

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASKELADDEN L.L.C.,
Petitioner,

v.

INTERCURRENCY SOFTWARE LLC,
Patent Owner.

IPR2024-00377
Patent 10,062,107 B1

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

POWELL, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. BACKGROUND

Askeladden L.L.C. (“Petitioner”) filed a Petition for *inter partes* review of claims 19–36 of U.S. Patent No. 10,062,107 B1 (Ex. 1001, “the ’107 patent”). Paper 2 (“Pet.”). Intercurrency Software LLC (“Patent Owner”) did not file a Preliminary Response.

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a) (2021). To institute an *inter partes* review, we must determine that the information presented in the Petition shows “a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). For the reasons set forth below, we determine that the information presented in the Petition establishes a reasonable likelihood that Petitioner will prevail with respect to at least one challenged claim. We institute an *inter partes* review of claims 19–36 based on the grounds set forth in the Petition.

B. RELATED PROCEEDINGS

The parties note the following related patent infringement lawsuits:

Intercurrency Software LLC v. Binance Holdings, Ltd.,
2:2023cv00370 (E.D. Tex., filed Aug. 16, 2023);

Intercurrency Software LLC v. Blockchain (Gb) Ltd, 2:2023cv00369
(E.D. Tex., filed Aug. 16, 2023);

Intercurrency Software LLC v. Charles Schwab & Co., Inc. et al.,
2:2023cv00128 (E.D. Tex., filed Mar. 27, 2023);

Intercurrency Software LLC v. Fidelity Brokerage Services LLC et al.,
2:2023cv00080 (E.D. Tex., filed Feb. 28, 2023);

Intercurrency Software LLC v. Foris DAX Asia Pte. Ltd.,
2:2023cv00361 (E.D. Tex., filed Aug. 4, 2023);
Intercurrency Software LLC v. GBM Foundation Company Ltd.,
2:2023cv00395 (E.D. Tex., filed Aug. 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 Aug. 31, 2023);
Intercurrency Software LLC v. Morgan Stanley & Co. LLC et al.,
2:2023cv00130¹ (E.D. Tex., filed Mar. 28, 2023);
Intercurrency Software LLC v. Robinhood Crypto, LLC,
2:2023cv00360 (E.D. Tex., filed Aug. 4, 2023); and
Intercurrency Software LLC v. TD AMERITRADE, Inc. et al.,
2:2023cv00196 (E.D. Tex., filed May 2, 2023).

Pet. 11–12; Paper 9 (Patent Owner’s Mandatory Notices), 2–3. We also note that claims 1–18 of the ’107 patent have been challenged by Petitioner in IPR2024-00376.

C. THE ’107 PATENT

To obviate an investor from having no knowledge of what the profit or loss would be because of fluctuation in the currency exchange rate, the ’107 patent discloses systems and methods for providing a consolidated trading platform in which traders can trade assets in a preferred currency, regardless of where and what currency the asset is typically traded.

Ex. 1001, 1:6–10, 1:53–59. The ’107 patent discusses an embodiment of a

¹ Patent Owner lists this case as 2:2023cv00131 rather than 2:2023cv00130. Paper 9, 2.

system configuration in connection with Figure 2A, which is reproduced below. *Id.* at 3:62–64.

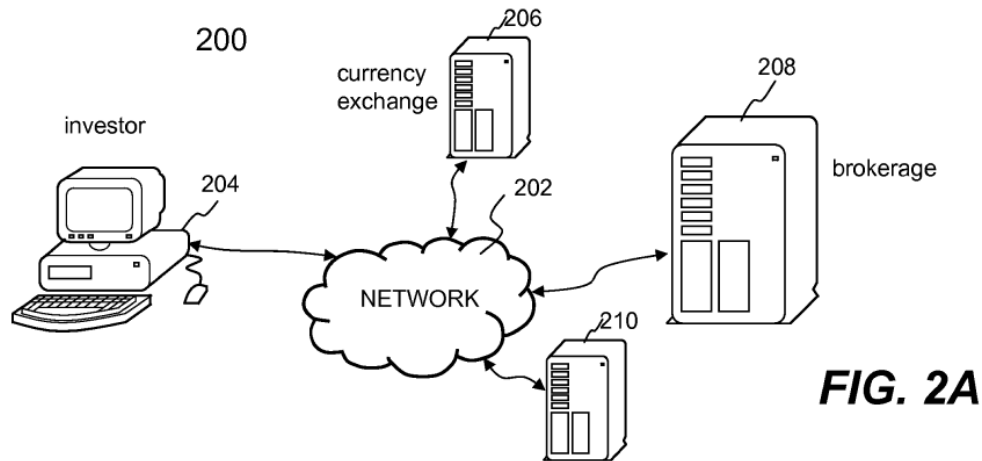


Figure 2A shows system configuration 200 including network 202, such as the Internet, for coupling client machine 204, which is used by an investor or a trader, to servers 206, 208, and 210. *Id.* at 4:40–49, 4:66–67. Server 206 represents an entity that provides currency exchange rate to buy or sell a type of currency for another, server 208 represents a brokerage that facilitates a transaction initiated by a trader, and server 210 represents an asset or market exchange, such as the New York Stock Exchange (NYSE), where an asset can change hands. *Id.* at 4:67–5:6. This system configuration has a three-tier architecture, as illustrated in Figure 2B, which is reproduced below. *Id.* at 3:65–67.

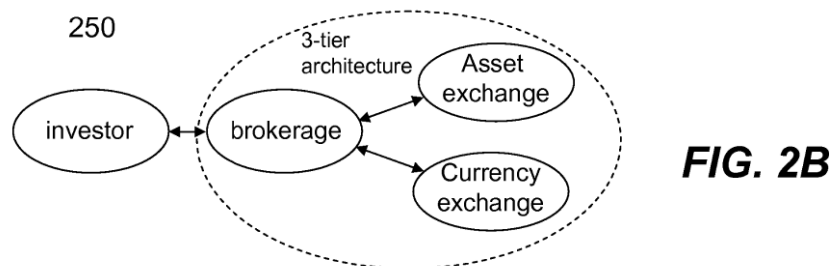


Figure 2B shows a three-tier architecture “in which there are three elements together providing a consolidated trading platform,” i.e., shown in the 3-tier architecture circle as “brokerage,” “Asset exchange,” and “Currency exchange,” “together providing all transactions in a local currency upon a real-time transactional level currency conversion.” *Id.* at 5:21–27, Fig. 2B. A transaction by a trader, shown as “investor,” which communicates with a “brokerage” server in a chosen currency other than a market currency, can be conducted through a process in the flowchart in Figure 3, which is reproduced below. *Id.* at 4:1–3, Fig. 2A.

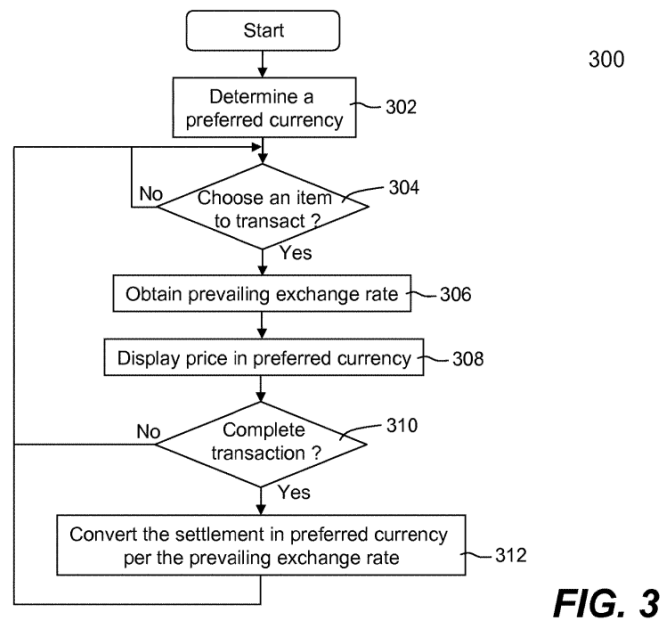


FIG. 3

Figure 3 shows flowchart or process 300 starting at first step 302, in which a trader determines the type of preferred currency. *Id.* at 5:33–37. “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, it is determined if the trader has selected an item for trading. *Id.* at 5:44–48. If not, the process goes back to wait for a selected item. *Id.*

“Based on the preferred currency, a prevailing exchange rate is obtained at [step] 306 from a currency exchange.” *Id.* at 5:48–49. Next, the prevailing exchange rate is used to display various costs of the item at step 308, in which the costs can 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. *Id.* at 5:54–59. According to the ’107 patent, this allows the trader to know “of what to pay for the item, or profit or loss when selling the item.” *Id.* at 5:59–61. At step 310, the trader then determines if the transaction should be completed. *Id.* at 5:62–63. If so, the process proceeds to step 312 for converting settlement (completed transaction) in the preferred currency with the prevailing exchange rate. *Id.* at 5:62–63, 5:67–6:3. If the transaction should not complete, the process loops back to steps 302 and 304 to start over. *Id.* at 5:62–66.

To complete the transaction in the preferred currency at step 312, “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. This is accomplished by the trading or brokerage server 208 in Figure 2A communicating with the market exchange server 210 to complete the currency conversion. *Id.* at 6:8–10. If a price of an item or contract is in a different currency than the currency selected by the investor, the process includes monitoring “the prevailing interbank market price of the ratio of” the two currencies, as well as the price of the item to update and display to the investor. *Id.* at 6:15–23.

In another embodiment, the process includes “executing a limit order by a trader.” *Id.* at 6:39–40. This process is similar to the one depicted in

Figure 3, but includes the steps of placing a limit order, determining whether a condition is met, and executing the limit order. *Id.* at 6:41–7:6; Fig. 4.

And in yet another embodiment, the process accounts for “currency neutral trading.” *Id.* 7:7–8. This process appreciates the fact that costs and risks are incurred when a currency conversion is performed and allows investors to realize that trading in the same home currency would benefit from the absence of currency conversion. *Id.* at 7:8–14. Here, the system “is configured to analyze orders and purchases/sales and determine whether or not investors can be matched without currency conversion,” and the process includes a step of determining if the currency that is being traded is the same as the currency preferred by the investor. *Id.* at 7:14–18, 7:30–31, 7:42–52.

Elements of the system to carry out the process “may be implemented in software” or hardware via a “computer-readable code on a computer readable medium.” *Id.* at 8:14–19.

D. ILLUSTRATIVE CLAIM

Of the challenged claims, claims 19 and 27 are independent. Each of claims 20–26 depends, directly or indirectly, from independent claim 19, and each of claims 28–36 depends, directly or indirectly, from independent claim 27. Claim 19 is illustrative and is reproduced below with certain reformatting:²

19. A non-transitory computer-readable storage medium with an executable software product providing a consolidated trading platform, a trading server configured to execute the software product to perform operations comprising:

² We have added the same labels that Petitioner applies to different portions of claim 19. *See* Pet. 24–25.

[A] coupling the trading server to at least one currency exchange server and one market exchange server;

[B] receiving an indicator of a preferred currency from a trader;

[C] determining whether an asset is being chosen for trading, wherein the asset is being traded in a market currency but displayed in the preferred currency in accordance with a prevailing exchange rate derived from all exchange rates obtained from the currency exchange server, a value of the asset being displayed changes as the exchange rate changes, even when a value of the asset on the market exchange server remains unchanged, wherein the trader has certain knowledge of what to pay for the asset, or profit or loss when acting on the asset;

[D] conducting a transaction of the asset by transmitting a transaction request from the trading server to a market exchange server when the trader decides to proceed with trading the asset;

[E] receiving a settlement notification that the transaction of the asset is performed by the market exchange server in accordance with conditions set by the user, wherein the conditions include a price at which the asset is traded in the preferred currency, the trading server determines first a prevailing exchange rate from the currency exchange server in favor of the user when the asset is not priced in the preferred currency and then executes the transaction with the prevailing exchange rate to prevent uncertainty in currency exchanges; and

[F] performing a currency conversion of some portion or all of the transaction from the market currency to the preferred currency when the preferred currency is not identical to the market currency, the conversion being performed with the prevailing exchange rate.

Id. at 11:57–12:28.

E. ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner challenges the patentability of claims 19–36 of the '107 patent on the following grounds (Pet. 15):

Claim(s) Challenged	35 U.S.C. §	References/Basis
19–25, 27–31, 34–36	103(a)	Calo ³ , Rude ⁴ , Sellberg ⁵
19–25, 27–31, 34–36	103(a)	Calo, Rude, Szoc ⁶
32, 33	103(a)	Calo, Rude, Sellberg, Szoc, Davidowitz ⁷
32, 33	103(a)	Calo, Rude, Szoc, Davidowitz
26	103(a)	Calo, Rude, Sellberg, Szoc Kedia ⁸
26	103(a)	Calo, Rude, Szoc, Kedia

Petitioner also submits the Declaration of Marc Reid. Ex. 1002.

II. ANALYSIS

A. LEVEL OF ORDINARY SKILL

Petitioner contends that “the level of ordinary skill in the art is reflected by the prior art of record.” Pet. 29 (citing *Okajima v. Bourdeau*,

³ U.S. Patent Application Publication No. 2002/0084754 A1, published July 4, 2002 (Ex. 1005, “Calo”).

⁴ U.S. Patent Application Publication No. 2006/0095361 A1, published May 4, 2006 (Ex. 1006, “Rude”).

⁵ U.S. Patent Application Publication No. 2004/0236664 A1, published Nov. 25, 2004 (Ex. 1019, “Sellberg”).

⁶ U.S. Patent Application Publication No. 2002/0023053 A1, published Feb. 21, 2002 (Ex. 1007, “Szoc”).

⁷ U.S. Patent Application Publication No. 2004/0267655 A1, published Dec. 30, 2004 (Ex. 1018, “Davidowitz”).

⁸ U.S. Patent Application Publication No. 2007/0005481 A1, published Jan. 4, 2007 (Ex. 1017, “Kedia”).

261 F.3d 1350, 1355 (Fed. Cir. 2001)). Petitioner contends that if it is necessary to define further, “a [person of ordinary skill in the art] for the ’107 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.” *Id.* at 29 (citing Ex. 1002 ¶¶ 71–74).

For purposes of deciding whether Petitioner has demonstrated a reasonable likelihood of prevailing, we adopt Petitioner’s definition of a person of ordinary skill in the art. At this stage of the proceeding, we find Petitioner’s definition of a person of ordinary skill in the art consistent with the ’107 patent and the asserted prior art.

B. CLAIM CONSTRUCTION

For petitions such as this one, filed after November 13, 2018, we apply the same claim construction standard “used in the federal courts, in other words, the claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b),” which is articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 83 Fed. Reg. 51,340, 51,344 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018) (now codified at 37 C.F.R. § 42.100(b)). Under the *Phillips* standard, the “words of a claim ‘are generally given their ordinary and customary meaning,’” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1312–1313.

Petitioner asserts that for the term “prevailing exchange rate,” as recited in claims 19–21, “[t]he term prevailing commonly means ‘current.’”

Pet. 28. According to Petitioner, this is consistent with the '107 patent. *Id.* Petitioner asserts that “[d]uring prosecution, the Patent owner argued that the ‘prevailing’ exchange rate is not an average rate,” adding that “[t]he ‘prevailing exchange rate’ should not be an FOREX average rate, but a current rate.” *Id.* at 29 (citing Ex. 1002 ¶¶ 63, 70). 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 ¶ 34). Petitioner thus asserts that “‘prevailing exchange rate’ means ‘a selected current rate.’” *Id.* (citing Ex. 1002 ¶ 70).

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))).

C. OVERVIEW OF PRIOR ART

1. *Calo*

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.

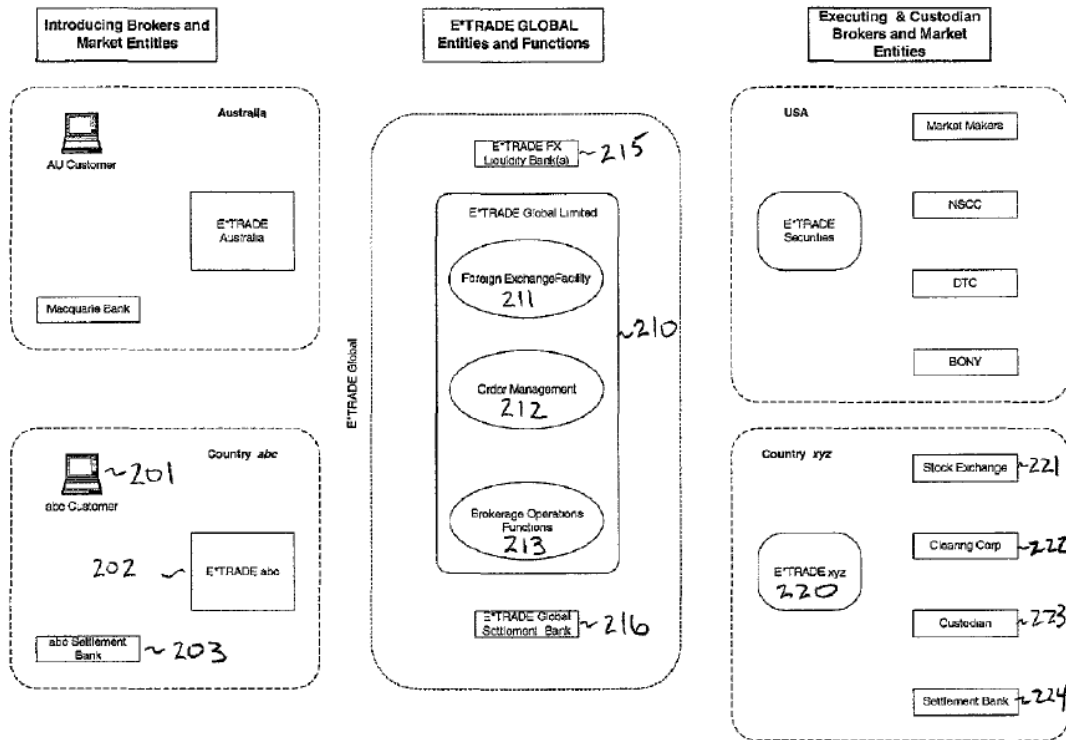


Figure 2 illustrates an exemplary computer network and “the various entities associated with the introducing broker, the executing broker, and the E*TRADE Global system.” *Id.* ¶ 27. On the introducing broker side is “customer 201, the local E*TRADE affiliate 202, and the abc settlement bank 203,” for 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.” 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:

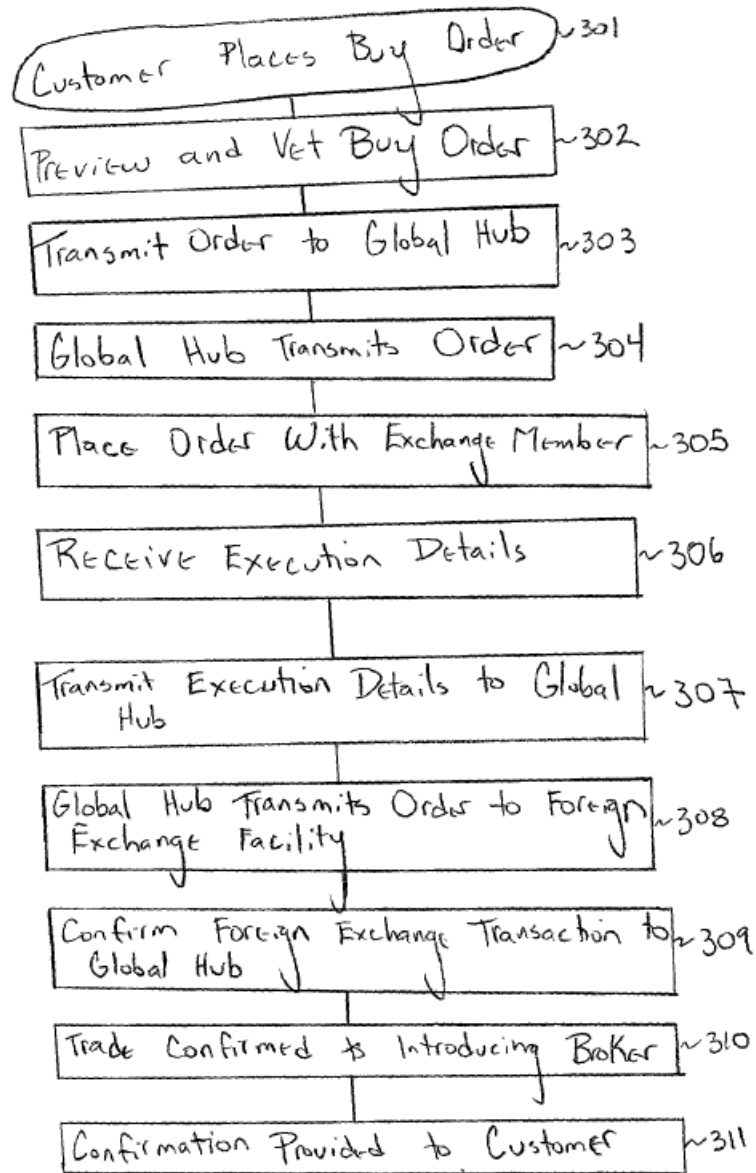


FIGURE 3B

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*

Rude is titled “Methods and Apparatus for Automatic Settlement of Foreign Securities Trades in Trader’s Operating Currency.” Ex. 1006, code

(54). The methods provide that, in response to the determined net settlement amount, “a foreign exchange trading order is automatically placed to convert the determined net settlement amount from the local currency to the operating currency of the party for whom the securities trading order was placed.” *Id.* at code (57), ¶ 5. Rude explains that much securities trading takes place across national borders with different currencies, and Rude’s objective is to provide a system that allows trading foreign security to be “transparent in terms of the trader’s operating currency.” *Id.* ¶¶ 2–3.

Rude shows an exemplary system in Figure 1. *Id.* ¶ 7. Figure 1 is reproduced below.

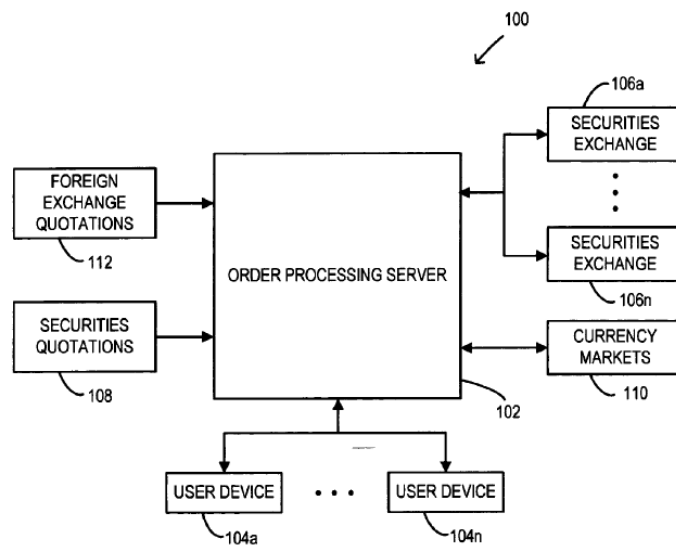


FIG. 1

Figure 1 shows trading system 100 including order processing server 102 in communication with at least one user device 104, multiple security exchanges 106, and sources 108 of current securities price quotations. *Id.* ¶¶ 20–21. Order processing server 102 is also in communication with at

least one foreign exchange currency market 110 and at least one source 112 of foreign exchange price quotations. *Id.* ¶ 21. Order processing server 102 functions as a host computer for user device 104 by receiving and executing securities and foreign exchange trading orders. *Id.* ¶ 22. Order processing server 102 can receive price quotations and data concerning market conditions from sources 108 and 112, and such data may include current price quotations and current status of order books at security exchanges 106. *Id.* ¶ 23. Some or all of the devices in the system may communicate via the Internet. *Id.* ¶ 28.

Rude's Figure 5 is a block diagram of details of a particular step in the process for handling a foreign securities trading transaction, and is reproduced below. *Id.* ¶¶ 11–12.

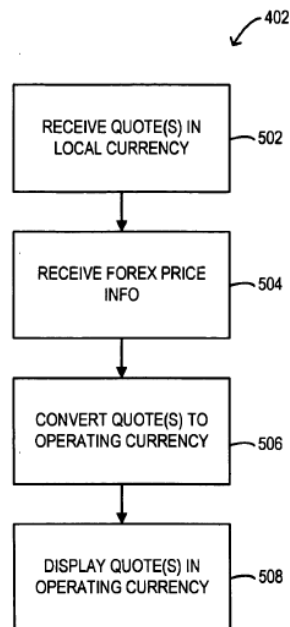


FIG. 5

Figure 5 shows particulars of step 402, in which user device 104 starts by displaying price quotation information concerning a security of interest to the user. *Id.* ¶ 46. At step 502, order processing server 102 receives from a securities quotation source 108 quotation information for the security in the local currency of the securities exchange on which the security trades. *Id.* ¶ 47. At step 504, “order processing server 102 receives from foreign exchange quotation source 112 foreign exchange quotation (exchange rate) information for the local currency.” *Id.* ¶ 48. At step 506, order processing server 102 converts the local currency quotation information for the security to quotation information denominated in the user’s operating currency. *Id.* ¶ 49. At step 508, user device 104 displays the operating currency security price quotation information generated at step 506. *Id.* ¶ 50.

The process of handling a foreign securities trading transaction may include displaying details of an order such as price of a limit order that is “translated to the local currency.” *Id.* ¶¶ 51–52. Order processing server 102 can also determine a net settlement amount for the transaction, “which may reflect settlement fees, commissions, etc. as well as the amount payable for or realized from the transaction.” *Id.* ¶ 53. In response to determination of the net settlement amount, order processing server 102 automatically places a foreign exchange order with a currency market 110 to convert the net settlement amount to the user’s operating currency. *Id.* ¶ 54. Alternatively, the foreign exchange trading order may be a purchase of the local currency “on the spot market” or “immediately after the net settlement amount is determined.” *Id.* ¶¶ 54–55.

3. *Sellberg*

Sellberg is titled “Automatic Generation of an Order in an Instrument in a Specified Currency.” Ex. 1019, code (54). Sellberg explains that sometimes a trader may want to sell or buy a specified volume of a particular financial instrument in another currency than the one used for that instrument in the automated trading system and does not have knowledge in advance of the exchange rate for the transaction. *Id.* ¶¶ 3–4. Sellberg provides a solution for this need by providing a method for automatically generating an order in an instrument in a specified currency, the method comprising

the steps of receiving from e.g. a currency market or a market maker a current exchange rate between a currency other than said specified currency . . . ; receiving from a trader an order in the instrument in said other currency; calculating a price of the order in the specified currency based on the received order and the current exchange rate; and generating the order in the instrument in the specified currency.

Id. at code (57).

Sellberg’s Figure 1 shows a flow scheme of the method and is reproduced below. *Id.* ¶ 16.

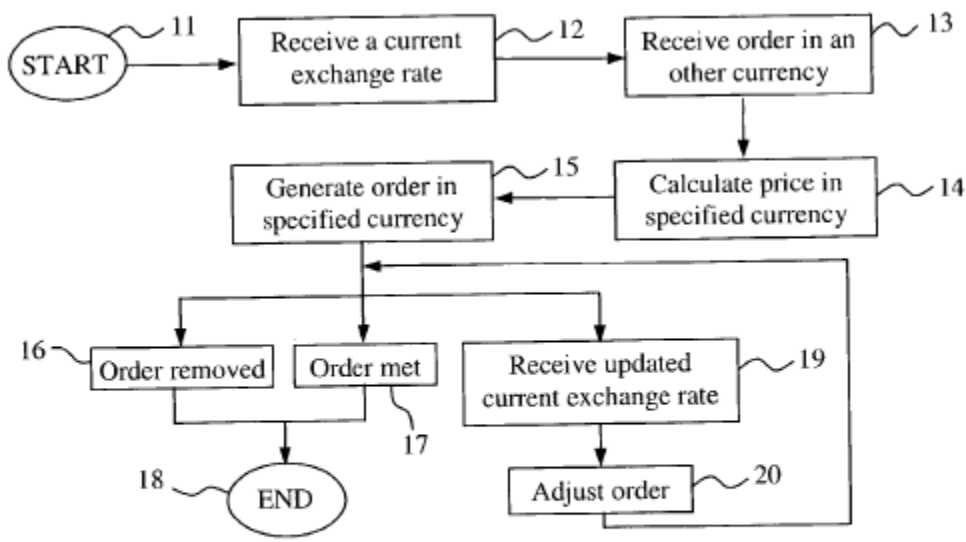


Fig. 1

Figure 1 shows the method starting at step 11 and proceeding to step 12, in which a current exchange rate between a currency and a different, specified currency for a particular instrument is received. *Id.* ¶ 23. Next, an order is received pertaining to a particular instrument in a currency different from the specified currency from a trader at step 13. *Id.* “Typically, an updated exchange rate between the different currency and the specified currency is received repeatedly and automatically from the currency market.” *Id.* ¶ 24. At step 14, a price of the order in the specified currency is calculated based on the received order and the current exchange rate, and at step 15, the order in the instrument is generated in the specified currency and entered into the order book for that instrument. *Id.* ¶ 26. Thereafter, the order may either be removed from the order book in response to a request made by the trader at step 16 or be met by another order on the market, whereupon a trade in the instrument and a currency transaction are

performed concurrently at step 17, and then the method ends at step 18. *Id.* ¶ 27. Alternatively, “an updated exchange rate between the different currency and the specified currency is received while the order is in the order book” at step 19, such that a new order is generated at step 20 to loop back to the end of step 15. *Id.* ¶ 28.

4. *Davidowitz*

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.*

5. *Kedia*

Kedia “relates to a graphical user interface for on-line trading that allows real-time trading and provides trade-data to the user in configurable and easily comprehensible formats.” Ex. 1017 ¶ 1. Kedia’s method of displaying is configurable by the user, and includes “graphically displaying and updating in substantially real time in a first portion of [the] graphical user interface historical filled order data,” as well as “graphically displaying and updating in substantially real time in a second portion of [the] graphical user interface current unfilled order data,” and “graphically displaying . . .

trade related actions made on [the] graphical user interface by [the] user,” while allowing modifications by the user. *Id.* ¶ 47.

6. *Szoc*

Szoc discloses

[a]n apparatus, system and method for providing real-time foreign exchange information, cross-border payments, and other financial information and services to clients over the World Wide Web. Real-time foreign exchange rate quotes are provided that may be relied on in timing international transactions to a benefit of a consumer. Single or multiple transactions are automatically converted from a consumer’s native currency to any of a plurality of foreign currencies and vice versa, thereby simplifying and facilitating these international transactions.

Ex. 1007, code (57). Szoc explains that because of the volatile nature of exchange rates being an impediment to what could otherwise be straightforward international transactions, it purports to reduce such volatility by providing “real-time foreign exchange rate quotes, cross-border payments, and other financial information and services to clients over a network such as the Internet.” *Id.* ¶¶ 9, 13, 18. Szoc shows a “pay today” page for its system in Figure 4A. *Id.* ¶ 27. Figure 4A is reproduced below.

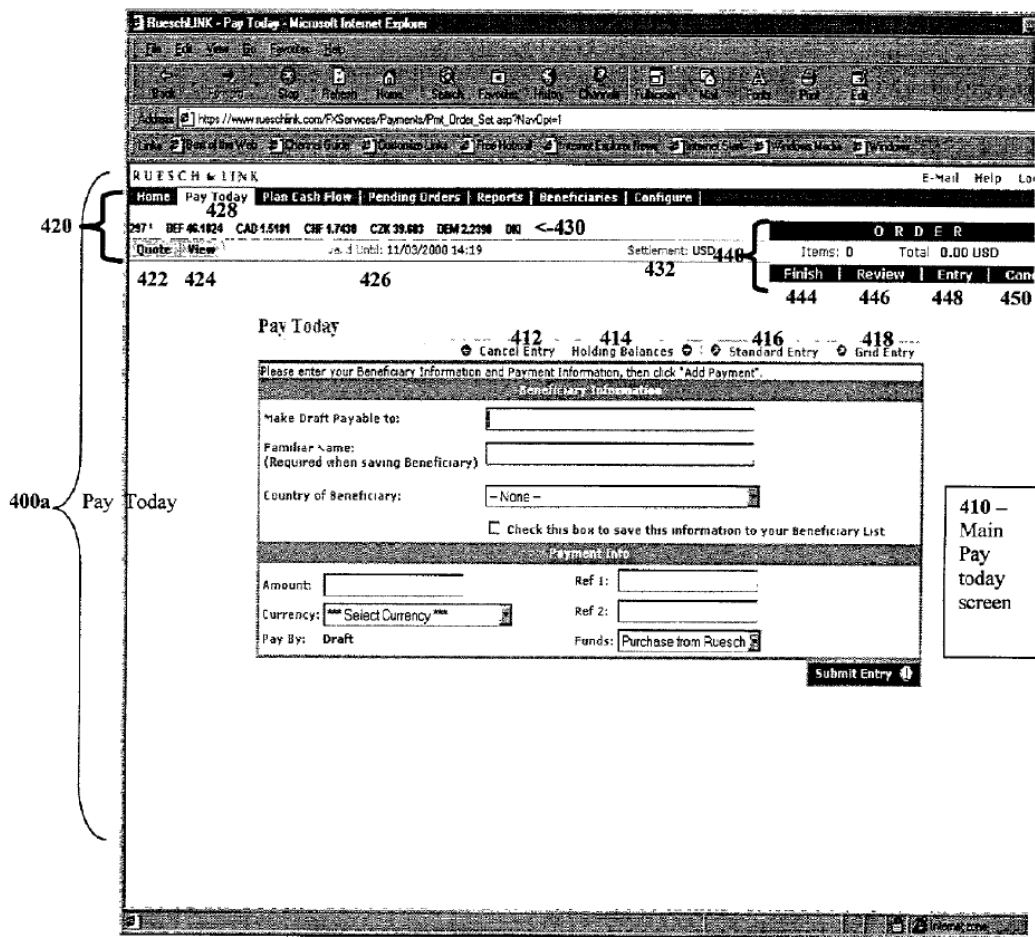


FIGURE 4A

Figure 4A shows a web page having pay today menu 400a when a user selects a link from another menu. *Id.* ¶ 73. Within menu 400a is main entry screen 410 for entering information for drafts to be issued. *Id.* Within main entry screen 410 are link 412 to cancel an entry, link 414 to hold balances for examination, link 416 to switch data entry forms, and link 418 to allow a grid entry. *Id.* Portion 420 of the page provides quotes via quote link 422 and view link 424. *Id.* ¶ 74. “[C]licking on the quote link 422 of the quotes portion 420 may direct a client to a separate quotes page having a list of real-time foreign exchange rates for all currencies available on the system.” *Id.* Alternatively, calculations are automatically performed as if an

amount in one currency has been entered by the client and “quote link 422 may calculate a corresponding amount in the relevant currency based on current foreign exchange rates.” *Id.* Further, scrolling quote bar 430 is provided to “display realtime, constantly changing rates.” *Id.* ¶ 83.

D. PATENTABILITY CHALLENGES

Some of Petitioner’s challenges cite a combination of prior art that includes Sellberg (the “Sellberg-based challenges”), and other of Petitioner’s patentability challenges cite a combination of prior art that includes Szoc (the “Szoc-based challenges”). *E.g.*, Pet. 15. We first address the Sellberg-based challenges, followed by the Szoc-based challenges.

1. *Alleged Obviousness Over Calo, Rude, and Sellberg* a) *Discussion*

Petitioner argues that the prior art “discloses each and every element of Claims 19-25, 27-31, and 34-36, either expressly or inherently.” Pet. 30. Petitioner then discusses the cited references and provides a claim chart to show which disclosures of Calo, Rude, or Sellberg allegedly disclose each of these claims’ limitations. *Id.* at 30–44, 55–77. Petitioner also cites Mr. Reid’s declaration, in which Mr. Reid details which disclosures of the cited references he believes disclose each of these claims’ limitations. *Id.*

In its discussion, Petitioner argues that although Rude was before the Examiner during prosecution, “the Applicant argued that the prior art did not teach the claimed prevailing rate,” but Rude teaches this claimed subject matter as it discloses both a spot rate and a forward rate.⁹ *Id.* at 42 (citing

⁹ In its proposed construction for the term “prevailing currency exchange rate,” Petitioner argues that a “prevailing exchange rate” includes a “forward” rate or a “spot” rate. *See* Pet. 28–29.

Ex. 1002 ¶ 214). Additionally, Petitioner argues that both Calo and Sellberg also disclose using a prevailing exchange rate. *Id.* (citing Ex. 1002 ¶¶ 101, 181).

Petitioner also argues that “[a]s Mr. Reid confirms, it would have been obvious to a [person of ordinary skill in the art] to combine teachings of Calo, Rude and Sellberg.” *Id.* (citing Ex. 1002 ¶¶ 95–124, 178–185, 257–260, 578, 583–584). Petitioner asserts that “Calo and Rude each discloses the basic features of the claims of the ’107 patent” and “[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.” *Id.* (citing Ex. 1019 ¶¶ 23–25; Ex. 1002 ¶ 181). Petitioner argues that “[a]dding the currency exchange features from Sellberg to the Calo-Rude combination would have been a simple task for a [person of ordinary skill in the art].” *Id.* at 42–43 (citing Ex. 1002 ¶¶ 185, 234). In sum, Petitioner contends that “[c]laims 19-25, 27-31, and 34-36 are invalid as obvious.” *Id.* at 43 (citing Ex. 1002, Section VII.19–25, 27–31, and 34–36; *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 415–416 (Fed. Cir. 2007) for the proposition that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”).

Specific to independent claim 19, Petitioner provides a brief discussion as to how Petitioner contends the combination of Calo, Rude, and Sellberg discloses each of steps A to F of claim 19. *Id.* at 43–44 (citing Ex. 1002 ¶¶ 181, 213–227, 241–261, 401–437). Thereafter, Petitioner refers to its claim chart. *Id.* at 44. Petitioner’s claim chart cites specific portions of the prior art references, along with portions of Mr. Reid’s Declaration, in connection with the features recited in claim 19.

We have reviewed Petitioner’s arguments and evidence regarding how the cited prior art allegedly meets the limitations of claim 19. *E.g.*, Pet. 30–44, 55–60. Based on our review, we determine Petitioner has demonstrated a reasonable likelihood of establishing that the combination of Calo, Rude, and Sellberg would have rendered obvious independent claim 19. Below, we discuss in detail Petitioner’s challenge of independent claim 19 as allegedly obvious over Calo, Rude, and Sellberg. Given Petitioner’s demonstration of a reasonable likelihood of establishing that claim 19 would have been obvious over Calo, Rude, and Sellberg, further evaluation of the merits of Petitioner’s currently undisputed challenge of claims 20–25, 27–31, and 34–36 is best done after institution of *inter partes* review.

(1) *Independent Claim 19*

(a) *Preamble*

In its preamble, claim 19 recites “[a] non-transitory computer-readable storage medium with an executable software product providing a consolidated trading platform, a trading server configured to execute the software product to perform operations comprising.” Ex. 1001, 11:57–61. According to Petitioner, “Calo and Rude both describe a consolidated trading platforms of the same kind as the one disclosed and claimed in the ’107 patent. For example, Calo discloses a trading platform with a three-tier network, including a trading server, in Fig. 2.” Pet. 55 (citing Ex. 1002 ¶¶ 213–219, 401–404; Ex. 1005 ¶ 27; Ex. 1006 ¶ 21, Fig. 1). At this stage of the proceeding, Petitioner provides sufficiently persuasive arguments and evidence regarding claim 19’s preamble.¹⁰

¹⁰ At this stage of the proceeding, we need not and do not determine whether claim 19’s preamble is limiting.

(b) Step [A]

Step [A] of claim 19 is “coupling the trading server to at least one currency exchange server and one market exchange server.” Ex. 1001, 11:62–63. For this limitation, Petitioner cites Calo, Rude, and Mr. Reid’s testimony. Pet. 55 (citing Ex. 1005 ¶ 27; Ex. 1006 ¶ 21, Fig. 1; Ex. 1002 ¶¶ 220–223, 405–406). Petitioner argues that “Calo discloses an extensive trading platform including Foreign Exchange servers and trading servers.” *Id.* (citing Ex. 1005 ¶ 27). Petitioner also argues that “Rude’s system is connected to a foreign exchange quotation computer, a currency quotation computer, and a currency market computer. Rude’s system is also connected to security exchanges.” *Id.* (citing Ex. 1006 ¶ 21, Fig. 1). At this stage of the proceeding, Petitioner’s arguments and evidence with respect to step [A] are sufficient to demonstrate a reasonable likelihood of establishing that claim 19 would have been obvious.

(c) Step [B]

Step [B] of claim 1 is “receiving an indicator of a preferred currency from a trader.” Ex. 1001, 11:64–65. Petitioner argues that step [B] is disclosed in each of Calo and Rude. Pet. 43, 55 (citing Ex. 1002 ¶¶ 224–227, 407–409; Ex. 1005 ¶¶ 30, 58; Ex. 1006 ¶ 19). Petitioner cites Calo’s disclosure of supplying a security’s price in “native” currency. *Id.* at 55 (citing Ex. 1005 ¶¶ 30, 58). Petitioner also cites Rude’s disclosure of supplying quotes in “operating” currency, instead of the currency of a traded asset’s local market. *Id.* (citing Ex. 1006 ¶ 19). At this stage, Petitioner’s evidence sufficiently supports the argument that Calo and Rude disclose step [B].

(d) Step [C]

Step [C] in claim 1 involves the following:

determining whether an asset is being chosen for trading, wherein the asset is being traded in a market currency but displayed in the preferred currency in accordance with a prevailing exchange rate derived from all exchange rates obtained from the currency exchange server, a value of the asset being displayed changes as the exchange rate changes, even when a value of the asset on the market exchange server remains unchanged, wherein the trader has certain knowledge of what to pay for the asset, or profit or loss when acting on the asset.

Ex. 1001, 11:66–12:9.

Petitioner argues that “[b]oth Calo and Rude disclose making a currency trade at the time of execution of the transaction to convert from the market currency to the preferred currency when the preferred currency is not identical to the market currency, the conversion being performed with the calculated prevailing exchange rate.” Pet. 56. Petitioner cites Calo’s discussion of an example in which a U.S. equity is sold by an Australian customer. Pet. 56. In this case, Calo discloses that

after the equity order is executed, E*TRADE Global transacts a foreign exchange deal prior to confirming the sale of the equity back to E*TRADE Australia. Step 611 includes sending an order to the Global FX facility to sell U.S. dollars for Australian dollars. At step 612, the foreign exchange bank confirms the foreign exchange deal with the Australian dollar counter amount to E*TRADE Global. At step 613, the trade is confirmed to E*TRADE Australia with the USD execution price and principal amount as well as the locked-in AUD value of the trade.

Ex. 1005 ¶ 36.

Petitioner also argues that “Rude discloses as similar process” (Pet. 56–57), citing the following passage of Rude:

In response to the determination of the net settlement amount, the process 400 advances to 410, where the order processing server 102 automatically, and without further input from the user beyond the original placement of the securities order at 404, places a foreign exchange order with a currency market 110 to convert the net settlement amount to the user's operating currency. For example, where the underlying securities trading order was for the purchase of a security, the automatically placed foreign exchange trading order may be to buy forward the local currency as of the date of settlement (typically three days after execution) for the securities trading order. Alternatively, the foreign exchange trading order may be a purchase of the local currency on the spot market. In some embodiments, the foreign exchange order may be placed by the server 102 immediately after the net settlement amount is determined.

Ex. 1006 ¶ 54. Petitioner further argues that “Rude also discloses that prevailing rates may include current (spot) and forward rates.” Pet. 57 (citing Ex. 1006 ¶ 20).

Petitioner contends that Rude discloses using real-time, prevailing rates because “[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.” *Id.* (citing Ex. 1006 ¶¶ 19, 49).

Petitioner further contends that to the extent Rude is considered not to teach “the prevailing exchange rate,” using a prevailing exchange rate was disclosed by both Calo and Sellberg. *Id.* at 42 (citing Ex. 1002 ¶¶ 101, 181). Petitioner asserts that Calo discloses the price in the native currency may be provided, with this price 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. *See* Pet. 55–56 (citing Ex. 1005 ¶ 30). Additionally, Petitioner asserts that Sellberg uses “an updated exchange rate, preferable the last exchange rate just prior to the submitting the order, for performing the transaction.” *Id.* at 57 (citing Ex. 1019 ¶¶ 23–25).

Based on the preliminary record, we are persuaded that the combination of Calo, Rude, and Sellberg discloses Step [C] for the reasons given by Petitioner.

(e) Step [D]

Step [D] in claim 19 is “conducting a transaction of the asset by transmitting a transaction request from the trading server to the market exchange server when the trader decides to proceed with trading the asset.” Ex. 1001, 12:10–13. Petitioner contends that step [D] is disclosed by each of Calo and Rude. Pet. 43–44, 58 (citing Ex. 1002 ¶¶ 241–242, 421; Ex. 1005 ¶ 40; Ex. 1006 ¶¶ 50–51). According to Petitioner, Calo discloses that when a customer determines to sell his or her asset, E*TRADE executes the trade. *Id.* at 58 (citing Ex. 1005 ¶ 40). Petitioner argues that Rude discloses submitting an order to the order processing server to execute a trade. *Id.* (citing Ex. 1006 ¶¶ 50–51). At this stage, for purposes of demonstrating a reasonable likelihood of prevailing, Petitioner’s evidence sufficiently supports its argument that each of Calo and Rude discloses step 1[D].

(f) Step [E]

Step [E] in claim 19 includes the following:

receiving a settlement notification that the transaction of the asset is performed by the market exchange server in accordance with conditions set by the user, wherein the conditions include a price at which the asset is traded in the preferred currency, the trading server determines first a prevailing exchange rate from the currency exchange server in favor of the user when the asset is

not priced in the preferred currency and then executes the transaction with the prevailing exchange rate to prevent uncertainty in currency exchanges

Ex. 1001, 12:14–23.

Petitioner asserts that the combination of Calo, Rude, and Sellberg discloses this limitation. Pet. 44, 58–59 (citing Ex. 1002 ¶¶ 243–248, 422–426; Ex. 1005 ¶ 30; Ex. 1006 ¶ 62; Ex. 1019 ¶¶ 23–25). Petitioner asserts that “Calo discloses E*TRADE Australia with the USD execution price and principal amount as well as the locked-in AUD value of the trade.” *Id.* at 58 (citing Ex. 1005 ¶ 30). As to Rude, Petitioner asserts that “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.’” *Id.* (citing Ex. 1006 ¶ 62). Petitioner further contends that “[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. 42 (citing Ex. 1019 ¶¶ 23–25; Ex. 1002 ¶ 181). Petitioner cites Sellberg in the claim chart, though without explanation. *Id.* at 58 (citing Ex. 1019 ¶¶ 23–25). Nonetheless, we note that Sellberg teaches in paragraphs 24 and 25 the following:

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.

Based on the preliminary record, we are persuaded that the combination of Calo, Rude, and Sellberg discloses step [E] for the reasons given by Petitioner because the cited disclosures are consistent with and support Petitioner’s arguments for the purposes of institution.

(g) Step [F]

Step [F] in claim 19 is “performing a currency conversion of some portion or all of the transaction from the market currency to the preferred currency when the preferred currency is not identical to the market currency, the conversion being performed with the prevailing exchange rate.”

Ex. 1001, 12:24–28. Petitioner argues that this step is disclosed by “Calo and Rude in view of Sellberg.” Pet. 44, 59–60 (citing Ex. 1002 ¶¶ 249–258, 427–437; Ex. 1005 ¶¶ 35, 42, 57; Ex. 1006 ¶¶ 20, 60; Ex. 1019 ¶¶ 23–25). Petitioner cites Calo’s disclosure of “generating a corresponding foreign exchange order on a real-time basis after an equity order executes by differentiating between payment and settlement currencies on an order record.” Ex. 1005 ¶ 57; Pet. 59. Additionally, Petitioner argues that Rude discloses automatically converting a settlement amount “to the trader’s operating currency through a forward foreign exchange transaction.” Pet. 59 (citing Ex. 1006 ¶ 20). Petitioner further argues that “Sellberg teaches to use an updated exchange rate, preferable the last exchange rate just prior to the

submitting the order, for performing the transaction.” *Id.* (citing Ex. 1019 ¶¶ 23–25).

At this stage, for purposes of demonstrating a reasonable likelihood of prevailing, Petitioner’s arguments and evidence sufficiently support its position that step 1[F] is disclosed by the prior art.

2. *Alleged Obviousness Based on Calo, Rude, Sellberg, and Other Prior Art*

Petitioner argues that claims 32, and 33 would have been obvious over Calo, Rude, Sellberg, and Davidowitz. Pet. 49–52. Petitioner also argues that claim 26 would have been obvious over Calo, Rude, Sellberg, and Kedia. *Id.* at 52–54. These currently undisputed challenges are best addressed after institution of *inter partes* review, given Petitioner’s demonstration of a reasonable likelihood of establishing claim 1 would have been obvious over Calo, Rude, and Sellberg.

3. *Alleged Obviousness Over Calo, Rude, and Szoc*

Petitioner argues that the combination of Calo, Rude, and Szoc discloses each and every element of claims 19–25, 27–31, and 34–36. Pet. 47–48. Petitioner discusses the cited references and provides a claim chart to show which disclosures of Calo, Rude, or Szoc allegedly disclose each of these claims’ limitations. *Id.* at 47–48, 55–77. For example, below is claim 19 of the ’107 patent reproduced with Petitioner’s citations to Calo, Rude, Szoc, and Mr. Reid’s Declaration in brackets. *See* Pet. 55–60.

19. A non-transitory computer-readable storage medium with an executable software product providing a consolidated trading platform, a trading server configured to execute the software product to perform operations comprising [Ex. 1005 ¶ 27, Fig. 2; Ex. 1006 ¶ 21, Fig. 1; Ex. 1002 ¶¶ 213–219, 401–404]:

[A] coupling the trading server to at least one currency exchange server and one market exchange server [Ex. 1005 ¶ 27; Ex. 1006 ¶ 21, Fig. 1; Ex. 1002 ¶¶ 220–223, 405–406];

[B] receiving in the trading server an indicator of a preferred currency from a trader [Ex. 1005 ¶¶ 30, 58; Ex. 1006 ¶ 19; Ex. 1002 ¶¶ 224–227, 407–409];

[C] determining whether an asset is being chosen for trading, wherein the asset is being traded in a market currency but displayed in the preferred currency in accordance with a prevailing exchange rate derived from all exchange rates obtained from the currency exchange server, a value of the asset being displayed changes as the exchange rate changes, even when a value of the asset on the market exchange server remains unchanged, wherein the trader has certain knowledge of what to pay for the asset, or profit or loss when acting on the asset [Ex. 1005 ¶¶ 30, 58; Ex. 1006 ¶¶ 19, 20, 29, 47–49, 54, 60; Ex. 1007 ¶ 83, Figs. 4A, 4B; Ex. 1002 ¶¶ 181, 410–420];

[D] conducting a transaction of the asset by transmitting a transaction request from the trading server to a market exchange server when the trader decides to proceed with trading the asset [Ex. 1005 ¶ 40; Ex. 1006 ¶¶ 50–51; Ex. 1002 ¶¶ 241–242, 421];

[E] receiving a settlement notification that the transaction of the asset is performed by the market exchange server in accordance with conditions set by the user, wherein the conditions include a price at which the asset is traded in the preferred currency, the trading server determines first a prevailing exchange rate from the currency exchange server in favor of the user when the asset is not priced in the preferred currency and then executes the transaction with the prevailing exchange rate to prevent uncertainty in currency exchanges [Ex. 1005 ¶ 30; Ex. 1006 ¶ 62; Ex. 1007 ¶ 101; Ex. 1002 ¶¶ 243–248, 422–426]; and

[F] performing a currency conversion of some portion or all of the transaction from the market currency to the preferred currency when the preferred currency is not identical to the market currency, the conversion being performed with the

prevailing exchange rate [Ex. 1005 ¶¶ 42, 57; Ex. 1006 ¶¶ 20, 60; Ex. 1007 ¶ 83, Figs. 4A, 4B; Ex. 1002 ¶¶ 249–258, 427–437].
Pet. 55–60.

Noting that Szoc was not considered during prosecution of the '107 patent, (*id.* at 44 (citing Ex. 1002 ¶ 125)), Petitioner argues that “[a]s Mr. Reid confirms, it would have been obvious to a [person of ordinary skill in the art] to combine teachings of Calo, Rude and Szoc.” *Id.* at 47 (citing Ex. 1002 ¶¶ 95–132, 257–260, 579, 583–584). Petitioner asserts that “Calo and Rude each disclose the basic features of the claims of the '107 patent” and “[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 Szoc.” *Id.* (citing Ex. 1002 ¶¶ 128–131, 234). Petitioner contends that “[a]dding the currency exchange features from Szoc to the Calo-Rude combination would have been a simple task for a [person of ordinary skill in the art].” *Id.* (citing Ex. 1002 ¶ 132). Thus, Petitioner argues, “[c]laims 19–25, 27–31, and 34–36 are invalid as obvious.” *Id.* (citing Ex. 1002 ¶¶ 164, 169–172; *KSR Int’l Co.* at 415–416).

Given that Petitioner has demonstrated a reasonable likelihood of establishing obviousness of claim 19 over Calo, Rude, and Sellberg, the merits of Petitioner’s currently undisputed challenges to claims 19-25, 27-31, and 34-36 over Calo, Rude, and Szoc, are best addressed after institution of *inter partes* review.

4. *Alleged Obviousness Based on Calo, Rude, Szoc, and Other Prior Art*

Petitioner argues that claims 32, and 33 would have been obvious over Calo, Rude, Szoc, and Davidowitz. Pet. 49–52. Petitioner also argues that claim 26 would have been obvious over Calo, Rude, Szoc, and Kedia. *Id.* at

52–54. These currently undisputed challenges are best addressed after institution of *inter partes* review, given Petitioner’s demonstration of a reasonable likelihood of establishing claim 1 would have been obvious over Calo, Rude, and Sellberg.

III. CONCLUSION

After considering the evidence and arguments of record, we determine that Petitioner has demonstrated a reasonable likelihood of success with respect to at least one of the challenged claims. An *inter partes* review of all of the claims and all of the grounds presented in the Petition is hereby instituted. *See SAS Institute Inc. v. Iancu*, 138 S. Ct. 1348, 1354, 1359–60; *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018); 37 C.F.R. § 42.108(a).

Our determination in this Decision is not a final determination on either the patentability of any challenged claims or the construction of any claim term. The factual findings set forth in this Decision are preliminary and provided for the sole purpose of deciding whether to institute a review. Any final findings will be based on the full trial record, including any information presented by Patent Owner in a timely filed response to the Petition. *See TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1068 (Fed. Cir. 2016) (noting that “there is a significant difference between a petitioner’s burden to establish a ‘reasonable likelihood of success’ at institution, and actually proving invalidity by a preponderance of the evidence at trial”) (quoting 35 U.S.C. § 314(a) and comparing *id.* with § 316(e)).

IV. ORDER

In consideration of the foregoing, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of the '107 patent is instituted with respect to challenged claims 19–36 with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4(b), *inter partes* review of the '107 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2024-00377
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