United States Court of Appeals for the Federal Circuit

ULTRAMERCIAL, INC., AND ULTRAMERCIAL, LLC, Plaintiffs-Appellants,

v.

HULU, LLC, Defendant,

AND

WILDTANGENT, INC.,

 $Defendant \hbox{-} Appellee.$

2010-1544

Appeal from the United States District Court for the Central District of California in No. 09-CV-6918, Judge R. Gary Klausner.

Decided: June 21, 2013

LAWRENCE M. HADLEY, Hennigan, Bennett & Dorman LLP, of Los Angeles, California, argued for plaintiffs-appellants. With him on the brief were HAZIM ANSARI and MIEKE K. MALMBERG.

GREGORY G. GARRE, Latham & Watkins, LLP, of Washington, DC, argued for defendant-appellee. On the

brief were RICHARD G. FRENKEL and LISA K. NGUYEN, of Palo Alto, California. Of counsel were RICHARD P. BRESS, GABRIEL BELL and KATHERINE TWOMEY, of Washington, DC.

Before RADER, *Chief Judge*, LOURIE, and O'MALLEY, *Circuit Judges*.

Opinion for the court filed by Chief Judge RADER.

Concurring opinion filed by Circuit Judge LOURIE.

RADER, Chief Judge.

The United States District Court for the Central District of California dismissed this patent suit, filed by Ultramercial, LLC and Ultramercial, Inc. (collectively, "Ultramercial"), by holding that U.S. Patent No. 7,346,545 ("the '545 patent") does not claim patent-eligible subject matter. In an earlier decision, later vacated by the United States Supreme Court, this court reversed the district Ultramercial, LLC v. court's holding and remanded. Hulu, LLC, 657 F.3d 1325 (Fed. Cir. 2011), vacated sub nom. WildTangent, Inc. v. Ultramercial, LLC, 132 S.Ct. 2431 (2012). Because this court again holds that the district court erred in holding that the subject matter of the '545 patent is not a "process" within the language and meaning of 35 U.S.C. § 101, this court again reverses and remands.

T.

The '545 patent claims a method for distributing copyrighted products (e.g., songs, movies, books) over the Internet where the consumer receives a copyrighted product for free in exchange for viewing an advertisement, and the advertiser pays for the copyrighted content. Claim 1 of the '545 patent reads:

A method for distribution of products over the Internet via a facilitator, said method comprising the steps of:

a first step of receiving, from a content provider, media products that are covered by intellectual property rights protection and are available for purchase, wherein each said media product being comprised of at least one of text data, music data, and video data;

a second step of selecting a sponsor message to be associated with the media product, said sponsor message being selected from a plurality of sponsor messages, said second step including accessing an activity log to verify that the total number of times which the sponsor message has been previously presented is less than the number of transaction cycles contracted by the sponsor of the sponsor message;

a third step of providing the media product for sale at an Internet website;

a fourth step of restricting general public access to said media product;

a fifth step of offering to a consumer access to the media product without charge to the consumer on the precondition that the consumer views the sponsor message;

a sixth step of receiving from the consumer a request to view the sponsor message, wherein the consumer submits said request in response to being offered access to the media product; a seventh step of, in response to receiving the request from the consumer, facilitating the display of a sponsor message to the consumer;

an eighth step of, if the sponsor message is not an interactive message, allowing said consumer access to said media product after said step of facilitating the display of said sponsor message;

a ninth step of, if the sponsor message is an interactive message, presenting at least one query to the consumer and allowing said consumer access to said media product after receiving a response to said at least one query;

a tenth step of recording the transaction event to the activity log, said tenth step including updating the total number of times the sponsor message has been presented; and

an eleventh step of receiving payment from the sponsor of the sponsor message displayed.

'545 patent col. 8, ll. 5-48.

Ultramercial sued Hulu, LLC ("Hulu"), YouTube, LLC ("YouTube"), and WildTangent, Inc. ("WildTangent"), alleging infringement of the '545 patent. Hulu and YouTube have been dismissed from the case. WildTangent moved to dismiss for failure to state a claim, arguing that the '545 patent did not claim patent-eligible subject matter. The district court granted WildTangent's preanswer motion to dismiss under Rule 12(b)(6). Ultramercial appeals. This court has jurisdiction under 28 U.S.C. § 1295(a)(1).

This court reviews a district court's dismissal for failure to state a claim under the law of the regional circuit. Juniper Networks, Inc. v. Shipley, 643 F.3d 1346, 1350 (Fed. Cir. 2011) (citation omitted). The Ninth Circuit reviews de novo challenges to a dismissal for failure to state a claim under Fed. R. Civ. P. 12(b)(6). Livid Holdings Ltd. v. Salomon Smith Barney, Inc., 403 F.3d 1050, 1055 (9th Cir. 2005). This court also reviews the ultimate determination regarding patent-eligible subject matter under 35 U.S.C. § 101 without deference. In re Ferguson, 558 F.3d 1359, 1363 (Fed. Cir. 2009).

II.

The district court dismissed Ultramercial's claims for failure to claim statutory subject matter without formally construing the claims and, further, without requiring defendants to file answers. This raises several preliminary issues.

First, it will be rare that a patent infringement suit can be dismissed at the pleading stage for lack of patentable subject matter. This is so because every issued patent is presumed to have been issued properly, absent clear and convincing evidence to the contrary. See, e.g., CLS Bank Int'l v. Alice Corp., _ F.3d _, 2013 WL 1920941, *33 (Fed. Cir. May 10, 2013) (Chief Judge Rader, and Judges Linn, Moore, and O'Malley, concluding that "any attack on an issued patent based on a challenge to the eligibility of the subject matter must be proven by clear and convincing evidence," and Judges Lourie, Dyk, Prost, Reyna, and Wallach, concluding that a statutory presumption of validity applies when § 101 is raised as a basis for invalidity in district court proceedings.). Further, if Rule 12(b)(6) is used to assert an affirmative defense, dismissal is appropriate only if the well-pleaded factual allegations in the complaint, construed in the light most favorable to the plaintiff, suffice to establish the defense. See Bell Atlantic Corp. v. Twombly, 550 U.S. 544, 555 (2007); Jones v. Bock, 549 U.S. 199, 215 (2007). Thus, the *only* plausible reading of the patent must be that there is clear and convincing evidence of ineligibility. For those reasons, Rule 12(b)(6) dismissal for lack of eligible subject matter will be the exception, not the rule.

Second, as is shown more fully below, the analysis under § 101, while ultimately a legal determination, is rife with underlying factual issues. For example, while members of this court have used varying formulations for the precise test, there is no doubt the § 101 inquiry requires a search for limitations in the claims that narrow or tie the claims to specific applications of an otherwise abstract concept. *CLS Bank*, __ F.3d at __, 2013 WL 1920941 at *27-30 (meaningful limitations); *Id.* at *10 (opinion of Lourie, J.). Further, factual issues may underlie determining whether the patent embraces a scientific principle or abstract idea. *Id.* (opinion of Lourie, J.) ("The underlying notion is that a scientific principle . . . reveals a relationship that has always existed.") (quoting Parker v. Flook, 437 U.S. 584, 593 n.15 (1978)). If the question is whether "genuine human contribution" is required, and that requires "more than a trivial appendix to the underlying abstract idea," and were not at the time of filing "routine, well-understood, or conventional," factual inquiries likely abound. Id. at *11-12. Almost by definition, analyzing whether something was "conventional" or "routine" involves analyzing facts. Id. at *12. Likewise, any inquiry into the scope of preemption—how much of the field is "tied up" by the claim—by definition will involve historic facts: identifying the "field," the available alternatives, and preemptive impact of the claims in that The presence of factual issues coupled with the requirement for clear and convincing evidence normally will render dismissal under Rule 12(b)(6) improper.

Third, and in part because of the factual issues involved, claim construction normally will be required. This court has never set forth a bright line rule requiring

district courts to construe claims before determining subject matter eligibility. Indeed, because eligibility is a "coarse" gauge of the suitability of broad subject matter categories for patent protection, Research Corp. Techs., Inc. v. Microsoft Corp., 627 F.3d 859, 869 (Fed. Cir. 2010), claim construction may not always be necessary for a § 101 analysis. See, e.g., Bilski v. Kappos, 130 S. Ct. 3218, 3231 (2010) (finding subject matter ineligible for patent protection without claim construction); CLS Bank, __ F.3d __, 2013 WL 1920941 (court decided eligibility of subject matter without formal claim construction).

On the other hand, if there are factual disputes, claim construction should be required. The procedural posture of the case may indicate whether claim construction is required. This case involves Rule 12(b)(6), which requires courts to accept the well-pleaded factual allegations as true and to require the accused infringer to establish that the only plausible reading of the claims is that, by clear and convincing evidence, they cover ineligible subject matter. It may also be feasible for the district court to choose to construe the claims in accordance with this court's precedent, or to adopt the construction proffered by the patentee. In either case, it cannot decide factual questions at this stage. At summary judgment, the district court may choose to construe the claims in accordance with this court's precedent, or if not it may choose to give a construction most favorable to the patentee, and to apply the usual rules pertaining to summary judgment from there, and still require clear and convincing evidence of ineligible subject matter.

Of course, even if not required, on many occasions a definition of the invention by claim construction can clarify the basic character of the subject matter of the invention. Thus, claim meaning may clarify the actual subject matter at stake in the invention and can enlighten, or even answer, questions about subject matter abstractness. In this procedural posture, however, the

subject matter at stake and its eligibility does not require formal claim construction.

Finally, fourth, the question of eligible subject matter must be determined on a claim-by-claim basis. Construing every asserted claim and then conducting a § 101 analysis may not be a wise use of judicial resources.

With these thoughts in mind, the court turns to the question of whether the court correctly dismissed the suit under § 101.

III.

A.

The statute controls the inquiry into patentable subject matter. 35 U.S.C. § 101 sets forth the categories of subject matter that are eligible for patent protection: "[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, subject to the conditions and requirements of this title." (Emphasis added). Underscoring its breadth, § 101 both uses expansive categories and modifies them with the word "any." In Bilski, the Supreme Court emphasized that "[i]n choosing such expansive terms modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given wide scope." 130 S. Ct. at 3225 (quoting Diamond v. Chakrabarty, 447 U.S. 303, 308 (1980)).

The pertinent, expansive definition of "process" in § 100(b) confirms the statute's intended breadth. At first examination, the Act's definition of "process" to include a new use of a known machine seems superfluous. After all, if "any" process may be patented under § 101, § 100(b) seems wholly unnecessary. The amendment was necessary to avoid narrow judicial interpretations of "process" given to the pre-1952 statute. Specifically, the 1952 amendments added § 100(b) to ensure that doubts about

the scope of a "process" under the pre-1952 version of the patent statute would not be read into the new Act. P.J. Federico, Commentary on the New Patent Act, reprinted in 75 J. Pat. & Trademark Off. Soc'v 161, 177 (1993) ("Remarks have appeared in a few decisions and elsewhere that new uses are not patentable [I]f such remarks are interpreted to mean that a new use or application of an old machine . . . cannot result in anything patentable then such statements are not and have never been an accurate statement of the law."); Hearing Before Subcomm. No. 3 of the Comm. on the Judiciary, at 37 (1951) (Federico testifying that the "definition of 'process' has been added...to clarify the present law as to certain types of methods as to which some doubts have been expressed "); S. Rep. No. 82-1979, at 17 (1952) (Explaining that the definition clarified that "processes or methods which involve merely the new use of a known process... are processes or methods under the statute and may be patented provided the conditions of patentability are satisfied."). Thus, changes were made to the 1952 Act to broaden eligible subject matter and eliminate doubt caused by narrow interpretations given to the prior Moreover, not only did Congress expand the definition of "process" in 1952, Title 35 does not list a single ineligible category. At a time when Congress considered § 101, it broadened the statute and certainly did not place any specific limits on it.

The limited role of § 101 even in patentability (the patentee did not argue that § 101 is not a defense to infringement) is confirmed by other aspects of the Patent Act. As § 101 itself expresses, subject matter eligibility is merely a threshold check; patentability of a claim ultimately depends on "the conditions and requirements of this title," such as novelty, non-obviousness, and adequate disclosure. 35 U.S.C. § 101; see Bilski, 130 S. Ct. at 3225 (Characterizing § 101 as a "threshold test"); Classen Immunotherapies, Inc. v. Biogen IDEC, 659 F.3d

1057,1064 (Fed. Cir. 2011) (Pointing out the difference between "the threshold inquiry of patent-eligibility, and the substantive conditions of patentability"). By directing attention to the substantive criteria for patentability, Congress made it clear that the categories of patenteligible subject matter are no more than a "coarse eligibility filter." Research Corp., 627 F.3d at 869. In other words, Congress made it clear that the expansive categories—process, machine, article of manufacture, and composition of matter—are not substitutes for the substantive patentability requirements set forth in §§ 102, 103, and 112 and invoked expressly by § 101 itself. After all, the purpose of the Patent Act is to encourage innovation, and the use of broadly inclusive categories of statutory subject matter ensures that "ingenuity . . . receive[s] a liberal encouragement." Chakrabarty, 447 U.S. at 308. The plain language of the statute provides that any new, non-obvious, and fully disclosed technical advance is eligible for protection.

В.

The Supreme Court has on occasion recognized narrow judicial exceptions to the 1952 Act's deliberately broadened eligibility provisions. In line with the broadly permissive nature of § 101's subject matter eligibility principles and the structure of the Patent Act, case law has recognized only three narrow categories of subject matter outside the eligibility bounds of § 101—laws of nature, physical phenomena, and abstract ideas. *Bilski*, 130 S. Ct. at 3225. The Court's motivation for recognizing exceptions to this broad statutory grant was its desire to prevent the "monopolization" of the "basic tools of scientific and technological work," which "might tend to impede innovation more than it would tend to promote it." Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1293 (2012) ("Prometheus") (internal quotation marks omitted).

Though recognizing these exceptions, the Court has also recognized that these implied exceptions are in obvious tension with the plain language of the statute, its history, and its purpose. See Chakrabarty, 447 U.S. at 308 ("In choosing such expansive terms as 'manufacture' and 'composition of matter,' modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given wide scope."); id. at 315 ("Broad general language is not necessarily ambiguous when congressional objectives require broad terms."). As the Supreme Court has made clear, too broad an interpretation of these exclusions from the grant in § 101 "could eviscerate patent law." Prometheus, 132 S. Ct. at 1293; cf. Bilski, 130 S. Ct. at 3226 ("This Court has not indicated that the existence of these well-established exceptions gives the Judiciary carte blanche to impose other limitations that are inconsistent with the text and the statute's purpose and design.").

Thus, this court must not read § 101 so restrictively as to exclude "unanticipated inventions" because the most beneficial inventions are "often unforeseeable." See Chakrabarty, 447 U.S. at 316; see also J.E.M. Ag Supply, 534 U.S. at 135 (describing § 101 as "a dynamic provision designed to encompass new and unforeseen inventions."). Broad inclusivity is the Congressional goal of § 101, not a flaw.

To sum up, because eligibility requires assessing judicially recognized exceptions against a broad and deliberately expanded statutory grant, one of the principles that must guide our inquiry is these exceptions should apply narrowly. Indeed, the Supreme Court has cautioned that, to avoid improper restraints on statutory language, acknowledged exceptions thereto must be rare.

C.

In the eligibility analysis as well, the presumption of proper issuance applies to a granted patent. As a practi-

cal matter, because judicially acknowledged exceptions could eviscerate the statute, application of this presumption and its attendant evidentiary burden is consistent with the Supreme Court's admonition to cabin exceptions to § 101. Further, applying the presumption is consistent with patent office practice. Before issuing a patent, the Patent Office rejects claims if they are drawn to ineligible subject matter, just as it rejects claims if not compliant with §§ 102, 103, or 112. With one exception, the Supreme Court's decisions since 1952 have addressed the propriety of those decisions. Thus, when a patent issues, it does so after the Patent Office assesses and endorses its eligibility under § 101, just as it assesses and endorses its patentability under the other provisions of Title 35. See Microsoft Corp. v. i4i Ltd. P'ship, 131 S. Ct. 2238, 2242, (2011) ("Congress has set forth the prerequisites for issuance of a patent, which the PTO must evaluate in the To receive patent protection a examination process. claimed invention must, among other things, fall within one of the express categories of patentable subject matter, § 101, and be novel, § 102, and nonobvious, § 103.").

In sum, the high level of proof applies to eligibility as it does to the separate patentability determinations. Accordingly, any attack on an issued patent based on a challenge to the eligibility of the subject matter must be proven by clear and convincing evidence. *Cf. Microsoft*, 31 S. Ct. at 2242 ("We consider whether § 282 requires an invalidity defense to be proved by clear and convincing evidence. We hold that it does.").

IV.

A.

Defining "abstractness" has presented difficult problems, particularly for the § 101 "process" category. Clearly, a process need not use a computer, or some machine, in order to avoid "abstractness." In this regard, the Supreme Court recently examined the statute and found that the ordinary, contemporary, common meaning of "method" may include even methods of doing business. See Bilski, 130 S. Ct. at 3228. Accordingly, the Court refused to deem business methods ineligible for patent protection and cautioned against "read[ing] into the patent laws limitations and conditions which the legislature has not expressed." *Id.* at 3226 (quoting *Diamond v. Diehr*, 450 U.S. 175, 182 (1981)).

In an effort to grapple with this non-statutory "abstractness" exception to "processes," the dictionary pro-See Merriam-Webster's Collegiate vides some help. Dictionary 5 (11th ed. 2003) (defining abstract as "disassociated from any specific instance . . . expressing a quality apart from an object <the word poem is concrete, poetry is [abstract]>"). An abstract idea is one that has no reference to material objects or specific examples—i.e., it is not concrete. This court at one point set forth a machine-or-transformation test as the exclusive metric for determining the subject matter eligibility of processes. *In* re Bilski, 545 F.3d 943, 956 (Fed. Cir. 2008), aff'd on other grounds, Bilski, 130 S. Ct. 3218. The Supreme Court rejected this approach in Bilski, noting that the machineor-transformation test is simply "a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101" and is not "the sole test for deciding whether an invention is a patent-eligible 'process." 130 S. Ct. at 3227 (emphasis While machine-or-transformation logic served added). well as a tool to evaluate the subject matter of Industrial Age processes, that test has far less application to the inventions of the Information Age. See id. at 3227-28 ("[I]n deciding whether previously unforeseen inventions qualify as patentable 'processes,' it may not make sense to require courts to confine themselves to asking the questions posed by the machine-or-transformation test. § 101's terms suggest that new technologies may call for new inquiries."). Technology without anchors in physical structures and mechanical steps simply defy easy classification under the machine-or-transformation categories. As the Supreme Court suggests, mechanically applying that physical test "risk[s] obscuring the larger object of securing patents for valuable inventions without transgressing the public domain." *Id.* at 3227.

Members of both the Supreme Court and this court have recognized the difficulty of providing a precise formula or definition for the abstract concept of abstractness. See id. at 3236 (Stevens, J., concurring) ("The Court... [has] never provide[d] a satisfying account of what constitutes an unpatentable abstract idea."); Research Corp., 627 F.3d at 868. Because technology is everchanging and evolves in unforeseeable ways, this court gives substantial weight to the statutory reluctance to list any new, non-obvious, and fully disclosed subject matter as beyond the reach of Title 35.

В.

A claim can embrace an abstract idea and be patentable. See Prometheus, 132 S. Ct. at 1294 (explaining that the fact that a claim uses a basic tool does not mean it is not eligible for patenting). Instead, a claim is not patent eligible only if, instead of claiming an application of an abstract idea, the claim is instead to the abstract idea itself. The inquiry here is to determine on which side of the line the claim falls: does the claim cover only an abstract idea, or instead does the claim cover an application of an abstract idea? See Bilski, 130 S. Ct. at 3230 ("[W]hile an abstract idea, law of nature, or mathematical formula could not be patented, an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." (emphasis in original) (internal quotation marks omitted)); Gottschalk v. Benson, 409 U.S. 63, 67 (1972) ("He who discovers a hitherto unknown phenomenon of nature has no claim to a monopoly of it which the law recognizes. If there is to be invention from such a discovery, it must come from the *application* of the law of nature to a new and useful end." (emphasis added) (internal quotation marks omitted)); *Diehr*, 450 U.S. at 187 ("It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.")

In determining on which side of the line the claim falls, the court must focus on the claim as a whole. As the Court explained:

In determining the eligibility of respondents' claimed process for patent protection under § 101, their claims must be considered as a whole. It is inappropriate to dissect the claims into old and new elements and then to ignore the presence of the old elements in the analysis. This is particularly true in a process claim because a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made.

Diehr, 450 U.S. at 188 (emphasis added). The majority in Diehr rejected the minority's approach ignoring portions of the claims: "[i]n order for the dissent to reach its conclusion it is necessary for it to read out of respondents' patent application all the steps in the claimed process which it determined were not novel or 'inventive.' That is not the purpose of the § 101 inquiry" Id. at 193 n.15 (citations omitted); Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 345 (1961) ("[T]here is no legally recognizable or protected 'essential' element, 'gist' or 'heart' of the invention.").

The Court has long-recognized that any claim can be stripped down, simplified, generalized, or paraphrased to remove all of its concrete limitations, until at its core, something that could be characterized as an abstract idea

is revealed. A court cannot go hunting for abstractions by ignoring the concrete, palpable, tangible limitations of the invention the patentee actually claims.

Instead, the relevant inquiry is whether a claim, as a whole, includes meaningful limitations restricting it to an application, rather than merely an abstract idea. Prometheus, 132 S. Ct. at 1297 ("[D]o the patent claims add *enough* to their statements of the correlations to allow the processes they describe to qualify as patent-eligible processes that apply natural laws?"); see also Fort Props., Inc. v. Am. Master Lease LLC, 671 F.3d 1317, 1323 (Fed. Cir. 2012) ("[T]o impart patent-eligibility to an otherwise unpatentable process under the theory that the process is linked to a machine, the use of the machine must impose meaningful limits on the claim's scope." (internal quotation marks omitted)). For these reasons, a claim may be premised on an abstract idea and, indeed, the abstract idea may be of central importance to the invention—the question for patent eligibility is whether the claim contains limitations that meaningfully tie that abstract idea to an actual application of that idea through meaningful limitations.

This analysis is not easy, but potentially wrought with the risk of subjectivity and hindsight evaluations. It also, as noted at the outset, often entails factual inquiries inappropriate on a motion directed to the pleadings. Fortunately, the Supreme Court has provided some guideposts.

An old example may be the most informative. The claims in *O'Reilly v. Morse*, 56 U.S. (15 How.) 62 (1854), and a case described therein, illustrate the distinction between a patent ineligible abstract idea and a practical application of an idea. The "difficulty" in *Morse* arose with the claim in which *Morse*:

d[id] not propose to limit [him]self to the specific machinery or parts of machinery described in the ... specification and claims; the essence of [his] invention being the use of the motive power of the electric or galvanic current ... however developed for marking or printing intelligible characters, signs, or letters, at any distances

Id. at 112 (internal quotation marks omitted). In considering Morse's claim, the Supreme Court referred to an earlier English case that distinguished ineligible claims to a "principle" from claims "applying" that principle:

[I]t seems that the court at first doubted, whether it was a patent for anything more than the discovery that hot air would promote the ignition of fuel better than cold. And if this had been the construction, the court, it appears, would have held his patent to be void; because the discovery of a principle in natural philosophy or physical science, is not patentable.

But after much consideration, it was finally decided that this principle must be regarded as well known, and that the plaintiff had invented a mechanical mode of applying it to furnaces; and that his invention consisted in interposing a heated receptacle, between the blower and the furnace, and by this means heating the air after it left the blower, and before it was thrown into the fire. Whoever, therefore, used this method of throwing hot air into the furnace, used the process he had invented, and thereby infringed his patent, although the form of the receptacle or the mechanical arrangements for heating it, might be different from those described by the patentee.

Id. at 116. The claim in *Morse* itself was impermissible because it covered "an effect produced by the use of electro-magnetism, distinct from the process or machinery necessary to produce it." *The Telephone Cases*, 126 U.S. 1, 534 (1888) (quoting *Morse*, 56 U.S. (15 How.) at 120).

This was in contrast to a sustained claim that was limited to:

making use of the motive power of magnetism, when developed by the action of such current or currents, substantially as set forth in the . . . description, . . . as means of operating or giving motion to machinery, which may be used to imprint signals upon paper or other suitable material, or to produce sounds in any desired manner, for the purpose of telegraphic communication at any distances.

Id. (first ellipsis added, second ellipsis in original) (quoting Morse, 56 U.S. (15 How.) at 85). "The effect of [Morse] was, therefore, that the use of magnetism as a motive power, without regard to the particular process with which it was connected in the patent, could not be claimed, but that its use in that connection could." Benson, 409 U.S. at 68 (quoting The Telephone Cases, 126 U.S. at 534).

The concern underscoring *Morse*, which has become clearer through the Supreme Court's more recent precedents, is to deny patentability to an idea itself, rather than an application of that idea. The Court has provided some guidance on discerning when this should occur.

First, the Supreme Court has stated that a claim is not meaningfully limited if it merely describes an abstract idea or simply adds "apply it." See Prometheus, 132 S. Ct. at 1294, 1297. The broad claim in Morse provides a striking example of this. We also know that, if a claim covers all practical applications of an abstract idea, it is not meaningfully limited. See id. at 1301-02. For example, "[a]llowing petitioners to patent risk hedging would pre-empt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea." Bilski, 130 S. Ct. at 3231 (emphasis added). While this concept is frequently referred to as "pre-emption," it is

important to remember that all patents "pre-empt" some future innovation in the sense that they preclude others from commercializing the invention without the patentee's permission. Pre-emption is only a subject matter eligibility problem when a claim pre-empts all practical uses of an abstract idea. For example, the claims in *Benson* "purported to cover *any* use of the claimed method in a general-purpose digital computer of any type." 409 U.S. at 64 (emphasis added). The claims were not allowed precisely because they pre-empted essentially all uses of the idea:

It is conceded that one may not patent an idea. But in practical effect that would be the result if the formula for converting [binary-coded decimal] numerals to pure binary numerals were patented in this case. The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that . . . the patent would *wholly* pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself.

Id. at 71-72 (emphasis added). When the steps of the claim "must be taken in order to apply the [abstract idea] in question," the claim is essentially no different from saying apply the abstract idea. *Prometheus*, 132 S. Ct. at 1299-1300. It is not the breadth or narrowness of the abstract idea that is relevant, but whether the claim covers every practical application of that abstract idea.¹

The pre-emption analysis must also recognize that the Patent Act does not halt or impede academic research, without commercial ends, to test, confirm, or improve a patented invention. *See Sawin v. Guild*, 21 F. Cas. 554, 555 (C.C.D. Mass. 1813) (No. 12,391) (Story, J.) (infringement does not occur when the invention is used "for

As noted at the outset, whether a claim preempts "too much" will often require claim construction and factual inquiries.

And, the Supreme Court has stated that, even if a claim does not wholly pre-empt an abstract idea, it still will not be limited meaningfully if it contains only insignificant or token pre- or post-solution activity—such as identifying a relevant audience, a category of use, field of use, or technological environment. *See Prometheus*, 132 S. Ct. at 1297-98, 1300-01; *Bilski*, 130 S. Ct. at 3230-31; *Diehr*, 450 U.S. at 191-92 & n.14; *Parker v. Flook*, 437 U.S. 584, 595 n.18 (1978). Again, these may involve factual inquiries.

Finally, the Supreme Court has stated that a claim is not meaningfully limited if its purported limitations provide no real direction, cover all possible ways to achieve the provided result, or are overly-generalized. See Prometheus, 132 S. Ct. at 1300 ("[S]imply appending conventional steps, specified at a high level of generality, to laws of nature, natural phenomena, and abstract ideas cannot make those laws, phenomena, and ideas patentable."); Fort Props., 671 F.3d at 1323 ("Such a broad and general limitation does not impose meaningful limits on the claim's scope." (internal quotation marks omitted)). For example, in Prometheus, "the 'determining' step tells the doctor to determine the level of the relevant metabolites in the blood, through whatever process the doctor or the laboratory wishes to use." 132 S. Ct. at 1297. Diehr

the mere purpose of philosophical experiment, or to ascertain the verity and exactness of the specification"). Further, *Morse* shows that a claim is not "abstract" merely because it is broad, because the "hot air" claims were broad and covered many "mechanical arrangements" but yet found patent eligible.

explained that the application in *Flook* "did not purport to explain how these other variables were to be determined, nor did it purport to contain any disclosure relating to the chemical processes at work, the monitoring of process variables, or the means of setting off an alarm or adjusting an alarm system," and that "[a]ll that it provides is a formula for computing an updated alarm limit." *Diehr*, 450 U.S. at 186-87 (footnote omitted) (internal quotation marks omitted).

Just as the Supreme Court has indicated when a claim likely should not be deemed meaningfully limited, it has also given examples of meaningful limitations which likely remove claims from the scope of the Court's judicially created exceptions to § 101. Thus, a claim is meaningfully limited if it requires a particular implementing a process or a particular transformation of See Bilski, 130 S. Ct. at 3227 ("This Court's precedents establish that the machine-or-transformation test is a useful and important clue . . . for determining whether some claimed inventions are processes under § 101."); see also Prometheus, 132 S. Ct. at 1302-03; Diehr, 450 U.S. at 184, 192. A claim also will be limited meaningfully when, in addition to the abstract idea, the claim recites added limitations which are essential to the invention. In those instances, the added limitations do more than recite pre- or post-solution activity, they are central to the solution itself. And, in such circumstances, the abstract idea is not wholly pre-empted; it is only preempted when practiced in conjunction with the other necessary elements of the claimed invention. See Diehr, 450 U.S. at 187 ("[T]he respondents here do not seek to patent a mathematical formula. Instead, they seek patent protection for a process of curing synthetic rubber. Their process admittedly employs a well-known mathematical equation, but they do not seek to pre-empt the use of that equation. Rather, they seek only to foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process."); see also Prometheus, 132 S. Ct. at 1298-99 (discussing Diehr, 450 U.S. 175).

In specifying what the scope of the abstract idea exception to patent eligibility is, it is also important to specify what the analysis is not. Flook suggested that an abstract idea is to be "treated as though it were a familiar part of the prior art." 437 U.S. at 591-92. Prometheus used the language of "inventive concept" to describe the "other elements or a combination of elements . . . sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself" and explain that purported limitations must be more than "routine" or "conventional" to confer patent eligibility. 132 S. Ct. at 1294, 1298-99. While these inquiries do require an understanding of what existed in the ken of those skilled in the art during the relevant time frame, principles of patent eligibility must not be conflated with those of validity, however.

The Supreme Court repeatedly has cautioned against conflating the analysis of the conditions of patentability in the Patent Act with inquiries into patent eligibility. See Diehr, 450 U.S. at 190 ("The question therefore of whether a particular invention is novel is wholly apart from whether the invention falls into a category of statutory subject matter." (internal quotation marks omitted)); see also Prometheus, 132 S. Ct. at 1304 (recognizing that "to shift the patent-eligibility inquiry entirely to [§§ 102, 103, and 112 risks creating significantly greater legal uncertainty, while assuming that those sections can do work that they are not equipped to do"). Because a new combination of old steps is patentable, as is a new process using an old machine or composition, subject matter eligibility must exist even if it was obvious to use the old steps with the new machine or composition. Otherwise the eligibility analysis ignores the text of §§ 101 and 100(b), and reads § 103 out of the Patent Act.

In this regard, the Supreme Court's reference to "inventiveness" in *Prometheus* can be read as shorthand for its inquiry into whether implementing the abstract idea in the context of the claimed invention inherently requires the recited steps. Thus, in *Prometheus*, the Supreme Court recognized that the additional steps were those that anyone wanting to use the natural law would necessarily use. See Prometheus, 132 S. Ct. at 1298. If, to implement the abstract concept, one *must* perform the additional step, or the step is a routine and conventional aspect of the abstract idea, then the step merely separately restates an element of the abstract idea, and thus does not further limit the abstract concept to a practical application. Id. ("Anyone who wants to make use of these laws must first administer a thiopurine drug and measure the resulting metabolite concentrations, and so the combination amounts to nothing significantly more than an instruction to the doctor to apply the applicable laws when treating their patients.")

C.

There are also additional guideposts specific to computer-implemented inventions. When assessing computer implemented claims, while the mere reference to a general purpose computer will not save a method claim from being deemed too abstract to be patent eligible, the fact that a claim is limited by a tie to a computer is an important indication of patent eligibility. *See Bilski*, 130 S. Ct. at 3227. This tie to a machine moves it farther away from a claim to the abstract idea itself. Moreover, that same tie makes it less likely that the claims will pre-empt all practical applications of the idea.

This inquiry focuses on whether the claims tie the otherwise abstract idea to a *specific way* of doing something with a computer, or a *specific computer* for doing something; if so, they likely will be patent eligible. On the other hand, claims directed to *nothing more than the idea*

of doing that thing on a computer are likely to face larger problems. While no particular type of limitation is necessary, meaningful limitations may include the computer being part of the solution, being integral to the performance of the method, or containing an improvement in computer technology. See SiRF Tech., Inc. v. Int'l Trade Comm'n, 601 F.3d 1319, 1332-33 (Fed. Cir. 2010) (noting that "a machine," a GPS receiver, was "integral to each of the claims at issue" and "place[d] a meaningful limit on the scope of the claims"). A special purpose computer, i.e., a new machine, specially designed to implement a process may be sufficient. See Alappat, 33 F.3d at 1544 ("Although many, or arguably even all, of the means elements recited in claim 15 represent circuitry elements that perform mathematical calculations, which is essentially true of all digital electrical circuits, the claimed invention as a whole is directed to a combination of interrelated elements which combine to form a machine for converting discrete waveform data samples into anti-aliased pixel illumination intensity data to be displayed on a display means. This is not a disembodied mathematical concept which may be characterized as an 'abstract idea,' but rather a specific machine to produce a useful, concrete, and tangible result." (footnotes omitted)); see also id. at 1545 ("We have held that such programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.").

At bottom, with a claim tied to a computer in a specific way, such that the computer plays a meaningful role in the performance of the claimed invention, it is as a matter of fact not likely to pre-empt virtually all uses of an underlying abstract idea, leaving the invention patent eligible. "[I]nventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory

language and framework of the Patent Act." Research Corp., 627 F.3d at 869.

With this background, the court turns to the asserted claims here.

VI.

The district court did not construe the claims in accordance with this court's precedent. Instead, it held that there was no "reasonable construction" that would "bring the patent within patentable subject matter." A. 6. The district court erred in requiring the patentee to come forward with a construction that would show the claims That is presumed. In this procedural were eligible. posture, the district court should either have construed the claims in accordance with Markman, required the defendant to establish that the only plausible construction was one that, by clear and convincing evidence rendered the subject matter ineligible (with no factual inquiries), or adopted a construction most favorable to the patentee. For purposes of this appeal, this court adopts the latter approach. It may be that formal claim construction will still be required to determine the merits of eligibility.

The district court held the asserted claim to be ineligible because it is "abstract." In this procedural posture, the complaint and the patent must by themselves show clear and convincing evidence that the claim is not directed to an application of an abstract idea, but to a disembodied abstract idea itself. See Diehr, 450 U.S. at 187; Parker, 437 U.S. at 591; Gottschalk, 409 U.S. at 67. After all, unlike the Copyright Act which divides ideas from expression, the Patent Act covers and protects any new and useful technical advance, including applied ideas.

The claimed invention is a method for monetizing and distributing copyrighted products over the Internet. As a method, it easily satisfies § 100's definition of "process"

and thus falls within a § 101 category of patent-eligible subject matter. Thus, this court focuses on whether the claim is meaningfully limited to something less than an abstract idea that pre-empts use of an abstract concept.

The parties proceed on the assumption that the mere idea that advertising can be used as a form of currency is abstract, just as the vague, unapplied concept of hedging proved patent-ineligible in *Bilski*. However, the '545 patent does not simply claim the age-old idea that advertising can serve as currency. Instead, for the following reasons, the court holds that the district court erred in holding that the '545 patent does not claim a practical application of this concept.²

The '545 patent seeks to remedy problems with prior art banner advertising over the Internet, such as declining click-through rates, by introducing a method of product distribution that forces consumers to view and possibly even interact with advertisements before permitting access to the desired media product. '545 patent col. 2, Il.14-18. By its terms, the claimed invention purports

When assessing the abstract idea exception, the § 101 inquiry is a two-step one: first, whether the claim involves an intangible abstract idea; and if so, whether meaningful limitations in the claim make it clear that the claim is not to the abstract idea itself, but to a nonroutine and specific application of that idea. Because the parties here focus only on the second step, we do as well. We note, however, that it is arguable that we are not even dealing with an intangible abstraction in the first instance; the claims relate to things that people do, not to mere mental steps. Because the district court did not enter judgment on that ground and the parties do not brief it, we decline to address this alternative ground upon which this matter might be resolved.

to improve existing technology in the marketplace. By its terms, the claimed invention invokes computers and applications of computer technology.

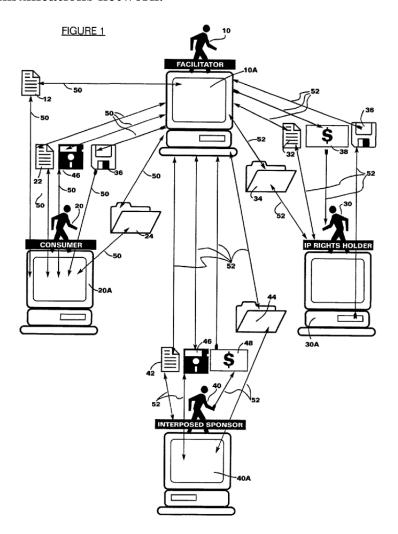
Specifically, the '545 patent claims a particular internet and computer-based method for monetizing copyrighted products, consisting of the following steps: (1) receiving media products from a copyright holder, (2) selecting an advertisement to be associated with each media product, (3) providing said media products for sale on an Internet website, (4) restricting general public access to the media products, (5) offering free access to said media products on the condition that the consumer view the advertising. (6) receiving a request from a consumer to view the advertising, (7) facilitating the display of advertising and any required interaction with the advertising, (8) allowing the consumer access to the associated media product after such display and interaction, if any, (9) recording this transaction in an activity log, and (10) receiving payment from the advertiser. '545 patent col. 8, ll. 5-48. This court does not need the record of a formal claim construction to see that many of these steps require intricate and complex computer programming.

Even at this general level, it wrenches meaning from the word to label the claimed invention "abstract." The claim does not cover the use of advertising as currency disassociated with any specific application of that activity. It was error for the district court to strip away these limitations and instead imagine some "core" of the invention. A. 6.

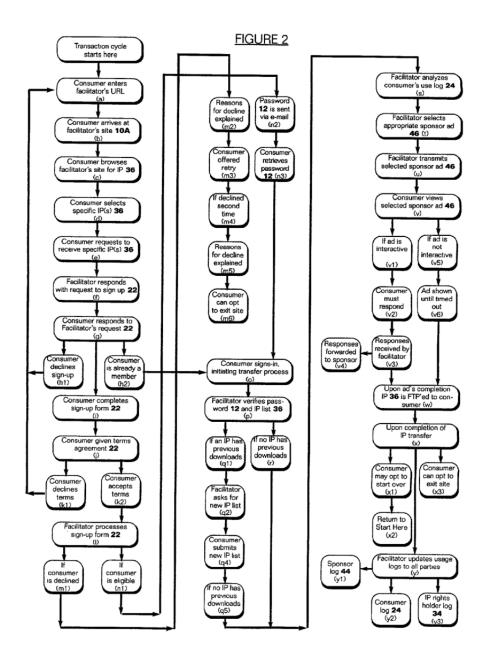
Further, and even without formal claim construction, it is clear that several steps plainly require that the method be performed through computers, on the internet, and in a cyber-market environment. One clear example is the third step, "providing said media products for sale on an Internet website." *Id.* col. 8, ll. 20-21. And, of course, if the products are offered for sale on the Internet, they

must be "restricted"—step four—by complex computer programming as well.

In addition, Figure 1, alone, demonstrates that the claim is not to some disembodied abstract idea but is instead a specific application of a method implemented by several computer systems, operating in tandem, over a communications network:



Almost all of the steps in this process, as explained in the flow chart of Figure 2, are tied to computer implementation:



Viewing the subject matter as a whole, the invention involves an extensive computer interface. Unlike *Morse*, the claims are not made without regard to a particular process. Likewise, it does not say "sell advertising using a computer," and so there is no risk of preempting all forms of advertising, let alone advertising on the Internet. Further, the record at this stage shows no evidence that the recited steps are all token pre- or post-solution steps. Finally, the claim appears far from over generalized, with eleven separate and specific steps with many limitations and sub-steps in each category. The district court improperly made a subjective evaluation that these limitations did not meaningfully limit the "abstract idea at the core" of the claims. A. 6.

Having said that, this court does not define the level of programming complexity required before a computer-implemented method can be patent-eligible. Nor does this court hold that use of an Internet website to practice such a method is either necessary or sufficient in every case to satisfy § 101. This court simply holds the claims in this case to be patent-eligible, in this posture, in part because of these factors.

In this context, this court examines as well the contention that the software programming necessary to facilitate the invention deserves no patent protection or amounts to abstract subject matter or, in the confusing terminology of machines and physical transformations, fails to satisfy the "particular machine" requirement. This court confronted that contention nearly two decades ago in *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994) (en banc). At that time, this court observed that "programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software." *Id.* at 1545. As computer scientists understand:

[T]he inventor can describe the invention in terms of a dedicated circuit or a process that emulates that circuit. Indeed, the line of demarcation between a dedicated circuit and a computer algorithm accomplishing the identical task is frequently blurred and is becoming increasingly so as the technology develops. In this field, a software process is often interchangeable with a hardware circuit.

Id. at 1583 (Rader, J., concurring). In other words, a programmed computer contains circuitry unique to that computer. That "new machine" could be claimed in terms of a complex array of hardware circuits, or more efficiently, in terms of the programming that facilitates a unique function. With the digital computer, considered by some the greatest invention of the twentieth century, as a vital invention, both this court and the Patent Office have long acknowledged that "improvements thereof" through interchangeable software or hardware enhancements deserve patent protection. Far from abstract, advances in computer technology—both hardware and software—drive innovation in every area of scientific and technical endeavor.

The court also notes that the claims in this case are not highly generalized. Instead, the ten specific steps in the claim limit any abstract concept within the scope of the invention. Further, common sense alone establishes that these steps are not inherent in the idea of monetizing advertising. There are myriad ways to accomplish that abstract concept that do not infringe these claims.

This court understands that the broadly claimed method in the '545 patent does not specify a particular mechanism for delivering media content to the consumer (i.e., FTP downloads, email, or real-time streaming). This breadth and lack of specificity does not render the claimed subject matter impermissibly abstract. Assuming the

patent provides sufficient disclosure to enable a person of ordinary skill in the art to practice the invention and to satisfy the written description requirement, the disclosure need not detail the particular instrumentalities for each step in the process.

That a process may be patentable, irrespective of the particular form of the instrumentalities used, cannot be disputed. If one of the steps of a process be that a certain substance is to be reduced to a powder, it may not be at all material what instrument or machinery is used to effect that object, whether a hammer, a pestle and mortar, or a mill.

Benson, 409 U.S. at 69-70 (quoting Cochrane v. Deener, 94 U.S. 780, 787-88 (1876)). Moreover, written description and enablement are conditions for patentability that Title 35 sets "wholly apart from whether the invention falls into a category of statutory subject matter." Diehr, 450 U.S. at 190 (quoting In re Bergy, 596 F.2d 952, 961 (C.C.P.A. 1979)). The "coarse eligibility filter" of § 101 is not the statutory tool to address concerns about vagueness, indefinite disclosure, or lack of enablement, as these infirmities are expressly addressed by § 112. See 35 U.S.C. § 112; see also Research Corp., 627 F.3d at 869 ("In § 112, the Patent Act provides powerful tools to weed out claims that may present a vague or indefinite disclosure of the invention.").

Finally, the '545 patent does not claim a mathematical algorithm, a series of purely mental steps, or any similarly abstract concept. It claims a particular method for collecting revenue from the distribution of media products over the Internet. In a recent case, this court discerned that an invention claimed an "unpatentable mental process." *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011). Unlike the claims in *CyberSource*, the claims here require, among

other things, controlled interaction with a consumer over an Internet website, something far removed from *purely* mental steps.

In sum, as a practical application of the general concept of advertising as currency and an improvement to prior art technology, the claimed invention is not "so manifestly abstract as to override the statutory language of section 101." *Research Corp.*, 627 F.3d at 869. Accordingly, this court reverses the district court's dismissal of Ultramercial's patent claims for lack of subject matter eligibility and remands for further proceedings. This decision does not opine at all on the patentability of the claimed invention under the substantive criteria set forth in §§ 102, 103, and 112.

REVERSED AND REMANDED

United States Court of Appeals for the Federal Circuit

ULTRAMERCIAL, INC., AND ULTRAMERCIAL, LLC, Plaintiffs-Appellants,

v.

HULU, LLC, Defendant,

AND

WILDTANGENT, INC., Defendant-Appellee.

2010-1544

Appeal from the United States District Court for the Central District of California in No. 09-CV-6918, Judge R. Gary Klausner.

LOURIE, Circuit Judge, concurring.

I concur in the result reached by the majority, but I write separately because I believe that we should concisely and faithfully follow the Supreme Court's most recent guidance regarding patent eligibility in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S.Ct. 1289 (2012), and should track the plurality opinion of five judges from this court in *CLS Bank International v. Alice Corp.*, __ F.3d __, 2013 WL 1920941, at *1–20 (Fed. Cir. May 10, 2013) (Lourie, Dyk, Prost, Reyna, & Wallach, JJ.,

plurality opinion). It is our obligation to attempt to follow the Supreme Court's guidance in *Mayo* rather than to set forth our own independent views, however valid we may consider them to be. Indeed, this appeal was specifically vacated by the Supreme Court and remanded for further consideration in light of *Mayo*. *WildTangent*, *Inc.* v. *Ultramercial*, *LLC*, 132 S.Ct. 2431 (2012).

The claims at issue in this appeal are method claims, not machine claims, and both *Mayo* and *CLS Bank* dealt squarely with the issue of patent eligibility of method claims. The plurality opinion in *CLS Bank* identified a two-step process, derived from *Mayo*, for analyzing patent eligibility under § 101. First, a court must identify "whether the claimed invention fits within one of the four statutory classes set out in § 101." *CLS Bank*, 2013 WL 1920941, at *9. Second, one must assess whether any of the judicial exceptions to subject-matter eligibility apply, including whether the claims are to patent-ineligible abstract ideas. *Id*.

In the case of abstractness, as discussed in *CLS Bank*, we must determine whether the claim poses "any risk of preempting an abstract idea." Id. To do so we must first "identify and define whatever fundamental concept appears wrapped up in the claim"; a claim construction may be helpful in this analysis. *Id.* Then, proceeding with the preemption analysis, the balance of the claim is evaluated to determine whether "additional substantive limitations . . . narrow, confine, or otherwise tie down the claim so that, in practical terms, it does not cover the full abstract idea itself." Id. at *10 (citing Mayo, 132 S.Ct. at 1300; Bilski v. Kappos, 130 S.Ct. 3218, 3231 (2010); Diamond v. Diehr, 450 U.S. 175, 187 (1981)). Following this procedure, we are then ready to evaluate the claims at issue in this case.

I agree with the majority that no formal claim construction is needed to interpret the claims at this stage.

See Majority Op. at 27. As the majority correctly notes, the '545 patent "claims a particular method for collecting revenue from the distribution of media products over the Internet" and, as a process, "falls within a category of patent-eligible subject matter." Majority Op. at 25–26. The abstract idea at the heart of the '545 patent, which the district court properly identified, is "us[ing] advertising as an exchange or currency." Ultramercial, LLC v. Hulu, LLC, No. CV 09-06918 RGK, 2010 WL 3360098, at *6 (C.D. Cal. Aug. 13, 2010). The '545 patent claims, however, require more than just that abstract idea as part of the claimed method.

The additional claim limitations reciting how that idea is implemented "narrow, confine, or otherwise tie down the claim so that, in practical terms, it does not cover the full abstract idea itself." CLS Bank, 2013 WL 1920941, at *10. While a computer or complex computer program, as discussed by the majority opinion, may be necessary to perform the method, it is not what the claim specifically requires and thus should not be the focus of the analysis. Likewise, although the number of claim limitations is also not an indication of patent-eligibility, unlike the method claims in CLS Bank, in my view, the added limitations in these claims represent significantly more than the underlying abstract idea of using advertising as an exchange or currency and, as a consequence, do not preempt the use of that idea in all fields. See CLS Bank, 2013 WL 1920941, at *15. Thus, under the CLS Bank plurality analysis, I agree with the majority that the district court erred in dismissing Ultramercial's claims for lack of subject matter eligibility under § 101 due to abstractness.