

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SALESFORCE, INC.,
Petitioner

v.

IQX CORP.,
Patent Owner

Case IPR2026-00478
U.S. Patent No. 12,438,978

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 12,438,978**

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PETITIONER'S EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent No. 12,438,978 to Spindler et al., issued October 7, 2025 (“the ’978 patent”)
1002	File History of U.S. Patent No. 12,438,978 (“’978 Patent File History”)
1003	Declaration of Bernard J. Jansen, Ph.D.
1004	<i>Curriculum Vitae</i> of Bernard J. Jansen, Ph.D.
1005	U.S. Patent Publication No. 2011/0178897 A1 to Balasubramanian <i>et al.</i> (“Balasubramanian”)
1006	U.S. Patent Publication No. 2022/0006895 A1 to Spindler <i>et al.</i> (“Spindler”)
1007	U.S. Patent Publication No. 2015/0052061 A1 to Anderson <i>et al.</i> (“Anderson”)
1008	U.S. Patent Publication No. 2016/0014603 A1 to Woodward <i>et al.</i> (“Woodward”)
1009	U.S. Patent No. 10,264,413 B1 to Bogineni <i>et al.</i> (“Bogineni”)
1010-1011	<i>Intentionally Left Blank</i>
1012	U.S. Patent Publication No. 2016/0239867 A1 to Sinha <i>et al.</i> (“Sinha”)
1013	<i>Intentionally Left Blank</i>
1014	International Application Publication No. WO 2018/103039 A1 to Wang <i>et al.</i> (“Wang”)
1015-1016	<i>Intentionally Left Blank</i>
1017	U.S. Patent Publication No. 2016/0364496 A1 to Li <i>et al.</i> (“Li”)
1018	U.S. Patent No. 6,360,254 B1 to Linden <i>et al.</i> (“Linden”)
1019	U.S. Patent Publication No. 2012/0191546 A1 to Phelan <i>et al.</i> (“Phelan”)
1020	File History of U.S. Application No. 18/984,041 (U.S. Patent No. 12,368,799) (“the ’041 Application”)

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1021	File History of U.S. Application No. 18/896,197 (U.S. Patent No. 12,200,165) (“the ’197 Application”)
1022	File History of U.S. Application No. 18/483,670 (U.S. Patent No. 12,126,752) (“the ’670 Application”)
1023	<i>Intentionally Left Blank</i>
1024	“Best Computer Science Scientists 2026” - Data Sources for the 12th Edition of the Research.com Best Computer Science Scientists Ranking (Page 13), accessed at https://research.com/scientists-rankings/computer-science?page=13
1025	Jafarzadeh, H., Aurum, A., D’Ambra, J., & Ghapanchi, A. “A Systematic Review on Search Engine Advertising,” <i>Pacific Asia Journal of the Association for Information Systems</i> , 7(3):1-32 (2015)
1026	Ioannidis, John P.A. (2025), “August 2025 data-update for “Updated science-wide author databases of standardized citation indicators,” Elsevier Data Repository, V8, doi: 10.17632/btchxktzyw.8
1027-1036	<i>Intentionally Left Blank</i>
1037	U.S. Patent Application Publication No. 2011/0078762 A1 to Bijlsma (“Bijlsma”)
1038	U.S. Patent Application Publication No. 2013/0254036 A1 to Trinh <i>et al.</i> (“Trinh”)
1039	U.S. Patent Application Publication No. 2015/0142906 A1 to Tolcher (“Tolcher”)
1040	U.S. Patent Application Publication No. 2005/0278231 A1 to Teeter (“Teeter”)
1041	U.S. Patent Application Publication No. 2014/0052562 A1 to Oliveira <i>et al.</i> (“Oliveira”)
1042	U.S. Patent Application Publication No. 2003/0101345 A1 to Nyberg (“Nyberg”)
1043	U.S. Patent Application Publication No. 2015/0373200 A1 to Zitnik <i>et al.</i> (“Zitnik”)
1044	U.S. Patent Application Publication No. 2007/0124399 A1 to Gillespie <i>et al.</i> (“Gillespie”)

Exhibit No.	Description
1045	U.S. Patent Application Publication No. 2011/0314287 A1 to Escott <i>et al.</i> (“Escott”)

I. INTRODUCTION

Salesforce, Inc. (“Petitioner”) petitions for *inter partes* review, seeking cancellation of claims 1-24 of U.S. Patent No. 12,438,978 (“the ’978 patent”; EX1001), assigned to IQX Corp. (“Patent Owner”).

The ’978 patent is generally directed to computer-implemented methods and systems for “providing secure access and authentication when using mobile devices to access and/or purchase content,” and in particular provides for user “access to one or more abandoned online shopping carts.” EX1001, 1:62-64, 37:33-35. The ’978 patent claims are directed to disclosure added in a continuation-in-part application in the priority chain. In doing so, the ’978 patent’s own priority application becomes prior art, and its publication (“Spindler”; EX1006) renders the claims obvious in combination with at least Anderson, which discloses well-known concepts related to resuming an abandoned online shopping transaction (subject matter added in the continuation-in-part application). Further still, even without breaking the priority chain, everything recited in the ’978 patent claims was known in the prior art (e.g., Balasubramanian) before even the earliest claimed priority date.

This Petition is supported by the declaration of Dr. Bernard Jansen (EX1003), an expert with decades of experience in e-commerce, computer networking and telecommunications. Dr. Jansen’s testimony confirms all

challenged claims are unpatentable. The Board should institute IPR and cancel claims 1-24.

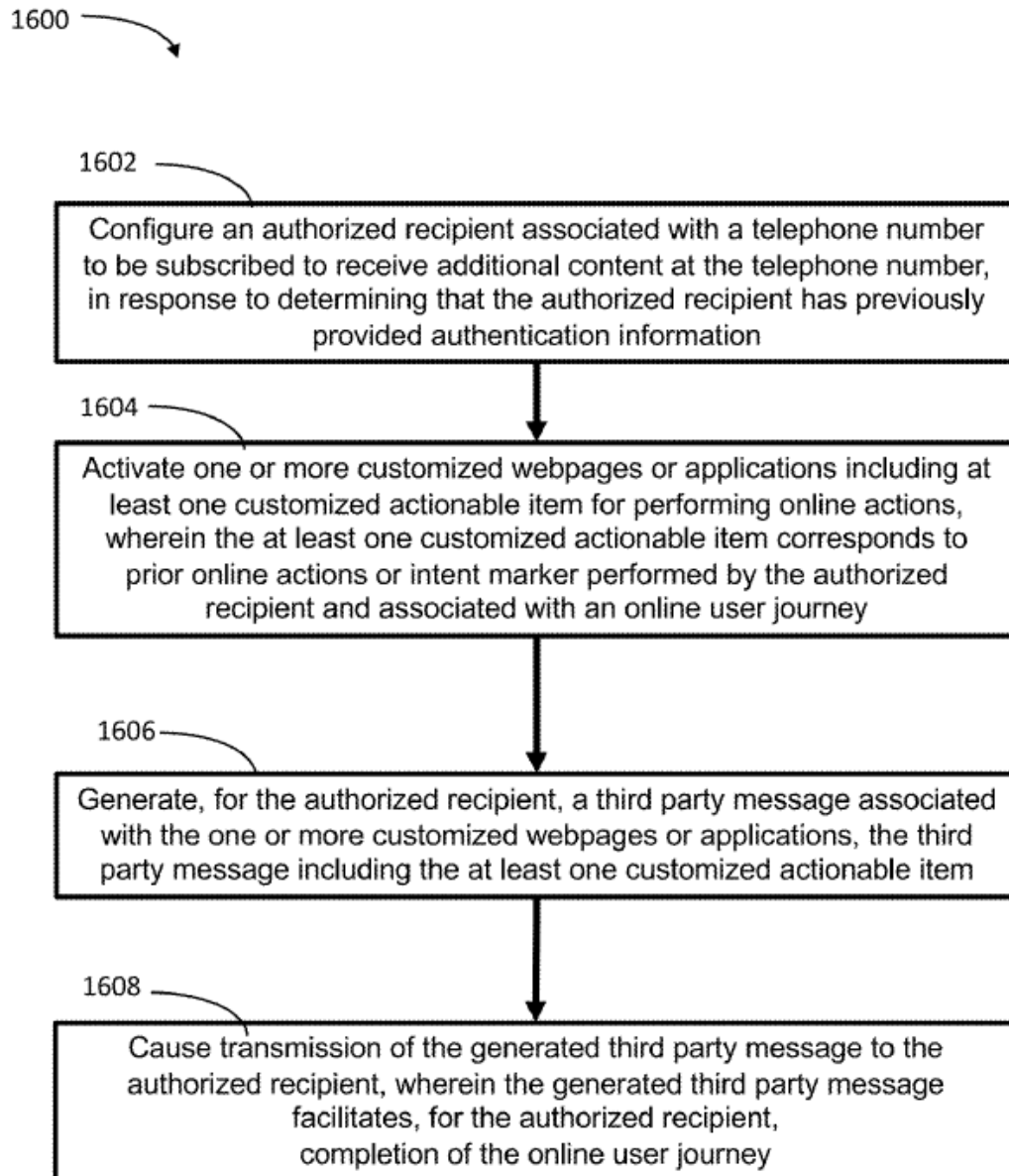
II. THE '978 PATENT

A. Overview

The '978 patent issued on October 7, 2025, from U.S. Application No. 19/192,732 (“the '732 application”). EX1001, (45), (21). The '978 patent claims priority, through multiple continuation and continuation-in-part applications, to a provisional application filed September 27, 2018. EX1001, 1:7-19. As explained below, however, the challenged claims are correctly entitled to priority no earlier than the September 25, 2024, filing date of U.S. Application No. 18/896,197 (“the '197 application”). Section IV.B.1.

The '978 patent relates to security and access control for mobile devices. EX1001, 1:31-32. It describes “systems and methods for providing secure access and authentication when using mobile devices to access and/or purchase content.” EX1001, 1:62-64.

Figure 16, below, illustrates a process for providing access to abandoned shopping carts or “user journeys.” EX1001, 37:33-35. The process configures an authorized recipient associated with a telephone number, activates customized webpages that may include an actionable item for resuming the user journey, and transmits a message associated with those webpages. EX1001, 37:55-38:46.



EX1001, FIG. 16.

The challenged claims, however, recite only well-known concepts related to resuming an abandoned online shopping transaction. For example, the claimed “online user journey” encompasses ordinary activities such as shopping, browsing, form filling, or searching that may later be abandoned. EX1001, 38:3-10. In an abandoned shopping session, the claimed “one or more customized webpages or

applications” is merely a webpage displaying the abandoned shopping cart, and the claimed “customized actionable item” is simply a link allowing the user to complete the transaction. EX1001, 38:29-34. The challenged claims thus amount to little more than sending a link to a user’s device to prompt resumption and completion of an abandoned transaction, concepts that were well known long before the filing of the ’978 patent. Sections V-VII; EX1003, ¶¶39-71.

B. Prosecution History

Prosecution of the ’978 patent was exceptionally short. *See generally*, EX1002. The claims were not formally rejected, and the only indication of substantive examination before allowance is a single Examiner-initiated interview that appears to have addressed only non-statutory double patenting. EX1002, 0024. After a terminal disclaimer, the claims were allowed. EX1002, 0021, 0152-0154. EX1003, ¶¶80-82.

C. Person of Ordinary Skill in the Art (“POSA”)

A POSA would have had a bachelor’s degree in Computer or Electrical Engineering, Computer Science, or equivalent discipline, and approximately two years’ experience in e-commerce, telecommunications, or computer networking. Additional education could substitute for professional experience, and significant work experience could substitute for formal education. EX1003, ¶36.

D. Claim Construction

Claims must be given their ordinary and customary meaning in light of the specification—“the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-1313 (Fed. Cir. 2005) (en banc); *see also* 37 C.F.R. § 42.100(b).

Petitioner submits that all claim terms should receive their plain and ordinary meaning in the context of the '978 patent specification.

III. IDENTIFICATION OF THE CHALLENGE (37 C.F.R. § 42.104(B))

Petitioner requests IPR based on the grounds summarized below.

Ground	35 U.S.C. §	Claims	References
1A	103	1-2, 5-10, 13-18, 21-24	Balasubramanian
1B	103	3-4, 11-12, 19-20	Balasubramanian, Woodward
1C	103	7-8, 15-16, 23-24	Balasubramanian, Bogineni
2A	103	1-2, 5-10, 13-18, 21-24	Spindler, Anderson
2B	103	3-4, 11-12, 19-20	Spindler, Anderson, Woodward
2C	103	7-8, 15-16, 23-24	Spindler, Anderson, Bogineni

IV. OVERVIEW OF THE ASSERTED ART

A. Balasubramanian (EX1005)

Balasubramanian published July 21, 2011, and is prior art to the '978 patent under 35 U.S.C. §§ 102(a)(1) and 102(a)(2).

Like the '978 patent, Balasubramanian is directed to “a system and method for facilitating electronic commerce over a network.” EX1005, Abstract.

Balasubramanian's system includes a user device that facilitates conducting financial transactions with merchant devices and a service provider over a network.

EX1005, ¶¶21-22, 24, FIG. 1. For example, the user device allows “for viewing, searching, and/or purchasing items, products, and/or services over the network.”

EX1005, ¶24.

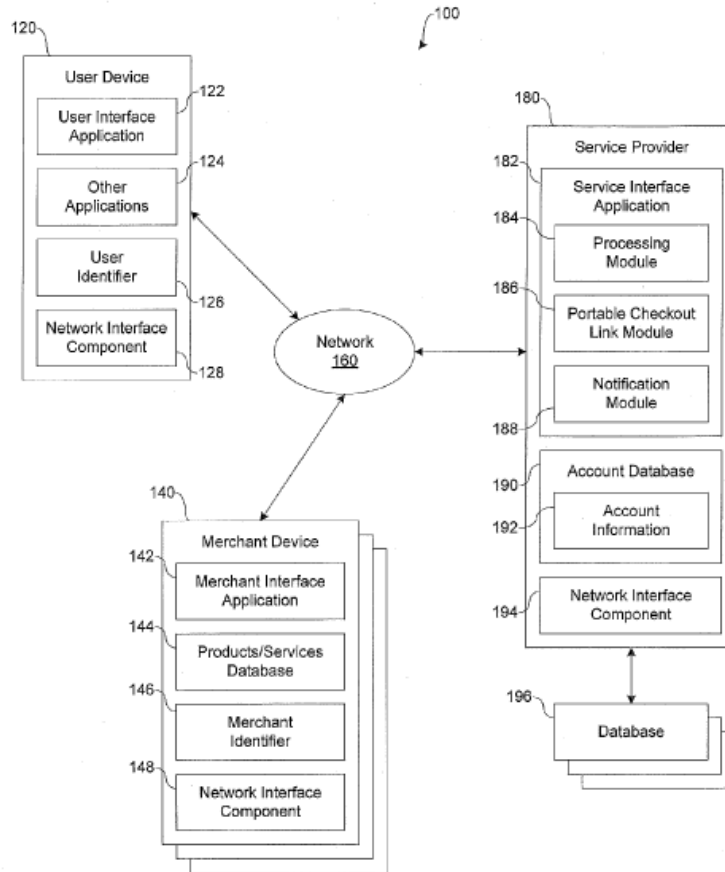


Fig. 1

EX1005, FIG. 1

When online shopping, users may place items in a virtual shopping cart, but “may withdraw from purchase or abandon the checkout prior to payment.”

EX1005, ¶6. When this occurs, the shopping cart may be deleted, resulting in lost revenue for the merchant and payment service provider. *Id.*

To solve this issue, Balasubramanian’s service provider sends a notification to the user regarding the incomplete purchase transaction. EX1005, ¶¶9, 45, 47, 55, 72. The notification includes selectable links (e.g., “portable checkout link[s]”

(“PCLs”)) to incomplete and/or abandoned transactions, and may be sent by email, alert, text message, or voice message. EX1005, ¶¶9, 20, 42, 48, 55, 72-74, 84.

Selecting a link returns the user to the abandoned or incomplete transaction.

EX1005, ¶¶42, 45, 55, 74-76. The transaction can then be completed. EX1005, ¶¶45, 55, 75-76, 79. *See also* EX1003, ¶¶83-85.

B. Spindler (EX1006)

1. Spindler is available as prior art to the '978 patent.

Spindler is the patent application publication of an earlier application in the '978 patent's priority chain. As explained below, the challenged claims are correctly entitled to priority no earlier than **September 25, 2024**—the filing date of the continuation-in-part (“CIP”) '197 application.

Because Spindler published **January 6, 2022**, more than one year before September 25, 2024, it is available as prior art to the '978 patent at least under 35 U.S.C. § 102(a)(1), and is not subject to the 35 U.S.C. § 102(b)(1) exception.

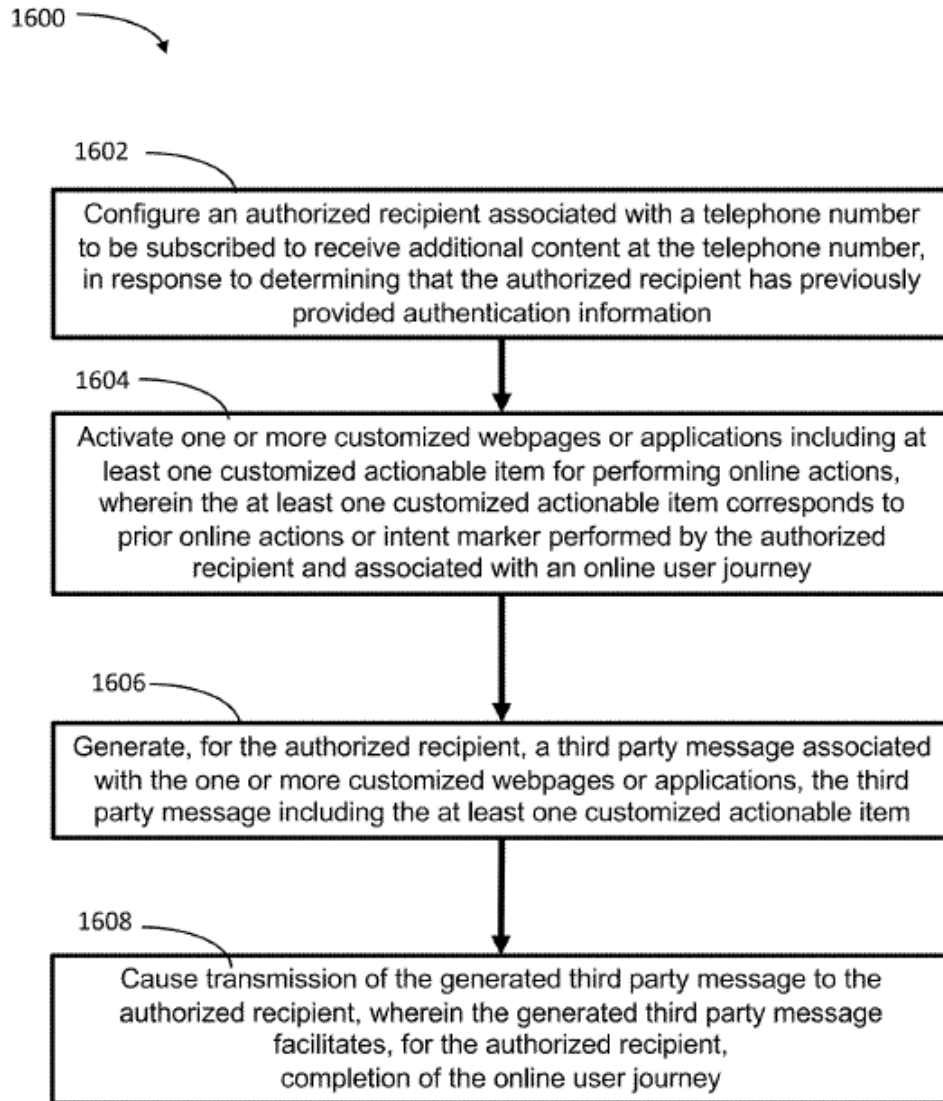
To claim an earlier filing date, each application in the priority chain must satisfy 35 U.S.C. § 112's written-description requirement *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1571 (Fed. Cir. 1997). That is not the case here.

The '978 patent claims priority to a filing date of September 25, 2019, and even further to a provisional application filed September 27, 2018. EX1001, (63), (60). The application that issued as the '978 patent (U.S. Application No.

19/192,732, “the ’732 application”) was a continuation of U.S. Application No. 18/984,041 (“the ’041 application”), which was a continuation of the ’197 application. These applications all share a common specification, including eighteen figures and related description. EX1002, 0176-0193, 0213-0280; EX1020, 0424-0511; EX1021, 0155-0172, 0175-0244.

However, the ’197 application was (correctly) filed as a CIP of U.S. Application No. 18/483,670 (“the ’670 application”), which included only eight figures and related description. EX1022, 0342-0349, 0368-0397. The ’197 CIP application added ten figures and approximately eighty paragraphs of disclosure. The challenged claims find written-description support only in that added material. EX1003, ¶97.

The challenged claims require, among other things, customized content and messages tied to “*prior online actions or intent marker*” associated with an “*online user journey*,” and facilitating completion of that journey. *See, e.g.*, EX1001, 46:47-47:4 (Claim 1). This claimed functionality finds support in Figure 16 and its accompanying description. *E.g.*, EX1001, 37:33-39:65; EX1003, ¶97. But Figure 16 was added in the ’197 CIP application and does not appear in the ’670 application, which includes only Figures 1-8. *Compare* EX1022, 0342-0349 (FIGs. 1-8), *with* EX1002, 0176-0183 (FIGs. 1-8).



EX1001, FIG. 16.

Although the pre-CIP '670 application describes a method that includes generating “a customized second document,” “such as a webpage,” that may “include[] information about one or more transactions ... of interest to the individual or subscriber customer,” EX1022, 0374, 0379, 0343, FIG. 2 (step 220), the '670 application does not describe, in any way, content related to “*prior online actions or intent marker performed by the authorized recipient and associated with*

an online user journey,” as recited in independent claims 1 and 9, and similarly recited in claim 17 of the ’978 patent. In fact, the ’670 application does not use the terms “prior online actions,” “intent marker,” or “online user journey” at all. EX1003, ¶97.

Nor can the “transactions” described in the ’670 application correspond to these claim elements. Indeed, the “transactions” described in the ’670 application are limited to *future* transactions, “such as one or more *upcoming events* or other purchasable tickets, merchandise products, etc.” EX1022, 0369, 0374-0375, 0379. Thus, the ’670 application describes determining future transactions *that may be of interest* to a subscriber, such as purchasing tickets for future events, and customizes content to provide those transactions to the subscriber. EX1003, ¶98.

In contrast, the “customized webpages or applications” described and claimed by the ’978 patent include a “customized actionable item” that “corresponds to *prior* online actions or intent marker performed by the authorized recipient and associated with an online user journey.” EX1001, 46:53-60 (claim 1). Dependent claims 5 and 6 provide specific examples of the recited “online user journey” as being, for example, “online shopping” or “online browsing” associated with “an abandoned online cart,” “an abandoned online purchase,” “an abandoned online wish list,” “an abandoned online form,” etc. EX1001, 47:20-43. Moreover, the recitation that the “generated third party message” “facilitates ... *completion of*

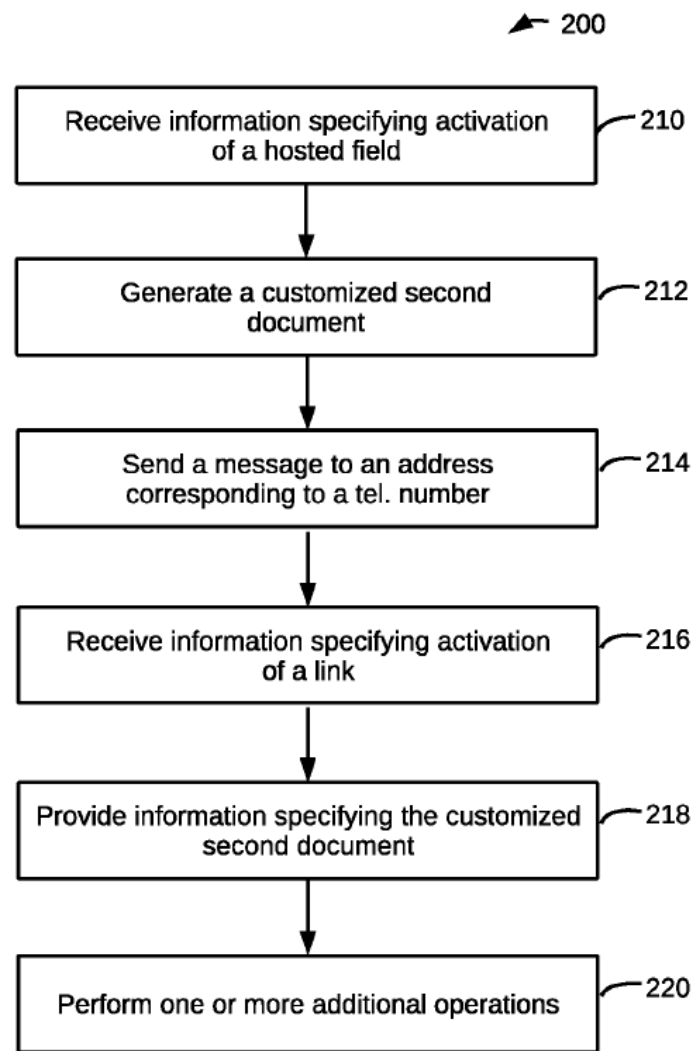
the online journey by providing access to an access point corresponding to the *prior online actions* or intent marker,” EX1001, 46:66-47:4 (claim 1), makes clear that the customized actionable item, as claimed in the ’978 patent, provides a user with the ability to *resume and complete* an online journey that was previously abandoned. No reading of the ’670 application, however broad, provides written description support for the *resumption and completion* of an abandoned online session. EX1003, ¶99.

Any argument that the missing features would have been obvious over the ’670 application is irrelevant because written description requires disclosure, not obviousness. *Lockwood*, 107 F.3d at 1572 (“A description which renders obvious the invention for which an earlier filing date is sought is not sufficient.”).

An application is entitled to an earlier priority date *only* where the claimed subject matter is common to both applications. *Transco Products Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 557 (Fed. Cir. 1994). Because the pre-CIP ’670 application lacks written description support at least for the claim limitations relating to prior online actions, intent markers, and completion of an online user journey, the challenged claims are not entitled to priority before the September 25, 2024 filing date of the ’197 CIP application. Spindler, which published January 6, 2022, more than one year prior, is available as prior art. EX1003, ¶100.

2. Overview

As a member of the same patent family, Spindler discloses many of the same concepts as the '978 patent. Indeed, Spindler discloses a computer system that includes one or more electronic devices 110 connected via network 116 to hosting computer 114 and cloud-based computer 112. EX1006, ¶31. Spindler's computer 112 performs method 200 for dynamically generating a customized document, shown in Figure 2 below. EX1006, ¶48.



EX1006, FIG. 2.

Spindler's hosting computer 114 may host a third-party webpage that "allow[s] a user of electronic device 110-1 ... to indicate a willingness to receive one or more messages from computer 112 and [] specifies a telephone number associated with electronic device 110-1." EX1006, ¶¶32, 48, 57, 71.

In response to receiving this information from the hosted field at step 210, Spindler's computer 112 (in the form of an "Amplify Decision Delivery Processor (ADDP)") may check if the telephone number is included in a data structure (e.g., "with information about subscribers") and, if not, "may send a text message ... to confirm that [the subscriber] want[s] to receive text messages." EX1006, ¶¶38, 54, 71-73. Once the number is confirmed, Spindler's computer 112 "may dynamically generate a customized second document (such as a webpage) that includes information about one or more transactions (such as one or more upcoming events) of interest to the individual or subscriber customer associated with the telephone number." EX1006, ¶¶34, 49, 59, FIG. 2 (step 212). "The customized webpage may pull in or incorporate additional events that may be of interest to the given subscriber customer." EX1006, ¶68.

Computer 112 then "send[s] a message to an address corresponding to the telephone number" that "includes a link to the customized second document." EX1006, ¶¶34, 50, 60, 84, FIG. 2 (step 214). The message "may include a Short

Message Service (SMS) message (which is sometimes referred to as a ‘text message’).” EX1006, ¶¶34, 50.

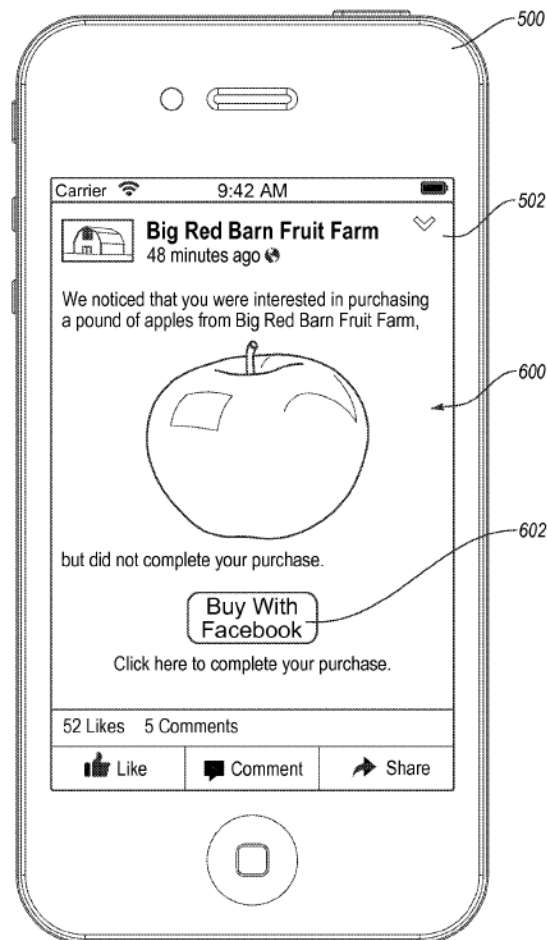
When the subscriber selects the link, computer 112 provides authentication information (such as a cookie), that permits completion of a transaction. EX1006, ¶¶36, 53. Although “the customized second document may allow completion of a given transaction,” “a purchase request ... may be rejected by computer 112 if the authentication information is not stored on electronic device 110-1.” EX1006, ¶¶37, 52, 93. *See also* EX1003, ¶¶89-93.

C. Anderson (EX1007)

Anderson published February 19, 2015, and is prior art to the ’978 patent under 35 U.S.C. §§ 102(a)(1) and 102(a)(2).

Like the ’978 patent, Anderson discloses “systems and methods of increasing the ease of making payments using e-commerce applications.” EX1007, ¶3. Anderson employs a “commerce application” accessed by a web browser or “special-purpose client application.” EX1007, ¶41. As one exemplary commerce application, Anderson describes “a virtual shopping cart” containing “goods or services” selected for purchase by a user. EX1007, ¶113. The user may complete the purchase by selecting “a user selectable element (e.g., button 510) operable by the user to ‘Check Out.’” EX1007, ¶114.

If the transaction is not completed, the system provides another opportunity to complete the purchase. EX1007, ¶126. To do so, Anderson's network application can send a text message to the user, where the message may "include details of items in the cart that was abandoned" along with "a selectable buy option (such as [a] buy button 602 ...) that allows the user to complete the abandoned transaction." EX1007, ¶127, FIG. 6. The selectable buy option may be "a deep link" that "directs the user to the virtual cart user interface." EX1007, ¶128. *See also* EX1003, ¶¶94-95.



EX1007, FIG. 6.

D. Woodward (EX1008)

Woodward published January 14, 2016, and is prior art to the '978 patent under 35 U.S.C. §§ 102(a)(1) and 102(a)(2).

Woodward discloses techniques for mobile number verification, using “signaling system number 7 (SS7)” data during enrollment and periodically thereafter to verify customer telephone numbers. EX1008, Title, ¶¶13-14.

After receiving a customer telephone number, Woodward’s verification system retrieves status data associated with that number. EX1008, ¶19. This “SS7” data may include a Mobile ID creation date, a Number Change Event date, and/or a Network Status (e.g., Active or Deactivated). EX1008, ¶¶20-22. Using this data, Woodward’s verification system determines whether the number remains eligible to receive calls or text messages, and if so, stores the number in a database as eligible for receiving future communications. EX1008, ¶¶11, 19, 24 *See also* EX1003, ¶¶86-87.

E. Bogineni (EX1009)

Bogineni was filed May 1, 2018, and issued April 16, 2019. Thus, Bogineni is available as prior art to the '978 patent under 35 U.S.C. § 102(a)(2).

Bogineni evidences that Rich Communication Services (RCS) messaging was well known prior to the '978 patent. EX1009, 1:6-7. Bogineni explains that

although “RCS provides a text-message system similar to [SMS] messages,” RCS can also provide additional services. EX1009, 1:7-12. *See also* EX1003, ¶88.

V. GROUND 1A: BALASUBRAMANIAN RENDERS OBVIOUS CLAIMS 1-2, 5-10, 13-18, 21-24.

A. Independent claim 1

1. [1.P]¹

Balasubramanian teaches the preamble. EX1003, ¶102. Balasubramanian’s “service provider,” which can be implemented as a computer system, “provide[s] processing for network-based transactions including online information and/or financial transactions on behalf of the user.” EX1005, ¶40. Balasubramanian’s service provider 180 implements the methods described in Figures 2A-2C. EX1005, ¶¶62-86; EX1003, ¶102.

2. [1.A]

Balasubramanian teaches element [1.A]. EX1003, ¶¶103-107.

First, Balasubramanian teaches an “*authorized recipient [that] has previously provided authentication information.*”² In particular, Balasubramanian’s user is prompted “to establish a user account for login with the service provider.” EX1005, ¶26. “When establishing a user account, the user may be asked to

¹ See the Claim Appendix for a recitation of the claim language.

² Claim language is italicized throughout.

provide personal information, such as name, address, phone number, etc., and financial information, such as banking information, credit card information, etc.”

*Id.*³ A user identifier 126, which is stored with the service provider, includes these “attributes related to the user,” and the service provider utilizes the user attributes “to associate the user with a particular user account maintained by the service provider 180.” EX1005, ¶¶28, 58, 65. The service provider maintains user accounts in an account database 190 that includes account information 192 associated with a user. EX1005, ¶57. These identity attributes (e.g., personal information such as usernames, passwords, photograph images, and biometric IDs, used to associate the user with a user account) include “*authentication information*” because they can be used to authenticate and verify the identity of the user. EX1005, ¶¶28, 65-66; EX1003, ¶104. The information is “*previously provided*” because, as discussed above, it is provided at the time of registration and stored with the service provider. EX1005, ¶¶26, 58; EX1003, ¶104. The user is an “*authorized recipient*” because the user registers with—and, as explained below, is verified by—the service provider. EX1003, ¶104.

³ Emphasis added throughout unless otherwise noted.

Second, Balasubramanian teaches the “*authorized recipient*” is “*associated with a telephone number.*” The user attributes received by the service provider include a **phone number**. EX1005, ¶¶26, 28; EX1003, ¶105.

Third, Balasubramanian teaches “*determining that the authorized recipient has previously provided authentication information.*” In the method of Figure 2A, when the service provider processes a user login request, it “attempt[s] to locate and access an account related to the user in the account database.” EX1005, ¶66. “If the user is **determined to be an existing user**,” (i.e., “*the authorized recipient has previously provided authentication information*”), the service provider verifies the login information and proceeds with the method of Figure 2A. *Id.*; EX1003, ¶106.

Fourth, Balasubramanian teaches “*configuring [the] authorized recipient ... to be subscribed to receive additional content at the telephone number, in response to [the] determining.*” As part of the method of Figure 2A, which continues “*in response to*” determining the user is an existing user, the service provider “store[s] transaction information related to [an] incomplete transaction ... so that the service provider 180 may remind the user to complete the incomplete transaction at another time.” EX1005, ¶70. Each reminder notification the service provider sends to the user regarding incomplete or abandoned purchase transactions represents the claimed “*additional content.*” EX1005, ¶¶9, 20, 55, 72; EX1003, ¶107. As another

example, the “*additional content*” can be alerts the service provider sends to the user regarding out-of-stock items, price changes, and discounts and coupons.

EX1005, ¶47; EX1003, ¶107. The user is “*configur[ed] ... to be subscribed to receive*” these notifications and alerts because the service provider 180 stores the incomplete transaction information “as part of the user account in the account database 190” for the purpose of providing periodic reminders to active user accounts. EX1005, ¶¶20, 66, 70; EX1003, ¶107. As Dr. Jansen explains, a POSA would have found it obvious that the user receiving the notification has agreed to receive messages, via the registration process, and thus “*subscribed to receive*” messages from the service provider. EX1003, ¶107. Finally, Balasubramanian teaches these alerts and notifications can be sent via a text message or a voice message (i.e., “*receive[d] at the telephone number*” associated with the user). EX1005, ¶¶9, 20, 47, 55, 72; EX1003, ¶107.

3. [1.B.1]

Balasubramanian teaches element [1.B.1]. EX1003, ¶¶108-113.

Balasubramanian teaches “*one or more customized webpages or applications including at least one customized actionable item for performing online actions.*” Balasubramanian’s service provider sends a notification to the user regarding prior incomplete or abandoned online purchase transactions via an email, text message, or other means. EX1005, ¶¶9, 20, 47, 55, 63, 72. In particular, the

service provider provides the user with an interactive list having selectable links (i.e., portable checkout links (PCLs)) that link to online shopping carts for incomplete and/or abandoned transactions. EX1005, ¶¶42, 55, 73-74, 84. For example, Figure 3A below shows an example of the notification in the form of an email. EX1005, ¶73, FIG. 3. As Dr. Jansen explains, a POSA would have understood, or at least found obvious, that when the notification is sent in other ways, such as a text message, it would also include an interactive list having selectable links. EX1005, ¶73; EX1003, ¶109. As explained in further detail below, a selectable link is “*at least one customized actionable item*” and an online shopping cart is “*one or more customized webpages.*”

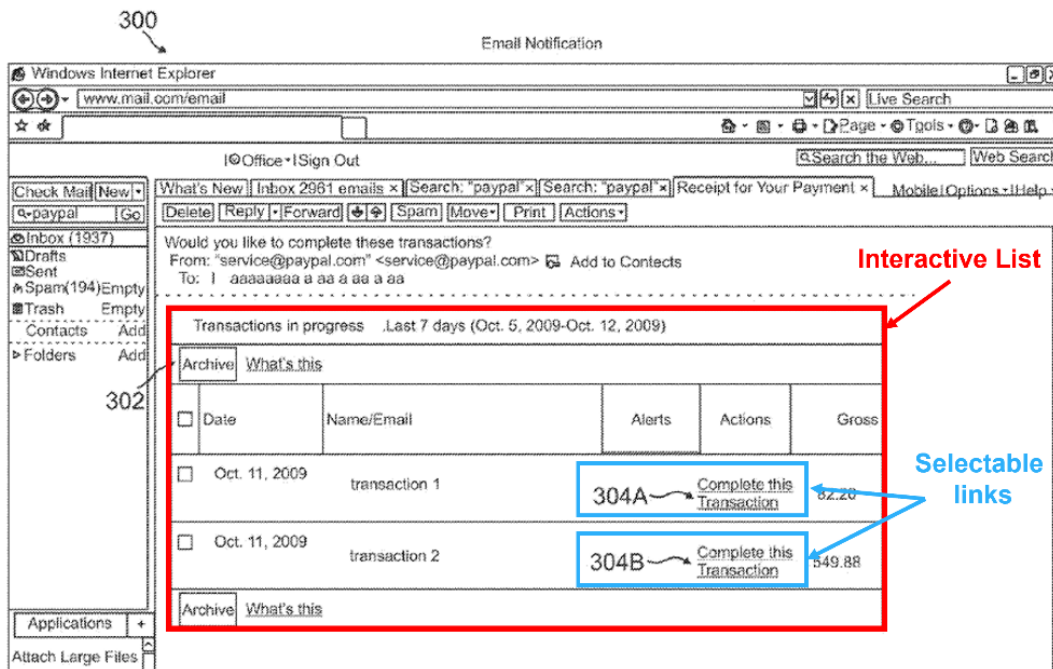


FIG. 3A

EX1005, FIG. 3A (annotated).

The '978 patent explains that an “actionable item” can be a link to perform actions. EX1001, 17:1-6 (“an actionable item, e.g., a link to purchase tickets or view a customized webpage”), 38:61-64 (“the at least one customized actionable item may include one or more links”), 39:6-8. Balasubramanian’s selectable links are “*actionable item[s]*” because they are PCLs that allow a user to review and request processing of incomplete and/or abandoned transactions (“*for performing online actions*”). EX1005, ¶¶42, 55-56, 74; EX1003, ¶110. Furthermore, because Balasubramanian’s selectable links correspond to the user’s previously incomplete or abandoned transactions, the selectable links are “*customized*” to the user. EX1005, ¶¶45, 75-76; EX1003, ¶110.

Regarding the “*one or more customized webpages*,” Balasubramanian explains that “the PCL is adapted to direct the user to a specific [(“*customized*”)] shopping cart having a state that may be frozen, saved, and/or accessed using a link, such as a URL link.” EX1005, ¶74. A POSA would have understood that the shopping cart, accessed using a URL link, is a “*webpage*.” EX1003, ¶111.

Furthermore, the shopping cart is a “*webpage*” that “*includ[es]*” the PCL (“*actionable item*”). EX1003, ¶112. The PCL can be, e.g., a URL pointing to the shopping cart. EX1005, ¶¶42, 44; EX1003, ¶112. As Dr. Jansen explains, a POSA would have understood that because a webpage is identified and accessed by its

URL, it would have been obvious that the URL is “*includ[ed]*” as part of the webpage. EX1003, ¶112.

Finally, Balasubramanian’s service provider “*activat[es]*” the “*one or more customized webpages*” by creating the virtual shopping cart and the corresponding PCL. EX1003, ¶113. The ’978 patent explains that “[t]he activating [one or more customized webpages] may include generation of secure access information for performing the online actions.” EX1001, 37:65-38:3. As explained immediately below, Balasubramanian’s service provider generates the PCL and corresponding “*secure access information.*” Section V.A.4. When the user selects the PCL, the user can return and access a previously abandoned or incomplete purchase transaction and complete the transaction. EX1005, ¶¶42, 55, 75. A POSA would have understood that before the service provider sends the notification (with the PCL) to the user, the service provider would generate the PCL pointing to the virtual shopping cart so that the user can select the PCL and access the virtual shopping cart upon receiving the notification. EX1003, ¶113; Section V.A.4.

4. [1.B.2]

Balasubramanian teaches element [1.B.2]. EX1003, ¶¶114-116.

In Balasubramanian, a PCL is a unique URL with a token (“*secure access information*”). EX1005, ¶44 (“a unique URL with a token (i.e., PCL)”). Although this disclosure is in the context of a PCL generated when the user checks out from

a merchant, a POSA would have found it obvious that this definition also applies when the service provider generates a PCL to send in a user notification. EX1003, ¶115. In particular, a POSA would have understood that a URL with a token provides secure access to online resources without needing to enter a username, password, or other authentication information. EX1018, Abstract; EX1003, ¶115. Therefore, it would have been obvious that PCLs in the notification include a URL with a token so malicious access can be avoided. EX1003, ¶115.

Thus, when generating (“*activating*”) a PCL, the service provider generates a unique URL and a token (“*generation of secure access information*”) corresponding to the PCL. EX1003, ¶116. A POSA would have understood that the token associated with the URL provides the secure access and thus corresponds to “*secure access information.*” EX1003, ¶116. Furthermore, because the URL and token are included in the PCL, they are “*for performing the online actions*” enabled by the PCL, such as completing online transactions. EX1005, ¶¶44, 55, 75; EX1003, ¶116.

5. [1.B.3]

Balasubramanian teaches element [1.B.3]. EX1003, ¶¶117-118.

As discussed above, Balasubramanian teaches that the selectable links (“*at least one customized actionable item*”) correspond to the user’s **previously** incomplete or abandoned transactions (“*prior online actions ... performed by the*

authorized recipient”). EX1005, ¶¶45, 75-76. The ’978 patent explains that “a user journey” “may include a series of steps or interactions that the user (e.g., subscriber) takes while shopping online.” EX1001, 35:15-18. Thus, Balasubramanian’s user’s actions of viewing and searching for items, products and services and creating the shopping cart represent an “*online user journey*.” EX1005, ¶24; EX1003, ¶118. When the user withdraws or abandons the checkout or the purchase transaction, the created shopping cart becomes incomplete or abandoned and is later pointed to by the selectable links. EX1005, ¶45; EX1003, ¶118. Thus, the selectable links are associated with the user’s actions of viewing and searching for items, products, and services, and creating the shopping cart (“*associated with an online user journey*”) via the resulting incomplete or abandoned shopping cart. EX1003, ¶118.

6. [1.C]

Balasubramanian teaches element [1.C]. EX1003, ¶¶119-121.

Balasubramanian’s service provider sends a notification (“*message*”) that includes PCLs (“*at least one customized actionable item*”) that lead the user to a virtual shopping cart (“*the one or more customized webpages*”). EX1005, ¶¶9, 20, 47, 55, 63, 72, 74. Thus, the notification is “*associated with the one or more customized webpages*.” EX1003, ¶120. Furthermore, the service provider is a third party because the incomplete or abandoned purchase transactions are between a

user and a merchant (i.e., not the service provider). EX1005, Abstract, ¶¶8, 24, 32, 41, 57, 61. Because the notification is sent by the service provider, the notification is “*a third party message*.”

Furthermore, a POSA would have understood, or at least found obvious, that, to send the notification to the user, the service provider would first “*generat[e]*” the notification. EX1003, ¶121. Because the user is the intended recipient, the notification is generated for the user (“*the authorized recipient*”). EX1005, ¶¶9, 20, 47, 55, 72; EX1003, ¶121.

7. [1.D.1]-[1.D.2]

Balasubramanian teaches elements [1.D.1]-[1.D.2]. EX1003, ¶¶123-124.

Balasubramanian’s service provider sends (“*caus[es] transmission of*”) a notification (“*generated third party message*”) to the user (“*the authorized recipient*”) regarding incomplete or abandoned purchase transactions. EX1005, ¶¶9, 20, 47, 55, 72; EX1003, ¶124. When the user selects a PCL included in the notification, the user can return to and access a previously abandoned or incomplete purchase transaction, and then proceed to complete the transaction “from where the user previously left-off, withdrew, abandoned, or failed to complete the checkout.” EX1005, ¶¶45, 55, 75. The notification, including the PCL, thus “*provid[es] access to an access point corresponding to the prior online actions or intent marker*.” EX1003, ¶124. Subsequently, the user can complete the

purchase of the shopping cart created by the user's prior actions; the notification, including the PCL, thus, "*facilitat[es] ... completion of the online user journey*". EX1005, ¶¶45, 55, 75-76, 79; EX1003, ¶124.

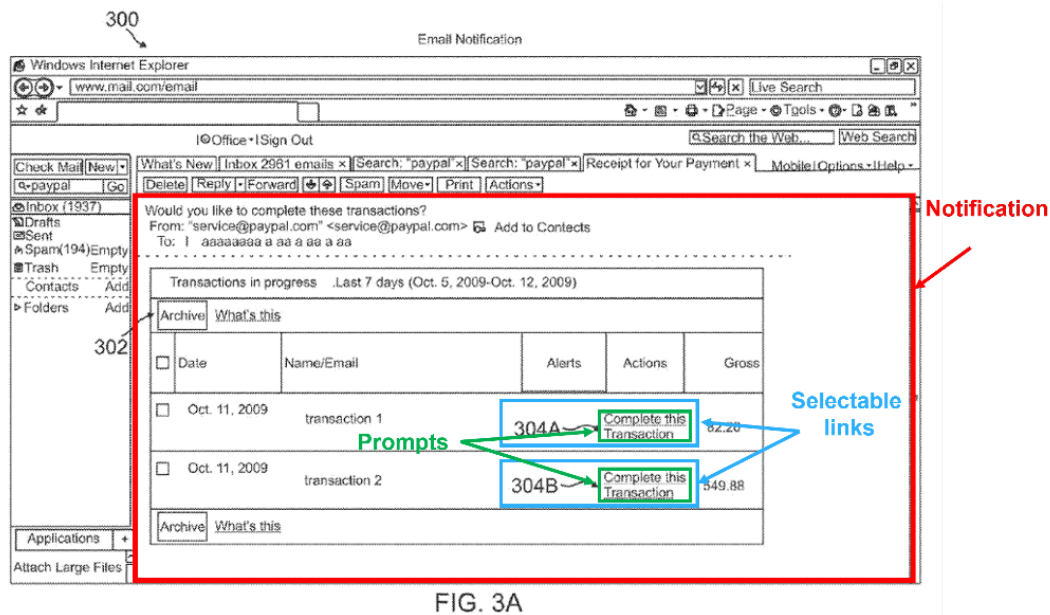
B. Claim 2

Balasubramanian teaches claim 2. EX1003, ¶¶125-128. As discussed above, "*the at least one customized actionable item*" is a selectable link that includes a unique URL with a token. Section V.A.3. A POSA would have understood that a unique URL with a token is "*a secure link*" because it can provide secure access to online resources without needing to enter a username, password, or other authentication information. EX1018, Abstract; EX1003, ¶126. Furthermore, as Dr. Jansen explains, a POSA would have understood that the token can identify the user ("*authorized recipient*"). EX1003 ¶126; EX1018, 4:3-5 (recites that "[t]he token identifies a particular private resource, such as by identifying a particular user"). Therefore, Balasubramanian's token "*correspond[s] to an identity of the authorized recipient.*" EX1003 ¶126. Accordingly, the PLC that includes the token "*correspond[s] to an identity of the authorized recipient.*" EX1003 ¶126.

The PCL enables the user "*to resume the online user journey,*" such as the user's prior actions of viewing and searching for items, products and services and creating the shopping cart, from "where the user previously left-off, withdrew,

abandoned, or failed to complete the checkout” (“*the access point*”). EX1005, ¶¶45, 55, 75, EX1003, ¶127.

Furthermore, as seen in Figure 3A below, the PCLs include respective “*prompts*” for the user, such as hyperlinked text, e.g., “Complete the Transaction.” EX1005, FIG. 3A. By selecting the link, the user can proceed to complete the purchase (“*complete the online journey.*”). EX1005, ¶¶45, 47, 76; EX1003, ¶128.



EX1005, FIG. 3A (annotated).

C. Claims 5, 6

Balasubramanian teaches claims 5 and 6. EX1003, ¶¶129-134. As discussed above, the user’s prior actions of viewing and searching for items, products, and services—thereby creating the shopping cart—represent “*the online user journey.*” Section V.A.5. Balasubramanian’s service provider can process and monitor users’ online navigation and shopping events. EX1005, ¶56.

Creating the shopping cart teaches “*online shopping*,” as recited in claim 5 EX1003, ¶130. Claim 5 requires the “*online shopping*” be associated with “*at least one of*” a list of options. Only one such option must be shown for the prior art to render the claims obvious. In Balasubramanian, the user may withdraw or abandon the user’s online navigation and shopping events (“*online shopping*”) prior to completion or payment of selected items, products, and/or services. EX1005, ¶45. A POSA would have understood that when the user’s online navigation and shopping events are withdrawn or abandoned, the shopping cart likewise becomes abandoned. EX1005, ¶42; EX1003, ¶131. Thus, the user’s online navigation and shopping events (“*online shopping*”) are associated with “*an abandoned online cart associated with the prior online actions*.” EX1003, ¶131. Because the user’s online navigation and shopping events (“*online shopping*”) were previously withdrawn or abandoned without purchase, they are also associated with “*an abandoned online purchase associated with the prior online actions*.” EX1003, ¶131.

As to claim 6, Balasubramanian explains that the user can use a web browser to access merchant websites to view, search, and select items, products, and/or services to purchase. EX1005, ¶25. Thus, the user’s prior actions of viewing and searching for items, products and services and creating the shopping cart (“*online user journey*”) include the user’s online browsing (“*online browsing*”). EX1003,

¶133. In Balasubramanian, “the user may have withdrawn or abandoned the checkout or purchase transaction prior to completion or payment for selected items, products, and/or services.” EX1005, ¶45. Therefore, the user’s “*online browsing session*” is associated with “*an abandoned online browsing session*” and “*an abandoned online search session purchase*,” both of which are “*associated with the prior online actions*.” EX1003, ¶134.

D. Claim 7

Balasubramanian renders obvious claim 7. EX1003, ¶¶135-137.

Balasubramanian’s notification can be a text message, but Balasubramanian does not explicitly explain a specific type of text message to be used to send the notification. EX1005, ¶¶9, 20, 48, 55. Nonetheless, as Dr. Jansen explains, a POSA would have understood that it was well known at the time of filing of the ’978 patent that a “text message” may include, for example, “Rich Communication Services,” a well-known successor to SMS text messaging. EX1003, ¶136. Thus, a POSA would have understood Balasubramanian’s text message (“*generated third party message*”) renders obvious, using “*an RCS message*,” which was a well-known type of text message. EX1003, ¶136. Additionally, a POSA would have known that there were only a finite number of text message protocols in widespread use at the time of the ’978 patent—RCS being one of them. Therefore,

a POSA would have also found it obvious to try the RCS protocol to implement RCS messages in Balasubramanian's system. EX1003, ¶136.

Furthermore, Balasubramanian's notification includes selectable links leading to incomplete and/or abandoned transactions (*"at least one user interface element to select," "an abandoned online cart associated with the prior online actions," "an abandoned online purchase associated with the prior online actions," "an abandoned online browsing session associated with the prior online actions," "an abandoned online session associated with the prior online actions," and "an abandoned online search session purchase associated with the prior online actions"*). EX1005, ¶¶42, 55, 73-74; EX1003, ¶137; *see also* Sections V.C.

E. Claim 8

Balasubramanian renders obvious claim 8. EX1003, ¶¶138-139. As discussed, Balasubramanian renders obvious, using *"an RCS message"* as the notification (*"generated third party message"*). Section V.D; EX1003, ¶138.

Furthermore, Balasubramanian's notification includes selectable links to complete the purchase of the user's abandoned shopping cart (*"at least one user interface element to select to complete an online user journey"*). EX1005, ¶55; EX1003, ¶139.

F. Independent Claim 9

Independent claim 9 recites a system comprising a “*processor*” and a “*memory configured to store program instructions,*” that, “*when executed by the processor, cause the processor to perform operations*” substantially the same as those recited in claim 1. EX1003, ¶140.

1. [9.P]

Balasubramanian discloses the preamble. EX1003, ¶¶141-142.

Balasubramanian discloses **system 100**, including user device 120, one or more merchant devices 140, and service provider 180. EX1005, ¶21, FIG. 1; EX1003, ¶142.

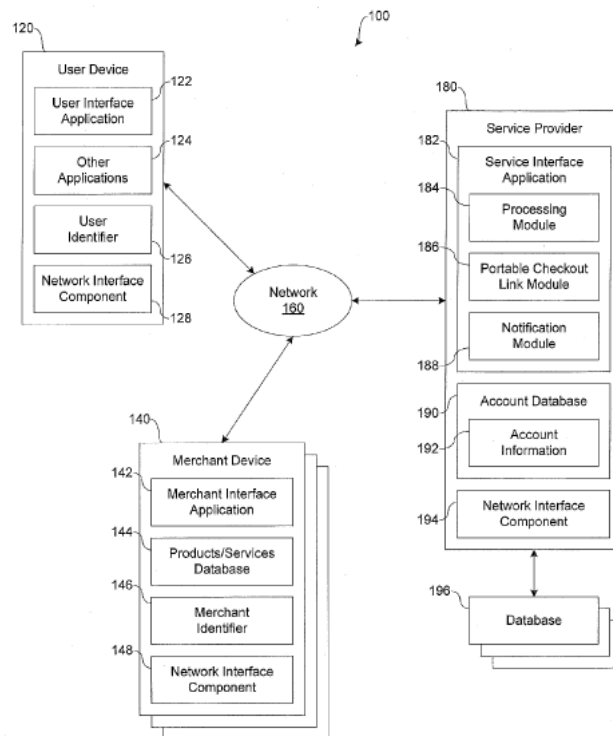


Fig. 1

EX1005, FIG. 1.

2. [9.A]

Balasubramanian discloses element [9.A]. EX1003, ¶¶143-144.

Balasubramanian's user device 120, one or more merchant devices 140, and service provider 180 can each be implemented as computer system 400. EX1005, ¶92, FIG. 4. The computer system includes a processing component, such as a “processor, micro-controller, digital signal processor (DSP), etc.” EX1005, ¶93.

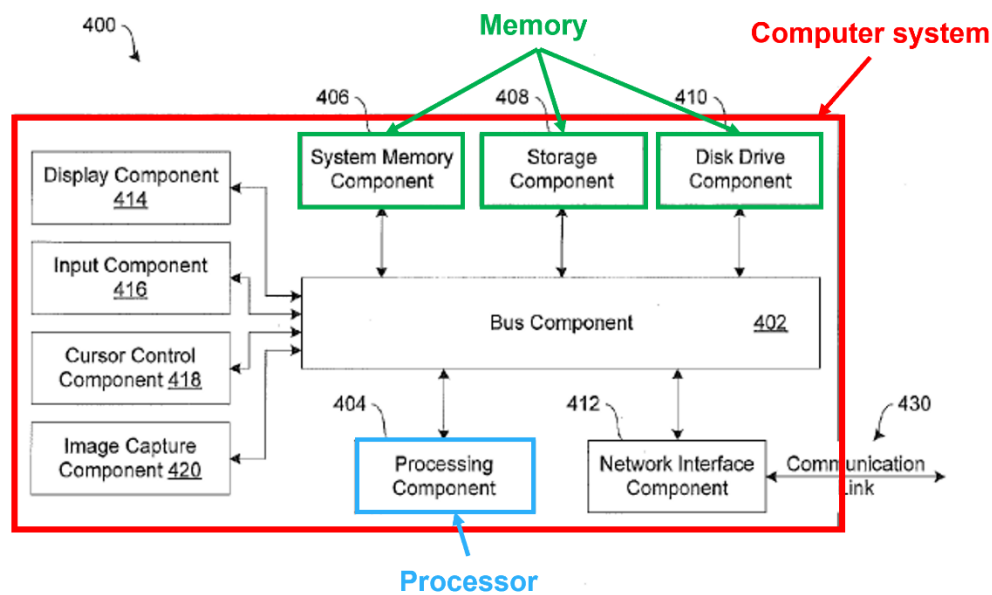


Fig. 4

EX1005, FIG. 4 (annotated).

3. [9.B]

Balasubramanian discloses element [9.B]. EX1003, ¶¶145-146.

Balasubramanian's computer system includes “memory,” e.g., “system memory component 406 (e.g., RAM), static storage component 408 (e.g., ROM), disk drive component 410 (e.g., magnetic or optical).” EX1005, ¶93, FIG. 4.

Balasubramanian's computer system "**performs specific operations** by processor 404 executing ... **instructions** contained in system memory component." EX1005, ¶94.

4. [9.C.1]–[9.F.2]

Claim elements [9.C.1]–[9.F.2] correspond to claim elements [1.A.1]–[1.D.2], respectively. Balasubramanian discloses or renders obvious these elements for the same reasons explained above regarding claim 1. Section V.A; EX1003, ¶147. The only substantive difference from claim 1 is that in [9.D.1] and [9.E.1], the claim recites "*one or more customized applications*" instead of "*one or more customized webpages or applications*" as recited in [1.B.1] and [1.C]. However, the '978 patent makes clear that a web browser for viewing a web link constitutes an "*application*." EX1001, 8:65-9:1. Thus, Balasubramanian's web browser application, which displays the shopping cart, corresponds to such "*customized applications*" and contains the PCL. EX1003, ¶148.

G. Claims 10, 13-16

Claims 10, 13-16 are system claims that otherwise recite limitations that are identical to the method steps recited in claims 2, 5-8. Balasubramanian discloses or renders obvious these elements for the same reasons as respectively explained for claims 2, 5-8 above. Sections V.B-V.E. EX1003, ¶149.

H. Independent Claim 17

Independent claim 17 recites a “*non-transitory computer-readable storage medium ... storing program instructions that ... cause the computer to carry out one or more operations*” substantially the same as those recited in claim 1.⁴

EX1003, ¶150.

1. [17.P]

Balasubramanian discloses the preamble. EX1003, ¶¶151-152.

Balasubramanian’s “computer system 400 performs specific operations by processor 404 executing one or more sequences of one or more instructions contained in system memory component 406.” EX1005, ¶94. “Such instructions may be read into system memory component 406 from another computer readable medium, such as static storage component 408 or disk drive component 410.” *Id.* A POSA would have understood that at least Balasubramanian’s static storage component is a “*non-transitory computer-readable storage medium.*” EX1003, ¶152.

2. [17.A]–[17.D.2]

Claim elements [17.A]–[17.D.2] correspond to claim elements [1.A]–[1.D.2], respectively. Balasubramanian discloses or renders obvious these elements for the

⁴ Claim 17 is met when any one of the operations is carried out because claim 17 only requires “*caus[ing] the computer to carry out one or more operations.*”

same reasons explained above regarding claim 1. Section V.A; EX1003, ¶¶153-154.

I. Claims 18, 21-24

Claims 18, 21-24 are storage medium claims that otherwise recite limitations that are identical to the method steps recited in claims 2, 5-8. Balasubramanian discloses or renders obvious these elements for the same reasons as respectively explained for claims 2, 5-8 above. Sections V.B-V.E. EX1003, ¶155.

VI. GROUND 1B: THE BALASUBRAMANIAN-WOODWARD COMBINATION RENDERS OBVIOUS CLAIMS 3-4, 11-12, 19-20.

A. Motivation to Combine

Claims 3-4, 11-12, and 19-20 recite a “*silent network authentication protocol*” (“SNAP”). Although Balasubramanian does not expressly disclose a SNAP, Woodward does, and a POSA would have been motivated to incorporate Woodward’s SNAP into Balasubramanian. EX1003, ¶¶157-162.

To start, Woodward and Balasubramanian are in the same field of mobile device authentication and authorization for conducting transactions on a mobile device, and are thus analogous art to each other and to the ’978 patent. *Compare* EX1008, ¶¶10-11, 13, *with* EX1001, 1:36-42, 1:62-64; EX1005, ¶¶58-59, 66, 78, 83; EX1003, ¶157.

Balasubramanian allows users to conduct financial transactions with a merchant device and service provider over the network using mobile devices, such

as a wireless cellular phone. EX1005, ¶¶23-24. Balasubramanian’s system performs identity verification, such as “verify[ing] a user account related to the user” “based on user information” such as name, address, phone number, etc. EX1005, ¶¶26, 66, 78, 83. However, Balasubramanian does not provide specific details on how this information is verified and/or validated. A POSA therefore would have looked to known verification/validity techniques, including the well-known SNAP-based techniques disclosed in Woodward. EX1003, ¶158. Woodward verifies user-provided telephone numbers silently—that is, without requiring input from the user. EX1008, ¶¶18-22; EX1003, ¶158.

Woodward, like Balasubramanian, describes that customers often provide contact telephone numbers, but also recognizes that “[p]roblems may arise when a customer changes a phone number or perhaps inadvertently provides a wrong number when consenting to telephone calls,” which can result in fines on the entity contacting the incorrect number. EX1008, ¶¶2-3, 11. To avoid such problems, Woodward describes techniques for “verifying that a phone number ... is authorized for such use.” EX1008, ¶10. EX1003, ¶159.

Woodward’s technique uses “SS7 protocol data,” which is routinely collected by various entities and used to “authenticate a transaction.” EX1008, ¶13. Leveraging this data, Woodward’s technique “receives a phone number for a customer,” “retrieves [SS7] status data” that is related to the received phone

number from a database, evaluates that data, and then “determines from that evaluation whether the number is still eligible for a call.” EX1008, ¶¶18-22.

Woodward’s verification may be performed “periodically” to “verify the availability [of] phone numbers provided by customers.” EX1008, ¶14. Verified numbers are stored for future use and others are deleted. EX1008, ¶24. EX1003, ¶160.

A POSA would have readily incorporated Woodward’s verification technique into Balasubramanian’s computer system because both systems use conventional computing components and communications networks. *Compare* EX1008, ¶¶27-28, *with* EX1005, ¶92, FIG. 4. The modification would simply add Woodward’s use of existing SS7 data to verify user-provided telephone numbers before communications are sent. EX1003, ¶161. Thus, a POSA seeking to modify Balasubramanian in view of Woodward would not have encountered any unreasonable technical challenges. EX1003, ¶161.

A POSA would have been motivated to make this modification for the benefit identified by Woodward—namely, verification to avoid fines and other problems arising from attempting to contact an incorrect or inactive phone number. EX1008, ¶3; EX1003, ¶162. Such a combination would merely amount to combining prior-art elements according to known methods to yield the predictable (yet improved) result of Balasubramanian’s computer system being capable of

verifying subscriber phone numbers to avoid using incorrect or inactive phone numbers, as explicitly taught by Woodward. EX1003, ¶162. And, because the combination would have required using only conventional computing elements and leveraging existing data collection, a POSA would have had a reasonable expectation of success in modifying Balasubramanian in view of Woodward. EX1003, ¶162.

B. Claims 3, 11, 19

The Balasubramanian-Woodward combination teaches claims 3, 11, and 19. EX1003, ¶¶163-166, 171.

Balasubramanian's service provider provides the user with an interactive list having selectable links via the user device (*"a computing device displaying the secure link"*). EX1005, ¶¶73, 92. The service provider verifies the user by comparing the user information received from the user's device with the user information stored as part of the user account. EX1005, ¶¶65-66. This user information can include, for example, a phone number. *Id.*; EX1003, ¶164.

Balasubramanian does not expressly disclose *"a silent network authentication protocol to confirm the identity of the authorized recipient."* As just discussed, Balasubramanian's service provider verifies the user. EX1005, ¶¶65-66. However, Balasubramanian does not explicitly explain the protocol of the verification. EX1003, ¶165. Thus, a POSA would have looked to the prior art for

guidance as to specific protocols for performing the verification. EX1003, ¶165.

This would have led the POSA to Woodward, which discloses a protocol to verify an identity based on a phone number. EX1008, ¶¶18-19. Thus, a POSA would have been motivated to have the selection of Balasubramanian's secure link trigger a "*silent network authentication protocol*" to confirm the identity of the authorized recipient, as taught by Woodward. *Id.*; EX1003, ¶165.

C. Claims 4, 12, 20

The Balasubramanian-Woodward combination teaches claims 4, 12, and 20. EX1003, ¶¶167-171.

As discussed above, the "*silent network authentication protocol*" is performed by the service provider. Section VI.B. Also as discussed above, the service provider is "*a third party*" that generates the notification ("*generated third party message*"). Section V.A.6. Finally, the service provider can be accessed via a wireless telecommunications network ("*a mobile device carrier*"). EX1005, ¶22. EX1003, ¶168.

Additionally, Woodward teaches that its phone number verification technique may be performed by an entity of which the user is a subscriber ("*third party*") such as, for example, a bank or other financial institution. EX1008, ¶14. Woodward describes that the purpose of verification is to avoid the possibility of the subscribed entity incurring fines when sending messages ("*third party*

message”) to the subscriber. EX1008, ¶3. Therefore, to the extent that

Balasubramanian does not disclose claim 4 on its own, a POSA would have been motivated to modify Balasubramanian’s service provider (“*third party*”) to perform the verification technique of Woodward’s third-party entity because a POSA would have understood that Balasubramanian’s service provider, like Woodward’s third-party entity, would want to avoid fines when preparing and sending text messages. EX1003, ¶169.

VII. GROUND 1C: THE BALASUBRAMANIAN-BOGINENI COMBINATION RENDERS OBVIOUS CLAIMS 7-8, 15-16, 23-24.

A. Motivation to Combine

Claims 7-8, 15-16, and 23-24 recite RCS messages. As explained above, such an RCS message is rendered obvious by Balasubramanian. Sections V.D.-V.E. To the extent Patent Owner argues that Balasubramanian does not teach or suggest an RCS message, Bogineni expressly discloses RCS messaging. A POSA would have been motivated to modify Balasubramanian in view of Bogineni to include an RCS message. EX1003, ¶¶173-179.

To start, Bogineni and Balasubramanian are in the same field of mobile device communication, and are thus analogous art to each other and to the ’978 patent. *Compare* EX1009, 1:6-7, 1:47-2:22, *with* EX1001, Abstract, 5:46-48; EX1005, ¶¶21, 23, 24, 29, 31; EX1003, ¶174.

Balasubramanian's service provider sends notifications to user devices, including text messages, but does not specify the underlying messaging protocol. EX1005, ¶¶9, 20-21, 48, 55; EX1003, ¶175. Thus, a POSA would have looked to known messaging technologies, including the well-known technique for sending text messages to mobile devices (like Balasubramanian's user device) via RCS messages, as taught by Bogineni. EX1003, ¶175. Bogineni teaches that RCS provides text messaging similar to SMS while offering additional functionality unavailable in SMS. EX1009, 1:7-12. A POSA would have been motivated to implement Balasubramanian's notifications using RCS to obtain those known advantages. EX1003, ¶176.

Furthermore, a POSA would have had a reasonable expectation of success to combine Balasubramanian with Bogineni. EX1003, ¶177. Bogineni teaches that RCS messaging may be implemented using IMS-based or non-IMS architectures, including hypertext transfer protocol (HTTP) communications and device application programming interfaces (APIs). EX1009, 1:47-2:4. Balasubramanian's system includes mobile devices, computer systems, and communication networks capable of supporting those conventional technologies. EX1005, ¶¶21-22, 92; EX1003, ¶177. A POSA would have understood that Balasubramanian's network would support the IMS and, therefore, support IMS-based RCS messaging. EX1003, ¶178. Because Balasubramanian's network can be the Internet, the

network also supports HTTP communications, which enables non-IMS RCS messaging. EX1003, ¶178. Finally, because Balasubramanian’s user device, merchant devices, and service provider can be implemented as computer systems, they are readily available to install APIs and thus support non-IMS RCS messaging via the APIs. EX1005, ¶92; EX1003, ¶178. A POSA would therefore not have experienced any unreasonable technical hurdles in implementing these modifications. EX1003, ¶178.

The combination would merely amount to combining prior-art elements according to known methods to yield the predictable (yet improved) result of sending text message having the additional functionality available with RCS messages. EX1009, 1:7-12; EX1003, ¶179.

B. Claims 7, 15, 23

The Balasubramanian-Bogineni combination teaches claims 7, 15, and 23. EX1003, ¶¶180-184, 189.

To the extent Patent Owner argues that Balasubramanian does not render obvious these claims, the combination with Bogineni does. EX1003, ¶181. Specifically, in the combination, Balasubramanian’s notification (“*the generated third party message*”) is specifically transmitted as “*an RCS message*” to provide the additional functionality RCS messages provide. EX1009, 1:7-9; EX1003, ¶182; Section VII.A.

Finally, as discussed above, Balasubramanian teaches that the notification includes selectable links to incomplete and/or abandoned transactions. EX1005, ¶¶42, 55, 73-74. When the notification is sent as an RCS message, as disclosed in Bogineni, the RCS message can similarly include the selectable links (“*at least one user interface element*”). EX1003, ¶183. Just as with Balasubramanian’s selectable links, the selectable links in the RCS message would then point to the incomplete and/or abandoned transactions disclosed in Balasubramanian. EX1003, ¶183.

C. Claims 8, 16, 24

The Balasubramanian-Bogineni combination teaches claims 8, 16, and 24. EX1003, ¶¶185-189.

To the extent Patent Owner argues that Balasubramanian does not render obvious these claims, the combination with Bogineni does. EX1003, ¶186.

As discussed above, a POSA would have been motivated to send Balasubramanian’s notifications using “*an RCS message*” as taught by Bogineni. Sections VII.A-VII.B. Thus, the RCS message would include content of the notification, such as the selectable links that enable the user to complete the purchase of the shopping cart created by the user’s prior actions of viewing and searching for items, products, and services, and creating the shopping cart (“*including at least one user interface element to select to complete an online user journey*”). EX1005, ¶¶55, 75; EX1003, ¶187.

**VIII. GROUND 2A: THE SPINDLER-ANDERSON COMBINATION
RENDERS OBVIOUS CLAIMS 1-2, 5-10, 13-18, 21-24.**

A. Motivation to Combine

A POSA would have been motivated to modify Spindler in view of Anderson to arrive at the computer-implemented method, system, and non-transitory computer-readable storage medium claimed by the '978 patent. EX1003, ¶¶191-199.

Spindler and Anderson are in the same field of endeavor as each other and the problem addressed by the '978 patent, and are thus analogous art. EX1003, ¶192. The '978 patent purports to address the problem of “a need for new and useful systems and methods for providing secure access and authentication when using mobile devices to access and/or purchase content” (e.g., “e-commerce”). EX1001, 1:36-42, 1:62-64. The '978 patent claims priority to Spindler as a CIP, and Spindler is similarly directed towards “techniques for performing [online] transactions” (e.g., “purchasing products or services”) that may include authenticating a user’s electronic device (e.g., a computer or a cellular telephone). EX1006, ¶¶2-3, 9, 31. Anderson is also directed towards techniques that “allow users to easily and quickly authenticate themselves to pay for [e-commerce] goods and/or services.” EX1007, ¶¶12, 28; EX1003, ¶192.

Spindler teaches a technique for dynamically generating customized content for a subscriber that “may provide an efficient and secure way for the individual to

receive relevant content and to conduct one or more transactions.” EX1006, ¶46.

Spindler’s technique alleviates “a cumbersome user experience” in which “visitors are forced to navigate through the content on a webpage or website in an attempt to find relevant or interesting information.” EX1006, ¶6. Such an experience “restricts use and, thus, people’s willingness to conduct transactions.” *Id.* However, as discussed above, Spindler does not disclose applying its techniques to the well-known problem of *prior* potential or abandoned transactions. Section IV.B.1. Thus, a POSA would have looked to the prior art for guidance as to specific techniques for extending Spindler’s teachings to such prior transactions. EX1003, ¶193. Anderson is such a reference.

Like Spindler, Anderson, which published well before Spindler, recognizes that a cumbersome user experience may frustrate users, “caus[ing] potential consumers to abandon their commerce transactions.” EX1007, ¶6. This prevents a user from completing a transaction “due to a lack of time, a loss of a network connection, or other reasons,” and thus the user’s shopping cart may be “abandoned.” EX1007, ¶¶6, 125. Anderson, like Spindler, attempts to “increas[e] the ease and efficiency of commerce payment” for online consumers. EX1007, ¶11. A POSA reading Spindler, thus, would have been aware that not only may consumers feel restricted by and/or unwilling to suffer a cumbersome user experience, as taught by Spindler, but that such an experience may cause some

consumers to completely abandon their transactions, as explicitly taught by Anderson. EX1003, ¶194. Accordingly, a POSA reviewing Spindler would have also been aware of Anderson's concerns regarding abandoned transactions. EX1003, ¶194.

Anderson's approach to solving the problem of abandoned transactions is similar to Spindler's computer system. EX1003, ¶195. In particular, Anderson's approach centers on an application in which a user selects items to be placed into a "virtual shopping cart." EX1007, ¶113. If the shopping cart is abandoned, Anderson's application may "send a purchase message to the user," for example "via text message," that may "include a selectable buy option ... that allows the user to complete the abandoned transaction." EX1007, ¶127. When the user receives the message and selects the link, the user is directed back to the earlier "virtual cart user interface," thereby "provid[ing] the user with another opportunity to complete the purchase of the items in the cart." EX1007, ¶¶126, 128; EX1003, ¶195.

Like Spindler, Anderson attempts to simplify the online transaction process for consumers. EX1007, ¶9; EX1006, ¶6; EX1003, ¶196. Like Spindler, Anderson collects information regarding a user's interests (e.g., Spindler's "transactions of interest," Anderson's virtual shopping cart created by the user). EX1007, ¶113; EX1006, ¶11; EX1003, ¶196. Anderson and Spindler each generate a message that

includes a link to allow the user to complete transactions related to those interests.

EX1007, ¶¶126-128; EX1006, ¶34; EX1003, ¶196. Much like Spindler's

"customized actionable item" that may be, for example, a link to purchase tickets, Anderson's virtual shopping cart includes a similar "selectable buy option" having a customized function to "allow[] the user to complete the abandoned transaction."

EX1006, ¶84; EX1007, ¶127; EX1003, ¶196. Anderson also describes various options for sending the message to the user, including sending the link by text message, as in Spindler. EX1007, ¶127; EX1006, ¶34; EX1003, ¶196. Given the similarities of the techniques described by Spindler and Anderson, a POSA would not have encountered any unreasonable technical challenges in modifying Spindler in view of Anderson. EX1003, ¶196.

A POSA would have had a reasonable expectation of success in modifying Spindler in view of Anderson because the modification would have involved only the routine application of a known content generation and messaging scheme (e.g., Spindler's text message with a link to complete a transaction) to the specific, well-known application of recapturing an abandoned virtual shopping cart, as taught by Anderson. EX1007, ¶125; EX1003, ¶197.

In the Spindler-Anderson combination, a POSA would have been motivated to send Spindler's text messages not only in response to *future* possible transactions of interest (e.g., upcoming events), but also in response to *past*

possible transactions (e.g., an abandoned shopping cart). EX1003, ¶198. A POSA would have known that Spindler’s customized second document and text messages could readily be generated in the case of an abandoned virtual shopping cart, as explicitly taught by Anderson. EX1003, ¶198. Anderson describes sending similar messages, including customized content, to a user in a specific application (e.g., an abandoned shopping cart) using the same means as those described by Spindler (e.g., text message). EX1003, ¶198. Anderson describes that the advantages of such a technique are “allow[ing] the user to complete the abandoned transaction” and “allow[ing] a merchant to recapture abandoned carts.” EX1007, ¶¶125, 127; EX1003, ¶198.

Modifying Spindler in view of Anderson would have yielded the predictable result of a computer system that customizes and sends transaction information to a user based on past transactions, such as an abandoned virtual shopping cart. EX1003, ¶198. A POSA would have understood that Anderson’s application would have provided a user with “another opportunity to complete the purchase of the items” in an abandoned shopping cart and provided merchants an opportunity to recapture abandoned transactions. EX1007, ¶126; EX1003, ¶198. A POSA would have also understood that these benefits could be realized in Spindler simply by extending Spindler’s technique to also generate and send customized content in the case of recognizing an abandoned virtual shopping cart. EX1003, ¶198.

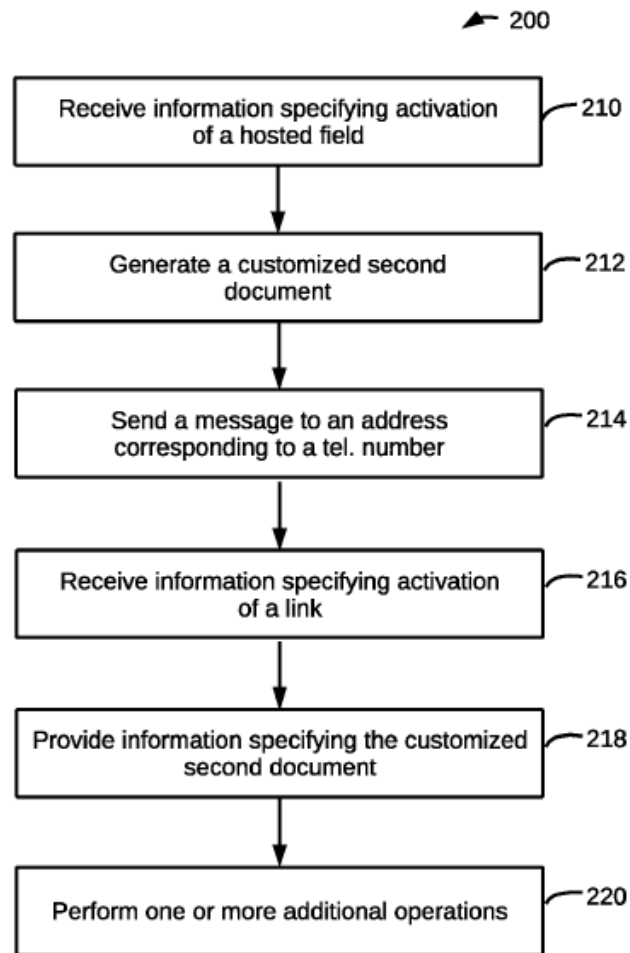
A POSA would have found it obvious to modify Spindler in view of Anderson to arrive at the configuration of elements recited by the challenged claims, as explained in detail below. EX1003, ¶199.

B. Independent claim 1

1. [1.P]

Spindler discloses the preamble. EX1003, ¶¶200-201.

Specifically, Spindler’s “method 200” “may be performed by a computer” (“*computer-implemented method*”). EX1006, ¶48, FIG. 2. By performing method 200, Spindler’s cloud-based computer 112 “dynamically generates [the] customized second document.” EX1006, ¶28; EX1003, ¶201.



EX1006, FIG. 2.

2. [1.A]

Spindler renders obvious element [1.A]. EX1003, ¶¶202-206.

First, Spindler discloses “an authorized recipient associated with a telephone number.” EX1003, ¶203. Spindler’s computer “receives information” from a user (“authorized recipient”) that “specifies a willingness to receive one or more messages from the computer and specifies a **telephone number**.” EX1006, ¶28. In Spindler, the “user of electronic device 110-1” provides the system with “a

telephone number associated with [that] electronic device 110-1.” EX1006, ¶32; EX1003, ¶203.

Second, Spindler discloses “*configuring [the] authorized recipient ... to be subscribed to receive additional content at the telephone number.*” EX1003, ¶204. After receiving the customer’s telephone number, Spindler’s computer may attempt to confirm the information. EX1006, ¶85. “When the telephone number details are confirmed, they may become a **subscriber** customer in a data structure.” *Id.* The information from the user also “indicate[s] a willingness to **receive one or more messages**” (“*additional content*”). EX1006, ¶32. Thus, after providing a telephone number to Spindler’s system, and upon verification of that information by Spindler’s system, a customer may be “*subscribed to receive additional content at the telephone number,*” as claimed. EX1003, ¶204.

Spindler does not explicitly disclose that the “*configuring the authorized recipient*” is “*in response to determining that the authorized recipient has previously provided authentication information.*” However, Spindler renders this element obvious. EX1003, ¶205. In Spindler, the information provided for initially subscribing to the system may include a “third-party API platform identifier and the subscriber customer telephone number.” EX1006, ¶85. Once this information is confirmed by Spindler’s computer system, the customer “may become a subscriber customer.” EX1006, ¶85; EX1003, ¶205.

Spindler also discloses the use of authentication information, such as, for example, an authentication cookie. EX1006, ¶¶53, 75, 92. Spindler explains that the use of such authentication information prevents use by a fraudulent user. EX1006, ¶78. Thus, it would have been obvious to modify Spindler's use of identifiers, such as an API identifier and a customer telephone number, at the time of subscriber registration to also include authentication information, such as an authentication cookie, to prevent fraud. EX1003, ¶206.

3. [1.B.1]

Spindler discloses or at least renders obvious element [1.B.1]. EX1003, ¶¶207-209.

First, Spindler discloses “*activating one or more customized webpages or applications.*” EX1003, ¶208. In particular, after receiving (and confirming) the telephone number information, Spindler's computer 112 “dynamically generates” (“*activat[es]*”) a “customized second document.” EX1006, ¶28. Spindler's customized second document may be a “webpage” and may “include[] information about one or more transactions ... of interest to an individual,” and thus represents the claimed “*one or more customized webpages.*” EX1006, ¶¶28, 49, Claim 4; EX1003, ¶208. Claim 1 specifically recites that the claimed “*activating*” “*compris[es] generation of secure access information for performing the online actions,*” which Spindler discloses through generation of a hot cookie, as explained

below in detail in Section VIII.B.4. Thus, Spindler's generation of the second document and generation of a hot cookie correspond with this step.

Second, Spindler discloses or at least suggests its customized second document (“*one or more customized webpages*”) “*includ[es] at least one customized actionable item for performing online actions.*” EX1003, ¶209.

Spindler's second document allows the subscriber to complete “a given [online] transaction ..., such as purchasing one or more tickets to an upcoming event.”

EX1006, ¶52; *see also id.*, ¶¶9, 37, Claim 5. Spindler also discloses “an actionable item” such as, “e.g., a link to purchase tickets or view a customized webpage,” the link being sent to the subscriber as part of the message. EX1006, ¶84. Upon selecting the link from the message, “the subscriber customer can send a command ... [to] purchase tickets” to the service provider “for fulfillment and payment services.” *Id.* As explained above, a POSA would have known that such a link would include, for example, a URL pointing to the webpage, and that such a URL would also be included in the webpage. Section V.A.3; EX1003, ¶209. A POSA would have understood, or at least found it obvious, to include such a link to purchase tickets (“*actionable item*”) as part of the customized second document in order to facilitate the disclosed ticket purchasing functionality. EX1003, ¶209.

4. [1.B.2]

Spindler discloses element [1.B.2]. EX1003, ¶¶210-212.

Spindler discloses that “*the activating compris[es] generation of secure access information for performing the online actions.*” EX1003, ¶211. For example, Spindler’s computer may also “provide authentication information (such as an authentication cookie) to the [subscriber’s] electronic device to authenticate purchases.” EX1006, ¶53. This cookie may be generated and stored on the subscriber’s electronic device when the user subscribes, and the customized document is generated. EX1006, ¶¶72-75. The cookie may be used to “confirm[] the identity of the client and further allows access 536 to complete a purchase.” EX1006, ¶92. Validation of this cookie “may allow financial information ... to process and pass authorization and processing.” EX1006, ¶93.

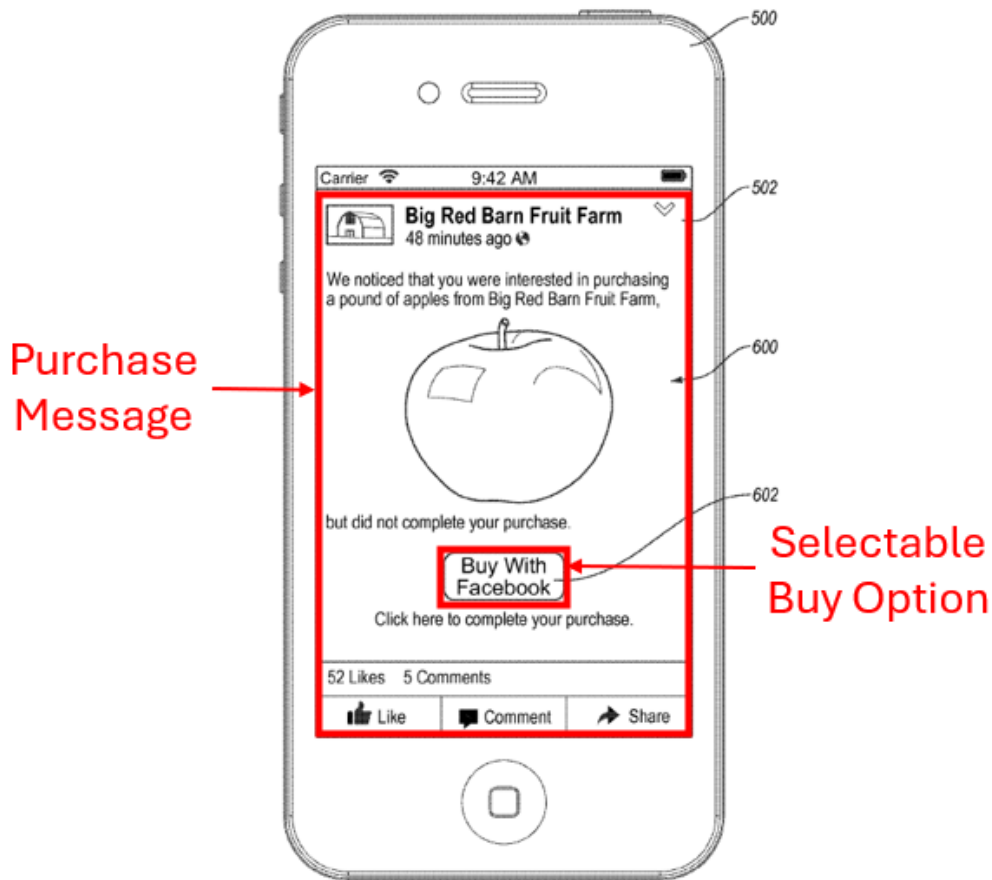
Spindler’s providing authentication information in the form of a cookie corresponds to the claimed “*generation of secure access information.*” EX1003, ¶212. Spindler’s completing a transaction in response to validation of the cookie corresponds to the claimed “*performing online actions.*” EX1003, ¶212. Thus, Spindler discloses this claim element.

5. [1.B.3]

The Spindler-Anderson combination teaches element [1.B.3]. EX1003, ¶¶213-219.

As discussed in Section VIII.A, Spindler fails to explicitly disclose element [1.B.3]. EX1003, ¶214.

Anderson, however, teaches “*the at least one customized actionable item corresponds to prior online actions or intent marker performed by the authorized recipient and associated with an online user journey.*” EX1003, ¶215. Anderson describes a network application that “provide[s] for recapturing of abandoned carts.” EX1007, ¶125. When a user adds items to a virtual shopping cart but fails to complete the transaction (“*prior online actions or intent marker performed by the authorized recipient*”), Anderson’s application “can store the detailed information in the transaction database 232 as an un-completed transaction.” EX1007, ¶126. If the user does not complete the transaction, the application “can provide the user with another opportunity to complete the purchase of the items in the cart” by “send[ing] a purchase message to the user.” EX1007, ¶¶126-127. The message may “include details of items in the cart that was abandoned (name of items, price of items, etc.)” as well as “a selectable buy option ... that allows the user to complete the abandoned transaction.” EX1007, ¶127, FIG. 6.



EX1007, FIG. 6 (annotated).

Activating the selectable buy option may return the user to the earlier virtual shopping cart (second user interface 508). EX1007, ¶¶128, 113, FIG. 5B. EX1003, ¶216.

Anderson's selectable buy option ("*the at least one actionable item*") is associated with the abandoned virtual shopping cart ("*prior online action*") because it allows the user to complete the purchase of items previously added to the virtual cart. EX1007, ¶¶127-128; EX1003, ¶217. Anderson's act of online shopping by selecting items to form the virtual shopping "*corresponds to*" the claimed "*online user journey*," which is described in the '978 patent as "shopping,

browsing, form filling, searching, or the like,” and therefore the selectable buy option (“*the at least one actionable item*”) also is “*associated with an online user journey*.” EX1001, 38:6-10; EX1003, ¶217.

A POSA would have found it obvious to send Spindler’s messages in the case of an abandoned shopping cart, as taught by Anderson. Section VIII.A; EX1003, ¶218. In the resulting combination, in response to determining that a virtual shopping cart has been abandoned as taught by Anderson, Spindler’s computer would generate a customized second document (e.g., a customized webpage) listing the items in the abandoned shopping cart and then send a message to the user with a link (a “*customized actionable item*”) to the customized second document. The customized second document (“*customized webpage*”) allows the user to complete the transaction. Section VIII.B.3; EX1003, ¶218. Thus, the “*customized actionable item*” in Spindler-Anderson “*corresponds to*” the items in the abandoned shopping cart (the claimed “*prior online actions or intent marker performed by the authorized recipient and associated with an online user journey*”). EX1003, ¶218.

Thus, as explained above in Section VIII.A, a POSA would have found it obvious to modify Spindler in view of Anderson to include a customized actionable item corresponding to prior online actions or intent markers performed

by the authorized recipient, and associated with an online user journey, as claimed.

EX1003, ¶219.

6. [1.C], [1.D.1]

Spindler discloses elements [1.C] and [1.D.1]. EX1003, ¶¶220-222.

First, Spindler discloses “*generating, for the authorized recipient, a third party message associated with the one or more customized webpages or applications*” and “*causing transmission of the generated third party message to the authorized recipient.*” EX1003, ¶221. Specifically, after dynamically generating the customized second document, Spindler’s computer “sends a message,” for example, a “text message” (e.g., SMSmessage), to the subscriber (“*authorized recipient*”) at “an address corresponding to the telephone number” (“*causing transmission of the ... message*”). EX1006, ¶¶28, 34. The message may “include[] a link to the customized second document” (thereby being “*associated with the one or more customized webpages*”). EX1006, ¶50. Spindler’s message may be sent from the service provider (e.g., “Amplify”) on behalf of a third-party client (e.g., “a third-party ticket provider or any third-party service or event provider”). EX1006, ¶¶67, 80; *see also id.*, ¶¶82, 84; EX1003, ¶221.

Second, Spindler discloses that “*the third party message includ[es] the at least one customized actionable item.*” EX1003, ¶222. Spindler’s message includes

the “actionable item, e.g., a link to purchase tickets or view a customized webpage.” EX1006, ¶84; EX1003, ¶222.

7. [1.D.2]

The Spindler-Anderson combination teaches element [1.D.2]. EX1003, ¶¶223-225.

As discussed above, the Spindler-Anderson combination teaches generating a customized second document and sending a text message to a user in response to determining a virtual shopping cart has been abandoned. EX1003, ¶224. The Spindler-Anderson combination further teaches “*the generated third party message facilitates, for the authorized recipient, completion of the online user journey by providing access to an access point corresponding to the prior online actions or intent marker.*” EX1003, ¶224.

Specifically, in the Spindler-Anderson combination, the text message may include a “customized actionable item” that is “an actionable item, e.g., a link to purchase tickets or view a customized webpage.” EX1006, ¶84; EX1003, ¶225. Similarly, Anderson teaches that activating selectable buy option 602 may “direct[] the user to the virtual cart user interface 508 ..., from which the user can complete the purchase of the items in the cart.” EX1007, ¶128; EX1003, ¶225. Anderson’s “direct[ing] the user to the [earlier] virtual cart user interface” teaches “*facilitat[ing] ... completion of the online user journey*” (completing the

abandoned shopping transaction) “*by providing access to an access point corresponding to the prior online actions or intent marker*” (providing the user access the virtual cart user interface as it existed when the user abandoned the prior shopping transaction), as claimed. EX1003, ¶225. Accordingly, this element is rendered obvious by the Spindler-Anderson combination. EX1003, ¶225.

C. Claim 2

The Spindler-Anderson combination teaches claim 2. EX1003, ¶¶226-228.

First, Spindler discloses that “*the at least one customized actionable item comprises a secure link, corresponding to an identity of the authorized recipient.*” EX1003, ¶227. In particular, Spindler discloses that the “actionable item” may be, “e.g., a link to purchase tickets or view a customized webpage, such that the subscriber customer can send a command ... purchase tickets.” EX1006, ¶84. Spindler also discloses various security techniques (e.g., a “‘hot’ cookie,” “biometric authentication,” “facial recognition,” “fingerprint recognition”) that protect against “fraudulent use of a link” and verify the identity of the user device, thereby making the link secure. EX1006, ¶¶78, 91-92.

Spindler’s “actionable item” does not “*resume the online user journey and include one or more prompts to complete the online user journey,*” but Anderson teaches this element. EX1003, ¶228. Specifically, Anderson’s selectable buy option “allows the user to complete the abandoned transaction.” EX1007, ¶127. In

addition, the text “Buy With Facebook” on Anderson’s selectable buy option 602 and the prompt to “Click here to complete your purchase” comprise a “prompt” to complete the online user journey (i.e., completing the online shopping by completing the purchase). EX1007, FIG. 6; EX1003, ¶228. Thus, a POSA would have been motivated to modify Spindler’s “actionable item” in view of Anderson’s “selectable buy option” to include a “prompt” to complete the online user journey. EX1003, ¶228. And it would have been obvious for a POSA to modify Spindler in view of Anderson to arrive at the claimed actionable item for at least the same reasons as those discussed above regarding claim 1. EX1003, ¶228.

D. Claims 5, 6

The Spindler-Anderson combination teaches claims 5 and 6. EX1003, ¶¶229-231.

Spindler does not explicitly disclose claims 5 or 6, but the Spindler-Anderson combination does. EX1003, ¶230. As explained above, it would have been obvious to modify Spindler to also send messages in the case of an abandoned shopping cart that is formed by the user’s prior online actions of placing items into a virtual shopping cart, as taught by Anderson. Section VIII.A. Thus, Spindler-Anderson teaches “*the online user journey comprises online shopping associated with*” at least “*an abandoned online cart associated with the prior online actions or intent marker*” and “*an abandoned online purchase*

associated with the prior online actions or intent marker,” as recited in claim 5.

EX1003, ¶230.

A POSA would have further understood that such a virtual shopping cart would be formed by a user virtually browsing for products or services. EX1003, ¶231. Thus, Spindler-Anderson teaches that “*the online user journey comprises online browsing associated with*” at least “*an abandoned online browsing session*” or “*an abandoned online search session purchase,*” each “*associated with the prior online actions or intent marker,*” as recited in claim 6. EX1003, ¶231.

E. Claim 7

The Spindler-Anderson combination renders obvious claim 7. EX1003, ¶¶232-236.

Spindler renders obvious that “*the generated third party message comprises an RCS message.*” EX1003, ¶233. Spindler discloses text messages. EX1006, ¶34. Spindler also discloses that these text messages can include multiple different protocols, and provides non-limiting examples of SMS, EMS, and MMS. EX1006, ¶¶50, 66. A POSA would have known that other text message protocols also existed and were well known prior to the ’978 patent, including RCS. EX1003, ¶233. Based on Spindler’s disclosure that multiple different text message protocols could be used, a POSA would have found it obvious to implement the generated third-party message as a well-known RCS message. EX1003, ¶233.

Spindler's "actionable item" that is a link is a "*user interface element*" that can be selected. EX1006, ¶34; EX1003, ¶234.

Spindler does not explicitly disclose selecting the user interface element "*to select one or more of: an abandoned online cart associated with the prior online actions or intent marker,*" or "*an abandoned online purchase associated with the prior online actions or intent marker,*" but the Spindler-Anderson combination teaches these elements. EX1003, ¶235. As explained above, the Spindler-Anderson combination teaches sending text messages in the case of an abandoned shopping cart that is formed by the user's prior online actions of placing items into a virtual shopping cart, as taught by Anderson. Section VIII.A; *see also* EX1006, ¶34; EX1007, ¶¶126-128. Thus, the Spindler-Anderson combination renders obvious that the generated third-party message includes a user interface element (e.g., a link that is an actionable item) to select at least "*an abandoned online shopping cart*" (e.g., the virtual shopping cart) or "*an abandoned online search session purchase*" that is associated with the prior online actions or intent marker, as claimed. EX1003, ¶235.

Accordingly, a POSA would have found claim 7 obvious over the modification of Spindler in view of Anderson. EX1003, ¶236.

F. Claim 8

The Spindler-Anderson combination teaches or at least renders obvious claim 8. EX1003, ¶¶237-240.

As discussed above for claim 7, Spindler renders obvious that “*the generated third party message comprises an RCS message.*” Section VIII.E; EX1003, ¶238.

Spindler-Anderson further teaches that the message “*includ[es] at least one user interface element to select to complete an online user journey.*” EX1003, ¶239. As explained above, Spindler-Anderson teaches sending such messages in the case of an abandoned shopping cart that is formed by the user’s prior online actions of placing items into a virtual shopping cart, as taught by Anderson, and provides the user a link to return to the virtual shopping cart and resume the transaction. Section VIII.E. This link is the “*at least one user interface element to select to complete an online user journey.*” EX1003, ¶239.

Thus, Spindler-Anderson teaches or at least renders obvious that the generated third-party message comprises an RCS message including a user interface element that may be selected to complete an online user journey (e.g., completing the transaction), as claimed. EX1003, ¶240

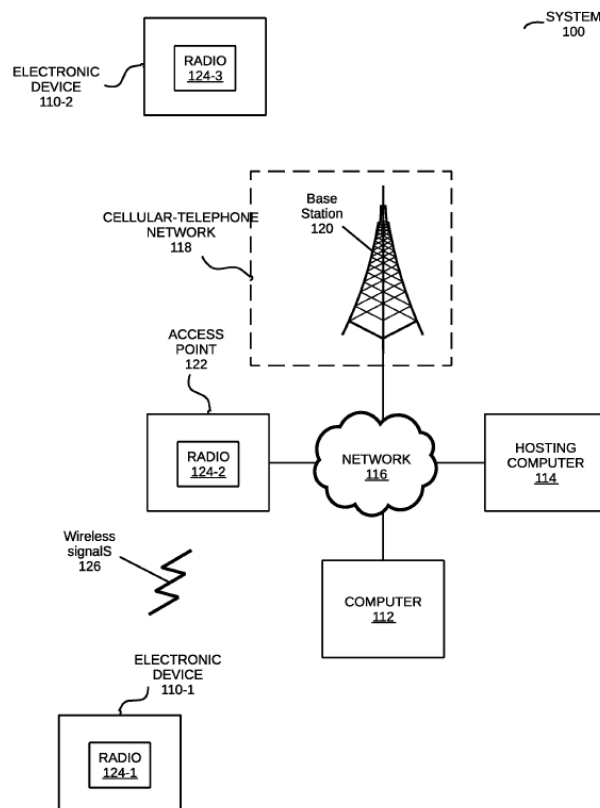
G. Independent Claim 9

Independent claim 9 recites a system comprising a “*processor*” and a “*memory configured to store program instructions,*” that, “*when executed by the processor, cause the processor to perform operations*” substantially the same as those recited in claim 1. EX1003, ¶241.

1. [9.P]

Spindler discloses the preamble. EX1003, ¶¶242-243.

Spindler discloses **system 100** including various electronic devices 110, hosting computer 114, network 116, and cloud-based computer 112 that may perform method 200. EX1006, ¶31, FIG. 1; EX1003, ¶243.

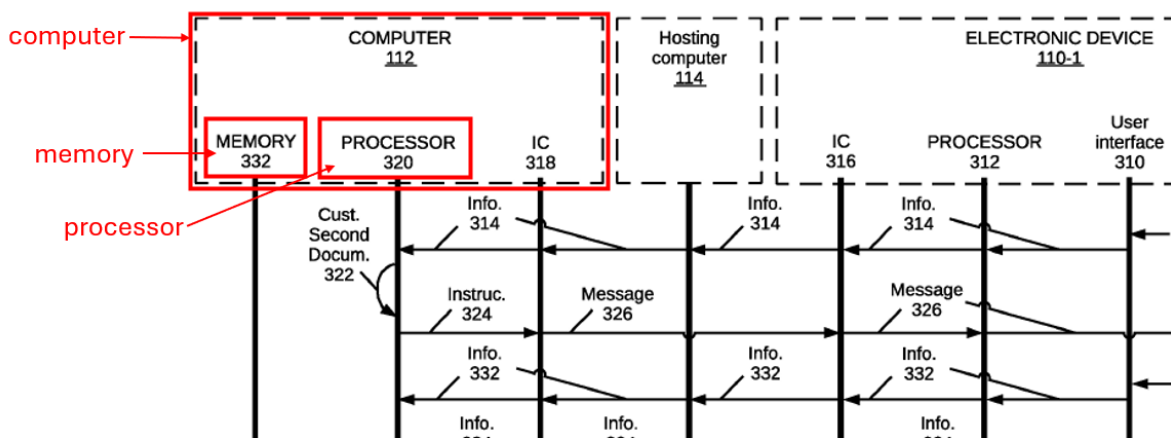


EX1006, FIG. 1.

2. [9.A]

Spindler discloses element [9.A]. EX1003, ¶¶244-245.

Spindler’s cloud-based computer 112 may include **processor 320** that “may dynamically generate a customized second document” and “may instruct 324 interface circuit 318 to send a message ... to an address corresponding to the telephone number.” EX1006, ¶¶59-60, FIG. 3; EX1003, ¶245.



EX1006, FIG. 3 (abridged, annotated).

3. [9.B]

Spindler discloses element [9.B]. EX1003, ¶¶246-247.

Spindler discloses that computer 112 may include **memory 332**. EX1006, ¶113, FIG. 3 *above*. The memory may be “*configured to store program instructions*” such that “when the program instructions are executed by the processor, they cause the computer to perform” the actions in method 200. *Id.*; EX1003, ¶247.

4. [9.C.1]–[9.F.2]

Claim elements [9.C.1]–[9.F.2] correspond to claim elements [1.A.1]–[1.D.2], respectively. The Spindler-Anderson combination discloses or renders obvious these elements for the same reasons explained above regarding claim 1. Section VIII.B; EX1003, ¶248. The only substantive difference from claim 1 is that in [9.D.1] and [9.E.1], the claim recites “*one or more customized applications*” instead of “*one or more customized webpages or applications*” as recited in [1.B.1] and [1.C]. However, the ’978 patent makes clear that a web browser for viewing a web link constitutes an “*application.*” EX1001, 8:65-9:1. Thus, Spindler’s web browser application displaying the webpage containing the URL provided in the link and Anderson’s network application each correspond to such a “*customized application.*”

H. Claims 10, 13-16

Claims 10 and 13-16 are system claims that otherwise recite limitations that are identical to the method steps recited in claims 2 and 5-8. The Spindler-Anderson combination discloses or renders obvious these elements for the same reasons as respectively explained for claims 2 and 5-8 above. Sections VIII.C–VIII.F; EX1003, ¶249.

I. Independent Claim 17

Independent claim 17 recites a “*non-transitory computer-readable storage medium ... storing program instructions that ... cause the computer to carry out*

one or more operations” substantially the same as those recited in claim 1.

EX1003, ¶250.

1. [17.P]

Spindler discloses the preamble. EX1003, ¶¶251-252.

Spindler discloses “*a non-transitory computer-readable storage medium for use in conjunction with a computer, the computer-readable storage medium storing program instructions that, when executed by the computer, cause the computer to carry out*” the operations in method 200. EX1006, ¶127; EX1003, ¶252.

2. [17.A]–[17.D.2]

Claim elements [17.A]–[17.D.2] correspond to claim elements [1.A]–[1.D.2], respectively. The Spindler-Anderson combination discloses or renders obvious these elements for the same reasons explained above regarding claim 1. Section VIII.B; EX1003, ¶253.

J. Claims 18, 21-24

Claims 18 and 21-24 are storage medium claims that otherwise recite limitations that are identical to the method steps recited in claims 2 and 5-8. The Spindler-Anderson combination discloses or renders obvious these elements for the same reasons as respectively explained for claims 2 and 5-8 above. Sections VIII.C-VIII.F; EX1003, ¶254.

IX. GROUND 2B: THE SPINDLER-ANDERSON-WOODWARD COMBINATION RENDERS OBVIOUS CLAIMS 3-4, 11-12, 19-20.

A. Motivation to Combine

Claims 3-4, 11-12, and 19-20 recite a “*silent network authentication protocol*” (“SNAP”). Although Spindler does not expressly disclose a SNAP, Woodward does, and a POSA would have been motivated to incorporate Woodward’s SNAP into the Spindler-Anderson combination. EX1003, ¶¶256-262.

To start, Woodward, Spindler, and Anderson are in the same field of mobile device authentication and authorization for conducting transactions on a mobile device, and are thus analogous art to each other and to the ’978 patent. *Compare* EX1008, ¶¶10-11, 13, *with* EX1001, 1:36-42, 1:62-64; EX1006, ¶¶2-3, 9, 31; EX1007, ¶¶2, 12; EX1003, ¶257.

The Spindler-Anderson combination teaches a computer system that communicates with users regarding online transactions, including abandoned virtual shopping carts. EX1003, ¶258. Spindler contemplates implementation on mobile devices, e.g., “a cellular telephone” and using various cellular telecommunication protocols. EX1006, ¶¶30-31. Spindler also describes verifying subscriber information, including telephone numbers, but does not explain how such information is validated. EX1006, ¶79. A POSA therefore would have looked to known verification/validity techniques, including the well-known SNAP-based

techniques disclosed in Woodward. As noted above, Woodward verifies a user-provided telephone number silently. EX1003, ¶258.

As discussed above for Ground 1B (Section VI.A), Woodward uses “SS7 protocol data,” to periodically verify whether customer-provided telephone numbers remain valid and eligible to receive communications. EX1008, ¶¶10, 13-14, 18-22, 24; EX1003, ¶¶259-260.

A POSA would have readily incorporated Woodward’s verification technique into the Spindler-Anderson system because both systems rely on conventional computing components, communications networks, and mobile devices. *Compare* EX1008, ¶¶27-28, *with* EX1006, ¶97, FIG. 8; EX1003, ¶261. This modification would simply add Woodward’s existing SS7-based verification technique before sending communications to a subscriber. EX1003, ¶261. Thus, a POSA seeking to modify Spindler-Anderson further in view of Woodward would not have encountered any unreasonable technical challenges. EX1003, ¶261.

A POSA would have been motivated to make this modification for the benefit identified by Woodward—namely, verification to avoid fines and other problems arising from attempting to contact an incorrect or inactive phone number. EX1008, ¶3; EX1003, ¶262. Such a combination would merely amount to combining prior-art elements according to known methods to yield the predictable (yet improved) result of the computer system of the Spindler-Anderson

combination being capable of verifying subscriber phone numbers to avoid using incorrect or inactive phone numbers, as explicitly taught by Woodward. EX1003, ¶262. And, because the combination would have required using only conventional computing elements and leveraging existing data collection, a POSA would have had a reasonable expectation of success in modifying the Spindler-Anderson combination further in view of Woodward. EX1003, ¶262.

B. Claims 3, 11, 19

The Spindler-Anderson-Woodward combination teaches claims 3, 11, and 19. EX1003, ¶¶263-267, 273.

Spindler discloses that, during the transaction that is initiated by the user activating the actionable item (“*selection of the secure link*”), a “‘hot’ cookie” may be generated, including, for example, a client identifier, a subscriber number, and a protocol that are used to verify and authorize a transaction. EX1006, ¶¶91-92; EX1003, ¶264.

To the extent Patent Owner argues that Spindler’s “‘hot’ cookie” does not explicitly teach claim 3, the further combination with Woodward does. EX1003, ¶265.

Specifically, as discussed above, a POSA would have been motivated to further have the selection of the secure link, as taught by the Spindler-Anderson

combination, trigger a “*silent network authentication protocol*,” as taught by

Woodward, to confirm the identity of the authorized recipient. EX1003, ¶266.

C. Claims 4, 12, 20

The Spindler-Anderson-Woodward combination teaches claims 4, 12, and 20. EX1003, ¶¶268-273.

Spindler discloses that the “‘hot’ cookie” may be generated by the “Amplify Decision Delivery Processor (ADDP),” which is a third party between the user and the e-commerce application that is hosted by hosting computer 114, thus “*the silent network authentication protocol is performed by a third party*.” EX1006, ¶¶69, 75, 77. Spindler’s ADDP may also be the entity that “send[s] a text message to the given subscriber customer with a link to the customized document,” thus, the “*third party [is] associated with the generated third party message*.” EX1006, ¶72. Spindler further discloses that the user’s electronic device and the ADDP may communicate via mobile telecommunication technology (“*accessed through a mobile device carrier*”). EX1006, ¶30; EX1003, ¶269. Thus, Spindler discloses or renders obvious claim 4.

Nonetheless, to the extent Patent Owner argues that the Spindler-Anderson combination does not explicitly teach claim 4, the further combination with Woodward does. EX1003, ¶270.

Specifically, Woodward teaches that its phone number verification technique may be performed by an entity of which the user is a subscriber (“*third party*”), such as, for example, a bank or other financial institution. EX1008, ¶14. Woodward describes that the purpose of verification is to avoid the possibility of the subscribed entity incurring fines when sending messages (“*third party message*”) to the subscriber. EX1008, ¶3. EX1003, ¶271.

In modifying the Spindler-Anderson combination further in view of Woodward, a POSA would have understood that Spindler’s Amplify service provider would be a “*third party associated with the generated third party message.*” This is because a POSA would recognize that the entity that may face fines is the entity that actually prepares and sends the text messages (e.g., Spindler’s Amplify). EX1003, ¶272. Thus, a POSA would have modified exactly this entity in Spindler to perform Woodward’s verification technique, to thereby safeguard itself from incurring fines or other penalties. EX1003, ¶272.

X. GROUND 2C: THE SPINDLER-ANDERSON-BOGINENI COMBINATION RENDERS OBVIOUS CLAIMS 7-8, 15-16, 23-24.

A. Motivation to Combine

Claims 7-8, 15-16, and 23-24 recite RCS messages. As explained above, such an RCS message is rendered obvious by Spindler. Sections VIII.E-VIII.F. To the extent Patent Owner argues that Spindler does not teach or suggest such an RCS message, Bogineni expressly discloses RCS messaging. EX1003, ¶275. A

POSA would have been motivated to modify Spindler-Anderson further in view of Bogineni to include an RCS message. EX1003, ¶¶275-280.

To start, Bogineni, Spindler, and Anderson are in the same field of mobile device communication as the '978 patent, and are thus analogous art to each other and to the '978 patent. *Compare* EX1009, 1:6-7, 1:47-2:22, *with* EX1001, Abstract, 5:46-48; EX1006, ¶30; EX1007, ¶¶111-112; EX1003, ¶276.

The Spindler-Anderson combination sends text messages (SMS messages), but does not specify the messaging protocol. EX1006, ¶34; EX1003, ¶277. Thus, a POSA would have looked to known messaging technologies, including the well-known technique for sending messages to mobile devices (like Spindler's electronic device) via RCS messages, as taught by Bogineni. EX1003, ¶¶277-278. Bogineni teaches that RCS provides text messaging similar to SMS while offering additional functionality unavailable in SMS. EX1009, 1:7-12. A POSA would have been motivated to implement Spindler-Anderson's text messages using RCS to obtain those known advantages. EX1003, ¶278.

Furthermore, a POSA would have had a reasonable expectation of success in further modifying the combination of Spindler-Anderson in view of Bogineni. EX1003, ¶279. Bogineni teaches that RCS messaging may be implemented using IMS-based or non-IMS architectures, including HTTP communications and device APIs. EX1009, 1:47-2:4. Spindler's system includes mobile devices, computer

systems, Internet-capable networks, and API-based functionality capable of supporting those conventional technologies. EX1006, ¶¶30-31, 80, 97; EX1003, ¶279. A POSA would have understood that Spindler’s “internet” would support the IMS and, therefore, support the IMS-based RCS messaging. EX1003, ¶279. Because the network can be the Internet, the network also supports HTTP communications, which enables non-IMS RCS messaging. EX1003, ¶279. Finally, because Spindler’s electronic devices, hosting computer, and cloud-based computer can be implemented as computer systems, a POSA would have understood they are readily available to install APIs and thus support non-IMS RCS messaging via the APIs. EX1006, ¶31; EX1003, ¶279. Spindler even explicitly relies, to at least some extent, on the use of such APIs for implementation. EX1006, ¶80; EX1003, ¶279. A POSA would therefore not have experienced any unreasonable technical hurdles in implementing these modifications. EX1003, ¶279.

The combination would merely amount to combining prior-art elements according to known methods to yield the predictable (yet improved) result of sending text message having the additional functionality available with RCS messages. EX1009, 1:9-12; EX1003, ¶280.

B. Claims 7, 15, 23

The Spindler-Anderson-Bogineni combination teaches claims 7, 15, and 23.
EX1003, ¶¶281-285, 290.

To the extent Patent Owner argues the Spindler-Anderson combination does not explicitly teach these claims, the further combination with Bogineni does.

EX1003, ¶282.

In the combination, Spindler’s “message” to the subscriber’s electronic device (“*the generated third party message*”) is specifically transmitted as “*an RCS message*” in order to provide the additional functionality RCS messages provide.

EX1003, ¶283.

Finally, as discussed above, Spindler teaches that the message may include “an actionable item, e.g., a link to purchase tickets or view a customized webpage.” EX1006, ¶84. When Spindler’s message is sent as an RCS message, as disclosed in Bogineni, the RCS message can similarly include the selectable links (“*at least one user interface element*”). EX1003, ¶284. And just as with Spindler’s “actionable item,” the selectable links in the RCS message would then point to the incomplete and/or abandoned transactions taught the Spindler-Anderson combination. EX1003, ¶284.

C. Claims 8, 16, 24

The Spindler-Anderson-Bogineni combination teaches claims 8, 16, and 24. EX1003, ¶¶286-290.

To the extent Patent Owner argues that the Spindler-Anderson combination does not explicitly teach these claims, the further combination with Bogineni does. EX1003, ¶287.

As discussed above, a POSA would have been motivated to send Spindler’s “text message” using “*an RCS message*,” as taught by Bogineni. Section X.B; EX1003, ¶288. Thus, when implemented in the Spindler-Anderson combination, the RCS message would include the content of the text message, such as an actionable item for completing the transaction (“*including at least one user interface element to select to complete an online user journey*”); EX1003, ¶288.

XI. GROUNDS FOR STANDING (37 C.F.R. § 42.104(A))

Petitioner certifies that the ’978 patent is available for IPR and Petitioner is not barred or estopped from requesting IPR of any ’978 patent claim.

XII. MANDATORY NOTICES (37 C.F.R. § 42.8(A)(1))

Real Party-in-Interest (37 C.F.R. § 42.8(b)(1)): The real party-in-interest is Salesforce, Inc.

Related Matters (37 C.F.R. § 42.8(b)(2)): The ’978 patent is at issue in pending litigation *IQX Corp. v. Salesforce, Inc.*, Civil Action No. 7:26-cv-00213 (W.D. Tex.), filed May 28, 2026.

U.S. Patent Nos. 12,368,799; 11,876,924; and 12,200,165 are also at issue in the above litigation proceeding and are being challenged in the below concurrently filed IPRs:

Patent No.	Case No.
12,368,799	IPR2026-00475
11,876,924	IPR2026-00476
12,200,165	IPR2026-00477

The '978 patent claims the benefit of U.S. Patent Nos. 12,368,799; 12,200,165; 12,126,752; 11,876,924; and 11,765,262.

U.S. Patent No. 12,647,506 and pending U.S. Patent Application Nos. 19/680,798 and 19/645,697 claim the benefit of the '978 patent.

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Service Information (37 C.F.R. § 42.8(b)(4)): Please direct all correspondence regarding this Petition to counsel at the above addresses and PTAB@sternekessler.com. Petitioner consents to service by email at the addresses above.

XIII. CONCLUSION

The challenged claims are unpatentable and IPR is warranted.

Respectfully submitted,

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APPENDIX A: LISTING OF CLAIMS

Claim 1

Element	
[1.P]	A computer-implemented method comprising:
[1.A.1]	configuring an authorized recipient associated with a telephone number, to be subscribed to receive additional content at the telephone number,
[1.A.2]	in response to determining that the authorized recipient has previously provided authentication information
[1.B.1]	activating one or more customized webpages or applications including at least one customized actionable item for performing online actions,
[1.B.2]	the activating comprising generation of secure access information for performing the online actions,
[1.B.3]	wherein the at least one customized actionable item corresponds to prior online actions or intent marker performed by the authorized recipient and associated with an online user journey
[1.C]	generating, for the authorized recipient, a third party message associated with the one or more customized webpages or applications, the third party message including the at least one customized actionable item; and
[1.D.1]	causing transmission of the generated third party message to the authorized recipient,
[1.D.2]	wherein the generated third party message facilitates, for the authorized recipient, completion of the online user journey by providing access to an access point corresponding to the prior online actions or intent marker.

Claim 2

Element	
[2]	The computer-implemented method of claim 1, wherein the at least one customized actionable item comprises a secure link, corresponding to an identity of the authorized recipient, to resume the online user journey at the access point and one or more prompts to complete the online user journey.

Claim 3

Element	
[3]	The computer-implemented method of claim 2, wherein selection of the secure link, on a computing device displaying the secure link, triggers a silent network authentication protocol to confirm the identity of the authorized recipient.

Claim 4

Element	
[4]	The computer-implemented method of claim 3, wherein the silent network authentication protocol is performed by a third party associated with the generated third party message, and accessed through a mobile device carrier.

Claim 5

Element	
[5.P]	The computer-implemented method of claim 1, wherein:
[5.A]	the online user journey comprises online shopping associated with at least one of:
[5.B]	an abandoned online cart associated with the prior online actions or intent marker,
[5.C]	an abandoned online purchase associated with the prior online actions or intent marker, and
[5.D]	an abandoned online wish list associated with the prior online actions or intent marker.

Claim 6

Element	
[6.P]	The computer-implemented method of claim 1, wherein:
[6.A]	the online user journey comprises online browsing associated with at least one of:
[6.B]	an abandoned online browsing session associated with the prior online actions or intent marker,
[6.C]	an abandoned online session associated with the or intent marker online actions,
[6.D]	an abandoned online search session purchase associated with the prior online actions or intent marker, and
[6.E]	an abandoned online form associated with the prior online actions or intent marker.

Claim 7

Element	
[7.P]	The computer-implemented method of claim 1, wherein the generated third party message comprises an RCS message including at least one user interface element to select amongst one or more of:
[7.A]	an abandoned online cart associated with the prior online actions or intent marker,
[7.B]	an abandoned online purchase associated with the prior online actions or intent marker,
[7.C]	an abandoned online wish list associated with the prior online actions or intent marker,
[7.D]	an abandoned online browsing session associated with the prior online actions or intent marker,
[7.E]	an abandoned online session associated with the prior online actions or intent marker,
[7.F]	an abandoned online search session purchase associated with the prior online actions or intent marker, and
[7.G]	an abandoned online form associated with the prior online actions or intent marker.

Claim 8

Element	
[8]	The computer-implemented method of claim 1, wherein the generated third party message comprises an RCS message including at least one user interface element to select to complete an online user journey.

Claim 9

Element	
[9.P]	A system comprising:
[9.A]	a processor; and
[9.B]	memory configured to store program instructions, wherein, when executed by the processor, the program instructions cause the processor to perform operations comprising:
[9.C]	configuring an authorized recipient associated with a telephone number, to be subscribed to receive additional content at the telephone number, in response to determining that the authorized recipient has previously provided authentication information;
[9.D.1]	activating one or more customized applications including at least one customized actionable item for performing online actions,
[9.D.2]	the activating comprising generation of secure access information for performing the online actions,
[9.D.3]	wherein the at least one customized actionable item corresponds to prior online actions or intent marker performed by the authorized recipient and associated with an online user journey;
[9.E]	generating, for the authorized recipient, a third party message associated with the one or more customized applications, the third party message including the at least one customized actionable item; and
[9.F]	causing transmission of the generated third party message to the authorized recipient, wherein the generated third party message facilitates, for the authorized recipient, completion of the online user journey by providing access to an access point corresponding to the prior online actions or intent marker.

Claim 10

Element	
[10]	The system of claim 9, wherein the at least one customized actionable item comprises a secure link, corresponding to an identity of the authorized recipient, to resume the online user journey at the access point and one or more prompts to complete the online user journey.

Claim 11

Element	
[11]	The system of claim 10, wherein selection of the secure link, on a computing device displaying the secure link, triggers a silent network authentication protocol to confirm the identity of the authorized recipient.

Claim 12

Element	
[12]	The system of claim 11, wherein the silent network authentication protocol is performed by a third party associated with the generated third party message, and accessed through a mobile device carrier.

Claim 13

Element	
[13.P]	The system of claim 9, wherein:
[13.A]	the online user journey comprises online shopping associated with at least one of:
[13.B]	an abandoned online cart associated with the prior online actions or intent marker,
[13.C]	an abandoned online purchase associated with the prior online actions or intent marker, and
[13.D]	an abandoned online wish list associated with the prior online actions or intent marker.

Claim 14

Element	
[14.P]	The system of claim 9, wherein:
[14.A]	the online user journey comprises online browsing associated with at least one of:
[14.B]	an abandoned online browsing session associated with the prior online actions or intent marker,
[14.C]	an abandoned online session associated with the prior online actions or intent marker,
[14.D]	an abandoned online search session purchase associated with the prior online actions or intent marker, and
[14.E]	an abandoned online form associated with the prior online actions or intent marker.

Claim 15

Element	
[15.P]	The system of claim 9, wherein the generated third party message comprises an RCS message including at least one user interface element to select amongst one or more of:
[15.A]	an abandoned online cart associated with the prior online actions or intent marker,
[15.B]	an abandoned online purchase associated with the prior online actions or intent marker,
[15.C]	an abandoned online wish list associated with the prior online actions or intent marker,
[15.D]	an abandoned online browsing session associated with the prior online actions or intent marker,
[15.E]	an abandoned online session associated with the prior online actions or intent marker,
[15.F]	an abandoned online search session purchase associated with the prior online actions or intent marker, and
[15.G]	an abandoned online form associated with the prior online actions or intent marker.

Claim 16

Element	
[16]	The system of claim 9, wherein the generated third party message comprises an RCS message including at least one user interface element to select to complete an online user journey.

Claim 17

Element	
[17.P]	A non-transitory computer-readable storage medium for use in conjunction with a computer, the computer-readable storage medium storing program instructions that, when executed by the computer, cause the computer to carry out one or more operations comprising:
[17.A]	configuring an authorized recipient associated with a telephone number, to be subscribed to receive additional content at the telephone number, in response to determining that the authorized recipient has previously provided authentication information;
[17.B]	activating one or more customized webpages including at least one customized actionable item for performing online actions, the activating comprising generation of secure access information for performing the online actions, wherein the at least one customized actionable item corresponds to one or more prior intent markers performed by the authorized recipient and associated with an online user journey;
[17.C]	generating, for the authorized recipient, a third party message associated with the one or more customized webpages, the third party message including the at least one customized actionable item; and
[17.D]	causing transmission of the generated third party message to the authorized recipient, wherein the generated third party message facilitates, for the authorized recipient, completion of the online user journey by providing access to an access point corresponding to the one or more prior intent markers.

Claim 18

Element	
[18]	The non-transitory computer-readable storage medium of claim 17, wherein the at least one customized actionable item comprises a secure link, corresponding to an identity of the authorized recipient, to resume the online user journey at the access point and one or more prompts to complete the online user journey.

Claim 19

Element	
[19]	The non-transitory computer-readable storage medium of claim 18, wherein selection of the secure link, on a computing device displaying the secure link, triggers a silent network authentication protocol to confirm the identity of the authorized recipient.

Claim 20

Element	
[20]	The non-transitory computer-readable storage medium of claim 19, wherein the silent network authentication protocol is performed by a third party associated with the generated third party message, and accessed through a mobile device carrier.

Claim 21

Element	
[21.P]	The non-transitory computer-readable storage medium of claim 17, wherein:
[21.A]	the online user journey comprises online shopping associated with at least one of:
[21.B]	an abandoned online cart associated with the one or more prior intent markers,
[21.C]	an abandoned online purchase associated with the one or more prior intent markers, and

[21.D]	an abandoned online wish list associated with the one or more prior intent markers.
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Claim 22

Element	
[22.P]	The non-transitory computer-readable storage medium of claim 17, wherein:
[22.A]	the online user journey comprises online browsing associated with at least one of:
[22.B]	an abandoned online browsing session associated with the one or more prior intent markers,
[22.C]	an abandoned online session associated with the one or more prior intent markers,
[22.D]	an abandoned online search session purchase associated with the one or more prior intent markers, and
[22.E]	an abandoned online form associated with the one or more prior intent markers.

Claim 23

Element	
[23.P]	The non-transitory computer-readable storage medium of claim 17, wherein the generated third party message comprises an RCS message including at least one user interface element to select amongst one or more of:
[23.A]	an abandoned online cart associated with the one or more prior intent markers,
[23.B]	an abandoned online purchase associated with the one or more prior intent markers,
[23.C]	an abandoned online wish list associated with the one or more prior intent markers,
[23.D]	an abandoned online browsing session associated with the one or more prior intent markers,

[23.E]	an abandoned online session associated with the one or more prior intent markers,
[23.F]	an abandoned online search session purchase associated with the one or more prior intent markers, and
[23.G]	an abandoned online form associated with the one or more prior intent markers.

Claim 24

Element	
[24]	The non-transitory computer-readable storage medium of claim 17, wherein the generated third party message comprises an RCS message including at least one user interface element to select to complete an online user journey.

CERTIFICATE OF WORD COUNT (37 C.F.R. § 42.24(d))

1. This Petition for *Inter Partes* Review complies with the type-volume limitation of 14,000 words, comprising 13,965 words, excluding the parts exempted by 37 C.F.R. § 42.24(a)(1).

2. This Petition for *Inter Partes* Review complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft® Word in 14-point Times New Roman font.

Respectfully submitted,

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Date: September 24, 2026

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CERTIFICATE OF SERVICE (37 C.F.R. §§ 42.6(e)), 42.105(a))

I certify that the above-captioned **PETITION FOR *INTER PARTES***
REVIEW FOR U.S. PATENT NO. 12,438,978 and associated Exhibits 1001-
1009, 1012, 1014, 1017-1022, 1024-1026, 1037-1045 were served in their
entireties upon the Patent Owner on September 24, 2026, via FedEx® Express at
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Additional Address Known to Petitioner as Likely to Effect Service

Respectfully submitted,

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