

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BO THIESSEN, CHRISTOPHER A. MEEK,
DAVID M. CHICKERING, and DAVID E. HECKERMAN

Appeal 2008-1055
Application 10/463,145
Technology Center 2100

Decided: August 25, 2008

Before JAMES D. THOMAS, JOSEPH L. DIXON,
and CAROLYN D. THOMAS, *Administrative Patent Judges*.

J. THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1 through 31. We have jurisdiction under 35 U.S.C. § 6(b).

As best representative of the disclosed and claimed invention, independent claim 1 is reproduced below:

1. A system that facilitates predicting values of time observation data in a time series, comprising:

a component that receives a subset of time observation data that includes observations of at least one entity, the time observation data comprising at least one selected from the group consisting of discrete time observation data and continuous time observation data; and

an autoregressive, moving average cross-predictions (ARMA xp) model that predicts values of the time observation data, the ARMA xp model includes at least one variable that corresponds to the observations associated with the at least one entity and conditional variance of each continuous time tube variable is fixed to a small positive value.

The following reference is relied on by the Examiner:

Wold US 5,949,678 Sep. 7, 1999

Claims 1 through 31 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wold.

Rather than repeat verbatim the positions of the Appellants and the Examiner, reference is made to the Brief and Reply Brief for Appellants' positions, and to the Answer for the Examiner's positions.

OPINION

For the reasons set forth by Appellants, principally in the Reply Brief, we reverse the rejection of each independent claim 1, 12, 22, and 27 under 35 U.S.C. § 102 and their respective dependent claims. With respect to each of these independent claims, the positions set forth at pages 2 and 3 of the

Reply Brief essentially repeat those set forth in a corresponding manner in the principal Brief on appeal. Of particular note is the requirement of each independent claim of a so-called autoregressive moving average cross-prediction (ARMA $_{xp}$) model.

At page 7 of the Answer, the Examiner responds to the argument that Wold does not disclose the claimed ARMA $_{xp}$ model by urging that portions of columns 9 and 11 respectively teach an autoregressive moving average for prediction and validation model. In turn, page 3 of the Reply Brief persuasively argues that the cross validation approach used in Wold is not equivalent to a cross prediction scheme even though Appellants recognize that, as urged by the Examiner, Wold does teach an ARMA-type autoregressive moving average approach. We agree with these views expressed at page 3 of the Reply Brief by Appellants and the conclusion that cross-validation as described in Wold is distinct from the cross predictions of the claimed ARMA $_{xp}$ model within the anticipation rejection before us. Therefore, since each independent claim requires this feature, we reverse the rejection of them and their respective dependent claims.

NEW REJECTIONS UNDER 37 C.F.R. § 41.50(b)

Claims 22 and 23 are rejected under the enablement provision of 35 U.S.C. § 112, first paragraph, since these claims recite a single means. Since there is only one recited “means” among these two claims, these claims cover every conceivable means for achieving the desired result. The Specification, however, only disclosed those means known to Appellants. *See in re Hyatt*, 708 F.2d 712, 714 (Fed. Cir. 1983).

In like manner, all claims on appeal, claims 1 through 31, stand rejected under 35 U.S.C. § 101, as being directed to a nonstatutory subject matter.

In the paragraph bridging pages 6 and 7, and in the paragraph bridging pages 17 and 18 of the Specification as originally filed the term “component” is stated to refer to a computer-related entity, software, software in execution, an object, an executable, a thread of execution, and a program among other possible broadly definable definitions. In turn, representative figure 1 of the disclosed invention illustrates a time series prediction “system” 100 which depicts a data receiving component and a prediction model component. Therefore, the “system” of independent claims 1 and 22 clearly comprises a software system entity and not hardware embodiments since the system is not recited in these claims to be a machine or otherwise recite a machine or computer implemented approach.

Corresponding method independent claim 12 has features substantially identical to system independent claim 1 which does not recite a computer implemented method. Indeed, even if the method of independent claim 12 may be fairly stated to produce a concrete, useful, and tangible result, the process and results are operations by and upon abstract data constructs or recitations of mere data structures themselves that may be performed by a human.

Independent claim 27 directly recites a data packet as a data construct or a data structure per se. Because all the claims recite the ARMA_{xp} model, the claims directly recite a mathematical model or algorithm per se. We know of no authority which permits this nor know of any authority which

permits the naked, direct claiming per se of abstract data constructs as in a data packet of claim 27 or of a computer program otherwise claimed. Here, there is no transformation of any underlying tangible subject matter to a different state or thing. Note the reasoning in *In re Cosmiskey*, 499 F.3d 1365, 1377-79 (Fed. Cir. 2007). These considerations flow through to the dependent claims of the respective independent claims 1, 12, and 22.

In summary, we have reversed the rejection of claims 1 through 31 under 35 U.S.C. § 102. Within the provisions of 37 C.F.R. § 41.50(b), we have instituted two new grounds of rejection. These include the first rejection of claims 22 and 23 as being single means claims proscribed by the enablement provision of 35 U.S.C. § 112, first paragraph. The second rejection is a rejection of all claims on appeal, claims 1 through 31, as being directed to non-statutory subject matter within 35 U.S.C. § 101.

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b) (2007). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review." 37 C.F.R. § 41.50(b) also provides that the Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

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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)(1)(iv).

REVERSED
37 C.F.R. § 41.50(b)

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