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15/170,354	06/01/2016	Yair Cohn	26295-33471/US	2682
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Facebook/Fenwick Silicon Valley Center 801 California Street Mountain View, CA 94041			ANDREI, RADU	
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			3682	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

15/170,354

Applicant(s)

Cohn et al.

Examiner

RADU ANDREI

Art Unit

3682

AIA (FITF) Status

Yes

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address** --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 2/26/2020.
 A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) Claim(s) 1,3-4,7-11,13-14 and 17-21 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) Claim(s) ____ is/are allowed.
- 7) Claim(s) 1,3-4,7-11,13-14 and 17-21 is/are rejected.
- 8) Claim(s) ____ is/are objected to.
- 9) Claim(s) ____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) The specification is objected to by the Examiner.
- 11) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) All b) Some** c) None of the:
- 1. Certified copies of the priority documents have been received.
- 2. Certified copies of the priority documents have been received in Application No. ____.
- 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date _____.
- 3) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 4) Other: _____.

DETAILED ACTION

The present application, filed on 6/1/2016 is being examined under the AIA first inventor to file provisions.

The following is a final Office Action in response to Applicant's amendments filed on 2/26/2020.

- a. Claims 1, 8, 11 are amended
- b. Claims 2, 5-6, 12, 15-16 are cancelled

Overall, **Claims 1, 3-4, 7-11, 13-14, 17-21** are pending and have been considered below.

Claim Rejections - 35 USC § 101

35 USC 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 3-4, 7-11, 13-14, 17-21 are rejected under 35 USC 101 because the claimed invention is not directed to patent eligible subject matter. The claimed matter is directed to a judicial exception (i.e. an abstract idea not integrated into a practical application) without significantly more.

Per Step 1 and Step 2A of the two-step eligibility analysis, independent Claim 1 and Claim 11 and the therefrom dependent claims are directed respectively to a computer implemented method and to computer executable instructions stored on a non-transitory storage medium. Thus, on its face, each such independent claim and the therefrom dependent claims are directed to a statutory category of invention.

However, Claim 1, (which is repeated in Claim 11) is rejected under 35 U.S.C. 101 because the claim is directed to an abstract idea, a judicial exception, without reciting additional elements that integrate the judicial exception into a practical application. The claim recites

determining an attribution amount of the offline conversion for each of the one or more sponsored content items, transmitting additional information regarding the offline conversion. The limitations, as drafted, constitute a process that, under its broadest reasonable interpretation, covers commercial activity, but for the recitation of generic computer components ("by an online system"). That is, the drafted process is comparable to an advertising, marketing process, i.e. a process aimed at attributing sales (i.e. offline conversions) to online sponsored content (i.e. advertising). If a claim limitation, under its broadest reasonable interpretation, covers performance of limitations of agreements in form of contracts, legal obligations, advertising, marketing, sales activities or behaviors, business relationships, but for the recitation of generic computer components, then it falls within the "Certain Methods of Organizing Human Activity – Commercial or Legal Interactions (e.g. agreements in form of contracts, legal obligations, advertising, marketing, sales activities or behaviors, business relationships)" grouping of abstract ideas. Accordingly, the claim recites an **abstract idea**.

This abstract idea is not integrated into a practical application. In particular, stripped of those claim elements that are directed to an abstract idea, the remaining positively recited elements of the independent claims are directed to extending an API for access by a third party system, receiving offline conversion data, identifying a local user matching the offline user, storing the offline conversion data, identifying sponsored content items that were presented, computing an updated bid. These claim elements amount to no more than insignificant extra-resolution activity (MPEP 2106.05(g)). The non-positively recited claim elements are the API, the offline conversion data, the updated bid value, the entry of the received offline conversion, the additional information. While these descriptive elements may provide further helpful context for the claimed invention, they do not serve to integrate the abstract idea into a practical application. The recited computer elements, i.e. an online system, a processor, a non-transitory computer readable storage medium, are recited at a high-level of generality (i.e. as a generic computing device performing generic computer functions of obtaining data, interpreting the obtained data and providing results), such that they amount to no more than mere instructions to apply the exception using generic computer components.

Accordingly, these additional claim elements do not integrate the abstract idea into a practical application, because (1) they do not effect improvements to the functioning of a computer, or to any other technology or technical field (see MPEP 2106.05 (a)); (2) they do not apply or sue the abstract idea to effect a particular treatment or prophylaxis for a disease or a

medical condition (see the *Vanda* memo); (3) they do not apply the abstract idea with, or by use of, a particular machine (see MPEP 2106.05 (b)); (4) they do not effect a transformation or reduction of a particular article to a different state or thing (see MPEP 2106.05 (c)); (5) they do not apply or use the abstract idea in some other meaningful way beyond generally linking the use of the identified abstract idea to a particular technological environment, such that the claim as a whole is more than a drafting effort designated to monopolize the exception (see MPEP 2106.05 (a) and the *Vanda* memo). Therefore, per Step 2A, Prong Two, the claim is directed to an abstract idea not integrated into a practical application.

Step 2B of the eligibility analysis concludes that the claim does not include additional elements that are sufficient to amount to significantly more than the judicial exception. Stripped of those claim elements that are directed to an abstract idea, not integrated into a practical application, the remaining positively recited elements of the independent claims are directed to extending an API for access by a third party system, receiving offline conversion data, identifying a local user matching the offline user, storing the offline conversion data, identifying sponsored content items that were presented, computing an updated bid. When considered individually, these additional claim elements represent “Insignificant Extra-Solution (Pre-Solution and/or Post-Solution) Activity”, i.e. activities incidental to the primary process or product that are merely a nominal or tangential addition to the claims. Specifically, extending an API for access by a third party system, receiving offline conversion data, identifying a local user matching the offline user, storing the offline conversion data, identifying sponsored content items that were presented are considered pre-solution activity because they are mere gathering or pre-processing data/information in conjunction with the abstract idea, while computing an updated bid are considered post-solution activity because they are mere outputting or post-processing results from executing the abstract idea. (MPEP 2106.05(g)) It is readily apparent that the claim elements are not directed to any specific improvements of the claims.

Furthermore, the independent claims contain descriptive limitations, not positively recited limitations of elements found in the independent claims and addressed above, such as describing the nature, structure and/or content of the API, the offline conversion data, the updated bid value, the entry of the received offline conversion, the additional information. However, these elements do not require any steps or functions to be performed and thus do not involve the use of any computing functions. While these descriptive elements may provide further helpful context for the claimed invention, these elements do not serve to confer subject

matter eligibility to the claimed invention since their individual and combined significance is still not heavier than the abstract concepts at the core of the claimed invention.

After stripping away the abstract idea claim elements, the additional positively recited steps and descriptive claim elements, the only remaining elements of the independent claims are directed to an online system, a processor, a non-transitory computer readable storage medium. When considered individually, these additional claim elements serve merely to implement the abstract idea using computer components performing computer functions. They do not constitute "Improvements to the Functioning of a Computer or to Any Other Technology or Technical Field". (MPEP 2106.05(a)) It is readily apparent that the claim elements are not directed to any specific improvements of any of these areas.

When the independent claims are considered as a whole, as a combination, the claim elements noted above do not amount to any more than they amount to individually. The operations appear to merely apply the abstract concept to a technical environment in a very general sense – i.e. a computer receives information from another computer, processes that information and then sends a response based on processing results. The most significant elements of the claims, that is the elements that really outline the inventive elements of the claims, are set forth in the elements identified as an abstract idea. Therefore, it is concluded that the elements of the independent claims are directed to one or more abstract ideas and do not amount to significantly more. (MPEP 2106.05)

Further, Step 2B of the analysis takes into consideration all dependent claims as well, both individually and as a whole, as a combination.

Dependent Claim 2 (which is repeated in Claim 12) is not directed to any additional abstract ideas, but is directed to additional claim elements such as to the "receiving offline conversion data" functions. Dependent Claim 7 (which is repeated in Claim 17) is not directed to any additional abstract ideas, but is directed to additional claim elements such as to the "transmitting a conversion rate" functions. When considered individually, these additional claim elements are comparable to "receiving or transmitting data over a network, e.g., using the Internet to gather data", which has been recognized by a controlling court as "well-understood, routine and conventional computing functions" when claimed generically as they are in these

dependent claims. (MPEP 2106.05(d) II) It is readily apparent that the claim elements are not directed to any specific improvements of the claims.

Dependent Claim 10 (which is repeated in Claim 20) is not directed to any additional abstract ideas, but is directed to additional claim elements such as to the “identifying a local user identifiers” functions. When considered individually, these additional claim elements are comparable to “sorting information” i.e. comparing data, which has been recognized by a controlling court as “well-understood, routine and conventional computing functions” when claimed generically as they are in these dependent claims. (MPEP 2106.05(d) II) It is readily apparent that the claim elements are not directed to any specific improvements of the claims. When considered individually, these additional claim elements are comparable to “sorting information” i.e. comparing data, which has been recognized by a controlling court as “well-understood, routine and conventional computing functions” when claimed generically as they are in these dependent claims. (MPEP 2106.05(d) II) It is readily apparent that the claim elements are not directed to any specific improvements of the claims.

Dependent Claims 3-4, 8-9 (which are repeated in Claims 13-14, 18-19 respectively) and Claim 21 are not directed to any abstract ideas and are not directed to any additional non-abstract claim elements. Rather, these non-positively recited claims provide further descriptive limitations of elements, such as describing the nature, structure and/or content of the action and the conversion rate, the data bin user interface. However, these elements do not require any steps or functions to be performed and thus do not involve the use of any computing functions. While these descriptive elements may provide further helpful context for the claimed invention, these elements do not serve to confer subject matter eligibility to the invention since their individual and combined significance is still not heavier than the abstract concepts at the core of the claimed invention.

Moreover, the claims in the instant application do not constitute significantly more also because the claims or claim elements only serve to implement the abstract idea using computer components to perform computing functions (*Enfish*, MPEP 2106.05(a)). Specifically, the computing system encompasses general purpose hardware and software modules, as disclosed in the application specification in fig1 and [0016]-[0020], including among others client device, network, online system, third party system.

When the dependent claims are considered as a whole, as a combination, the additional elements noted above appear to merely apply the abstract concept to a technical environment in a very general sense – i.e. a computer receives information from another computer, processes that information and then sends a response based on processing results. The most significant elements of the claims, that is the elements that really outline the inventive elements of the claims, are set forth in the elements identified in the independent claims as an abstract idea. The fact that the computing devices are facilitating the abstract concept is not enough to confer statutory subject matter eligibility. In sum, the additional elements do not serve to confer subject matter eligibility to the invention since their individual and combined significance is still not heavier than the abstract concepts at the core of the claimed invention. Therefore, it is concluded that the dependent claims of the instant application do not amount to significantly more either. (MPEP 2106.05)

Therefore, Claims 1, 3-4, 7-11, 13-14, 17-21 are rejected under 35 USC 101 as being directed to non-statutory subject matter.

Claim Rejections - 35 USC § 112(a)

Written Description (New Matter)

The following is a quotation of 35 U.S.C. 112(a):

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the relevant portion of 35 U.S.C. §132(a):

No amendment shall introduce new matter into the disclosure of the invention.

Claims 1, 3-4, 7-11, 13-14, 17-21 are rejected under 35 U.S.C. 112(a), for failing to comply with the written description requirement. MPEP 2163.06 stipulates – If new matter is added to the claims, the examiner should reject the claims under 35 U.S.C. 112(a) – written description requirement. *In re Rasmussen*, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981).

Claims 1, 11 have been amended by Applicant to include the limitation “*revenue-based metric.*” The specification discloses at [0039] “For each offline conversion, the offline conversions receiver 240 may receive from a third party system 130 an indication of the type of

action performed, the identity of the offline user (which may be hashed or non-hashed, and may include personally identifiable or non-personally identifiable information), the timestamp of the action, and other metadata such as the revenue/profit generated by the action, a value score of the action to the third party system 130, and so on. The offline conversions receiver 240 may store this offline conversions information in the conversions log 250.”

The application specification makes no reference to the claim element “an indication of the third party system.” The specification disclosure “a value score of the action to the third party system 130” does not mean the same like “an indication of the third party system.” Therefore, the limitation has no support in the specification, drawings or initial set of claims.

The remainder of the claims are rejected by virtue of dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained through the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- i. Determining the scope and contents of the prior art.
- ii. Ascertaining the differences between the prior art and the claims at issue.
- iii. Resolving the level of ordinary skill in the pertinent art.
- iv. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 7-8, 10-14, 17-18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook (US 2017/0262880), in view of Wang et al (US 2009/0216616), in further view of Burt et al (US 2011/0231239), in further view of Bussmann et al (US 2010/0138294), in further view of Hsiao et al (US 2011/0302025), in further view of Ferber et al (US 2015/0348119).

Regarding Claims 1, 11 – Cook discloses: A method comprising:

... to transmit offline conversions data to an online system, the offline conversion data including an indication of an action performed by the offline user that is not directly trackable {see at least fig7, rc708, [0072] In an implementation, data indicative of whether a customer made a purchase while present in a physical store can include electronic data derived from electronic coupons (e.g., those communicated to an email address associated with the customer), online payments made by the customer (e.g., as determined based on personal data used at the time of payment), quick response (QR) codes communicated to the customer and indicative of the customer (e.g., as including personal data about the customer in the code), data scanned by in-store scanners, or data received from a point-of-sales or other payment application (e.g., whether an in-store feature or as a mobile application interfacing therewith)}

receiving, at the online system from the third party system, ... with a function call of the API {see at least fig6, rc604, rc612, rc614, [0053]-[0057]}, offline conversion data for an offline user ... {see at least fig4, rc406, [0041]-[0044] logs user information about commercial activity; [0016]-[0019] offline purchase in a physical store; fig7, rc708, rc710, [0072]-[0075] user activity occurring within the physical store is identified ... intelligence dashboard updated ... [0064] API}

... the function call including instructions to add offline conversion data received in real-time as the actions of the offline conversions are completed ... {see at least fig6, rc612, [0057]-[0059] updating in store visits; [0072]-[0074] updating to reflect users being detected in a physical store ... in store customer traffic (reads on immediately after action); ... real-time in store customer numbers (reads on receiving the data immediately)}

storing, at the online system, the offline conversion data entry for the identified local user; {see at least fig3, rc312, [0027] storage; fig7, rc710, [0073]-[0074]; fig6, rc612, rc614, [0057] storing store visits ..., transactions; [0064] data stored in database ... for future use; [0067] identifier compared against a list of identifiers stored in a database; [0073] stored intelligence data to update statistics}

transmitting computer readable instructions to a client device of the third party system to cause the client device of the third party system to display a user interface presenting additional information regarding the offline conversion to the third party system, ... {see at least [0073]-[0075] send update data (reads on additional information)... update data can be used for further marketing/advertising activities}

... the additional information including a display of a conversion rate of the one or more sponsored content items computed using stored offline conversion data ... {see at least fig6, rc602, [0072]-[0075] In an implementation, data indicative of whether a customer made a purchase while present in a physical store can include electronic data derived from electronic

coupons (e.g., those communicated to an email address associated with the customer), online payments made by the customer (e.g., as determined based on personal data used at the time of payment), quick response (QR) codes communicated to the customer and indicative of the customer (e.g., as including personal data about the customer in the code), data scanned by in-store scanners, or data received from a point-of-sales or other payment application (e.g., whether an in-store feature or as a mobile application interfacing therewith).}

... the additional information not previously accessible to the third party system. {see at least fig7, rc702-rc710, [0062]-[0075] ... the data exchange takes place only after communication is initiated (rc704), which, based on the broadest reasonable interpretation requirement (MPEP 2111), implicitly points to the fact that additional information is not accessible prior to establishing the communication (i.e. previously)}

Cook does not disclose, however, Wang discloses:

identifying one or more sponsored content items of the third party system that were presented within a range of a previous time period to the identified local user during one or more impression opportunities at the online system; and {see at least [0055]-[0058] user's recent ad viewing activities in real time (reads on most recent sponsored content); fig4, rc450, [0047]-[0049] most recent data about user's ad viewing ... ads recently viewed by the user; [0056] ... in the last few days; [0059] The web site utilizes users' latest ad-viewing activities to select advertisements that correlate to the users' latest (or most recent) ad-viewing activities, which can occur within a few seconds, a few minutes, a few days, or a few weeks}

In addition, it would have been obvious to one of ordinary skill in the art, at the time of filing, to modify Cook to include the elements of Wang. One would have been motivated to do so, in order to more accurately correlate which of the advertisement (sponsored content) has generated the offline conversion. Furthermore, the Supreme Court has supported that use of known technique to improve similar devices (methods, or products) in the same way, to obtain predictable results, is sufficient to determine an invention obvious over such combination (see *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S.,82 USPQ2d 1385 (2007) & MPEP 2143). In the instant case, Cook evidently discloses correlating online advertising (sponsored content) with offline conversion. Wang is merely relied upon to illustrate the functionality of identifying the most recent presented advertisement (sponsored content) in the same or similar context. As best understood by Examiner, since both correlating online advertising (sponsored content) with offline conversion, as well as identifying the most recent presented advertisement

(sponsored content) are implemented through well-known computer technologies in the same or similar context, combining their features as outlined above using such well-known computer technologies (i.e., conventional software/hardware configurations), would be reasonable, according to one of ordinary skill in the art. Moreover, since the elements disclosed by Cook, as well as Wang would function in the same manner in combination as they do in their separate embodiments, it would be reasonable to conclude that their resulting combination would be predictable. Accordingly, the claimed subject matter is obvious over Cook / Wang.

Cook, Wang does not disclose, however, Burt discloses:

extending, by an online system, an application programming interface (API) for access by a third party system, the application, the API including one or more hypertext transport protocol (HTTP) based commands that allow the third party system ... {see at least [0125] API; [0060] To exchange data via the network 108, the computer systems 102, 104 and 106 and the network 108 may use various methods, protocols and standards including, among others, token ring, Ethernet, Wireless Ethernet, Bluetooth, TCP/IP, UDP, HTTP, ... }

... an HTTP message ... {see at least [0060] To exchange data via the network 108, the computer systems 102, 104 and 106 and the network 108 may use various methods, protocols and standards including, among others, token ring, Ethernet, Wireless Ethernet, Bluetooth, TCP/IP, UDP, HTTP, ... (reads on HTTP message)}

determining an attribution amount of the offline conversion for each of the one or more sponsored content items that is inversely proportional to the time between a timestamp of the impression opportunity of the sponsored content item and a timestamp of an occurrence of the offline conversion; {see at least fig4, [0107]-[0117] recency factor}

In addition, it would have been obvious to one of ordinary skill in the art, at the time of filing, to modify Cook, Wang to include the elements of Burt. One would have been motivated to do so, in order to more accurately determine the attribution amount. Furthermore, the Supreme Court has supported that combining well known prior art elements, in a well-known manner, to obtain predictable results is sufficient to determine an invention obvious over such combination (see *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S., 82 USPQ2d 1385 (2007) & MPEP 2143). In the instant case, Cook, Wang evidently discloses correlating online advertising (sponsored content) with offline conversion. Burt is merely relied upon to illustrate the functionality of an attribution amount in proportion to the elapsed time in the same or similar context. As best understood by Examiner, since both correlating online advertising (sponsored content) with

offline conversion, as well as an attribution amount in proportion to the elapsed time are implemented through well-known computer technologies in the same or similar context, combining their features as outlined above using such well-known computer technologies (i.e., conventional software/hardware configurations), would be reasonable, according to one of ordinary skill in the art. Moreover, since the elements disclosed by Cook, Wang, as well as Burt would function in the same manner in combination as they do in their separate embodiments, it would be reasonable to conclude that their resulting combination would be predictable. Accordingly, the claimed subject matter is obvious over Cook, Wang / Burt.

Cook, Wang, Burt does not disclose, however, Bussmann discloses:

computing an updated bid value for each of the one or more sponsored content items for the identified local user, the updated bid value increased or decreased based on the corresponding attribution amounts for that sponsored content item, the updated bid value computed by the online system when submitting the sponsored content item for impression opportunities for the identified local user; {see at least [0041] As described above, under some circumstances an advertising publisher may wish to update a previously-submitted bid, for example to increase or decrease a price of a bid in response to changing conditions. Therefore, method 500 comprises, at 538, receiving an updated bid that changes one or more items in the original bid. The updated bid may comprise a higher or lower price bid, new or updated category information, a change in the originally requested time interval, or any other suitable update. In this manner, an advertising publisher may be able to quickly and easily adjust the distribution of its advertising content, and therefore its advertising costs, in real-time and on an as-desired basis.}

In addition, it would have been obvious to one of ordinary skill in the art, at the time of filing, to modify Cook, Wang, Burt to include the elements of Bussmann. One would have been motivated to do so, in order to create a bid value that reflects the latest situation. Furthermore, the Supreme Court has supported that combining well known prior art elements, in a well-known manner, to obtain predictable results is sufficient to determine an invention obvious over such combination (see *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S.,82 USPQ2d 1385 (2007) & MPEP 2143). In the instant case, Cook, Wang, Burt evidently discloses correlating online advertising (sponsored content) with offline conversion. Bussmann is merely relied upon to illustrate the functionality of an updated bid value in the same or similar context. As best understood by Examiner, since both correlating online advertising (sponsored content) with

offline conversion, as well as updated bid value are implemented through well-known computer technologies in the same or similar context, combining their features as outlined above using such well-known computer technologies (i.e., conventional software/hardware configurations), would be reasonable, according to one of ordinary skill in the art. Moreover, since the elements disclosed by Cook, Wang, Burt, as well as Bussmann would function in the same manner in combination as they do in their separate embodiments, it would be reasonable to conclude that their resulting combination would be predictable. Accordingly, the claimed subject matter is obvious over Cook, Wang, Burt / Bussmann.

Cook, Wang, Burt, Bussmann does not disclose, however, Hsiao discloses:

... each entry of the received offline conversion data including an indication of the third party system {see at least [0045] This conversion data can be stored in association with one or more user identifiers (or other tracking mechanisms) for the user device that was used to perform the user interaction, such that user interaction data associated with the user identifier can be associated with the conversion and used to generate a performance report for the conversion; [0055] A search result 118 is data generated by the search system 112 that identifies a resource that is responsive to a particular search query, and includes a link to the resource; [0217] In some implementations, the user identifier is a cookie that is retrieved from a user device with which the user interaction was performed, and each pair of user device and browser has a unique cookie. For example, obtaining the user identifier can occur from a cookie that is stored on the user's device 106 by the user's browser}, an action performed by the offline user, a timestamp for the action, {see at least [0015] The first distributed data table includes rows indexed and sorted by strings representing unique pairs of advertiser identifier and user identifier that are associated with stored user interactions in the first distributed data table. Each row includes a plurality of ordered cells, where each cell corresponds to a respective user interaction type and contains the user interaction data for stored user interactions of said user interaction type. The user interaction data for each user interaction is stored with a respective timestamp associated with the user interaction. The first distributed data table is queried to identify conversions that have occurred within a specified time window based on the user interaction types and timestamps of the stored user interactions. In response to the query, the user interaction data is received for each identified conversion, as well as respective user interaction data of all stored user interactions associated with a same advertiser identifier and user identifier pair as the conversion and having occurred within a specified time period prior to the identified conversion. A new row is created for each identified conversion in a second

distributed data table, the new row being indexed with a unique conversion identifier and including all of the received user interaction data for the identified conversion}, and a hash of identifying information for the offline user. {see at least [0015] The first distributed data table includes rows indexed and sorted by strings representing unique pairs of advertiser identifier and user identifier that are associated with stored user interactions in the first distributed data table. Each row includes a plurality of ordered cells, where each cell corresponds to a respective user interaction type and contains the user interaction data for stored user interactions of said user interaction type. The user interaction data for each user interaction is stored with a respective timestamp associated with the user interaction. The first distributed data table is queried to identify conversions that have occurred within a specified time window based on the user interaction types and timestamps of the stored user interactions. In response to the query, the user interaction data is received for each identified conversion, as well as respective user interaction data of all stored user interactions associated with a same advertiser identifier and user identifier pair as the conversion and having occurred within a specified time period prior to the identified conversion. A new row is created for each identified conversion in a second distributed data table, the new row being indexed with a unique conversion identifier and including all of the received user interaction data for the identified conversion; [0421] In some implementations, collected user interaction data are associated with one or more user identifiers and/or one or more conversion identifiers. For example, user interaction data relating to a first conversion is associated with a first user identifier and/or a first conversion identifier, and data relating to a second conversion is associated with a second user identifier and/or a second conversion identifier. Each user identifier uniquely represents a converting user for a conversion, while each conversion identifier uniquely identifies each conversion. For example, when a conversion is an online purchase of a baseball glove, a user identifier for the user device and/or browser that were used to purchase the baseball glove is identified, for example, from a cookie that is stored on the user device. As another example, a user identifier for a user device that was used to sign up for a mailing list on a concert website can be identified. As described above, the user identifier can be a cookie obtained from the user device that was used to complete the conversion a hash of a user name, a randomly assigned user ID code, or another anonymized user identifier.}

In addition, it would have been obvious to one of ordinary skill in the art, at the time of filing, to modify Cook, Wang, Burt, Bussmann to include the elements of Hsiao. One would have been motivated to do so, in order to check if the conversion took place and identify the user who

generated that conversion. Furthermore, the Supreme Court has supported that combining well known prior art elements, in a well-known manner, to obtain predictable results is sufficient to determine an invention obvious over such combination (see *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S.,82 USPQ2d 1385 (2007) & MPEP 2143). In the instant case, Cook, Wang, Burt, Bussmann evidently discloses correlating online advertising (sponsored content) with offline conversion. Hsiao is merely relied upon to illustrate the functionality of offline conversion data in the same or similar context. As best understood by Examiner, since both correlating online advertising (sponsored content) with offline conversion, as well as offline conversion data are implemented through well-known computer technologies in the same or similar context, combining their features as outlined above using such well-known computer technologies (i.e., conventional software/hardware configurations), would be reasonable, according to one of ordinary skill in the art. Moreover, since the elements disclosed by Cook, Wang, Burt, Bussmann, as well as Hsiao would function in the same manner in combination as they do in their separate embodiments, it would be reasonable to conclude that their resulting combination would be predictable. Accordingly, the claimed subject matter is obvious over Cook, Wang, Burt, Bussmann / Hsiao.

Cook, Wang, Burt, Bussmann, Hsiao does not disclose, however, Ferber discloses:

identifying a local user matching the offline user by matching a hash of identifying information of the local user with the hash of the identifying information of the offline user received in offline conversion data entry from the API function call; {see at least [0011] In one example, a method, implemented on at least one machine, each having at least one processor, storage, and a communication platform connected to a network for targeted advertising is presented. First information related to an online activity of a user is received. The online activity is associated with a first attribute to be used to identify the user. Second information related to an offline activity of the user is received. The offline activity is associated with a second attribute to be used to identify the user. A connection between the online activity and the offline activity of the user is then identified by matching the first attribute with the second attribute. A profile of the user is obtained based, at least in part, on the identified connection. A request of serving an advertisement is received. The user is selected from a plurality of users based on the profile of the user and information related to the request. The advertisement is provided to the user; fig13, [0075], fig16, [0079] hash function}

In addition, it would have been obvious to one of ordinary skill in the art, at the time of filing, to modify Cook, Wang, Burt, Bussmann, Hsiao to include the elements of Ferber. One would have been motivated to do so, in order to identify the user that made the conversion. Furthermore, the Supreme Court has supported that combining well known prior art elements, in a well-known manner, to obtain predictable results is sufficient to determine an invention obvious over such combination (see *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S.,82 USPQ2d 1385 (2007) & MPEP 2143). In the instant case, Cook, Wang, Burt, Bussmann, Hsiao evidently discloses correlating online advertising (sponsored content) with offline conversion. Ferber is merely relied upon to illustrate the functionality of matching offline with local users in the same or similar context. As best understood by Examiner, since both correlating online advertising (sponsored content) with offline conversion, as well as matching offline with local users are implemented through well-known computer technologies in the same or similar context, combining their features as outlined above using such well-known computer technologies (i.e., conventional software/hardware configurations), would be reasonable, according to one of ordinary skill in the art. Moreover, since the elements disclosed by Cook, Wang, Burt, Bussmann, Hsiao, as well as Ferber would function in the same manner in combination as they do in their separate embodiments, it would be reasonable to conclude that their resulting combination would be predictable. Accordingly, the claimed subject matter is obvious over Cook, Wang, Burt, Bussmann, Hsiao / Ferber.

Regarding Claims 3, 13 – Cook, Wang, Burt, Bussmann, Hsiao, Ferber discloses the limitations of Claims 1, 11. Cook further discloses:

wherein the action is not directly trackable by the online system via a website of the third party system. {see at least [0057] ... data indicative of in-store visits 612 can be communicated from a user device of a customer physically present in a physical store, for example, by receiving data from the user device over a communication system, such as WiFi, Bluetooth, etc; fig7, rc702, rc704, [0062]-[0066] actions trackable over sensors and wireless connection (WiFi, Bluetooth), not over the Internet}

Regarding Claims 4, 14 – Cook, Wang, Burt, Bussmann, Hsiao, Ferber discloses the limitations of Claims 1, 11. Cook further discloses:

wherein the action comprises at least one of: a transaction at a physical location, a transaction as part of a delayed payment service, a transaction as part of a service approval process, and a transaction completed at an intermediary. {see at least [0072] user activity

indicative of a completed transaction for purchase of goods while present in the store ...
payment application ... online payments}

Regarding Claims 7, 17 – Cook, Wang, Burt, Bussmann, Hsiao, Ferber discloses the limitations of Claims 1, 11. Cook further discloses: wherein the transmitting additional information regarding the offline conversion further comprises:

transmitting to the third party system a conversion rate of the sponsored content based on a number of local users with stored offline conversion data attributed to the sponsored content item and a total number of local users presented with the sponsored content item. {see at least fig6, rc604-rc616, [0054]-[0059] total number of users who viewed the advertisement ... total number of user who visited the store ... total sales}

Regarding Claims 8, 18 – Cook, Wang, Burt, Bussmann, Hsiao, Ferber discloses the limitations of Claims 7, 17. Cook further discloses:

wherein the conversion rate is further based on the type of action performed by offline users as indicated by the stored offline conversion data. {see at least fig6, rc602, fig7, rc708, [0072]-[0075] At operation 708, a user activity occurring within the physical store is identified. The user activity can be any activity related to the customer traffic and/or offer for purchase of goods or services by or in connection with the user of the user device. For example, user activity may be identified to determine the goods displayed for sale that the user has looked at for a prolonged period of time (reads on type of action). In an implementation, the detector can identify movement of the device within a near proximity of the detector.}

Regarding Claims 10, 20 – Cook, Wang, Burt, Bussmann, Hsiao, Ferber discloses the limitations of Claims 1, 11. Cook further discloses: wherein the identifying the local user matching the offline user further comprises:

identifying a local user having a threshold number of identifiers matching the corresponding identifiers in the identifying information of the offline user. {see at least [0070] ... rather, an identifier of the mobile device such as MAC address ... can be supplemented with personal information (reads on a threshold number of identifiers (e.g. a threshold of one: MAC address, or a threshold of two: MAC address plus personal information))}

Claims 9, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook (US 2017/0262880), in view of Wang et al (US 2009/0216616), in further view of Burt et al (US 2011/0231239), in further view of Bussmann et al (US 2010/0138294), in further view of Hsiao et al (US 2011/0302025), in further view of Ferber et al (US 2015/0348119), in further view of Kawamura et al (US 2016/0140603).

Regarding Claims 9, 19 – Cook, Wang, Burt, Bussmann, Hsiao, Ferber discloses the limitations of Claims 7, 17. Cook, Wang, Burt, Bussmann, Hsiao, Ferber does not disclose, however, Kawamura discloses:

wherein the conversion rate is further based on the visual placement of the attributed sponsored content item when the sponsored content item was presented to the local users in the online system. {see at least [0009] advertising activity information ... second user ... user performs advertising activity ... visual effect ... location (reads on impact of visual placement on user activity/conversion)}

In addition, it would have been obvious to one of ordinary skill in the art, at the time of filing, to modify Cook, Wang, Burt, Bussmann, Hsiao, Ferber to include the elements of Kawamura. One would have been motivated to do so, in order to improve the advertising economics (i.e. profitability). Furthermore, the Supreme Court has supported that combining well known prior art elements, in a well-known manner, to obtain predictable results is sufficient to determine an invention obvious over such combination (see *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S.,82 USPQ2d 1385 (2007) & MPEP 2143). In the instant case, Cook, Wang, Burt, Bussmann, Hsiao, Ferber evidently discloses correlating online advertising (sponsored content) with offline conversion. Kawamura is merely relied upon to illustrate the functionality of correlating conversion rate with advertising (sponsored content) placement in the same or similar context. As best understood by Examiner, since both correlating online advertising (sponsored content) with offline conversion, as well as correlating conversion rate with advertising (sponsored content) placement are implemented through well-known computer technologies in the same or similar context, combining their features as outlined above using such well-known computer technologies (i.e., conventional software/hardware configurations), would be reasonable, according to one of ordinary skill in the art. Moreover, since the elements disclosed by Cook, Wang, Burt, Bussmann, Hsiao, Ferber, as well as Kawamura would function in the same manner in combination as they do in their separate embodiments, it would be reasonable to conclude that their resulting combination would be predictable. Accordingly, the

claimed subject matter is obvious over Cook, Wang, Burt, Bussmann, Hsiao, Ferber / Kawamura.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook (US 2017/0262880), in view of Wang et al (US 2009/0216616), in further view of Burt et al (US 2011/0231239), in further view of Bussmann et al (US 2010/0138294), in further view of Hsiao et al (US 2011/0302025), in further view of Ferber et al (US 2015/0348119), in further view of Patwa et al (US 2011/0225035).

Regarding Claim 21 – Cook, Wang, Burt, Bussmann discloses the limitations of Claim 1. Cook, Wang, Burt, Bussmann, Hsiao, Ferber does not disclose, however, Patwa discloses:

wherein the user interface presents a plurality of data bin user interfaces to the third party system, each data bin user interface presenting statistical information regarding an effect of one of a plurality of characteristics of a presentation of sponsored content on offline conversions, one of the characteristics of the plurality of characteristics including a placement position of sponsored content, the online system computing an effect of a placement position of sponsored content on offline conversion rates according to the attribution amount of the sponsored content in the placement position to the offline conversion, the placement position being a position within a web page presented to users of the online system. {see at least fig3, [0035]-[0038]; fig5, rc508, rc512 (calculating the online advertisement attribution), rc516, [0041]-[0042]}

In addition, it would have been obvious to one of ordinary skill in the art, at the time of filing, to modify Cook, Wang, Burt, Bussmann, Hsiao, Ferber to include the elements of Patwa. One would have been motivated to do so, in order to finer correlate online advertising to offline conversion. Furthermore, the Supreme Court has supported that combining well known prior art elements, in a well-known manner, to obtain predictable results is sufficient to determine an invention obvious over such combination (see *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S.,82 USPQ2d 1385 (2007) & MPEP 2143). In the instant case, Cook, Wang, Burt, Bussmann, Hsiao, Ferber evidently discloses correlating online advertising (sponsored content) with offline conversion. Patwa is merely relied upon to illustrate the functionality of correlation of online advertisement placement with offline conversion in the same or similar context. As best understood by Examiner, since both correlating online advertising (sponsored content) with offline conversion, as well as correlation of online advertisement placement with offline

conversion are implemented through well-known computer technologies in the same or similar context, combining their features as outlined above using such well-known computer technologies (i.e., conventional software/hardware configurations), would be reasonable, according to one of ordinary skill in the art. Moreover, since the elements disclosed by Cook, Wang, Burt, Bussmann, Hsiao, Ferber, as well as Patwa would function in the same manner in combination as they do in their separate embodiments, it would be reasonable to conclude that their resulting combination would be predictable. Accordingly, the claimed subject matter is obvious over Cook, Wang, Burt, Bussmann, Hsiao, Ferber / Patwa.

Response to Amendments/Arguments

Applicant's submitted remarks and arguments have been fully considered.

Applicant disagrees with the Office Action conclusions and asserts that the presented claims fully comply with the requirements of 35 U.S.C. § 101 regarding judicial exceptions. Further, Applicant is of the opinion that the prior art fails to teach Applicant's invention.

Examiner respectfully disagrees in both regards.

With respect to Applicant's Remarks as to the claims being rejected under 35 USC § 101.

Applicant submits:

- a. The pending claims are not directed to an abstract idea.
- b. The identified abstract idea is integrated into a practical application.
- c. The pending claims amount to significantly more.

Furthermore, Applicant asserts that the Office has failed to meet its burden to identify the abstract idea and to establish that the identified abstract idea is not integrated into a practical application and that the pending claims do not amount to significantly more.

Examiner responds – The arguments have been considered in light of Applicants' amendments to the claims. The arguments ARE NOT PERSUASIVE. Therefore, the rejection is maintained.

The pending claims, as a whole, are directed to an abstract idea not integrated into a practical application. This is because (1) they do not effect improvements to the functioning of a computer, or to any other technology or technical field (see MPEP 2106.05 (a)); (2) they do not apply or use the abstract idea to effect a particular treatment or prophylaxis for a disease or a medical condition (see the *Vanda* memo); (3) they do not apply the abstract idea with, or by use of, a particular machine (see MPEP 2106.05 (b)); (4) they do not effect a transformation or reduction of a particular article to a different state or thing (see MPEP 2106.05 (c)); (5) they do not apply or use the abstract idea in some other meaningful way beyond generally linking the use of the identified abstract idea to a particular technological environment, such that the claim as a whole is more than a drafting effort designated to monopolize the exception (see MPEP 2106.05 (a) and the *Vanda* memo).

In addition, the pending claims do not amount to significantly more than the abstract idea itself.

As such, the pending claims, when considered as a whole, are directed to an abstract idea not integrated into a practical application and not amounting to significantly more.

More specific:

Applicant submits "Instead, these limitations are recited specifically to improve the functionality of the computer to achieve the solution described above of being able to track the actions of the users in real time." Examiner has carefully considered, but doesn't find Applicant's arguments persuasive. Applicant argues that the claims are patent-eligible because they result in an improvement in the functionality of a computer. Examiner respectfully disagrees. First, it is not clear how adding an application to a computer configuration (hardware and software, which are logically equivalent) improves the computer. The computer industry regards as improvements either (a) a higher execution speed, or (b) a lower power consumption, or (c) a lower cost. It is not clear which of these factors are improved and how; Examiner argues that adding the instant application to a computer configuration will improve none of the three enumerated factors.

Second, it is not clear that the claims are directed to an improvement to an existing technology either. The claims appear directed to an improvement to tracking offline transactions. The technological improvements identified by the courts in *Diehr*, *Enfish*, and *Bascom* are significantly different than programming a computer to track offline transactions in real time. The disclosure fails to explicitly discuss an improvement to any underlying technology executing the identified abstract idea. The original disclosure fails to discuss prior art offline

transaction tracking engines. In spite of disclosing some perceived advantages which allegedly are brought about by the instant application, the original disclosure fails to discuss prior art offline transaction tracking engines. The original disclosure therefore does not suggest that the particular offline transaction tracking engine structures being claimed is an improvement over prior art systems. The fact that the disclosure failed to identify a problem and the fact that the original disclosure fails to indicate how or why the claimed arrangement of system elements enables an improvement suggests that the claimed invention is not directed to this improvement. Instead, it appears Applicant has attempted to identify, after the fact, some unsubstantiated benefit of the claimed matter in an effort to exhibit the claims are directed to a technological improvement. (see MPEP 2106.05(a); (i) specification requirements in regard to the improvements (should describe the improvement): *McRO v Bandai* – specification provides explanation, *Affinity Labs* – specification does not provide explanation; (ii) claim requirements in regard to the improvements (should recite the improvement): *Enfish* – claim reflects the improvement, *Intellectual Ventures* – claim does not reflect the improvement).

Applicant submits “When compared to the new examples in the October 2019 PEG Appendix 1, the claims are similar to examples with eligible claims rather than those with ineligible claims.” Examiner has carefully considered, but doesn’t find Applicant’s arguments persuasive. It is not proper practice to go and find a particular Example from the Office published material and use the specific arguments from that Example to determine eligibility of a particular claimed invention, unless the particular claimed invention uniquely matches the subject matter claimed in that particular Example, which in the instant situation it does not. The Office periodically publishes Examples with detailed analyses only to serve as rational and argumentation models to determine eligibility.

Applicant submits “For example, claim 21 recites a graphical user interface which utilizes a computer display and processor to render. This provides a novel method of allowing the computer to display the information indicated and differs from the cited abstract ideas indicated in the Office Action.” Examiner has carefully considered, but doesn’t find Applicant’s arguments persuasive. Claim 21 recites a non-positively claim element that provides further descriptive limitations, such as the data bin user interface. However, this element does not require any steps or functions to be performed and thus does not involve the use of any computing functions. While the descriptive elements may provide further helpful context for the claimed invention, these elements do not serve to confer subject matter eligibility to the invention since

their individual and combined significance is still not heavier than the abstract concepts at the core of the claimed invention.

Applicant submits "Here, the specification and claims to disclose such an improvement. (see, e.g., Specification, [0037]-[0039])." Examiner has carefully considered, but doesn't find Applicant's arguments persuasive. The application specification discloses at [0037]-[0039] In these and other similar cases, the offline conversions receiver 240 may provide a separate method for the third party system 130 to transmit information regarding these offline conversions to the online system 140. The specification does not mention any deficiencies or drawbacks in the state of the art engines for tracking real-time transactions. Furthermore, it does not disclose any advantages/improvements the proposed method will bring about, if compared with the state of the art.

Applicant submits "This does not cite to any of the four required elements described in *Berkheimer*." Examiner has carefully considered, but doesn't find Applicant's arguments persuasive. No "well-known, routine and conventional" steps are identified in the eligibility rejection in the instant Office Action.

Applicant submits "Therefore, as the claims do provide significantly more than any judicial exception as noted above ..." Examiner has carefully considered, but doesn't find Applicant's arguments persuasive. The eligibility rejection in the instant Office Action concludes at Step 2B:

When the independent and dependent claims are considered as a whole, as a combination, the additional elements noted above appear to merely apply the abstract concept to a technical environment in a very general sense – i.e. a computer receives information from another computer, processes that information and then sends a response based on processing results. The most significant elements of the claims, that is the elements that really outline the inventive elements of the claims, are set forth in the elements identified in the independent claims as an abstract idea. The fact that the computing devices are facilitating the abstract concept is not enough to confer statutory subject matter eligibility. In sum, the additional elements do not serve to confer subject matter eligibility to the invention since their individual and combined significance is still not heavier than the abstract concepts at the core of the claimed invention. Therefore, it is concluded that the dependent claims of the instant application do not amount to significantly more either. (MPEP 2106.05)

It becomes self-evident that there are no meaningful limitations in the claims that transform the judicial exception into a patent eligible application such that the claims amount to significantly more than the judicial exception itself. Therefore, the rejection under 35 U.S.C. § 101 is maintained.

With respect to Applicant's Remarks as to the claims being rejected under 35 USC § 103.

Applicant submits "Burt [0125] discloses a "reporting interface," such as an API, to report "amount of credit apportioned to influencing events may be viewed by individual influencing events, or alternately may be summarized according to one or more factors." However, this is used to report the results of a data analysis, and not to receive offline conversions data from various third parties regarding conversions occurring offline." Examiner has carefully considered, but doesn't find Applicant's arguments persuasive. Burt discloses at [0125] an API interface. In addition, Cook discloses: "... to transmit offline conversions data to an online system, the offline conversion data including an indication of an action performed by the offline user that is not directly trackable" {see at least fig7, rc708, [0072] In an implementation, data indicative of whether a customer made a purchase while present in a physical store can include electronic data derived from electronic coupons (e.g., those communicated to an email address associated with the customer), online payments made by the customer (e.g., as determined based on personal data used at the time of payment), quick response (QR) codes communicated to the customer and indicative of the customer (e.g., as including personal data about the customer in the code), data scanned by in-store scanners, or data received from a point-of-sales or other payment application (e.g., whether an in-store feature or as a mobile application interfacing therewith)}.

In addition, Cook also discloses an API interface at [0064].

Therefore, the combination Cook, Burt discloses the claim limitation.

Applicant submits "In addition, as noted previously, claim 8 is also not taught by the cited Cook reference." Examiner has carefully considered, but doesn't find Applicant's arguments persuasive. Cook discloses fig6, rc602, fig7, rc708, [0072]-[0075] At operation 708, a user activity occurring within the physical store is identified. The user activity can be any activity related to the customer traffic and/or offer for purchase of goods or services by or in connection with the user of the user device. For example, user activity may be identified to determine the

goods displayed for sale that the user has looked at for a prolonged period of time (reads on type of action). In an implementation, the detector can identify movement of the device within a near proximity of the detector.

The application specification does not provide a clear definition of "offline conversion." It provides only an example at [0060] – "The offline conversions UI module 280 may also present details regarding each offline conversion, including the type of the offline conversion (e.g., retail purchase, deferred payment), ..."

However, per MPEP § 2106.11.C (Interpretation of Claims): unless a term is given an "explicit" and "clear" definition in the specification the examiner is obligated to give a claim term its broadest reasonable interpretation, in light of the specification as it would be interpreted by one of ordinary skilled in the art (MPEP § 2111). This means that the words of a claim must be given their "plain meaning" unless the plain meaning is inconsistent with the specification (MPEP § 2111.01.1 and 2111.01.111). An explicit and clear definition must establish the metes and bounds of the terms. A clear definition must unambiguously establish what is and what is not included. A clear definition is indicated by a section labeled definitions, or by the use of phrases such as "by xxx we mean"; "xxx is defined as". An example of a term does not constitute a "clear definition" beyond the scope of the example. An applicant may define specific terms used to describe the invention, but must do so "with reasonable clarity, deliberateness, and precision" and, if done, must "'set out his uncommon definition in some manner within the patent disclosure' so as to give one of ordinary skill in the art notice of the change" in meaning (MPEP § 2111.01.IV and 2173.05(a)).

Therefore, looking at an object for a prolonged period of time and a detector that can identify movement of the device within a near proximity of the detector read on type of action.

Applicant submits "No teaching is made of modifying a conversion rate based on the type of action performed by a user in the offline conversions data." Examiner has carefully considered, but doesn't find Applicant's arguments persuasive. No such language is disclosed by the actual set of claims.

The other arguments presented by Applicant continually point back to the above arguments as being the basis for the arguments against the other 103 rejections, as the other arguments are presented only because those claims depend from the independent claims, and the main argument above is presented against the independent claims. Therefore, it is believed that all arguments put forth have been addressed by the points above.

Examiner has reviewed and considered all of Applicant's remarks. The changes of the grounds for rejection, if any, have been necessitated by Applicant's extensive amendments to the claims. Therefore, the rejection is maintained, necessitated by the extensive amendments and by the fact that the rejection of the claims under *35 USC § 101* has not been overcome.

Conclusion

Applicants' amendments necessitated the new ground(s) of rejection presented in this Office action. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this office action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this office action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Radu Andrei whose telephone number is 313.446.4948. The examiner can normally be reached on Monday – Friday 8:30am – 5pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ilana Spar can be reached at (571)270-7537. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

As detailed in MPEP 502.03, communications via Internet e-mail are at the discretion of the applicant. Without a written authorization by applicant in place, the USPTO will not respond via Internet e-mail to any Internet correspondence which contains information subject to the confidentiality requirement as set forth in 35 U.S.C. 122. A paper copy of such correspondence will be placed in the appropriate patent application. The following is a sample authorization form which may be used by applicant:

"Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (in U.S.A. or Canada) or 571-272-1000.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to 571-273-8300

Hand delivered responses should be brought to the:

United States Patent and Trademark Office
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

/Radu Andrei/
Primary Examiner, AU 3682

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the claim amendments and following remarks.

Status of Claims

Claims 1, 11, 17, and 19 are amended.

Claims 2, 5-6, 12, and 15-16 were previously canceled without prejudice or disclaimer of the subject matter contained therein.

Claims 1, 3-4, 7-11, 13-14, and 17-21 are pending in the application of which claims 1 and 11 are independent.

Claims 1, 3-4, 7-11, 13-14, and 17-21 are rejected.

No new matter has been introduced by way of the amendments above. Entry thereof is therefore respectfully requested.

Examiner Interview

At the outset, Applicant thanks the Examiner for the courtesies extended during the interview on April 10, 2020. Agreement was reached with respect to the rejection under 35 U.S.C. § 112, first paragraph (written description). The Examiner acknowledged that this rejection was issued in error and should have been withdrawn earlier. Although agreement was not reached with regard to allowability, the Examiner discussed with Applicant ways to overcome the rejections under 35 U.S.C. § 101 (subject matter eligibility) and § 103 (obviousness). Specifically, the

Examiner acknowledged that the amendments and arguments made herein would potentially overcome the rejections and necessitate further search and consideration.

Summary of the Office Action

Claims 1, 3-4, 7-11, 13-14, and 17-21 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement.

Claims 1, 3-4, 7-11, 13-14, and 17-21 are rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter.

Claims 1, 3-4, 7-8, 10-11, 13-14, 17-18, and 20 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2017/0262880 to Cook (hereinafter “Cook”) in view of U.S. Patent Application Publication No. 2009/0216616 to Wang, et al. (hereinafter “Wang”), U.S. Patent Application Publication No. 2011/0231239 to Burt, et al. (hereinafter “Burt”), U.S. Patent Application Publication No. 2010/0138294 to Bussmann, et al. (hereinafter “Bussmann”), U.S. Patent Application Publication No. 2011/0302025 to Hsiao, et al. (hereinafter “Hsiao”), and further in view of U.S. Patent Application Publication No. 2015/0348119 to Ferber, et al. (hereinafter “Ferber”).

Claims 9 and 19 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cook in view of Wang, Burt, Bussmann, Hsiao, Ferber, and further in view of U.S. Patent Application Publication No. 2016/0140603 to Kawamura, et al. (hereinafter “Kawamura”).

Claim 21 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cook in view of Wang, Burt, Bussmann, Hsiao, Ferber, and further in view of U.S. Patent Application Publication No. 2011/0225035 to Patwa, et al (hereinafter “Patwa”).

The rejections above are respectfully traversed for at least the reasons set forth below.

Claim Rejection Under 35 U.S.C. § 112, 1st Paragraph

Claims 1, 3-4, 7-11, 13-14, and 17-21 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement.

During the interview with the Examiner conducted on April 10, 2020, agreement was reached with respect to this rejection. The Examiner acknowledged that this rejection was issued in error and should have been withdrawn earlier.

In view of the foregoing, Applicant respectfully requests that the aforementioned written description rejection of claims 1, 3-4, 7-11, 13-14, and 17-21 be withdrawn.

Claim Rejection Under 35 U.S.C. § 101

Claims 1, 3-4, 7-11, 13-14, and 17-21 are rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter.

During the interview with the Examiner conducted on April 10, 2020, the Examiner kindly pointed to the January 2019 updated patent eligibility guidelines (“2019 PEG”) and stressed the importance of clarifying how the claimed invention can be integrated into a “practical application,” according to the requirements of the Step 2A, prong 2. More specifically, the Examiner asked Applicant to highlight portions of the specification and better explain how the claimed invention improves upon the existing technology or technical field. *See* MPEP 2106.05(a).

Responsive to the Examiner’s request, Applicant demonstrates below how the claimed invention can be integrated into a “practical application” to meet and satisfy the requirements of

the Step 2A, prong 2. That said, it should be appreciated that a full analysis of patent eligibility should still be addressed. After all, Applicant believes that the claimed invention satisfies all the eligibility requirements and that this rejection should be withdrawn for all the reasons presented below.

Summary of Eligibility Requirements

The USPTO issued the 2019 Revised Patent Subject Matter Eligibility Guidance (hereinafter the “2019 PEG”) for determining subject matter eligibility, and these guidelines became effective January 7, 2019. *See* USPTO's January 7, 2019 Memorandum, 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019). Furthermore, the USPTO recently issued the October 2019 Patent Eligibility Guidance Update (hereinafter the “October 2019 Update”) on October 18, 2019 to include a new set of examples and a discussion of various issues raised by public comments.

Under the 2019 PEG and the October 2019 Update, we first look to whether the claim recites:

(1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human interactions such as a fundamental economic practice, or mental processes); and

(2) additional elements that integrate the judicial exception into a practical application (see MPEP § 2106.05(a)-(c), (e)-(h)). *See* 2019 PEG at 52, 55-56.

Only if a claim (1) recites a judicial exception, and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that are not "well-understood, routine, conventional" in the field (see MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. *See* 2019 Guidance at 56.

Furthermore, the 2019 PEG "extracts and synthesizes key concepts identified by the courts as abstract ideas to explain that the abstract idea exception includes the following groupings of subject matter, when recited as such in a claim limitation(s) (that is, when recited on their own or per se)":

(a) Mathematical concepts-mathematical relationships, mathematical formulas or equations, mathematical calculations;

(b) Certain methods of organizing human activity fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations); managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions); and

(c) Mental processes----concepts performed in the human mind (including an observation, evaluation, judgment, opinion). *Id.* at 52.

The remarks below pertain to the required analysis as set forth in the 2019 PEG and the October 2019 Update as is summarized above. The remarks below further address remarks presented by the Examiner in the Office Action.

Step 2A, Prong 1 Analysis

The Examiner asserts that, regarding **Step 2A, Prong 1**, claims 1, 3-4, 7-11, 13-14, and 17-21 are directed toward a "judicial exception (i.e. an abstract idea)." *See* Office Action at 2-3. More

specifically, the Office Action alleges that the “limitations, as drafted constitute a process that, under its broadest reasonable interpretation, covers commercial activity, but for the recitation of generic computer components...comparable to an advertising, marketing process, i.e. a process aimed at attributing sales (i.e. offline conversions) to online sponsored content (i.e. advertising)...[which] falls within the ‘Certain Methods of Organizing Human Activity – Commercial or Legal Interactions (e.g., agreements in form of contracts, legal obligations, advertising, marketing, sales activities or behaviors, business relationships)’ grouping of abstract ideas.” *See* Office Action at 3.

In the October 2019 Update, page 16, the USPTO states, “First, the rejection should identify the judicial exception (i.e., abstract idea enumerated in Section I of the 2019 PEG, laws of nature, or a natural phenomenon) by referring to what is recited (i.e., set forth or described) in the claim and explaining why it is considered to be an exception (Step 2A Prong One). ... For abstract ideas, the rejection should explain why a specific limitation(s) recited in the claim falls within one of the enumerated groupings of abstract ideas (i.e., mathematical concepts, mental processes, or certain methods of organizing human activity)” (Emphasis added).

First, the Examiner only generally states that “generic computers” are used and appears to only refer to the specification, rather than the claims themselves. Therefore, the Examiner’s analysis is erroneous and fails to follow the guidelines set forth by the USPTO. The claims plainly do not recite any “contract,” “legal obligations,” or “business relationships.” Therefore, the Examiner’s analysis for Step 2A, Prong One based on what appears to be directed to the specification, and not the claims themselves, is improper.

Second, the Examiner alleges that the claims are directed to certain methods of organizing human activity, such as commercial or legal interactions. However, the Examiner fails to provide any more detail to his position. The claims, rather, are directed to tracking user response to content presented to a use, especially in scenarios where users do so indirectly via a third party system or in an offline manner. In other words, the claimed system tracks user offline response in real-time by using offline conversion data from third parties, and does not recite any features related to an agreement in the form of contract or legal obligations, advertising, marketing or sales activities, or business relations. More specifically, claim 1 recites “extending, by an online system, an application programming interface (API) for access by a third party system, the application, the API including one or more hypertext transport protocol (HTTP) based commands that allow the third party system to transmit offline conversions data to an online system, the offline conversion data including an indication of an action performed by the offline user that is not directly trackable,” “receiving, at the online system from the third party system, an HTTP message with a function call of the API, the function call including instructions to add offline conversion data for an offline user, the offline conversion data received in realtime as the actions of the offline conversions are completed, each entry of the received offline conversion data including comprising at least one of the following identifying information: an indication of the third party system, an indication of a type of action performed by the offline user, a timestamp for the action, and metadata associated with revenue or profit generated by the action, a value score of the action to the third party system, wherein the identifying information for the offline user is hashed for security,” and “identifying a local user matching the offline user by matching identifying information of the local user with the identifying information of the offline user received in offline

conversion data entry from the API function call, wherein the matching is based on: assigning a confidence score to a match between the local user and the offline user, and determining whether the confidence score meets a predetermined threshold,” and “storing, at the online system, the offline conversion data entry for the identified local user.” These are not forms of contract or legal obligations, advertising, sales activities, or business relations.

Therefore, contrary to the assertion by the Examiner, independent claim 1 does not recite an abstract idea that can be characterized as a commercial interaction or business relation. Based on at least the foregoing reasons, the features recited in independent claim 1 are **not** directed to an abstract idea grouping of certain methods of organizing human activity.

Step 2A, Prong 2 Analysis

Regarding **Step 2A, prong 2**, the Examiner asserts that the judicial exception of independent claim 1, for example, is not integrated into a practical application. However, even assuming that the claimed features are directed to an abstract idea, which Applicant does not so concede, the Applicant submits that the claimed invention nevertheless satisfies prong two of Step 2A analysis under the 2019 PEG. *See* 2019 PEG at 54.

The 2019 PEG indicates that, in prong 2, examiners should evaluate whether the claim as a whole integrates the recited judicial exception into a practical application of the judicial exception. *Id.* A claim that integrates a judicial exception into a practical application will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception. *Id.*

In addition and more specifically, on page 12 of the October 2019 Update, the USPTO states,

An important consideration to evaluate when determining whether the claim as a whole integrates a judicial exception into a practical application is whether the claimed invention improves the functioning of a computer or other technology. ... In short, first the specification should be evaluated to determine if the disclosure provides sufficient details such that one of ordinary skill in the art would recognize the claimed invention as providing an improvement. The specification need not explicitly set forth the improvement, but it must describe the invention such that the improvement would be apparent to one of ordinary skill in the art. ... ***Second, if the specification sets forth an improvement in technology, the claim must be evaluated to ensure that the claim itself reflects the disclosed improvement.*** (Emphasis added)

On pages 12 and 13 of the October 2019 Update, the USPTO states,

That is, the claimed invention may integrate the judicial exception into a practical application by demonstrating that it **improves the relevant existing technology although it may not be an improvement over well-understood, routine, conventional activity**.

Consideration of improvements is relevant to the integration analysis regardless of the technology of the claimed invention. That is, the consideration applies equally whether it is a computer-implemented invention, an invention in the life sciences, or any other technology. (Emphasis added).

In this case, independent claim 1 recites, *inter alia*,

extending, by an online system, an application programming interface (API) for access by a third party system, the application, the API including one or more hypertext transport protocol (HTTP) based commands that allow the third party system to transmit offline conversions data to an online system, the offline conversion data including an indication of an action performed by the offline user that is not directly trackable;

receiving, at the online system from the third party system, an HTTP message with a function call of the API, the function call including instructions to add offline conversion data for an offline user, the offline conversion data received in realtime as the actions of the offline conversions are completed, each entry of the received offline conversion data comprising at least one of the following identifying information: an indication of the third party system, an indication of a type of action

performed by the offline user, a timestamp for the action, and metadata associated with revenue or profit generated by the action, a value score of the action to the third party system, wherein the identifying information for the offline user is hashed for security;

identifying a local user matching the offline user by matching identifying information of the local user with the identifying information of the offline user received in offline conversion data entry from the API function call, wherein the matching is based on:

assigning a confidence score to a match between the local user and the offline user, and

determining whether the confidence score meets a predetermined threshold

...

determining an attribution amount of the offline conversion for each of the one or more sponsored content items that is inversely proportional to the time between a timestamp of the impression opportunity of the sponsored content item and a timestamp of an occurrence of the offline conversion;

computing an updated bid value for each of the one or more sponsored content items for the identified local user, the updated bid value increased or decreased based on the corresponding attribution amounts for that sponsored content item, the updated bid value computed by the online system when submitting the sponsored content item for impression opportunities for the identified local user. (Emphasis added).

As such, independent claim 1 recites a method of tracking user response to content presented to a user, even in situations where some users may act upon content indirectly, e.g., via a third party system or in an offline manner. Specifically, the method recited in claim 1 collects offline conversion data that includes an indication of an action performed by the offline user that is not directly trackable by, among other things, matching identifying information of the local user with the identifying information of the offline user by assigning a confidence score to a match between the local user and the offline user, and determining whether the confidence score meets a

predetermined threshold. Using this information, the method of claim 1 computes an updated bid value for each of the one or more sponsored content items for the identified local user, the updated bid value increased or decreased based on the corresponding attribution amounts for that sponsored content item. Existing technology has no adequate solution for this, especially in the novel and nonobvious ways recited by the claimed invention.

According to the specification, these improvements to the field of digital content management and advertisement technology are described in at least paragraphs [0004] and [0062]-[0064] of the specification, which state:

The online system receives information about actions performed by users at the online system that may not be directly trackable, such as a transaction made at a physical location. This is in contrast to actions that may be directly trackable, such as one made at a website of the third party system. By using such a method, the online system is able to more accurately determine the effects of providing sponsored content from the third party systems and the benefits provided to the third party systems by the sponsored content. While previously the offline conversion information may not be accurately determined, and thus a large portion of the effect of the sponsored content may not be measured accurately, by having the offline conversions information be gathered and reported in real-time, the online system is able to more accurately present the information to the third party system, allowing the third party system to better understand the effects of its sponsored content...

As noted above, the system as described here has many advantages compared to a traditional method. Previously, a system may not have been easily able to determine the effects of offline conversions. At most, a system may have performed a simple lift analysis much later on, and after the fact, to determine in the aggregate an approximate effect on offline conversions. However, without being able to provide information regarding the effects of offline conversions in a timely fashion, the information is not significantly useful to a third party system 130.

Instead, as described here, by providing the information in (near) real-time, the third party systems 130 may quickly adjust for and react to the changes in user response to sponsored content. Furthermore, as described in further detail below, the receipt of offline conversions information allows for more accurate tracking of users' actions, based on an actual occurrence of the action, rather than an estimation or guess that the action may have occurred.

For example, in the case of deferred payments, a user may have reached a payment instruction web page requesting the user to remit payment to a particular bank account. If the online system 140 were to track the user's actions only up to this web page, the information gathered by the online system 140 may not be accurate, as many users may not actually transfer payment subsequently to the particular bank account. Instead, by receiving the offline conversion information regarding payments to the bank account from the third party system 130, the online system 140 is able to gather much more accurate information regarding user behavior, and pass this information back to the third party system 130. (Emphasis added).

Thus, the features recited above in independent claim 1 clearly provide an improvement in the field of computer-related digital content management and advertisement technology, and thereby properly integrate the alleged abstract idea into a “practical application,” as required by Step 2A, prong 2.

Moreover, the features recited in independent claim 1, including “the function call including instructions to add offline conversion data for an offline user, the offline conversion data received in realtime as the actions of the offline conversions are completed, each entry of the received offline conversion data comprising at least one of the following identifying information: an indication of the third party system, an indication of a type of action performed by the offline user, a timestamp for the action, and metadata associated with revenue or profit generated by the action, a value score of the action to the third party system, wherein the identifying information for the offline user is hashed for security,” and “identifying a local user matching the offline user by matching identifying information of the local user with the identifying information of the offline user received in offline conversion data entry from the API function call, wherein the matching is based on: assigning a confidence score to a match between the local user and the offline user, and determining whether the confidence score meets a predetermined threshold,” plainly show that the

claim recites meaningful limitations of the invention, beyond generally linking the use of an abstract idea to a particular technological environment.

As such, the features recited in independent claim 1 more than adequately integrate a judicial exception (if any) into a practical application in accordance with the 2019 PEG and the October 2019 Update. Therefore, independent claim 1 is **not** directed to an abstract idea.

Independent claim 11 recites similar features as independent claim 1. Thus, independent claim 11 is also **not** directed to an abstract idea, nor any intervening dependent claim that depends on these independent claims.

Step 2B Analysis

Notwithstanding that the claims are believed not to be directed to an abstract idea and accordingly the rejection under 35 U.S.C. §101 must be withdrawn, under Step 2B, even if a claim is directed to an abstract idea, the claim is only patent ineligible if the claim elements fail to recite “nothing significantly more” than the abstract idea itself. Here, the claims recite “significantly more” than an abstract idea. The Examiner does not appear to disagree.

Regarding step 2B, the 2019 PEG states, “the Federal Circuit has held claims eligible at the second step of the Alice/Mayo test (USPTO Step 2B) because the additional elements recited in the claims provided “significantly more” than the recited judicial exception (e.g., because the additional elements were unconventional in combination).” *See* 2019 PEG at 56.

In this case, independent claim 1 recites, *inter alia*,

extending, by an online system, an application programming interface (API) for access by a third party system, the application, the API including one or more hypertext transport protocol (HTTP) based commands that allow the third party

system to transmit offline conversions data to an online system, the offline conversion data including an indication of an action performed by the offline user that is not directly trackable;

receiving, at the online system from the third party system, an HTTP message with a function call of the API, the function call including instructions to add offline conversion data for an offline user, the offline conversion data received in realtime as the actions of the offline conversions are completed, each entry of the received offline conversion data comprising at least one of the following identifying information: an indication of the third party system, an indication of a type of action performed by the offline user, a timestamp for the action, and metadata associated with revenue or profit generated by the action, a value score of the action to the third party system, wherein the identifying information for the offline user is hashed for security;

identifying a local user matching the offline user by matching identifying information of the local user with the identifying information of the offline user received in offline conversion data entry from the API function call, wherein the matching is based on:

assigning a confidence score to a match between the local user and the offline user, and

determining whether the confidence score meets a predetermined threshold

...

determining an attribution amount of the offline conversion for each of the one or more sponsored content items that is inversely proportional to the time between a timestamp of the impression opportunity of the sponsored content item and a timestamp of an occurrence of the offline conversion.

As shown above and below in the arguments against the § 103 rejection, the combination of features recited above in independent claims 1 and 11, for example, is not taught or suggested by the prior art. In fact, these limitations and features are clearly directed to additional elements that are unconventional in combination. As such, the combination of features recited in independent claims 1 and 11 constitute a non-conventional and non-generic arrangement of the

additional elements recited in the claims. Accordingly, based on the 2019 PEG, the additional features recited above amount to significantly more than an abstract idea.

In view of the foregoing, the claims 1, 3-4, 7-11, 13-14, and 17-21 are **not** directed to an abstract idea, and/or amount to significantly more than an abstract idea, and, as such, the rejection under 35 U.S.C. §101 should be withdrawn.

Claim Rejections Under 35 U.S.C. § 103(a)

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007):

“Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” Quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

As set forth in MPEP 2143.03, to ascertain the differences between the prior art and the claims at issue, “[a]ll claim limitations must be considered” because “all words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385. According to the Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of *KSR International Co. v. Teleflex Inc.*, Federal Register, Vol. 72, No. 195, 57526, 57529 (October 10, 2007), once the *Graham* factual inquiries are resolved, there must be a

determination of whether the claims would have been obvious to one of ordinary skill in the art based on any one of the following proper rationales:

(A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) “Obvious to try”—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art; (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007).

Furthermore, as set forth in *KSR International Co. v. Teleflex Inc.*, quoting from *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006), “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasonings with some rational underpinning to support the legal conclusion of obviousness.”

Therefore, if the above-identified criteria and rationales are not met, then the cited reference(s) fails to render the claims obvious and, thus, the claims are distinguishable over the cited reference(s).

Claims 1, 3-4, 7-8, 10-11, 13-14, 17-18, and 20

Claims 1, 3-4, 7-8, 10-11, 13-14, 17-18, and 20 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cook in view of Wang, Burt, Bussmann, Hsiao, and further in view of Ferber.

Regarding independent claim 1, the Examiner asserts that the claimed invention would have been obvious in view of the six-reference combination of Cook, Wang, Burt, Bussmann, Hsiao, and Ferber. Applicant respectfully disagrees. However, in order to forward the present application toward allowance, Applicant has amended claim 1 to more specifically define the claimed invention, and specifically those features that further differentiate the claimed invention from Cook, Wang, Burt, Bussmann, Hsiao, and/or Ferber, as well as the other cited references.

In particular, Applicant respectfully submits that Cook, either alone or in combination with Wang, Burt, Bussmann, Hsiao, and Ferber, fails to disclose, or even suggest, a “method” comprising “receiving, at the online system from the third party system, an HTTP message with a function call of the API, the function call including instructions to add offline conversion data for an offline user, the offline conversion data received in realtime as the actions of the offline conversions are completed, each entry of the received offline conversion data comprising at least one of the following identifying information: an indication of the third party system, an indication of a type of action performed by the offline user, a timestamp for the action, and metadata associated with revenue or profit generated by the action, a value score of the action to the third party system, wherein the identifying information for the offline user is hashed for security,” and “identifying a local user matching the offline user by matching identifying information of the local user with the identifying information of the offline user received in offline conversion data entry from the API function call, wherein the matching is based on: assigning a confidence score to a match between the local user and the offline user, and determining whether the confidence score meets a predetermined threshold,” as presently claimed. Support for this amendment may be found in at least paragraphs [0039], [0042], [0045], and [0073] of the specification.

In contrast, Cook is focused on proximity detection. The Examiner acknowledges that Cook does not teach each and every feature of claim 1, and therefore relies on the secondary references of Wang, Burt, Bussmann, Hsiao, and Ferber to teach these missing limitations. However, nothing in any of these secondary references teach or render obvious “offline conversion data comprising at least one of the following identifying information: an indication of the third party system, an indication of a type of action performed by the offline user, a timestamp for the action, and metadata associated with revenue or profit generated by the action, a value score of the action to the third party system, wherein the identifying information for the offline user is hashed for security,” and “identifying a local user matching the offline user by matching identifying information of the local user with the identifying information of the offline user received in offline conversion data entry from the API function call, wherein the matching is based on: assigning a confidence score to a match between the local user and the offline user, and determining whether the confidence score meets a predetermined threshold,” as presently claimed. In fact, nothing in any of these references even mentions these features or limitations, and the Examiner as acknowledged as such in the interview conducted on April 10, 2020. Therefore, Wang, Burt, Bussmann, Hsiao, and Ferber do not cure the deficiencies of Cook.

Even assuming, for the sake of argument, that Wang, Burt, Bussmann, Hsiao, and Ferber teach the missing elements and therefore cures the deficiencies of Cook, which Applicant does not so concede, there would still be no rationale of obviousness to combine the references. The combination of these six references is clearly based on classic improper hindsight. The Examiner alleges that “it would have been obvious to one of ordinary skill in the art...to combine the teachings” of each of these secondary references to the primary reference, but fails say why or how

this would work. Merely stating that it would have been obvious, without any evidence or explanation, and citing what each reference can do on its own, is not a proper basis for obviousness.

In fact, the combination that is proposed by the Examiner could not happen without violating the purpose or principle of each of the systems. For example, the Cook is focused on proximity detection. By contrast, Burt is directed to identifying and crediting interactions that lead to a conversion.” In other words, none of the “conversion metrics” or described by Burt have anything to do with physical movement or location, but rather to other influencing actions such as “recency of interaction.” See Burt at [0009]. Therefore, to combine Burt’s *time-based conversion* system with that of Cook’s would necessarily violate Cook’s *physical location detection* system, and vice versa.

Accordingly, Applicant respectfully submits that claim 1 should be allowable over the six-reference combination of Cook, Wang, Burt, Bussmann, Hsiao, and Ferber as set forth above.

Regarding claims 11, while different in overall scope from claim 1, this claims recites subject matter related to claim 1. Thus, the arguments set forth above with respect to claim 1 are equally applicable to claim 11. Accordingly, Applicant respectfully submits that claims 11 should be allowable over Cook, Wang, Burt, Bussmann, Hsiao, and Ferber for analogous reasons as set forth above with respect to claim 1.

Regarding claims 3-4, 7-8, 10, 13-14, 17-18, and 20, these claims are dependent upon independent claim 1 or 11. Thus, since independent claims 1 and 11 should be allowable as discussed above, claims 3-4, 7-8, 10, 13-14, 17-18, and 20 should also be allowable at least by virtue of their dependency on independent claim 1 or 11. Moreover, these claims recite additional

features which are not disclosed, or even suggested, by the cited references taken either alone or in combination.

In view of the foregoing, Applicant respectfully requests that the aforementioned obviousness rejection of claims 1, 3-4, 7-8, 10-11, 13-14, 17-18, and 20 be withdrawn.

Claims 9 and 19

Claims 9 and 19 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cook in view of Wang, Burt, Bussmann, Hsiao, Ferber, and further in view of Kawamura.

Applicant respectfully submits that the aforementioned obviousness rejection of claims 9 and 19 has become moot in view of the deficiencies of the primary references (i.e., Cook, Wang, Burt, Bussmann, Hsiao, and Ferber) as discussed above with respect to independent claims 1 and 11. That is, claims 9 and 19 are dependent upon independent claim 1 or 11 and thus inherently incorporate all of the limitations of independent claim 1 or 11. Also, the secondary reference (i.e., Kawamura) fails to disclose, or even suggest, the deficiencies of the primary references as discussed above with respect to independent claim 1 or 11. Indeed, the Examiner does not even assert such. Thus, the combination of the secondary reference with the primary references also fails to disclose, or even suggest, the deficiencies of the primary references as discussed above with respect to independent claims 1 and 11. Accordingly, claims 9 and 19 should be allowable over the combination of the secondary reference with the primary references at least by virtue of its/their dependency on independent claim 1 or 11. Moreover, claims 9 and 19 recite additional features which are not disclosed, or even suggested, by the cited references taken either alone or in combination.

In view of the foregoing, Applicant respectfully requests that the aforementioned obviousness rejection of claims 9 and 19 be withdrawn.

Claim 21

Claim 21 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cook in view of Wang, Burt, Bussmann, Hsiao, Ferber, and further in view of Patwa.

Applicant respectfully submits that the aforementioned obviousness rejection of claim 21 has become moot in view of the deficiencies of the primary references (i.e., Cook, Wang, Burt, Bussmann, Hsiao, and Ferber) as discussed above with respect to independent claim 11. That is, claim 21 is dependent upon independent claim 11 and thus inherently incorporate all of the limitations of independent claim 11. Also, the secondary reference (i.e., Patwa) fails to disclose, or even suggest, the deficiencies of the primary references as discussed above with respect to independent claim 11. Indeed, the Examiner does not even assert such. Thus, the combination of the secondary reference with the primary references also fails to disclose, or even suggest, the deficiencies of the primary references as discussed above with respect to independent claim 11. Accordingly, claim 21 should be allowable over the combination of the secondary reference with the primary references at least by virtue of its/their dependency on independent claim 1 or 11. Moreover, claim 21 recites additional features which are not disclosed, or even suggested, by the cited references taken either alone or in combination.

In view of the foregoing, Applicant respectfully requests that the aforementioned obviousness rejection of claim 21 be withdrawn.

PATENT

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Conclusion

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited. Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to Deposit Account No. 50-3290.

Respectfully submitted,

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IN THE CLAIMS

Please find below a listing of all of the pending claims. The status of each claim is set forth in parentheses. This listing will replace all prior versions, and listings, of claims in the present application.

1. (Currently Amended) A method comprising:

extending, by an online system, an application programming interface (API) for access by a third party system, the application, the API including one or more hypertext transport protocol (HTTP) based commands that allow the third party system to transmit offline conversions data to an online system, the offline conversion data including an indication of an action performed by the offline user that is not directly trackable;

receiving, at the online system from the third party system, an HTTP message with a function call of the API, the function call including instructions to add offline conversion data for an offline user, the offline conversion data received in realtime as the actions of the offline conversions are completed, each entry of the received offline conversion data including comprising at least one of the following identifying information: an indication of the third party system, an indication of a type of action performed by the offline user, a timestamp for the action, and metadata associated with revenue or profit generated by the action, a value score of the action to the third party system, and wherein the a hash of identifying information for the offline user is hashed for security;

identifying a local user matching the offline user by matching ~~a hash of~~ identifying information of the local user with ~~the hash of~~ the identifying information of the offline user

received in offline conversion data entry from the API function call, wherein the matching is based on:

assigning a confidence score to a match between the local user and the offline user,

and

determining whether the confidence score meets a predetermined threshold;

storing, at the online system, the offline conversion data entry for the identified local user;

identifying one or more sponsored content items of the third party system that were presented within a range of a previous time period to the identified local user during one or more impression opportunities at the online system; ~~[[and]]~~

determining an attribution amount of the offline conversion for each of the one or more sponsored content items that is inversely proportional to the time between a timestamp of the impression opportunity of the sponsored content item and a timestamp of an occurrence of the offline conversion;

computing an updated bid value for each of the one or more sponsored content items for the identified local user, the updated bid value increased or decreased based on the corresponding attribution amounts for that sponsored content item, the updated bid value computed by the online system when submitting the sponsored content item for impression opportunities for the identified local user; and

transmitting computer readable instructions to a client device of the third party system to cause the client device of the third party system to display a user interface presenting additional information regarding the offline conversion to the third party system, the additional information including a display of a conversion rate of the one or more sponsored content items computed

using stored offline conversion data, the additional information not previously accessible to the third party system.

2. (Canceled).

3. (Original) The method of claim 1, wherein the action is not directly trackable by the online system via a website of the third party system.

4. (Original) The method of claim 1, wherein the action comprises at least one of: a transaction at a physical location, a transaction as part of a delayed payment service, a transaction as part of a service approval process, and a transaction completed at an intermediary.

5-6. (Cancelled).

7. (Original) The method of claim 1, wherein the transmitting additional information regarding the offline conversion further comprises:

transmitting to the third party system a conversion rate of the sponsored content based on a number of local users with stored offline conversion data attributed to the sponsored content item and a total number of local users presented with the sponsored content item.

8. (Previously Presented) The method of claim 7, wherein the conversion rate is further based on the type of action performed by offline users as indicated by the stored offline conversion data.

9. (Previously presented) The method of claim 7, wherein the conversion rate is further based on the visual placement of the attributed sponsored content item when the sponsored content item was presented to the local users in the online system.

10. (Original) The method of claim 1, wherein the identifying the local user matching the offline user further comprises:

identifying a local user having a threshold number of identifiers matching the corresponding identifiers in the identifying information of the offline user.

11. (Currently Amended) A computer program product comprising a non-transitory computer readable storage medium having instructions encoded thereon that, when executed by a processor, cause the processor to:

extend, by an online system, an application programming interface (API) for access by a third party system, the application, the API including one or more hypertext transport protocol (HTTP) based commands that allow the third party system to transmit offline conversions data to an online system, the offline conversion data including an indication of an action performed by the offline user that is not directly trackable;

receive, at the online system from the third party system, an HTTP message with a function call of the API, the function call including instructions to add offline conversion data for an offline user, the offline conversion data received in real-time as the actions of the offline conversions are completed, each entry of the received offline conversion data ~~including~~ comprising at least one of

the following identifying information: an indication of the third party system, an indication of a type of action performed by the offline user, a timestamp for the action, and metadata associated with revenue or profit generated by the action, a value score of the action to the third party system, ~~and wherein the a hash of~~ identifying information for the offline user is hashed for security;

identify a local user matching the offline user e.as.ee-by matching ~~a hash of~~ identifying information of the local user with the hash of the identifying information of the offline user received in offline conversion data entry from the API function call, wherein the matching is based on:

assigning a confidence score to a match between the local user and the offline user,

and

determining whether the confidence score meets a predetermined threshold;

store, at the online system, the offline conversion data entry for the identified local user;

identify one or more sponsored content items of the third party system that were presented within a range of a previous time period to the identified local user during one or more impression opportunities at the online system; and

determine an attribution amount of the offline conversion for each of the one or more sponsored content items that is inversely proportional to the time between a timestamp of the impression opportunity of the sponsored content item and a timestamp of an occurrence of the offline conversion;

compute an updated bid value for each of the one or more sponsored content items for the identified local user, the updated bid value increased or decreased based on the corresponding attribution amounts for that sponsored content item, the updated bid value computed by the online

system when submitting the sponsored content item for impression opportunities for the identified local user; and

transmit computer readable instructions to a client device of the third party system to cause the client device of the third party system to display a user interface presenting additional information regarding the offline conversion to the third party system, the additional information including a display of a conversion rate of the one or more sponsored content items computed using stored offline conversion data, the additional information not previously accessible to the third party system.

12. (Cancelled).

13. (Original) The non-transitory computer readable storage medium of claim 11, wherein the action is not directly trackable by the online system via a website of the third party system.

14. (Original) The non-transitory computer readable storage medium of claim 11, wherein the action comprises at least one of: a transaction at a physical location, a transaction as part of a delayed payment service, a transaction as part of a service approval process, and a transaction completed at an intermediary.

15-16. (Cancelled).

17. (Currently Amended) The non-transitory computer readable storage medium of claim 11, ~~having~~ further comprising instructions that when executed by the processor cause the processor to:

transmit to the third party system a conversion rate of the sponsored content based on a number of local users with stored offline conversion data attributed to the sponsored content item and a total number of local users presented with the sponsored content item.

18. (Previously presented) The non-transitory computer readable storage medium of claim 17 wherein the conversion rate is further based on the type of action performed by offline users as indicated the stored offline conversion data.

19. (Currently Amended) The non-transitory computer readable storage medium of claim 17 wherein the conversion rate is further based on the visual placement of the attributed sponsored content item when the sponsored content item was presented to the local users in the online system[[-]].

20. (Original) The non-transitory computer readable storage medium of claim 11, having further instructions that when executed by the processor cause the processor to: identify a local user having a threshold number of identifiers matching the corresponding identifiers in the identifying information of the offline user.

21. (Previously presented) The method of claim 1, wherein the user interface presents a plurality of data bin user interfaces to the third party system, each data bin user interface presenting statistical information regarding an effect of one of a plurality of characteristics of a presentation of sponsored content on offline conversions, one of the characteristics of the plurality of characteristics including a placement position of sponsored content, the online system computing an effect of a placement position of sponsored content on offline conversion rates according to the attribution amount of the sponsored content in the placement position to the offline conversion, the placement position being a position within a web page presented to users of the online system.