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In re: )
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Request for Comments on )
Examination Instruction and )
Guidance Pertaining to Patent- )
Eligible Subject Matter )

COMMENTS OF GOOGLE INC.
AND TWITTER, INC.

Suzanne Michel
GOOGLE INC.
25 Massachusetts Ave., N.W.
Washington, DC 20001

Tim Pham
TWITTER, INC.
1355 Market St., Suite 900
San Francisco, CA 94103

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The Patent and Trademark Office’s (PTO’s) Preliminary Guidance concerning the Supreme Court’s decision in *Alice Corporation Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014), provides an important first step in helping patent examiners apply 35 U.S.C. § 101 to computer-implemented inventions. We thank the Office for the opportunity to provide feedback on the Preliminary Guidance and input on the final guidance. As the Preliminary Guidance explains, the Supreme Court held that claims to abstract ideas as implemented on a computer are not eligible for patenting under Section 101, even if such claims recite the use of generic or conventional computer equipment or contain other, non-technological limitations. See U.S. Patent and Trademark Office, Preliminary Examination Instructions in View of the Supreme Court Decision in *Alice Corporation Pty. Ltd. v. CLS Bank International*, et al. (June 25, 2014), http://www.uspto.gov/patents/announce/alice_pec_25jun2014.pdf (“Preliminary Guidance”).

The PTO’s guidance on this issue is extraordinarily important because patents drawn to abstract ideas impair innovation, especially in computer-related fields, by granting exclusive rights to high-level ideas and thereby blocking others from undertaking the truly innovative task of developing and implementing specific applications. Because of the ever-growing use of computerized equipment in a wide variety of settings, the harm from abstract software patents has been widespread, stifling innovation in a large circle of industries.

As the Preliminary Guidance explains, the Supreme Court held in *Alice* that Section 101 requires a two-step process to identify whether a claim is ineligible for patent protection: determining whether the claim is “directed to” laws of nature, natural phenomena, or abstract ideas; and then assessing whether the claim contains limitations sufficient to “transform the
nature of the claim” from an abstract idea to a concrete application. 134 S. Ct. at 2355. These comments address how the PTO could improve its guidance with respect to each of those steps.

Part I concerns step one of the *Alice* test: identifying an abstract idea. For this purpose, ideas should be characterized at a relatively high level of generality, as the Supreme Court and the Federal Circuit have done, because analysis of the specific claim limitations comes in step two of the analysis. Examiners should be careful not to conflate the two separate parts of the analysis. The guidance should make clear that claims directed toward abstract ideas can arise in all fields, not only the specific categories identified in the Preliminary Guidance, and should provide multiple examples of abstract ideas as instruction for examiners.

Part II concerns step two of the *Alice* test: determining whether the claim elements contain significantly more than the abstract idea. The guidance should explain that to satisfy step 2, claims directed to abstract ideas must contain inventive, technological limitations. To make the examination process more efficient and to create a clear record, the guidance should instruct examiners to reject claims that do not contain clear limitations to inventive, technological computer implementation.

**PART I: Alice Step One Requires Identifying, At A Relatively High Level Of Generality, The “Abstract Idea” Toward Which A Claim Is Directed.**

A. The guidance should instruct examiners to characterize the idea to which a claim is directed at a high level of generality.

The PTO’s interim guidance following *Alice* instructs examiners first to “[d]etermine whether the claim is directed to an abstract idea.” Preliminary Guidance at 2. The guidance should include discussion comparing the claims at issue in the Supreme Court’s two recent cases, *Bilski* and *Alice*, and how the Court characterized the abstract ideas in those cases. Such a comparison would make clear that the idea to which claims are “directed” should be defined at a
high level of generality, without consideration of all claim limitations. Indeed, the Court rejected efforts to define the relevant idea more narrowly.

For instance, the Bilski applicant attempted to characterize the idea behind its claims as “the purchase and sale of commodities involving an intermediary commodity provider that manages consumption risk costs.” Brief for Petitioners at 57, Bilski v. Kappos, 130 S. Ct. 3218 (July 30, 2009), 2009 WL 2372921. The independent claims listed a series of steps and one included a mathematical formula. The dependent claims limited the context to energy markets and applied specified statistical techniques. Bilski, 130 S. Ct. at 3224. Despite this specificity, the Supreme Court concluded that the idea to which the claim was directed was simply “hedging, or protecting against risk.” Id. at 3231. So too in Alice. The Court held that a claimed method of “creat[ing] electronic shadow accounts, electronically adjust[ing] those shadow accounts, and ultimately issu[ing] irrevocable instructions to exchange institutions to provide delivery,” Brief for Petitioner at 47, Alice Corp., 134 S. Ct. 2347 (Jan. 21, 2014), 2014 WL 262088, was directed toward the basic and abstract idea of “intermediated settlement.” Alice Corp., 134 S. Ct. at 2355.

B. The guidance should be corrected to recognize that the Court’s caution in construing Section 101’s exclusion of abstract ideas applies to the complete Alice analysis, not the identification of the idea to which a claim is directed in Alice step one.

The Preliminary Guidance seems to express misplaced caution about characterizing abstract ideas for purposes of step one when it notes in the discussion of step one that “courts have tread carefully in construing this exclusion because, at some level, all inventions embody, use, reflect, rest upon or apply abstract ideas.” Preliminary Guidance at 2; see also Alice Corp., 134 S. Ct. at 2354 (quoting Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1293 (2012)). But that caution relates to step two of the analysis, not step one. The Alice Court made the quoted statement in the context of the complete Section 101 analysis, not as part
of step one. At step one, the question is only whether a claim is “directed to” an abstract idea, not whether it is limited to such an idea based on review of all claim elements. Alice Corp., 134 S. Ct. at 2355. The Court’s observation that at some level all inventions embody or build upon abstract ideas simply recognizes that many claims are directed toward abstract ideas for the purpose of step one.

Unlike step one, step two emphasizes “consider[ation of] all claim elements” by asking whether a claim contains “something more” than the abstract idea. Id. at 2354, 2355 n.3. Incorporating all claim limitations to define the idea to which a claim is directed would conflate step one with step two, contrary to the Court’s clear directive. It would also make the analysis more muddled, as examiners and courts would have to decide how much weight to give claim limitations in the first step, instead of just identifying the idea behind a claim in step one, and then considering all of the claim limitations once, in step two. Moreover, that approach would not provide greater protection for valid patent applications. As long as the abstract idea is not described too narrowly, step two will separate the wheat from the chaff by asking whether a claim contains significant and meaningful limitations on the abstract idea identified in step one. Whatever else may be true, describing the idea to which a claim is directed at a more general level in step one does not make it harder for a patent applicant to show that the claim contains additional, meaningful limitations in step two.

For these reasons, the PTO should instruct examiners to define abstract ideas in step one at the high level of generality reflected in the cases discussed above, and to focus their efforts on the second step, which asks whether a claim also contains significant limitations.
C. The guidance should make clear that abstract ideas are not limited to the listed categories and provide additional instruction for examiners by including multiple examples of ideas found to be abstract.

The Preliminary Guidance defines abstract ideas by reference to four categories: “[f]undamental economic practices”; “[c]ertain methods of organizing human activities”; “[m]athematical relationships/formulas”; and “an idea of itself.” Preliminary Guidance at 2-3. The PTO’s guidance should make clear that—as the fourth, catch-all category reflects—abstract ideas are not limited to the first three categories. Nor are abstract ideas limited to particular industries or sectors. The wide variety of ideas identified by courts as abstract illustrates these points well.

Because they characterize abstract ideas at a relatively high level of generality, courts have found identifying the idea behind a particular patent claim to be relatively straightforward in practice. Including multiple examples of these ideas in the guidance will provide valuable instruction for examiners. As one court succinctly explained, “[a]bstract ideas lend themselves to identification rather than definition.” Oplus Techs. Ltd. v. Sears Holding Corp., No. 12-cv-5707, 2013 WL 1003632, at *14 (C.D. Cal. Mar. 4, 2013). Abstract ideas identified by the Federal Circuit include:


- “generating tasks based on rules to be completed upon the occurrence of an event,” Accenture Global Servs., GmbH v. Guidewire Software, Inc., 728 F.3d 1336, 1344 (Fed. Cir. 2013) (alteration omitted);

- “categorical data storage,” Cyberfone Sys., LLC v. CNN Interactive Grp., Inc., 558 F. App’x 988, 992 (Fed. Cir. 2013);

- “managing a stable value protected life insurance policy,” Bancorp Servs., LLC v. Sun Life Assurance Co. of Can. (U.S.), 687 F.3d 1266, 1280 (2012);
• “processing information through a clearinghouse,” Dealertrack, Inc. v. Huber, 674 F.3d 1315, 1333 (Fed. Cir. 2012);

• “aggregating property, making it subject to an agreement, and then issuing ownership interests to multiple parties,” Fort Props., Inc. v. Am. Master Lease LLC, 671 F.3d 1317, 1322 (Fed. Cir. 2012);

• “idea that advertising can be used as a form of currency,” Ultramercial, LLC v. Hulu, LLC (Ultramercial I), 657 F.3d 1323, 1328 (Fed. Cir. 2011), vacated, 132 S. Ct. 2431 (2012);

• “credit card fraud detection,” CyberSource Corp. v. Retail Decisions, Inc., 654 F.3d 1366, 1373 (Fed. Cir. 2011);

• “mandatory arbitration resolution,” In re Comiskey, 554 F.3d 967, 981 (Fed. Cir. 2009);

• “determining the optimal combination of bids” at an auction, In re Schrader, 22 F.3d 290, 293 (Fed. Cir. 1994).

Recent district court decisions also provide valuable examples:

• “breakdown and organization” of “entered data according to some criteria” and “the transmission of information derived from that entered data to a computer user,” Intellectual Ventures I LLC v. Capital One Fin. Corp., No. 13-cv-00740, 2014 WL 1513273, at *3 (E.D. Va. Apr. 16, 2014);

• the idea of a “conditional action,” i.e., “the basic concept of conditioning one action on the existence of another action or circumstance,” UbiComm, LLC v. Zappos IP, Inc., No. 13-cv-1029, 2013 WL 6019203, at *3 (D. Del. Nov. 13, 2013);


• “process of underwriting commercial transactions by a third party to guarantee performance,” buySAFE, Inc. v. Google Inc., 964 F. Supp. 2d 331, 337 (D. Del. 2013);


• “basic idea that information can be extracted from a document and adapted to fill an application format,” Glory Licensing LLC v. Toys R Us, Inc., No. 09-cv-4252, 2011 WL 1870591, at *4 n.9 (D.N.J. May 16, 2011).
Decisions of the Patent Trials and Appeals Board similarly have identified the abstract idea behind claims:

- “creating a technical delivery framework to manage information technology systems,” *Ex Parte Benny*, Appeal No. 2009-1260 2010 WL 2157835, at *1 (B.P.A.I. May 28, 2010);


**PART II: Alice Step Two: Claims Directed Toward Abstract Ideas Must Contain Meaningful Technological Limitations.**

The Preliminary Guidance correctly states that, if a claim is identified as directed to an abstract idea in step one, then in step two, examiners should “determine whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to significantly more than the abstract idea itself.” Preliminary Guidance at 3 (emphasis in original).

**A. The guidance should instruct examiners that limitations in claims that recite implementation of abstract ideas on generic computer components must involve an “inventive concept” to satisfy step two and provide illustrative examples.**

As Alice confirmed, Mayo governs the patent eligibility of all inventions, including computer-implemented ones. Both cases require that claims directed to non-patentable subject matter also set forth an “inventive concept” to satisfy Section 101 to ensure that the claim does not preempt all uses of the abstract idea. *Alice Corp.*, 134 S. Ct. at 2355; *Mayo*, 132 S. Ct. at 1294. In the software context, this test signifies that the recitation of conventional or non-inventive steps of implementing an abstract idea with a computer will not satisfy Section 101.
As the Supreme Court found in Alice, generic computer implementation even of detailed steps of financial intermediation is insufficient to confer patentability if “the function performed by the computer at each step of the process is ‘[p]urely conventional.’” Id. at 2359 (quoting Mayo, 132 S. Ct. at 1298). “Using a computer to create and maintain ‘shadow’ accounts amounts to electronic recordkeeping—one of the most basic functions of a computer,” and “[t]he same is true with respect to the use of a computer to obtain data, adjust account balances, and issue automated instructions.” Id. Because those steps did not add anything meaningful or inventive to the abstract idea of financial intermediation, they did not confer patent eligibility.

The Supreme Court’s disposition of cases after Alice has provided further confirmation of the need for a specific and inventive computer implementation. Petitions in three software-related cases were pending before the Supreme Court when it decided Alice. In one case, the Supreme Court granted the petition, vacated, and remanded (“GVR”) for reconsideration in light of Alice. Ultramercial, Inc. v. Hulu, LLC (Ultramerical II), 722 F.3d 1335, 1350 (Fed. Cir. 2013), vacated, 134 S. Ct. 2870 (2014). In two other cases, where the Federal Circuit had invalidated the asserted claims under Section 101, the Supreme Court denied the petitions. Accenture Global Servs., GmbH v. Guidewire Software, Inc., 728 F.3d 1336 (Fed. Cir. 2013), cert. denied, 134 S. Ct. 2871 (2014); Bancorp Servs., LLC v. Sun Life Assurance Co. of Can. (U.S.), 687 F.3d 1266, 1280 (2012), cert. denied, 134 S. Ct. 2870 (2014). Because the standard for a GVR is “liberal,” Lawrence ex rel. Lawrence v. Chater, 516 U.S. 163, 167-68 (1996) (per curiam), the Court’s denial of certiorari as an alternative to a GVR in Accenture and Bancorp (in which claims were invalidated), but not in Ultramercial (in which claims were upheld), provides important confirmation of Alice’s import and the holdings in Accenture and Bancorp. These two
cases provide illustrative examples of the type of computer-implementation limitations that do not satisfy the “inventive concept” requirement of step two.

In Accenture, the patent claimed “generating tasks based on rules to be completed upon the occurrence of an event,” 728 F.3d at 1344 (alteration omitted); Bancorp involved a patent for “managing a stable value protected life insurance policy,” 687 F.3d at 1280. The Accenture patent narrowed the abstract idea “through its recitation of a combination of computer components including an insurance transaction database, a task library database, a client component, and a server component, which includes an event processor, a task engine, and a task assistant.” 728 F.3d at 1344. In Bancorp, “[t]he asserted claims require determining values . . . and then ‘storing,’ ‘removing,’ and/or ‘accumulating’ some of those values.” 687 F.3d at 1279-80. But all of these claims were patent-ineligible because they did not recite a specific, inventive way of implementing the abstract idea with a computer. Accenture, 728 F.3d at 1345 (“detailed software implementation guidelines” were not present in the claims); see also Alice Corp., 134 S. Ct. at 2360 (“what petitioner characterizes as specific hardware . . . is purely functional . . . ”).¹

¹ In this respect, Section 101’s prohibition on abstract claims overlaps with the longstanding prohibition on purely functional claims. It is well settled that claims purporting to cover “the result or function of a machine,” instead of a specific way to accomplish that result, are invalid because they would “extend the monopoly beyond the invention,” i.e., beyond the specific way (if any) the patent applicant invented for achieving the result. Holland Furniture Co. v. Perkins Glue Co., 277 U.S. 245, 257, 258 (1928); accord Halliburton Oil Well Cementing Co. v. Walker, 329 U.S. 1, 9 (1946); General Elec. Co. v. Wabash Appliance Corp., 304 U.S. 364, 371 (1938); see also CLS Bank Int’l v. Alice Corp. Pty. Ltd., 717 F.3d 1269, 1286-88 (Fed. Cir. 2013) (plurality op.), aff’d, 134 S. Ct. 2347 (2014). Step two, in other words, demands “significantly more” than functional claiming.
B. The guidance should instruct examiners that in claims directed to an abstract idea implemented in a generic computer, limitations must be technological to satisfy step two, and that specificity in non-technological limitations, such as those directed to business methods, is insufficient.

As the cases reflect, the requisite inventive aspect of a claim must be technological; merely describing an abstract idea in greater detail or adding context is not sufficient to satisfy step two. *Alice* invalidated claims because they did not “purport to improve the functioning of the computer itself” or “effect an improvement in any other technology or technical field,” even though the patent claims recited particular steps of financial intermediation with a fair amount of specificity. 134 S. Ct. at 2359.

Likewise, *Bilski* invalidated patent claims that recited a specific series of steps for hedging risk: initiating a series of financial transactions between providers and consumers of a commodity; identifying market participants that have a counter-risk for the same commodity; and initiating a series of transactions between those market participants and the commodity provider. 130 S. Ct. at 3223-24. Importantly, many of the invalidated claims included additional limitations involving energy markets or applied statistical techniques, but these non-technological limitations also were insufficient to save the claims. *Id.* Thus, the cases teach and the guidance should instruct that details of an economic practice, business method or financial arrangements do not satisfy step two.

Recent Federal Circuit cases are in accord. In *Accenture*, the court rejected arguments that a claim directed to the abstract idea of “generating tasks based on rules to be completed upon the occurrence of an event,” could be transformed into patentable subject matter by multiple limitations restricting its use to the business environment of insurance processing

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2 This focus on technological advancement is rooted in the Constitution, which authorizes the issuance of patents only “[t]o promote the Progress of Science and useful Arts.” U.S. Const. art. I, § 8.
decisions based on client communications. 728 F.3d at 1344-45 (alteration omitted). The court also noted that the detailed software implementation guidelines described in the specification that might have described the technical aspects of how the computer components operated, were not included in the claims, and therefore, could not influence the eligibility determination. Id. The patent in Bancorp recited managing life insurance policies through multiple steps of calculating values and fees, but these financial limitations also were irrelevant to the Section 101 analysis. Instead, the court looked for and failed to find technical elements limiting the claim beyond basic computer functions. Bancorp, 687 F.3d at 1279-80 (explaining that a patent is subject-matter eligible if it “plainly represent[s] improvements to computer technologies in the marketplace”).

In instructing examiners how to identifying technological limitations, the guidance should look to the definition of “technological invention” in regulations governing the covered business method (“CBM”) review program of the American Invents Act. See America Invents Act § 18(d)(1), Pub. L. No. 112-29, 125 Stat. 284, 331 (2011) (excluding patents covering a “technological invention” from review). The PTO’s CBM regulations define a “technological invention” as one that “solves a technical problem using a technical solution,” and that definition is helpful here. 37 C.F.R. § 42.301(b).

C. **The guidance should emphasize that requisite limitations must clearly be found in the claims.**

The focus of Section 101, as with all patentability doctrines, is the scope of the patent claims themselves, not any more detailed disclosures in the specification. Alice Corp., 134 S. Ct. at 2355. Thus, it is generally irrelevant whether the patent’s specification describes inventive technological limitations not incorporated into the claims. The question is whether each claim contains such limitations and thereby restricts itself to patent-eligible subject matter. E.g.,
Accenture, 728 F.3d at 1345. That is important because it has become common for software patents, even those that arguably disclose technological improvements, to claim in overbroad, functional language that does not limit the scope of the exclusive right to any disclosed technological improvements.

Indeed, patentees opposing Section 101 motions often argue that their inventions include “significantly more” than an abstract idea by pointing to disclosures in the specification. For instance, in Accenture, one of the asserted patents included “over one hundred columns of text in the specification disclosing how to create the computer software and system.” Brief of Plaintiffs-Appellants at 31, Accenture, 728 F.3d 1336 (Oct. 12, 2011), 2011 WL 5186393. But as the Federal Circuit noted, “the important inquiry for a § 101 analysis is to look to the claim.” Accenture, 728 F.3d at 1345. The limitations present in the claim itself involved “a database of tasks, a means to allow a client to access those tasks, and a set of rules that are applied to that task on a given event.” Id. But that was all. Thus, the “very detailed software implementation guidelines” in the specification could not, without being incorporated into the claim, alter the Section 101 analysis.

On the other side of the coin, the dissenting Federal Circuit judges in Alice found it important that the asserted claims cover computer equipment “specifically programmed to solve a complex problem.” CLS Bank Int’l v. Alice Corp. Pty. Ltd., 717 F.3d 1269, 1307 (Fed. Cir. 2013) (Rader, C.J., concurring in part and dissenting in part), aff’d, 134 S. Ct. 2347 (2014); see also id. at 1307-09 (“the specification explains implementation of the recited special purpose computer system”); Ultramercial II, 722 F.3d at 1350. As confirmed by the Supreme Court’s unanimous affirmance of the plurality opinion in that case, however, the dissenting judges had it exactly backwards: even if such programming might constitute a sufficient limitation, its
absence from the claims only underscores the claims’ infirmity. The PTO’s guidance should emphasize that, just like any other limitation, a computer-related limitation could make a claim eligible for patenting only if it added a significant, inventive aspect to an otherwise abstract idea and were included in (thereby limiting) the claim.

D. The guidance should instruct examiners to reject claims that do not clearly contain inventive, technological limitations, or to create a clear record of claim interpretation by indicating where those limitations can be found in a claim.

In some circumstances, the meaning of claim terms and whether they incorporate inventive, technological limitations will not be clear. A rejection for indefiniteness under Section 112 may be appropriate in these circumstances, but the guidance should also instruct examiners conducting an analysis under Alice step two to reject such claims under Section 101.

In the absence of clear indication from applicants on the meaning of claim terms, examiners will be left guessing and hunting in the specification to interpret claim limitations that might pass the Alice test. A rejection in this situation would require an applicant to identify the requisite technological advance and where it can be found in the claims, making an examiner’s task more manageable and providing a clearer examination record. It is also fair to applicants, who can overcome the rejection by amending claims to incorporate the requisite limitations, clarifying the meaning of claim terms or explaining why an existing limitation is inventive and not conventional. See, e.g., MPEP § 2173.02 (“the patent drafter is in the best position to resolve the ambiguity in the patent claims, and it is highly desirable that patent examiners demand that applicants do so in appropriate circumstances so that the patent can be amended during prosecution rather than attempting to resolve the ambiguity in litigation.”).