *See* Section IX.C.1.d. That was the known way for a third-party service to place its fields in a merchant’s page. EX1009, ¶21; EX1024, ¶¶14, 19-22; EX1025, 1-2; *see* Section IX.A.1. Doing so would have required only conventional web programming, because Wendkos’ form code already identifies the sender’s list on the platform and routes each submission to PMP servers 108. EX1012, ¶¶476, 489-490.

e. Wendkos Discloses 1[d]

339. Wendkos discloses **“receiving, information indicating activation of the hosted input field in the first document, wherein the information comprises an electronic address associated with an electronic device and an indication of a willingness to receive one or more messages.”**

340. In Wendkos, the recipient activates the hosted input field by submitting the subscription form. In step 502 of Figure 5A, “a recipient requests to receive electronic communications,” for example “by completing an online subscription form directly on a Web page of a sender, during which process the recipient provides the sender and/or the PMP servers personal information such as name, email address (or other unique identifier), and phone number.” EX1012, ¶92, Fig. 5A. The process continues “after one or more requests (e.g., via an online subscription form) have been submitted.” *Id.*, ¶95.

341. PMP servers 108 receive that information. Data from a subscription form on the sender’s website “is deposited into your account,” and “[w]henever a new subscriber opts-in to one of your lists, a Confirmation Message is immediately sent by email to the email address used in the subscription form.” *Id.*, ¶¶476, 478; *see also id.*, ¶464 (“The subscriber’s information is automatically posted to your BrowserMail account.”).

342. The information received includes “an indication of a willingness to receive one or more messages.” The sender’s target audience uses Wendkos’ subscription forms “to subscribe to communications and simultaneously grant their permission to receive the communications,” and in the subscription process recipients “agree to receive the communication they are subscribing to.” *Id.*, ¶¶18-19. Wendkos’ approach “requires the establishment of indisputable permission arrangements between senders and recipients.” *Id.*, ¶14.

343. The information received also includes “an electronic address associated with an electronic device.” The recipient provides an “email address (or other unique identifier), and phone number.” *Id.*, ¶92; *see also id.*, ¶19. Wendkos delivers communications to the subscriber’s e-mail address when the subscriber elects e-mail delivery, *id.*, ¶¶238, 256, 478, and the subscriber reads them on computer 102, which may be “a laptop or other personal computer, a mobile (cellular) telephone, a personal digital assistant (PDA),” or another device capable of running a Web browser, *id.*, ¶82. I understand that Patent Owner’s infringement contentions, read this limitation on a subscriber’s “email address and/or mobile phone number” submitted through a signup form. EX1032, 4. Wendkos discloses the claimed electronic address associated with an electronic device under the reading that an email address is an electronic address associated with an electronic device. Alternatively, the phone number collected in the subscription form is such

an address. Because Wendkos identifies a mobile telephone as a recipient device, a POSITA would have understood that the phone number a subscriber provides could be a mobile telephone number, which identifies the subscriber's mobile device. *Id.*, ¶¶19, 82, 92. And, as I explain for element 1[f], it would have been obvious to send Wendkos' communications to that mobile telephone number as a text message. *See* Section IX.D.1.g.

A POSITA would have understood that the e-mail address entered in Wendkos' subscription form (or, alternatively, the mobile telephone number) is "an electronic address associated with an electronic device," and that the subscriber's agreement to receive the subscribed-to communications is "an indication of a willingness to receive one or more messages." The applicant described its own claimed submission the same way during prosecution, as an electronic address "physically entered into the provided 'hosted input field'" that "constitutes an explicit indication of the user's 'willingness to receive one or more messages.'" EX1002, 425.

f. Wendkos in View of Teeter Discloses 1[e]

344. Wendkos in view of Teeter discloses **"generating, a second document that includes information about one or more events of interest for a user associated with the electronic address, the second document being customized to the user."**

345. Wendkos' PMP servers generate Web pages customized to individual recipients. Communications are "converted into a Web page" and published to the PMP servers. EX1012, ¶¶96. When communications differ among recipients, "the URL will also be personalized (recipient-specific) so that each recipient will be able to view a personalized version of the BrowserMail communication." *Id.*, ¶¶103. Communications "can include personalized text and images by merging recipient-specific data that exists in an sender's list," and a sender may "[i]nsert up to 10 different fields of information in your message" from the recipient's record. *Id.*, ¶¶28, 506-508; *see also id.*, ¶¶118. The platform also hosts landing pages linked from e-mail: its "Landing Page URL tool automatically hosts and generates the unique URL of your message," and those pages may be used for "longer stories, photos, charts, graphs, order forms, surveys or anything you need to communicate with your target audience." *Id.*, ¶¶272, 337.

346. Teeter supplies the content of such a page for a consumer's pending purchase. Teeter's personalized e-mail contains "the shopping cart information which was stored on the session server and a hypertext link to initiate the checkout process." EX1013, ¶¶14. The link leads to a landing page that "usually will be the shopping cart review page so that the contents of the abandoner's shopping cart may be recovered and the order placed," and the e-mails may offer "an incentive such as a special offer or coupon." *Id.*, ¶¶23, 25; *see also id.*, ¶¶17. The cart page

presents the products that the particular consumer selected, so it is customized to that consumer.

347. A POSITA would have understood that the consumer's pending purchase of the items in that cart, together with any accompanying special offer, is one or more "events of interest for a user associated with the electronic address," and that the cart page is "customized to the user." As I explain for Ground 1, the '799 patent describes the second document's content as information about "transactions (such as one or more upcoming events)," EX1001, 9:13-16, and a sale or offer of a product the consumer has chosen is an event under the plain meaning of that term. *See* Section IX.C.1.f.

348. A POSITA would have recognized that PMP servers 108 could generate Teeter's cart page using Wendkos' existing personalization and hosting functions. Teeter's system "may be implemented and managed by a third party as a service to the merchant," and the consumer's cart information is stored on the session server. EX1013, ¶¶13-14, 29-30. Wendkos' PMP servers are such a third-party platform. EX1012, ¶135. In the combination, PMP servers 108 merge the consumer's cart information into a recipient-specific page, as Wendkos does with other "recipient-specific data that is stored by the PMP servers," and publish that page at a unique URL that the platform "automatically hosts." EX1012, ¶¶103, 118, 272. That Teeter's example landing page retrieves the cart "from the e-

commerce web site's server" does not change my opinion, because the same cart information resides on the session server, and Teeter leaves the landing page to "whatever page the merchant chooses." EX1013, ¶¶14, 23, 29-30.

349. A POSITA would have been motivated to use Teeter's cart-recovery page as the second document generated by Wendkos' platform for the reasons I give in Section IX.B.8. Wendkos already uses the platform to disseminate merchants' "sales bulletins, pricing schedules, image galleries, promotional offers," and other communications with recipient-specific content, and Teeter's page is a known means of giving merchants "a second chance to get consumers to complete their sales." EX1012, ¶¶81, 118; EX1013, ¶¶4, 17.

g. Wendkos in View of Teeter Discloses 1[f]

350. Wendkos in view of Teeter discloses **"sending a message to the electronic address, wherein the message comprises a link to the second document, the link being configured to enable the user to access the second document to execute one or more transactions associated with the one or more events."**

351. Wendkos sends messages to the electronic address that the subscriber provided. PMP servers 108 send communications by e-mail to subscribers who elect e-mail delivery, and the platform immediately sends a confirmation message "by email to the email address used in the subscription form." EX1012, ¶¶238,

256, 478; *see also id.*, ¶117 (a sender may send “traditional emails” using the PMP servers). Those messages carry links, which the platform makes “instantly trackable when any of your targets clicks on the link in your message,” including links to landing pages that the platform hosts. *Id.*, ¶¶272, 293, 337.

352. To the extent the electronic address is the subscriber’s mobile telephone number, a POSITA would have found it obvious to send the same message and link to that number as a text message. Wendkos collects the subscriber’s phone number and identifies a mobile telephone as a recipient device, and text messaging to a mobile telephone number was an established channel for marketing messages and their links. EX1012, ¶¶82, 92; EX1010, ¶¶3, 54; *see* Sections IX.A.2, IX.A.5. Delivering the same content over a known messaging channel to an address the recipient supplied yields predictable results.

353. Teeter discloses the same step with the cart page as the link target. Its personalized e-mail contains “a hypertext link to initiate the checkout process,” and when the consumer selects the link, the consumer “is directed to the landing page to initiate the check out process.” EX1013, ¶¶14-15. The e-mail may provide “[a] link to view the contents of the abandoned shopping cart 212 or proceed to checkout 214.” *Id.*, ¶24, Fig. 3. The link carries the cart identifier: “[t]he cartid is used in the link to retrieve the shopper’s cart information.” *Id.*, ¶23.

354. The link enables the user to execute the transaction. “By selecting the link, the contents of the consumer’s shopping cart, prior to abandonment, are again accessible and the consumer may modify or add to the contents, or proceed directly to checkout,” where the consumer’s payment information is collected and the order is submitted. *Id.*, ¶¶11, 17. The link therefore opens a continuing path to the transaction, unlike the arrangement the applicant distinguished during prosecution, in which “the user interaction concludes immediately following either of these confirmations.” EX1002, 426.

355. A POSITA combining the references would have sent Wendkos’ e-mail to the subscriber’s e-mail address (or, alternatively, a text message to the subscriber’s mobile telephone number) with Teeter’s cart-specific link to the platform-hosted cart page described for element 1[e], for the reasons I give in Section IX.B.8, and would have understood that this message “comprises a link to the second document, the link being configured to enable the user to access the second document to execute one or more transactions associated with the one or more events.”

h. Wendkos in View of Teeter Discloses 1[g]

356. Wendkos in view of Teeter discloses **“in response to determining activation of the link has occurred, causing provision of the second document**

to the electronic address, wherein the second document is configured to facilitate completion of a given transaction in the one or more transactions.”

357. Wendkos’ PMP servers determine, recipient by recipient, when a recipient activates a link in a communication. Its reports show “the numbers of specific clickthroughs (i.e., how many recipients clicked on a specific link in the communication),” and “a more detailed report relating to a particular communication may indicate the number of times that each particular link provided in the communication has been clicked, and by which recipients.” EX1012, ¶¶122-123. The platform will “parse and track the links in your own HTML,” and its Target Activity Report lists “each email respondent on your open list, the number of links they clicked on and which links in your message they clicked on.” *Id.*, ¶¶542, 562-563. These reports apply to e-mail delivery, because “all reports and statistics are consistent across all three delivery methods (email, BrowserMail and WebPager).” *Id.*, ¶524. The platform also tracks clicks on the landing pages it hosts. *Id.*, ¶¶339-340.

358. Teeter acts in response to activation of the link. “If the consumer clicks on the hypertext link, the shopping cart is reinitiated on the e-commerce web site,” and “[i]f the consumer selects the hyperlink, decision block 78, the consumer is directed to the landing page to initiate the check out process, block 84.” EX1013, ¶¶14-15. Figure 1C shows the same branching: when a link is selected

(decision blocks 68 and 78), Teeter checks whether the consumer has already purchased (blocks 70 and 80) and, if not, goes to the landing page (blocks 74 and 84). *Id.*, Fig. 1C; *see also id.*, Fig. 1D.

359. A POSITA would have understood that detecting the consumer's selection of the link is "determining activation of the link has occurred," and that directing the consumer to the landing page in response is "causing provision of the second document." A link to a page on a web server works this way: the click causes the browser to send a request for that URL, the server that receives the request thereby knows that the link has been activated, and it responds by serving the page or redirecting the browser to it. *See* Section IX.A.3.

360. The second document is provided to the electronic address. Teeter delivers "a message containing a hyperlink to the e-commerce website to the collected e-mail address," and upon "selecting the hyperlink," returns "the user to the e-commerce website with the previously abandoned item restored." EX1013, claim 1; *see also id.*, ¶14. Wendkos likewise sends communications by e-mail to the address entered in the subscription form. EX1012, ¶¶117, 478. The user activates the link from the message received at that address, which opens the page on the same device; and where the electronic address is the subscriber's mobile telephone number, the link sent to that number is activated on, and opens the page on, the subscriber's mobile telephone. *Id.*, ¶¶82, 92. The '799 patent describes the

claimed step the same way: the customized second document is provided to the device from which the link was activated. EX1001, 9:31-37, 14:1-7; *see* Section IX.C.1.h. A POSITA would therefore have understood that serving the page to the device on which the user activated the link delivered to the electronic address is “causing provision of the second document to the electronic address.”

361. The second document is configured to facilitate completion of the transaction. Teeter’s landing page “usually will be the shopping cart review page so that the contents of the abandoner’s shopping cart may be recovered and the order placed,” and from it the consumer may “proceed directly to checkout.” EX1013, ¶¶17, 23; *see also id.*, ¶11. Wendkos’ platform-hosted landing pages may likewise be used for “order forms.” EX1012, ¶337.

362. A POSITA combining the references would have tracked activation of Teeter’s cart link through PMP servers 108 and, in response, served or redirected the consumer to the cart page described for element 1[e]. A POSITA would have been motivated to make Teeter’s cart-recovery link a tracked link through which PMP servers 108 detect the click and provide the cart page, because Wendkos already tracks every link down to the individual recipient, and Teeter’s click-triggered landing page is the known means of returning the shopper to complete the order. EX1012, ¶¶122-123, 542, 563; EX1013, ¶¶15, 23, 30; *see* Section

IX.B.8. A POSITA would have understood that this combination meets element 1[g].

2. Independent Claims 12 and 22

363. As I explain for Ground 1, the body limitations of claims 12 and 22 are word-for-word identical to elements 1[c] through 1[g] of claim 1. *See* Section IX.C.2. Accordingly, for the reasons I give for claim 1, Wendkos in view of Teeter discloses elements 12[a] and 22[a] (*see supra* Section IX.D.1.d, element 1[c]); elements 12[b] and 22[b] (*see supra* Section IX.D.1.e, element 1[d]); elements 12[c] and 22[c] (*see supra* Section IX.D.1.f, element 1[e]); elements 12[d] and 22[d] (*see supra* Section IX.D.1.g, element 1[f]); and elements 12[e] and 22[e] (*see supra* Section IX.D.1.h, element 1[g]).

364. To the extent the preamble of claim 12 is limiting, Wendkos discloses “[a] computer-implemented method.” Wendkos describes its operations as methods performed by a server, including “receiving, by a server, information that is associated with the generation of the electronic communication” and “determining, by the server, whether the recipient has granted permission to receive the electronic communication.” EX1012, claim 18; *see also id.*, ¶¶15, 44, claim 1. Those operations are performed by PMP servers 108, which run the platform’s software. *Id.*, ¶¶84, 233. A POSITA would have understood that

operations performed by software executed on a server are “[a] computer-implemented method.”

365. To the extent the preamble of claim 22 is limiting, Wendkos discloses “[a] non-transitory computer-readable storage medium for use in conjunction with a processor, the computer-readable storage medium storing program instructions that, when executed by the processor, cause the processor to carry out operations comprising,” for the reasons I give for elements 1[pre] through 1[b]. *See supra* Sections IX.D.1.a-c. Wendkos describes “computer program products” and server applications “coded in PHP, C++ and Objective C.” EX1012, ¶¶15, 233. Software of that kind is stored as data in the servers’ memory or disk storage, not as a propagating signal, and a POSITA would have understood that the storage holding it is “[a] non-transitory computer-readable storage medium.”

366. Thus, in my opinion, Wendkos in view of Teeter discloses or renders obvious each element of claims 12 and 22.

3. Dependent Claims

a. Wendkos in View of Teeter and Lentz Discloses Claims 2, 13, and 23

367. Claims 2, 13, and 23 add that “the message comprises a Rich Communication Services (RCS) message provided to the electronic address according to a schedule generated based at least in part on a determined

classification of the user.” EX1001, claims 2, 13, 23. Wendkos in view of Teeter and Lentz discloses these limitations.

368. Wendkos lets senders schedule communications and stores, for each recipient, the data needed to classify that recipient. Its campaign scheduler lets the sender “[s]chedule the launch day and time for your campaign,” and senders may “[s]end the same message to different segments of your list” and “[t]est offers, schedule times.” EX1012, ¶¶250, 252; *see also id.*, ¶30. Wendkos stores, for each recipient, “profile data about the recipient, his communications preferences, and response metrics associated with the recipient,” and tracks opens and clickthroughs “down to the recipient level.” *Id.*, ¶¶24, 31. It also shows senders which subscribers are active or inactive “so that you can either optimize your messages or schedule segmented campaigns.” *Id.*, ¶594.

369. Teeter supplies such a schedule. Its recovery e-mails are sent “at intervals selected by the merchant,” for example “3 hours after abandonment,” then at “48 hours” and “7 days,” and each follow-up is sent only to a consumer who has not selected the link in the prior e-mail. EX1013, ¶¶15-17, 24-25, Figs. 1C, 3. A POSITA would have understood that Teeter’s determination that a consumer has abandoned a cart and has not yet selected the link is “a determined classification of the user,” and that the resulting sequence of timed e-mails is “a schedule generated based at least in part on” that classification. *Id.*, ¶15, Fig. 1C (blocks 68, 76).

370. Lentz discloses the RCS channel, and a POSITA would have been motivated to deliver the combined system's scheduled messages over it, for the reasons I give in Sections IX.B.9 and IX.C.3.a. EX1011, ¶¶33, 73. Wendkos itself lets the sender select the delivery method for each campaign and lets subscribers switch their delivery preference, so the delivery channel is already a variable in Wendkos' platform. EX1012, ¶¶26, 256. Here, the electronic address is the subscriber's mobile telephone number. *See* Section IX.D.1.e.

371. Lentz also confirms that a POSITA would have timed delivery based on what the system learned about the consumer. Lentz applies "one or more trained machine learning algorithms" to the consumer's activity, including "a time of day or day of the week that the product-search was initiated," and may recommend transmitting an offering "at a time of day or day of the week that is most likely to trigger the consumer to initiate and/or complete a corresponding purchase agreement." EX1011, ¶40. Lentz also groups consumers for targeting. *Id.*, ¶¶41, 49. A POSITA would have been motivated to use Lentz's recommended send time, together with Wendkos' campaign scheduler and per-recipient engagement data and Teeter's status-based follow-up intervals, to generate the delivery schedule for each recipient or group of recipients, because all three serve the goal of timing messages so that the consumer acts on them. EX1011, ¶¶37-41, 49; EX1012, ¶¶24, 31, 249-250; EX1013, ¶¶15, 17.

372. As I explain in Section VI.C, claims 2, 13, and 23 are entitled to an effective filing date no earlier than September 25, 2024, and by then RCS had been standardized by the GSMA, including for messaging between businesses and consumers, and was offered in consumer messaging applications. *See* Section IX.A.5; EX1016, 152-53; EX1017, 1-2; EX1018, 1. As I explain for Ground 1, my understanding that a POSITA would read the claimed schedule to cover scheduling each recipient’s messages according to the recipient’s status is confirmed by the prosecution history, in which the applicant distinguished Lee on the ground that it “does not ‘schedule’ the RCS message” at all. EX1002, 428; *see* Section IX.C.3.a.

373. Claims 13 and 23 recite the same limitation as claim 2. For the same reasons, Wendkos in view of Teeter and Lentz discloses claims 13 and 23.

**b. Wendkos in View of Teeter and Lentz Discloses
Claims 3, 14, and 24**

374. Claims 3, 14, and 24 add that **“the classification of the user comprises criteria corresponding to an application, a website, or a service associated with the electronic address.”** EX1001, claims 3, 14, 24. Wendkos in view of Teeter and Lentz discloses these limitations. As I note for Ground 1, the ’799 patent explains that “the criteria may be based on a level of engagement with particular content.” EX1001, 41:13-19; *see* Section IX.C.3.b.

375. Service. Wendkos lets senders “[c]reate targeted mailings to your subscribers based upon their demographic profile, campaign activity or other

relevant segmentation requirement,” where campaign activity includes “how many HTML emails were opened and of those, how many recipients clicked on the links within the message.” EX1012, ¶¶395, 558. Those criteria measure the subscriber’s engagement with communications delivered through the messaging service, such as e-mail or BrowserMail, associated with the subscriber’s address. Wendkos also lets senders send a campaign separately to BrowserMail subscribers and to e-mail subscribers, according to the service each subscriber uses. *Id.*, ¶256.

376. Website. Wendkos lets senders “segment your lists based upon either the source of their subscription or the interests of individual subscribers,” so that a subscriber may be classified by the website at which the subscriber subscribed. *Id.*, ¶490. Teeter’s session server likewise records, for each visitor to the merchant’s website, “a unique customer id, the page currently being viewed, and the time initiated,” distinguishes a customer who “is new to the web site” from “a returning customer,” and ties the consumer’s stored cart to the consumer’s e-mail address and “unique cart identifier.” EX1013, ¶¶12-13, 18, 29.

377. Application. Lentz’s client analysis model, with which it pairs its recommended send time, is built from data gathered as the system monitors “the consumer’s use of the IVER application,” and the IVER application is installed on, or accessed from, the consumer’s client device. EX1011, ¶¶26-27, 40; *see* Section IX.C.3.b.

378. A POSITA would have understood that each of these criteria is a criterion “corresponding to an application, a website, or a service associated with the electronic address,” because each classifies the user by the user’s own engagement with an application, a website, or a service. That understanding is consistent with, and confirmed by, the prosecution history, in which the applicant distinguished Lee on the ground that it had “no mapping of users to websites, apps, or services.” EX1002, 428.

379. Claims 14 and 24 recite the same limitation as claim 3. For the same reasons, Wendkos in view of Teeter and Lentz discloses claims 14 and 24.

c. Wendkos in View of Teeter and Lentz Discloses Claim 4

380. Claim 4 depends from claim 2 and adds that the classification of the user indicates whether the user is **“a message recipient that has selected a link provided by the system to the electronic address and completed at least one prior transaction; a message recipient that has selected a link provided by the system to the electronic address, but has not completed a transaction; or a message recipient that has not selected a link provided by the system to the electronic address.”** EX1001, claim 4. Wendkos in view of Teeter and Lentz discloses this limitation.

381. Wendkos tracks, for each recipient, whether the recipient has clicked the links in a communication. It stores “response metrics” in a database entry for

each recipient, and it reports the number of “clickthroughs” and of “specific ‘clickthroughs’ (how many recipients clicked on a specific link in the communication)” “down to the recipient level.” EX1012, ¶¶24, 31. Its Target Activity Report lists, for each respondent, “the number of links they clicked on and which links in your message they clicked on.” *Id.*, ¶563. Wendkos thus distinguishes “a message recipient that has not selected a link provided by the system” from one that has.

382. Teeter supplies the remaining distinction, between recipients who have and have not completed a transaction after selecting the link. When the consumer selects the link, Teeter checks whether the consumer has made a “Previous purchase,” displaying an “already purchased” message to a consumer who has and the landing page to one who has not. EX1013, Fig. 1C (blocks 68-74, 78-84). Teeter also collects “successful order completion” data from the merchant’s pages, “including the confirmation page.” *Id.*, ¶¶18, 26. Together with Wendkos’ per-recipient click tracking, this information allows each recipient to be classified as one who has selected a link and completed a transaction, one who has selected a link but not completed a transaction, or one who has not selected a link. Teeter itself treats the last group differently, sending a consumer who has not selected the link a further e-mail. *Id.*, ¶15, Fig. 1C (blocks 68, 76).

383. Lentz confirms that a POSITA would have tracked recipients in these groups, assigning each selection of an offering a purchase-event status “such as, a ‘pending,’ ‘fulfilled,’ ‘approved,’ or ‘abandoned’ status.” EX1011, ¶¶60; *see also id.*, ¶¶91, 143-144, Fig. 16; Section IX.C.3.c.

384. A POSITA would have been motivated to use these three groups as the classification on which the claim 2 schedule is based, because whether a recipient has clicked and purchased is a direct measure of the engagement that Wendkos tracks and on which Teeter’s follow-up schedule already turns, and Lentz times its offerings to “trigger the consumer to initiate and/or complete a corresponding purchase agreement.” EX1012, ¶¶24, 31; EX1013, ¶15; EX1011, ¶40. Classifying recipients this way was also an ordinary marketing practice by claim 4’s effective filing date, which is no earlier than September 25, 2024. *See* Sections IX.A.4, IX.C.3.c; EX1021, 1, 3.

d. Wendkos in View of Teeter and Lentz Discloses Claims 5, 15, and 25

385. Claims 5, 15, and 25 add that the message comprises an RCS message and that the operations further comprise **“requesting and receiving authorization data corresponding to an identity of the user before causing provision of the second document to the electronic address.”** EX1001, claims 5, 15, 25.

Wendkos in view of Teeter and Lentz discloses these limitations. Lentz discloses the RCS channel, and a POSITA would have been motivated to use it, for the

reasons I give for claim 2. *See* Section IX.D.3.a; EX1011, ¶¶33, 73. Here, the electronic address is the subscriber’s mobile telephone number. *See* Section IX.D.1.e.

386. Wendkos verifies the recipient’s identity before providing the recipient’s Web page. Wendkos claims “generating a personal security key by the utility program; and using the personal security key to verify that the recipient should be provided access to the electronic communication prior to the step of providing the published Web page to the recipient.” EX1012, claim 6. Each PMP utility program also carries a “unique ID” that “can be used to identify and verify the recipient in communications with the PMP servers,” and a recipient using a computer without the utility program can instead log in to a private account. *Id.*, ¶¶99, 134. Wendkos likewise authenticates a subscriber who clicks the “Subscription Preferences” link in a communication before providing the preferences page: “Once authenticated, the subscriber can modify any or all of their preferences.” *Id.*, ¶470; *see also id.*, ¶480.

387. A POSITA would have understood that verifying the recipient through the personal security key, the utility program’s unique ID, or a login, before providing the recipient’s Web page, is “requesting and receiving authorization data corresponding to an identity of the user before causing provision of the second document.” A POSITA would have applied the same verification

before providing the combined system's cart page, for the reason Wendkos gives for its security key: so that only the recipient for whom a communication is intended can view it. EX1012, ¶¶37, 41, claim 6.

388. Claims 15 and 25 recite the same limitation as claim 5. For the same reasons, Wendkos in view of Teeter and Lentz discloses claims 15 and 25.

e. Wendkos in View of Teeter and Lentz Discloses Claims 6 and 16

389. Claims 6 and 16 add that **“the message is an Enhanced Messaging Service (EMS) message.”** EX1001, claims 6, 16. Wendkos in view of Teeter, Lentz, and the general knowledge of a POSITA renders these claims obvious.

390. Wendkos identifies “a mobile (cellular) telephone” as a recipient device and collects the subscriber's phone number. EX1012, ¶¶82, 92. A POSITA would therefore have understood that Wendkos' communications, and Teeter's link, could be sent to the subscriber's mobile telephone by text message. *See* Section IX.D.1.g.

391. As I explain for Ground 1, the '799 patent treats EMS as a drop-in alternative to SMS, stating that “different communication channels may be used in other embodiments, e.g., email, Enhanced Messaging Service (EMS), and/or MMS,” and the applicant did not argue claim 6 separately. EX1001, 14:18-21; EX1002, 428; *see* Section IX.C.3.e. EMS was standardized as an extension of SMS that uses the same short-message infrastructure and the same telephone

number, and it was supported by mobile handsets, long before the '799 patent's earliest claimed priority date. EX1014, §§ 3.10, 9.2.3.24.10.1; EX1015, ¶¶6-7, 10, 64; *see* Section IX.A.5.

392. A POSITA would have found it obvious to deliver Wendkos' communication, with Teeter's link, as an EMS message. Doing so required only the substitution of one known text-messaging format for another, with the predictable result of delivering the same communication and link to the same telephone number, and a POSITA would have had a reasonable expectation of success for the same reason. No other element of the combined system changes.

393. Claim 16 recites the same limitation as claim 6. For the same reasons, Wendkos in view of Teeter, Lentz, and the general knowledge of a POSITA renders claim 16 obvious.

**f. Wendkos in View of Teeter and Lentz Discloses
Claims 7, 17, and 26**

394. Claims 7, 17, and 26 add that **“the message comprises content including send and receive indicators provided in a user interface of a mobile computing device associated with the electronic address, the indicators depicting real time typing between a message provider and the mobile computing device or between another computing device and the mobile computing device.”** EX1001, claims 7, 17, 26. Wendkos in view of Teeter and Lentz discloses these limitations.

395. My opinions for Ground 1 apply equally here. *See* Section IX.C.3.f. The '799 patent describes typing indicators as a feature of RCS messaging, EX1001, 39:36-51; Lentz discloses the RCS channel, EX1011, ¶¶33, 73; the RCS standard requires an “is typing” notification, and RCS business messaging presents typing indicators in conversations between a business and a consumer, EX1016, 46; EX1018, 1; and the applicant did not argue claim 7 separately, EX1002, 304, 428. A POSITA delivering the combined system’s message by RCS would have presented it in the RCS messaging interface with the typing indicators and read receipts that accompany RCS messaging, which are “send and receive indicators ... depicting real time typing between a message provider and the mobile computing device.” Nothing about Wendkos’ or Teeter’s content changes that analysis.

396. Claims 17 and 26 recite the same limitation as claim 7. For the same reasons, Wendkos in view of Teeter and Lentz discloses claims 17 and 26.

g. Wendkos in View of Teeter Discloses Claims 8, 18, and 27

397. Claims 8, 18, and 27 add that the link is further configured to **“allow users other than the user to access the second document to browse the second document while prohibiting execution of the one or more transactions through the link for the users other than the user.”** EX1001, claims 8, 18, 27. Wendkos in view of Teeter renders these limitations obvious.

398. Wendkos addresses communications sent on to people other than the subscriber. Its referral tool lets a recipient “send a copy of the HTML message to a friend,” and the copy carries “a disclaimer notifying the recipient that their email has not been permanently recorded nor have they been subscribed to any list.” EX1012, ¶¶517, 519. Wendkos does not capture the friend’s address “because they haven’t opted in to your list,” and recommends including a link so that the friend can subscribe. *Id.*, ¶522. The friend may thus view the communication and its content, but is not a subscriber.

399. Purchases through a communication, by contrast, are tied to the subscriber. A recipient may pay for content “that must be purchased (or rented)” by providing payment information or by giving “permission (explicitly or implicitly) to bill a previously established financial account with the PMP servers.” *Id.*, ¶91. A POSITA would have found it obvious to configure the cart link in the combined system the same way: a friend to whom the message is sent may open and browse the cart page, but cannot complete the purchase on the subscriber’s account through that link, and is instead invited to subscribe. That configuration protects the subscriber’s account and follows Wendkos’ own treatment of messages sent to friends. *Id.*, ¶¶91, 519, 522. The ’799 patent describes the same arrangement, in which a second individual “may browse content customized for the first individual but will be prohibited from ... executing a transaction unless the

second individual subscribers [sic] and provides his/her telephone number.”

EX1001, 14:35-41.

400. Claims 18 and 27 recite the same limitation as claim 8. For the same reasons, Wendkos in view of Teeter renders claims 18 and 27 obvious.

h. Wendkos in View of Teeter Discloses Claims 9, 19, and 28

401. Claims 9, 19, and 28 add that **“the link is further configured with a security layer to provide augmented access or navigation attributes to the user.”** EX1001, claims 9, 19, 28. Wendkos in view of Teeter discloses these limitations.

402. Wendkos discloses links configured with a security layer. A BrowserMail subscriber downloads “a personal BrowserMail key and utility, which establishes a secure, communication stream,” and each communication is published to “an encrypted URL which can only be viewed by the recipient.” EX1012, ¶¶37, 236; *see also id.*, ¶¶17, 103. The alert that the recipient receives carries “an encrypted, recipient-specific URL where the recipient’s communication is published,” and the utility program “opens the recipient’s default web browser and loads the recipient’s personalized and encrypted URL.” *Id.*, ¶23.

403. That security layer gives the recipient augmented access and navigation. Through BrowserMail, the recipient views the communication in the recipient’s Web browser, with rich media over which the sender has “full creative

control,” rather than in an e-mail reader that may strip out images and links. *Id.*, ¶¶8, 85, 237. Wendkos also offers a Web-based login to the recipient’s private account as an alternative way of verifying the recipient, and each PMP utility program carries a “unique ID” that “can be used to identify and verify the recipient in communications with the PMP servers.” *Id.*, ¶¶99, 134.

404. A POSITA would have understood that Wendkos’ recipient-specific, encrypted URLs, opened through the BrowserMail key and utility, are links “configured with a security layer to provide augmented access or navigation attributes to the user,” because they restrict access to the identified recipient while giving that recipient a browser-based view of the communication. EX1012, ¶¶23, 37, 99, 134, 236. My understanding of how a POSITA would read this limitation is consistent with the Examiner’s, and is confirmed by the prosecution history: in rejecting claim 9 over Long, the Examiner read this limitation on a server that can “authenticate the user based on a user identifier,” and the applicant did not contest that reading. EX1002, 304-05, 428; *see* Section IX.C.3.h.

405. Claims 19 and 28 recite the same limitation as claim 9. For the same reasons, Wendkos in view of Teeter discloses claims 19 and 28.

i. Wendkos in View of Teeter Discloses Claims 10, 20, and 29

406. Claims 10, 20, and 29 add that **“the link is further configured to enable the user to resume an online user journey associated with the given**

transaction.” EX1001, claims 10, 20, 29. Wendkos in view of Teeter discloses these limitations.

407. Teeter discloses such a link. Teeter’s process “enables a consumer to recover an abandoned shopping cart hours or even days later and then complete their order,” by sending an e-mail that “contains a hypertext link for the consumer to return to the merchant’s website and complete the purchase.” EX1013, ¶17. “By selecting the link, the contents of the consumer’s shopping cart, prior to abandonment, are again accessible and the consumer may modify or add to the contents, or proceed directly to checkout.” *Id.* The link carries the identifier that retrieves the consumer’s own cart, and the landing page is usually “the shopping cart review page so that the contents of the abandoner’s shopping cart may be recovered and the order placed.” *Id.*, ¶23. Teeter’s claim describes the result as “returning the user to the e-commerce website with the previously abandoned item restored.” *Id.*, claim 1.

408. A POSITA would have understood that a link that returns the consumer to the consumer’s own abandoned cart, with its contents restored, so that the consumer can continue to checkout, is a link “configured to enable the user to resume an online user journey associated with the given transaction.” The consumer’s journey stopped at the cart, and the link returns the consumer to that

point. The '799 patent describes the same function, a link that enables a user “to return to an abandoned journey or cart.” EX1001, 37:47-60.

409. Claims 20 and 29 recite the same limitation as claim 10. For the same reasons, Wendkos in view of Teeter discloses claims 20 and 29.

**j. Wendkos in View of Teeter and Lentz Discloses
Claims 11, 21, and 30**

410. Claims 11, 21, and 30 add that **“the second document comprises user-targeted content based on one or more prior engagement characteristics associated with the electronic address, wherein the prior engagement characteristics are determined using machine learning.”** EX1001, claims 11, 21, 30. Wendkos in view of Teeter and Lentz discloses these limitations.

411. Lentz discloses the machine-learning limitation for the reasons I give for Ground 1. Its consumer module “may also employ one or more machine learning algorithms to generate a consumer analysis model” from the consumer’s prior engagement, including transactions, viewed offerings, profile data, and storefront selections, and it uses that model to generate a consumer-applicability score for each offering and a storefront that “may selectively prioritize a presentation of product-service offerings based at least in part on their respective CA scores.” EX1011, ¶¶39, 52-53, 90, 175-177; *see* Section IX.C.3.j.

412. Wendkos itself profiles each recipient from prior engagement. It can automatically update mailing lists with response data, “such as how many times a

recipient has received a communication from the sender, opened a communication, responded to a communication, and other response statistics that an organization might desire to help evaluate performance and profile the recipient,” and it keeps each recipient’s profile and response metrics in a database entry tied to the address supplied at subscription. EX1012, ¶¶24, 27, 114. Senders use that “campaign activity” to create targeted mailings. *Id.*, ¶395.

413. A POSITA would have been motivated to generate the customized second document using Lentz’s machine-learning-based prioritization, because Wendkos already targets its communications using each recipient’s campaign activity, and Lentz’s trained model is a known and more capable means of performing that profiling. EX1012, ¶¶114, 395; EX1011, ¶¶39-40, 52-53, 90, 177; *see* Section IX.B.9. In the combined system, the cart page and any accompanying offer would present content selected for the recipient using that model. Those prior engagement characteristics are associated with the electronic address, because Wendkos keeps them in the recipient’s database entry. EX1012, ¶24. A POSITA would therefore have understood that the combined system’s second document “comprises user-targeted content based on one or more prior engagement characteristics associated with the electronic address, wherein the prior engagement characteristics are determined using machine learning.”

414. Claims 21 and 30 recite the same limitation as claim 11. For the same reasons, Wendkos in view of Teeter and Lentz discloses claims 21 and 30.

X. CONCLUSION

415. For the reasons presented above, it is my opinion that the applied references render obvious claims 1-30 of the '799 patent.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: October 19, 2026



Benjamin B. Bederson, Ph.D.