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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID GERSHON

Appeal 2010-008199
Application 11/401,466
Technology Center 3600

Before: HUBERT C. LORIN, ANTON W. FETTING, and
JOSEPH A. FISCHETTI, *Administrative Patent Judges*.

FISCHETTI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellant seeks our review under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-44. We affirm.

THE CLAIMED INVENTION

Appellant claims a method and system of pricing financial instruments or providing automatic trading capabilities. (Specification [002]). Claim 1 is illustrative of the claimed subject matter:

1. A computer-based method of pricing a financial instrument relating to an underlying asset, the method comprising:
 - receiving by a computing device trade information of a plurality of traded financial instruments related to said underlying asset, wherein said trade information includes information indicative of a plurality of market prices corresponding to said plurality of traded financial instruments;
 - determining by the computing device at least one set of market parameter values based on a predefined criterion applied to a plurality of sets of said market prices and to a respective plurality of sets of model prices, wherein each of said sets of market prices includes one or more market prices corresponding to a respective one of said plurality of traded financial instruments, and wherein each of said sets of model prices includes one or more model prices calculated by a pricing model based on the trade information corresponding to a respective one of the plurality of financial instruments; and
 - estimating by the computing device a price of said financial instrument using said pricing model based on said at least one set of market parameter values.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Jackson

US 2006/0036531 A1 Feb. 16, 2006

REJECTIONS

The following rejections are before us for review.

The Examiner rejected claims 1-3, 7-25, and 29-44 under 35 U.S.C. § 102(e) as anticipated by Marynowski.

The Examiner rejected claims 4-6 and 26-28 under 35 U.S.C. § 103(a) as unpatentable over Marynowski and Jackson.

FINDINGS OF FACT

We find the following facts by a preponderance of the evidence.

1. Marynowski discloses an option pricing method, stating:

Theoretical price logic **490** generates theoretical prices in accordance with mathematical models. The mathematical models produce a theoretical value for an option given values for a set of option pricing input variables that may change over time. Option pricing input variables considered in these models may include (1) the current market price of the underlying security (e.g., the price of the stock or future from which the option is derived), (2) interest rates, (3) the future volatility of underlying security, (4) dividend stream, (5) time until expiration, (6) whether the option can be exercised before the expiration date, and (7) whether the option is a call or put.

(Col. 9, ll. 3-14).

2. Marynowski discloses that “implied volatilities may be calculated for market option bid (ask) prices using, say, mathematical models and inputs similar to those used for calculating theoretical option prices.”

(Col. 20, ll. 23-26).

3. Marynowski discloses that “buy and sell spreads may be used to calculate option transaction prices such as theoretical buy and sell prices.” (Col. 10, ll. 4-6).
4. Marynowski discloses an option price model table listing plural models usable with its system. (Col. 11, ll. 46-63).

ANALYSIS

Claims 1, 2, 7, 8, 10-24, 29, 30, and 32-44

Initially, we note that the Appellant argues independent claims 1 and 23 together as a group. (App. Br. 8). Correspondingly, we select representative claim 1 to decide the appeal of these claims, with remaining claim 23 standing or falling with claim 1. Appellant does not provide a substantive argument as to the separate patentability of claims 2, 7, 8, 10-24, 29, 30, and 32-44 (App. Br. 21) that depend from claims 1 and 23, so these claims also stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Appellant argues that Marynowski lacks any disclosure of:

... calculating a set of implied volatilities (which, according to the Examiner's contention, are analogous to the market parameter values) by applying trader-defined theoretical volatility values (which, according to the Examiner's contention, are analogous to the predefined criterion) to a plurality of sets of market prices and to a respective plurality of sets of theoretical values (which, according to the Examiner's contention, are analogous to the sets of model prices), wherein each of the sets of market prices includes one or more market prices corresponding to a respective one of the plurality of traded financial instruments, and wherein each of the sets of theoretical values (which, according to the Examiner's contention, are analogous to the sets of model prices) includes one or more model prices calculated by a pricing model based on the trade information corresponding to a respective one of

the plurality of financial instruments; and estimating a price of a financial instrument using the pricing model based on the set of calculated implied volatilities (which, according to the Examiner's contention, are analogous to the market parameter values).

(Reply Br. 8; *see also* App. Br. 20).

We are not persuaded by Appellant's argument, because we find the Examiner set forth a *prima facie* case of anticipation based on Marynowski that meets the claim requirements. (Ans. 3-4).

Specifically, we find Marynowski discloses "estimating by the computing device a price of said financial instrument using said pricing model based on said at least one set of market parameter values" using the theoretical price logic 490 to produce a theoretical value for an option, because we find the future volatilities of the underlying security are "market parameter values." (FF 1).

We further find Marynowski discloses "determining by the computing device at least one set of market parameter values based on a predefined criterion applied to a plurality of sets of said market prices and to a respective plurality of sets of model prices" by deciding whether the option can be exercised before the expiration date and whether the option is a put or call (FF 1), by using as input the current market price of the underlying security (FF 1), and by using model prices to calculate implied volatilities. (FF 2).

Thus, even though the exact wording of Appellants' claims are not found in the prior art, the claims remain anticipated by the subject matter disclosed therein. Anticipation "is not an 'ipsissimis verbis' test." *In re Bond*, 910 F.2d 831, 832-33 (Fed. Cir. 1990) (citing *Akzo N.V. v. U. S. Int'l Trade Comm'n*, 808 F.2d 1471, 1479 n.11 (Fed. Cir. 1986)). "An

anticipatory reference ... need not duplicate word for word what is in the claims.” *Standard Havens Prods., Inc., v. Gencor Indus., Inc.*, 953 F.2d 1360, 1369 (Fed. Cir. 1991). For these reasons, we affirm the rejection of claims 1, 2, 7, 8, 10-24, 29, 30, and 32-44 under 35 U.S.C. § 102(e).

Claims 3 and 25

Dependent claims 3 and 25 recite “wherein determining said set of market parameter values comprises determining a plurality of difference values corresponding to the plurality of sets of market prices and to the plurality of sets of model prices.”

Appellant argues the cited portions of Marynowski “merely describes determining an option transaction price based on a buy spread and a sell spread selected by a trader.” (Reply Br. 10).

We are not persuaded by Appellant’s argument, because Marynowski discloses using buy and sell spreads to determine a theoretical option price. (FF 3). This meets the claim requirement because a spread is a difference between buy and sell prices, and thus are difference values that correspond to market and model prices. The manner or degree of correspondence is not further narrowed.

Claims 9 and 31

Dependent claims 9 and 31 recite “wherein receiving said trade information comprises receiving trade information of traded financial instruments corresponding to said plurality of expiration dates.”

Appellant argues “Marynowski et al. merely describes general types of market information.” (Reply Br. 12).

We are not persuaded by Appellant’s argument because Marynowski discloses it takes into consideration “time until expiration” in input values

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(FF 1), which meets the claim requirement because time until expiration corresponds to expiration dates. The manner or degree of correspondence is not further narrowed.

Claims 4-6 and 26-28

Appellant has not argued these claims separately (App. Br. 21), so we affirm their rejection under 35 U.S.C. § 103(a) for the same reasons as claim 1.

CONCLUSIONS OF LAW

The Examiner did not err in rejecting claims 1-3, 7-25, and 29-44 under 35 U.S.C. § 102(e).

The Examiner did not error in rejecting claims 4-6 and 26-28 under 35 U.S.C. § 103(a).

DECISION

For the above reasons, the Examiner's rejection of claims 1-44 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

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