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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* VISHU GUPTA, WEI WU, and JIN YOU

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Appeal 2019-003665  
Application 14/542,460  
Technology Center 3600

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Before RICHARD M. LEBOVITZ, RACHEL H. TOWNSEND, and  
CYNTHIA M. HARDMAN, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

The Examiner rejected the claims under 35 U.S.C. § 103 as obvious. Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject the claims. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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<sup>1</sup> We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Facebook, Inc. Appeal Br. 2 (the pages of the Appeal Brief are unnumbered; for reference, we refer to page numbers, commencing from the first page of the Appeal Brief).

### STATEMENT OF THE CASE

Claims 1–20 stand finally rejected by the Examiner as follows:

1. Claims 1, 4, 5, 8, 10, 11, 14, 16, 17, and 20 stand rejected by the Examiner under 35 U.S.C. § 103 as obvious in view of Whitnah et al., US 2010/0049534 A1, published Feb. 25, 2010 (“Whitnah”) and Kerr, US 9,319,373 B1, issued Apr. 19, 2016 (“Kerr”). Final Act. 7.

2. Claims 2 and 3 under 35 U.S.C. § 103 as obvious in view of Whitnah, Kerr, and Brown et al., US 2012/0254902 A1, published Oct. 4, 2012 (“Brown”) . Final Act. 28.

3. Claims 6, 7, 12, 13, and 19 under 35 U.S.C. § 103 as obvious in view of Whitnah, Kerr, and Walkingshaw et al., US 2015/014921 A1, published May 28, 2015 (“Walkingshaw”). Final Act. 32.

4. Claims 9, 15, and 18 under 35 U.S.C. § 103 as obvious in view of Whitnah, Kerr, and Matamala et al., US 2013/0339345 A1, published Dec. 19, 2013 (“Matamala”). Final Act. 47.

Claims 1, 10, 16 are independent claims. The remaining claims depend from them. Claim 1, which is representative, is reproduced below (bracketed numbers have been added for reference to the specific limitations in the claim):

1. A method comprising:

[1] providing, by an online system, an application programming interface to one or more third party systems, each of the one or more third party systems providing an application for use to users of the online system and the application programming interface configured to communicate state information of a user of the online system corresponding to interactions the user made within the application to the online system;

[2] obtaining, at an online system, the state information through the application programming interface from the one or

more third party systems describing the state of the user of the online system within one or more applications, the state information for an application describing a relationship between the user and one or more features inside of the application, the state information including one or more interactions performed by the user inside the one or more applications, identifying one or more types of the interactions performed inside the one or more applications, and identifying each of the one or more applications;

[3] determining a likelihood of the user performing an additional type of interaction with each application in a set of additional applications based at least in part on the obtained state information describing interactions by the user within the one or more applications;

[4] ranking each application in the set of additional applications based on the determined likelihood of the user performing the additional type of interaction;

[5] selecting one or more applications from the set based at least in part on the ranking; and

[6] providing information identifying the selected one or more applications to the user.

## CLAIMS

The first step [1] of claim 1 provides an “application programming interface” to a third party by an “online system.” An example of an online system described in the Specification is a “social networking system.” Spec. ¶ 4. The third party provides an application to users for use with the online system. Example of “applications” disclosed in the Specification are finance, entertainment, gaming, and educational applications. Spec. ¶ 33.

The application programming interface is “configured to communicate *state information* of a user of the online system corresponding to *interactions* the user made within the application to the online system.” Step [1] of claim 1 (emphasis added). The Specification does not provide an explicit definition of “state information.” However, the Specification

explains that the “state of a user within an application describes the user’s relationship with features or content provided by the application.” Spec. ¶ 31. The Specification does not expressly define “interactions,” but it discloses several examples of interactions with an application: “making a purchase via the application, interacting with one or more advertisements presented via the application, interacting with an additional user via the application, and an amount of usage of the application.” Spec. ¶ 4; *see also* Spec. ¶¶ 26, 31. Thus, we construe “state information” and “interactions” broadly to mean an action made by a user within the application, while using the application, such as a purchase made within the application and the time spent using the application.

Step [2] of the method comprises the online system obtaining “state information” from the application programming interface about the user inside the application, e.g., information about making a purchase or interacting with other users of the application.

In step [3] of the claimed method, “a likelihood of the user performing an additional type of interaction with each application in *a set of additional applications* based at least in part on the obtained state information describing interactions by the user *within the one or more applications*” is determined. We interpret the “set of additional applications” to be applications which are *different* applications from the “one or more applications” from which state information has been obtained in step [2]. As an example, the Specification explains the “additional applications may be associated with a similar genre as the application or with a similar genre as applications with which the user frequently interacts.” Spec. ¶ 35. The

Specification also refers to the additional application as a “new” application.<sup>2</sup>

The “additional type of interaction” is an interaction within the additional applications. Step [3] therefore predicts the likelihood of a user performing an interaction with an “additional” application based on the state information from a different application (the “one or more applications”), provided to the online system in step [2].

The applications in the set of “additional” applications are ranked in step [4] “based on the determined likelihood of the user performing the additional type of interaction.” The method further comprises [5] “selecting” one or more of the additional applications “based at least in part on the rankings.” The claim does not expressly specify what entity performs the “selecting” step. However, the Specification indicates it is the “online system.” Spec. ¶ 53. In the last step of the method, [6] information identifying the additional application is provided to the user.

In sum, the claim determines the likelihood that a user will perform an interaction within a “new” application based on state information (step [3]) comprising previous interactions with a different application (step [2]), and then provides information identifying (step [6]) a new application to a user.

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<sup>2</sup> “For example, the online system 140 determines 315 the likelihood that a user will install a new shopping application based on the user’s prior installations of other shopping applications and/or based on the user’s interaction with one or more objects associated with the shopping application or associated with additional shopping applications.” Spec. ¶ 46.

## OBVIOUSNESS REJECTIONS BASED ON WHITNAH AND KERR

The Examiner found that Whitnah describes each step of the claimed method, but not the application programming interface that communicates the state information within an application. Final Act. 11. The Examiner found, however, that Kerr describes an application programming interface that communicates occurrences that happen inside a game to a social networking site server. *Id.* The Examiner determined it would have been obvious to one of ordinary skill in the art to have modified Whitnah with Kerr's teaching to receive information from the game application server. *Id.*

Appellant contends that Whitnah does not describe communicating state information within an application as required by claim 1. Appellant argues that Whitnah is directed to a user's interactions with communications via a "channel resource," which Appellant asserts is not the same as the "state information." Appeal Br. 7.

We do not agree with Appellant's argument.

Whitnah discloses logging member actions in an action log which is maintained by the social networking website. Whitnah ¶¶ 47, 57.

Whitnah discloses that the "use of any functionality offered by the application may thus constitute an action by the member in connection with the application 190." Whitnah ¶ 50.

In sum, Whitnah discloses logging actions into an action log, where the actions can include an interaction within an application, namely, the use of an application functionality. The actions described by Whitnah are "action[s] made by a user within the application, while using the application," and therefore meet the definition of "state information" as we have interpreted that term. *See supra* at 4.

Appellant also argues that Kerr does not disclose communicating state information from the application provider to the social networking system as required by claim 1 (steps [1] and [2]). Appeal Br. 8. We do not agree.

Kerr discloses:

The application server 206 is a server which can be hosted separate from FACEBOOK and can serve an application (e.g., a game, advertising application, etc.) Thus, the application server 206 can store and execute all of the software that can implement a game and *communicates occurrences that happen inside the game to the social networking site server 204 via the social networking site application interface 205.*

Kerr, col. 3, ll. 60–66 (emphasis added).

Appellant attempts to distinguish the “occurrences” in Kerr from the state information recited in the claim at step [2]. Appeal Br. 9–10. This argument is not persuasive. State information is not limited to specific relationships with the application, application features, application content, or interactions with the application. Thus, while Kerr uses the term “occurrences”<sup>3</sup> to describe an event, incident, etc., that happens inside a game, one of ordinary skill in the art would reasonably understand that such an event or incident would include an interaction with a feature or aspect of the game when playing it. Appellant has not provided adequate evidence that an occurrence is not “state information” as the term is used in claim 1.

Appellant also argues that the combination of Whitnah and Kerr does not disclose step [3] of “determining a likelihood of the user performing an

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<sup>3</sup> Dictionary.com defines “occurrences” as: “1 the action, fact, or instance of occurring. 2 something that happens; event; incident.”  
<https://www.dictionary.com/browse/occurrence> (Accessed Feb. 7, 2020).

additional type of interaction with each application in a set of additional applications” and subsequent steps [4]–[6]. Appeal Br. 10. *See also* Reply Br. 3 (“Whitnah does not disclose ranking and recommending new or additional applications to the user, as claimed.”).

We agree with Appellant that these claims limitations are not described in Whitnah, nor in its combination with Kerr.

The following disclosure from Whitnah describes how its ranking works:

The ability to determine a numeric value as the user affinity metric for an application gives the ability to rank applications for a given channel or with respect to all channels. An application ranked high compared to other applications is liked more by its current users compared to applications with lower user affinity metric. There is a high probability that new users are also going to like an application rated high on a user affinity ranking. The social networking website can be adapted to promote applications with high user affinity ranking, as compared to applications that are ranked lower. The social networking website can promote an application by providing it better channel resources so as to give the application a better chance at increasing its user base. The user affinity metric therefore provides the social networking website with a mechanism to decide how to allocate the channel resources between different applications.

Whitnah ¶ 13.

In Whitnah, the applications are *ranked* based on current users’ interactions using a user affinity metric. *Id.* ¶¶ 7–8, 13. Whitnah explains that the user affinity towards an application is determined by “rates of occurrences of various types of user interaction associated with an application and a channel computed over various time intervals provide a measure of the likelihood that a member will take that specific action when

presented with the given application based on that channel.” Whitnah ¶ 8. The purpose of the ranking is to determine which applications to give “better channel resources” to promote them and “give the application a better chance at increasing its user base.” Whitnah ¶ 13. Thus, in Whitnah, applications are promoted to a new user based on a user affinity metric computed from existing user interactions with the same applications. The claimed method, however, promotes new applications to an existing user based on that user’s interactions with a different application.

Kerr describes ranking of messages based on factors, such as the value and importance of the message to the recipient (Kerr, Abstract; col. 1, ll. 30–47), but does not teach using this ranking to promote other applications to the recipient. The Examiner did not identify an adequate reason to apply Kerr’s ranking method to Whitnah to have arrived at the claimed method, particularly steps [4]–[6] of claim 1. Accordingly, we reverse the obviousness rejection of claim 1.

Claims 10 and 16 have the similar limitations in which information regarding new applications is provided to a user based on the user interactions with a different application. The obviousness rejection of these claims is therefore reversed as well.

Dependent claims 2–9, 11–15, and 17–20 incorporate all the limitations of the independent claims and therefore are reversed, as well.

CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 4, 5, 8, 10, 11, 14, 16, 17, 20	103	Whitnah, Kerr		1, 4, 5, 8, 10, 11, 14, 16, 17, 20
2, 3	103	Whitnah, Kerr, Brown		2, 3
6, 7, 12, 13, 19	103	Whitnah, Kerr, Walkingshaw		6, 7, 12, 13, 19
9, 15, 18	103	Whitnah, Kerr, Matamala		9, 15, 18
<b>Overall Outcome</b>				1-20

REVERSED