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Paper 17
Entered: July 1, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASKELADDEN L.L.C.,
Petitioner,

v.

INTERCURRENCY SOFTWARE LLC,
Patent Owner.

IPR2024-00378
Patent 11,449,930 B1

Before NEIL T. POWELL, FRANCES L. IPPOLITO, and SEAN P. O'HANLON, *Administrative Patent Judges*.

IPPOLITO, *Administrative Patent Judge*.

JUDGEMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Askeladden L.L.C ("Petitioner") filed a Petition (Paper 2, "Pet.") requesting *inter partes* review of claims 1–15 of U.S. Patent No. 11,449,930 B1 (Ex. 1001, "the '930 patent"). Pet. 13. Intercurrency Software LLC ("Patent Owner") did not file a Preliminary Response.

Applying the standard set forth in 35 U.S.C. § 314(a), we instituted an *inter partes* review as to all claims and grounds set forth in the Petition. Paper 12 ("Inst. Dec.").

After institution, Patent Owner filed a Patent Owner Response (Paper 15, "PO Resp."), Petitioner filed a Reply (Paper 16, "Pet. Reply"). Patent Owner did not file a Sur-reply. An oral hearing was not requested by the parties.

We have jurisdiction pursuant to 35 U.S.C. § 6. This Decision is a Final Written Decision under 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 as to the patentability of the Challenged Claims. Petitioner bears the burden of proving unpatentability of the Challenged Claims. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2021).

Having reviewed the arguments and the supporting evidence, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–15 of the '930 patent are unpatentable.

A. Related Matters

According to Petitioner, the '930 patent is the subject of civil action in: *Intercurrency Software LLC v. Binance Holdings, Ltd.,* 2:2023cv00370 (E.D. Tex. filed August 16, 2023); *Intercurrency Software LLC v.*

Blockchain (Gb) Ltd, 2:2023cv00369 (E.D. Tex. filed August 16, 2023); *Intercurrency Software LLC v. Charles Schwab & Co., Inc. et al.,* 2:2023cv00128 (E.D. Tex. filed March 27, 2023); *Intercurrency Software LLC v. Fidelity Brokerage Services LLC et al.,* 2:2023cv00080 (E.D. Tex. filed February 28, 2023); *Intercurrency Software LLC v. Foris DAX Asia Pte. Ltd.,* 2:2023cv00361 (E.D. Tex. filed August 4, 2023); *Intercurrency Software LLC v. GBM Foundation Company Ltd.,* 2:2023cv00395 (E.D. Tex. filed August 31, 2023); *Intercurrency Software LLC v. IG Group,* 2:2023cv00234 (E.D. Tex. filed May 26, 2023); *Intercurrency Software LLC v. MEK Global Limited et al.,* 2:2023cv00394 (E.D. Tex. filed August 31, 2023); *Intercurrency Software LLC v. Morgan Stanley & Co. LLC et al.,* 2:2023cv00130 (E.D. Tex. filed March 28, 2023); *Intercurrency Software LLC v. Robinhood Crypto, LLC* 2:2023cv00360 (E.D. Tex. filed August 04, 2023); and *Intercurrency Software LLC v. TD AMERITRADE, Inc. et al.,* 2:2023cv00196 (E.D. Tex. filed May 2, 2023). Pet. 11–12. Petitioner asserts, "[n]one of the defendants in the above cases is a real party in interest or a privy of Petitioner in this proceeding." *Id.* at 12.

B. The '930 Patent (Ex. 1001)

The '930 patent relates generally to "systems and methods for providing a consolidated trading platform allowing traders to trade various assets in a preferred currency regardless where and in what currency the asset is typically traded." Ex. 1001, 1:8–11. The '930 patent describes a three-tier architecture, "which includes a brokerage, a market exchange where securities/assets are traded, and a currency exchange where amounts in one currency can be converted to corresponding amounts in another currency at prevailing rates." *Id.* at 2:24–28. According to the '930 patent,

the three-tier architecture presents "a consolidated trading platform," in which "the brokerage presents all prices, market data, P&L estimates, and transaction results or settlements in a preferred currency, in conjunction with the market exchange and the currency exchange." *Id.* at 2:29–33. Because of this, the '930 patent states that "a trader always knows exactly what he/she may end up with [for] a transaction of an asset." *Id.* at 2:33–34.

Three-tier architectures depicted in Figures 2A and 2B of the '930 patent are reproduced below:

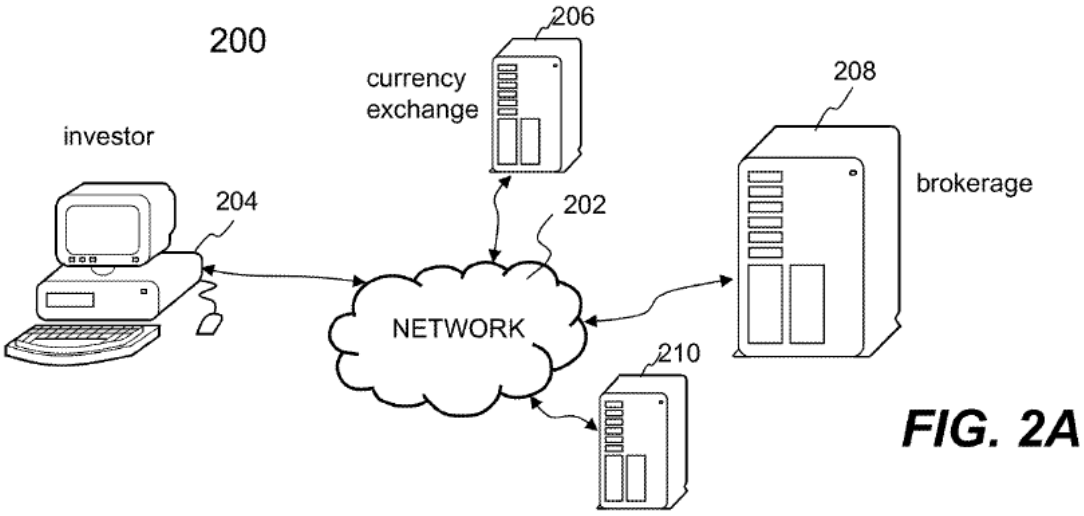

FIG. 2A

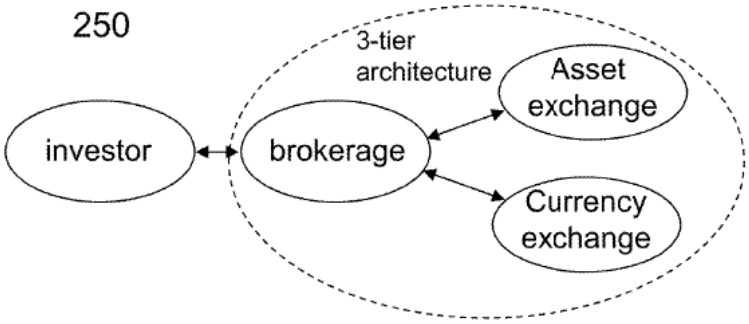

FIG. 2B

Figure 2A illustrates a system configuration and Figure 2B shows a three-tier architecture in which there are three elements together providing various transactions in a preferred currency. *Id.* at 3:62–67. System configuration

200 of Figure 2A includes network 202 that may be the Internet, and client machine 204 coupled to the network, and that "may be accessed by or associated with traders residing anywhere." *Id.* at 4:44–49. Also coupled to network 202 are three servers 206, 208 and 210, wherein server 206 represents a bank or an exchange "providing a currency exchange rate to buy or sell a type of currency for another," server 208 represents a brokerage that facilitates a transaction by a trader, and server 210 represents an asset or market exchange "where an asset is caused to change hands." *Id.* at 4:66–5:6. To complete a "transaction in the preferred currency, the currency exchange converts all settlements to the preferred currency per the prevailing exchange rate, as if the item has changed hands in the preferred currency." *Id.* at 6:4–8. According to the '930 patent, because the system conducts a transactional level currency conversion "a trader knows exactly what profits and losses he/she is going to get in the transaction, without being subject to uncertainty in currency conversion of another time." *Id.* at 5:16–20. Three-tier architecture 250 shown in Figure 2B includes "three elements together providing a consolidated trading platform. These three elements are communicating over a network, together providing all transactions in a local currency upon a real-time transactional level currency conversion." *Id.* at 5:22–27.

An exemplary transaction is depicted in Figure 3, reproduced below.

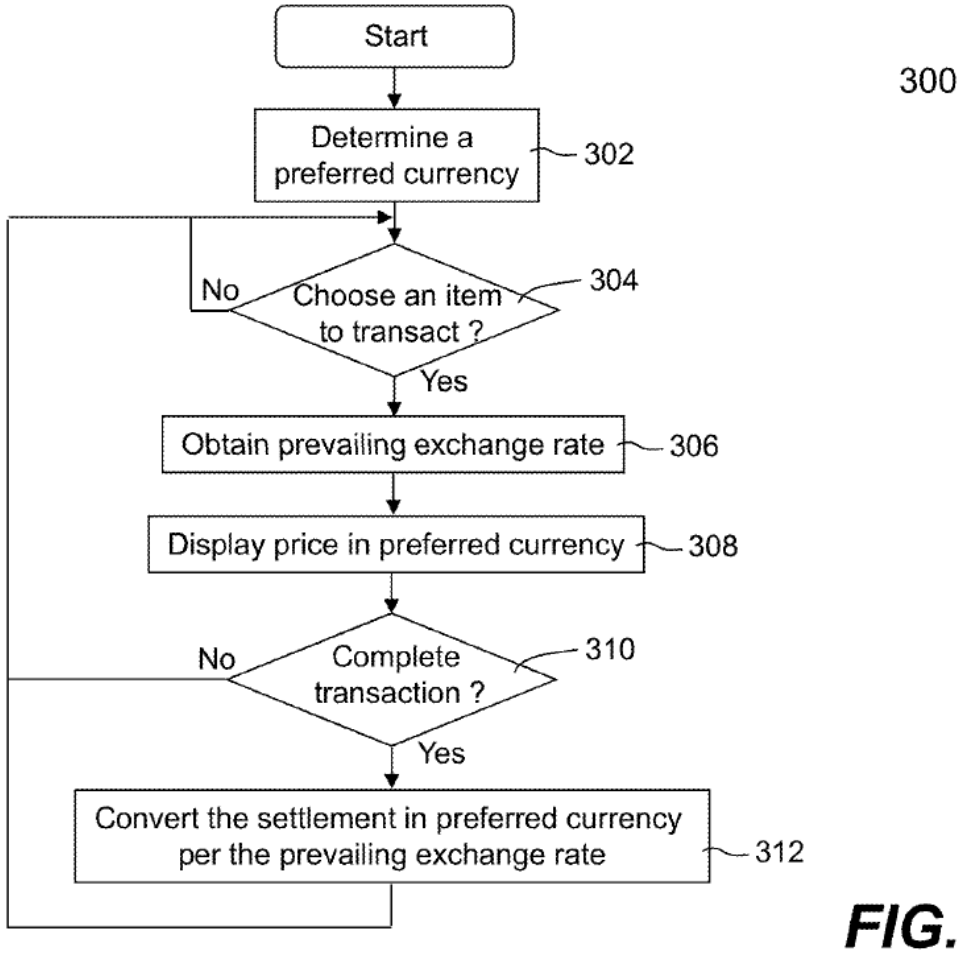

FIG. 3

Figure 3 shows a flowchart or process of conducting a transaction by a trader in a chosen currency other than a market currency. *Id.* at 4:1–3. In Figure 3, "process 300 starts at 302 where it determines what type of currency (e.g., Yen, RMB, EURO)" has been "determined by the trader." *Id.* at 5:36–38. "Once the currency is determined, all subsequent transactions, market data or quotes are presented in the chosen currency in conjunction with a prevailing currency exchange rate provided by an exchange agent." *Id.* at 5:40–43. At step 304, "process 300 determines whether an item (e.g., a stock of XYZ company) has been chosen for transaction (e.g., buying or selling the stock)." *Id.* at 5:44–46. Then, "a prevailing exchange rate is

obtained at [step] 306 from a currency exchange." *Id.* at 5:48–49. If the prevailing exchange rate is provided in yen, "the various costs of the item are displayed in the Japanese yen at 308." *Id.* at 5:54–56. The '930 patent explains that because the costs include "a current market cost of the item to own or to sell, a transaction cost, and a total cost including all the costs and fees," the trader will have "knowledge of what to pay for the item, or profit or loss when selling the item." *Id.* at 5:56–61. "[P]rocess 300 now goes to [step] 310 where the trader decides whether the item shall be bought or sold." *Id.* at 5:62–63. If "the trader decides to proceed with the item (e.g., to own or sell the asset), the process 300 goes to 312 where the transaction is completed (i.e., settled) in the preferred currency." *Id.* at 5:67–6:3.

C. Challenged Claims

Petitioner challenges claims 1–15. Pet. 13. Claims 1, 5, and 12 are the independent claims. Claim 1 is reproduced below:

> 1. A method for trading an asset, the method comprising:
>
> receiving in a trading server an indicator of first currency from a trader, wherein the trading server is coupled to at least one currency exchange server and at least one market exchange server;
>
> calculating costs and fees in the first currency to own or sell the asset being traded in second currency, wherein the costs and fees are displayed on a display device, the costs and fees being display[ed] are dynamically changed in accordance with a first prevailing exchange rate between the first currency and the second currency, and even when the market value of the asset remains unchanged, wherein the first prevailing exchange rate is determined by the trading server in reference to the at least one currency exchange server;
>
> conducting in the trading server a transaction of the asset by transporting a transaction request from the trading server to the market exchange server upon receiving an order from trader; and

> reaching a settlement in the trading server as soon as the transaction of the asset is performed by the market exchange server in accordance with conditions set by the trader, wherein a second prevailing exchange rate is calculated from the currency exchange server right before the transaction takes place, and executes the transaction with the calculated second prevailing exchange rate, wherein costs and fees in the settlement per the second prevailing exchange rate are not identical to the displayed costs and fees with the first prevailing exchange before the transaction of the asset took place.

Ex. 1001, 8:46–9:9 (minor reformatting).

D. Alleged Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Claims Challenged	**35 U.S.C. §**	**References**
1, 2, 4–9, 12, 13, 15	103(a)	Calo,[1] Rude,[2] Sellberg[3]
1, 2, 4–9, 12, 13, 15	103(a)	Calo, Rude, Szoc[4]
3, 10, 11, 14	103(a)	Calo, Rude, Sellberg, Davidowitz[5]
3, 10, 11, 14	103(a)	Calo, Rude, Szoc, Davidowitz

[1] U.S. Patent Application Pub. No. 2002/0087454 A1, published July 4, 2002 (Ex. 1005) ("Calo").
[2] U.S. Patent Application Pub. No. 2006/0095361 A1, published May 4, 2006 (Ex. 1006) ("Rude").
[3] U.S. Patent Application Publication No. 2004/0236664 A1, published November 25, 2004 (Ex. 1019) ("Sellberg").
[4] U.S. Patent Application Publication No. 2002/0023053 A1, published February 21, 2002 (Ex. 1007) ("Szoc").
[5] U.S. Patent Application Pub. No. 2004/0267655 A1, published December 30, 2004 (Ex. 1018) ("Davidowitz").

Pet. 15. In addition to the references listed above, Petitioner relies on the Declaration of Mr. Marc Reid (Ex. 1002). *See, e.g.*, Pet. 9.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review proceeding, the Board interprets claim language using the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b), as described in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b). Under the principles set forth by our reviewing court, the "words of a claim 'are generally given their ordinary and customary meaning,'" as would be understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips*, 415 F.3d at 1312. "In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence." *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence, when available, may also be useful when construing claim terms under this standard, extrinsic evidence should be considered in the context of the intrinsic evidence. *See Phillips*, 415 F.3d at 1317–19.

Petitioner asserts that for the term "prevailing exchange rate," as recited in claims 1, 4, 6, 12, and 15, "[t]he term prevailing commonly means 'current.'" Pet. 26. According to Petitioner, this is consistent with the '930 patent. *Id.* Petitioner asserts that "[t]he only rates the Specification describes using are a 'forward' rate or a 'spot' rate – in other words, a selected current exchange rate." *Id.* (citing Ex. 1002 ¶ 33). Petitioner thus

asserts that "'prevailing exchange rate' means 'a selected current rate.'" *Id.* (citing Ex. 1002 ¶¶ 67, 70, 75). Petitioner further contends that the term "prevailing currency exchange rate" as recited in claims 2, 3, 6–11, 13, and 14, should "be any selected current currency exchange rate such as a 'spot' rate or a 'forward' rate." *Id.* at 27 (citing Ex. 1002 ¶ 67).

Patent Owner does not contest Petitioner's proposed constructions. PO Resp. 4 ("For purposes of the present IPR, Patent Owner agrees with Petitioner's proposed definition of the term[s] 'prevailing exchange rate' [and prevailing currency exchange rate] means 'a selected current exchange rate.'"). For the remaining terms, Patent Owner "submits that they should be given their ordinary and customary meaning as understood by one of ordinary skill in the art in the field of electronic trading as of the date of the invention." *Id.*

We do not need to construe any terms expressly to reach our decision. *See Realtime Data LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required to construe 'only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

B. Alleged Obviousness

In *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court set out a framework for assessing obviousness under § 103 that requires consideration of four factors: (1) the "level of ordinary skill in the pertinent art," (2) the "scope and content of the prior art," (3) the "differences between the prior art and the claims at issue," and (4) "secondary considerations" of non-obviousness such as "commercial

success, long-felt but unsolved needs, failure of others, etc." *Id.* at 17–18. "While the sequence of these questions might be reordered in any particular case," *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007), the Federal Circuit has "repeatedly emphasized that an obviousness inquiry requires examination of all four *Graham* factors and that an obviousness determination can be made only after consideration of each factor." *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1335 (Fed. Cir. 2016).

We note that, with respect to the fourth *Graham* factor, the record in this proceeding does not include any argument or evidence directed to secondary considerations of nonobviousness. The analysis below addresses the first three *Graham* factors.

C. Level of Ordinary Skill in the Art

In determining the level of skill in the art, we consider the type of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus. Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986); *Orthopedic Equip. Co. v. U.S.*, 702 F.2d 1005, 1011 (Fed. Cir. 1983).

Petitioner proposes "that a [person of ordinary skill in the art] for the '930 Patent in the relevant field in 2007 would have a bachelor's degree in computer science or a related study and two years of experience with financial trading systems or an equivalent combination of education and experience." Pet. 27 (citing Ex. 1002 ¶¶ 73–74).

Patent Owner does not propose an alternative level of skill. *See, generally* PO Resp.

For purposes of this Decision, we adopt Petitioner's proposal, reiterated by the proposal of Petitioner's expert, which comports with the teachings of the '930 patent and the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

D. Prior Art References

1. Calo (Ex. 1005)

Calo describes "a globalized trading network that permits trading of stocks and other securities and commodities across international boundaries." Ex. 1005 ¶ 3. Calo's trading methods "include accepting an electronic transaction order for the purchase or sale of a security, vetting the order" for sufficiency of funds, "transmitting the transaction order to a global hub, purchasing or selling the security, and adjusting the customer account accordingly." *Id.* ¶ 9.

Figure 2, reproduced below, illustrates Calo's system.

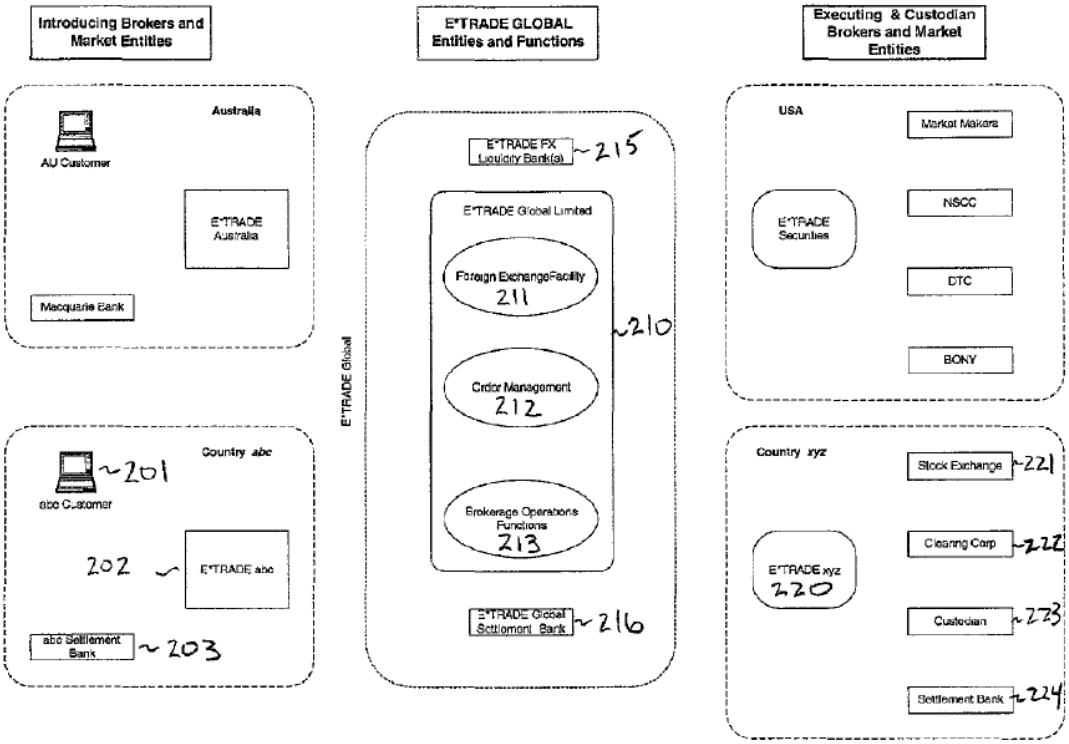

Figure 2 illustrates an exemplary computer network and "the various entities associated with the introducing broker, the executing broker, and the E*TRADE Global system." *Id.* ¶ 27. On the introducing broker side is "customer 201, the local E*TRADE affiliate 202, and the abc settlement bank 203," for country abc and the corresponding elements for an Australian introducing broker. *Id.* Calo teaches that "E*TRADE Global hub 210 supports a Foreign Exchange Facility 211, an order management system 212 and a brokerage operation system 213 internally," as well as "Foreign Exchange (FX) liquidity bank 215, and its own global settlement bank 216." *Id*. On the executing broker side is "local E*TRADE affiliate 220, the stock exchange 221 of the country from where the equities are being purchased, the clearing corporation 222, the custodian 223, and the local settlement

bank 224," of country xyz and the corresponding elements for a US executing broker. *Id.*

Figure 3B of Calo is further reproduced below:

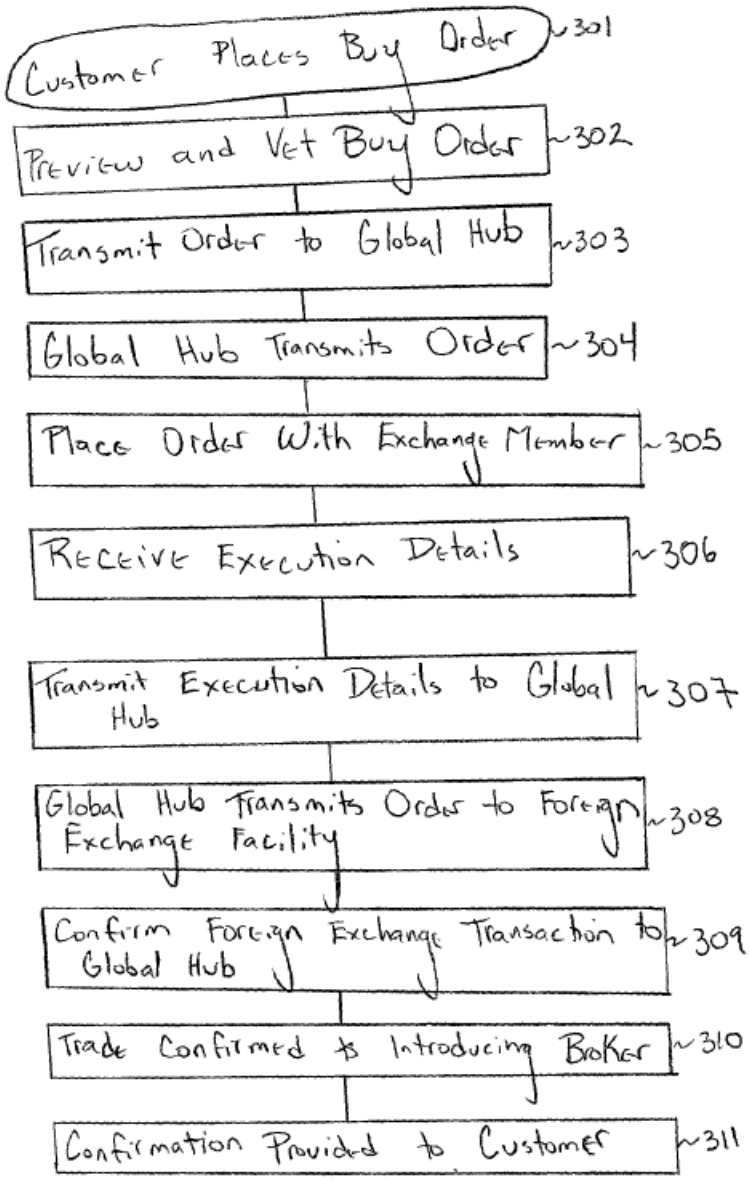

FIGURE 3B

Figure 3B is a "flow diagram[] illustrating cross-border trading order and execution flow for buying a security." *Id.* ¶ 14. In a cross-border transaction for an Australian customer buying a U.S. security, "prior to step 301, a customer in Australia receives from E*TRADE Global a preview price on a real-time basis for a U.S. equity (such as an individual stock or mutual fund share)." *Id.* ¶ 30. Calo explains that although orders are normally placed "based on the currency of the target market in which the security trades[, a] price in the native currency may also be provided, with this price being based on both the real-time quote for price on the U.S. equity, as well as a real-time conversion from the foreign exchange rates." *Id.* At step 301, the customer places an order with E*TRADE Australia based on the real-time quote. The order is vetted at step 302, and then transmitted to E*TRADE Global at step 303. *Id.*

At step 304, E*TRADE Global transmits the order to E*TRADE Securities (ETS). *Id.* At step 305, the order is placed and executed with a U.S. exchange, or E*TRADE Global may execute the trade directly. *Id.* "After the equity order is executed, ETS receives the execution details at step 306," and "transmits the execution details to E*TRADE Global," at step 307, which confirms the trade back to E*TRADE Australia in step 310 including "the USD execution price and principal amount as well as the locked-in AUD value of the trade." *Id.* "At step 311, E*TRADE Australia gives confirmation to the customer of the purchase. This confirmation includes E*TRADE Australia's commissions and fees." *Id.*

2. *Rude (Ex. 1006)*

Rude is directed to "systems, methods, apparatus, computer program code and means for electronic trading of securities" that "facilitat[e] trading

of securities priced in currencies other than a trader's operating currency." Ex. 1006 ¶ 1. Rude explains that foreign securities trading transactions may be processed, so that price quotations from a foreign securities exchange are "automatically converted to a trader's operating currency and may be displayed by a trading system to the trader in the operating currency, rather than in the local currency in which the quotations are presented on the foreign securities exchange." *Id.* ¶ 19. Rude further discloses that "[w]hen an order for a foreign securities trading transaction is placed by the trader, the order is sent by the trading system to the foreign securities exchange and is executed on the foreign securities exchange in the local currency of the foreign securities exchange." *Id.* According to Rude, "a net settlement amount is established for the transaction, reflecting the execution price and expenses such as settlement fees and commissions." *Id.*

Figure 1, reproduced below, shows a block diagram of Rude's system. *Id.* ¶ 7.

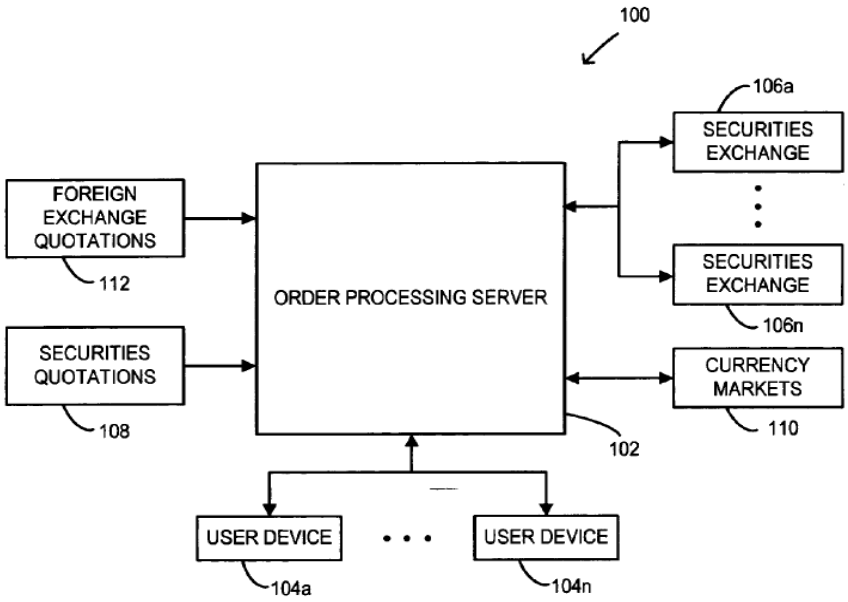

FIG. 1

Figure 1, reproduced above, shows "trading system 100 includes a number of different components which cooperatively operate to process foreign securities trading orders and related foreign exchange transactions." *Id.* ¶ 20. In particular, "trading system 100 includes an order processing server 102 in communication with one or more user device(s) 104, a plurality of securities exchanges 106, and a source or sources 108 of current securities price quotations." *Id.* ¶ 21. Referring to Figure 1, Rude discloses that "order processing server 102 is also in communication with one or more currency (foreign exchange) markets 110, and one or more sources 112 of foreign exchange price quotations." *Id.* "[O]rder processing server 102 also operates to receive from the price quotation sources 108, 112 data concerning market conditions," wherein "the data supplied by the source(s)

108 may include current price quotations for securities to be traded via the trading system 100." *Id.* ¶ 23. According to Rude, "[t]he quotations may be provided in the local currencies of the various securities exchanges." *Id.*

3. Sellberg (Ex. 1019)

Sellberg describes systems and methods for automatically generating an order in an instrument in a specified currency. Ex. 1019 ¶ 1. Figure 1 of Sellberg, reproduced below, is a schematic flow scheme of a method described.

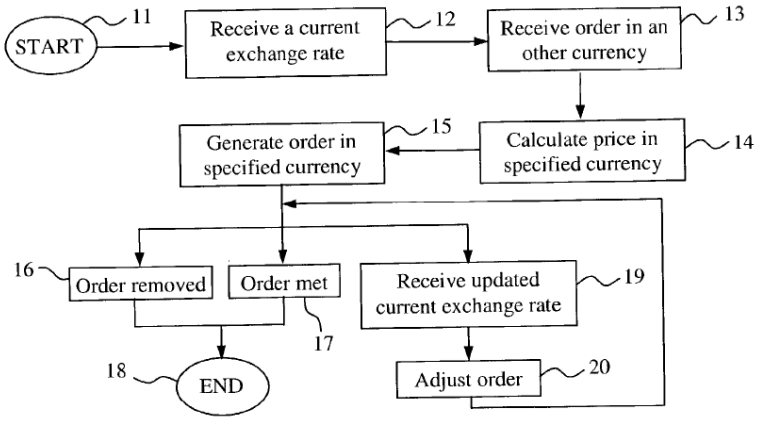

Fig. 1

Figure 1 shows an algorithm for automatically generating an order in an instrument in a specified currency. *Id.* ¶ 22. In step 11 of Figure 1, the algorithm is started. *Id.* ¶ 23. In step 12, a current exchange rate between a currency, which is different from a specified currency in which the instrument is traded, is received. *Id.* "In a step 13, an order is received in the particular instrument in a currency different from the specified currency from a trader." *Id.* Sellberg explains that "an updated exchange rate between the different currency and the specified currency is received repeatedly and automatically from the currency market …, and the last

received updated exchange rate between the different currency and the specified currency at the time of receiving the order is used as the received current exchange rate." *Id.* ¶ 24.

4. Szoc (Ex. 1007)

Szoc describes "apparatus, system and method for providing real-time foreign exchange rate quotes, cross-border payments, and other financial information and services to clients over the Internet and World Wide Web." Ex. 1007 ¶ 5. Szoc's "scrolling quote bar 430 provides a scrolling list of the foreign exchange rates received by the web server 110 from the quote server 126." *Id.* ¶ 83. "Rates are displayed for various currencies with respect to the currently logged-in client's native currency," and "the client may change the number of rates displayed, the manner in which they are displayed, the client's native currency, etc." *Id.* "[S]crolling quote bar 430 may display realtime, constantly changing rates," or, "the displayed quoted rates are updated at a request of the client, such as by clicking on the quote link 422." *Id.*

5. Davidowitz (Ex. 1018)

Davidowitz describes a method and system for initiating pairs trading "across multiple markets, including foreign markets, and automatic foreign exchange price hedge." Ex. 1018 ¶ 3. Davidowitz discloses "an automated system that can help manage an investor's portfolio, including continuously monitoring the relationships of pairs in various markets and automatically executing transactions based upon the realization of specific parameters chosen by the investor." *Id.* ¶ 8. Davidowitz also discloses "a system that can monitor the relationships between securities in various foreign

currencies and revalue such securities into a single currency in order to facilitate an investor's automated pairs trading strategy." *Id.*

E. Obviousness Based on Calo, Rude, and Sellberg

Petitioner asserts that each of claims 1, 2, 4–9, 12, 13, and 15 of the '930 patent would have been obvious over Calo, Rude, and Sellberg. Pet. 28–43. For the reasons discussed below, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 1–4 and 6–10 of the '930 patent would have been unpatentable over the asserted combination of Calo, Rude, and Sellberg.

1. Independent Claim 1

a. receiving in a trading server an indicator of first currency from a trader, wherein the trading server is coupled to at least one currency exchange server and at least one market exchange server

Independent claim 1 recites a method for trading an asset, the method including, "receiving in a trading server an indicator of first currency from a trader, wherein the trading server is coupled to at least one currency exchange server and at least one market exchange server." Ex. 1001, 8:46–50.

For these limitations, Petitioner contends that "Calo and Rude both describe consolidated trading platforms." Pet. 42. As to Calo, Petitioner asserts that "Calo discloses an extensive trading platform including Foreign Exchange servers and trading servers." *Id.* at 51 (citing Ex. 1005 ¶ 27; Ex. 1002 ¶¶ 214–222).

Petitioner asserts that "Rude's system is connected to a foreign exchange quotation computer, a currency quotation computer, and a currency market computer," as well as being "connected to security exchanges." *Id.* (citing Ex. 1006 ¶ 21, Fig. 1). Petitioner contends that

Rude's "trading system may provide quotes in an 'operating' currency rather than the currency local to the market where an asset is traded," and that Rude's "trader, may choose to have the system automatically convert 'quotes of security prices []in local currencies to his/her operating currency . . . .'" *Id.* (citing Ex. 1006 ¶¶ 19, 29, 36, 47–49, 60).

Based on our review, we observe Petitioner's position is consistent with Rude's disclosure. For example, Rude's Figure 1 is reproduced below:

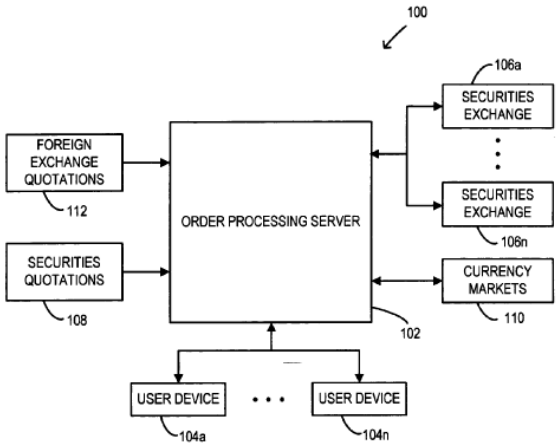

FIG. 1

Figure 1 is a block diagram of trading system 100 with order processing server 102 in communication with a plurality of securities exchanges 106 and one or more currency (foreign exchange) markets 110. Ex. 1006 ¶ 21. Consistent with Petitioner's argument, trading system 100 is coupled to at least one currency exchange server and at least one market exchange server. Additionally, Rude teaches that

> [p]rice quotations from a foreign securities *exchange may be automatically converted to a trader's operating currency* and may be displayed by a trading system to the trader in the

> operating currency, rather than in the local currency in which the quotations are presented on the foreign securities exchange.

Ex. 1006 ¶ 19 (emphases added). Further, as Petitioner notes, Calo's "system may provide price of a security in the 'native,' or preferred currency." Pet. 51 (citing Ex. 1005 ¶¶ 30, 58).

Patent Owner does not specifically contest Petitioner's contentions with respect to this limitation. *See, generally* PO Resp.

Based on our review of the complete record, we agree with and adopt Petitioner's arguments as our own. Pet. 41–42, 50–54. As such, Petitioner has explained sufficiently with reference to Calo, Rude, and expert testimony how these references each teach or suggest this limitation. *Id.*

b. calculating costs and fees in the first currency

Claim 1 further recites:

> calculating costs and fees in the first currency to own or sell the asset being traded in second currency, wherein the costs and fees are displayed on a display device, the costs and fees being display[ed] are dynamically changed in accordance with a first prevailing exchange rate between the first currency and the second currency, and even when the market value of the asset remains unchanged, wherein the first prevailing exchange rate is determined by the trading server in reference to the at least one currency exchange server[.]

Ex. 1001, 8:51–60.

Petitioner asserts that both Calo and Rude disclose this limitation. Pet. 42 (citing Ex. 1002 ¶¶ 222–227). Petitioner contends that "Calo discloses that all costs and fees are displayed prior to a trade in the preferred currency and are updated in real time." Pet. 52 (citing Ex. 1005 ¶¶ 30, 38, 70). Petitioner also asserts that "Rude determines all fees in the preferred currency." *Id.* (citing Ex. 1006 ¶ 53).

In addition, Petitioner asserts that "Sellberg discloses costs and fees in the first currency to own or sell the asset being traded in second currency based on the prevailing exchange rate." *Id.* (citing Ex. 1019 ¶¶ 23–25).

Patent Owner does not specifically contest Petitioner's contentions with respect to this limitation. *See, generally* PO Resp.

Consistent with Petitioner's arguments, we observe that Rude teaches expressly that

> the user interface of the user device 104, in cooperation with the order processing server 102, may present one or more screen displays (not shown) to the user, to permit the user to select in advance for his or her operation of the user device options as to whether foreign securities quotations are to be provided in an operating currency designated by the user or in the local currencies in which the foreign securities trade.

Ex. 1006 ¶ 58. Additionally, we note that Rude discloses an example where

> a user is based in New York and operates in U.S. dollars. Further assume that the user has opted for automatic conversion of quotes of securities prices in local currencies to his/her operating currency and for automatic foreign exchange trading to convert local currency settlements to his/her operating currency.

Id. ¶ 60.

Moreover, we discern Calo teaches that

> *[t]he customer places the order with a cost estimate based on the real-time quotes for the security.* At step 302, E*TRADE Australia *provides a preview of the order* and vets against the buying power of the customer to reserve the sum of the principal amount calculated in U.S. dollars (USD) based on the current U.S. ask price, the Australian dollar (AUD) equivalent based on the current ask price for USD based on the USD principal amount, *the estimated commissions and fees* for a cross-border trade to the US and an additional "reserve" over the previous amounts to allow for fluctuations in both the US equity and USD/AUD currency market.

Ex. 1005 ¶ 30 (emphases added).

Based on our review of the complete record, we agree with and adopt Petitioner's arguments as our own. Pet. 41–42, 50–54. Petitioner has, thus, explained sufficiently with reference to Calo, Rude, and expert testimony how these references each teach or suggest this limitation. *Id.*

c. conducting in the trading server a transaction of the asset by transporting a transaction request from the trading server to the market exchange server upon receiving an order from trader

Claim 1 also recites, "conducting in the trading server a transaction of the asset by transporting a transaction request from the trading server to the market exchange server upon receiving an order from trader." Ex. 1001, 8:61–64.

Petitioner asserts that "Calo and Rude both disclose conducting the transaction by submitting it to the market." Pet. 42 (citing Ex. 1002 ¶¶ 228–230. As to Calo, Petitioner asserts "Calo discloses that E*trade conducts the trade when the customer decides to sell their asset." *Id.* at 52 (citing Ex. 1005 ¶ 40). Additionally, Petitioner asserts that "Rude discloses conducting the trade by submitting it to the order processing server." *Id.* (citing Ex. 1006 ¶¶ 50–51).

Patent Owner does not specifically contest Petitioner's contentions with respect to this limitation. *See, generally* PO Resp.

Based on our review of the complete record, we agree with and adopt Petitioner's arguments as our own. Pet. 41–42, 50–54. Petitioner has, thus, explained sufficiently with reference to Calo, Rude, and expert testimony how these references each teach or suggest this limitation. *Id.*

d. reaching a settlement in the trading server as soon as the transaction of the asset is performed by the market exchange server in accordance with conditions set by the trader

Claim 1 further recites:

> reaching a settlement in the trading server as soon as the transaction of the asset is performed by the market exchange server in accordance with conditions set by the trader, wherein a *second prevailing exchange rate is calculated from the currency exchange server right before the transaction takes place, and executes the transaction with the calculated second prevailing exchange rate*, wherein costs and fees in the settlement per the second prevailing exchange rate are not identical to the displayed costs and fees with the first prevailing exchange before the transaction of the asset took place.

Ex. 1001, 8:65–9:10 (emphases added).

i. Petitioner's Contentions

For these limitations, Petitioner asserts that "Calo and Rude in view of Sellberg, disclose receiving the claimed settlement step, including executing the transaction with a second prevailing rate, Step [D]." Pet. 42 (citing Ex. 1002 ¶¶ 231–248). More specifically, Petitioner contends that "Calo discloses this element: 'E*TRADE Australia with the USD execution price and principal amount as well as the locked-in AUD value of the trade.'" *Id.* at 53 (citing Ex. 1005 ¶ 30).

Petitioner further asserts "Rude discloses that by executing a trade at the real-time exchange rate, the resulting clearance has the condition met where the settlement price is the prevailing exchange rate 'right before the transaction takes place when the asset is not priced in the preferred currency.'" Pet. 53 (citing Ex. 1006 ¶ 62). According to Petitioner, Rude's "net settlement amount is automatically converted to the trader's operating currency through a forward foreign exchange transaction, effectively

mitigating foreign exchange risk." *Id.* Petitioner asserts that Rude's "system offers options for traders to customize their preferences regarding currency display and automatic foreign exchange conversion" in order "to provide a seamless and transparent foreign securities trading experience by simplifying currency conversion and managing foreign exchange transactions automatically." *Id.* (citing Ex. 1006 ¶¶ 24, 60).

Separately, we note Petitioner also relies on Sellberg for this limitation. Pet. 54 (citing Ex. 1019 ¶¶ 23–25). In this regard, Mr. Reid explains that

> Sellberg also teaches monitoring the currency exchange rate to execute limit orders. That is, if the market price of the asset does not change in the market exchange, but the currency exchange rate does, a trade can still be executed when a favorable currency exchange rate is detected. Id. ¶ 0028. Sellberg specifically teaches processing portions of limit orders based on exchange rates received.

Ex. 1002 ¶ 236 (quoting Ex. 1019 ¶¶ 35, 37); *see* Pet. 40. Mr. Reid further testifies that

> [c]learly, by 2007, a POSITA would have appreciated that Calo and Rude were in the same field of endeavor and analogous art. Both are directed to the same type of technology. The state of programming technology at the time supported developing systems that would easily accomplish the features of claim 1 using the teachings of Calo and Rude, and Sellberg or Szoc. In fact, all the teaching of the prior art cited this Declaration would have been easily combinable by the skilled person by 2007. This was also evidenced by the existence of electronic trading systems for currencies and equities prior to 2007. There was a clear motivation to combine the references and a POSITA would have had a reasonable expectation of success when making this combination. For example, *the skilled person would have been motivated to improve the features of the display and trading technology to make the system more useful and desirable to use.*

Ex. 1002 ¶¶ 247–248 (emphases added).

ii. Patent Owner's Contentions

Patent Owner contends that Calo, Rude, and Sellberg, either alone or in combination, fail to teach or suggest "wherein a second prevailing exchange rate is calculated from the currency exchange server *right before the transaction takes place*, and *executes the transaction with the calculated second prevailing exchange rate*." PO Resp. 4.

Patent Owner contends that "Calo clearly teaches executing a trade with a future undetermined exchange rate, because the currency conversion is done after the trade is executed." PO Resp. 6; Ex. 1005 ¶ 30. Patent Owner adds Calo does not teach calculating the prevailing rate *right before the transaction* takes place and executing the transaction with that rate because Calo's display of an order "preview" and reservation of sums to cover fluctuations in the US equity and USD/AUD currency market indicate the transaction happens later, after the preview is provided. *Id.*

Patent Owner further contends that Rude "clearly and unequivocally teaches using an exchange rate in existence *after* the transaction is executed[.]" PO Resp. 8 (citing Ex. 1006 ¶ 19).

For Sellberg, Patent Owner maintains that

> Sellberg teaches an automated system in which a buyer of securities that are traded in a "foreign currency" that is different than the buyer's home currency sets a bid order for the securities based on the buyer's home currency and the system *automatically converts the home currency bid price to the equivalent foreign currency bid price based on the current exchange rate*.

Id. (emphases added).

iii. Discussion

Based on the complete record, Petitioner's position is better supported. To better explain, Figure 3B of Calo is reproduced below:

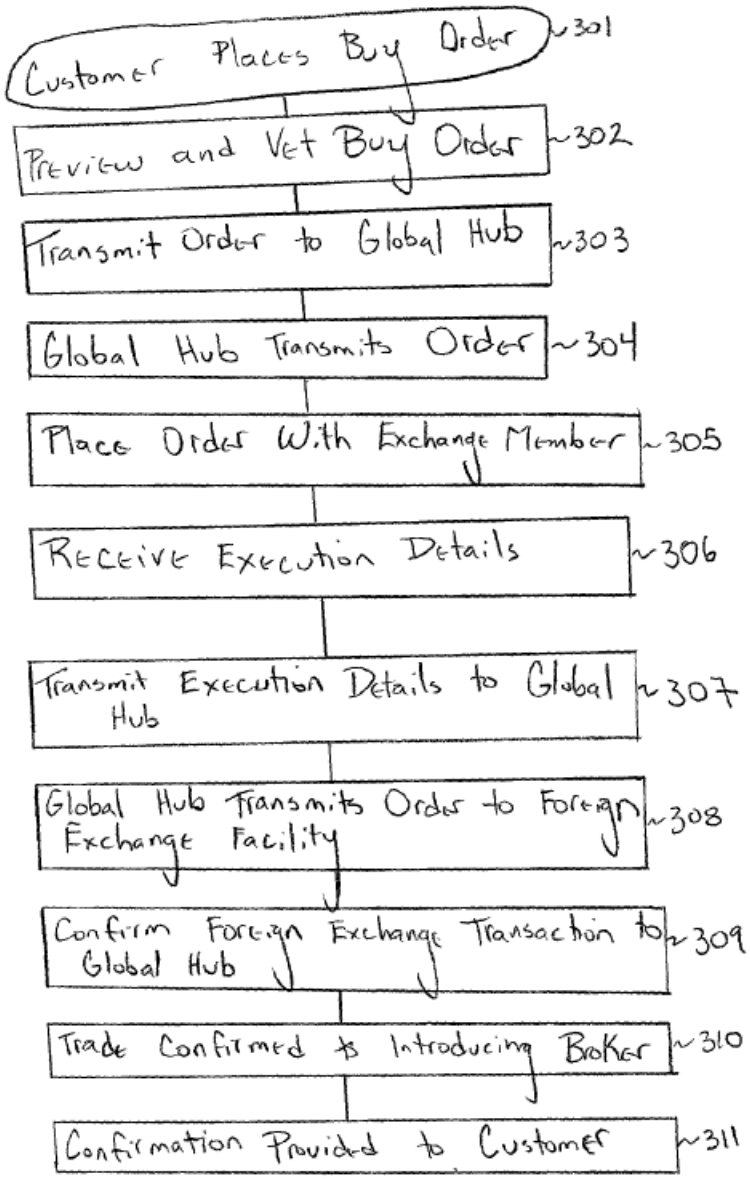

FIGURE 3B

Figure 3B is a "flow diagram[] illustrating cross-border trading order and execution flow for buying a security." Ex. 1005 ¶ 14. Referring to Figure 3B, Calo discloses a cross-border transaction for an Australian customer buying a U.S. security in which, "prior to step 301, a customer in Australia receives from E*TRADE Global a preview price on a *real-time basis* for a U.S. equity (such as an individual stock or mutual fund share)." *Id.* ¶ 30 (emphasis added). Calo explains that, although orders are normally placed "based on the currency of the target market in which the security trades[, a] price in the native currency may also be provided, with this price being based on both the real-time quote for price on the U.S. equity, as well as a *real-time conversion from the foreign exchange rates*." *Id.* (emphasis added). At step 301, the customer places an order with E*TRADE Australia based on the real-time quote. *Id.* The order is vetted at step 302, and then transmitted to E*TRADE Global at step 303. *Id.*

At step 304, E*TRADE Global transmits the order to E*TRADE Securities (ETS). *Id.* At step 305, the order is placed and executed with a U.S. exchange, or E*TRADE Global may execute the trade directly. *Id.* "After the equity order is executed, ETS receives the execution details at step 306," and "transmits the execution details to E*TRADE Global," at step 307, which confirms the trade back to E*TRADE Australia in step 310 including "the USD execution price and principal amount as well as the locked-in AUD value of the trade." *Id.* "At step 311, E*TRADE Australia gives confirmation to the customer of the purchase. This confirmation includes E*TRADE Australia's commissions and fees." *Id.*

We note further that Calo teaches:

> Associated with these transactions are a number of risks . . . [that] arise from having two transactions occurring in a cross-border

> trade (equity and currency) and having to deal with different time zones . . . . *[T]here is the risk that the exchange rate for the currency pair will have changed significantly between the time the order is placed and the time of execution.*

Ex. 1005 ¶ 69 (emphases added). Calo teaches that this risk can be "mitigated by initiating and *executing the currency exchange transaction immediately after the equity transaction is executed* to lock in an exchange rate as close as possible to that previewed." *Id.* ¶ 69 (emphasis added);

Petitioner's expert, Mr. Reid, explains that a POSITA would understand

> Calo discloses, among other things, "a customer in Australia receives from E*TRADE Global a preview price on a real-time basis for a U.S. equity (such as an individual stock or mutual fund share). A customer normally is expected to place orders based on the currency of the target market in which the security trades. A *price in the native currency may also be provided, with this price being based on both the real-time quote for price on the U.S. equity, as well as a real-time conversion from the foreign exchange rates*.

Ex. 1002 ¶ 102 (citing Ex. 1002 ¶ 30) (emphases added). Mr. Reid adds that Calo's "locked-in rate does not mean that the display does not change when the rates change, but rather that the rate, which may be continuously changing*, becomes locked-in for the purpose of the transaction at the time the trader makes the trade*." Ex. 1002 ¶ 105 (emphasis added).

As discussed above, Calo explains that orders may be placed based on a "price in the native currency . . . with this price being based on both the *real-time* quote for price on the U.S. equity, as well as a *real-time* conversion from the foreign exchange rates." Ex. 1005 ¶ 30 (emphases added). In addition, Calo teaches that the risks and exposure of transactions can be "mitigated by initiating and *executing the currency exchange*

transaction immediately after the equity transaction is executed to *lock in an exchange* rate as close as possible to that previewed." *Id.* ¶ 69 (emphasis added). In this way, we find Calo teaches that the exchange rate may be locked in (e.g., a real-time conversion rate that is obtained right before the transaction takes place) and that the currency exchange occurs immediately after the equity transaction to mitigate uncertainty in currency changes in another time. *See* Ex. 1005 ¶¶ 30, 69.

We further observe that Petitioner also relies on the automated trading system disclosed in Sellberg. Petitioner contends "[t]o the extent that the Calo-Rude combination fails to disclose using the prevailing rate 'right before the transaction takes place,' this is clearly disclosed by Sellberg." Pet. 41 (citing Ex. 1002 ¶ 222–224). In its Reply, Petitioner adds that

> Sellberg teaches to use an updated exchange rate, preferably the last exchange rate just prior to the submitting the order, for performing the transaction. Petition at 39; EX1019 ¶¶0023-0025; EX1002 ¶161. Sellberg therefore teaches using exactly the same prevailing exchange rate as the '930 patent.

Pet. Reply 23 (citing Ex. 1019 ¶¶ 23–25; Ex. 1002 ¶ 177).

In addition, Mr. Reid explains "Sellberg discloses a system that allows a trader to give an order in an instrument in a currency that is different from the currency used for that instrument." Ex. 1002 ¶ 176 (citing Ex. 1019 ¶ 7). Mr. Reid testifies that

> [w]hen an order is received in a preferred currency that is different than the market currency, Sellberg also teaches to use an updated exchange rate (which is updated repeatedly in real-time), preferably the last exchange rate just prior to the submitting the order, for performing the transaction.

Id. ¶ 177 (citing Ex. 1019 ¶¶ 23–25).

Consistent with Petitioner's arguments and Mr. Reid's testimony, we note that Sellberg's paragraphs 24 and 25 discloses:

> *an updated exchange rate between the different currency and the specified currency is received repeatedly and automatically from the currency market or the market maker*, and *the last received updated exchange rate between the different currency and the specified currency at the time of receiving the order is used as the received current exchange rate*. The frequency, at which the updated exchange rate between the different currency and the specified currency is received, may be from several times a second down to once an hour, or even more infrequently. If the updated exchange rate between the different currency and the specified currency is received repeatedly and automatically from a market maker, *this market maker guarantees to perform a currency transaction based on the last received updated exchange rate. Thus, the updated exchange rate as received may be viewed upon as a real time feed of guaranteed exchange rates*.

Ex. 1019 ¶¶ 24–25 (emphases added). As such, we agree that Sellberg's disclosure teaches what is required of challenged claim 1, which is the calculation of a second prevailing exchange rate "right before the transaction takes place," and the execution of the transaction with the calculated second prevailing exchange rate "wherein costs and fees in the settlement per the second prevailing exchange rate are not identical to the displayed costs and fees with the first prevailing exchange before the transaction of the asset took place." Ex. 1001, 8:65–9:10.

We further note that Patent Owner's reading of Sellberg is also consistent with ours. Patent Owner contends that

> Sellberg teaches an automated system in which a buyer of securities that are traded in a "foreign currency" that is different than the buyer's home currency sets a bid order for the securities based on the buyer's home currency and the system *automatically converts the home currency bid price to the*

> *equivalent foreign currency bid price based on the current exchange rate*.

PO Resp. 8 (emphases added). According to Patent Owner, Sellberg converts the currency bid price to a foreign currency "based on the *current* exchange rate," which is consistent with our understanding that Sellberg updates the exchange rate repeatedly and automatically. *See* Ex. 1019 ¶¶ 24–25.

Additionally, we observe Mr. Reid testifies that "Sellberg also describes benefits of adding currency exchange features to a trading system, such as increasing liquidity in the system." Ex. 1002 ¶ 178 (citing Ex. 1019 12). Mr. Reid further explains that "the skilled person would have known that adding currency exchange to a trading system would be a desired improvement." *Id.*

After reviewing the record, we determine that Petitioner has set forth a sufficient rationale for combining Sellberg's teachings with Calo's system. Sellberg discloses a trading system that utilizes an updated exchange rate that is repeatedly and automatically received from the currency market or the market maker, "and the last received updated exchange rate between the different currency and the specified currency at the time of receiving the order is used as the received current exchange rate." Ex. 1019 ¶ 24. Mr. Reid has explained, with sufficient reasoning and citation to the record, how and why a POSITA would have added Sellberg's currency exchange features to Calo's trading system. Ex. 1002 ¶ 178.

Thus, based on our review of the complete record, including the testimony of Mr. Reid, we are persuaded that the combination of Calo, Rude, and Sellberg discloses this limitation for the reasons given by Petitioner.

e. Conclusion

After review of the arguments and evidence, we conclude that Petitioner has established by a preponderance of evidence that claim 1 would have been obvious over the combination of Calo, Rude, and Sellberg.

2. Claims 2, 4–9, 12, 13, and 15

For claims 2, 4–9, 12, 13, and 15, Petitioner relies on the same or similar arguments and evidence discussed above for the combination of Calo, Rude, and Sellberg. *See* Pet. 42–43, 57–62, 66–73 ("The other independent claims are similar as three claim sets substantially mirror each other respectively, with two sets being directed to methods and one being directed to computer trading system claims.") (citing Ex. 1002 ¶ 51). Petitioner further directs us to the claim chart on pages 50 through 76 of the Petition. *Id.* at 42–43.

For these claims, Patent Owner relies on the same arguments that we have discussed for independent claim 1. PO Resp. 4–9.

Based on the reasoning and evidence provided in the Petition (*see* Pet. 42–43, 57–62, 66–73) and supporting testimony by Mr. Reid (*see* Ex. 1002 ¶¶ 249–257, 265–332, 350–400, 410–413), we determine that Petitioner has shown by a preponderance of evidence that claims 2, 4–9, 1, 13, and 15 would have been obvious over the combination of Calo, Rude, and Sellberg.

F. Obviousness Based on Calo, Rude, and Szoc

Petitioner asserts that claims 1, 2, 4–9, 12, 13, and 15 of the '930 patent would have been obvious over Calo, Rude, and Szoc. Pet. 43–47. Petitioner relies on the same or similar arguments and evidence discussed above for the challenge based on the combination of Calo, Rude, and Sellberg. *Id.* Petitioner further relies on Szoc "to disclose using the claimed

prevailing rate." *Id.* at 45 (citing Ex. 1007 ¶¶ 123–128; Ex. 1002 ¶¶ 247, 415–416); *see id.* at 46 (citing Ex. 1002 ¶¶ 231–248) ("Calo and Rude in view of Szoc, disclose receiving the claimed settlement step, including executing the transaction with a second prevailing rate[.]").

Patent Owner contends that

> Petitioner has failed to provide articulated reasoning with some rational underpinning as to how either Calo or Rude, which both clearly and unequivocally teach using an exchange rate in existence *after* the transaction is executed for the currency conversion, would be modified in view of the teachings of Szoc to obtain the method of claims [1] and 5, and the system of claim 12.

PO Resp. 10.

We observe that Szoc describes "apparatus, system and method for providing real-time foreign exchange rate quotes, cross-border payments, and other financial information and services to clients over the Internet and World Wide Web." Ex. 1007 ¶ 5. According to Szoc, "[o]ne feature of the present invention is that it provides real-time foreign exchange rate quotes that may be relied upon by consumers for a predetermined period of time." *Id.* ¶ 18. Szoc further discloses that

> the client may cho[o]se to execute a transaction following receipt of *a favorable exchange rate quote* with respect to the transaction. As long as an exchange rate quote has not yet expired at a time of execution of a transaction, the transaction will receive the benefit of that rate quote.

Id. ¶ 102 (emphasis added). With respect to this disclosure, we note that Mr. Reid testifies "Szoc teaches that to identify and use a favorable exchange rate, i.e., a prevailing rate, is beneficial, and it would have been obvious to the skilled person to apply the teachings of Szoc to the systems of Calo or Rude." Ex. 1002 ¶ 128. Mr. Reid further testifies that

> [t]he state of programming technology at the time supported developing systems that would easily accomplish the features of claim 1 using the teachings of Calo and Rude, and Sellberg or Szoc. In fact, all the teaching of the prior art cited this Declaration would have been easily combinable by the skilled person by 2007.

Ex. 1002 ¶ 247. We find that Szoc's express disclosure (as discussed above and relied upon by Petitioner) and Mr. Reid's testimony regarding the same sets forth a sufficient rationale for combining Sellberg's teachings with Calo and Rude.

Based on the reasoning and evidence provided in the Petition (*see* Pet. Pet. 43–47) and supporting testimony by Mr. Reid (*see* Ex. 1002 ¶ 128), we determine that Petitioner has shown by a preponderance of evidence that claims 1, 2, 4–9, 12, 13, and 15 would have been obvious over the combination of Calo, Rude, and Szoc.

G. Obviousness Based on Calo, Rude, Sellberg or Szoc, and Davidowitz

Petitioner further asserts that dependent claims 3, 10, 11 and 14 of the '930 patent would have been obvious over Calo, Rude, Sellberg, and Davidowitz, and in the alternative, over Calo, Rude, Szoc, and Davidowitz. Pet. 47–50.

Patent Owner relies on the same arguments discussed for claim 1 that we have discussed. PO Resp. 10–11.

Based on the reasoning and evidence provided in the Petition (*see* Pet. 47–50), we determine that Petitioner has shown by a preponderance of evidence that claims 3, 10, 11 and 14 would have been obvious over the combination of Calo, Rude, Sellberg, and Davidowitz, or, alternatively Calo, Rude, Szoc, and Davidowitz.

III. CONCLUSION

Having reviewed the arguments and the supporting evidence, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–15 of the ’930 patent are unpatentable.

Claims Challenged	35 U.S.C. §	References/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 2, 4–9, 12, 13, 15	103(a)	Calo, Rude, Sellberg	1, 2, 4–9, 12, 13, 15	
1, 2, 4–9, 12, 13, 15	103(a)	Calo, Rude, Szoc	1, 2, 4–9, 12, 13, 15	
3, 10, 11, 14	103(a)	Calo, Rude, Szoc, Davidowitz	3, 10, 11, 14	
3, 10, 11, 14	103(a)	Calo, Rude, Sellberg, Davidowitz	3, 10, 11, 14	
Overall Outcome			1–15	

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–15 of the ’930 patent have been shown to be unpatentable; and

FURTHER ORDERED that because this Decision is final, a party to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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