

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

STODGE, INC. D/B/A POSTSCRIPT

Petitioner,

v.

ATTENTIVE MOBILE INC.

Patent Owner.

Case IPR2024-00129

Patent No. 11,553,074

**DECLARATION OF SAM MALEK, Ph.D.
IN SUPPORT OF PATENT OWNER'S PRELIMINARY RESPONSE**

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EXHIBIT LIST

Exhibit	Description
2001	Declaration Of Sam Malek, Ph.D.
2002	<i>Curriculum Vitae</i> of Sam Malek, Ph.D.
2003	Lex Machina, Motion Metrics Report for 543 orders issued by Magistrate Judge Christopher J Burke (CJB)
2004	<i>Attentive Mobile Inc., v. Stodge Inc., d/b/a/ Postscript</i> , Case No. 1:23-cv-00087-CJB, Defendant Stodge Inc., d/b/a Postscript's Amended Answer and Counterclaims to Plaintiff's Complaint for Patent Infringement, Dkt. 50 (D. Del. Aug. 25, 2023)
2005	<i>Attentive Mobile Inc., v. Stodge Inc., d/b/a/ Postscript</i> , Case No. 1:23-cv-00087-CJB, Stipulation and Order Amending Schedule For Patent Infringement Counterclaim, Dkt. 74 (D. Del. Oct. 19, 2023)
2006	Lex Machina, U.S. District Court for the District of Delaware, cases between 2013-11-01 and 2023-11-07
2007	<i>Attentive Mobile Inc., v. Stodge Inc., d/b/a/ Postscript</i> , Case No. 1:23-cv-00087-CJB, Scheduling Order, Dkt. 20 (D. Del. Mar. 28, 2023)
2008	<i>Attentive Mobile Inc., v. 317 Labs, Inc. d/b/a Emotive et al.</i> , Case No. 1:22-cv-01163-CJB, Stipulation and [Proposed] Order to Modify Rule 16 Scheduling Order, Dkt. 52 (D. Del. Aug. 31, 2023)
2009	<i>Attentive Mobile Inc., v. Stodge Inc., d/b/a Postscript</i> , Case No. 1:3-cv-00087-CJB, Joint Letter Brief, Dkt. 127 (D. Del. Jan. 29, 2024)
2010	<i>Attentive Mobile Inc., v. Stodge Inc., d/b/a/ Postscript</i> , Case No. 1:23-cv-00087-CJB, Stodge Inc. d/b/a/ Postscript's Initial Invalidity Contentions (D. Del. July 27, 2023)
2011	File History for U.S. Patent 11,416,897

Exhibit	Description
2012	Press Release PR Newswire, <i>Attentive Co-Founder & CEO, Brian Long, Recognized as DMN 2019 40UNDER40 Award, Winner</i> (Aug. 6, 2019), https://markets.businessinsider.com/news/stocks/attentive-co-founder-ceo-brian-long-recognized-as-a-dmn-2019-40under40-award-winner-1028421503
2013	Sacra.com, <i>Attentive is a marketing tool for mobile messaging</i> , https://sacra.com/c/attentive/
2014	Eric Lambert, <i>Demystifying Text Marketing, Text-Based Support and “Double Opt-In”</i> , https://www.linkedin.com/pulse/demystifying-text-marketing-text-based-support-double-eric-lambert
2015	Michael Scheiner, <i>Attentive Gets the Message Out</i> (Feb. 27, 2020); https://crm.org/news/attentive-gets-the-message-out
2016	Patrice Hendriksen, <i>Attentive’s Compliance Features and Two-Tap Validated by Florida Federal Court</i> (Sept. 16, 2022), https://www.attentive.com/blog/attentives-compliance-florida-federal-court
2017	Abby Miller, <i>“DMN 2018 Award Winners”</i> (Jan. 25, 2019); https://www.dmnnews.com/dmn-2018-award-winners/
2018	2021 Glossy Awards, <i>Best Use of SMS, Attentive and Supergoop!</i>
2019	The Tech Tribune, <i>2023 Best Tech Startups in NYC</i> , https://the-techtribune.com/10-best-tech-startups-in-nyc/
2020	Attentive Reviews & Product Details, https://www.g2.com/products/attentive/reviews
2021	Business Wire, <i>Attentive Ranks #6 World’s Best Software for 2023</i> , (Sept. 27, 2023); https://www.business-wire.com/news/home/20230927658818/en/Attentive-Ranks-6-World%E2%80%99s-Best-Software-for-2023

Exhibit	Description
2022	PRNewswire, <i>Attentive Ranked #8 on LinkedIn's 2020 Top Startups List in the United States</i> , (Sept. 22, 2020)
2023	The Cloud 100 (Aug. 8.2023); https://www.forbes.com/lists/cloud100/?sh=6a9a510e7d9c
2024	G2 Fastest Growing Products for 2022, https://www.g2.com/best-software-companies/2022/fastest-growing?rank=23
2025	<i>Attentive's 2022 Year to Date</i> , https://www.attentive.com/year-to-date-2022
2026	BusinessWire, <i>Attentive Named to the 2023 Deloitte Technology Fast 500™</i> (Nov. 8, 2023); https://www.business-wire.com/news/home/20231108028698/en/Attentive-Named-to-the-2023-Deloitte-Technology-Fast-500%E2%84%A2?blaid=5291542
2027	Forbes, <i>Buying Soap Was Just the Start, Now The Company Wants to Text You, Too</i> (Apr. 29, 2022); https://www.forbes.com/sites/laurendebter/2022/04/29/buying-soap-was-just-the-start-now-the-company-wants-to-text-you-too/?sh=2f7416521073
2028	Attentive, <i>Convert visitors into subscribers</i> ; https://www.attentive.com/growth
2029	Patent information for Attentive Mobile Inc., https://www.attentive.com/legal/patents
2030	Attentive Debuts Signature "Two-Tap" Sign-Up Technology Within Instagram Stories; https://www.attentive.com/blog/attentive-instagram-stories
2031	Why SMS Marketing is The Way of The Future (plus, a spotlight on our friends at attentive®); https://www.sama-labs.com/why-sms-marketing-is-the-way-of-the-future-plus-a-spotlight-on-our-friends-at-attentive/

Exhibit	Description
2032	Barry Levine, <i>Led by TapCommerce founders, startup Attentive launches SMS/MMS marketing platform</i> ; https://martech.org/led-tapcommerce-founders-startup-attentive-launches-smsmms-marketing-platform/
2033	Weetech Solution, <i>TapCommerce's founders are back with Attentive, a messaging startup that's raised \$13M</i> (Apr. 27, 2022); https://www.weetechsolution.com/blog/tapcommerce-founders-are-back-with-attentive
2034	U.S. Patent 10,366,400, <i>Reducing Un-Subscription Rates for Electronic Marketing Communications</i> , to Stephane Moreau et al., issued July 30, 2019
2035	U.S. Patent Appl., 2016/0140627 A1, <i>Generating High Quality Leads For Marketing Campaigns</i> , to Stephanie Moreau, et al., issued May 19, 2016
2036	Attentive, <i>Rethinking messaging-based customer communications</i>
2037	Attentive, <i>Text Message Marketing</i> , https://info.attentive.com/10x-revenue-email-marketing/
2038	<i>Attentive Mobile Inc., v. 317 Labs, Inc. d/b/a Emotive</i> , Case No. 1:22-cv-01163-CJB, Joint Claim Construction Brief, Dkt. 70 (D. Del. Dec. 11, 2023)
2039	User-Agent, https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/User-Agent
2040	X-Forwarded-For, https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/X-Forwarded-For
2041	3GPP TS 23.040 V14.0.0 (2017-03), <i>3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Technical realization of the Short Message Service (SMS) (Release 14)</i> ; https://www.3gpp.org/ftp/Specs/archive/23_series/23.040/23040-e00.zip

Exhibit	Description
2042	File History for U.S. Patent 11,416,887

I, Sam Malek, Ph.D., declare as follows:

1. I have been engaged by King & Spalding LLP on behalf of Attentive Mobile Inc. (“Patent Owner”), to provide this Declaration concerning the technical subject matter relevant to the petition for *Inter Partes* Review (“Petition”) of U.S. Patent 11,553,074 (“the ’074 patent”).

2. I am over 18 years of age. I have personal knowledge of the facts stated in this Declaration and could testify competently to them if asked to do so.

3. I have reviewed and am familiar with the specification and the claims of the ’074 patent. In general, I will cite to the specification of a United States patent using the following formats: (Exhibit No. Col:Line Number(s)) or (Exhibit No. Paragraph Number(s)). For example, the citation (EX-1001 1:1–10) points to the ’074 patent specification at column 1, lines 1–10. Also, for convenience, I use italics to denote limitations from the challenged claims.

4. All the opinions in this Declaration are based on the documents I reviewed and my knowledge, experience, training and professional judgment. In forming the opinions expressed in this Declaration, I reviewed the Petition for *Inter Partes* Review of U.S. Patent No. 11,553,074 and supporting exhibits.

5. I have been asked to provide my technical opinions regarding how a person of ordinary skill in the art would have understood the claims of the ’074 patent at the time of the alleged invention. I have also been asked to provide my

technical opinions on how concepts in the '074 patent specification relate to claim limitations of the '074 patent. In reaching the opinions provided herein, I have considered the '074 patent, its prosecution history, and the references cited herein and have drawn as appropriate on my own education, training, research, knowledge, and personal and professional experience.

I. QUALIFICATIONS

6. In formulating my opinions, I have relied on my knowledge, training, and experience in the relevant field, which I will summarize briefly. A more detailed summary of my background, experience, and publications is set forth in my curriculum vitae (CV), which is submitted as Exhibit 2002.

7. I have more than two decades of experience in the general area of computer and software technology in a variety of roles, including as a software engineer, software architect, and programmer at a variety of companies, as well as a researcher and professor at several universities.

8. I am currently a Full Professor of Software Engineering with tenure in the Informatics Department within the School of Information and Computer Sciences at the University of California, Irvine. I am also the Director of the Software Engineering and Analysis Laboratory ("SEAL"). My general research interests are in the field of software engineering, and to date my focus has spanned the areas of software analysis and testing, mobile computing, architecture and

design, and software dependability and security. The underlying theme of my research has been to devise techniques and tools that aid with the construction, analysis, and maintenance of largescale software systems.

9. I received my Ph.D. and M.S. degrees in Computer Science from the University of Southern California and my B.S. degree in Information and Computer Science from the University of California, Irvine. I have received numerous awards for my research contributions, including the Test of Time Award from the Association for Computing Machinery Special Interest Group on Software Engineering (2020), National Science Foundation CAREER award (2013), GMU Emerging Researcher/Scholar/Creator award (2013), and the GMU Computer Science Department Outstanding Faculty Research Award (2011).

10. I have authored over 120 peer-reviewed research publications. These publications have been highly cited (more than 10,000 times according to scholar.google.com). I have received numerous research grants from a variety of organizations, including the National Science Foundation (NSF), Federal Bureau of Investigation (FBI), Air Force Office of Scientific Research, Department of Homeland Security (DHS), National Security Agency (NSA), Defense Advanced Research Projects Agency (DARPA), Office of the Director of National Intelligence, and Army Research Office among others. Software systems and results produced in

my research lab have been adopted for use by various organizations in both private (e.g., Boeing, Bosch) and public (e.g., NASA, DHS, FBI) organizations.

11. I also have several years of experience as a software engineer, software architect, and programmer at a variety of companies, namely the Boeing Company, PricewaterhouseCoopers Consulting (later acquired by International Business Machines (“IBM”) Corporation), FieldCentrix, and Neural Computing Systems Lab. During my tenure in the industry, I gained professional experience in the design, development, and management of largescale software engineering efforts. Among the software systems that I designed and developed were commercial ecommerce and enterprise software systems. An important part of my responsibility in these projects was implementation and evaluation of security mechanisms to protect the resulting software systems from security attacks.

12. I have taught software engineering and computer science courses on a regular basis at the B.S., M.S., and Ph.D. levels at the universities where I have been employed. I have been a frequent speaker at scientific conferences, symposia, workshops, and gatherings of software engineering academics and professionals. I have served as chair, committee member, and reviewer for numerous software engineering journals, magazines, and conferences. I am currently on the editorial board of the ACM Transactions on Software Engineering and Methodology, the ACM Transactions on Autonomous and Adaptive Systems, and the Springer Journal

of Computing. I am a member of the Association for Computing Machinery (ACM), ACM Special Interest Group on Software Engineering (SIGSOFT), and the Institute of Electrical and Electronics Engineers (IEEE). I have testified at trial and deposition as an expert witness in numerous cases in the past five years.

13. My experience is highly relevant to the technologies at issue in this case and their application here. As set forth above, during my tenure in industry, I contributed to the design and development of several largescale enterprise and ecommerce software systems. For example, while working as a software engineer at FieldCentrix Computing in the late 1990s, I contributed to the development of a mobile application on Windows CE that was used by field technicians for tasks such as scheduling, dispatching, and invoicing from the field. Subsequently, while working as a software engineer at PriceWaterhouseCoopers Consulting, I participated in the development of several e-commerce applications that included web-based advertisement and marketing features.

14. My PhD dissertation and subsequent research work as a professor has highly focused on mobile application development, including methods for message-based communication. As part of my PhD dissertation, I developed a middleware called Prism-MW, which provides support for message-based (also known as event-based) communication among components comprising a Java-based mobile application. I published the results of this work in several articles, including one

entitled “Software Architecture Support for Handheld Computing”, which appeared in the IEEE Computer magazine in 2003. Since then, a significant thrust of my research at the university has been on mobile computing, from novel ways of constructing mobile apps with message-oriented communication structure to novel ways of validating their behaviors through testing. I have received numerous research grants to develop new technologies involving mobile applications. One of these grants was for a project that was funded by the Department of Homeland Security. The project aimed to validate the security implications of message-based communication among Android apps. My research group developed a novel tool, called Covert, that could effectively detect such threats through an accurate analysis of how messages generated from one app can be delivered to other apps, and ways in which such messages can be intercepted or modified by an attacker in the Android platform. The results of this work were published in a paper entitled “COVERT: Compositional Analysis of Android Inter-App Permission Leakage” in the IEEE Transactions on Software Engineering journal in 2015.

15. As part of the courses that I regularly teach at the University at both undergraduate and graduate levels, I cover topics that are directly related to the technologies at issue in this case including mobile application development, message-based communication model, deep linking techniques, and web technologies such as HTTP, URI, and JavaScript. As associate editor of several

journals and committee member of many conferences, I regularly evaluate the novelty of article submissions related to the technologies at issue in this case for publication in these venues. For instance, in the past I have been a co-organizer of several meetings of the International Workshop on Advances in Mobile App Analysis, and a program committee member of several editions of the IEEE/ACM International Conference on Mobile Software Engineering and Systems.

II. UNDERSTANDING OF RELEVANT LEGAL PRINCIPLES

16. I am not a lawyer, and I will not provide any legal opinions. Although I am not a lawyer, I have been advised certain legal standards are to be applied by technical experts in forming opinions regarding the meaning and validity of patent claims.

17. I understand that a patent claim is invalid if it is anticipated or obvious in view of the prior art, and that a claim can be unpatentable even if all of the requirements of the claim cannot be found in a single prior art reference. I further understand that invalidity of a claim requires that the claim be anticipated or obvious from the perspective of a person of ordinary skill in the art at the time the invention was made.

18. I have been informed that a patent claim is invalid if it would have been obvious to a person of ordinary skill in the art. In analyzing the obviousness of a claim, I understand the following factors may be taken into account: (1) the scope

and content of the prior art; (2) the differences between the prior art and the claims; (3) the level of ordinary skill in the art; and (4) any so called “secondary considerations” of nonobviousness if they are present.

19. I have been informed that a claim can be obvious in light of a single prior art reference or multiple prior art references. I understand that to prove that prior art or a combination of prior art renders a patent obvious, it is necessary to:

- 1) Identify the particular references that, singly or in combination, make the patent obvious;
- 2) Specifically identify which elements of the patent claim appear in each of the asserted references; and
- 3) Explain why a person of ordinary skill in the art would have combined the references, and how they would have done so, to create the inventions claimed in the patent. I further understand that exemplary rationales that may support a conclusion of obviousness include:
 - Combining prior art elements according to known methods to yield predictable results;
 - Simple substitution of known element for another to obtain predictable results;
 - Use of known technique(s) to improve similar devices (methods or products) in the same way;
 - Applying a known technique to a known device (method or product) ready for improvement to yield predictable results;

- “Obvious to try” – choosing from a finite number of identified, predictable solutions with a reasonable expectation of success;
- Known work in one field of endeavor may prompt variations of the work for use in either the same field or a different field based on design incentives or other market forces if the variations are predicable to a person of ordinary skill in the art; and
- Some teaching, suggestion, or motivation in the prior art that would have led a person of ordinary skill in the art to modify the prior art reference or to combine the prior art reference teachings to arrive at the claimed invention.

20. I understand that a patent composed of several elements is not proved obvious by merely demonstrating that each of its elements was, independently, known in the prior art. I further understand that one must identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.

21. I have been informed that, in considering obviousness, hindsight reasoning derived from the patent-at-issue may not be used.

III. STATE OF THE PRIOR ART

22. With the advent of Internet-connected mobile electronic devices, vendors acquired new ways of engaging mobile device users. (EX-1001 1:26-28.) For example, users reading an email or viewing a website might click or tap on their mobile device and be redirected to a vendor’s application or website. (EX-1001

1:30-37.) Once there, the user could select and purchase the vendor's products or services, as well as provide payment information to complete a transaction. (*Id.*) However, because this process required keeping the user's attention as they navigate the application or website (i.e., by clicking or tapping the screen)—and they had often paused their initial activity to be redirected—many users left the purchase before the transaction could be completed. (*Id.*)

23. Accordingly, an improved method for transitioning a user from one interface to another interface on a mobile device to complete, for example, a subscription, communication, and/or purchase, while still maintaining and improving a user's experience and engagement, was needed. (EX-1001, 1:38-42.)

IV. THE '074 PATENT

A. Summary Of The '074 Patent

24. The '074 patent discloses an improved technology platform and method for completing messaging-based subscriptions, communications, and/or purchases that a user initiates from a website viewed on a mobile device. (EX-1001, 2:18-28, 1:20-25; 7:20-28.) While the '074 patent enabled the use of “two-tap signup” across a variety of transactions, the challenged claims specifically recite the application of the patented technology within the context of a text message subscription service, enabling the ability to enroll a user without the need for further opt-in communications. (*E.g.*, EX-1001 10:6-10, cls. 1, 8, 16, 23, 6:27-57, Figs. 2A-2D.)

25. The '074 patent discloses a platform that may be implemented across a network having three parties: a click-to-text server, client server, and user mobile device:

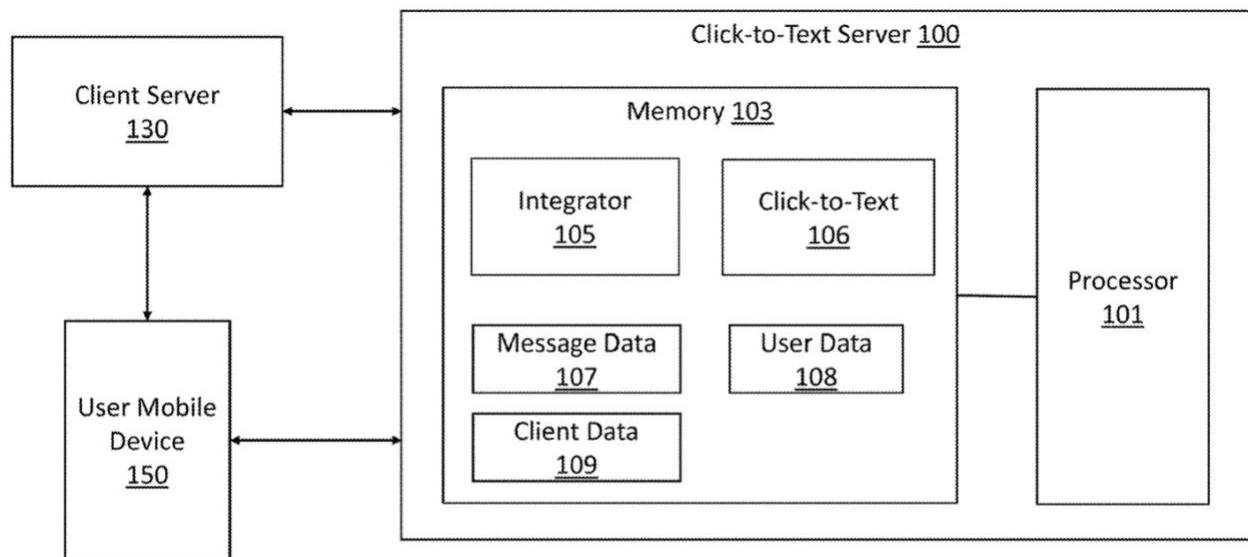


FIG. 1

(EX-1001 Fig. 1, 4:13-17.) The '074 patent describes one embodiment of a click-to-text server as a device capable of executing a “click-to-text process.” (EX-1001 4:32-5:7.) A client or vendor involved in Internet promotional activities serves a webpage that the user may load on their mobile device. (EX-1001 5:33-42, 6:27-36, cl. 1, 8, 16, 23.)

26. The click-to-text server sends a means for displaying, e.g., an integration tag, to the client server, such that the client server may serve a hosted webpage. (EX-1001 4:63-66, 11:23-45, cl. 1, 8, 16, 23.) For example, an “integration tag” may contain code representing “integrator instructions” or

instructions which cause the executing device to send a request to the click-to-text server and receive the client's promotional message. (EX-1001 4:63-5:3.)

27. The '074 patent teaches that when the user's mobile device loads the webpage in a mobile application, e.g., a browser, and the integration tag is executed, the tag will additionally cause the mobile device to send user data to either the client server or the click-to-text server. (EX-1001 7:42-53, 11:53-63, cl. 1, 8, 16, 23.) For example, a user identifier may be provided, such as a phone number, such that the click-to-text server can authenticate the user by, *e.g.*, determining whether the user is on a blacklist (to be blocked) or whitelist (permitted) associated with the client. (EX-1001 7:53-66.) The click-to-text server might alternatively or additionally determine, based on the user identifier, whether the user is a new or existing subscriber of the client to better customize the server's response to the user. (EX-1001 8:6-21.)

28. In order to achieve improved user experience and engagement, the '074 patented invention employs several key techniques within its "two-tap" method—i.e., a method in which a subscription process can be initiated and completed by two screen taps—to switch the user from, e.g., a mobile website or application to a subscription message on a mobile messaging application. (EX-1001 2:33-37, 2:53-65) In particular, the patent discloses a "custom-generated mobile deeplink." (EX-1001 2:38-52.) For example, the click-to-text server may define and send a means

for causing the mobile device to transition from a first application to a messaging application, e.g., a uniform resource identifier (URI). (EX-1001 cls. 1, 8, 16, 23.) That is, the means causes the device to automatically transition to a messaging application and auto-populate a custom message to the click-to-text server. (EX-1001 cls. 1, 8, 16, 23; 8:32-44, 9:45-65.) The message may include an address for the server, as well as a message body having an identifier associated with the webpage or the user data. (EX-1001 2:65-3:15, 8:32-44, 14:45-49.)

29. Accordingly, the patented technology platform may be used to implement a “two-tap” enrollment in a messaging-based subscription service and to deliver an installment of the subscription service without requiring any further user interaction after sending the text message. (EX-1001, 2:33-37, 19:61-65, cls. 1, 8, 16, 23.) In this way, the ’074 patent improves a user’s experience while shopping and interacting with a client’s webpage on their mobile device and increased user engagement with the client’s promotional messaging and marketing efforts. (EX-1001 19:65-20:3.)

B. Claim Construction

30. While I am aware that Petitioner has proposed a variety of constructions in the district court claim construction briefing (EX-2038), I understand that the parties agree in this proceeding that no claim terms need be

construed and that all claim terms should carry their plain and ordinary meaning in light of the intrinsic record. (Petition 10.)

31. Consistent with the above understanding, I apply the plain and ordinary meaning of all claim terms for purposes of this declaration.

C. Level Of Ordinary Skill In The Art

32. I understand that certain issues relating to the validity of the '074 patent must be judged from the perspective of a person of ordinary skill in the relevant art, as I discuss below. I have been asked to define the level of a “person having ordinary skill in the art” or “POSITA” that someone would have had at the time the alleged invention as claimed was made. In deciding the level of ordinary skill, I have considered the following factors, which I have been informed are relevant in determining the level of ordinary skill in the art:

- The levels of education and experience of persons working in the field;
- The types of problems encountered in the art;
- The prior art solutions to these problems;
- The rapidity with which innovations are made; and
- The sophistication of the technology.

33. A POSITA at the time of the invention of the '074 patent (May 2017) would have had a bachelor's degree in an accredited program of computer science, computer engineering, electrical engineering, or a similar discipline, and have 2-3

years of practical work or research experience in mobile and web application programming. More advanced degrees and/or training in a related discipline can compensate for shorter work experience.

34. I understand that Petitioner's expert Dr. Houh has defined the level of ordinary skill in the art as:

In my opinion, a PHOSITA in the relevant timeframe would have had a Bachelor's Degree in computer science and three years of experience in Web-based programming methods, where a higher level of education may substitute for experience and vice-versa.

(EX-1002 46.)

35. Despite minor variations in these two positions, these variations would not alter my opinions expressed in this Declaration.

36. Based on either standard, I was at least a person of ordinary skill in the art at the time of the invention of the '074 patent.

V. OVERVIEW OF PRIOR ART

A. Overview Of Oliver

37. Oliver is directed to a system and method for "creating a passive entity" associated with a promotion that, when scanned or read, generates a prepopulated message on a user's communication device. (EX-1011 [0002].)

38. Oliver defines "passive entities" as "images, codes, tags, or any other unique identifiers that may be encoded with uniquely identifying information and

codes.” (EX-1011 [0007].) When describing how the “passive entities” are used in practice, Oliver uses the term interchangeably with “generated sign.” (EX-1011 Abstract, [0033].) Although Petitioner describes these “passive entities” as “essentially anything with which a mobile device can interact,” my understanding of Oliver does not support such a broad reading. (Petition 20; EX-1011 Abstract, [0007], [0033], [0035], [0027]-[0029].)

39. Oliver specifically identifies these examples as *passive*. The examples Oliver identifies in its specification are consistent with this understanding. (See EX-1011 [0007], [0003] (identifying a QR code, near-field communication (NFC) tag, radio frequency identification (RFID) tag, or short message service (SMS) message).) For example, Oliver points most often to a QR code containing encoded data. (EX-1011 Fig. 1, [0007].) Unlike an interactive link, which requires that the user actually select or click the link, Oliver teaches that a user may activate a “passive” entity by simply gathering the data from the entity. (EX-1011 [0033].) Specifically, Oliver states that users “activat[e]” a passive entity by “scanning, reading, or otherwise **inputting the unique information contained in the passive entity into a device** operated by the user” or by merely being present near a passive entity while equipped with a passive entity receiver. (EX-1011 [0007].) That some entities may require the user to input information into a device indicates that

interaction between the entity and the device directly may be impossible. (*See id.*) Thus, Petitioner's broad description of a passive entity is inaccurate.

40. Oliver laments the fact that, while many businesses use “passive entities or identifiers...as a means of presenting promotions for their products and services,” such prior art use was limited to placing passive entities “on promotional displays and items as a means to navigate a consumer to a particular place in the digital world.” (EX-1011 [0003].) Oliver explains that businesses which created the passive entity “may not even know that anyone has taken an action towards activating one of their passive entities.” (EX-1011 [0003].)

41. Accordingly, Oliver discloses a “lead generation tool” used to create a passive entity (e.g., QR code or sign). (EX-1011 [0007].) When the user activates the passive entity, the user is prompted to send a message in order to obtain a link to a reward—i.e., something of value to the user. (EX-1011 [0007], [0026], [0040]-[0042], Figs. 5-6, 8-10.) Oliver teaches that a responsive message is generated for that user that contains one or more links to the reward and that, in particular, these links are “trackable parameterized links to web application,” which allow the business to track user engagement with the link:



(EX-1011 Fig. 10 (excerpted).) That is, to obtain the benefit of Oliver—i.e., tracking user engagement with passive entities and engaging in a one-time exchange of information with potential customers—Oliver’s method requires three interactions from the user: (1) activating the passive entity; (2) sending a message to the web

application; and (3) selecting the link that is returned by the web application to obtain the promised reward. (EX-1011 Figs. 5-6, [0039]-[0042].)

B. Overview Of Agrawal

42. Agrawal discloses a method for determining whether interactions with an online advertising link are legitimate or the result of malicious activity. (EX-1005 Abstract, Figs. 3, 5.)

43. Agrawal discloses an environment in which the user's web browser is presented with an advertising link:

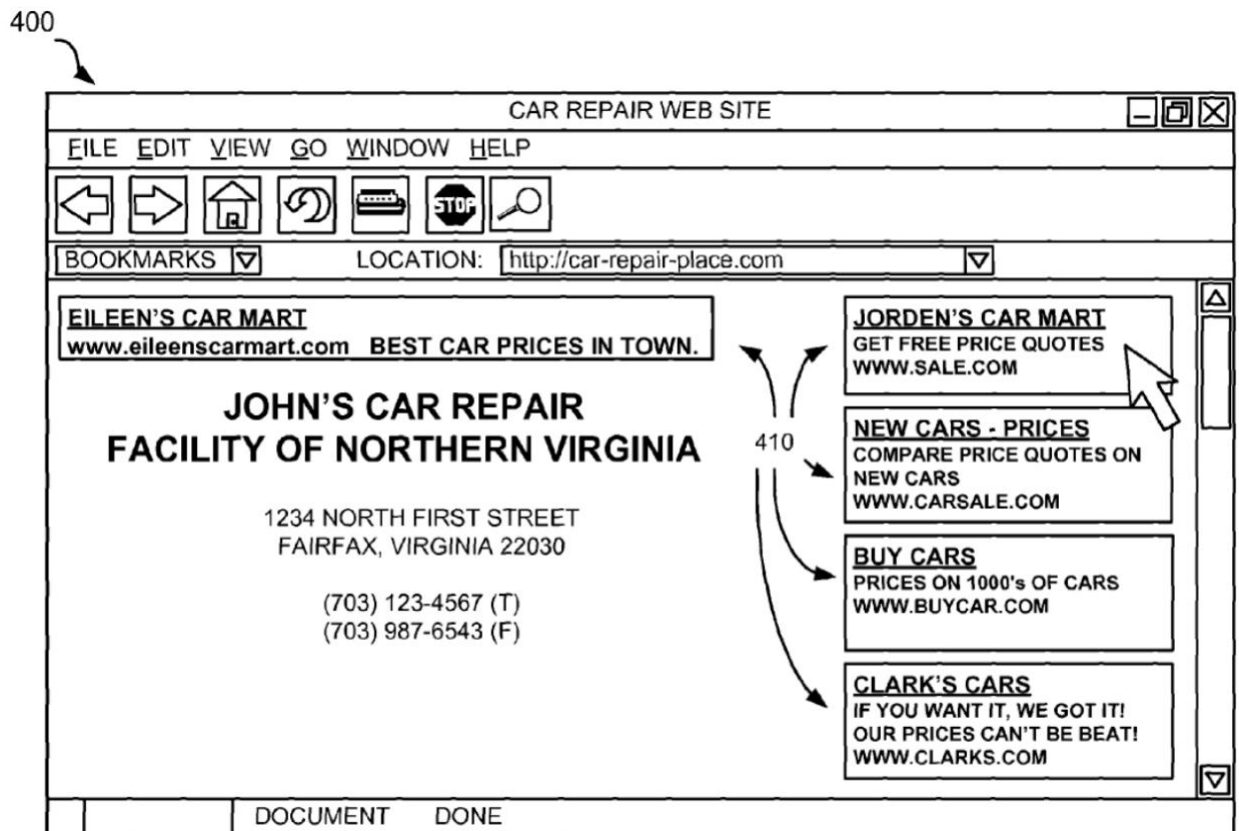


FIG. 4

(EX-1005 Fig. 4, 1:18-25.) Agrawal defines these advertising links as links which cause – when selected or clicked – the user’s web browser “to visit a web page belonging to the advertiser associated with the advertising link.” (EX-1005 1:18-25.)

44. Agrawal explains that on-line advertising systems often track impressions (i.e., presentation of a link to a user) and clicks to calculate advertising charges. (EX-1005 1:26-33.) Since many advertising systems will charge companies a pre-determined fee for each click or impression associated with an advertisement, more clicks/impressions results in higher advertising fees. (See EX-1005 1:34-39.) One of the vulnerabilities of such a system, which Agrawal seeks to address, is that malicious individuals may seek to artificially inflate the click count or impression count associated with a company’s advertising link. (EX-1005 1:39-46.) Agrawal teaches that individuals or “click-bots” can mimic real network traffic by continually causing the advertising link to be displayed and clicking on the link, such that a company may be charged for clicks or impressions that do not correspond to legitimate (or real) users. (EX-1005 1:42-54.)

45. Accordingly, Agrawal discloses a method for determining whether interactions with an online advertising link are legitimate or the result of malicious activity. (EX-1005 Abstract, Figs. 3, 5, cl. 1.) Agrawal accomplishes this

determination through the collection and comparison of information associated with a user's interaction with web-based links. (*See, e.g.*, EX-1005 cl. 1.)

46. For example, Agrawal teaches that when a user requests a webpage, an “advertisement query request” is generated, requesting advertising links to populate the webpage. (*E.g.*, EX-1005 5:45-6:46.) The server may collect a first group of information associated with this first request. (*See id.*) Agrawal teaches that when a user selects one of the advertising links contained in the webpage, an “advertisement click request” is generated. (*E.g.*, EX-1005 6:47-7:44.) Here, a second group of information associated with this second request is collected. (*See id.*) Agrawal teaches that such information may, for example, be obtained via the user's browser, but that regardless of how the information is collected, it is sent by Hyper Text Transfer Protocol (HTTP) to the server as part of the request. (EX-1005 5:64-6:46.)

47. The critical step in Agrawal's method is the comparison of these two sets of information. (EX-1005 7:45-62.) A discrepancy in the information gathered at the time of the advertisement query request and the information gathered at the time of the advertisement click request indicates illegitimate advertising activity, whereas a match suggest legitimate activity. (EX-1005 7:63-8:12.)

48. Agrawal also discloses a similar but slightly alternative method in which legitimate information is collected over a period of time to generate and store

a distribution of that information. (EX-1005 9:29-40.) A distribution is then generated over predetermined intervals and compared to the stored distribution, such that a match within a certain threshold indicates legitimate advertising activity. (EX-1005 9:40-55.)

49. By collecting and comparing this information, Agrawal teaches that engagement with web-based advertising links may be determined to be legitimate or illegitimate and that, based on this determination, advertising fees may be adjusted to ensure accuracy. (EX-1005 8:59-60, 9:56-58.)

C. Overview Of Khanna

50. Khanna discloses a method and system for launching an application from a webpage to display a product landing page. (EX-1034, Title, Abstract, cl. 1, [0005].)

51. In particular, Khanna discloses specialized “content items”—i.e., data that can be provided over a network, such as an advertisement including a link to a landing page. (EX-1034 [0029].) Content items can be presented within a web page or with a web page, such as in a pop-up window. (EX-1034 [0003].)

52. Khanna discloses a specialized content item, which includes “a first data element that identifies an application, a second data element that identifies a product, and a set of instructions.” (EX-1034 [0005]-[0006], cl. 1.) When a user selects the content item, the user’s device executes the set of instructions, causing

the processing device to check whether the identified application is installed, transmit a request containing the first data element to a server to install the application, and launch the application with the second data element as an input, such that the first content displayed by the application relates to the product. (EX-1034 [0005]-[0006], Abstract, cl. 1.)

53. Khanna notes that publishers or advertisers may use these specialized content items to “deep-link” directly to the content within their own applications in order to create opportunities for the publisher to drive more business. (EX-1034 [0025].) Khanna defines “deep-linking” as “making a hyperlink that points to a specific content (e.g., a webpage or image) on a destination website, instead of that website’s main or home page.” (EX-1034 [0030].)

For example, an online merchant’s website may have a main or home page that welcomes visitors and helps them to find content or products of interest. A visitor may navigate to other webpages within the website that include content related to particular products. A link that directs a user to a webpage for a particular product on the merchant’s website, without viewing the main or home page, is an example of a deep-link. (EX-1034 [0030].)

54. Khanna teaches that its method for launching an application from a webpage can be used to facilitate deep-linking—specifically, when data elements

identifying a product of interest are passed to an application, such as a shopping application. (EX-1034 [0026]-[0027].) For example:

When a user selects (e.g., clicks on) the content item, if the application is installed, the application may be launched with the associated product related data elements as inputs so that the content (e.g., a landing page) related to the product is displayed in the application.

(EX-1034 [0027].)

55. The user may be presented with multiple applications that may handle the landing page for the content item's product, allowing them to select their preferred application. (EX-1034 [0063].) The user may also be presented with a single option and their permission requested to launch the application. (*Id.* (“This link is going to open Company App. Do you want to open this app? (Y/N)”)).) Thus, Khanna discloses a method for launching an application from a webpage to display a product's landing page. (EX-1034, Title, Abstract, cl. 1.)

56. The '074 patent acknowledged known prior art methods similar to Khanna—*i.e.*, methods which “allow a user to open a vendor's application or a vendor's website on a mobile device,” where the user had the option of completing a transaction. (EX-1001 1:26-30.) The '074 patent explains that the disadvantage of such a method is that it typically involves further user input (e.g., clicks, or screen taps) to provide information or payment and complete the transaction. (EX-1001

1:30-35.) “This time-consuming and burdensome process results in many users leaving the purchase before the transaction is complete.” (EX-1001 1:35-37.)

VI. GROUNDS 1-2 DO NOT DISCLOSE OR RENDER OBVIOUS ALL LIMITATIONS OF THE INDEPENDENT CLAIMS

57. I understand that Petitioner and its expert, Dr. Henry Houh, allege that a combination of Oliver, Agrawal, and Khanna renders obvious every limitation of the independent claims 1, 8, 16, 23, and this three-reference combination underlies their challenge of the remaining dependent claims under Ground 1 and 2.

Ground 1	Section 103(a)	Obvious over Oliver in view of Agrawal and Khanna	Claims 1-30
Ground 2	Section 103(a)	Obvious over Ground 1, in further view of Molinet	Claims 1-30

58. I disagree with the arguments in the Petition and the opinions set forth by Dr. Houh for at least the reasons that I discuss in further detail below.

A. A POSITA Would Not Have Been Motivated To Combine The Teachings of Oliver, Agrawal, and Khanna

59. A POSITA would not have been motivated to combine the teachings of Oliver, Agrawal, and Khanna for the reasons Petitioner asserts. Petitioner asserts that it would have been obvious: “to implement Oliver’s business method by presenting links in Web ads, using an ad system such as Agrawal’s, and to augment the system with Khanna’s techniques to deeplink to mobile applications.” (Petition 19.) But Petitioner’s rationale for such a combination fails to acknowledge the

distinct environments and goals across these references, as well as the explicit teachings of these references that prohibit such a combination.

60. **Oliver and Agrawal**. Petitioner’s first rationale for combining Oliver and Agrawal is based on its understanding that Oliver’s method allegedly provides “a streamlined way to acquire contact information for potential customers, and to acquire the potential customer’s consent to receive marketing communications and proof of possession of the mobile device.” (Petition 19.) This assertion misstates Oliver.

61. Oliver does not disclose acquiring consent to receive marketing communications or proof of possession of a mobile device. For example, the disclosure of Oliver cited by Petitioner merely explains that contact information may be obtained during the application of Oliver’s method, such that a meaningful communication may take place between the person and the business. (See EX-1011 [0009].) But Oliver discloses a method by which a user activates a passive entity as a one-time opt-in to receive a responsive message with a link (or links) to a reward. (See Section V(A), *supra*; see also, e.g., EX-1011 [0008] (returning a single response to the user containing the promotional reward or other information to the user), [0030] (describing the method “for providing a promotional reward to a user [] via a response message, in accordance with the disclosed principles”).)

62. Oliver does not discuss acquiring consent for future communications. It also does not discuss obtaining proof of possession of a mobile device, particularly since Oliver discloses a variety of passive entities that may not involve a mobile device at all. (*See* EX-1011 [0003].)

63. Indeed, Oliver teaches that in order to receive any further messages or promotional rewards, the user would have to activate a passive entity and repeat Oliver’s process again. (*See* EX-1011 [0045].) For example, Oliver teaches that the disclosed method can register (and limit) the specific number of scans by the same user activating the same passive entity—indicating that each scan will result in a singular promotional reward and that to obtain multiple rewards or responsive messages, a user must repeatedly activate a passive entity. (*Id.*) This understanding of Oliver’s method is consistent with Oliver’s purpose—i.e., enabling businesses to track where someone “has taken an action towards activating one of their passive entities.” (*See* EX-1011 [0003].) Oliver even discloses a “use token” which may be generated and added to the reward URL link that is provided in the responsive message back to the user. (*Id.* [0045].) The token “will ensure that a given reward is only accessed once for every scan.” (*Id.*)

64. Petitioner’s own arguments indicate a similar understanding of Oliver’s intended purpose. For example, Petitioner argues that a POSITA “would have found Agrawal’s authentication system advantageous to carry out *Oliver’s express desire*

to ... impose limits on the user's access to promotions." (Petition 20-21.) Imposing limits on the user's access to promotions is the exact opposite of obtaining consent for future marketing communications.

65. Petitioner's second rationale for combining the teachings of Oliver and Agrawal is not actually a rationale at all. Petitioner argues that "[t]o make use of Agrawal in Oliver's business method, a PHOSITA would have found it obvious to use the concept of mobile app deeplinks that pre-populated text messages (like Oliver's) as links (e.g., links 410) in Agrawal's web ads." (Petition 20.) Petition does not actually explain *why* a POSITA would have found such a combination obvious—rather, Petitioner mostly just describes the alleged similarities between Oliver and Agrawal. (See Petition 20.)

66. Moreover, it would not have been obvious to a POSITA to combine these references as Petitioner suggests. As a preliminary matter, Oliver does not use the term "mobile app deeplinks" or even "deeplink," and Petitioner does not explain or support its assertion. Oliver discloses a method implemented in passive entities—*e.g.*, QR codes, Near-Field Communication (NFC) tags, Radio Frequency Identification (RFID) tags, Short Message Service (SMS) messages "used on promotional displays and items as a means to navigate a consumer to a particular place in the digital world." (EX-1011 [0003].) Whereas Oliver discloses encoding information into these passive entities, *e.g.*, a QR code, Agrawal discloses hyperlink

or URL-based advertisements. (*Compare* EX-1011 [0027]-[0029] *with* EX-1005 Abstract, Fig. 4, 3:46-58, 8:13-37.) That is, Oliver and Agrawal disclose wholly different operating environments.

67. For example, Agrawal's web-based environment relies on web-based protocols to achieve its intended purpose. (*See* EX-1005 1:19-26; *see also* Section V(B), *supra*.) Agrawal discloses a method of verifying advertising activity by collecting and comparing information obtained via the client's web browser, which exchanges information with a server via the Hyper Text Transfer Protocol (HTTP). (EX-1005 6:30-43, 6:14-18; *see also id.* 5:29-6:67, Fig. 3.) In contrast to Agrawal, however, Oliver's method for activating a passive entity in order to send an SMS message does not involve a web browser or an exchange of information with a server.¹ (*See generally* EX-1011; *e.g.*, *id.* cl. 1; Section V(A), *supra*.) Oliver teaches that activation of a passive entity will open the SMS client on the mobile device—which does not result in a HTTP request. (EX-1011 [0005]-[0006], [0026]-[0029].)

¹ Note that while Oliver discloses a user interacting with the URL provided in the responsive message via a browser, this takes place only after the user has activated a passive entity, sent a message, and received the responsive message with reward link. (*E.g.*, EX-1011 [0042], [0043].)

That is, unlike Agrawal, which is explicitly reliant on web-based communication protocols, Oliver is explicitly reliant on distinct phone-based messaging protocols.

68. Agrawal teaches:

[W]hen the user requests access to document **400**, an advertisement query request may be generated to retrieve advertising links **410** for document **400**. In addition, a combination of browser information, client information, and/or user information may be collected. Assume, for explanatory purposes, that the following combination of information is collected-that the browser being used is Netscape, that the browser has java enabled, that the time zone in which client **110** is located is the Eastern time zone, and that the IP address is 100.100.10.10.

(See EX-1005 8:28-37.) Agrawal teaches that when an advertising link is selected, an advertising click request is generated and sent to the server to report the selection of the advertising link, and that the same type of information is collected from this request. (See EX-1005 8:38-49.) The two sets of browser information, client information, and/or user information are then compared to determine if they do not match, which could indicate an illegitimate advertising activity. (See Ex 1005 8:50-60).

69. A POSITA would have understood that the information collected in Agrawal is contained in the HTTP header of an HTTP request object, because a POSITA would be familiar with web protocols, including HTTP. HTTP header

contains information that among others allows a server to identify the browser type and version (EX-2039) and the IP address of a client. (EX-2040.) The HTTP header also contains information about the time zone in which a client is located. (EX-2039.)

70. Unlike Agrawal, Oliver teaches a system where the user sends Short Message Service (SMS) text messages. SMS protocol is fundamentally different from HTTP protocol. First, it does not run on top of TCP/IP protocol layers, therefore, an SMS message does not have an IP address. Second, it does not contain any information about the client browser type and version, because SMS messages are not sent by browsers. (EX-2041.) Naturally, it contains no information about whether the browser supports java.

71. A POSITA would have been familiar with HTTP and SMS at the time of invention and would have readily realized that Agrawal's method of detecting illegitimate advertising activity targets web-based traffic running on HTTP, which allows the kind of information needed by Agrawal's system to be collected. A POSITA would have realized Agrawal's allegedly inventive method is not compatible with SMS-based communications occurring over cellular networks.

72. Moreover, Oliver does not disclose two interactions with a server. In Oliver, the QR code directly instructs the mobile device to open the SMS message and prepopulates a ready to send text message. (See EX-1011, Fig 8.) The text

message is then sent to a pre-populated phone number or a shortcode (which is just a short telephone number, like 911), and not a server. (See EX-1011, Fig 8.) Therefore, in Oliver, there are no two sets of information that can be collected by a server to allow Agrawal’s system to be applied. For this additional reason, a POSITA would have realized Agrawal and Oliver are incompatible and cannot be combined.

73. The criticalness of this distinction is clear—even Petitioner admits that “different operating environments may not use or allow all deeplinking protocols.” (Petition 69.) Here, the distinction is not even limited to a mere difference between *mobile* operating environments; rather, Agrawal is directed to a web-based environment and an advertising verification method reliant on web-based protocols, whereas Oliver is not. Accordingly, a POSITA would not be motivated to combine their teachings in the asserted way. Furthermore, as I will discuss in more detail with respect to one of the limitations below, attempting to combine the references’ teachings in such a way would render Agrawal non-functional, further discouraging the combination in the first place. (See Section VI(C)(1), *infra*.)

74. **Agrawal and Khanna.** The majority of Petitioner’s argument that one would “augment” Agrawal’s system with Khanna’s teachings (Petition 21) again fails to provide an actual rationale for combining the teachings, instead relying only on “the common origin of the patents and the natural technological relationship between the two references”—i.e., the fact that “[b]oth references are intended for

use with web-based advertising.” (Petition 21-22.) However, such similarities could be said about many distinct technologies and do not actually explain why a POSITA might have combined these two references, specifically.

75. The only motivation Petitioner cites is that a POSITA would have allegedly desired Khanna’s method because it “[a]llow[s] publishers or advertisers to create content items that deep-link directly to the content within their applications.” (Petition 22.) However, this could not possibly serve as the rationale for assembling the combination on which Petitioner relies, because in Petitioner’s proposed combination, Khanna’s method is not used to “deep-link directly to the content within [advertisers’] applications.” (*Compare id. 22 with id. 42-44.*) Rather, Petitioner argues that one would have used Khanna’s method to deep-link from a web browser to a pre-populated text message in a messaging application (i.e., an application that does not belong to the advertiser). (Petition 42-44.)

76. Petitioner’s limitation-specific analysis of the asserted combination merely cites back to its generalized motivation to combine and, therefore, does not address the discrepancy between Khanna’s actual teachings and how Khanna would allegedly be used in the combination. (Petition 41.) Petitioner merely assumes and concludes—without explanation and without ever discussing why one might combine Oliver and Khanna—that “[i]n the combination, the second application is a text messaging application, as taught by Oliver.” (Petition 43.)

77. A POSITA would understand that Khanna’s deeplinking technique is reliant on Khanna’s specialized web-based content item, which is particularly designed to deeplink to a specific product landing page within an advertiser’s application—not a messaging application. (See EX-1034 Abstract, Fig. 2 (steps 202-206), [0002]-[0005]; *see also* Section V(C), *supra*.) For example, many of Khanna’s embodiments specifically launch a vendor-specific shopping application (EX-1034 [0015], [0027], [0045]-[0046])—one of the prior art techniques criticized by the ’074 patent as needing improvement. (EX-1001 1:26-37; Section V(C), *supra*.)

78. Khanna teaches that publishers or advertisers may create content items which include “a first data element that identifies an application, a second data element that identifies a product, and a set of instructions.” (EX-1034 [0005]-[0006], cl. 1.) The second data element is then used as input for the vendor’s application, “so that the first content displayed by the application relates to the product.” (EX-1034 Abstract, cl. 1, [0005].) This specific step of linking to a product page in an advertiser’s specialized application is critical to achieving many of the advantages identified by Khanna—e.g., facilitating purchase transactions, streamlining the process of finding and purchasing products, encouraging users to adopt the advertiser’s online shopping application, increasing the install base for an advertiser’s application, etc. (EX-1034 [0015].) A POSITA would not have been motivated to modify Khanna’s technique to achieve the proposed result (linking to

a messaging application) and combined that teaching with Agrawal when doing so would have negated the very advantages Khanna was trying to achieve by linking to an advertiser's application.

79. Furthermore, Agrawal does not disclose a mobile operating environment, nor does it disclose an environment supporting applications. (See generally Section V(B), *supra*; EX-1005.) Figure 4, for example, depicts a typical screen view from a desktop computer. (EX-1005 Fig. 4.) Accordingly, a POSITA would not have found Khanna's teachings of transitioning users from a webpage to an application relevant to Agrawal's system and method.

80. **The Asserted Combination.** As to the combination of all three references, Petitioner asserts that such a combination would have been "the application of known techniques (Oliver and Khanna), for their known functions, in order to improve Agrawal, with no unpredictable results." (Petition 23.) But as I have discussed above, Oliver and Khanna are clearly not being used for their disclosed techniques. For example, Oliver discloses a method in which a user activates a passive entity and sends a message to trigger a one-time responsive message with a trackable reward link. (Section V(A), *supra*.) But Petitioner's combination relies on a greatly modified application of Oliver's teachings in an environment lacking passive entities and to purportedly allow for multiple transactions where Oliver teaches a limited transaction. (Petition 19-20.) As another

example, Khanna discloses a specialized content item that will redirect a user from a webpage to the product landing page of a particular advertiser's application—and does not disclose redirecting the user to a messaging application. (Section V(C), *supra*.) Petitioner's arguments are dependent on unsupported leaps from the prior art disclosures to the alleged resulting combination, but Petitioner fails to support these leaps or explain why a POSITA would have been motivated to modify and combine the prior art teachings to practice the challenged claims.

81. Based on the distinctions I've discussed, Agrawal cannot be improved to attain the benefits alleged by Petitioner. Rather, the asserted combination would strip Oliver of its inventive aspect—generating passive entities that lead the user to a trackable reward link, because the combination would no longer be applicable to passive entities and would no longer return a responsive message to users with the trackable link. Alternatively, the asserted combination would prevent Agrawal from verifying advertising activity, because Agrawal relies on web-based protocols to collect the information necessary to verify the activity, but Oliver bypasses any server or making any web-based request by using phone-based messaging protocols. And the advantages Khanna discloses (and which Petitioner cites) are achieved through transitioning the user to an advertiser's application—not the messaging application. Accordingly, a POSITA would not be motivated to combine the references' teachings.

82. Finally, Petitioner’s generic assertion that a POSITA would combine the functionalities of all three references into a single server, merely because each reference “provides functionality with a server” (Petition 22-23) fails to take into consideration the distinct operating environments and their lack of compatibility, which I have discussed above.

B. No Combination of Oliver, Agrawal, and Khanna Renders Obvious A Text Messaging Subscription Service

83. None of Oliver, Agrawal, and Khanna—either alone or together—discloses or renders obvious a subscription service or list.

84. The ’074 patent recites several limitations relating to a subscription service or subscription list:

Claim Limitation	Claim Language
Cl. [1e]; see also cl. [8e], [16d], [23d]	<i>receiving, at the mobile device, from the at least one web server, and in response to sending the mobile device identifier and the request to retrieve the identifier, a first signal causing a frame to be displayed with the webpage via the web browser application, the frame including a promotional message associated with joining a subscription list</i>
Cl. [1g.2]; see also cl. [8g.2], [16f], [23f]	<i>receiving, from the at least one web server and in response to at least one of (1) the integration tag executing or (2) the indication of the first user interaction, a uniform resource identifier (URI) that deeplinks to and causes the mobile device to</i>

Claim Limitation	Claim Language
	<i>automatically (1) switch from rendering the web browser application to rendering a text messaging application and (2) generate a text message with a pre-populated phone number and a pre-populated message body containing a request to join the subscription list;</i>
Cl. [1h]; see also cl. [8h], [16g-h], [23g-h]	<i>sending the text message including the message body prepopulated with the request to join the subscription list in response to a second user interaction with the text messaging application such that the mobile device is subscribed to the subscription list in response to the text message being sent to the pre-populated phone number;</i>
Cl. [1i]; see also cl. [8i], [16i], [23i]	<i>receiving an installment of a subscription associated with the subscription list without sending an opt-in communication after sending the text message containing the pre-populated message body.</i>

(EX-1001, cls. 1, 8, 16, 23.)

85. I address each limitation in turn.

- The prior art does not disclose or render obvious a promotional message associated with joining a subscription list.**

86. As a preliminary matter, I am aware that Petitioner opines that limitation [1e]’s alleged recitation of the content of the promotional message constitutes “printed matter that is unrelated to the technical functioning of the alleged

invention” and, as such, is non-limiting. (Petition 39.) For purposes of this declaration, I have assumed that limitation [1e] (and identical limitations in other independent claims) is limiting. However, regardless of the Board’s determination regarding this specific limitation, my conclusion would not change, because the asserted prior art also does not disclose or render obvious the other limitations relating to a subscription or subscription list.

87. As to limitation [1e] (and similar limitations in all independent claims), Petitioner asserts that Oliver discloses multiple types of “promotional information” and that “it would have been obvious to say this in the ad to induce the user to sign up.” (Petition 39-40.) But even if Petitioner’s characterization of Oliver is true, neither Agrawal nor Oliver discloses a subscription service or list and, therefore, a POSITA would not be motivated to display a promotional message associated with joining a subscription list.

88. Agrawal discloses only webpage-based advertising links that transfer a user to another webpage. (EX-1005 1:18-26; Section V(B), *supra*.) Figure 4 illustrates a view of these links:

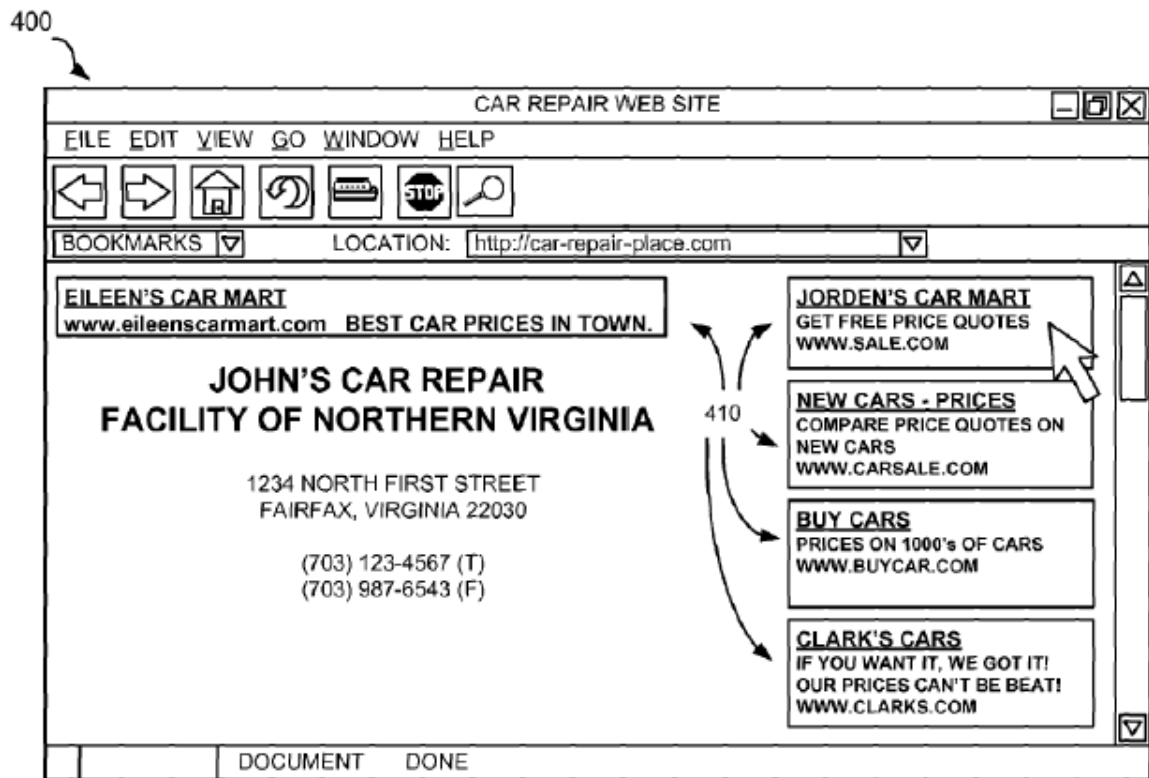


FIG. 4

(EX-1005 Fig. 4.) While one could characterize some of the text associated with these links as invitations—e.g., to “Get free price quotes” or “Compare price quotes”—these phrases are unrelated to a subscription service and interaction with the link will merely transfer the user to the linked webpage, where the user may continue to interact with those webpages to obtain a quote. And merely clicking on the link, without providing additional information (e.g., the make, model, and year of the car), will not result in the user being provided with a quote.

89. Agrawal contains no disclosure that is relevant specifically to a subscription service, nor does Petitioner assert that Agrawal does. Therefore, Agrawal provides no motivation or teaching (nor does Petitioner assert that it does)

that its advertising links should be modified to display a promotional message associated with joining a subscription list.

90. Oliver also does not disclose or render obvious a subscription service or list, because Oliver discloses only a one-time responsive message with a reward. (See, e.g., EX-1011 [0008] (returning a single response to the user containing the promotional reward or other information to the user), [0030] (describing the method “for providing a promotional reward to a user [] via a response message, in accordance with the disclosed principles”).) Indeed, Oliver teaches the use of a token to “ensure that a given reward is only accessed once for every scan.” (EX-1011 [0045].) That is, to receive a second responsive message through Oliver’s method, a user would be required to repeat the entire process—activating (e.g., scanning) a passive entity and sending a message again in order to receive the trackable reward link. (See *id.*) This facilitates Oliver’s explicit goal of enabling businesses to track interactions with their passive entities, as that can only be done if the user that engages with the passive entity then also engages with the trackable reward link that is generated in response to the activation. (See EX-1011 [0003]-[0006], [0045].)

91. Oliver even discloses a “use token” to limit users to a single scan and—therefore—a single responsive message containing the reward, rather than

allowing the user to activate the passive entity and obtain a reward multiple times.
(EX-1011 [0043].)

92. Oliver does not disclose any kind of subscription service or list and does not teach sending anything more than a single one-time reward message for activation of a passive entity. Accordingly, a POSITA would not be motivated based on Oliver’s teachings to modify either Agrawal’s advertising link or Oliver’s passive entity to display a promotional message associated with joining a subscription list when Oliver teaches providing the exact opposite—a limited, one-time response. (E.g., EX-1011 [0045], [0008].) To do so when neither reference provides a subscription would merely confuse the user.

93. Accordingly, neither reference, alone, or together, discloses or renders obvious a subscription or subscription list, and neither reference, alone or together, provides motivation for displaying a promotional message associated with joining a subscription list.

2. The prior art does not disclose or render obvious a pre-populated message body containing a request to join a subscription list.

94. For limitation [1g.2], Petitioner merely concludes—without any limitation-specific analysis—that “[i]t would be further obvious for the pre-populated message body to contain a request to join the subscription list.” (Petition 48.) Petitioner cross-references it’s “reasons set forth under claim limitation [1e].”

(*Id.*) However, Petitioner’s analysis under limitation [1e] addresses only why it would have allegedly been obvious to display a promotional message associated with joining a subscription list. (*See* Petition 39-40.) Petitioner does not provide any reasons or rationale as to why a POSITA would have been motivated to incorporate a request to join a subscription list into a pre-populated text message body; therefore, there is no rationale for me to consider.

95. Indeed, for the same reasons I have discussed above—i.e., the lack of any disclosure in either Agrawal or Oliver related to a subscription list and the fact that neither of the prior art methods uses a subscription list—it would not be obvious to pre-populate a text message request with the request to join a subscription list. (*See* Section VI(B)(1), *supra.*) Were a POSITA to modify Oliver’s text message in such a way, it would only confuse the user, since Oliver teaches providing a one-time responsive reward message each time a user activates a passive entity. (*See id.*)

3. The prior art does not disclose or render obvious subscribing a mobile device to a subscription list based on receiving a text message.

96. Petitioner makes only conclusory assertions to support its finding of this limitation in the cited prior art. Petitioner first asserts that “Oliver teaches that the reception of the prepopulated text message subscribes the mobile device in a promotion,” citing only its expert for support. (Petition 49.) But Petitioner’s insertion of the term “subscribe” does not make Oliver’s one-time promotion or one-

time responsive message a “subscription” or necessarily disclose a “subscription list.” (See Section VI(B)(1), *supra*.) Petitioner references Oliver’s disclosure of a sweepstakes or contest (Petition 49), but the fact that the reward message is sent as a result of a sweepstakes or contest does not necessarily disclose or suggest a change to Oliver’s one-time delivery of the reward. (*Id.*)

97. Petitioner also asserts that “[i]t would be obvious that in response to a text message containing a request about a product or service...that the mobile device be in fact subscribed to the subscription list in order to facilitate ‘targeted marketing’ as taught by Oliver.” (Petition 49.) Petitioner provides no rationale to support this obviousness conclusion, other than citing its expert. (*Id.*) But Petitioner’s expert also provides no rationale, merely restating the same conclusion. (EX-1002 ¶156.)

98. The challenged claims clearly recite an enrollment process capable of enrolling mobile users in a subscription, such that installments may be delivered without the need for additional opt-in communications. (EX-1001 cls. 1, 8, 16, 23.)

99. While Oliver briefly mentions that existing prior art lacked a method for logging responding consumer contact information for use in “targeted marketing efforts” (EX-1011 [0006]) this explanation of the prior art still does not necessarily disclose a subscription list or subscribing a mobile device to a subscription list, such that it will receive an installment of a subscription.

100. For example, Oliver discloses an exemplary “targeted marketing effort” in which a sales agent—only after confirming that a number is not included in a “do not call list”—may follow up with a particular user by calling them. (EX-1011 [0056].) But this does not indicate that the number has been subscribed to a subscription list. (*See id.*) The mere capability that a sales agent *could* use the stored phone number to follow-up *only if* the user does not appear on a do not call list does not necessarily mean that the user has been subscribed to a subscription. Accordingly, contrary to Petitioner’s assertion (Petition 49), it would not be obvious—based only on the fact that a message is received requesting a coupon or information associated with a product—to then subscribe the user’s mobile device to an undisclosed subscription.

4. The prior art does not disclose or render obvious an installment of a subscription associated with a subscription list.

101. Petitioner asserts that because Oliver discloses “a reply message to the user’s mobile device,” that “[a] PHOSITA would recognize that a reply message ***could be*** used to deliver an installment of a subscription.” (Petition 50.) But even if such a message “could be” used to deliver an installment of a subscription, Petitioner provides no reasoning or rationale as to why a POSITA ***would*** modify Oliver’s method to provide a subscription and deliver an installment of a subscription. Petitioner cites its expert; however, he merely repeats the same

assertion—i.e., that in his opinion, a POSITA “would recognize that a reply message ***could be used***” to deliver an installment of a subscription.

102. Again, for the same reasons I discuss above—namely that neither Agrawal nor Oliver disclose a subscription service—a POSITA would not be motivated to modify Oliver’s method of sending a limited, one-time responsive reward message. (See Section VI(B)(1), *supra*.)

103. Accordingly, the prior art does not disclose or render obvious these subscription-based limitations.

C. No Combination of Oliver, Agrawal, and Khanna Renders Obvious Sending or Receiving From A Server A URI That Causes The Mobile Device To Automatically Switch From A Web Browser To A Text Messaging Application

104. No combination of Oliver, Agrawal, and Khanna renders obvious sending from a server or receiving from a server a URI that deeplinks to and causes the mobile device to automatically transition from a web browser application to a text messaging application and generate a pre-populated text message.

105. The challenged independent claims recite the following limitations related to transitioning the mobile device to a messaging application:

Claim Limitation	Claim Language
Cl. [1g]; see also [8g], [16f], [23f].	<i>receiving, from the at least one web server and in response to at least one of (1) the integration tag executing or (2) the indication of the first user interaction, a uniform resource identifier (URI) that deeplinks to and causes the mobile</i>

Claim Limitation	Claim Language
	<i>device to automatically (1) switch from rendering the web browser application to rendering a text messaging application and (2) generate a text message with a pre-populated phone number and a pre-populated message body containing a request to join the subscription list;</i>

106. Petitioner makes two alternative arguments with respect to this limitation: (1) that Khanna teaches deeplinking and “Khanna would have been obvious to use for the reasons provided above” (Petition 41-43); or (2) that it would have been obvious “to cause a user click on an advertising link in Agrawal (i.e., a promotional message) to switch from rendering the web browser application to rendering a text messaging application, as taught by Oliver, for the reasons provided above.” (Petition 44.) But neither of the asserted combinations render obvious this limitation, nor would a POSITA have been motivated to combine such teachings.

1. The cited combination of Agrawal’s and Khanna’s teachings does not render obvious this limitation.

107. Khanna does not disclose or suggest sending or receiving a URI that deeplinks to and causes the mobile device to automatically switch from rendering a web browser application to rendering a text messaging application. As I’ve previously explained in detail, Khanna discloses specialized content items, which facilitate deeplinking to a product’s landing page by containing two data elements—

one that specifies an application and a second that specifies a product of interest. (EX-1034 [0029], [0005], cl. 1; *see also* Section V(C), *supra*.) Khanna teaches that when a content item is selected via a user interface device (e.g., keypad, mouse, touchpad), the device is checked for the specified application and, if necessary, a request for the application may be transmitted to a remote server. (EX-1034 [0055]-[0058], Fig. 2.) The server may respond with a webpage including an offer to download the application. (EX-1034 [0059].) After the user confirms the download and installation is complete, the application is launched with the data element identifying a product as an input parameter. (EX-1034 [0061], Fig. 2.)

108. Khanna explains that this method allows publishers or advertisers to create content items that “deeplink” or “mak[e] a hyperlink that points to a specific content (e.g., a webpage or image) on a destination website, instead of that website’s main or home page.” (EX-1034 [0030]; *see also id.* [0063].) For example, when users select the specialized content item, they are redirected to the product’s landing page in a shopping application. (EX-1034 [0026]-[0027].)

109. That is, Khanna discloses a specific URL that deeplinks to a vendor’s web-based landing page for a product and contains no teachings that would suggest deeplinking to anything other than a product page. (Section V(C), *supra*; EX-1034 [0030].) Accordingly, Khanna does not teach or suggest a URL that deeplinks to

and causes the mobile device to automatically switch from rendering the web browser application to rendering a text messaging application.

110. Furthermore, a deep link for a web page is substantially different from a deep link for a messaging application. Khanna's deep link to a web page is achieved through an http-based URL, implemented via the standard http protocol, and involves the use of web server to retrieve the referenced page. On the other hand, a deep link to a messaging application—such as that claimed by the '074 patent—is achieved through an SMS-based URL (with the precise implementation being specific to the mobile platform) and allows for the referenced application to be opened directly (i.e., without the use of a web server). A deep link to a messaging application loads a page in the messaging application for sending a message. For example, consider the following deep link for a messaging application: `sms : +123-456-7891?body=Hello%20there`. Here, selecting this deep link results in either a new SMS message page to be loaded for sending a message containing the words “Hello there” to phone number “123-456-7891”, or loading a page containing the device's prior communication with that phone number and appending the words “Hello there” in the conversation. Neither one of these scenarios involves retrieving a web page for a product from a web server.

111. Accordingly, Khanna does not disclose or suggest a URI that deeplinks to and causes the mobile device to automatically switch from rendering the web

browser application to rendering a text messaging application. Furthermore, based on these same distinctions between transitioning to an application landing page and transitioning to a messaging application, a POSITA would not have been motivated to modify Khanna's teachings.

112. Petitioner cross-references its general, alleged motivation to combine; I address these flawed reasons above in Section VI(A) and explain why a POSITA would not have been motivated to combine the teachings of Agrawal and Khanna. Petitioner does not offer any limitation-specific explanation as to why one would modify Khanna's teachings. Accordingly, the cited combination does not render obvious this limitation.

2. The cited combination of Agrawal's and Oliver's teachings does not render obvious this limitation.

113. While Oliver discloses auto-populating a text message, Oliver does not disclose causing a mobile device to automatically transition from rendering **a web browser application** to rendering a text messaging application. (Section V(A), *supra*.) As I have previously discussed, Oliver's disclosure of activating a passive entity and sending a message does not disclose a web browser—indeed, no browser would be necessary where a user is merely scanning a QR code or reading some kind of NFC or RFID tag. (See Section VI(A), *supra*; EX-1011 [0003], [0007].)

114. Petitioner's argument based on a combination of Agrawal and Oliver is a single sentence, concluding that it would have been obvious to cause a user clicking

on one of Agrawal’s advertising links to switch from rendering the web browser application to rendering a text messaging application “as taught by Oliver.” (Petition 44.) But as I have just explained, Oliver does not teach switching from rendering a web browser application to rendering a text messaging application, and Petitioner provides no explanation to support its conclusion.

115. Furthermore, Petitioner cites only its general motivation to combine. (Petition 44.) In Section VI(A), above, I address this alleged motivation to combine and explain why a POSITA would not have been motivated to combine Agrawal’s and Oliver’s teachings. (Section VI(A), *supra*.) Specifically, Agrawal’s ability to determine whether web-based advertising activity is legitimate is reliant on the information collected via web-based communication protocols. (Section VI(A), *supra*.) Oliver, on the other hand, uses phone-based messaging protocols and does not disclose any requests or interactions with a server that take place between the user activating the passive entity and sending a text message to obtain a reward. (*Id.*)

116. Were a POSITA to implement these two references’ teachings together, either one of the references will be rendered non-functional OR it would be necessary to substantially redesign one of the references to ensure compatibility. For example, if one prioritizes Oliver’s teachings—e.g., the activation of a passive entity and the use of the phone-based messaging protocols—then no interaction between a web browser and the server will ever take place and Agrawal’s intended purpose of

collecting information from the browser to determine whether activity is legitimate or not is rendered non-functional. (See Section V(B), *supra* (describing Agrawal's reliance on the collection of information).) But if one alternatively prioritizes Agrawal's teachings, then modifying Oliver to the extent necessary to support web-based protocols would entirely change the principle of Oliver's operation and require a substantial redesign of its disclosed method. Faced with only these options, a POSITA would not have been motivated to combine (or modify) the teachings of two incompatible references.

117. Accordingly, no combination of the cited prior art discloses or renders obvious this limitation, nor would a POSITA have been motivated to combine (or modify) their teachings in the first place.

VII. CLAIMS AND/OR LIMITATIONS NOT ADDRESSED IN THIS DECLARATION

118. It is my understanding that this declaration is being provided in support of Patent Owner's Preliminary Response. I have provided analysis of key limitations not included in the prior art. The fact that I have not analyzed particular limitations or claims in no way indicates or supports that these limitations or claims are disclosed or rendered obvious by the prior art, and I reserve the right to supplement my analysis if asked to do so.

VIII. SECONDARY OBJECTIVE INDICIA OF NONOBVIOUSNESS

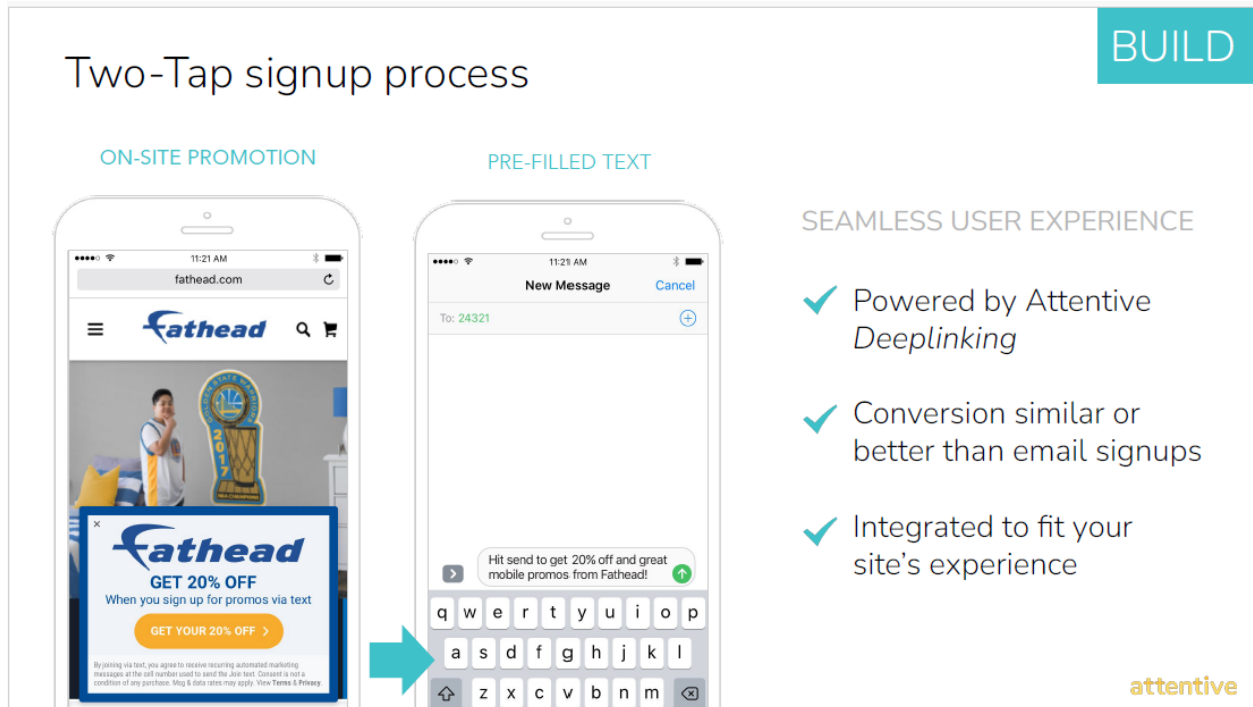
119. I understand that in determining obviousness of the claimed invention, objective evidence of secondary considerations pertaining to nonobviousness must be considered, including long-felt but unsolved needs, failure of others, commercial success, etc. I understand that such evidence is relevant where “nexus” exists—that is, where the evidence of secondary considerations is the direct result of the unique characteristics of the claimed invention. I further understand that these indicia constitute independent evidence of nonobviousness that can be the most probative evidence in that regard in avoiding the trap of hindsight when reviewing, what otherwise seems like, a combination of known elements.

120. As demonstrated by my summary of the prior art, above, there was at least a long-felt and persistent need prior to the '074 patent to improve upon prior art methods for transitioning a user from one interface to another interface on a mobile device to complete, for example, a subscription, communication, and/or purchase, while still maintaining and improving a user's experience and engagement. Prior attempts to develop such methods involved additional burden to the user in the form of “taps” or input, as well as additional time during which the user may lose interest. (See Section III, *supra*.)

121. Where others failed, the '074 Patent succeeded. (See Section IV(A), *supra*.)

122. I have reviewed the evidence cited and summarized in Patent Owner's preliminary response, which demonstrates that (1) Attentive's "two-tap" sign-up technology satisfied a long-felt need recognized in the prior art, (2) Attentive's "two-tap" sign-up technology has received significant praise in the industry, and (3) Attentive's "two-tap" sign-up technology has led to immense commercial success both for Attentive and its customers (i.e., clients who use the "two-tap" technology in conjunction with their offerings). (See Patent Owner's Preliminary Response, Section VII.)

123. The below image from Patent Owner's own marketing deck illustrates a user interacting with Patent Owner's "two-tap" technology platform. When a user interacts with the call-to-action button of the promotional message (e.g., "Get 20% Off"), the mobile device automatically transitions to a messaging application and automatically populates a custom message in the messaging application that includes an address and a message body. The message body further includes an identifier associated with the webpage.



(EX-2036 15.) After the user taps the send button of the messaging application, the mobile device sends the custom message, and the user is enrolled as a subscriber. (*Id.* 16-17.)

124. Specifically, the '074 patent sought to reduce “[t]he time-consuming and burdensome process”—e.g., many user clicks or screen taps—that often resulted in lost customers. (EX-1001 1:26-42.) As demonstrated by the evidence cited in Patent Owner’s preliminary response, third parties praised Patent Owner’s “two-tap” technology and attributed its success to its ability to “let[] brands minimize the path between catching a user’s interest and convincing them to agree to a regular flow of marketing texts.” (EX-2013 Patent Owner’s Preliminary Response Section VII(B)-(C).)

125. The '074 patented claims explicitly describe the benefit of being able to enroll a mobile device in a promotion based on receiving the auto-populated message “and without receiving any additional information from the mobile device.” (EX-1001, cl. 1, 8, 16, 23.) And as demonstrated by the evidence cited in Patent Owner’s preliminary response, the industry recognized Patent Owner’s “two-tap” technology for its “profitable” “[s]implicity”—i.e., the ability to opt users in to begin receiving promotional messages based on nothing but the user’s tap on, e.g., a pop-up, and its pressing of a button to send a pre-populated message. (EX-2031 2-3; EX-2032 2; EX-2015 2; Patent Owner’s Preliminary Response Section VII(C).)

126. This collection of evidence relevant to secondary considerations further supports my opinion that the '074 patented invention was nonobvious.

IX. CONCLUSION

127. For at least the foregoing reasons, it is my opinion that Petitioner’s grounds do not render obvious any of the challenged claims of the '074 Patent.

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

Executed this 22nd day of February 2024 in Irvine, California.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Sam Malek", is written over a horizontal line.

Sam Malek, Ph.D.