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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte HONG GE, ROBERT WILLIAM CATHCART, and
NIMROD HOOFIEN

Appeal 2019-004230
Application 13/970,084
Technology Center 3600

Before HUBERT C. LORIN, BIBHUR. MOHANTY, and
NINA L. MEDLOCK, *Administrative Patent Judges*.

LORIN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant appeals from the Examiner's Final decision to reject claims 1–10 and 21–30.¹ We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Facebook, Inc. as the real party in interest. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The claimed subject matter relates “generally to social networking systems, and in particular to presenting advertisements to social networking system users” (Spec. para. 1). Claim 1, reproduced below with emphasis added, is illustrative of the claimed subject matter:

1. A method comprising:
 - receiving a plurality of content items, where the plurality of content items comprise:*
 - one or more content items that include a prompt to perform an action on a client device that is unable to be performed while the client device is in a locked state; and*
 - one or more content items that include a prompt to perform an action on a client device that is able to be performed while the client device is in the locked state;*
 - responsive to an indication that a client device of a user of a social networking system is in the locked state that provides limited functionality to the user:*
 - identifying, from the received plurality of content items, one or more eligible content items, each of the one or more eligible content items identified based on the eligible content item including a prompt to perform an action on a client device that is able to be performed while the client device is in the locked state;*
 - selecting one or more of the eligible content items for presentation from the received plurality of content items;*
 - sending the selected one or more eligible content items for presentation in an ambient feed to the client device while the client device is in the locked state.*

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Conant	US 2008/0092182 A1	Apr. 17, 2008
Brown	US 2013/0124276 A1	Mar. 16, 2013
Ricasata	US 2014/0019253 A1	Jan. 16, 2014
Barnes	US 8,655,716 B1	Feb. 18, 2014
Biswas	US 2014/0156417 A1	June 5, 2014
Govan	US 2014/0195353 A1	July 10, 2014
Gao	US 2016/0085385 A1	Mar. 24, 2016

REJECTIONS

Claims 1–10 and 21–30 are rejected under 35 U.S.C. § 101 as being directed to judicially-excepted subject matter.

Claims 1, 3, 4, 9, 10, 21, 23, 24, 29, and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, and Govan.

Claims 2, 6, 22, and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Conant.

Claims 5 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Gao.

Claims 7 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Barnes.

Claims 8 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Biswas.

OPINION

The rejection of claims 1–10 and 21–30 under 35 U.S.C. § 101 as being directed to judicially-excepted subject matter.

The Appellant argues these claims as a group. *See* Appeal Br. 4–11. We select claim 1 as the representative claim for this group, and the

remaining claims 2–10 and 21–30 stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Preliminary comment

Previous Office guidance on patent subject matter eligibility has been superseded by the 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019), hereinafter “2019 Revised 101 Guidance.” *See* 2019 Revised 101 Guidance, 84 Fed. Reg. at 51 (“Eligibility-related guidance issued prior to the Ninth Edition, R-08.2017, of the MPEP (published Jan. 2018) should not be relied upon.”). Accordingly, we will not address arguments on the sufficiency of the Examiner’s position relative prior guidance but rather our analysis that follows will comport with the 2019 Revised 101 Guidance. We will pay particular attention to the Examiner’s position taken in the Answer and Appellant’s arguments made in the Reply Brief which are expressed in the context of the 2019 Revised 101 Guidance.

Introduction

35 U.S.C. § 101 provides that “[w]hoever 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.”

In that regard, claim 1 covers a “process” and is thus statutory subject matter for which a patent may be obtained.² This is not in dispute.

² This corresponds to Step 1 of the 2019 Revised 101 Guidance which requires determining whether “the claim is to a statutory category.” 84 Fed. Reg. at 53. *See also id.* at 53–54 (“consider[] whether the claimed subject

However, the 35 U.S.C. § 101 provision “contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

In that regard, notwithstanding claim 1 covers statutory subject matter, the Examiner has raised a question of patent eligibility on the ground that claim 1 is directed to an abstract idea.

Alice identifies a two-step framework for determining whether claimed subject matter is directed to an abstract idea. *Alice*, 573 U.S. at 217. *Alice* step one — the “directed to” inquiry:

According to *Alice* step one, “[w]e must first determine whether the claims at issue are *directed to* a patent-ineligible concept.” *Alice*, 573 U.S. at 218 (emphasis added).

The Examiner determined that claim 1 is directed to “selecting and presenting ads on a locked device.” Final Act. 2 (emphasis omitted). Specifically,

Claims 1 and 21 (as amended) recite, in part, a system for performing the steps of receiving a plurality of ads, receiving an indication that a user device is locked, identifying ads that include a prompt to perform an action on the device while it is locked, selecting an ad, and displaying the ad in the user’s ambient feed. These steps correspond to concepts identified as abstract ideas by the courts, such as: processing information through a clearinghouse (Ads are filtered and selected by the system prior to dissemination to user devices.) See *Dealertrack v. Huber*, 674 F.3d 1315 (Fed. Cir. 2012); communicating

matter falls within the four statutory categories of patentable subject matter identified by 35 U.S.C. 101.”).

targeted information (Ads are targeted to social media users whose mobile devices are in a locked state.) See *Affinity Labs of Texas, LLC v. Amazon.com*, 838 F.3d 1266 (Fed. Cir. 2016); screening digital data files for unwanted content (Ads are screened to remove any that require the user device to be in an unlocked state.) See *Intellectual Ventures v. Symantec Corp*, 838 F.3d 1307 (Fed. Cir. 2016); tailoring content based on information about a user (Ads are selected and presented to a user based on their social media activity, as well as the state of their device.) See *Intellectual Ventures v. Capital One Bank* ('382 patent), 793 F.3d 1363 (Fed. Cir. 2015), and collecting information, analyzing it, and displaying certain results of the collection and analysis (Information about ads is collected, analyzed, and used to filter which ads will ultimately be displayed on a user device. Information regarding the state of user devices is likewise collected, analyzed, and used to determine which ads will be displayed as a result of the collected and analyzed information.) See *Electric Power Group, LLC v. Alstom*, 830 F.3d 1350 (Fed. Cir. 2016). The concept described in claims 1 and 21 are not meaningfully different than those economic concepts found by the courts to be abstract ideas. As such, the description in claims 1 and 21 of selecting and displaying ads on the lock screen of a device is abstract.

Id. at 3–4.

The Examiner's Answer states:

As noted in the Final Office Action dated 5/24/18, the claims are directed to the abstract idea of identifying and selecting ads to be presented on a locked device, and more directly based on a locked-device condition, which, pursuant to the 2019 Eligibility Guidance, is aptly categorized as a method of organizing human activity (i.e. advertising and marketing activities). Furthermore, this judicial exception is not integrated into a practical application because it merely uses a computer as a tool to perform the abstract idea, and generally links the use of the judicial exception to a particular technological environment (e.g. user devices).

Ans. 3.

We have carefully reviewed the briefs but do not see that the Appellant has *expressly* disputed the Examiner’s characterization of what claim 1 is directed to (i.e., “selecting and presenting ads on a locked device” (Final Act. 2)) and/or that what the Examiner has characterized claim 1 as being directed to is an abstract idea for being a method of organizing human activity. Instead the briefs direct our attention to (a) “additional limitations beyond the abstract idea” (Appeal Br. 4) that the Appellant believes are not “conventional” (discussed at Appeal Br. 4–8); (b) “an unconventional and counterintuitive solution for solving a problem” (Appeal Br. 8; further discussed at 8–11); (c) an integration into a practical application (Reply Br. 1–6); and “significantly more” recitations (Reply Br. 6).

However, various statements are made in the briefs suggesting Appellant believes the claimed subject matter is directed to a technical improvement. For example, Appellant contends that “the claims describe an improved technical solution for sending content items to a client device for presentation in an ambient feed that is presented while the client device is in a locked state so the presented content items prompt users to perform actions that are capable of being performed while the content item is in the locked state.” Reply Br. 5.

Accordingly, a dispute over whether claim 1 is directed to an abstract idea is present. Specifically, is claim 1 directed to “selecting and presenting ads on a locked device” (Final Act. 2) or “an improved technical solution” (Reply Br. 5)?

*Claim Construction*³

We consider the claim as a whole giving it the broadest reasonable construction as one of ordinary skill in the art would have interpreted it in light of the Specification at the time of filing.^{4,5,6}

Claim 1 recites 4 steps, the first calls for “receiving” certain information and the last three – “identifying,” “selecting,” and “sending” – process said certain information upon “an indication that a client device of a user of a social networking system is in the locked state that provides limited functionality to the user.”

The “content items” that are received are not limited to any specific type of information.

³ “[T]he important inquiry for a § 101 analysis is to look to the claim.” *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013). “In *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can.*, 687 F.3d 1266, 1273 (Fed. Cir. 2012), the court observed that ‘claim construction is not an inviolable prerequisite to a validity determination under § 101.’ However, the threshold of § 101 must be crossed; an event often dependent on the scope and meaning of the claims.” *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1347–48 (Fed. Cir. 2015).

⁴ “In determining the eligibility of respondents’ claimed process for patent protection under § 101, their claims must be considered as a whole.” *Diamond v. Diehr*, 450 U.S. 175, 188 (1981).

⁵ “First, it is always important to look at the actual language of the claims. . . . Second, in considering the roles played by individual limitations, it is important to read the claims ‘in light of the specification.’” *Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1378 (Fed. Cir. 2017) (J. Linn, dissenting in part and concurring in part) (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016)), among others.

⁶ See 2019 Revised 101 Guidance, 84 Fed. Reg. at 52, footnote 14 (“*If a claim, under its broadest reasonable interpretation.*”).

However, the content items must include a “prompt.” In that regard, the Specification does not define the claim term “prompt.” Ordinarily and customarily, a “prompt” means “a symbol or phrase that appears onscreen to inform you that the computer is ready to accept input.” *Webster’s Dictionary of Computer Terms*, 438 (8th ed. 2000), entry for “prompt.”

Although the prompts have the same function – to communicate an action intended to be performed by a client device, they distinguish from each other in the types of actions they communicate.

According to the claimed subject matter, the client device is unable to perform the action communicated by the first prompt (1) but able to perform the action communicated by the second prompt (2) while it is locked.

Accordingly, as reasonably broadly construed, the “receiving” step covers (a) receiving two content items that include prompts (1) and (2) – which communicate different types of actions intended to be performed by a client device – and (b) a client device that, while locked, is unable to perform the action communicated by the first prompt but able to perform the action communicated by the second prompt.

Turning now to the other three steps, “identifying,” “selecting,” and “sending” – all of which occur when the client device is locked. *See* claim 1 (“responsive to an indication that a client device of a user of a social networking system is in the locked state that provides limited functionality to the user”).

The “identifying” step identifies those content items which “includ[e] a prompt to perform an action on a client device that is able to be performed while the client device is in the locked state.” In other words, the “identifying” step identifies content items with prompt (2).

The “selecting” step selects “content items for presentation” from the content items identified as having prompt (2).

The “sending” step sending the selected “content items for presentation” (i.e., from the content items identified as having prompt (2)) “in an ambient feed to the client device while the client device is in the locked state.”

Notably, the “receiving,” “identifying,” “selecting,” and “sending” steps are not tied to any device. The claim leaves open the type of device one can employ to practice these steps as claimed. In that regard, the Specification discloses conventional networks which can be employed to receive and send information. *See Spec.*, para. 16. Accordingly, these steps are reasonably broadly construed as covering generic computer functions.

As for the client device, the Specification discloses a “conventional computer system, such as a desktop or a laptop computer” as an example of what can be employed. *See Spec.*, para. 15. In accordance with the claim, the client device is a “client device of a user of a social networking system.”

Putting it together, the claimed method is reasonably broadly construed as a scheme to identify content items that include prompts communicating an action a device of a social networking system is able, rather than unable, to perform while locked, select content items for presentation from those identified, and send the selected content items to the device while it is in the locked state.

According to the Specification, an objective of the invention is to decrease the likelihood of a user performing an action associated with an advertisement presented while a device is in a state providing limited functionality that the device is unable to perform.

Users increasingly access social networking systems through mobile devices, or other devices that have one or more states providing users with limited functionality. For example, many devices have a “locked state” that responds to a reduced set of inputs from the user and passively displays information to a user. Conventional social networking systems may present a limited amount of content to users while a device associated with the user is in a state providing the user with limited functionality. While advertisements may be included in the content presented while a device is in a state providing limited functionality, these advertisements may prompt users to perform actions unable to be performed while the device is in the state providing limited functionality. This decreases the likelihood of a user performing an action associated with an advertisement presented while a device is in a state providing limited functionality.

Spec., para. 3.

Given the method as claimed as reasonably broadly construed above and in light of the Specification’s description of the objective of the invention in the social networking and advertising realm, we reasonably broadly construe claim 1 as being directed to a scheme to identify content items that include prompts (such as advertisements) communicating an action a device of a social networking system is able rather than unable to perform while locked, select content items for presentation from those identified, and send the selected content items to the device while it is in the locked state. Put more succinctly, claim 1 is directed to a scheme for providing content to a locked device that includes a prompt (such as an advertisement) communicating an action the device is able to perform while locked.

*The Abstract Idea*⁷

Above, where we reproduce claim 1, we identify in italics the limitations we believe recite an abstract idea.⁸ Based on our claim construction analysis (above), we determine that the identified limitations describe a scheme for providing content to a locked device of a social networking system that includes a prompt (such as an advertisement) communicating an action the device is able to perform while locked. Providing content in a social networking environment that includes, for example, advertising is a commercial interaction. It falls within the enumerated “[c]ertain methods of organizing human activity” grouping of abstract ideas set forth in the 2019 Revised 101 Guidance.⁹ 2019 Revised 101 Guidance, 84 Fed. Reg. at 52.

⁷ This corresponds to Step 2A of the 2019 Revised 101 Guidance. Step 2A determines “whether a claim is ‘directed to’ a judicial exception,” such as an abstract idea. Step 2A is two prong inquiry.

⁸ This corresponds to Prong One (a) of Step 2A of the 2019 Revised 101 Guidance. “To determine whether a claim recites an abstract idea in Prong One, examiners are now to: (a) Identify the specific limitation(s) in the claim under examination (individually or in combination) that the examiner believes recites an abstract idea.” 84 Fed. Reg. at 54.

⁹ This corresponds to Prong One [“Evaluate Whether the Claim Recites a Judicial Exception”] (b) of Step 2A of the 2019 Revised 101 Guidance. “To determine whether a claim recites an abstract idea in Prong One, examiners are now to: . . . (b) determine whether the identified limitation(s) falls within the subject matter groupings of abstract ideas enumerated in Section 1 of the [2019 Revised 101 Guidance].” 84 Fed. Reg. at 54. This case implicates subject matter grouping “(b):” “(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

*Technical Improvement*¹⁰ (*Appellant's Argument*)

Our characterization of what the claim is directed to is similar to that of the Examiner's ("selecting and presenting ads on a locked device"). The Examiner's characterization is described at a somewhat higher level of abstraction. Nevertheless, "[a]n abstract idea can generally be described at different levels of abstraction." *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240, 1240–41 (Fed. Cir. 2016) ("The Board's slight revision of its abstract idea analysis does not impact the patentability analysis.").

We have reviewed the record and are unpersuaded as to error in our or the Examiner's characterization of what claim 1 is directed to.

Appellant contends that "the claims describe an improved technical solution for sending content items to a client device for presentation in an ambient feed that is presented while the client device is in a locked state so the presented content items prompt users to perform actions that are capable

personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions)." *Id.* at 52.

¹⁰ This corresponds to Prong Two ["If the Claim Recites a Judicial Exception, Evaluate Whether the Judicial Exception Is Integrated Into a Practical Application"] of Step 2A of the 2019 Revised 101 Guidance. "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." 84 Fed. Reg. at 54. One consideration, implicated here, that is "indicative that an additional element (or combination of elements) may have integrated the exception into a practical application" is if "[a]n additional element reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field." *Id.* at 55.

of being performed while the content item is in the locked state.” Reply Br. 5.

However, we do not find that the claim adequately reflects an improved *technical* solution to the problem of “sending content items to a client device for presentation in an ambient feed that is presented while the client device is in a locked state so the presented content items prompt users to perform actions that are capable of being performed while the content item is in the locked state.” Reply Br. 5.

The method as claimed describes, in very general terms, providing (via “receiving,” “identifying,” “selecting,” and “sending” steps) information including prompts communicating an action a device is able to perform when a device is locked. The method as claimed is not focused on improving technology. *Cf. Trading Techs. Int’l, Inc. v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019) (“The claims are focused on providing information to traders in a way that helps them process information more quickly, ’556 patent at 2:26–39, not on improving computers or technology.”).

We have carefully reviewed the claim. Per our previous claim construction analysis, claim 1 is reasonably broadly construed as covering a scheme to identify content items that include prompts (such as advertisements) communicating an action a device of a social networking system is able rather than unable to perform while locked, select content items for presentation from those identified, and send the selected content items to the device while it is in the locked state. We see no specific asserted improvement in computer capabilities recited in the claim. Rather than being directed to any specific asserted improvement in computer capabilities, the

claim supports the opposite view — that the claimed subject matter is directed to a scheme for providing content to a locked device that includes a prompt (such as an advertisement) communicating an action the device is able to perform while locked employing generic devices. *See Spec.*, e.g., para. 15.

The claim provides no additional structural details that would distinguish any device required to be employed to practice the method as claimed, such as the recited “client device,” from its generic counterparts.¹¹

With respect to the “receiving,” “identifying,” “selecting,” and “sending” steps, the Specification attributes no special meaning to any of these operations, individually or in the combination, as claimed. In our view, albeit the claim does not specifically require a computer, these are common computer processing functions that one of ordinary skill in the art at the time of the invention would have known generic computers were capable of performing and would have associated with generic computers. *Cf. OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015)

Beyond the abstract idea of offer-based price optimization, the claims merely recite “well-understood, routine conventional activit[ies],” either by requiring conventional computer activities or routine data-gathering steps. *Alice*, 134 S.Ct. at 2359 (quoting *Mayo*, 132 S.Ct. at 1294) For example, claim 1 recites “sending a first set of electronic messages over a network to devices,” the devices being “programmed to communicate,” storing test results in a “machine-readable medium,” and “using a computerized system . . . to automatically determine” an

¹¹ *Cf. Move, Inc. v. Real Estate Alliance Ltd.*, 721 F. App’x 950, 954 (Fed. Cir. 2018) (non-precedential) (“Claim 1 is aspirational in nature and devoid of any implementation details or technical description that would permit us to conclude that the claim as a whole is directed to something other than the abstract idea identified by the district court.”).

estimated outcome and setting a price. Just as in *Alice*, “all of these computer functions are ‘well-understood, routine, conventional activit[ies]’ previously known to the industry.” *Alice*, 134 S.Ct. at 2359 (quoting *Mayo*, 132 S.Ct. at 1294) (alterations in original); *see also buySAFE[, Inc. v. Google, Inc.]*, 765 F.3d [1350,] 1355 [(Fed. Cir. 2014)] (“That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive.”).

We find the Appellant’s remark that the claim presents a technical-improvement solution unpersuasive as to error in the Examiner’s or our characterization of what the claim is directed to because the method as claimed fails to adequately support it. We are unable to point to any claim language suggestive of an improvement in technology. An argument that such an improvement exists is alone insufficient. *See generally In re Glass*, 474 F.2d 1015, 1019 (CCPA 1973); *In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974); *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984); and, *In re Schulze*, 346 F.2d 600, 602 (CCPA 1965).

Accordingly, within the meaning of the 2019 Revised 101 Guidance, we find there is no integration of the abstract idea into a practical application.

The Appellant argues that “the claims recite a practical application of the identified judicial exceptions that addresses a specific challenge in the field of online advertising” Reply Br. 3. A similar argument is made later in the brief. *See id.* at 5 (“For example, the claims specific information - that a client device is in a locked state providing limited functionality - in specific ways recited through the various steps to improve a different technical field, namely online advertising and targeting content to users.”) But there is no mention of online advertising or targeting in the claim.

The Appellant further argues that the claimed method

allows the pending claims to limit selection of content items for inclusion in the ambient feed presented while the client device is in a locked state to content items that prompt a user to perform actions capable of being performed by the user while the client device is in the locked state by accounting for the client device being in the locked state when selecting content items for sending to the client device.

Id. at 4. Similar arguments are made later in the Reply Brief. E.g.,

[the claimed method] allows content items to be selected for presentation while the client device is in the locked state with which the user may more easily interact while the client device is in the locked state, increasing user interaction with the content items via the client device.

This is a practical application because it practically applies selection of content items to a specific context to solve a real world problem.

Id. at 5.

The difficulty with such an argument is that it points to the recited steps (“receiving,” “identifying,” “selecting,” and “sending”) themselves, the very subject matter that we, and the Examiner, have characterized as being an abstract idea. Rather than showing that these steps describe a technical improvement, the Appellant points to result-based functional language that is without any means for achieving any purported technological improvement. The claimed invention the Appellant points to – that is, limiting selection of the content items for inclusion in the ambient feed presented while the client device is in a locked state to content items that prompt a user to perform actions capable of being performed by the user while the client device is in the locked state – is described via a scheme

(“receiving,” “identifying,” “selecting,” and “sending”) for providing said content items that is unmoored in technical details. By so broadly defining the inventive method, that is, by setting out what it is aspiring to accomplish without any means for achieving it, let alone any purported technological improvement, the claim is in effect presenting the invention in purely result-based functional language, strengthening our determination under *Alice* step one that the claim is directed to an abstract idea. *Cf. Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017) (“Claim 1 recites a method for routing information using result-based functional language. The claim requires the functional results of ‘converting,’ ‘routing,’ ‘controlling,’ ‘monitoring,’ and ‘accumulating records,’ but does not sufficiently describe how to achieve these results in a non-abstract way.”). *See also Uniloc USA v. LG Elecs. USA*, 957 F.3d 1303, 1308 (Fed. Cir. 2020):

The claims we held ineligible in *Two-Way Media* similarly failed to concretely capture any improvement in computer functionality. In *Two-Way Media*, the claims recited a method of transmitting packets of information over a communications network comprising: converting information into streams of digital packets; routing the streams to users; controlling the routing; and monitoring the reception of packets by the users. 874 F.3d at 1334. *Two-Way Media* argued that the claims solved data transmission problems, including load management and bottlenecking, but the claimed method was not directed to those improvements. *Id.* at 1336–37. We therefore held the claims ineligible because they merely recited a series of abstract steps (“converting,” “routing,” “controlling,” “monitoring,” and “accumulating records”) using “result-based functional language” without the means for achieving any purported technological improvement. *Id.* at 1337.

We have considered Appellant’s other arguments challenging the Examiner’s determination under step one of the *Alice* framework and find them unpersuasive. For the foregoing reasons, the record supports the Examiner’s determination that claim 1 is directed to an abstract idea.

*Alice step two — Does the Claim Provide an Inventive Concept?*¹²

Step two is “a search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Alice*, 573 U.S. at 217–18 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 73 (2012)).

In that regard, the Examiner determined, *inter alia*, that

the claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements when considered both individually and as an ordered combination do not amount to significantly more than the abstract idea.

Final Act. 4.

Most notably, other than the presentation of ads on a “user device,” the claims do not disclose any computer hardware (such as a processor) that is intended to execute the method. As such, it is unclear what components are performing the receiving of ads, identification of ads, selection of ads, and transmission of ads to the user device. Thus, as currently written, the method

¹² This corresponds to Step 2B, of the 2019 Revised 101 Guidance, 84 Fed. Reg. at 56 “if a claim has been determined to be directed to a judicial exception under revised Step 2A, examiners should then evaluate the additional elements individually and in combination under Step 2B to determine whether they provide an inventive concept (*i.e.*, whether the additional elements amount to significantly more than the exception itself).”

claims would not even be sufficient to overcome the antiquated *Bilski* standard. Furthermore, the “client device” is stated at a high level of generality and its broadest reasonable interpretation is that of an ordinary smartphone, computer, or tablet. The use of generic computer components to transmit information through an unspecified interface does not impose any meaningful limit on the computer implementation of the abstract idea. Thus, taken alone, the additional elements do not amount to significantly more than the above-identified judicial exception (the abstract idea).

Id. (emphasis omitted). We agree.

We addressed the matter of whether the claim presented any purported specific asserted technical improvements in our analysis above under step one of the *Alice* framework. This is consistent with the case law. *See Ancora Techs., Inc. v. HTC Am., Inc.*, 908 F.3d 1343, 1347 (Fed. Cir. 2018) (“We have several times held claims to pass muster under *Alice* step one when sufficiently focused on such improvements.”). Such an argument, as the Appellant has made here, can also challenge a determination under step two of the *Alice* framework. *See buySAFE*, 765 F.3d at 1354–55. “[R]ecent Federal Circuit jurisprudence has indicated that eligible subject matter can often be identified either at the first or the second step of the *Alice/Mayo* [framework].” *See* 2019 Revised 101 Guidance, 84 Fed. Reg. at 53, n.17.

The Appellant argues that “the claimed invention provides an unconventional and counterintuitive solution for solving a technical problem.” Appeal Br. 8 (emphasis omitted). Specifically,

given the evidence of record in this case it is apparent that the claimed invention indeed provides an unconventional and counterintuitive solution for solving a technical problem.

For example, one problem solved by the claimed invention is how to limit the presentation of content items on a client device

when that device is in a locked state. Specifically, the claimed invention limits this presentation to content items that prompt a user to perform an action that the user is able to perform without unlocking the client device. As a result, content items that would require the device to be unlocked before their prompted action can be performed (e.g., launching a specific application on the client device) are not presented when the device is in the locked state.

Id. at 9 (emphasis omitted). According to the Appellant, “[t]he solution both requires and uses the technical environment of a computerized system in an unconventional manner that prompts users to perform actions that can be performed from within a locked state of a client device.” *Id.* at 10.

But this does not explain in what way the claimed method provides a *technical* improvement. As a matter of fact, as the Examiner correctly pointed out, the claim does not place the method within a “technical environment of a computerized system,” let alone any purported technological improvement. The argument relies on the claim’s result-based functional language as the basis for contending that the claim “provides an unconventional and counterintuitive solution for solving a technical problem” (Appeal Br. 8) (emphasis omitted). Rather than being based on any technical details, the argument looks to the very scheme (“receiving,” “identifying,” “selecting,” and “sending”) for providing said content items that we have characterized as being an abstract idea. In effect, the Appellant is arguing that the abstract idea is “unconventional and counterintuitive.” But “[g]roundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry.” *Ass’n for Molecular Pathology*, 569 U.S. at 591. *Cf. Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1315 (Fed. Cir. 2016).

Indeed, “[t]he ‘novelty’ of any element or steps in a process, or even of the process itself, is of *no relevance* in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.” *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (emphasis added); *see also Mayo*, 132 S. Ct. at 1303–04 (rejecting “the Government’s invitation to substitute §§ 102, 103, and 112 inquiries for the better established inquiry under § 101”). Here, the jury’s general finding that Symantec did not prove by clear and convincing evidence that three particular prior art references do not disclose all the limitations of or render obvious the asserted claims does not resolve the question of whether the claims embody an inventive concept at the second step of *Mayo/Alice*.

We are unpersuaded that claim 1 presents an element or combination of elements indicative of a specific asserted technical improvement, thereby rendering the claimed subject matter sufficient to ensure that the patent in practice amounts to significantly more than a patent upon a scheme to identify content items that include prompts (such as advertisements) communicating an action a device of a social networking system is able rather than unable to perform while locked, select content items for presentation from those identified, and send the selected content items to the device while it is in the locked state.

We have reviewed the claim in light of the Specification and, as explained above, we find the claimed subject matter insufficiently expresses a technical improvement as a result of performing the functions as broadly as they are recited.

We cited the Specification in our earlier discussion. It is intrinsic evidence that the claimed “client device” as claimed is conventional. In doing so, we have followed “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision

(*Berkheimer v. HP Inc.*[], 881 F.3d 1360 (Fed. Cir. 2018)],” USPTO Memorandum, Robert W. Bahr, Deputy Commissioner For Patent Examination Policy, April 19, 2018 (the “*Berkheimer* Memo”).

The court in *Berkheimer* held that “[t]he patent eligibility inquiry may contain underlying issues of fact.” *See Berkheimer*, 881 F.3d at 1365 (quoting *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016) (“The § 101 inquiry ‘*may* contain underlying factual issues.”)). But the court also held that “[w]hen there is *no genuine issue of material fact* regarding whether the claim element or claimed combination is well-understood, routine, [and] conventional to a skilled artisan in the relevant field, this issue can be decided on summary judgment as a matter of law.” *Berkheimer*, 881 F.3d at 1368 (emphasis added). This qualification has been subsequently reiterated.

If there is a genuine dispute of material fact, Rule 56 requires that summary judgment be denied. In *Berkheimer*, there was such a genuine dispute for claims 4–7, but not for claims 1–3 and 9.

. . . .

[I]n accordance with *Alice*, we have repeatedly recognized the absence of a genuine dispute as to eligibility for the many claims that have been defended as involving an inventive concept based merely on the idea of using existing computers or the Internet to carry out conventional processes, with no alteration of computer functionality.

Berkheimer v. HP Inc., 890 F.3d 1369, 1371–73 (Fed. Cir. 2018) (Order, On Petition for rehearing en banc, May 31, 2018 (J. Moore concurring)); *see also Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1368 (Fed. Cir. 2018) (Order On Petition for Rehearing En Banc) (Reyna, J., dissenting) (“A factual allegation or dispute should not automatically take

the determination out of the court’s hands; rather, there needs to be justification for why additional evidence must be considered—the default being a legal determination.”).

Here, the Specification indisputably shows the recited “client device” individually and in the context of a social network as claimed was conventional at the time of filing. Accordingly, there is sufficient factual support for the well-understood, routine, or conventional nature of the claimed “client device” individually or in the combination as claimed.

The Appellant argues that

Separately, the claims recite significantly more than just targeted advertising for the reasons presented in detail above and in the Appeal Brief. The claims recite a very specific method including novel features that are much more than just the high level concept of advertising and marketing activities.

Reply Br. 6. Because claim 1 makes no mention of targeted, or other advertising and marketing activities, this argument cannot be persuasive as to error in the Examiner’s determination under step two of *Alice*. It is not commensurate in scope with what is claimed.

We have carefully reviewed the discussion at pages 5–8 of the Appeal Brief under the heading

1) The present Office Action does not adequately demonstrate that the claimed additional limitations beyond the abstract idea are conventional as required by recent case law and USPTO guidance such as the April 19, 2018 *Berkheimer* memorandum.

But the discussion there repeats the argument that the abstract idea (i.e., the claimed scheme to identify content items that include prompts (such as advertisements) communicating an action a device of a social networking

system is able rather than unable to perform while locked, select content items for presentation from those identified, and send the selected content items to the device while it is in the locked state) is not conventional. *See e.g.*, Appeal Br. 7–8 (“the Office Action does not provide any factual evidence to demonstrate that selecting eligible content items for presentation in an ambient feed of a client device in a locked state is prevalent in the industry or otherwise conventional.”) As we explained above, the “unconventional and counterintuitive” nature of the abstract idea does not affect the determination that the claim is directed to an abstract idea. The abstract idea itself cannot amount to “‘significantly more than a patent upon the [ineligible concept] itself.’” *Alice*, 573 U.S. at 218 (quoting *Mayo*, 566 U.S. at 73), whether or not it is conventional.

No other persuasive arguments having been presented, we conclude that no error has been committed in the determination under *Alice* step two that claim 1 does not include an element or combination of elements circumscribing the patent-ineligible concept it is directed to so as to transform the concept into a patent-eligible application.

We have considered all of the Appellant’s arguments (including those made in the Reply Brief) and find them unpersuasive.

Accordingly, because we are not persuaded as to error in the determinations that representative claim 1, and claims 2–10 and 21–30 which stand or fall with claim 1, are directed to an abstract idea and do not present an “inventive concept,” we sustain the Examiner’s conclusion that they are directed to patent-ineligible subject matter for being judicially-excepted from 35 U.S.C. § 101. *Cf. LendingTree, LLC v. Zillow, Inc.*, 656 F. App’x 991, 997 (Fed. Cir. 2016) (“We have considered all of

LendingTree’s remaining arguments and have found them unpersuasive. Accordingly, because the asserted claims of the patents in suit are directed to an abstract idea and do not present an ‘inventive concept,’ we hold that they are directed to ineligible subject matter under 35 U.S.C. § 101.”); *see, e.g., OIP Techs.*, 788 F.3d at 1364; *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1098 (Fed. Cir. 2016).

The rejection of claims 1, 3, 4, 9, 10, 21, 23, 24, 29, and 30 under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, and Govan.

Both independent claims (claims 1 and 21) contain “identifying,” “selecting,” and “sending” steps, all of which occur when the client device is locked. These steps are performed “responsive to an indication that a client device of a user of a social networking system is in the locked state that provides limited functionality to the user” (claims 1 and 21).

The Examiner finds that said “responsive” limitation is disclosed in Figures 3 and 9; paragraphs 11, 13, 27, 29, 37, and 43 of Ricasata. Final Act. 6.

We have reviewed the cited Ricasata disclosures. We see there disclosed information selected for display on a lock screen. E.g., para. 29:

FIG. 2 is an illustration of a first advertisement (ad) lock screen 202 being displayed on a touch-sensitive display screen 204 of a smartphone 200, in accordance with one embodiment of the invention. The first ad lock screen 202 is, overall, a graphical user interface (GUI), with at least one ad provided therein. The ad may be a still image, a sequence of images or a video. The first ad lock screen 202 may include one or more hyperlinks 206 which a user can immediately select in order to launch a web browser on the smartphone 200 and view additional information from the advertiser. The first ad lock screen 202 may also include

a menu button 208 which provides additional options for the user, including unlocking the phone to terminate the lock screen function,

However, we do not see disclosed there that the “identifying,” “selecting,” and “sending” of the lock screen information is “*responsive to an indication* that a client device of a user of a social networking system is in the locked state that provides limited functionality to the user” (claims 1 and 21) (emphasis added). We agree with the Appellant that “Ricasata’s selection of ads based on user data is performed independent of whether the portable electronic device is in a locked state providing limited functionality.” Reply Br. 9.

The rejection is not sustained on the ground that a prima facie case of obviousness has not been made out in the first instance.

The rejection of claims 2, 6, 22, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Conant.

The rejection of claims 5 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Gao.

The rejection of claims 7 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Barnes.

The rejection of claims 8 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Biswas.

These rejections of dependent claims are not sustained for the reason given above in not sustaining the rejection of the independent claims from which they depend.

CONCLUSION

The decision of the Examiner to reject claims 1–10 and 21–30 is affirmed.

More specifically:

The rejection of claims 1–10 and 21–30 under 35 U.S.C. § 101 as being directed to judicially-expected subject matter is affirmed.

The rejection of claims 1, 3, 4, 9, 10, 21, 23, 24, 29, and 30 under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, and Govan is reversed.

The rejection of claims 2, 6, 22, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Conant is reversed.

The rejection of claims 5 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Gao is reversed.

The rejection of claims 7 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Barnes is reversed.

The rejection of claims 8 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Ricasata, Brown, Govan, and Biswas is reversed.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–10, 21–30	101	Eligibility	1–10, 21–30	
1, 3, 4, 9, 10, 21, 23, 24, 29, 30	103	Ricasata, Brown, Govan		1, 3, 4, 9, 10, 21, 23, 24, 29, 30
2, 6, 22, 26	103	Ricasata, Brown, Govan, Conant		2, 6, 22, 26
5, 25	103	Ricasata, Brown, Govan, Gao		5, 25
7, 27	103	Ricasata, Brown, Govan, Barnes		7, 27
8, 28	103	Ricasata, Brown, Govan, Biswas		8, 28
Overall Outcome			1–10, 21–30	

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