



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/840,150	08/31/2015	Elmore Eugene Pope	170105-1841	2883
71247	7590	11/29/2018	EXAMINER	
Client 170101 c/o THOMAS HORSTEMEYER, LLP 3200 WINDY HILL RD SE SUITE 1600E ATLANTA, GA 30339			COUGHLAN, PETER D	
			ART UNIT	PAPER NUMBER
			2121	
			NOTIFICATION DATE	DELIVERY MODE
			11/29/2018	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@tkhr.com  
docketing@thomashorstemeyer.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* ELMORE EUGENE POPE

---

Appeal 2018-004382  
Application 14/840,150<sup>1</sup>  
Technology Center 2100

---

Before HUNG H. BUI, JOSEPH P. LENTIVECH, and  
KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

BUI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant seeks our review under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 2–21, which are all the claims pending in the application. App. Br. 14–17, Claims App'x. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.<sup>2</sup>

---

<sup>1</sup> According to Appellant, Amazon Technologies Inc., is the real party in interest. App. Br. 2.

<sup>2</sup> Our Decision refers to Appellant's Appeal Brief filed August 21, 2017 ("App. Br."); Reply Brief filed March 21, 2018 ("Reply Br."); Examiner's Answer mailed January 23, 2018 ("Ans."); Final Office Action mailed March 31, 2017 ("Final Act."); and original Specification filed August 31, 2015 ("Spec").

## STATEMENT OF THE CASE

Appellant's invention relates to "detecting unexpected behavior" of a user based on tracking a path followed by a user's device and comparing that path to historical paths followed by other devices associated with a topology of a particular site to infer user intent or deviation from an expected behavior. Spec. ¶¶ 7–9, 20, 24, Abstract.

Claims 2, 7, and 15 are independent. Claim 2 is illustrative of the claimed subject matter, as reproduced below:

2. A method comprising:
  - generating, by at least one computing device, at least one intent grouping associated with at least one historical path followed by a plurality of users by comparing statistical measures of the at least one historical path, the at least one historical path being associated with a topology of a site;
  - tracking, by the at least one computing device, at least one path followed by a user, the at least one path corresponding to at least one of a content request and a location;
  - identifying, by the at least one computing device, at least one subsequent step associated with the at least one intent grouping;
  - determining, by the at least one computing device, that a subsequent step associated with the at least one path deviates from the at least one subsequent step;
  - identifying, by the at least one computing device, the at least one path as being associated with an unexpected behavior;
  - and
  - in response to identifying the at least one path as being associated with an unexpected behavior, generating, by the at least one computing device, at least one of a remedial measure and a preventative measure.

App. Br. 14 (Claims App'x).

## EXAMINER'S REJECTION

Claims 2–21 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to an abstract idea without significantly more. Final Act. 2–4.

## DISCUSSION

In *Alice Corp. Proprietary LTD. v. CLS Bank International*, 134 S. Ct. 2347 (2014), the Supreme Court reiterates an analytical two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 79 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355. The first step in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts,” such as an abstract idea. *Id.* If the claims are directed to eligible subject matter, the inquiry ends. *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016).

If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 79, 78). In other words, the second step is to “search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the

[ineligible concept] itself.” *Id.* (quoting *Mayo*, 566 U.S. at 72–73). “[W]ell-understood, routine, [and] conventional activit[ies]’ previously known to the industry” are insufficient to transform an abstract idea into patent-eligible subject matter. *Id.* (quoting *Mayo*, 566 U.S. at 73).

In rejecting claims 2–21 under 35 U.S.C. § 101, the Examiner determines these claims are directed to an abstract application of “an idea of itself,” i.e., a mental process that could be performed in the human mind or by a human using a pen and paper, and includes limitations that are analogous to those claims discussed in *Fairwarning*. Final Act. 2–3 (quoting *FairWarning IP, LLC v. Iatric Systems, Inc*, 839 F.3d 1089 (Fed. Cir. 2016) (holding that a process of “collecting and analyzing information to detect misuse and notifying a use when misuse is detected” is patent-ineligible under § 101); *see also CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011).

The Examiner also determines the claims fail to amount to “significantly more” than the judicial exception” because these claims fail (1) “to improve another technology or technological field,” (2) “to improve the functioning of the computer itself,” (3) “to effect a transformation or reduction of a particular article into a different state or thing,” and (4) “to add a specific limitation other than what is well understood, routine and conventional in the field.” Final Act. 4.

*Alice/Mayo—Step 1 (Abstract Idea)*

Turning to the first step of the *Alice* inquiry, Appellant argues the claims are not directed to an abstract idea because:

- (1) Appellant’s claims, like the claims in *DDR Holdings [DDR Holdings, LLC v. Hotels.com, L.P., 773 F.3d 1245, 1257 (Fed. Cir. 2014)]*, “do not merely recite the

performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet” but, instead, “is necessary rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks” and, as such, “amount textbook case of patentable subject matter under a 101 analysis under *DDR holdings* precedent” (App. Br. 6–7);

- (2) “The Office fails to consider Claims 2–21 as whole [in light of the specification]” and has oversimplified the claims “at such a high level of abstraction that it is untethered from the language of the claims” (*id.* at 8); and
- (3) “the claims are not directed to an idea itself . . . recite several meaningful limitations that are more than a mental process when considered as a whole in light of the specification” (*id.* at 9).

App. Br. 6–10; Reply Br. 2–5.

Appellant’s arguments are not persuasive. First, the Examiner is required to review all claims at some level of generalization and characterize whether those claims are directed to an abstract idea under *Alice* step 1. However, there is no single definition of “abstract idea.” As the Federal Circuit succinctly put it:

The problem with articulating a single, universal definition of “abstract idea” is that it is difficult to fashion a workable definition to be applied to as-yet-unknown cases with as-yet-unknown inventions.

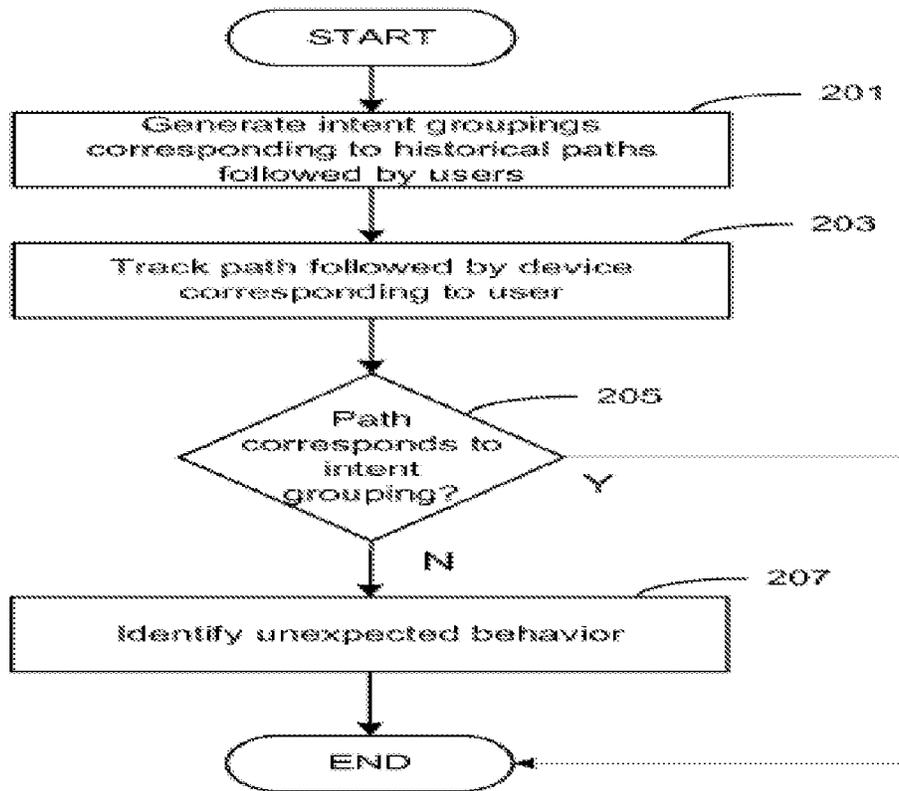
*Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016). Because there is no single definition of an abstract idea, the Federal Circuit instructs us “to examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided.” *Id.* at 1294 (citing *Elec. Power Grp., LLC v.*

*Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016); accord USPTO Memorandum, *July 2015 Update: Subject Matter Eligibility* (2015), <https://www.uspto.gov/sites/default/files/documents/ieg-july-2015-update.pdf> (“USPTO Memorandum”) (instructing Examiners that “a claimed concept is not identified as an abstract idea unless it is similar to at least one concept that the courts have identified as an abstract idea”). In this case, the Examiner did what he was required to do under the USPTO Memorandum, has characterized the claims as required pursuant to *Alice*, and has provided analogous claims as discussed in *Fairwarning*.

Second, Appellant’s reliance on *DDR Holdings* is misplaced. In *DDR Holdings*, the Federal Circuit recognized *DDR’s* claims, like any patent claim, could be characterized as an abstract idea under *Alice* step 1, but avoided doing so because “identifying the precise nature of the abstract idea [of *DDR’s* claims] is not as straightforward as in *Alice*.” *DDR Holdings*, 773 F.3d at 1257. For example, *DDR’s* claims could be characterized broadly as an abstract idea in several ways, including: (1) “making two web pages look the same,” (2) “syndicated commerce on the computer using the Internet,” or (3) “making two e-commerce web pages look alike by using licensed trademarks, logos, color schemes and layouts.” *Id.* at 1257. Because *DDR’s* claim could be characterized in several ways, the Federal Circuit opted to bypass *Alice* step 1 in favor of *Alice* step 2. In particular, the Federal Circuit found *DDR’s* claims contain an “inventive concept” under *Alice* step 2 because *DDR’s* claims: (1) do not merely recite “the performance of some business practice known from the pre-Internet world” previously disclosed in *Bilski* and *Alice* but instead; (2) provide a technical solution to a technical problem unique to the Internet, *i.e.*, a “solution . . .

necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *DDR*, 773 F.3d at 1257.

Third, and contrary to Appellant’s arguments, Appellant’s claims and Specification describe “detecting unexpected behavior” of a user based on tracking a path followed by a user’s device and comparing that path to historical paths followed by other devices associated with a topology of a particular site to infer user intent or deviation from an expected behavior. Spec. ¶¶ 7–9, 20, 24; Abstract. According to Appellant, “the path followed by a device associated with the current user and the paths followed by devices associated with previous users” includes, for example: (1) “network navigation information”; (2) “physical navigation information”; or (3) “both network navigation information and physical navigation information.” Spec. ¶ 7. Embodiments of Appellant’s Specification are shown in Figure 2, as reproduced below:



**FIG. 2**

Appellant's Figure 2 describes basic steps recited in Appellant's claims 2, 7, and 15, including: (1) generating intent groupings based on historical paths followed by users at a particular site (i.e., physical locations of a mobile device); (2) tracking a path followed by a user's device; (3) determining whether the path followed by the user corresponds to an intent group associated with one or more historical paths tracked; and (4) identifying any unexpected behavior if the path does not correspond to one or more intent groupings in order to take preventive measures. Spec. ¶ 36.

As recognized by the Examiner (Final Act. 3), the steps recited in Appellant's claims 2, 7, and 15 such as "tracking . . . at least one path followed by device," "identifying," and "determining" are mental steps that could also be performed in the human mind or by a human using a pen and

paper. *See CyberSource*, 654 F.3d at 1372–73 (“[A] method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under [§] 101.”); *see also In re Comiskey*, 554 F.3d 967, 979 (Fed. Cir. 2009) (“[M]ental processes—or processes of human thinking—standing alone are not patentable even if they have practical application.”); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“Phenomena of nature, . . . mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.” (Emphasis added)). Additionally, mental processes remain unpatentable even when automated to reduce the burden on the user of what once could have been done with pen and paper. *CyberSource*, 654 F.3d at 1375 (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*.”).

Likewise, the steps recited in Appellant’s claims 2, 7, and 15 are also abstract processes of receiving, processing, comparing, and identifying data of a specific content, i.e., data specific to the path followed by a user’s device associated with an unexpected behavior. Information, as such, is intangible, and data comparison and identification are abstract ideas. *See, e.g., Microsoft Corp. v. AT & T Corp.*, 550 U.S. 437, 451 n.12 (2007); *Alice*, 134 S. Ct. at 2355; *Parker v. Flook*, 437 U.S. 584, 589, 594–95 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972). “[C]ollecting information and analysis, including when limited to particular content (which does not change its character as information),” and “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more,” are “within the realm of abstract ideas.” *Electric Power Group*, 830 F.3d at 1353–54; *see also Internet Patents Corp. v. Active Network, Inc.*, 790

F.3d 1343, 1349 (Fed. Cir. 2015); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014); *CyberSource* 654 F.3d at 1370. Moreover, the steps recited in claims 2, 7, and 15 are also akin or analogous to the claims discussed in *Fairwarning*, as correctly recognized by the Examiner. Final Act. 3

Thus, we agree with the Examiner that claims 2–21 are directed to an abstract idea of “detecting unexpected behavior of a user’s device” which is considered as a “mental process.”

*Alice/Mayo—Step 2 (Inventive Concept)*

In the second step of the *Alice* inquiry, Appellant argues the claims “recite elements that amount to ‘significantly more’ [i.e., inventive concept] than the alleged abstract idea” because:

- (1) “the claims recite a specific technical solution to a technical problem”;
- (2) like the claims in *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016), Appellant’s claims “are directed to a particular, practical arrangement of elements that constitutes an improvement over existing systems that analyze user behavior within an Internet site”;
- (3) like the claims in *DDR Holdings*, Appellant’s claims “are rooted in overcoming challenges related to computer networks”; and
- (4) like the claims in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016), Appellant’s claims relate to programmatically tracking user behavior and identifying remedial or preventative measures to activate in response to an analysis of such user behavior.

App. Br. 9–12; Reply Br. 5–7.

Appellant’s arguments are not persuasive. Under current Federal Circuit precedent, an “inventive concept” under *Alice* step 2 can be established by showing, for example, that the patent claims:

- (1) provide a technical solution to a technical problem unique to the Internet, e.g., a “solution . . . necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks” (see *DDR*, 773 F.3d at 1257);
- (2) transform the abstract idea into “a particular, practical application of that abstract idea,” e.g., “installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user” (see *BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1352, 1350 (Fed. Cir. 2016)); or
- (3) “entail[] an unconventional technological solution ([e.g.,] enhancing data in a distributed fashion) to a technological problem ([e.g.,] massive record flows [that] previously required massive databases)” and “improve the performance of the system itself” (see *Amdocs*, 841 F.3d at 1300, 1302).

In this case, however, we find no element or combination of elements recited in Appellant’s claims 2, 7, and 15 that contains any “inventive concept” or adds anything “significantly more” to transform the abstract concept into a patent-eligible application. *Alice*, 134 S. Ct. at 2357. For example, Appellant’s “abstract idea of detecting unexpected behavior” of a user’s device is not rooted in computer technology; nor does it (1) provide any technical solution to a technical problem unique to the Internet as required by *DDR Holdings*; (2) provide any particular practical application as required by *Bascom*; or (3) entail an unconventional technological solution to a technological problem as required by *Amdocs*. Instead,

Appellant’s invention simply uses a generic computing device, shown, for example, in Figures 1 and 3, to perform the abstract idea of detecting unexpected behavior of a user’s device based on tracking a path followed by a user’s device and comparing that path to historical paths followed by other devices associated with a topology of a particular site to infer user intent or deviation from an expected behavior (Spec. ¶¶ 7–9, 20, 24; Abstract)

As recognized by the Examiner, “the use of generic computer elements like a microprocessor or user interface do not alone transform an otherwise abstract idea into patent-eligible subject matter.” Ans. 16. As our reviewing court has observed, “after *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.” *DDR*, 773 F.3d at 1256 (citing *Alice*, 134 S. Ct. at 2358).

Because Appellant’s claims 2, 7, and 15 are directed to a patent-ineligible abstract concept and do not recite something “significantly more” under the second prong of the *Alice* analysis, we sustain the Examiner’s rejection of claims 2–21 under 35 U.S.C. § 101.

#### CONCLUSION

On the record before us, we conclude Appellant has not demonstrated the Examiner erred in rejecting claims 2–21 under 35 U.S.C. § 101.

#### DECISION

As such, we AFFIRM the Examiner’s rejection of claims 2–21 under 35 U.S.C. § 101.

Appeal 2018-004382  
Application 14/840,150

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

AFFIRMED