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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SEAN MICHAEL BRUICH
and BRADLEY HOPKINS SMALLWOOD

Appeal 2017–001718
Application 13/658,480
Technology Center 3600

Before ANTON W. FETTING, BRUCE T. WIEDER, and
TARA L. HUTCHINGS, *Administrative Patent Judges*.
FETTING, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE¹

Sean Michael Bruich and Bradley Hopkins Smallwood (Appellants) seek review under 35 U.S.C. § 134 of a non-final rejection of claims 1–4, 6, 7, 9–17, and 20–22, the only claims pending in the application on appeal. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

¹ Our decision will make reference to the Appellants’ Appeal Brief (“App. Br.,” filed June 14, 2016) and Reply Brief (“Reply Br.,” filed November 7, 2016), and the Examiner’s Answer (“Ans.,” mailed October 4, 2016), and Non-Final Action (“Non-Final Act.,” mailed March 21, 2016).

The Appellants invented a way of determining advertising effectiveness based on the observed actions of users in a social networking system.
Specification para. 1.

An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below (bracketed matter and some paragraphing added).

1. A computer-implemented method comprising:
using a computer processor to perform steps comprising:
 - [1] randomly selecting a plurality of users to be included in at least one of holdout subset and a sample subset from a plurality of users of a social networking system;
 - [2] selecting a pseudo-control group of users from the users in the sample subset, the users in the pseudo-control group not having met targeting criteria for being shown advertisements;
 - [3] selecting an advertisement from the one or more advertisements;
 - [4] preventing the users in the holdout subset and the users in the pseudo-control group from being presented with the selected advertisement;
 - [5] presenting the selected advertisement to the remaining users in the sample subset;
 - [6] determining one or more actions performed by the users in the holdout subset;
 - [7] determining one or more actions performed by the users in the pseudo-control group;
 - [8] determining one or more actions performed by the users presented with the selected advertisement in the sample subset;
 - [9] calculating a drift metric representing differences between the actions performed by the users in the holdout subset and the actions performed by the users in the pseudo-control group, the calculated drift metric indicating whether the pseudo-control group is validated to act as a suitable control with which the

sample subset is compared to measure effectiveness of the selected advertisement;

[10] responsive to the drift metric being within a predefined similarity range, calculating a measure of effectiveness for the selected advertisement based at least in part on the determined actions performed by the one or more users presented with the selected advertisement in the sample subset and the determined actions performed by the users in the pseudo-control group.

Claims 1–4, 6, 7, 9–17, and 20–22 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

ISSUES

The issues of eligible subject matter turn primarily on whether the claims recite more than abstract conceptual advice of what a computer is to provide without implementation details.

ANALYSIS

Method claim 1 recites selecting users and an advertisement, presenting the advertisement to some and preventing display to other users, determining actions, and computing a drift metric and a measure of effectiveness. Thus, claim 1 recites retrieving data, displaying data, and analyzing and computing data. None of the limitations recite implementation details for any of these steps, but instead recite functional results to be achieved by any and all possible means. Data reception, analysis and modification, and display are all generic, conventional data processing operations to the point they are themselves concepts awaiting implementation details. The sequence of data

reception–display–analysis is equally generic and conventional. The ordering of the steps is therefore ordinary and conventional. Independent method claim 13 recites similar steps in a slightly different sequence, but retains the data reception–display–analysis sequence. The remaining claims merely describe data and parameters for the advertising, selections, and computations, with no implementation details.

The Supreme Court

set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent–eligible applications of those concepts. First, [] determine whether the claims at issue are directed to one of those patent–ineligible concepts. [] If so, we then ask, “[w]hat else is there in the claims before us? [] To answer that question, [] consider the elements of each claim both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent–eligible application. [The Court] described step two of this analysis as a 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.”

Alice Corp., Pty. Ltd. v. CLS Bank Intl, 134 S.Ct. 2347, 2355 (2014) (citing *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012)).

To perform this test, we must first determine whether the claims at issue are directed to a patent–ineligible concept. The Examiner finds the claims directed to a mathematical algorithm defined by the steps, which is merely an idea 'of itself', mathematical relationships/formulas and a fundamental economic practice. Non-Final Act. 3–4.

Although the Court in *Alice* made a determination as to what the claims were directed to, we find that this case's claims themselves and the Specification provide enough information to inform one as to what they are directed to.

The preamble to claim 1 does not recite what it is directed to, but the steps in claim 1 result in calculating a drift metric and a measure of effectiveness based on data from actions performed by the users presented with a selected advertisement in a sample subset. The Specification at paragraph 1 recites that the invention relates to determining advertising effectiveness based on the observed actions of users in a social networking system. Thus, all this evidence shows that claim 1 is directed to using a mathematical algorithm to compute statistical measures, i.e. a mathematical algorithm. This is consistent with the Examiner's finding.

It follows from prior Supreme Court cases, and *Bilski* (*Bilski v. Kappos*, 561 U.S. 593 (2010)) in particular, that the claims at issue here are directed to an abstract idea. Like the risk hedging in *Bilski*, the concept of market research is a fundamental business practice long prevalent in our system of commerce. The use of market research is also a building block of ingenuity in marketing. Thus, market research, like hedging, is an "abstract idea" beyond the scope of §101. See *Alice Corp. Pty. Ltd.* at 2356. Beyond that, mathematical algorithms are abstract ideas.

As in *Alice Corp. Pty. Ltd.*, we need not labor to delimit the precise contours of the "abstract ideas" category in this case. It is enough to recognize that there is no meaningful distinction in the level of abstraction between the concept of risk hedging in *Bilski* and the concept of market

research at issue here. Both are squarely within the realm of “abstract ideas” as the Court has used that term. *See Alice Corp. Pty. Ltd.* at 2357.

Further, claims involving data collection, analysis, and display are directed to an abstract idea. *Elec. Power Grp. 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”); *see also In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016). Claim 1, unlike the claims found non–abstract in prior cases, uses generic computer technology to perform data retrieval, analysis, and display and does not recite an improvement to a particular computer technology. *See, e.g., McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314–15 (Fed. Cir. 2016) (finding claims not abstract because they “focused on a specific asserted improvement in computer animation”). As such, claim 1 is directed to the abstract idea of receiving, analyzing, and displaying data.

The remaining claims merely describe data and parameters for the advertising, selections, and computations. We conclude that the claims at issue are directed to a patent–ineligible concept.

The introduction of a computer into the claims does not alter the analysis at *Mayo* step two.

the mere recitation of a generic computer cannot transform a patent–ineligible abstract idea into a patent–eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is

not enough for patent eligibility. Nor is limiting the use of an abstract idea “to a particular technological environment.” Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implemen[t]” an abstract idea “on . . . a computer,” that addition cannot impart patent eligibility. This conclusion accords with the preemption concern that undergirds our §101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of “additional featur[e]” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.”

Alice Corp. Pty. Ltd., 134 S.Ct. at 2358 (citations omitted).

“[T]he relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea [] on a generic computer.” *Alice Corp. Pty. Ltd.*, 134 S.Ct. at 2359. They do not.

Taking the claim elements separately, the function performed by the computer at each step of the process is purely conventional. Using a computer to retrieve, analyze, and display data amounts to electronic data query and retrieval—one of the most basic functions of a computer. All of these computer functions are well-understood, routine, conventional activities previously known to the industry. *See Elec. Power Grp. v. Alstom S.A.*, *supra*. Also see *In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’ . . . those functions can be achieved by any general purpose computer without special programming”). In short, each step does no more than

require a generic computer to perform generic computer functions. As to the data operated upon, “even if a process of collecting and analyzing information is ‘limited to particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.” *SAP America Inc. v. InvestPic LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018)

Considered as an ordered combination, the computer components of Appellants’ method add nothing that is not already present when the steps are considered separately. The sequence of data reception–display–analysis is equally generic and conventional or otherwise held to be abstract. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (sequence of receiving, selecting, offering for exchange, display, allowing access, and receiving payment recited an abstraction), *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (sequence of data retrieval, analysis, modification, generation, display, and transmission), *Two–Way Media Ltd. v. Comcast Cable Communications, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (sequence of processing, routing, controlling, and monitoring). The ordering of the steps is therefore ordinary and conventional.

Viewed as a whole, Appellants’ method claims simply recite the concept of market research as performed by a generic computer. To be sure, the claims recite doing so by advising one to divide a test group and only present an ad to some of the groups for the purpose of collecting statistics. But this is no more than abstract conceptual advice on the parameters for such market research and the generic computer processes necessary to process those parameters, and do not recite any particular implementation.

The method claims do not, for example, purport to improve the functioning of the computer itself. Nor do they effect an improvement in any other technology or technical field. The pages of specification spell out different generic equipment² and parameters that might be applied using this concept and the particular steps such conventional processing would entail based on the concept of market research under different scenarios. They do not describe any particular improvement in the manner a computer functions. Instead, the claims at issue amount to nothing significantly more than an instruction to apply the abstract idea of market research using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice Corp. Pty. Ltd.* at 2360.

As to the structural claims, they

are no different from the method claims in substance. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea. This Court has long “warn[ed] ... against” interpreting § 101 “in ways that make patent eligibility ‘depend simply on the draftsman’s art.’”

Alice Corp. Pty. Ltd. at 2360.

As to Appellants’ Appeal Brief arguments, we adopt Examiner’s determinations and analysis from Non-Final Action 2–7 and Answer 3–15 and reach similar legal conclusions. We now turn to the Reply Brief.

² For example, a general-purpose computing device. Spec. para. 67.

We are not persuaded by Appellants' argument that

the claims are directed towards solving a specific problem through the particular implementation of a holdout subset, a sample subset, and a pseudo-control group that "reduces the number of wasted advertising opportunities. Because holdout subsets primarily serve as checks for whether pseudo-control groups can be suitably compared to sample subsets, holdout subsets may be kept relatively small in size.

Reply Br. 3. What Appellants refer to as the particular implementation of a holdout subset, a sample subset, and a pseudo-control group is not a technological, but rather a conceptual implementation. It is no more than advice to use such subsets.

The patent in this case is not directed to the solution of a "technological problem," nor is it directed to an improvement in computer or network functionality. Instead, it claims the general concept of out-of-region delivery of broadcast content through the use of conventional devices, without offering any technological means of effecting that concept.

Affinity Labs of Texas, LLC v. DIRECTV, LLC, 838 F.3d 1253, 1262 (Fed. Cir. 2016).

We are not persuaded by Appellants' argument that the claims are unlike those in the cases the Examiner cites. Reply Br. 4-6. Every case presents different facts. The issue is whether the instant claims are directed to some idea in the form of some practice that is so fundamental that its invocation is itself an abstraction. These claims are directed to computing statistics regarding the market for an ad, which is a form of market research. Market research has been a staple of industry for over a century. To the extent Appellants contend the claims are directed to making the specific computations recited, such computations are not technological, but are

themselves abstractions. Using one abstract idea in pursuit of another does not remove claims from the realm of abstract ideas. “Adding one abstract idea . . . to another abstract idea . . . does not render the claim nonabstract.” *RecogniCorp, LLC v. Nintendo Co., Ltd.*, 855 F.3d 1322, 1327 (2017)

Appellants also attempt to analogize the claims to those involved in *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016). Reply Br. 6–9. In *McRO*, the court held that, although the processes were previously performed by humans, “the traditional process and newly claimed method . . . produced . . . results in fundamentally different ways.” *FairWarning v. Iatric Systems*, 839 F.3d at 1094 (differentiating the claims at issue from those in *McRO*). In *McRO*, “it was the incorporation of the claimed rules not the use of the computer, that improved the existing technology process,” because the prior process performed by humans “was driven by subjective determinations rather than specific, limited mathematical rules.” 837 F.3d at 1314 (internal quotation marks, citation, and alterations omitted). In contrast, the claims of the instant application merely implement an old practice of using decision criteria in making sales decisions in a new environment. Appellants have not argued that the claimed processes of selecting ads do so in a manner technologically different from those which humans used, albeit with less efficiency, before the invention was claimed. Merely using particular subsets for research and computing statistics for the objects of decision making to aid decision making is both old and itself abstract.

The claims in *McRO* were not directed to “a specific asserted improvement in computer animation, i.e., the automatic use of rules of a particular type.” We explained that “the claimed improvement [was] allowing computers to produce ‘accurate

and realistic lip synchronization and facial expressions in animated characters’ that previously could only be produced by human animators.” The claimed rules in McRO transformed a traditionally subjective process performed by human artists into a mathematically automated process executed on computers.

FairWarning, 839 F.3d 1089, 1094 (Fed. Cir, 2016).

We are not persuaded by Appellants’ argument that the claims contain an inventive concept that is also found in the specific ordered combination of the limitations, similar to the Federal Circuit's findings in *Bascom* (*Bascom Global Internet v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016)). Reply Br. 11–15. Initially, we remind Appellants that *Bascom* did not find claims eligible on the substance, but rather that the Appellees did not provide sufficient evidence to support a 12(b)(6) motion to dismiss in which facts are presumed in the non–movant’s favor.

The key fact in *Bascom* was the presence of a structural change in “installation of a filtering tool at a specific location, remote from the end–users, with customizable filtering features specific to each end user. This design gives the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server.” *Bascom*, 827 F.3d at 1350. The instant claims have no analogous structural benefit.

Appellants contend that their steps for selecting research subject subsets are inventive because they are novel and useful. But a novel abstract idea remains an abstract idea. “A claim for a new abstract idea is still an abstract idea. The search for a § 101 inventive concept is thus distinct from demonstrating § 102 novelty.” *Synopsys, Inc. v. Mentor Graphics Corporation*, 839 F.3d 1138, 1151 (Fed. Cir. 2016). And many abstract ideas are highly useful, as for example, “a stitch in time saves nine” and “an

ounce of prevention is worth a pound of cure” are the basis for the highly useful billion dollar preventative maintenance industry. Novelty and utility are not determinative. At bottom, there is nothing structural or technological in the recited manner of selecting test subjects. Such a manner remains abstract conceptual advice for how to do so.

Appellants further argue that the asserted claims are akin to the claims found patent-eligible in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). Reply Br. 16–17. In *DDR Holdings*, the Court evaluated the eligibility of claims “address[ing] the problem of retaining website visitors that, if adhering to the routine, conventional functioning of Internet hyperlink protocol, would be instantly transported away from a host’s website after ‘clicking’ on an advertisement and activating a hyperlink.” *Id.* at 1257. There, the Court found that the claims were patent eligible because they transformed the manner in which a hyperlink typically functions to resolve a problem that had no “pre-Internet analog.” *Id.* at 1258. The Court cautioned, however, “that not all claims purporting to address Internet-centric challenges are eligible for patent.” *Id.* For example, in *DDR Holdings* the Court distinguished the patent-eligible claims at issue from claims found patent-ineligible in *Ultramercial*. *See id.* at 1258–59 (citing *Ultramercial*, 772 F.3d 709, 715–16 (Fed. Cir. 2014)). As noted there, the *Ultramercial* claims were “directed to a specific method of advertising and content distribution that was previously unknown and never employed on the Internet before.” *Id.* at 1258 (quoting *Ultramercial*, 772 F.3d at 715–16). Nevertheless, those claims were patent ineligible because they “merely recite[d] the abstract idea of ‘offering media content in exchange for

viewing an advertisement,’ along with ‘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.’” *Id.*

Appellants’ asserted claims are analogous to claims found ineligible in *Ultramercial* and distinct from claims found eligible in *DDR Holdings*. The ineligible claims in *Ultramercial* recited “providing [a] media product for sale at an Internet website;” “restricting general public access to said media product;” “receiving from the consumer a request to view [a] sponsor message;” and “if the sponsor message is an interactive message, presenting at least one query to the consumer and allowing said consumer access to said media product after receiving a response to said at least one query.” 772 F.3d at 712. Similarly, Appellants’ asserted claims recite retrieving data, displaying data, and analyzing and computing data. This is precisely the type of Internet activity found ineligible in *Ultramercial*.

CONCLUSIONS OF LAW

The rejection of claims 1–4, 6, 7, 9–17, and 20–22 under 35 U.S.C. § 101 as directed to non–statutory subject matter is proper.

DECISION

The rejection of claims 1–4, 6, 7, 9–17, and 20–22 is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2011).

AFFIRMED