

**United States Court of Appeals
for the Federal Circuit**

INTERVAL LICENSING LLC,
Plaintiff-Appellant

v.

**AOL, INC., APPLE, INC., GOOGLE LLC, YAHOO!,
INC.,**
Defendants-Appellees

2016-2502, 2016-2505, 2016-2506, 2016-2507

Appeals from the United States District Court for the Western District of Washington in Nos. 2:13-cv-00263-MJP, 2:13-cv-00264-MJP, 2:13-cv-00265-MJP, 2:13-cv-00266-MJP, Judge Marsha J. Pechman, Senior Judge Barbara Jacobs Rothstein.

Decided: July 20, 2018

MICHAEL F. HEIM, Heim, Payne & Chorush, LLP, Houston, TX, argued for plaintiff-appellant. Also represented by ROBERT ALLAN BULLWINKEL, DOUGLAS R. WILSON; JUSTIN ADATTO NELSON, MAX LALON TRIBBLE, JR., Susman Godfrey LLP, Houston, TX.

DARYL JOSEFFER, King & Spalding LLP, Washington, DC, argued for all defendants-appellees. Defendant-

appellee Google LLC also represented by AMELIA GRACE YOWELL.

J. MICHAEL JAKES, Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, Washington, DC, for defendant-appellee AOL, Inc. Also represented by ROBERT L. BURNS, II, Reston, VA; CORTNEY SCOTT ALEXANDER, Kent & Risley, LLC, Alpharetta, GA.

DAVID ALBERTI, Feinberg Day Alberti & Thompson LLP, Menlo Park, CA, for defendant-appellee Apple, Inc. Also represented by MARC BELLOLI.

DEANNE MAYNARD, Morrison & Foerster LLP, Washington, DC, for defendant-appellee Yahoo!, Inc. Also represented by MATTHEW IAN KREEGER, San Francisco, CA.

Before TARANTO, PLAGER, and CHEN, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* CHEN.

Opinion concurring-in-part, dissenting-in-part filed by
Circuit Judge PLAGER.

CHEN, *Circuit Judge*.

In our previous decision in *Interval Licensing LLC v. AOL, Inc.*, we upheld the district court’s judgment invalidating claims 1–4 and 7–15 of U.S. Patent No. 6,788,314, and claims 4–8, 11, 34, and 35 of U.S. Patent No. 6,034,652 on indefiniteness grounds. 766 F.3d 1364, 1366 (Fed. Cir. 2014). As to four other asserted claims of the ’652 patent, claims 15–18, we vacated the judgment of non-infringement and remanded for further proceedings because the non-infringement judgment had been premised on an incorrect construction of the claim term “attention manager.” Claims 15–18 now return to us from the Western District of Washington after a determination

that they fail to recite patent-eligible subject matter under 35 U.S.C. § 101. *See Interval Licensing LLC v. AOL, Inc.*, 193 F. Supp. 3d 1184, 1190 (W.D. Wash. 2016).

We affirm. Claims 15–18 are directed to an abstract idea: the presentation of two sets of information, in a non-overlapping way, on a display screen. The claimed “attention manager,” broadly construed as any “system” for producing that result, is not limited to a means of locating space on the screen unused by a first set of displayed information and then displaying the second set of information in that space. The claim limitations for accessing, scheduling, and then displaying the second information set are conventional functions stated in general terms and do not further define *how* the attention manager segregates the display of two sets of data on a display screen. Considered as a whole, the claims fail under § 101’s abstract idea exception because they lack any arguable technical advance over conventional computer and network technology for performing the recited functions of acquiring and displaying information.

BACKGROUND

A. The ’652 Patent

The ’652 patent describes and claims the operation of an “attention manager [that] makes use of ‘unused capacity’” of a display device, by displaying content in that unused capacity. ’652 patent col. 2 ll. 7–8. Generally, the attention manager can use a display device’s “unused capacity” in two different situations: (1) it displays content when the display device is turned on but the user is not actively engaged with the display device; and (2) it displays content in an area of the display screen not used by already-displayed content with which the user is actively engaged. *Id.* col. 2 ll. 7–19. While the specification labels the first situation as the “screen saver embodiment” and the second situation as the “wallpaper embodiment,” we explained in our previous *Interval*

Licensing opinion that, for the “wallpaper embodiment,” neither the claims nor the specification contemplates integrating the content-to-be-displayed into the background display of the screen, as is the case with traditional computer screen wallpaper. *See Interval Licensing*, 766 F.3d at 1375. Rather, the ’652 patent describes simply displaying content in the “space in the display not used by the user’s primary interaction.” *Id.* (citing ’652 patent col. 3 ll. 25–31, col. 6 ll. 45–51). This broader understanding of the wallpaper embodiment—the display of a second set of data in an area that does not overlap with an already-displayed first set of data—is what Interval itself advanced in the prior appeal. *See id.*

Consistent with that understanding of the disclosed wallpaper embodiment, we also construed “attention manager” as “a system that displays images to a user either when the user is not engaged in a primary interaction or in an area of the display screen that is not used by the user’s primary activity.” 766 F.3d at 1376. The user’s “primary activity,” which does not cover the entire area of the display screen (thereby creating “unused capacity”), can relate to “any of a number of application programs (e.g., word processing programs, computer games, spreadsheets, etc.)”¹ ’652 patent col. 6 ll. 30–32; col. 8 ll. 23–28. Our function-based construction of “attention manager” of displaying two sets of data in a non-overlapping way

¹ As Interval Licensing’s counsel noted during oral argument, the ’652 patent states that “primary interaction” or “primary user interaction” “is to be construed broadly,” and “includes any operation of the computer (or other apparatus with which the user is engaging in an interaction),” thus encompassing any computer interaction other than interacting with the second data set supplied by the attention manager. Oral Arg. at 34:26–35:00 (citing ’652 patent col. 8 ll. 10–20).

essentially adopted Interval's proposed construction, except that we defined the area of the display screen for displaying the image as the display area "not used by the user's primary activity," as opposed to Interval's proposed "not substantially used by the user's primary activity." *Interval Licensing*, 766 F.3d at 1375–76.

The specification explains that the operation of the attention manager relies on acquiring content from a content provider which is used to produce "images" that are then displayed on "unused capacity" of the display device. *Id.* col. 6 l. 45–col. 7 l. 7. "Image" is defined broadly to include any "visual imagery (e.g., moving or still pictures, text, or numerical information)," and "audio imagery (i.e., sounds)." *Id.* col. 6 ll. 62–64. Furthermore, "[t]he kinds of content data that can be used with the attention manager are virtually limitless." *Id.* col. 7 ll. 26–35 (listing examples, such as advertisements, nature scenes, family pictures, stock ticker information, and news summaries). In similarly broad fashion, "display device" refers to "any device that presents sensory stimulus" which includes "computer video display devices, televisions and audio speakers." *Id.* col. 6 ll. 11–14.

According to the specification, the attention manager coordinates the display of this acquired content through a set of instructions that enable, *inter alia*, the following: (i) acquiring content from a content-providing information source, (ii) controlling the timing of the display of the acquired content, (iii) displaying the content, and (iv) acquiring an updated version of the previously-acquired content whenever the information source updates its content. *Id.* col. 4 ll. 26–59.

Representative claim 18 is directed to the implementation of an attention manager through the use of these instructions to acquire and then display content on the unused capacity of a display:

18. A computer readable medium, for use by a content display system, encoded with one or more computer programs for enabling acquisition of a set of content data and display of an image or images generated from the set of content data on a display device during operation of *an attention manager*, comprising:

[1] acquisition instructions for enabling acquisition of a set of content data from a specified information source;

[2] user interface installation instructions for enabling provision of a user interface that allows a person to request the set of content data from the specified information source;

[3] content data scheduling instructions for providing temporal constraints on the display of the image or images generated from the set of content data;

[4] display instructions for enabling display of the image or images generated from the set of content data;

[5] content data update instructions for enabling acquisition of an updated set of content data from an information source that corresponds to a previously acquired set of content data;

[6] operating instructions for beginning, managing and terminating the display on the display device of an image generated from a set of content data;

[7] content display system scheduling instructions for scheduling the display of the image or images on the display device;

[8] installation instructions for installing the operating instructions and content display system

scheduling instructions on the content display system; and

[9] audit instructions for monitoring usage of the content display system to selectively display an image or images generated from a set of content data.

Id. col. 33 l. 15–col. 34 l. 24 (emphasis and numbering added). Although claim 18 recites several instructions limitations, these “generic sets of instructions,” *id.* col. 16 l. 8, relate to one of two functions: (i) enabling the acquisition of content to be displayed; and (ii) enabling control over when to display the acquired content, for how long, and then displaying it.² See *id.* col. 4 l. 26–col. 5 l. 10; col. 16 ll. 1–16 (content acquisition instructions include [1] acquisition instructions, [2] user interface installation instructions, and [5] content data update instructions); col. 15 ll. 9–21, 41–42 (content control instructions include [3] content data scheduling instructions, [4] display instructions, [6] operating instructions, [7] content display system scheduling instructions, and [8] installation instructions).³

Moreover, the specification describes the claimed instructions as routine and conventional. “Each of the . . . instructions could be acquired from a content provider, or any one or all of the sets of instructions could be acquired from an application manager that provides generic sets of

² The [9] audit instructions are ancillary to the operation of the attention manager in that they merely store information about the “usage of the attention manager,” including the identity of the content displayed and when it was displayed. *Id.* col. 28 l. 29–col. 29 l. 14.

³ While the patent specification refers to limitations [6]–[8] as “application instructions,” by their terms, these instructions relate to controlling the display of content.

instructions” *Id.* col. 3 ll. 3–8. The [1] acquisition instructions and [5] content data update instructions are “generic sets of instructions.” *Id.* col. 16 ll. 7–9. The [2] user interface installation instructions are “conventional and readily available for use with the attention manager.” *Id.* col. 16 l. 15. The [3] content data scheduling instructions merely “provide temporal constraints on the display of particular sets of content data” and are “usually the same” and “generic.” *Id.* col. 15 ll. 61–67. Similarly, the specification describes the conventional and generic nature of the other claimed instructions. *See, e.g., id.* col. 15 ll. 53–56 (“[4] Display instructions that can be used with a particular display device are typically already developed by third parties (e.g., the maker of the display device) and are readily available.”), col. 15 ll. 9–11 ([6] operating instructions relate to “beginning, managing and terminating operation of the attention manager”), col. 15 ll. 12–14 ([7] content display system scheduling instructions described only as “scheduling the display of content data on a content display system”), col. 10 ll. 43–45 (“Any appropriate set of rules, that can, for example, be arranged in any appropriate hierarchical manner, can be used for establishing a display schedule. . . .”), col. 15 ll. 16–40 (stating that [8] installation instructions for installing other instructions “can be implemented as known by those skilled in the art”). As Interval Licensing acknowledged at oral argument, these instructions, reciting functions in general terms for accessing, scheduling, and then displaying data, are not inventive, but conventional; it instead focused its arguments on their use in connection with the claimed “attention manager.” *See Oral Arg.* at 5:19–30.

The ’652 patent, however, offers no clues on how the “attention manager” manages the display of the acquired content in a manner that avoids overlapping with the already-displayed content with which the user is actively engaged. For example, neither the specification nor the

claims specify: whether a second window is created for the new content to be displayed; whether the new content always is displayed in a particular corner or location of the screen; or whether the attention manager performs an initial scan for where on the display screen “unused capacity” exists, and then, wherever that space is, defines a boundary on the screen to display the new content there. Instead, the claimed “attention manager,” as construed, calls for an undefined “system” that produces the result of presenting two non-overlapping sets of data.

B. The District Court Opinion

The district court held that the asserted claims failed to meet the patent-eligibility standard set forth in *Alice Corp. Pty. v. CLS Bank International*. 134 S. Ct. 2347 (2014). The district court first noted that the parties agreed that the claims are directed to the operation of an “attention manager,” but disagreed whether the attention manager “is a patent-ineligible abstract idea.” *Interval Licensing*, 193 F. Supp. 3d at 1187. Taking into account that claims must be “considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter,” *id.* (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)), the court concluded that the asserted claims “are directed towards the same abstract idea—providing information to a person without interfering with the person’s primary activity.” *Id.* at 1188.

The court then concluded that the claims lack an inventive concept for implementing the abstract idea, reasoning that “the elements of the asserted claims are purely conventional and do no more than apply the abstract idea . . . in the particular technological environment of networked computers.” *Interval Licensing*, 193 F. Supp. 3d at 1189. Although Interval Licensing contended below that the claims provided a technical solution to problems arising in “windowed, multitasking operating

systems,” the court noted that “the claims do not recite how the attention manager” solved that problem. *Id.* (emphasis in original) (citing *Internet Patents*, 790 F.3d at 1348, for the proposition that claim limitations directed only to a result do not recite an inventive concept). The district court thus found the claims invalid and granted the defendants’ motion for judgment on the pleadings. *Interval Licensing*, 193 F. Supp. 3d at 1190.

DISCUSSION

We have jurisdiction over this appeal under 28 U.S.C. § 1295(a)(1). We review a judgment on the pleadings under Rule 12(c) de novo. *See Harris v. Cty. of Orange*, 682 F.3d 1126, 1131 (9th Cir. 2012). Patent eligibility under 35 U.S.C. § 101 is a question of law that may contain underlying issues of fact.⁴ *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018). We review the district court’s ultimate conclusion on patent eligibility de novo. *Id.*

⁴ Our court recently held that disposition on § 101 is inappropriate at the summary judgment stage when there are genuine disputes of material fact as to whether elements of the challenged claims are “well-understood, routine and conventional to a skilled artisan in the relevant field.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). And resolution at the Rule 12(b)(6) or Rule 12(c) stage is similarly inappropriate where claim elements are adequately alleged to be more than well-understood, routine, or conventional. *See Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018). But where, as here, there are no disputed facts material to the issue of patent eligibility, the district court’s resolution of the inventive concept inquiry is proper.

Section 101 allows inventors to obtain patents on “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. However, “this provision contains an important implicit exception:” an inventor may not patent laws of nature, natural phenomena, or abstract ideas. *Alice*, 134 S. Ct. at 2354. To assess whether a patent claim violates this exception to the terms of § 101, the Supreme Court has set forth a two-step framework, in which a court determines: (1) whether the claim is “directed to a patent-ineligible concept,” i.e., a law of nature, natural phenomenon, or abstract idea, and, if so, (2) whether the elements of the claim, considered “both individually and ‘as an ordered combination,’” add enough to “transform the nature of the claim’ into a patent-eligible application.” *Id.* at 2355 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78 (2012)). In the context of an abstract-idea challenge to a patent claim, those two steps are typically understood as the “abstract idea” step and the “inventive concept” step. See *Affinity Labs of Tex., LLC v. DirecTV, LLC*, 838 F.3d 1253, 1257–58 (Fed. Cir. 2016). While each step involves its own separate inquiry, we have explained that they may “involve overlapping scrutiny of the content of the claims.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016).

A. *Alice* Step 1: Abstract Idea

The judicial exception in patent law against claiming abstract ideas dates as far back as 1840. See *Wyeth v. Stone*, 30 F. Cas. 723 (C.C.D. Mass. 1840). In *Wyeth*, the patent described a particular apparatus for cutting ice, as well as a multi-step process for using the inventor’s apparatus to cut ice. The patent specification recited two claims, with one claim “for the particular apparatus and machinery to cut ice, described in the specification.” *Id.* at 727. As for the other claim, “the patentee claim[ed] an exclusive title to the art of cutting ice by means of any

power, other than human power.” *Id.* Justice Story, riding circuit, ruled that second claim to be “utterly unmaintainable,” because it was “a claim for an art or principle in the abstract, and not for any particular method or machinery, by which ice is to be cut. No man can have a right to cut ice by all means and methods” *Id.*

In *O’Reilly v. Morse*, 56 U.S. 62 (1853), the Supreme Court endorsed *Wyeth v. Stone* as “directly in point” for creating, along with other circuit court decisions, “established principles in the American courts” on which the Court relied for its *Morse* validity decision. *Id.* at 118. Samuel Morse was granted several patent claims, but his broadest claim, the eighth claim, encompassed the use of “electro-magnetism, *however developed*, for making or printing intelligible characters, letters, or signs, at any distances.” *Id.* at 86 (emphasis added). Opining that this claim was “too broad, and not warranted by law,” the Court observed that “[i]f this claim can be maintained, it matters not by what process or machinery the result is accomplished.” *Id.* at 113. The Court further explained its objection to Morse’s eighth claim in *The Telephone Cases*, 126 U.S. 1 (1888), noting that it impermissibly was “for an effect produced by the use of electromagnetism, distinct from the process or machinery necessary to produce it.” *Id.* at 534 (quoting *Morse*, 56 U.S. at 120).

In both *Wyeth* and *Morse*, then, the inventors received a patent containing at least one claim directed to a particular technical solution to a problem, whether for cutting ice or for printing at a distance using electromagnetism; but each inventor also lost a claim that encompassed all solutions for achieving a desired result, whether for cutting ice or for printing at a distance using electromagnetism. In other words, those latter claims failed to recite a practical way of applying an underlying idea; they instead were drafted in such a result-oriented way that they amounted to encompassing the “principle in the abstract” no matter how implemented.

In more recent years, the Supreme Court has reaffirmed the principles it espoused in *Morse*, continually citing *Morse* and other cases from its era as authority for the implicit exceptions to section 101, and then applying those exceptions to modern-day technologies. See *Alice*, 134 S. Ct. at 2354; *Mayo Collaborative Servs.*, 566 U.S. at 71–74; *Parker v. Flook*, 437 U.S. 584, 592 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 68 (1972). Because the exceptions “are the basic tools of scientific and technological work,” the Court has emphasized the concern that a patent claim which ties up a law of nature or an abstract idea “might tend to impede innovation more than it would tend to promote it.” *Mayo Collaborative Servs.*, 566 U.S. at 71; see also *Le Roy v. Tatham*, 55 U.S. 156, 175 (1853) (“A patent is not good for an effect, or the result of a certain process,” for such patents “would prohibit all other persons from making the same thing by any means whatsoever.”). Our recent abstract idea exception decisions likewise have stressed that a claimed invention must embody a concrete solution to a problem having “the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it.” *SAP Am., Inc. v. InvestPic, LLC*, 890 F.3d 1016, 1021–22 (Fed. Cir. 2018) (collecting cases).

At the same time, courts must “tread carefully” when wielding this invalidity tool, since “all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Alice*, 134 S. Ct. at 2354. Computer software-related inventions—due to their intangible nature—can be particularly difficult to assess under the abstract idea exception. See *Elec. Power Grp.*, 830 F.3d at 1354 (noting that the *Alice*-recognized distinction between “computer-functionality improvements” and “uses of existing computers as tools in aid of processes focused on ‘abstract ideas’” “has common-sense force even if it may present line-drawing challenges because of the programmable nature of ordinary existing

computers”). The exception nevertheless applies to new and old technologies alike. Importantly, we have found a number of software-based claims to be patent-eligible, observing that “[s]oftware can make non-abstract improvements to computer technology just as hardware improvements can, and sometimes the improvements can be accomplished through either route.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016); *id.* at 1339 (claims directed to a self-referential table “designed to improve the way a computer stores and retrieves data in memory”); *see also Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1348–49 (Fed. Cir. 2016) (claims directed to improved content filter); *McRO, Inc. v. Bandai Namco Games Am. Inc.* 837 F.3d 1299, 1313–14 (Fed. Cir. 2016) (claims directed to a technical improvement in animation techniques); *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1362 (Fed. Cir. 2018) (holding that claims which were directed to “particular manner of summarizing and presenting information in electronic devices” were patent-eligible).

Other software-based claimed inventions, however, have failed to pass section 101 muster, because they did not recite any assertedly inventive technology for improving computers as tools and/or because the elements of the asserted invention were so result-based that they amounted to patenting the patent-ineligible concept itself. *See Elec. Power Grp.*, 830 F.3d at 1354, 1355 (claims lacking “any requirements for *how* the desired result is achieved”) (emphasis in original); *SAP Am., Inc.*, 890 F.3d at 1022 (“the focus of the claims [wa]s not any improved computer or network”). In this case, the record is sufficiently clear to conclude that the district court properly granted the defendants’ motion for judgment on the pleadings.

In this case, Interval Licensing contends that the claimed “attention manager” provides a technological

improvement to a computer system. We disagree. The focus of the claims here is directed to “providing information to a person without interfering with the person’s primary activity,” i.e., the result-centric construction of the claimed “attention manager.” *Interval Licensing*, 193 F. Supp. 3d at 1188. Standing alone, the act of providing someone an additional set of information without disrupting the ongoing provision of an initial set of information is an abstract idea. As the district court aptly observed, this “basic and longstanding practice can be found in, for example, a television station’s use of a breaking news ticker across the bottom of the screen.” *Id.* at 1187. The court also pointed to the nontechnical human activity of passing a note to a person who is in the middle of a meeting or conversation as further illustrating the basic, longstanding practice that is the focus of the claimed invention. *Id.* We have recognized that “[i]nformation as such is an intangible” and that collecting, analyzing, and displaying that information, without more, is an abstract idea. *Elec. Power Grp.*, 830 F.3d at 1353–54; *see also id.* at 1355 (noting claim requirement of “‘displaying concurrent visualization’ of two or more types of information” was insufficient to confer patent eligibility). We have also held that claims directed to displaying two different information sets sequentially are abstract. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (claims directed to abstract idea of “showing an advertisement before delivering free content”). Similarly, we have held that claims directed to a single display of information collected from various sources are abstract. *See Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341–42 (Fed. Cir. 2017) (holding claims which recited creating a “dynamic document” using content from multiple electronic records ineligible under § 101). Recitation, as in this case, of the collection, organization, and display of two sets of information on a generic display device is abstract absent a “specific improvement

to the way computers [or other technologies] operate.” *Enfish*, 822 F.3d at 1336.

Furthermore, in light of the broad, result-oriented construction for “attention manager,” we agree with the district court that the claimed “attention manager” encompasses a patent-ineligible abstract concept rather than an arguably technical improvement to display devices, because the term as properly construed simply demands the production of a desired result (non-interfering display of two information sets) without any limitation on how to produce that result. Instead of claiming a solution for producing that result, the claim in effect encompasses all solutions. This result-centric construction for “attention manager” conforms with the specification, which lacks any description for how a display device would ensure the segregation of the two sets of information presented on a display screen.

Next, Interval Licensing argues that its claims are not directed to an abstract idea in light of the claimed instructions. This argument also fails. As an initial matter, the claimed instructions do not identify how the attention manager performs the function of ensuring a defined boundary between two data sets co-displayed on a screen. Instead, the instructions limitations are for either collecting a second data set or controlling the order and timing of when to display the collected second data set, not for *how* to engineer or program the display of the second data set in a way that does not interfere with the first data set, wherever that first data set may exist on a screen. Although the claims include “display instructions,” those instructions are simply for “displaying the image” generated from the acquired content, and have no bearing on how to display the “image” in a section of the screen that is unused. Moreover, acquiring and organizing information, as broadly recited by some of the instructions limitations, is an abstract idea, not an improvement in how computers and networks carry out their basic func-

tions. *See Elec. Power Grp.*, 830 F.3d at 1353–54. And displaying the information which results from that collection and organization, as recited by other instructions limitations, is “abstract as an ancillary part of such collection and analysis.” *Id.* at 1354. The instructions limitations, taken as a whole, are thus abstract.

Furthermore, the claimed instructions do not impose meaningful limitations on the purported solution of an attention manager that would improve a computer as a tool, but merely recite routine and conventional steps in carrying out the well-established practice of accessing data from an external source and displaying that data on a user’s device. In the words of the district court, they offer “nothing more than generic, pre-existing computer functionality.” *Interval Licensing*, 193 F. Supp. 3d at 1190. As explained *supra*, the ’652 patent specification itself makes clear that the instructions limitations are generic and cover established ways to access information, organize information, and then display information. *See also* Oral Arg. at 5:19–30 (“I think there’s a good chance if it didn’t say attention manager or if that wasn’t the invention, [Interval Licensing] wouldn’t have even filed for the patent application. . . . If it was just using the Internet to get content, I don’t know that there’s an invention here at all.”); *see also* ’652 patent col. 3 ll. 5–8.

The instructions limitations Interval Licensing highlights in its appeal as representing an improvement in computing devices are unavailing. For example, the specification admits the acquisition instructions are “generic,” *id.* col 3 ll. 3–8, and are, in any event, a necessary aspect of carrying out any conception of providing one set of information to be displayed next to another. The claimed “user interface installation instructions” “are conventional” instructions previously employed for permitting users to request content on a computer. *Id.* col. 16 l. 15. The content data scheduling instructions and content display system scheduling instructions limita-

tions control the duration, order, and timing of presentation of acquired content. The specification explains that “[a]ny appropriate set of rules” can “be used for establishing a display schedule.” *Id.* col. 10 ll. 43–45. Finally, the content data update instructions, which enable updating the displayed information, are recited only at the broadest, functional level, without explaining how that is accomplished, let alone providing a technical means for performing that function. Because the instructions discuss only broad functions and are not directed to any technological improvement for performing those functions, Interval Licensing’s reliance on *McRO* is inapposite. In *McRO*, the claim limitations at issue were “limited rules” which “improved technological result[s].” 837 F.3d at 1316. *See SAP Am., Inc.*, 890 F.3d at 1021 (explaining that the claims in *McRO*, besides being directed to physical display improvements, also avoided abstraction by adequate specificity as to how to achieve the improvements).

In sum, the recited claims are directed to an abstract idea because they consist of generic and conventional information acquisition and organization steps that are connected to, but do not convert, the abstract idea—displaying a second set of data without interfering with a first set of data—into a particular conception of how to carry out that concept. “[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.” *Mayo Collaborative Servs.*, 566 U.S. at 82.

B. *Alice* Step 2: Inventive Concept

Whether considering the claim elements of representative claim 18 individually or as an ordered combination, nothing in the claim converts the abstract idea to an inventive concept. It is well-settled that placing an abstract idea in the context of a computer does not “im-

prove” the computer or convert the idea into a patent-eligible application of that idea. *See Alice*, 134 S. Ct. at 2358. Furthermore, the claims do not recite any arguably inventive method of how the secondary information is displayed, such as what portion of the screen is utilized or how the primary activity on the screen is monitored. That is, while the specification and claims of the ’652 patent purport to describe an improved user experience which allows the presentation of an additional set of information, the patent is wholly devoid of details which describe *how* this is accomplished. *See, e.g., Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (“[A] claim for a *new* abstract idea is still an abstract idea.”) (emphasis in original). The patent does not describe how the preexisting screen background is altered to enable the display of the second set of information, nor does it describe how the second set of information is segregated from the primary set of information.

Interval Licensing re-raises its claimed instructions in the form of an alleged inventive concept. But, for the reasons we have already given *supra*, the instructions are recited at a high level of generality and conventional, and are not the kinds of limitations we have held to “solve a technology-based problem, even with conventional, generic components, combined in an unconventional manner.” *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1300 (Fed. Cir. 2016), *cert. denied*, 138 S. Ct. 469 (2017); *see also Ultramercial*, 772 F.3d at 716 (“Adding routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet does not transform an otherwise abstract idea [of showing an advertisement before delivering content] into patent-eligible subject matter.”).

Interval Licensing next argues that the claims provide a specific technological improvement which is “rooted in computer technology” in that they “improve computer

display devices by combining the acquired information with the user's primary display interaction." Appellant Br. 51–52 (quoting *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014)). We disagree. Interval Licensing does not allege that computer display devices were previously unable to display information from more than one source. And the problem for Interval Licensing is that its claims, as construed, are so broad that they encompass the basic concept of displaying two sets of information, using any means to display them without overlap, in which the secondary data set is acquired and organized by generic, conventional steps. Thus, unlike *DDR Holdings*, the claims here do not offer a particular solution to a problem that, in *DDR Holdings*, was unique to the Internet. The asserted improvement here is the presentation of information in conjunction with other information. Such an information-based improvement is not an improvement "rooted in computer technology." *DDR Holdings*, 773 F.3d at 1257.

Interval Licensing also argues that the acquisition of specific information desired by the user represents an inventive concept (e.g., the limitation "user interface installation instructions" construed as "installation instructions for enabling provision of an interface that enables a person to request the set of content data from a specific source of information."). Appellant's Br. at 35. We once again disagree. Offering a user the ability to select information to be displayed is one of the "most basic functions of a computer." *Alice*, 134 S. Ct. at 2359. Interval Licensing does not, and cannot, contend that it is arguably inventive to enable a person to access information over a network through a user interface. '652 patent col. 1 ll. 28–34 (explaining in background section that, by using networks such as the Internet, "information can be displayed to a computer user having access to the network directly in response to a request from a user"); see also *Intellectual Ventures I LLC v. Erie Indem. Co.*,

850 F.3d 1315, 1330 (Fed. Cir. 2017) (“Remotely accessing and retrieving user-specified information is an age-old practice that existed well before the advent of computers and the Internet.”). Instead, its argument boils down to using that conventional, pre-existing practice of acquiring information that will then be displayed somewhere (and somehow) adjacent to other information. Appending rote conventional activity in this way to an abstract idea does not amount to an inventive concept. *See, e.g., Affinity Labs of Tex., LLC*, 838 F.3d at 1272 (“The addition of basic user customization features to the interface does not alter the abstract nature of the claims and does not add an inventive component that renders the claims patentable.”).

Interval Licensing further argues that the claims at issue are for a “distributed architecture” similar to that found patent eligible in *Amdocs*. 841 F.3d at 1303. However, none of the claims recite anything even akin to a distributed architecture. As discussed *supra*, the claims, as construed, recite acquiring information from a “specific source of information,” but there is no further disclosure of what that information source is or where it is located. This is a disclosure of a generic network connection, not any specific distributed architecture. *See 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.”). And, as noted earlier, Interval Licensing argued for and received a construction of “attention manager” defining that term by the result it yields, not by its structural design or any mode for producing the result.

CONCLUSION

We have considered all of Interval Licensing’s other arguments and find them unpersuasive. For the foregoing reasons, the determination of the district court that

claims 15–18 of the '652 patent are directed to patent-ineligible subject matter is

AFFIRMED

United States Court of Appeals for the Federal Circuit

INTERVAL LICENSING LLC,
Plaintiff-Appellant

v.

AOL, INC., APPLE, INC., GOOGLE LLC, YAHOO!,
INC.,
Defendants-Appellees

2016-2502, 2016-2505, 2016-2506, 2016-2507

Appeals from the United States District Court for the Western District of Washington in Nos. 2:13-cv-00263-MJP, 2:13-cv-00264-MJP, 2:13-cv-00265-MJP, 2:13-cv-00266-MJP, Judge Marsha J. Pechman, Senior Judge Barbara Jacobs Rothstein.

PLAGER, *Circuit Judge*, concurring-in-part and dissenting-in-part.

Today we are called upon to decide the fate of some inventor's efforts, whether for good or ill, on the basis of criteria that provide no insight into whether the invention is good or ill. Given the current state of the law regarding what inventions are patent eligible, and in light of our governing precedents, I concur in the carefully reasoned opinion by my colleagues in the majority, even though the state of the law is such as to give little confidence that the outcome is necessarily correct. The law, as I shall explain, renders it near impossible to know with any cer-

tainty whether the invention is or is not patent eligible. Accordingly, I also respectfully dissent from our court's continued application of this incoherent body of doctrine.

The Three Exceptions

The majority opinion, after reviewing in detail the district court's decision and the patent's written description and claims, goes through the obligatory review of the history of 35 U.S.C. § 101, the statutory section entitled "Inventions patentable." Under the statute a patent may be obtained for an invention that is a "new and useful process, machine, manufacture, or composition of matter." This phrasing is often described as providing a wide and permissive scope for patent eligibility.¹

However, as the majority opinion notes, any recourse to § 101 must take into account not only the words of the statute but also the Supreme Court's judicially created three exceptions to the statute's description of what is patent eligible. Of these three Court-created exceptions—'laws of nature, natural phenomena, and abstract ideas'—the one at issue in this case is the one that causes the most trouble: 'abstract ideas.'

That 'abstract ideas' is the only one of the three at issue here is a critical point, in need of emphasizing. All too often courts discussing these three judicially created exceptions to patent eligibility lump them together, as if all three present the same set of issues to be conceptualized and analyzed.² They do not. 'Laws of nature' and

¹ See, e.g., *Bilski v. Kappos*, 561 U.S. 593, 601 (2010).

² The Supreme Court itself is not always consistent. Compare *id.* at 601–02 (referring to the "three specific exceptions") with *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (referring to the three categories as constituting one "exception").

‘natural phenomena’ have understandable referents, and thus have proven more amenable to workable definitions, or at least a reasonable degree of boundary-setting, and thus are more amenable to analysis.³

However, when it comes to applying the concept of ‘abstract ideas’ to a challenged patent (or application for patent) as a distinct test of patent eligibility, the issues are different, and require close examination. The analytical structure which we now are to employ is provided by the Supreme Court’s recent teachings in *Alice Corp. v. CLS Bank International*.⁴ (*Alice* is often linked at citation-time to an earlier case, *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*;⁵ that case did not turn on the ‘abstract ideas’ formula, and is an example of the blending that can cause analytical confusion.)

I. Abstract Idea(s)

The majority opinion, following the structure dictated by *Alice*, first steps through “*Alice* Step 1: Abstract Idea.” The court recites a bit of the history of the ‘abstract ideas’ idea from its origins in the 19th century, and then reviews the more recent cases that wander through it, lining the

³ That does not, however, preclude controversy. See, e.g., *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1380 (Fed. Cir. 2015) (Linn, J., concurring), *reh’g denied*, 809 F.3d 1282 (Fed. Cir. 2015) (per curiam denial with concurrences by Judges Lourie and Dyk and a dissent by Judge Newman). *But see* Robert R. Sachs, *Bad Science Makes Bad Patent Law—No Science Makes It Worse (Part I)*, *Bilski Blog* (Sept. 13, 2016), <http://www.bilskiblog.com/blog/2016/09/bad-science-makes-bad-patent-law.html> (arguing that the courts have failed to accurately define ‘laws of nature’).

⁴ 134 S. Ct. 2347 (2014).

⁵ 566 U.S. 66.

cases up as they explain themselves on both sides of the divide between good and ill. (In *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*,⁶ I explained the reason for this evolved decision-by-example technique; the verbal nature of the distinctions drawn becomes quite apparent.)

The majority opinion concludes that “the recited claims are directed to an abstract idea because they consist of generic and conventional information acquisition and organization steps that are connected to, but do not convert, the abstract idea.” Maj. Op. at 18. This often-seen language is familiar from *Alice*. See *Alice*, 134 S. Ct. at 2359–60. It is interesting language—if “generic and conventional” is the same as ‘previously known,’ someone familiar with traditional patent law might think of the 1952 Patent Act’s § 103 and the nonobviousness principle—a point discussed later; but, following *Alice*, the majority opinion, as did the district court, ignores the Patent Act’s requirements and cites the current litany for abstractness.

But what makes an idea found in a claim an ‘abstract idea’? An idea itself by definition is “[s]omething, such as a thought or conception, that is the product of mental activity.”⁷ The definitions of “abstract” include “[c]onsidered apart from concrete existence,” “[d]ifficult to understand; abstruse,” and “[n]ot applied or practical; theoretical.”⁸ An idea, whether abstract or not, is something that lives in the interstices of someone’s brain, a psychophysiological area not fully understood to this day.⁹

⁶ 841 F.3d 1288, 1294–95 (Fed. Cir. 2016).

⁷ The American Heritage Dictionary of the English Language 872 (5th ed. 2011).

⁸ *Id.* at 7.

⁹ *Cf.* John Medina, *Brain Rules* (2d ed. 2014).

And ideas can have an infinite range of abstractness, if by that we imply concreteness—for example, compare “I have an idea—let’s have hamburgers for dinner,” with “I have an idea—I am going to invent how to make time go backwards.”¹⁰ How much of abstractness is a function of concreteness? How do we pick the line where the articulation and explication of an idea is sufficiently concrete to be ‘non-abstract,’ but not so much as to be ‘generic and conventional’? Does it help to phrase the notion as the difference between claiming a desired result and claiming how to produce that same result? Or are we just substituting one set of vague notions for the other, with the same line-drawing problem?

That the phrase ‘abstract ideas’ is a definitional morass can be seen in one simple fact—a search for a definition of ‘abstract ideas’ in the cases on § 101 from the Supreme Court, as well as from this court, reveals that there is no single, succinct, usable definition anywhere available. The problem with trying to define ‘abstract ideas,’ and why no court has succeeded in defining it, is that, as applied to as-yet-unknown cases with as-yet-unknown inventions, it cannot be done except through the use of equally abstract terms.¹¹ As explained in *Amdocs*,

¹⁰ See, e.g., Dava Sobel, *Longitude* 34 (1st ed. 1995) (“Time is to clock as mind is to brain. The clock or watch somehow contains the time. And yet time refuses to be bottled up like a genie stuffed in a lamp. . . . [I]t flows as sand or turns on wheels within wheels, time escapes irretrievably . . .”).

¹¹ For example, compare *In re Bilski*, 545 F.3d 943, 959 (Fed. Cir. 2008) (en banc) proposing ‘machine-or-transformation’ as *the* test, with *Bilski*, 561 U.S. at 604, indicating that ‘machine-or-transformation’ is one test, “a useful and important clue” and “an investigative tool” but not the exclusive test and offering nothing better. See

the closest our cases come to a definition is to state examples of what prior cases have contained, and which way they were decided. But what anecdotal cases reveal, a definition does not make.

The ‘abstract ideas’ idea, when used for denying a claimed invention’s patent eligibility either before or after a patent is issued, cannot thus function as a valid rule of law. As a fundamental policy, a legal term such as ‘abstract ideas,’ if the exclusionary standards of § 101 are to function as a valid rule of law, must provide concise guidance for the future. In that sense, a rule of law is a prediction of how courts will decide future cases.¹² ‘Abstract ideas,’ like the term ‘obscenity,’ may provide a cultural consensus in a given instance regarding whether a past event qualifies, but it fails to provide the kind of specificity and clarity that makes it useful for future prediction of outcome. And from the viewpoint of decisional law, the ‘abstract ideas’ idea falls short in the sense of providing a trial judge with confidence that the judgment will be understood by the judges who come after,

also the several opinions in this court’s *CLS Bank International v. Alice Corp.*, 717 F.3d 1269 (Fed. Cir. 2013) (en banc), the harbinger of the Supreme Court’s *Alice* opinion.

¹² See Oliver W. Holmes, *The Path of the Law*, in *Collected Legal Papers* 167, 173 (1920) (noting that rules of law are “prophecies of what the courts will do in fact, and nothing more pretentious”); see also Karl N. Llewellyn, *The Bramble Bush: Some Lectures on Law and Its Study* 3 (1930) (“What these officials do about disputes is, to my mind, the law itself.”). *But cf.* Michael C. Dorf, *Prediction and the Rule of Law*, 42 *UCLA L. Rev.* 651, 653 n.6, 715 (1996) (suggesting that “the prediction model undermines the rule of law by over-emphasizing the role of individual judges”).

since only the judges who have the final say in the matter can say with finality that they know it when they see it.

II. Inventive Concept

Having determined the claims at issue to be directed to nothing more than ‘abstract ideas,’ the majority opinion, following the *Alice* analysis, segues to “*Alice* Step 2: Inventive Concept.” Here the court explores whether the invention’s claims, determined in Step 1 to be abstract, are not really abstract because they limit the abstractness by an ‘inventive concept.’ In the case before us, no such concept is seen; the trial court’s determination of fatal abstraction is affirmed.

A small puzzle—if a court, after reviewing challenged claims in light of their terminology and written description, determines the claims to be ‘abstract’ in Step 1, how can the same court be expected to determine on a second reading that the same claims have become ‘un-abstract’ via Step 2? Could it be that an ‘inventive concept’ cannot exist until the court reads the patent at least one more time? Perhaps courts cannot be expected to read the claims carefully enough the first time?

A bigger puzzle regarding the ‘inventive concept’ concept: Those who are familiar with the history of the Patent Act, when in 1952 the law of patenting was given a major statutory overhaul, will be the most puzzled. Is it the case that now, some 65 years later, we really have resurrected the concept of an ‘inventive concept’?¹³ The late Judge Giles Rich, the grand old man of patent law, whose portrait hangs in the place of honor in the Federal

¹³ Some authorities attribute the resurrection of ‘inventive concept’ to *Mayo*, and to Justice Stevens in his earlier opinion in *Parker v. Flook*, 437 U.S. 584 (1978). For the history buffs, see Jeffrey A. Lefstin, *Inventive Application: A History*, 67 Fla. L. Rev. 565, 572–77 (2015).

Circuit courthouse—how can he rest in peace? He was one of the acclaimed authors of the new Patent Act. At the time he, along with many others, thought that the undefinable—truly abstract—concept of ‘inventive concept’ had been put into the dustbin of history by the specific criteria for a valid patent in the new Patent Act, specifically § 103, non-obvious subject matter.

Judge Rich wrote extensively on the point. *See, e.g.*, Giles S. Rich, *Laying the Ghost of the “Invention” Requirement*, 1 APLA Q.J. 26 (1972); Giles S. Rich, *The Vague Concept of “Invention” as Replaced by Sec. 103 of the 1952 Patent Act*, 46 J. Pat. Off. Soc’y 855 (1964).¹⁴ In his 1964 article, based on a speech he gave twelve years after the statutory changes were enacted, Judge Rich reviewed the long and sorry history during the 19th century of the “injection into the law of what has ever since been called the ‘requirement for invention.’” 46 J. Pat. Off. Soc’y at 860. “This proliferation of views on what did and did not amount to ‘invention’ went on for 100 years. We were enlightened with the view that ‘invention’ resulted from the exercise of the ‘inventive faculties’ and other circular reasoning.” *Id.* He attributed this development to an 1851 Supreme Court case, *Hotchkiss v. Greenwood*, 52 U.S. 248 (1851), and noted that “[a]s is usual with a ‘doctrine’ derived from a court opinion, the doctrine persists while the facts out of which it arose are forgotten.” *Id.* at 859–60.

¹⁴ *See also In re Bergy*, 596 F.2d 952, 959–64 (CCPA 1979), *vacated in part sub nom. Diamond v. Chakrabarty*, 444 U.S. 1028 (1980), *and aff’d sub nom. Diamond v. Chakrabarty*, 447 U.S. 303 (1980); Giles S. Rich, *Why and How Section 103 Came to Be*, in *Nonobviousness—The Ultimate Condition of Patentability* 1:201 (John F. Witherspoon ed., 1980); Giles S. Rich, *Principles of Patentability*, 28 Geo. Wash. L. Rev. 393 (1960).

Judge Rich bemoaned the fact that, even after the statutory enactment of § 103 of the Patent Act, some still used the meaningless ‘invention’ or ‘inventive requirement’ phrase. He concluded his article with a series of propositions to reinforce “that when 103 has been complied with, there is no further and different requirement called ‘invention’; that compliance with 103 is the policy judgment of Congress on how to bring the invention within the Constitutional purpose.” *Id.* at 875.

Without referring to this history, the Supreme Court in *Alice* instructed that we ask whether there is such structure or something in the patent claim(s) that recites an ‘inventive concept’ “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 73). Beyond the question of ultimate meaning of the ‘inventive concept’ phrase, other questions abound. When we search for this significantly more ‘inventive concept,’ are we limited to the limitations of a particular claim in the patent? If not limited to the limitations in the individual claim, then what? Do the written description and the scope of other claims in the patent come into play, as perhaps they did in Step 1?

And adding a little more complexity to the matter, the Supreme Court has recognized that “[a]t some level, ‘all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.’” *Id.* at 2354 (quoting *Mayo*, 566 U.S. at 71). With that in mind, we are left to ponder at what level of abstraction do we focus—put another way, how deep into the ‘elements’ do we dig when we search for that which is not ‘abstract,’ or for that non-abstract combination that saves an otherwise ‘abstract idea’ patent claim?

When the ‘abstract idea’ notion appeared in the law back in the 19th century, the requirement for ‘invention’

in its many variants—currently ‘inventive concept’—was also part of patent law. Then, as now, it seemed logical that something claiming to be an invention should have something called an ‘inventive concept’ at its core. And as a literary construct that is unexceptional.

As a decisional construct for validation of a property right—a patent—the idea of a necessarily underlying ‘inventive concept’ proved unworkable. The concept provided no discernable boundaries for decision-making in specific cases, resulting in an incoherent legal rule that led to arbitrary outcomes. Judge Rich, who devoted his life to patent law, saw this clearly, and gave the Congress a workable alternative—nonobvious subject matter—which they adopted.

The modern Supreme Court inherited this body of formulaic doctrine, and we now expect the Court to make sense of it. That they have failed is less a commentary on their efforts than on the absence of recognition of the problem on the part of the lawyers and judges who continue to treat these doctrines as if they were gospel.¹⁵

The Emperor Has No Clothes

My purpose in this discussion is not to critique the Court’s handiwork, but rather to highlight the number of unsettled matters as well as the fundamental problems that inhere in this formulation of ‘abstract ideas.’ In the

¹⁵ See Amy L. Landers, *Patentable Subject Matter as a Policy Driver*, 53 Hous. L. Rev. 505, 517–18 (2015) (“Like an ice sculpture that is shaped by the parts that have been chipped away, the legal definition of invention is shaped by its exceptions. Decisions lack clarity. Their reasoning rests heavily on a limited field of precedent that is, in turn, written in opaque terms during a different technological era.” (footnote omitted)), and sources cited therein.

short expanse available in a court opinion (and in the reader's patience), it is not possible for me to recite all the issues and all the problems with the current law of 'abstract ideas' and its 'inventive concept' offspring.

I do, however, want to go on record as joining my colleagues who have recently expressed similar views about the current state of our patent eligibility jurisprudence, and to incorporate by reference their wisdom concerning the matter. Judge Richard Linn, concurring and dissenting in *Smart Systems Innovations, LLC v. Chicago Transit Authority*,¹⁶ critiqued at length the 'abstract ideas' idea, both in general and as specifically applied in that case. More recently, Judge Alan Lourie, concurring in the denial of *en banc* rehearing in *Berkheimer v. HP Inc.*, and referring to the complex of issues in our current § 101 jurisprudence, wrote that "the law needs clarification by higher authority, perhaps by Congress, to work its way out of what so many in the innovation field consider are § 101 problems."¹⁷

I welcome their attention to this—when two of our leading judges who have devoted their careers to the practice and explication of patent law publicly proclaim that there is a real problem, there is a real problem. I do not mean to suggest that they are the only two such judges on the court—to my knowledge, other than myself, they are the only two who have gone on record in such clear terms regarding the law of 'abstract ideas.'

There is almost universal criticism among commentators and academicians that the 'abstract idea' idea has created havoc in the patent law. The testimonials in the

¹⁶ 873 F.3d 1364, 1376 (Fed. Cir. 2017) (Linn, J., concurring-in-part and dissenting-in-part).

¹⁷ 890 F.3d 1369, 1374 (Fed. Cir. 2018) (Lourie, J., concurring in the denial of rehearing).

blogs and elsewhere to the current mess regarding our § 101 jurisprudence have been legion.¹⁸ There has even been a call for abolishing § 101 by the former head of the Patent and Trademark Office.¹⁹

This view is shared by many patent practitioners.²⁰ A § 101 defense is widely employed, and often successful. For example, in the period following *Alice* until April 30, 2017, one study reported that the federal courts invalidated patents on § 101 grounds in 330 out of 488 decisions. See Bilski Blog, *#Alicestorm: April Update and the Impact of TC Heartland on Patent Eligibility* (June 1,

¹⁸ Regarding patent blogs, see just about any issue of Law360; regarding the innovation community, see, e.g., Intellectual Prop. Owners Ass'n, Section 101 Legislation Task Force, Proposed Amendments to Patent Eligible Subject Matter Under 35 U.S.C. § 101 (2017), http://www.ipo.org/wp-content/uploads/2017/02/20170224_IPO-101-TF-Proposed-Amendments-and-Report_final.pdf.

¹⁹ See Ryan Davis, *Kappos Calls for Abolition of Section 101 of Patent Act*, Law360 (Apr. 12, 2016), <http://www.law360.com/articles/783604/kappos-calls-for-abolition-of-section-101-of-patent-act>.

²⁰ See, e.g., Peter Leung, *The Federal Circuit's Section 101 Uncertainty*, Managing Intellectual Prop. (Sept. 29, 2015) ("Frustrated IP practitioners are hoping the court will soon change from telling them what is not eligible to providing some guidance on what is."), <http://www.managingip.com/Article/3491780/Latest-News-Magazine/The-Federal-Circuits-Section-101-uncertainty.html>; Ryan Davis, *Major [Companies], IP Groups Call For Clearer USPTO Alice Rules*, Law360 (Nov. 2, 2015), <https://www.law360.com/articles/722015/major-cos-ip-groups-call-for-clearer-uspto-alice-rules>.

2017).²¹ According to the same report, the Patent Trial and Appeal Board has invalidated patents on § 101 grounds in 90 out of 92 covered business method review final written decisions. *Id.*

These defenses are a shortcut way for alleged infringers to try for a quick dismissal of the infringement charge on the grounds that the invention underlying the infringement suit was never entitled to a patent. If successful, it saves having to go to the effort of proving in a full-dress law suit one of the statutory invalidity defenses found in §§ 102, 103, and 112 of the Patent Act.²²

Indeed, some of these shortcut cases now arrive on appeal following a trial court's summary judgment, or in some cases, even following a judgment on the pleadings or motion for dismissal. This has the effect of ensuring a minimal record or virtually no record at all on which an appeal can sensibly be judged.²³

²¹ <http://www.bilskiblog.com/blog/2017/06/alicestorm-april-update-and-the-impact-of-tc-heartland.html>.

²² See Paul R. Gugliuzza & Mark A. Lemley, *Can a Court Change the Law by Saying Nothing?*, 71 Vand. L. Rev. 765, 777 n.70 (2018), quoting Saurabh Vishnubhakat, *The Antitrust of Patentability*, 48 Seton Hall L. Rev. 71, 104 (2017) for the proposition that “[c]ourts’ use of subject-matter eligibility as a shortcut to other patentability requirements appears to offer significant savings in decision cost,’ but that ‘these savings likely come at the expense of higher error costs.’”

²³ *But see Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018) (observing that “[w]hether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination”); *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018).

There is little consensus among trial judges (or appellate judges for that matter) regarding whether a particular case will prove to have a patent with claims directed to an abstract idea, and if so whether there is an ‘inventive concept’ in the patent to save it. In such an environment, from the viewpoint of counsel for the defense, there is little to be lost in trying the § 101 defense. We are left with a process for finding abstract ideas that involves two redundant steps and culminates with a search for a concept—inventiveness—that some 65 years or so ago was determined by Congress to be too elusive to be fruitful. Is it any wonder that the results of this process are less than satisfactory?

It would not be useful, or even fair, to fault today’s Supreme Court for trying to find some way to decide what is an abstract idea, or at the least for trying to find a way to decide the question. Or to fault this court for doing its best to honor the Supreme Court’s formula, even when the results demonstrated that the test did not produce coherent, readily understandable, replicable, and demonstrably just outcomes. The Supreme Court inherited the ‘abstract ideas’ idea from cases decided at a time when it probably sounded reasonable and had little impact. With the rise of software and business method patents, the ‘abstract idea’ became a weapon of choice for summary execution of what many decried as ‘bad’ patents. The problem is that it does not distinguish good from ill in any coherent sense, and thus does not serve well either patent law or the public.

When the lawyers and judges bring to the Supreme Court a shared belief in the uselessness of the abstract notion of ‘abstract ideas’ as a criterion for patent eligibility, we can hope that the Court will respond sensibly. In light of the statutory criteria for patent validity established in the Patent Act, there is no need, and indeed no place in today’s patent law, for this abstract (and indefinable) doctrine. Something as simple as a declaration by

the Court that the concept of ‘abstract ideas’ has proven unworkable in the context of modern technological patenting, and adds nothing to ensuring patent quality that the statutory requirements do not already provide, would remove this distraction from the salutary system of patent issuance and enforcement provided by the Congress in the 1952 Patent Act.

The problem with hoping for this solution is that there is no particular incentive for the Supreme Court to immerse itself again in this intellectual morass. The Court, unlike this court, is not called upon daily to address the consequences of an incoherent doctrine that has taken on a life of its own. It will take a special effort by the judges and the patent bar to gain the Court’s attention. Failing that, a legislative fix is a possibility, though waiting for that may be the ultimate test of patience.

In the interim, a district court in an appropriate case might choose to exercise control over its docket by instructing a defendant who raises an ‘abstract ideas’ § 101 defense that the court will defer addressing that defense until first having the issues in §§ 102, 103, and 112 addressed. This need not be viewed as offending existing law since the ‘abstract ideas’ test would remain in the case, as would the *Alice* process; only the timing would change.

There would be a shift in trial court process from the current notion, held by some, that a determination of patent eligibility under § 101 is necessarily the first thing to be decided in every case. That notion can still remain true for cases challenging a patent on laws of nature and natural phenomenon grounds; only because of the problems inherent in testing for ‘abstract ideas’ would the § 101 test be delayed until determinations are made under the statutory standards that Congress established.

What would be the consequences of such a procedural delay? Even a cursory look at the claims in our recent

§ 101 ‘abstract ideas’ cases suggests how many of those cases would just go away as soon as the well-understood statutory criteria are applied to the challenged claims, especially the question of whether the claimed invention is new or just a replay of prior art (see § 103). Those who would quail at the supposed burden this might place on the trial judges should remember that is what trial judges do. And besides, the trial judges have already started using an alternative along the same lines: many patent infringement suits are now being stayed by the trial courts when there is a reference of the patent eligibility and validity issues (depending on the kind of case) to the Patent Trial and Appeal Board under the expedited procedures of the America Invents Act.²⁴

Whether this court should take the initiative and instruct the trial courts to follow such a procedure raises somewhat more difficult questions. We have generally left the case management of those courts to the courts themselves, or to the circuit courts of appeal to which they

²⁴ See Harness Dickey, *A Look at Forty-Five Months of Inter Partes Review Proceedings Before the United States Patent and Trademark Office*, <http://ipr-pgr.com/wp-content/uploads/2016/08/IPR-PGR-Report-Vol-14.pdf> (Aug. 24, 2016) (finding that 61% of all contested requests to stay were granted from September 16, 2012 to June 16, 2016 in the *inter partes* review context); Morgan Lewis, *2017 PTAB Digest: The Latest Trends and Developments in Post-Grant Proceedings*, at 26, https://www.morganlewis.com/-/media/files/publication/report/ptab-post-grant-proceedings_fin_screen.ashx (2017) (estimating that 58% of all contested requests to stay were granted as of June 1, 2016 in the *inter partes* review context and that 61% of all contested requests to stay were granted in the same period in the covered business method review context).

normally report. For these reasons among others, our court presumably should have little difficulty with respecting a district court's decision about how best to manage its own docket.

Regardless of what other courts may do, an appellate court's job is not only to decide the immediate case before it, but also to rationalize and regularize the law to be applied in future similar cases. Judge Rich believed that words have meaning;²⁵ years earlier Professor Wittgenstein expressed well that same thought: "What can be said at all can be said clearly, and what we cannot talk about we must pass over in silence. . . . The limits of my language mean the limits of my world."²⁶

This emperor clearly has no clothes; we need not wait for our children to tell us this.²⁷ The legitimate expectations of the innovation community, as well as basic notions of fairness and due process, compel us to address this § 101 conundrum.

²⁵ Giles S. Rich, *Escaping the Tyranny of Words—Is Evolution in Legal Thinking Impossible?— in Nonobviousness—The Ultimate Condition of Patentability* 3:301.

²⁶ Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*, Preface at 3, Proposition 5.6 (1922).

²⁷ See Hans Christian Andersen, *The Annotated Hans Christian Andersen* 3–16 (Maria Tatar, ed., trans., & contributor, Julie Allen, trans. & contributor, 1st ed. 2008).