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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte STEVEN R. KARSON,
MARK G. SMITH,
and MICHAEL J. BURGISS

Appeal 2016–003283
Application 12/342,944
Technology Center 3600

Before ANTON W. FETTING, MICHAEL W. KIM, and KENNETH G. SCHOPFER, *Administrative Patent Judges.*

FETTING, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE[1]

Steven R. Karson, Mark G. Smith, and Michael J. Burgiss (Appellants) seek review under 35 U.S.C. § 134 of a final rejection of claims 1–16, the

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[1] Our decision will make reference to the Appellants' Appeal Brief ("App. Br.," filed July 29, 2015) and Reply Brief ("Reply Br.," filed February 4, 2016), and the Examiner's Answer ("Ans.," mailed December 4, 2015), and Final Action ("Final Act.," mailed January 29, 2015).

only claims pending in the application on appeal. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

The Appellants' Specification discloses a way of forecasting when advertising capacity is not within a producer's control, or based on a manufactured quantity. Specification para. 3.

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

> 1. A method of delivering digitally-encoded advertising content over a digital network comprising:
>
> [1] storing, in a memory device, historical advertising content delivery data comprising
>
> > a recording of a substantial number of actual advertising impressions delivered in response to user queries;
>
> [2] with at least one processor coupled to the memory device and to the network,
>
> > receiving user queries via the digital network
> >
> > and
> >
> > in response thereto, analyzing the stored advertising content delivery data
> >
> > > to assess future capacity for delivering targeted advertising content in response to the user queries via the network;
>
> [3] with the at least one processor, assessing already reserved advertising content deliveries;
>
> [4] with the at least one processor, forecasting availability of future opportunities for delivering targeted advertising content via at least one server on the network in response to said assessed future capacity and said assessed reserved deliveries,

including the processor taking overlap situations into account,

wherein an overlap situation occurs if

advertising content is responsive to more than one specific user query,

and

the at least one processor forecasts availability at least in part by the processor automatically calculating

availability based on the number of times advertising content has served targeted to a specific user query

and

the number of times the matched advertising content has served to any targeting;

[5] with the at least one processor, reserving additional advertising content delivery

in response at least in part to said forecasted availability;

and

[6] using the at least one server on the network, delivering digitally encoded targeted advertising content

to users over the network

based at least in part on the forecasted availability and the reserved additional advertising content delivery.

Claims 1–16 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 as to what a computer is to do without any implementation details as to how to do so.

FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

Facts Related to Appellants' Disclosure

01. In this exemplary illustrative non-limiting implementation, the number of ads booked and reserved is calculated as being equal to a flight target 1 710(1) +the flight target 2 710(2) +flight target n 710(n). In other words, the number of ads booked and reserved can be determined as the total number of ads "in flight" that are targeted based on the various combinations of queries. The percentage of overlap 712 is calculated based on the number of times the matched flight target has served to the query targeting in historical database divided by the number of times the matched flight target has served to all targeting. Such percentage of overlap 712 calculation can be assisted by actual data logged by the real time ad targeter 104 indicating which impressions could have been served within the targeting rules, i.e., "runners up." Specification para. 66.

ANALYSIS

Method claim 1 recites storing historical advertising content delivery data, receiving user queries and analyzing the data, assessing content delivery data, forecasting future opportunity availabilities, and reserving content delivery. Thus, claim 1 recites, in summary, storing, analyzing, receiving, forecasting and writing reservation 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, modification, forecasting, and reserving are all generic, conventional data processing operations to the point they are themselves concepts awaiting implementation details. The sequence of data reception-analysis-forecast-reservation is equally generic and conventional. The ordering of the steps is, therefore, ordinary and conventional. The remaining claims merely describe parameters used for forecasting, such as seasonality, 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.*, 132 S. Ct. 1289 (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 forecasting availability of future opportunities for delivering targeted advertising content. Final Act. 5.

While the Court in *Alice* made a direct finding 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 recites that it is a method of delivering digitally-encoded advertising content over a digital network. The steps in claim 1 result in delivering ads. The Specification, at paragraph 3, recites that the invention relates to forecasting when advertising capacity is not within a producer's control and also to inventory availability when purchases can be satisfied by multiple combinations of differing inventory units. Thus, all this evidence shows that claim 1 is directed to delivering ads based on forecast and inventory, i.e., managing the delivery of advertising.

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 managing the delivery of advertising is a fundamental marketing practice long prevalent in our system of commerce. The use of managing the delivery of

advertising is also a building block of advertising. Thus, managing the delivery of advertising, like hedging, is an "abstract idea" beyond the scope of §101. *See Alice Corp. Pty. Ltd.* at 2356.

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 managing the delivery of advertising 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 transmission, 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 transmitting data.

The remaining claims merely describe parameters used for forecasting, such as seasonality. 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 "implement[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 store, analyze, and transmit 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. In short, each step does no more than require a generic computer to perform generic computer functions.

Considered as an ordered combination, the computer components of Appellants' method add nothing that is not already present when the steps are considered separately. Viewed as a whole, Appellants' method claims simply recite the concept of managing the delivery of advertising as performed by a generic computer. To be sure, the claims recite doing so by advising one to assess advertising capacity using historical, query, and content inventory data to in turn forecast advertising opportunities and deliver ads. But this is no more than abstract conceptual advice on the parameters for such managing the delivery of advertising 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 34 pages of the Specification spell out different generic equipment and parameters that might be applied using this concept and the particular steps such conventional processing would entail based on the concept of managing the delivery of advertising under different scenarios. They do not describe any particular improvement in the manner of computer functions. Instead, the claims at issue amount to nothing significantly more than an instruction to apply the abstract idea of managing the delivery of advertising 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. 134 S. Ct. at 2360.

We adopt the Examiner's findings and analysis from Final Action 2–7 and Answer 2–6. We now respond to the Reply Brief arguments.

We are not persuaded by Appellants' argument that:

> [the] Answer fails to analyze applicant's actual claim language but instead substitutes a shorthand "generic" version of features of claim 1 which the Answer then alleges are "well-understood, routine and conventional [computer] functions when they are claimed in a merely generic manner . . . ." But the law requires the PTO to look at what applicant is <u>actually claiming</u>.

Reply Br. 1. Appellants conflate claim recitation and analysis. The first part of *Alice* requires finding what the claims are directed to, not an analysis of each of every aspect of what they recite. The second part requires looking at the claim to see if there is something significantly more. Both tests require analyzing the component parts of the claim. After that, then the claim is looked at as a whole, which the Examiner did.

We are not persuaded by Appellants' argument that:

> the computer processor is looking at information concerning previously delivered ads to automatically assess <u>future capacity</u> for delivering targeted advertising content in response to user queries. This automatically performed step is not merely "performing repetitive calculations" nor merely "receiving, processing and storing data" nor merely "electronically

> scanning or extracting data from a physical document" nor merely "electronic recordkeeping" nor merely "automating mental tasks" nor merely "receiving or transmitting data over a network, e,g., using the Internet to gather data." To the contrary, the specification describes this detailed analysis as taking both historically served ads <u>and</u> user queries into account.

Reply Br. 2. This argument contends that the particular parameters relied on and the purpose of the analysis are sufficient to show the claims are more than abstract conceptual advice. But all this shows is that the claims describe analyzing data to decide what data to transmit.

> This case is similar to *Digitech Image Technologies, LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014). There, the claims of the challenged patent were directed to the abstract idea of organizing information through mathematical correlations. We explained that the claim at issue "recites a process of taking two data sets and combining them into a single data set" simply by organizing existing data into a new form. A process that started with data, added an algorithm, and ended with a new form of data was directed to an abstract idea. In this case, the '303 patent claims a method whereby a user starts with data, codes that data using "at least one multiplication operation," and ends with a new form of data. We discern no material difference between the *Alice* step one analysis in *Digitech* and the analysis here.

RecogniCorp, LLC v. Nintendo Co., Ltd., 855 F.3d 1322, 1327 (2017) (citations omitted).

Further, the nature of the data, what it represents, is discernable only in the human mind and undeserving of patentable weight. *See In re Bernhart*, 417 F.2d 1395, 1399 (CCPA 1969).

We are not persuaded by Appellants' argument that the specification specifically states that forecasting "can be difficult" and the PTO does not

contend claim 1 is anticipated or obvious in view of prior art. Reply Br. 3. The difficulty of the programming details for this functionality is immaterial, because these details are not recited in the actual claims. "The degree of difficulty in implementing an abstract idea in this circumstance does not itself render an abstract idea patentable." *Apple, Inc. v. Ameranth, Inc.,* 842 F.3d 1229, 1242 (2016). "[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 (2016).

We are not persuaded by Appellants' argument that:

> The claim further specifies precisely how the processor calculates to take overlap situations into account: the at least one processor forecasts availability at least in part by the processor automatically calculating availability based on the number of times advertising content has served targeted to a specific user query and the number of times the matched advertising content has served to any targeting .... The specification refers to this unique calculation result as "percentage of overlap".

Reply Br. 4. First, as to Appellants' referral to Specification paragraph 66 as defining "percentage of overlap," this paragraph states that it is an exemplary embodiment and even then only further states that in this instance a percentage of overlap is computed in a general fashion. Thus, the Specification does not lexicographically define "percentage of overlap."

More to the point, forecasting availability, at least in part, and calculating availability, based on X and Y under conditions of uncertainty, is imprecise at best. The claim does not recite or narrow the implementation or manner of such basis, and the result is only relied upon in some part, again

without any recitation of implementation for the forecasting. This is an abstraction of a mathematical algorithm, which itself would be an abstraction, at best.

We are not persuaded by Appellants' argument that "the claims enable software to perform a function in digital advertising computer delivery environment that (to the extent was even possible previously) required a helter-skelter series of imprecise human guesswork that could not possibly keep up with real time that is required for Internet ad delivery." Reply Br. 5. Relying on the intrinsic speed and organizational capacity of a general purpose computer is not a technological improvement.

> The claims here, in contrast, are not directed to an improvement in the way computers operate, nor does FairWarning contend as much. While the claimed system and method certainly purport to accelerate the process of analyzing audit log data, the speed increase comes from the capabilities of a general-purpose computer, rather than the patented method itself.

FairWarning IP, LLC v. Iatric Systems, Inc., 839 F.3d 1089, 1095 (2016).

CONCLUSIONS OF LAW

The rejection of claims 1–16 under 35 U.S.C. § 101 as directed to non–statutory subject matter is proper.

DECISION

The rejection of claims 1–16 is affirmed.

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