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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* TIMOTHY A. KENDALL, MATTHEW R. COHLER,  
MARK E. ZUCKERBERG, YUN-FANG JUAN,  
ROBERT KANG-XING JIN, JUSTIN M. ROSENSTEIN,  
ANDREW G. BOSWORTH, YISHAN WONG, ADAM D'ANGELO,  
and CHAMATH M. PALIHAPITIYA

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Appeal 2019-000828  
Application 13/829,410  
Technology Center 3600

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Before JEAN R. HOMERE, KARL D. EASTHOM, and  
JAMES B. ARPIN, *Administrative Patent Judges*.

EASTHOM, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the  
Examiner's final decision rejecting claims 1, 5–7, 36, and 39–52. Final Act.

1. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> “Appellant” here constitutes an “applicant” as defined in 37 C.F.R. 1.42(a). Appellant identifies the real party in interest as Facebook, Inc. of Menlo Park, California. Appeal Br. 3.

## II. CLAIMED SUBJECT MATTER

The Specification describes a computer social networking system. The system logs information about actions taken by users of the social networking system. *See* Spec. ¶ 9, Fig. 4. For a first member of the system, the system generates and displays in a newsfeed of socially relevant ads based on the actions taken on a third-party system by other members of the system connected to the member (e.g., the member's online friends). *See id.* ¶¶ 6–7. Connections may be based on common factors between the first member and members performing the action. *See id.* ¶ 26. The system selects actions based on the first member satisfying targeting criteria for a content object associated with the action (*see id.* ¶¶ 64–65), and the system employs selected actions to generate and store a plurality of informational messages in a batch process. *See id.* ¶¶ 64–65, 68. After a pre-determined period of time, the system generates and stores an updated plurality of informational messages for display to the first member in a feed. *See id.* ¶ 68.

Independent claim 1, reproduced below, illustrates the claimed subject matter:

1. A computer-implemented method comprising:
  - maintaining profiles for a plurality of users of a social networking system, each user's profile comprising connections to other users of the social networking system;
  - receiving information from a third-party system about actions performed by the users of the social networking system in the third-party system;
  - logging the information about the actions performed in the third party system; and for a viewing user of the social networking system:
    - identifying, from the maintained profiles, by one or more processors of the social networking system, a

plurality of related users having implied connections to the viewing user,

identifying, from the logged information, a set of relevant actions performed in the third party system by the identified plurality of related users;

identifying a set of content objects having targeting criteria, each content object in the set of content objects being associated with a type of action;

selecting, by the social networking system, a plurality of actions from the identified set of relevant actions, each action in the plurality of actions corresponding to a content object in the set of content objects and being selected based on the action matching the type of action for the content object and on the viewing user satisfying the targeting criteria for the content object;

generating a plurality of informational messages for the viewing user in a batch process, an informational message for the viewing user comprising information about one of the selected actions and one of the identified related users who performed the one of the selected actions,

storing the plurality of informational messages in local storage, periodically, after a passage of a pre-determined interval of time, generating an updated plurality of informational messages for the viewing user in a batch process and updating the stored plurality of informational messages in the local storage with the updated plurality of informational messages; and

responsive to the request for the feed, providing the feed for display from the social networking system to the viewing user, the feed comprising one or more of the plurality of informational messages retrieved from the local storage.

### III. REFERENCES

The Examiner relies upon the following references:

Name	Reference	Date
Schirmer	US 2006/0149731 A1	July 6, 2006
Sample	US 2006/0230061 A1	Oct. 12, 2006
Isaacs	US 2007/0300064 A1	Dec. 27, 2007
Heckerman	US 7,370,002 B2	May 6, 2008
Pennington	US 7,752,552 B2	July 6, 2010
Baio	US 7,844,604 B2	Nov. 30, 2010

### IV. REJECTIONS

Claims Rejected	35 U.S.C. §	Basis/References
1, 5–7, 36, 39–52		Provisional Double Patenting, App. No. 12/193705
1, 5–7, 36, 39–52	101	Nonstatutory Subject Matter
1, 39, 44	103	Obviousness, Pennington, Baio, Sample
5–7, 40–42, 45–47	103	Obviousness, Pennington, Baio, Sample, Isaacs
36, 43, 48	103	Obviousness, Pennington, Baio, Sample, Schirmer
49–52	103	Obviousness, Pennington, Baio, Sample, Heckerman

### V. OPINION

As set forth in the table in Section IV above, the Examiner finally rejects claims 1, 5–7, 36, and 39–52 for double patenting, nonstatutory subject matter, and obviousness.

#### *A. Double Patenting*

The Examiner provisionally rejects claims 1, 5–7, 36, and 39–52 on the ground of nonstatutory double patenting over claims 1–31 of copending

Application No. 12/193705. Final Act. 5–7. We adopt and incorporate the Examiner’s rejection. Appellant does not respond to the rejection in its Appeal Brief. Accordingly, we summarily sustain the rejection *pro forma*.

*B. Non-Statutory Subject Matter*

The Examiner rejected claims 1, 5–7, 36, and 39–52 under 35 U.S.C. § 101 as being directed to nonstatutory subject matter. Final Act. 3–5. A patent-eligible invention must claim a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. However, the Supreme Court, in a long line of precedent, interprets 35 U.S.C. § 101 to include implicit exceptions to statutory subject matter: “[l]aws of nature, natural phenomena, and abstract ideas.” *See, e.g., Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, the Court’s two-step framework, described in *Mayo* and *Alice*, frames the analysis. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, a tribunal first determines what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611);

mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)).

If the claim is “directed to” an abstract idea, the second step of the *Alice* and *Mayo* framework requires “examin[ing] the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

The PTO recently published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (“*Guidance*”). Under Step 2A of the *Guidance*, PTO judges and examiners must determine if the claims recite any judicial exceptions, i.e., a law of nature, a natural phenomenon, or an abstract idea (mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes) (Prong 1); and additional elements in the claim as a whole that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)) (Prong 2). *Id.* at 52–54.

Furthermore, under Prong 1, the *Guidance* “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 (footnotes omitted).

Under Step 2B, only if the claim recites a judicial exception and does not recite additional elements that integrate the judicial exception into a practical idea, then PTO examiners and judges investigate whether the claim

[a]dds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present; or

simply appends well-understood routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.

*Id.* at 52–57 (bullet points omitted).

Guidance, Step 2A, Prong 1

The Examiner refers to several steps in claim 1 as reciting an abstract idea related to data gathering and processing to create information based thereon: “maintaining profiles of users of a social network,” “receiving information” about “actions performed by the users,” “logging the

information about the actions performed,” “identifying a plurality of related users . . . inferred from one or more common profile attributes,” “identifying a set of relevant actions performed . . . by identified related users and selecting an action from identified set of relevant actions,” and “generating an informational message.” *See* Final Act. 3–4 (citing, *inter alia*, *FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089 (Fed. Cir. 2016); *Elec. Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016) (“*Elec. Power*”); *Intellectual Ventures I LLC v. Capital One Financial Corp.*, 850 F.3d 1332 (Fed. Cir. 2017) (“*Capital One*”); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372–73, 1375 (Fed. Cir. 2011); *SmartGene, Inc. v. Advanced Biological Laboratories, SA*, 555 F. App’x 950 (Fed. Cir. 2014)).

In other words, the Examiner relates the noted claim recitations as analogous to the claims involved in, *inter alia*, *FairWarning*, *Elec. Power*, *Capital One*, *CyberSource Corp.*, and *SmartGene*. The Examiner refers to the cited cases as involving claims directed to “collecting and comparing known information,” and involving “categories to organize . . . information.” *See* Final Act. 3–4. As the Examiner shows, the limitations of claim 1 listed by the Examiner recite mental processes involved in data gathering and processing to create information. As an example, *FairWarning* groups certain data gathering recitations as involving an abstract mental process:

As we have explained, “merely selecting information, by content or source, for collection, analysis, and [announcement] does nothing significant to differentiate a process from ordinary *mental processes*, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas.”

*FairWarning*, 839 F.3d at 1097 (quoting *Elec. Power*, 830 F.3d at 1355) (emphasis added) (information added by *FairWarning*).

The claim 1 steps noted by the Examiner, i.e., “maintaining profiles of users of a social network,” “receiving information” about “actions performed by the users,” “logging the information about the actions performed,” “identifying a plurality of related users . . . inferred from one or more common profile attributes,” “identifying a set of relevant actions performed . . . by identified related users and selecting an action from identified set of relevant actions,” and “generating an informational message,” each recite, and as a group recite, “[m]ental processes,” namely “concepts performed in the human mind (including an observation, evaluation, judgment, opinion,” an abstract idea under the *Guidance*. See *Guidance*, 84 Fed. Reg. at 52.

For example, with respect to “maintaining profiles of users of a social network,” “receiving information” about “actions performed by the users,” and “logging the information about the actions performed,” humans can create profiles about people in their minds by receiving information through observation about the people performing actions in a social setting, and then recall that information after “logging” it in their mind. A human also can “identify[] a set of relevant actions performed . . . by identified related users [i.e., members of a social network] and select[] an action from [an] identified set of relevant actions” as claim 1 recites, by observing actions of related members of a social group, such as by observing the types of articles they purchase and wear, the types of concerts they attend, or other activities they pursue as a social group, actions deemed to be “relevant” by an observer. Then, based on the collected information, a human can “announc[e],” see

*FairWarning* 839 F.3d at 1097, certain judgments or opinions about the collected information, thereby “generating an informational message,” as claim 1 recites.

In essence, these claim steps amount to providing “stories” about members of a social group by observing actions of members of the group and relaying information about the actions to a targeted member. The Specification supports this analysis. Spec. ¶ 50. For example, it reveals “[t]hese communications may take the form of stories . . . about an action in the action log that is relevant to the particular member.” *Id.* ¶ 50. As a specific example, the Specification provides the following story: “John Smith invited Bob Roberts to John’s 21st Birthday Party.” *Id.* ¶ 60 (providing an example “story format” corresponding to this birthday message as “[Member field 705] [Action field 710] [Target field 715] [Object field 720]”).

Similarly, some of these claim 1 steps listed by the Examiner, including the claim 1 step of “generating a plurality of informational messages . . . in a batch process, an informational message for the viewing user comprising information about one of the selected actions and one of the identified related users who performed the one of the selected actions,” recite “certain methods of organizing human activity,” an abstract idea under the *Guidance*. *See Guidance*, 84 Fed. Reg. at 52. Specifically, under the *Guidance*, “certain methods of organizing human activity,” include “managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions)” and/or “commercial interactions” including “advertising.” *See id.*

By announcing certain judgments or opinions by “generating” a “batch” (i.e., a group) of “informational messages” about the selected actions by persons in the social network for a member in the social network, based on observations gleaned via “maintaining profiles of users of a social network,” and “receiving information” about “actions performed by the users,” claim 1 involves managing relationships or interactions between people (including social activities).

In other words, the “informational messages,” which may be “stories” about people as noted above, seek to manage or encourage behavior of a targeted user in the social network. As an example, the Specification indicates the “informational messages” may include “socially relevant ads for the member” of the social network, thereby including marketing or advertising messages. *See* Spec. 40 (Abstract). As another example, the “stories” noted above “can . . . be leveraged for marketing purposes.” *Id.* ¶ 54.

Appellant groups claims 1, 5–7, 36, and 39–52 together and does not argue any of the claims separately. *See* Appeal Br. 8–20.<sup>2</sup> Accordingly, claim 1 represents the claims on appeal under this § 101 rejection. Appellant contends the Examiner does not consider claim 1 as a whole and does not identify any actual abstract idea. Appeal Brief 8. However, the Examiner sufficiently relates individual recitations and claim 1 as a whole to collecting and analyzing data about people, and providing messages based on that data, as summarized above. *See* Final Act. 2–3; Ans. 4–5. Moreover, as set forth above, the *Guidance* specifies investigating any

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<sup>2</sup> The Board numbered each page of the Appeal Brief and the Reply Brief, because Appellant did not provide page numbers.

“additional elements” in the claims and the claim as a whole under Prong 2. *Guidance*, 84 Fed. Act. at 52–54.

Appellant’s arguments do not show error in Examiner’s determination that claim 1 recites an abstract idea. As determined above, claim 1 recites mental processes and certain methods of organizing human activity as set forth in the *Guidance*. See *Guidance*, 84 Fed. Reg. at 52; see also, e.g., *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (“[W]e have never suggested that simply reciting the use of a computer to execute an algorithm that can be performed entirely in the human mind” renders a claim patent eligible.); *October 2019 Update: Subject Matter Eligibility*, 8 (Oct. 17, 2019) (“The courts have found claims requiring a generic computer or nominally reciting a generic computer may still recite a mental process even though the claim limitations are not performed entirely in the human mind.”).

Appellant also argues “the claimed invention presents advertisements that communicate information [sic: actions] taken by others in the member’s network, particularly those with implied connections (i.e., the member’s friends and other relationships and connections on the social networking system).” Appeal Br. 19. As outlined above, this argument supports the determination above. It shows that claim 1 involves mental processes and certain methods of organizing human activity, namely commercial interactions including advertising or marketing activities, and/or managing personal behavior or relationships or interactions between people (including social activities), as set forth above. In other words, communicating messages about actions performed by a person in a social group of people involves a mental process by a human to announce the results of certain

observations of those people to one of the people, and involves organizing human activity via messages that may include marketing or advertisements, and involves managing personal behavior or relationships or interactions between people (including social activities), by communicating the information to a selected person of the social group. *See October 2019 Update* at 5 (“Finally, the sub-groupings encompass both activity of a single person (for example, a person following a set of instructions or a person signing a contract online) and activity that involves multiple people (such as a commercial interaction), and thus, certain activity between a person and a computer (for example a method of anonymous loan shopping that a person conducts using a mobile phone) may fall within the ‘certain methods of organizing human activity’ grouping.”).

Accordingly, based on the foregoing discussion the Examiner shows that claims 1, 5–7, 36, and 39–52 recite limitations for abstract ideas, including certain methods of organizing human activity and mental processes.

*Guidance, Step 2A, Prong 2*

In determining whether the claims are “directed to” the identified abstract idea, we consider here whether the claims recite “additional elements” that integrate the judicial exception into a practical application. *See Guidance*, 84 Fed. Reg. at 54–55. The Examiner contends that claim 1 recites additional elements as generic components, including a “processor,” “maintaining . . . profiles” “a feed for . . . display,” and other generic data gathering and processing limitations, considered both individually and as an

ordered combination, and fail to integrate the judicial exception into a practical application. *See* Final Act. 3–4.

For example, the Examiner contends as follows:

The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements or combination of elements in the independent claims are recitation of generic computer structure (i.e. a processor to execute instructions to perform the method), which serves to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the pertinent industry, and do not add a meaningful limitation to the abstract idea because they would be routine in any computer implementation. The limitations of maintaining a plurality of profiles; receiving information actions performed by the user from third party system; generating an informational message; providing a feed for display . . . are well-known, routine and conventional practices that require no more than a generic computer to perform generic computer functions. Generic processors/computing systems routinely provide data access by displaying the data. . . . The processor system in the instant application merely receives, processes and stores data. *The claims do not recite an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.* For the role of a computer in a computer implemented invention to be deemed meaningful in the context of this analysis, it must involve more than performance of “well understood, routine, [and] conventional activities previously known to the industry.” . . . *None of the hardware offers a meaningful limitation beyond generally linking the system to a particular technological environment, that is, implementation via computers.*

Final Act. 3–4 (emphases added).

The Examiner also contends “[v]iewed as a whole, the claims do not purport to improve the functioning of the computer itself, or to improve any

other technology or technical field. Use of an unspecified, generic computer does not transform an abstract idea into a patent-eligible invention.” *Id.* at 4.

Appellant does not dispute that the claims recite generic computer components: “While recitation of a special purpose computer or dedicated hardware modules may aid in patent-eligibility, it is not a requirement. Providing a special purpose computer is only one way of providing ‘something more.’” Appeal Br. 17 (“Applicant claims can recite the ‘something more’ required by the second prong of *Mayo/Alice* even if they are implemented by a ‘general purpose computer.’”).

Rather than relying on a “special purpose” computer, Patent Owner contends “the claimed invention provides an unconventional application of generating informational messages for a viewing user. The unconventional application of this concept yields different and improved content items selected for users of the social networking system compared to prior selection approaches.” Appeal Br. 18. Appellant does not point to any specific additional recitations beyond the abstract idea that involve anything more than generic functionality or components that serve to gather and analyze data that a human could mentally process or that involve certain methods of organizing human activity. We analyze Appellant’s arguments about the alleged “unconventional application” further in Step 2B below.<sup>3</sup>

Appellant contrasts typical social networking websites to the claimed invention: “By contrast, rather than merely delivering a message that is

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<sup>3</sup> Some of the considerations at Step 2A, prong 2, properly may be evaluated under Step 2 of *Alice* (Step 2B of the Office guidance). *See* 84 Fed. Reg. at 55 n.25, 27–32.

targeted to a particular member based on the member's preferences, the claimed invention presents advertisements that communicate information [sic: actions] taken by others in the member's network, particularly those with implied connections (i.e., the member's friends and other relationships and connections on the social networking system)." Appeal Br. 19. But, these types of communication, namely telling stories about group members depending upon certain relationships, forms part of the abstract idea, as indicated in the previous section.

Appellant explains "[b]eyond targeting messages based on articulated interests, this approach is better able to create or generate demand by providing the socially related information to members about their friends' actions." *Id.* at 20. But, again, delivering "socially related information" about "their friends' actions" represents part of the mental processes of simply telling stories about what people did. It also involves certain methods of organizing human activity via advertising or marketing messages to "create or generate demand," and managing personal behavior or relationships or interactions between people (including social activities), by communicating the stories or other information to a selected member of the perceived social group. *See id.*

As the Examiner recognizes and, as indicated above, claim 1 does not improve upon generic computer systems to deliver the information. According to the *Guidance*,

[i]f a claim, under its broadest reasonable interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim cannot practically be performed in the mind. *See Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) ("[W]ith the exception of

generic computer implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper.”); *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324 (Fed. Cir. 2016) (holding that computer-implemented method for “anonymous loan shopping” was an abstract idea because it could be “performed by humans without a computer”); *Versata Dev. Grp. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (“Courts have examined claims that required the use of a computer and still found that the underlying, patent-ineligible invention could be performed via pen and paper or in a person’s mind.”).

*Guidance* at 52 & n.4

But for the generic computer components, most of the limitations recited in claim 1 and claim 1 as a whole may be practiced in the human mind “without a computer,” as outlined above. As also outlined above, the steps alternatively involve certain methods of organizing human activity, namely via advertisements, and managing personal behavior or relationships or interactions between people (including social activities). Stated differently, claim 1 does not recite “[a]n additional element [that] reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field.” *See Guidance*, 84 Fed. Reg. 55.

Specifically, claim 1 recites generic components, such as “one or more processors.” It generically recites “profiles,” “logging,” “content objects,” a “batch process,” and “local storage,” but it does not recite any specific manner as to how it “generate[s] . . . informational messages” beyond generic computer functionality including “matching” “relevant actions” in a “third party system” to “the action matching the type of action for the content object and on the viewing user satisfying the targeting criteria for the content object.” These actions, stripped of their generic computer

components and functionality, focus on abstract ideas that involve comparing actions of related users to targeted marketing actions in order to deliver information, which may include marketing, advertising, or social information, to one of the related users, most of which a human could have performed mentally using observation and judgment of the social group in different settings.

Alternatively, as outlined above, claim 1 focuses on organizing human activity via commercial interactions such as advertisements or marketing based on information collected and analyzed about actions taken by people in social groups, or managing personal behavior or relationships or interactions between people (including social activities) by attempting to influence certain behavior through advertisements or stories based on information collected and analyzed about actions taken by people in social groups. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed Cir. 2014) (holding that claim “describ[ing] only the abstract idea of showing an advertisement before delivering free content” is patent ineligible);<sup>4</sup> *Credit Acceptance Corp. v. Westlake Services*, 859 F.3d 1044, 1055 (Fed. Cir. 2017) (“Our prior cases have made clear that mere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology.”). Moreover, “relying on a computer to perform routine tasks more quickly or more accurately is insufficient to

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<sup>4</sup> While claim 1 recites “generating a plurality of informational messages” and such information may involve social advertisements or other advertisements (*see* Spec. 40), claim 1 does not require necessarily that the information be presented in advertisement form. Even if the information relates to advertisements, this does not transform the invention into patent eligible subject matter. *See* MPEP § 2106.05(g).

render a claim patent eligible.” *OIP Techs.*, 788 F.3d at 1363 (citing *Alice*, 573 U.S. at 224 (“use of a computer to create electronic records, track multiple transactions, and issue simultaneous instructions” is not an inventive concept)); *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (a computer “employed only for its most basic function . . . does not impose meaningful limits on the scope of those claims”).

Accordingly, based on the foregoing discussion the Examiner shows that claims 1, 5–7, 36, and 39–52 recite limitations for, and are directed as a whole to, abstract ideas including certain methods of organizing human activity and mental processes.

*Guidance, Step 2B and Alice/Mayo Step 2*

Step 2 of the *Alice/Mayo* framework and Step 2B of the *Guidance* requires determining whether the claims (a) add a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, or (b) simply append well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. *See Guidance*, 84 Fed. Reg. at 56. The Examiner contends that the generic components recited in the claims, considered both individually and as an ordered combination, “perform generic computer functions that are well-understood, routine, and conventional activities previously known to the pertinent industry, and do not add a meaningful limitation to the abstract idea because they would be routine in any computer implementation.” Final Act. 3.

The Examiner points to a “processor to execute instructions to

perform the method,” as conventional, and points to “limitations of maintaining a plurality of profiles; receiving information actions performed by the user from third party system; generating an informational message; providing a feed for display” as “well-known, routine and conventional practices that require no more than a generic computer to perform generic computer functions.” *Id.* The Examiner adds “[g]eneric processors [and] computing systems routinely provide data access by displaying the data.” *Id.*

Responding, Appellant admits

[s]ocial networking websites *typically incorporate a system for connecting members to content that is most likely to be relevant to each member.* For example, members may be grouped according to one or more common attributes (e.g., geographic location, age, interests, etc.), and members of the social networking system or *external parties can then use these groups to customize or target information delivery so that information that might be of particular interest to a group can be communicated to that group.* Advertisers have attempted to leverage this information about members, targeting ads to members whose interests best align with the ads. For example, a social networking system may display banner ads for a concert to members who express an affinity for the performing band and live near a concert venue where that band might be performing.

Appeal Br. 19 (emphasis above).

As explained above, Appellant contends the claimed invention displays information in the form of user’s actions performed at a third party system. *See* App. Br. 19. Appellant also contends the claims recite an unconventional method. *See id.* at 18. But, even if this alleged “unconventional method” involves “additional elements” outside the abstract idea, Appellant does not explain how viewing and reporting about such user’s actions requires anything beyond implementing well-understood,

routine, conventional data collection and analysis involving conventional websites and conventional social networks. The Specification and Appellant’s arguments show that social networking systems or websites conventionally tracked user’s locations and interests, so they conventionally would have been able to track other information about a user. *See id.* at 18–19.

For example, the Specification explains that in conventional networking sites, “[m]embers of the social networking website *or external parties* can then use these groups *to customize or target information delivery so that information that might be of particular interest to a group can be communicated to that group.*” Spec. ¶ 4 (emphasis added). The Specification also admits users could be targeted based on their “website profile.” *Id.* ¶ 5. The profile might include “profiles, such as geographic location, employer, job type, age, music preferences, interests, or other attributes.” *Id.* ¶ 4.

The Specification does not reveal how tracking other information about user’s actions in third party systems involves anything more than conventional tracking functionality already performed in conventional social networks. As examples of actions, the Specification explains a “social ad, for example, may inform a member that a friend (or a number of friends) of the member has purchased a particular item made by an advertiser, will attend an event sponsored by an advertiser, or has added a connection to a profile for a business or other entity.” *Id.* ¶ 6. But, as noted above, conventional social networking already had the ability to target members based on prior connections or membership in a group and could target adds

based on different types of profile information, including interests or other attributes. *See id.* ¶¶ 4–5.

To the extent that adding information about actions in third party systems somehow involves more than the judicial exception, it does not involve anything more than conventional tracking of a connection to the third party system, and as explained above, the Specification explains that prior social networks already tracked connections at the social networking site. Also, the Specification indicates that merely “joining the group” may be considered a type of action tracked in claim 1 (*see id.* ¶ 31), and tracking group memberships not only constitutes part of the abstract idea, to the extent it involves more, it was conventional in prior art social networks: “These connections among the members can be exploited by the website to offer more relevant information to each member in view of the members’ own stated interests in their connections.” *Id.* ¶ 3. As noted above, the Specification reveals that in conventional systems, “*external parties* can then use these groups to customize or target information delivery so that information that might be of particular interest to a group can be communicated to that group.” *Id.* ¶ 4 (emphasis added).

In short, claim 1 “does not gather data in an unconventional way” and it does not include an “inventive concept.” *See Guidance*, 84 Fed. Reg. at 56. It simply involves collecting data from different sites about actions by users, comparing it to actions of interest using routine computer comparison

logic, and then delivering groups of information about the actions. *See, e.g.*, Spec. ¶¶ 28–29, 97, Fig. 3.

For example, the Specification specifically describes the algorithms involved in the invention as “commonly used . . . in the data processing arts”:

Some portions of this description describe the embodiments of the invention in terms of algorithms and symbolic representations of operations on information. *These algorithmic descriptions and representations are commonly used by those skilled in the data processing arts to convey the substance of their work effectively to others skilled in the art.* These operations, while described functionally, computationally, or logically, are understood to be implemented by computer programs or equivalent electrical circuits, microcode, or the like.

Spec. ¶ 97 (emphasis added).

Nevertheless, Appellant argues “[i]n *Fair Warning*, the claims were held to be directed to an abstract idea because they ‘merely implement an old practice in a new environment,’ and the court stated that the claims were directed to the ‘broad concept of monitoring audit log data.’” Appeal Br. 12 (quoting *Fair Warning*, 839 F.3d at 1097). According to Appellant, “[b]y contrast, the current claims are not directed to an overly broad or old concept, but perform a new process that allows the social networking system to generate content that describes actions taken in a third-party system for displaying within a feed to a viewing user.”

Contrary to the arguments, claim 1 is directed toward an overly broad or old concept, namely, as Appellant notes, “a social networking system [e.g., a social group] to generate content [e.g., information, stories] that describes actions taken in a third-party system [e.g., actions social group members took in a store, shop, or anywhere] for displaying within a feed

[e.g., announcing or telling a story] to a viewing user [e.g., a member of the social group].” *See id.* Stated differently, an observer of the social group delivers different stories, i.e., content, about actions taken by other members of the social group in different settings, actions implicitly deemed important or relevant as a

note-worthy topic by the observer. So claim 1 essentially focuses on the broad and old basic abstract concept of providing stories about group members, using a generic computer system as a tool to deliver those stories.

Similar to the arguments dismissed in *FairWarning* (which the Examiner and Appellant rely upon as noted above), Appellant’s arguments reduce to the assertion that “its system allowed for the compilation and combination of . . . disparate information sources and that the patented method ‘made it possible to generate a full picture of a user’s activity, identity, frequency of activity, and the like in a computer environment.’”

*FairWarning*, 839 F.3d at 1096–97.

Dismissing the argument, the court stated

[a]s we have explained, “merely selecting information, by content or source, for collection, analysis, and [announcement] does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas.” *Elec. Power*, 830 F.3d at 1355. Furthermore, to the extent that *FairWarning* suggests that its claimed invention recites a technological advance relating to accessing and combining disparate information sources, its claims do not recite any such improvement. Rather, the claimed invention is directed to the broad concept of monitoring audit log data. The claims here do not propose a solution or overcome a problem “specifically arising in the realm of computer [technology].” *DDR Holdings*, 773 F.3d at 1257. At most, the claims require that these processes be executed on a generic computer. But, “after *Alice*,

there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.” *Id.* at 1256 (citing *Alice*, 134 S.Ct. at 2358).  
*Id.* at 1097; *see also Alice*, 573 U.S. at 224–26 (receiving, storing, sending information over networks insufficient to add an inventive concept). Here, like the “broad concept of monitoring audit log data” involved in *FairWarning*, claim 1 is directed to the broad concept of monitoring social activity to deliver stories about group members.

Appellant also argues the claims present “a less burdensome and more computationally predictable [process] than generating content for display within a feed in real-time”:

The current claims describe a specific improvement that allows the social networking system to generate content in advance and is *less burdensome and more computationally predictable than generating content for display within a feed in real-time*. For example, the current claims recite a specific method of identifying relevant actions performed in a third party system by a plurality of related users, selecting a plurality of actions from the identified set of relevant actions based on the action matching the type of action for the content object and on the viewing user satisfying targeting criteria for the content object, and generating a plurality of informational messages for the viewing user in *a batch process*.

Appeal Br. 13 (emphases added). This argument reduces to the fundamental idea that doing something less often (i.e., sending information in a “batch process”) reduces the amount of effort involved. Appellant does not contend the inventors conceived of, or claim 1 requires, an unconventional batch process, otherwise akin to saving letters or collections of local stories for a neighbor on vacation, and then delivering it all in batch form when the neighbor returns.

In *Ultramercial, Inc. v. Hulu LLC*, 772 F.3d. 709 (Fed. Cir. 2014), the patentee argued that a financial arrangement (a method of using advertising as an exchange or currency) distinguished from the “routine,” “long prevalent,” or “conventional” abstract idea in *Alice*, because it was “directed to a specific method of advertising and content distribution that was previously unknown.” *Id.* at 714. The court rejected the patentee’s position that “abstract ideas remain patent-eligible under § 101 as long as they are new ideas not previously well known, and not routine activity.” *Id.*

As set forth above, the additional elements in claim 1 amount to no more than well-understood, routine, conventional computer instructions, storage, and processor components recited at a high level of generality in a social network to apply a judicial exception directed to delivering a story about a person in a social group. More particularly, the additional elements implement the broad abstract concept of tracking activities of members of the social network group in different places, matching the activities to preconceived relevant activities of interest to an observer, for example a merchant, and then delivering the messages based on the match at intervals to a targeted member of the social network, an insufficient application to provide an inventive concept. Accordingly, Appellant does not show that the Examiner erred in rejecting claims 1, 5–7, 36, and 39–52 under 35 U.S.C. § 101.

### *C. Obviousness*

The Examiner rejects claims 1, 39, and 44 as obvious over the combined teachings of Pennington, Baio, and Sample; claims 5–7, 40–42, and 45–47 as obvious over the combined teachings of Pennington, Baio, Sample, and Isaacs; claims 36, 43, and 48 as obvious over the combined

teachings of Pennington, Baio, Sample, and Schirmer; and claims 49–52 as obvious over the combined teachings of Pennington, Baio, Sample, and Heckerman. *See* Final Act. 8–25. Appellant presents arguments for claim 1 only. Appeal Br. 23–24. Therefore, claim 1 represents the claims on appeal for these obviousness rejections.

In the Final Rejection, the Examiner relies on Pennington’s teachings for most of the claim 1 limitations, and relies on the combined teachings of Pennington, Baio, and Sample for the remaining limitations. The Examiner supports the obviousness determination with a factual underpinning and supported reasons for the combination. *See* Final Act. 8–16.

In the Appeal Brief, Appellant contends *Pennington does not disclose* the following “identifying a set of content objects” and “selecting . . . actions” steps:

*identifying a set of content objects* having targeting criteria, each content object in the set of content objects being associated with a type of action;

*selecting*, by the social networking system, a plurality of actions from the identified set of relevant *actions*, each action in the plurality of actions corresponding to a content object in the set of content objects and being selected based on the action matching the type of action for the content object and on the viewing user satisfying the targeting criteria for the content object.

Appeal Br. 20–21 (emphases added). In particular, Appellant contends “the rejection errs by finding th[ese] limitation[s reproduced above] in Pennington and in relying on this finding in the combination of references as a whole to reject claim 1.” *Id.* at 20.

Appellant provides specific arguments as to how Pennington allegedly fails to disclose the above-recited “identifying a set of content objects” and

“selecting . . . actions” steps. Appeal Br. 21–22. Appellant also argues that no other reference teaches a combined step involving the “selecting . . . actions” step and a later “display” step, as follows:

*The remaining references do not teach selecting actions to display to a user based on the user satisfying targeting criteria for a particular content object or based on whether the user’s connections have performed an action of a specified type associated with the content object, nor does the Office Action so assert.*

*Id.* at 22 (emphasis added). In contrast to its arguments about Pennington, Appellant does not provide reasons why it contends “the remaining references” do not teach “selecting actions to display.” Claim 1 does not recite “selecting actions to display.” Rather, it recites “providing the feed for display . . . the feed comprising . . . informational messages.” Even if Appellant employs “selecting actions to display” as a short-hand reference to “providing the feed for display,” with the feed providing “informational messages” about “selected actions,” Appellant simply does not provide sufficient reason why the “remaining references do not teach selecting actions to display.” *See id.* at 22.

The Examiner’s Answer responds by stating the “Examiner has considered all arguments and respectfully disagrees. Examiner notes *Pennington was not cited for these limitation, Baio was cited for rejecting above limitations.*” Answer 10 (citing Final Act. 12–16) (emphasis added). In the Reply Brief, Appellant responds to the Examiner’s Answer by addressing alleged deficiencies in Baio. The Reply Brief does not challenge the Examiner’s assertion that the Final Rejection relies on Baio for the asserted limitations outlined above. *See Reply Br.* 5–7.

Appellant does not explain why it presents arguments about Baio in the Reply Brief that it does not raise in the Appeal Brief. By focusing on Pennington's alleged shortcomings in the Appeal Brief for limitations the Examiner did not rely upon as taught by Pennington (i.e., the unrecited limitation of "selecting actions to display," and the recited "selecting . . . actions" and "identifying a set of content objects" steps in claim 1 as reproduced above), providing only a general allegation about what the secondary references (e.g., Baio) do not teach in the Appeal Brief, and then belatedly providing the specific arguments in the Reply Brief about alleged deficiencies in Baio with respect to the noted limitations, Appellant waives the belated arguments addressing alleged short-comings in Baio. In other words, by failing to present clear arguments in the Appeal Brief about Baio and by presenting an untimely argument in the Reply Brief about Baio, without adequate explanation justifying the untimeliness, Appellant fails to show "good cause" and waives arguments regarding the unrecited "selecting actions to display" step and the recited "selecting . . . actions" and "identifying a set of content objects" steps as reproduced above. *See* 37 C.F.R. § 41.41 (Reply brief. (b)(2) "Any argument raised in the reply brief which was not raised in the appeal brief, or is not responsive to an argument raised in the examiner's answer, including any designated new ground of rejection, will not be considered by the Board for purposes of the present appeal, unless good cause is shown.").<sup>5</sup>

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<sup>5</sup> Appellant's new arguments do not respond to a new point raised in the Answer, because the Examiner relied on Baio in the Final Rejection, as noted.

Appellant also argues that Pennington fails to teach the claim 1 step of “providing the feed for display from the social networking system to the viewing user.” Appeal Br. 33. The Examiner relies on the combined teachings of Pennington and Baio as teaching and suggesting this step. *See* Final Act. 9, 14–15. Appellant’s arguments do not address the combination; rather, they only address Pennington:

*Unlike the claimed social networking system, which receives and logs information from third-party systems, identifies a set of relevant actions, generates informational messages, and displays the feed to the viewing user, Pennington’s third-party website merely provides a place for the system to display its content and feed, but does not perform content selection or generate events to be displayed in the event feed. Rather, these steps are performed by a separate ‘open overlay service’ that generates and sends the aggregated event stream to the third-party website for display. Thus, Pennington fails to teach “providing the feed for display from the social networking system to the viewing user.”*

Appeal Br. 22 (emphases added).

Addressing the feed limitation at issue, the Examiner explains that Pennington’s “aggregated event stream allows open overlay service to show various accounts (e.g., Flickr, YouTube, digg, and delicious) on different systems and then *keep a user’s social network informed changes that happen with those disparate accounts.*” Final Act. 9 (citing Pennington, 7:8–42, 63–67, Figs. 4–6) (emphasis added). So the Examiner shows Pennington’s local client social networks receive changes (i.e., actions) about various accounts from the overlay service. Moreover, Pennington states “[o]pen overlay service 106 serves as a social network service” that “stores, manages, and provides access control to the various services and social networks of clients 102” and also “forwards information shared by users, as well as user profiles

and social network information.” Pennington, 2:66–3:5 (emphasis added). Therefore, contrary to Appellant’s argument based on an alleged distinction between the claimed social networking system and Pennington’s service, Appellant demonstrates no such distinction. Accordingly, Pennington’s social networking service (i.e., its overlay service) provides a feed for display of the information changes, even if some information starts from the overlay service.<sup>6</sup>

Even if Pennington’s teachings do not meet the limitation by providing a feed from the social network, the Examiner turns to Baio’s teachings, which also supply this limitation. Addressing the feed limitation teachings in Baio, the Examiner states “Fig 3 shows feed displayed to user.” *Id.* at 14 (citing 9:4–12, 38–55). The Examiner provides “examples of [a] feed” as disclosed in Baio at the cited portions of column 9, including “5 comments have been added to event X, Your friend Joe is now attending events Y and Z.” *See id.*; Baio, 9:34–42. The Examiner repeats the citation to Figure 3 of Baio in addressing the feed limitation further, as follows:

responsive to the request for the feed, *providing the feed for display from the social networking system to the viewing user* (Fig 3 shows recent activity feed, Fig 1 # 130, 150), the feed comprising one or more of the plurality of informational messages retrieved from the local storage (Fig 3 shows activities retrieved for activity log) and updating the stored plurality of informational messages in the local storage with the updated plurality of informational messages (Col 4 lines 33–64 changes

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<sup>6</sup> Accordingly, even if Appellant raised a timely argument about the unclaimed or short-hand limitation of “selecting actions to display” determined above as waived, Pennington teaches this limitation, as do Pennington’s teachings combined with those of Biao, as discussed further below. And as discussed herein, Appellant does not address the combined teachings.

related to event such as an event has been updated are stored in change record).

Final. Act. at 14–15 (emphasis added). As a reason to combine the teachings, the Examiner specifies “the motivation” as “providing a method of notifying users based on their interest and thus reducing the possibility of information overload.” *Id.* at 15 (citing Baio 2:10–28). In other words, the Examiner finds both references teach a feed as useful for providing information to users about activities related to a social network, and provides a valid reason to provide a feed for display from the social networking system to the viewing user (i.e., “reducing . . . information overload”) to combine the teachings. Appellant does not address these feed teachings and suggestions in Baio.

Based on the foregoing discussion, Appellant does not show error in the Examiner’s findings and determination of the obviousness of claims 1, 5–7, 36, and 39–52.

VII. CONCLUSION

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>References/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 5-7, 36, 39-52		Provisional Double Patenting	1, 5-7, 36, 39-52	
1, 5-7, 36, 39-52	101	Nonstatutory Subject Matter	1, 5-7, 36, 39-52	
1, 39, 44	103	Pennington, Baio, Sample	1, 39, 44	
5-7, 40-42, 45-47	103	Pennington, Baio, Sample, and Isaacs	5-7, 40-42, 45-47	
36, 43, 48	103	Pennington, Baio, Sample, and Schirmer	36, 43, 48	
49-52	103	Pennington, Baio, Sample, Heckerman	49-52	
<b>Overall Outcome</b>			1, 5-7, 36, 39-52	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED