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Sawyer Law Group, P.C. P.O. Box 51418 Palo Alto, CA 94303			MERCHANT, SHAHID R	
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1 UNITED STATES PATENT AND TRADEMARK OFFICE

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4 BEFORE THE PATENT TRIAL AND APPEAL BOARD

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6  
7 *Ex parte* CHEONG KEE JEFFREY LIM

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10 Appeal 2011-003610  
11 Application 10/182,462  
12 Technology Center 3600  
13 \_\_\_\_\_

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15  
16 Before ANTON W. FETTING, JOSEPH A. FISCHETTI, and  
17 BIBHU R. MOHANTY, *Administrative Patent Judges*.  
18 FETTING, *Administrative Patent Judge*.

19 DECISION ON APPEAL

1 STATEMENT OF THE CASE<sup>1</sup>

2 Cheong Kee Jeffrey Lim (Appellant) seeks review under  
3 35 U.S.C. § 134 of a non-final rejection of claims 5-13, which along with  
4 claims 1-4 and 14-19, are the only claims pending in the application on  
5 appeal. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

6 The Appellant invented a way of pricing and structuring financial  
7 instruments with user interfaces that intelligently guide the user and which  
8 allows the users to price and structure financial instruments which are not  
9 commonly found. (Specification 1:7-10).

10 An understanding of the invention can be derived from a reading of  
11 exemplary claim 5, which is reproduced below [bracketed matter and some  
12 paragraphing added].

13 5. A computer implemented method  
14 for pricing and structuring  
15 a cross currency interest rate instrument  
16 in a risk management system (RMS),  
17 wherein the computer performs the following functions  
18 comprising:  
19 [1] building  
20 by the computer  
21 using a standard bootstrapping methodology,  
22 one or more Discount Factor (Yield Curves)

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<sup>1</sup> Our decision will make reference to the Appellant's Appeal Brief ("App. Br.," filed July 14, 2010) and the Examiner's Answer ("Ans.," mailed September 16, 2010).

1 of an interest rate swaps curve (IRS curve)  
2 in the RMS,  
3 each Discount Factor (Yield Curve) of the IRS curve  
4 being used for valuing  
5 an interest rate instrument  
6 associated with a single base currency  
7 only,  
8 and additionally with  
9 the United States dollar (USD) IRS curve  
10 being used for valuing  
11 all interest rate instruments  
12 associated with at least one of the  
13 base currencies being the USD; [sic]  
14 [2] building  
15 using the standard bootstrapping methodology  
16 one or more Discount Factor (Yield Curves)  
17 of a cross currency swaps curve (CCS curve)  
18 in the RMS,  
19 wherein the CCS curve is built using  
20 money market swaps,  
21 futures,  
22 and  
23 long term cross currency swaps,  
24 wherein the RMS has to first convert  
25 the money market swap rates  
26 to  
27 implied base currency deposit rates  
28 from USD money market deposit rates,  
29 then

1 applying the standard bootstrapping  
2 methodology  
3 using as inputs the computed implied base  
4 currency deposit rates, futures (for some of the  
5 currencies) and the cross currency swap rates  
6 to build each Discount Factor (Yield Curve)  
7 of the CCS curve  
8 wherein for some currencies,  
9 Cross Currency Swap rates quoted against  
10 the USD already exist,  
11 and  
12 if they do not exist directly,  
13 then the RMS obtains these Cross  
14 Currency Swap rates  
15 from the combination of the  
16 base currency interest rate swap  
17 rates and the basis risk quotes  
18 for USD/Base Currency;  
19 [3] each Discount Factor (Yield Curve) of the CCS curve for  
20 valuing an interest rate instrument involving an exchange of  
21 cash flows between at least two different base currencies; [sic]  
22 [4] receiving user input to price a cross currency interest rate  
23 instrument;  
24 [5] pricing and structuring the cross currency interest rate  
25 instrument  
26 using only  
27 a given Discount Factor (Yield Curve) of the CCS curve  
28 for each of the non-USD cross currencies and Discount  
29 Factor (Yield Curve) of the IRS curve for USD if USD is  
30 one of the base currencies,  
31 wherein the RMS does not have to adjust any Discount  
32 Factor (Yield Curve) of an interest rate swaps (IRS)  
33 curve

1                           in order to price the cross currency interest rate  
2                           instrument;  
3           and  
4           [6] displaying the priced cross currency interest rate instrument  
5           to a user  
6           through an interactive user interface of the RMS.

7           The Examiner relies upon the following prior art:

          Weinstock   US 6,223,143 B1                    Apr. 24, 2001

8           M.A.H. Dempster and J.P. Hutton, Numerical Valuation of Cross-  
9           Currency Swaps and Swaptions, October 24, 1996, Ref. W. [Dempster]  
10          Interest Rate Swap Module of the Focus System, June 23, 1998, Ref. U.  
11          [Focus System]

12          Loan Calculator, November 16, 1999, Ref. V. [Loan Calculator]

13          Claim 5 stands rejected under 35 U.S.C. § 112, first paragraph, as  
14          lacking a supporting written description within the original disclosure.

15          Claims 5-13 stand rejected under 35 U.S.C. § 112, first paragraph, as  
16          not enabling a person of ordinary skill in the art to make and use the claimed  
17          subject matter from the original disclosure.

18          Claims 5-13 stand rejected under 35 U.S.C. § 112, second paragraph, as  
19          failing to particularly point out and distinctly claim the invention.

20          Claim 5 stands rejected under 35 U.S.C. § 103(a) as unpatentable over  
21          Focus System and Dempster.

22          Claims 6-12 stand rejected under 35 U.S.C. § 103(a) as unpatentable  
23          over Focus System, Dempster, and Loan Calculator.

1 Claim 13 stands rejected under 35 U.S.C. § 103(a) as unpatentable over  
2 Focus System, Dempster, Loan Calculator, and Weinstock.

3 ISSUES

4 The issue of written description turns primarily on whether the four  
5 corners of the Specification show possession of the limitation “pricing and  
6 structuring the cross currency interest rate instrument using only a given  
7 Discount Factor (Yield Curve) of the CCS curve for each of the non-USD  
8 cross currencies and Discount Factor (Yield Curve) of the IRS curve for  
9 USD if USD is one of the base currencies, wherein the RMS does not have  
10 to adjust any Discount Factor (Yield Curve) of an interest rate swaps (IRS)  
11 curve in order to price the cross currency interest rate instrument.” The  
12 issues of obviousness turn primarily on whether the art shows it was  
13 required to adjust a discount factor of an interest rate swap to price a cross  
14 currency interest rate instrument.

15 FACTS PERTINENT TO THE ISSUES

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

18 *Facts Related to Appellant’s Disclosure*

- 19 01. Specification 57:3-21 does not mention the risk management  
20 system not having to adjust any given yield curve of an interest  
21 rate swaps (IRS) curve in order to price the cross currency interest  
22 rate instrument.

23 *Facts Related to the Prior Art*

1        *Dempster*

2            02. Dempster is directed to numerical valuation of cross-currency  
3            interest rate-based derivatives under Babbs' extended Vasicek-  
4            style model by numerical solution of the associated partial  
5            differential equation (PDE) – and in particular, the terminable  
6            differential (diff) swap. Dempster precisely formulates, in terms  
7            of their cash flows, various types of single and cross-currency  
8            swaps and swaptions, and describes Babbs' model for the domestic  
9            and foreign term structures and the exchange rate, its formulation  
10           in terms of three correlated drift less Gaussian processes and the  
11           associated three state variable parabolic PDE. Dempster then  
12           formulates finite difference approximations to the PDE, and  
13           discusses explicit and implicit methods, and, with this discrete  
14           approximation to the valuation problem in a period, proceeds to  
15           value the terminable diff swap and other deals numerically by  
16           backwards recursion through the payment dates, and investigate  
17           the solutions found graphically. Dempster concludes with  
18           discussing the practicality, on a fast workstation, to solve for the  
19           value function of a wide range of cross-currency derivative  
20           securities by solution of explicit finite difference approximations  
21           of the PDE. Dempster Abstract.

22           03. Dempster provides various pricing formulae, none of which  
23           require adjusting any Discount Factor (Yield Curve) of an interest  
24           rate swaps (IRS) curve in order to price the cross currency interest  
25           rate instrument, relying on various additional factors and  
26           coefficients instead. Dempster 4-7.





1 instrument using only a given Discount Factor (Yield Curve) of the CCS  
2 curve for each of the non-USD cross currencies and Discount Factor (Yield  
3 Curve) of the IRS curve for USD if USD is one of the base currencies,  
4 wherein the RMS does not have to adjust any Discount Factor (Yield Curve)  
5 of an interest rate swaps (IRS) curve in order to price the cross currency  
6 interest rate instrument.”

7 In particular, all four of Appellant’s contentions enumerated A, B, C,  
8 and D go to arguing that the art fails to show pricing wherein the RMS does  
9 not have to adjust any Discount Factor (Yield Curve) of an interest rate  
10 swaps (IRS) curve in order to price the cross currency interest rate  
11 instrument. Notably, this limitation does not say “does not adjust” but  
12 instead says “does not have to adjust.”

13 Thus, the claim recites a negative limitation as to necessity rather than  
14 presence. Appellant faces a formidable obstacle in that none of the  
15 references recite such a necessity, nor has Appellant suggested where they  
16 might show such a necessity. Instead, Appellant argues convention.

17 Pricing after all is no more than value assignment. Pricing ultimately  
18 does not have to include any step other than assigning a value. Appellant’s  
19 arguments go to what Appellant supposes is occurring in the art, and then  
20 arguing that such presence is evidence that the art does not show it does not  
21 have to do otherwise. This attempt to provide evidence as to a double  
22 negative is yet another hurdle Appellant must clear.

23 But then the Appellant essentially admits that Dempster shows the  
24 recited limitation, but argues that any price Dempster would arrive at that is  
25 not useful because

1           it is an article of theoretical value and would not be used by  
2           traders as it teaches a possible non arbitrage-free pricing  
3           methodology that could potentially lead to mispricing which  
4           could then be potentially disadvantageous to traders as third  
5           parties might take advantage of the situation for their own  
6           benefit. The subject invention, on the other hand, recites a  
7           method that uses arbitrage-free pricing methodology and  
8           provides certainty to users.

9           Appeal Br. 22. The phrase “arbitrage-free pricing” or even the word  
10          “arbitrage” does not occur in the claim. So Appellant argues the art  
11          necessarily require that which is never required as such, as pricing is no  
12          more than assignment, and then disparage the art that does not require what  
13          is not to be required by arguing it lacks an unclaimed limitation. It is clear  
14          that Dempster does not adjust a yield curve in its pricing formulae. Whether  
15          as a result Dempster’s pricing does not result in a price Appellant would  
16          consider proper is irrelevant, as such criteria of propriety is not in the claim.

17          We find that Appellant does not even show that Focus System has to  
18          modify the yield curve, but only suggests that such modification is implied.  
19          Again, the limitation is one of requirement rather than presence. Even were  
20          such modification implied, that would not also imply requirement.

21                 *Claims 5-13 rejected under 35 U.S.C. § 112, first paragraph, as not*  
22                 *enabling a person of ordinary skill in the art to make and use the claimed*  
23                 *subject matter from the original disclosure.*

24          As we found the sole independent claim properly rejected under 35  
25          U.S.C. § 112, we do not reach the alternate reasoning of lack of enablement.  
26          Examiner is basing this on the same limitation as in the written description  
27          rejection. Although the written description rejection does not formally

1 include the dependent claims, we recognize that like the enablement  
2 rejection, any dependent claim rewritten in independent form incorporating  
3 the independent claim limitations would necessarily then have the same  
4 written description issue.

5 *Claims 5-13 rejected under 35 U.S.C. § 112, second paragraph, as failing to*  
6 *particularly point out and distinctly claim the invention.*

7 As we have found the claims to be properly rejected under both art and  
8 lack of written description, we do not reach the issue of indefiniteness.

9 CONCLUSIONS OF LAW

10 The rejection of claim 5 under 35 U.S.C. § 112, first paragraph, as  
11 lacking a supporting written description within the original disclosure is  
12 proper.

13 The rejection of claim 5 under 35 U.S.C. § 103(a) as unpatentable over  
14 Focus System and Dempster is proper.

15 The rejection of claims 6-12 under 35 U.S.C. § 103(a) as unpatentable  
16 over Focus System, Dempster, and Loan Calculator is proper.

17 The rejection of claim 13 under 35 U.S.C. § 103(a) as unpatentable over  
18 Focus System, Dempster, Loan Calculator, and Weinstock is proper.

19 We do not reach the cumulative rejections of claims 5-13 under 35  
20 U.S.C. § 112, first paragraph, as not enabling a person of ordinary skill in  
21 the art to make and use the claimed subject matter from the original  
22 disclosure and under 35 U.S.C. § 112, second paragraph, as failing to  
23 particularly point out and distinctly claim the invention is proper.

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DECISION

The rejection of claims 5-13 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

JRG