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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAYANTA BASAK, SAMEEP MEHTA,
VINAYAKA D. PANDIT, and GYANA RANJAN PARIJA

Appeal 2016-007989
Application 12/369,418
Technology Center 3600

Before JOHN A. EVANS, JOYCE CRAIG, and
AARON W. MOORE, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants[1] appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–5, 7, 9–15, and 17–19, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

THE INVENTION

The application is directed to "demand forecasting." (Spec. 1:6.) Claim 1, reproduced below, exemplifies the subject matter on appeal:

> 1. A method for forecasting, said method comprising:
>
> obtaining and storing input of at least (i) a first anticipated future external event, (ii) a second anticipated future external event, and (iii) historical time series data indicative of past utilization of at least one tangible resource,
>
> wherein said obtaining input is carried out by an events detector module executing on a hardware processor and communicatively linked to a user interface to capture user-specified information pertaining to at least one of (i) the first anticipated future external event, (ii) the second anticipated future external event, and (iii) the historical time series data indicative of past utilization of the at least one tangible resource from a user, and
>
> wherein said storing is carried out by the events detector module, communicatively linked to provide (i) the first anticipated future external event, (ii) the second anticipated future external event, and (iii) the historical time series data indicative of past utilization of the at least one tangible resource to an events database via a database query server additionally linked to the hardware processor;

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[1] Appellants identify International Business Machines Corporation as the real party in interest. (*See* App. Br. 1.)

predicting at least one future effect of said (i) first anticipated future external event and (ii) second anticipated future external event, said first anticipated future external event being similar to at least a first past external event and said second anticipated future external event being similar to at least a second past external event, wherein predicting at least one future effect of said at least one anticipated future external event comprises:

developing: (i) a first representative event model for said at least first past external event, said first representative event model capturing at least one typical effect of events similar to said at least first past external event, and (ii) a second representative event model for said at least second past external event, said second representative event model capturing at least one typical effect of events similar to said at least second past external event, wherein said developing said first representative event model and said second representative event model comprises:

filtering said historical time series data, using a filter with an initial window, to detect a plurality of regions in said historical time series data;

modeling, with a parametric model, said detected regions, wherein said modeling is carried out in accordance with:

$g(t) = \alpha + \beta t + \sum_i h_i K(t; a_i, b_i, c_i, d_i)$, wherein

$K(t, a, b, c, d)$ is a kernel event shape;

$g(t)$ is said first past external event or second past external event;

α is a constant representing baseline activity;

β is a constant to represent a linear trend; and

h_i are scaling factors of given kernel events; and

comparing said parametric model to user labeling for said first past external event and said second past external event; and

decomposing the historical time series data into (i) data induced as said at least one typical effect of said at least first

past external event and said at least one typical effect of said at least second past external event, and (ii) events-normalized forecasted data capturing an evolution of the time series data absent said at least first past external event and said at least second past external event,

wherein said predicting at least one future effect of said at least one future external event is carried out by an events learner module, communicatively linked to receive input from the events detector module and the user interface, executing on the hardware processor, and wherein the events learner module is further communicatively linked to provide input to the events database via the database query server; and

forecasting future utilization of the at least one tangible resource by superimposing (i) the events-normalized forecasted data, (ii) said at least one predicted future effect of said at least one anticipated future external event similar to said at least first past external event, and (iii) said at least one future effect of said at least second future external event similar to said at least second past external event,

wherein said forecasting future utilization of at least one tangible resource is carried out by an events reconstructor module, communicatively linked to receive input from the events learner module and the user interface, executing on the hardware processor, and wherein the events reconstructor module is further communicatively linked to provide input to the events database and receive input from the events database via the database query server.

THE REJECTION

Claims 1–5, 7, 9–15, and 17–19 stand rejected under 35 U.S.C. § 101 "because 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." (*See* Final Act. 2–3.)

ANALYSIS

The Examiner finds the claims "directed to the abstract idea of forecasting (mathematical relationships/formulas) resources future utilization." (Final Act. 2.) The Examiner further finds "the claims do not include additional elements beyond the abstract idea of forecasting a future utilization of at least one tangible resource by a parametric model and decomposing historical time series data" because they merely recite "a generic computer structure that serves to perform generic computer functions, that are well-understood, routine, and conventional activities previously known to the pertinent industry." (*Id.* at 3.)

Appellants argue "the specific limitations of the claims provide 'significantly more' as described in the 2nd part of the *Alice* test due at least to the fact that the specific limitations of the claims constitute limitations other than what is well-understood, routine and conventional in the field." (App. Br. 13.) Appellants assert that "if a set of 'specific limitations' has been deemed not anticipated, taught, or even suggested by a field of available art (as is the case with the instant claims) then the same set of 'specific limitations' cannot plausibly be simultaneously argued as 'well-understood, routine and conventional in the field.'" (App. Br. 14.) Appellants conclude that "because the Examiner *expressly* determined that the instant claims are novel and non-obvious, the specific limitations of those same novel and non-obvious claims cannot plausibly be 'well-understood, routine and conventional in the field.'" (App. Br. 15.)

We find Appellants' arguments unpersuasive of Examiner error because "a claim for a new abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016). Even

though the Section 101 inquiry and the Section 102/103 inquiry might sometimes overlap, a novel and nonobvious claim directed to a purely abstract idea is, nonetheless, ineligible for patenting. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1311 (Fed. Cir. 2016) (Reyna, J., dissenting) ("The inventiveness inquiry of § 101 should . . . not be confused with the separate novelty inquiry of § 102 or the obviousness inquiry of § 103.").

Appellants do not identify what element or combination of elements in the claims evidences an inventive concept that would make the claims patent-eligible, and we find the claims are directed to the abstract idea of a particular method of forecasting demand, implemented using conventional programming techniques on conventional hardware.[2] Simply implementing an algorithm on a general purpose computer is not enough to give rise to an inventive concept, as the governing case law requires something more. *See, e.g.*, *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016) (finding an inventive concept in claims reciting "a specific way to automate the creation of a composite web page by an 'outsource provider' that incorporates elements from multiple sources in order to solve a problem faced by websites on the Internet"); *Bascom Glob. Internet Servs., Inc. v.*

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[2] *See* Spec. 19:25–29 ("Computer program code for carrying out operations of the present invention may be written in any combination of one or more programming languages, including an object oriented programming language . . . and conventional procedural programming languages, such as the 'C' programming language.") & 21:21–25 ("[T]he components . . . may be implemented in various forms of hardware, software, or combinations thereof" including "one or more appropriately programmed general purpose digital computers with associated memory, and the like.").

AT&T Mobility LLC, 827 F.3d 1341, 1350 (Fed. Cir. 2016) ("The inventive concept . . . is the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user.").

We recognize that the techniques described in the application may constitute a new way of forecasting demand. That is not enough, however, for the same reason that the allegedly new method for calculating alarm limits in *Parker v. Flook*, 437 U.S. 584, 595 (1978), was not enough: "if a claim is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory."

In the Reply, Appellants make a new argument that "the specific limitations of the independent claims affirmatively include 'a specific improvement to the way computers operate,' and thereby satisfy the first part of the *Alice/Mayo* framework." (App. Br. 3.) We find this contention untimely,[3] and, in any event, unpersuasive because merely programming a computer to implement the demand forecasting idea does not change how the computer *itself* operates. Appellants' claims are directed to an algorithm running on a conventional computer using standard programming techniques, not a fundamentally new way to use a computer.

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[3] *See Ex parte Borden*, 93 USPQ2d 1473, 1474 (BPAI 2010) (informative) ("[T]he reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner's rejections, but were not."); 37 C.F.R. §§ 41.37(c)(1)(iv) & 41.41(b)(2).

DECISION

The rejection of claims 1–5, 7, 9–15, and 17–19 under 35 U.S.C. § 101 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)(1)(iv).

AFFIRMED