



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.
13/452,471	04/20/2012	Pat Hathaway	201200481	1485
10782	7590	11/21/2018	EXAMINER	
Target Brands Inc. 1000 Nicollet Mall, TPS-3165 Minneapolis, MN 55403			AN, IG TAI	
			ART UNIT	PAPER NUMBER
			4112	
			NOTIFICATION DATE	DELIVERY MODE
			11/21/2018	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):

USPTO.Mail@target.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* PAT HATHAWAY, DEREK JOHNSON,  
RAVISHANKAR JAGADEESHWARA,  
HONG SINGHANIA, GARY SANKARY,  
ERIC BIBELNIEKS, SHAM KASHYAP, and CINDY JUDGE

---

Appeal 2017-004717  
Application 13/452,471  
Technology Center 3600

---

Before BRADLEY W. BAUMEISTER, KARA L. SZPONDOWSKI, and  
MICHAEL M. BARRY, *Administrative Patent Judges*.

SZPONDOWSKI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants<sup>1</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 2, and 4–20, constituting all claims pending in the current application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

STATEMENT OF THE CASE

Appellants' invention is directed to automating aspects of organizing product placement in retail stores, and more specifically, to automated

---

<sup>1</sup> According to Appellants, the real party in interest is Target Brands, Inc. App. Br. 3.

mapping of product adjacency groups with merchandising persistence logic.  
Spec. ¶¶ 1, 4, 5. Claim 1, reproduced below, is representative of the claimed  
subject matter:

1. A method for generating a product subgroup map for a product adjacency group with a computing system, the method comprising:

providing, by the computing system, a user interface presenting data on a plurality of product subgroups for the product adjacency group, each of the product subgroups comprising one or more products;

receiving, by the computing system, via the user interface, one or more user inputs indicating one or more user-selected product subgroups from among the plurality of product subgroups;

for each respective user-selected product subgroup of the one or more user-selected product subgroups:

configuring, by the computing system, the user interface with user-selectable options for editing user-editable mapping criteria of the respective user-selected product subgroup and for assigning a respective priority value to each respective one of the user-editable mapping criteria for the respective user-selected product subgroup, wherein the user-editable mapping criteria for the respective user-selected product subgroup include a respective ideal minimum area, a respective ideal area, and a respective ideal maximum area for a respective area of a display for the respective user-selected product subgroup; and

receiving, by the computing system, one or more user inputs for each of the user-editable

mapping criteria for the respective user-selected product subgroup;

generating, by the computing system, based in part on a score for a persistence criterion, the product subgroup map, wherein:

the computing system generates the product subgroup map based on the one or more user inputs for each of the user-editable mapping criteria for the one or more user-selected product subgroups, the priority values assigned to the user-editable mapping criteria for the one or more user-selected product subgroups, priority values assigned to one or more non-user-editable mapping criteria, and data indicating a physical layout of a store,

the one or more non-user-editable mapping criteria comprise the persistence criterion, wherein the priority value assigned to the persistence criterion places a priority on persisting product subgroup mapping positions from a previous product subgroup map, the score for the persistence criterion being calculated as a percentage of merchandising sections or area that are persisted without lack of persistence being necessitated by a change in area for the product subgroup, and

the product subgroup map comprises a map of the product subgroups of the product adjacency group within the physical layout of the store; and

providing, by the computing system, a graphical output of the product subgroup map.

## REJECTION

Claims 1, 2, and 4–20 stand rejected under 35 U.S.C. § 101 because the Examiner determines that the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more.

## PRINCIPLES OF LAW

In *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014), the Supreme Court reiterated the 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. U.S.*, 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 (citing *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.* (citing *Mayo*, 566 U.S. at 72–73).

## ANALYSIS

The Examiner determines “the claims are directed to the abstract idea of organizing the product layout of a retail store,” and are similar to the claims in *Parker v. Flook*, 437 U.S. 584 (1978). Final Act. 4. The Examiner further determines the claims do not include additional elements alone or in combination that are sufficient to amount to sufficiently more than the abstract idea, but rather, are mere instructions to implement the idea on a computer, and recite generic computer structure that serves to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the pertinent industry. Final Act. 5.

Appellants argue claim 1 is similar to the claims in *Ex parte Wegman III*, Appeal No. 2013-008168 (PTAB Sept. 22, 2015). App. Br. 13. Specifically, Appellants argue claim 1 “is much more specific than the broad abstract idea stated by the Office Action.” App. Br. 14. According to Appellants, “the features of Appellant[s]’ claim 1 are sufficiently concrete as to set them outside the broad definition of abstract idea as set forth in *Alice*.” App. Br. 15. Appellants further argue claim 1 is not similar to the claims in *Flook* because the claims are not directed to an abstract idea in the first place, so there is nothing (e.g., a mathematical algorithm) to be assumed to be in the prior art. App. Br. 15–16. In addition, Appellants argue claim 1 is similar to the claims in *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016). Reply Br. 6–8.

Appellants' arguments are unpersuasive. Initially, we note *Ex parte Wegman II* is a non-precedential decision of the Board and, thus, is not binding precedent. Moreover, Appellants have not persuasively explained why claim 1 is not directed to the abstract idea of "organizing the product layout of a retail store."

Appellants focus on the claim limitation, "the score for the persistence criterion being calculated as a percentage of merchandising sections or area that are persisted without lack of persistence being necessitated by a change in area for the product subgroup" (App. Br. 14), which recites a calculation, or mathematical algorithm. As the Examiner notes, this step "appears to carry out a calculation based on a series of inputs," similar to the claims in *Flook*. Ans. 7.

It is well established that data analysis and algorithms are abstract ideas. *See, e.g., Alice*, 134 S. Ct. at 2355; *Flook*, 437 U.S. at 594–95 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972). Claim 1 is directed to an abstract idea because it is focused on collecting information (e.g., user inputs), processing the information, including by mathematical algorithm (e.g. generating the product subgroup map based on the user inputs, priority values, and data indicating a physical layout), and presenting the results (e.g., providing a graphical output of the product subgroup map). *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (holding that "collecting information, analyzing it, and displaying certain results of the collection and analysis" are "a familiar class of claims 'directed to' a patent-ineligible concept"); *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) (claims directed to "collecting, displaying, and manipulating data" are abstract).

Moreover, as a whole, the recited steps in claim 1 involve no more than abstract concepts that could be performed in the human mind, or by a human using a pen and paper, without the need of any computer or other machine. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372–73 (Fed. Cir. 2011); *see also Benson*, 409 U.S. at 67. Such 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; *see Fair Warning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (citing *Bancorp Serv., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.”)). Indeed, Appellants’ Specification extensively describes using various data, rules, strategies, and goals as input to *automate* merchandise presentation. E.g., Spec. ¶¶ 1–5, 106–108.

Appellants’ reliance on *McRO* is also not persuasive. In *McRO*, the claims were “focused on a specific asserted improvement in computer animation” that “allow[ed] computers to produce ‘accurate and realistic lip synchronization and facial expressions in animated characters’ that previously could only be produced by human animators . . . through ‘the use of rules, rather than artists, to set the morph weights and transitions between phonemes.’” 837 F.3d at 1313–14 (internal citation omitted). The claims in *McRO* were defined a specific way to solve the problem, automating tasks that previously were not automated because they were driven by subjective determinations, rather than specific mathematical rules. *Id.* at 1314. Moreover, the existing technological process was improved by the

incorporation of the claimed rules (e.g., evaluating sub-sequences, generating transition parameters, and applying transition parameters to create a final morph weight set) to allow automation of further tasks. *Id.*

Appellants contend the “automated mapping of product subgroups in adjacency groups” is the alleged improvement, and claim 1 includes features analogous to the “rules” in *McRO*, such as involving priority values assigned to various criteria, including user-editable criteria, non-user-editable criteria, and a persistence criterion. Reply Br. 8. We disagree the claims are like those in *McRO*.

Claim 1 does not recite a specific improvement to computers or recite the technical details that describe the alleged improvement of the technical process, such as incorporating the specific features of the “rules.” *See McRO*, 837 F.3d at 1313. For example, although claim 1 recites generating the product subgroup map based on (1) the user inputs for each of the user-editable mapping criteria, (2) the priority values assigned to the user-editable mapping criteria, (3) the priority values assigned to the non-user-editable mapping criteria (persistence criterion), and (4) data indicating the physical layout of the store, claim 1 does not recite technical details as to how the product subgroup should be generated based upon these four different inputs. Instead, claim 1 merely recites collecting, analyzing, and displaying information along with generic computer elements (e.g., “a computing system”).

Appellants further argue “[n]othing in these steps may be considered necessary, routine, or conventional in terms of the fundamental abstraction set forth by the Office Action” because “[t]he Office Action itself noted that

the emphasized portion of the feature cited above ‘is not obvious in view of the prior art of record or any combination thereof.’” App. Br. 14.

Appellants improperly conflate the requirements for patent-eligible subject matter (under § 101) with the independent requirements of novelty (under § 102) and non-obviousness (under § 103). “The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.” *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981); *see also Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016) (stating that, “under the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility”).

With respect to the second step in the *Alice* analysis, Appellants argue claim 1 “does not ‘seek to tie up any judicial exception such that others cannot practice it.’” App. Br. 16 (internal citation omitted). Appellants further argue “claim 1 recites more than well-understood, routine and conventional elements and, instead, recites a specific technique that confines the claim to a particular application without seeking to pre-empt all techniques for ‘organizing the product layout of a retail store.’” App. Br. 17. Appellants further argue claim 1 describes a “new and automated way of generating [the] interface.” Reply Br. 10.

Appellants’ arguments are not persuasive. Rather, we agree with the Examiner that claim 1 amounts to no more than instructions to implement the abstract idea on a computer. *See* Final Act. 5. Appellants have not directed our attention to anything in the record that shows, nor can we find,

any specialized computer hardware or other “inventive” computer components are required.

Rather than reciting additional elements that amount to “significantly more” than the abstract idea, the pending claims, at best, add only a generic “computing system,” “processor,” “storage device,” and “user interface” (see Spec. ¶¶ 49, 52–54, 60–68, 72–92, Figs. 1–4), which does not satisfy the inventive concept. See, e.g., *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (“[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible. The bare fact that a computer exists in the physical rather than purely conceptual realm is beside the point.”) (internal quotation marks and citation omitted). As recognized by the Supreme Court, “the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” See *Alice*, 134 S. Ct. at 2358–59 (concluding claims “simply instruct[ing] the practitioner to implement the abstract idea of intermediated settlement on a generic computer” not patent eligible); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1344–45 (Fed. Cir. 2013) (claims reciting “generalized software components arranged to implement an abstract concept . . . [of generating insurance-policy-related tasks based on rules to be completed upon the occurrence of an event] on a computer” not patent eligible).

Appellants’ preemption argument does not alter our § 101 analysis. This argument is adequately addressed by the remainder of the *Alice* analysis. See *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (“Where a patent’s claims are deemed only to disclose

patent ineligible subject matter under the Mayo framework, as they are in this case, preemption concerns are fully addressed and made moot.”); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) (“[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”).

Accordingly, we are not persuaded the Examiner erred in rejecting independent claim 1 under 35 U.S.C. § 101, so we, therefore, sustain the rejection. For the same reasons, we sustain the Examiner’s 35 U.S.C. § 101 rejection of dependent claims 2 and 4–12, which are not separately argued (App. Br. 18), as well as independent claims 13 and 17 and their respective dependent claims 14–16, and 18–20, for which Appellants presented the same arguments (App. Br. 20–21).

#### DECISION

We affirm the Examiner’s 35 U.S.C. § 101 rejection of claims 1, 2, and 14–20.

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