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Paper 11
Entered: July 15, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASKELADDEN L.L.C.,
Petitioner,

v.

INTERCURRENCY SOFTWARE LLC,
Patent Owner.

IPR2024-00376
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 1–18 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 1–18 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., 2:2023cv00130[1] (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 19–36 of the '107 patent have been challenged by Petitioner in IPR2024-00377.

C. THE '107 PATENT

The '107 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, 1:6–10. The '107 patent describes a three-tier architecture, "which includes a brokerage, a market exchange where securities/assets are traded, and a currency exchange where amounts

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

in one currency can be converted to corresponding amounts in another currency at prevailing rates." *Id.* at 2:24–28. According to the '107 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 '107 patent states that "a trader always knows exactly what he/she may end up with a transaction of an asset." *Id.* at 2:33–34.

Three-tier architectures depicted in Figures 2A and 2B of the '107 patent are reproduced below:

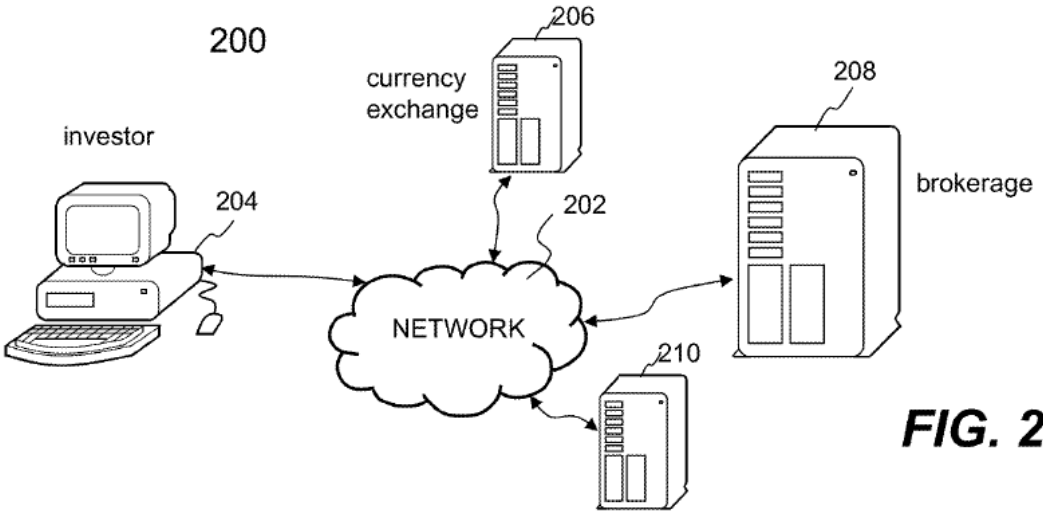

FIG. 2A

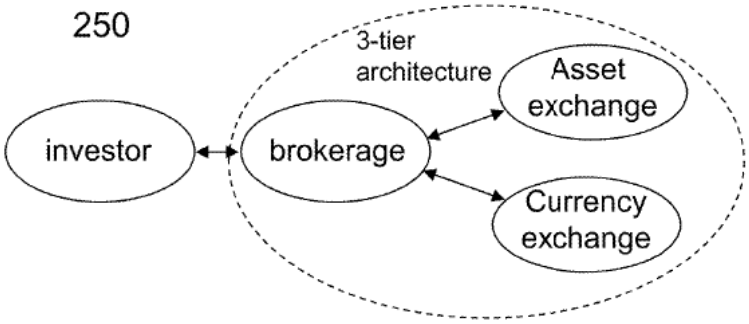

FIG. 2B

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 '107 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.

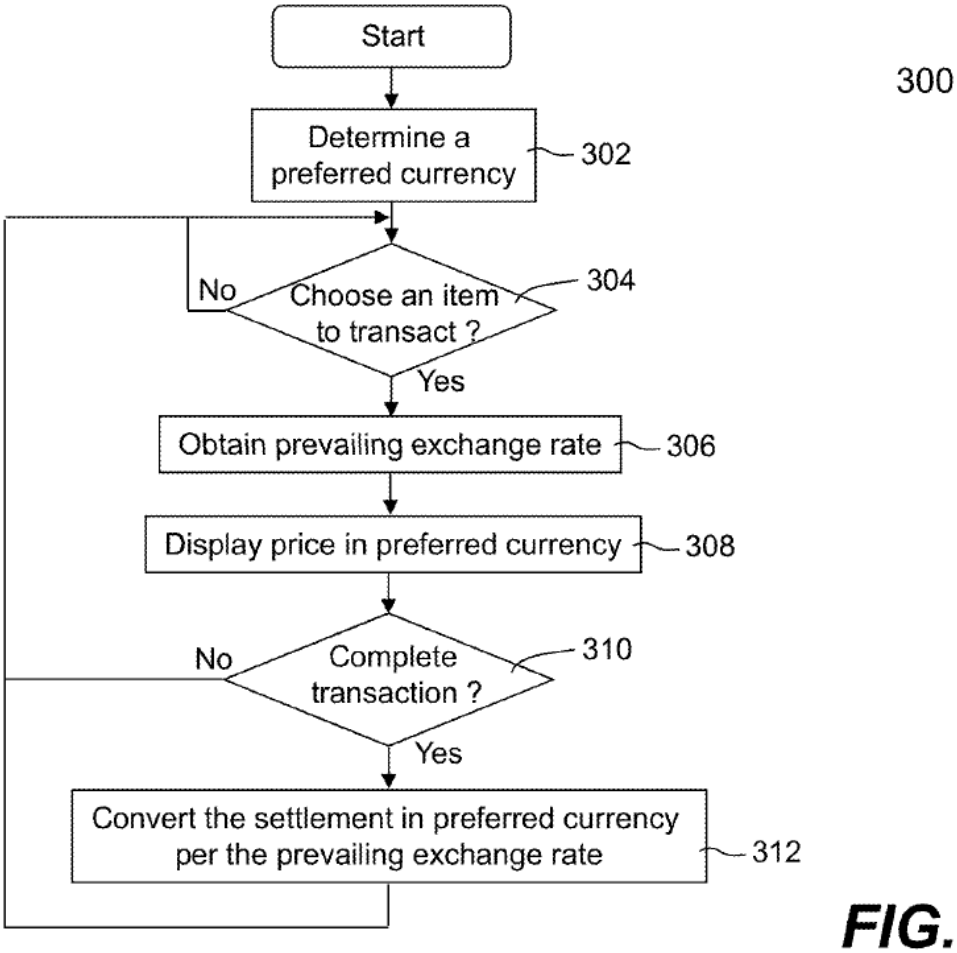

FIG. 3

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 '107 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.

D. ILLUSTRATIVE CLAIM

Of the challenged claims, claims 1 and 9 are independent. Each of claims 2–8 depends, directly or indirectly, from independent claim 1, and each of claims 10–18 depends, directly or indirectly, from independent claim 9. Claim 1 is illustrative and is reproduced below with certain reformatting:[2]

> 1. A method for providing a consolidated trading platform, the method comprising:
>
> [A] providing a trading server coupled to one or more currency exchange servers and one or more market exchange servers;
>
> [B] receiving in the trading server an indicator of a preferred currency from a trader;
>
> [C] causing a client computer associated with the trader to display at least an asset in the preferred currency while the asset is being traded in a market currency, wherein said causing a

[2] We have added the same labels that Petitioner applies to different steps recited in claim 1. *See* Pet. 24–25.

client computer associated with the trader to display at least an asset in the preferred currency comprises:

[D] determining in the trading server a prevailing exchange rate between the preferred currency and the market currency, wherein the prevailing exchange rate is derived from all exchange rates obtained from the one or more currency exchange servers when the asset is displayed in the preferred currency; and

[E] displaying all costs and fees in the preferred currency to own or sell the asset, wherein the all costs and fees are dynamically changed in accordance with the prevailing exchange rate updated constantly even when a market value of the asset remains unchanged, wherein the trader has certain knowledge of what to pay for the asset, or profit or loss when acting on the asset;

[F] conducting in the trading server 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;

[G] receiving a settlement notification in the trading server when 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 is configured to calculate the prevailing exchange rate from all exchange rates obtained from the one or more currency exchange servers right before the transaction takes place when the asset is not priced in the preferred currency, and executes the transaction with the calculated prevailing exchange rate obtained at the transaction to prevent uncertainty in currency exchanges in another time; and

[H] 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 calculated prevailing exchange rate.

Ex. 1001, 8:45–9:27.

E. EVIDENCE

Petitioner relies on the following evidence:

(1) U.S. Patent Application Publication No. 2002/0084754 A1, published July 4, 2002 (Ex. 1005, "Calo");

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

(3) U.S. Patent Application Publication No. 2004/0236664 A1, published Nov. 25, 2004 (Ex. 1019, "Sellberg");

(4) U.S. Patent Application Publication No. 2002/0023053 A1, published Feb. 21, 2002 (Ex. 1007, "Szoc");

(5) U.S. Patent Application Publication No. 2004/0267655 A1, published Dec. 30, 2004 (Ex. 1018, "Davidowitz");

(6) U.S. Patent Application Publication No. 2007/0005481 A1, published Jan. 4, 2007 (Ex. 1017, "Kedia"); and

(7) Declaration of Marc Reid (Ex. 1002).

F. ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner challenges the patentability of claims 1–18 of the '107 patent on the following grounds (Pet. 15):

Claim(s) Challenged	35 U.S.C. §	References/Basis
1–7, 9–13, 16–18	103(a)	Calo, Rude, Sellberg
1–7, 9–13, 16–18	103(a)	Calo, Rude, Szoc
14, 15	103(a)	Calo, Rude, Sellberg, Szoc, Davidowitz
8	103(a)	Calo, Rude, Sellberg, Szoc, Kedia

II. ANALYSIS

A. LEVEL OF ORDINARY SKILL

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 contends that "the level of ordinary skill in the art is reflected by the prior art of record." Pet. 29 (citing *Okajima v. Bourdeau*, 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 30 (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

In an *inter partes* review proceeding, a claim of a patent is construed using the same standard used in federal district court, including construing the claim in accordance with the ordinary and customary meaning of the

claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b). According to the applicable standard, claim terms "are generally given their ordinary and customary meaning" as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc) (citations omitted). Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. America Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Although Petitioner asserts that "the terms of Claims 1-18 should be given their ordinary and customary meaning of such claim as understood by one of ordinary skill in the art in the field of electronic trading in the 2007 time frame," Petitioner proposes construction for the claim terms "prevailing exchange rate" and "prevailing currency exchange rate." Pet. 28–29. We do not find express construction of any claim language necessary to resolve whether Petitioner has demonstrated a reasonable likelihood of prevailing.

C. Alleged Obviousness Over Calo, Rude, and Sellberg

1. *Overview of Calo*

Calo relates to a system and a method involving a globalized trading network that permits trading of stocks, securities, and commodities across international boundaries. Ex. 1005, codes (54), (57), ¶ 3. Calo explains that cross-border trades are time-consuming and expensive and purports to resolve this problem by providing a simplified system that could also "trade different currencies directly, without any need to trade an equity or other financial instrument in concert." *Id.* ¶¶ 6–7. The system is computerized

and includes an introducing affiliate that transmits a transaction order to an exchange on which a security is traded, along with a global hub for electronically routing the transaction order from the introducing affiliate to the exchange. *Id.* ¶ 8. Multiple exchanges are connected to the hub and "[i]f necessary, a currency transaction is performed through the global hub to convert the currency of the first country to that used in the country in which the exchange resides." *Id.*

Calo shows an exemplary system or computer network in Figure 2. *Id.* ¶ 13. Figure 2 is reproduced below.

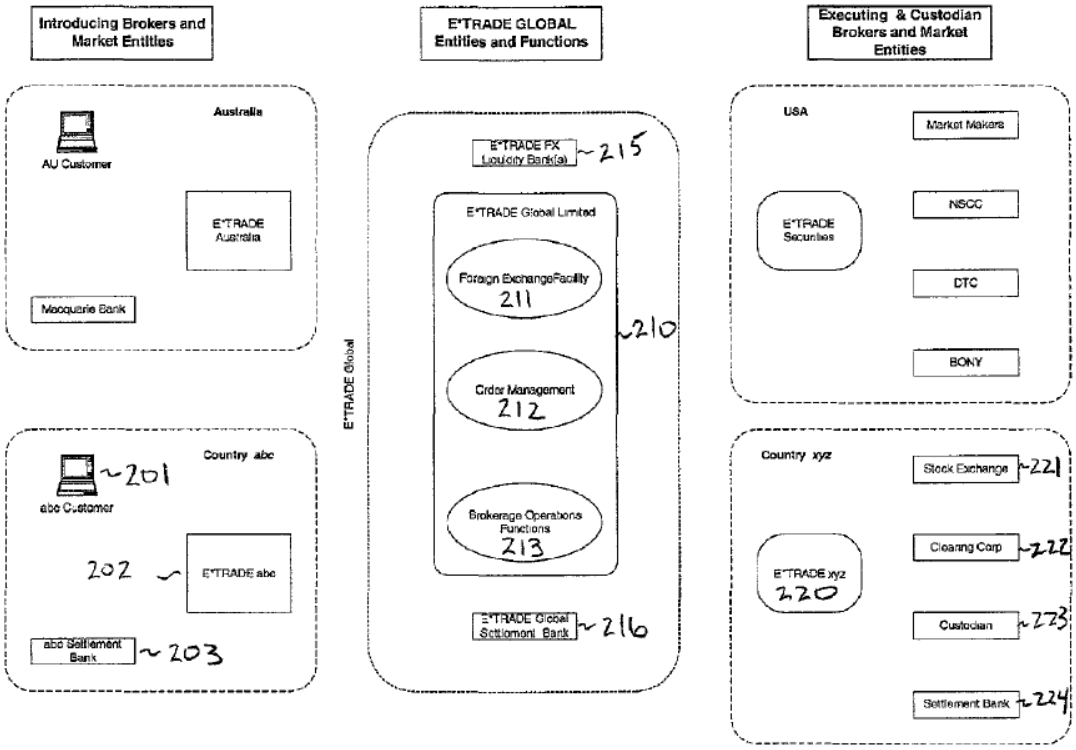

Figure 2 shows various entities that can be associated in three categories or columns designated as the introducing brokers and market entities, the E*TRADE (an exemplary trade management system) Global system with its entities and functions, and executing and custodian brokers with their market

entities. *Id.* ¶¶ 23, 27. Entities for a particular country abc associated with the introducing brokers include customer 201, local E*TRADE affiliate 202, and settlement bank 203. *Id.* ¶ 27. "Corresponding elements for an Australian introducing affiliate are also shown." *Id.* The E*TRADE Global system and related entities include E*TRADE Global hub 210, which supports Foreign Exchange Facility 211, order management system 212, and brokerage operation system 213 (all internally within E*TRADE Global hub). *Id.* Global hub 210 also "interfaces with a Foreign Exchange (FX) liquidity bank 215, and its own global settlement bank 216." *Id.* E*TRADE Global, as shown in Figure 2, is an "Order Management System" that provides various functions ranging from the routing to the execution reporting of cross-border transactions "to, as needed, the appropriate affiliate and foreign exchange facility." *Id.* ¶ 57. Entities associated with executing and custodian brokers with their market for country xyz (a country different than country abc) include local E*TRADE affiliate 220, stock exchange 221 of the country from where the equities are being purchased (country xyz in this case), clearing corporation 222, custodian 223, and local settlement bank 224. *Id.*

Calo shows an exemplary flow diagram of a cross-border trading order and an execution flow for buying a security in Figure 3B, which is reproduced below. *Id.* ¶ 14.

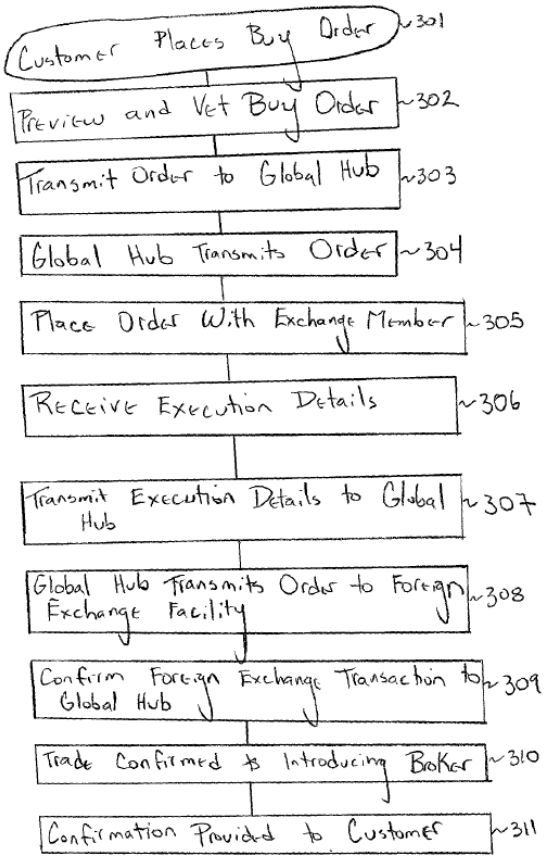

FIGURE 3B

Figure 3B shows first step 301, in which a customer, following the example in Figure 2, who is in Australia, receives from E*TRADE Global a preview price on a real-time basis for an equity such as a stock from the USA. *Id.* ¶ 30. Calo discloses:

> 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. In any case, the estimated prices are computed automatically through, by, or with information obtained through E*TRADE Global.

Id. "At step 301, the E*TRADE Australia customer places a buy order for 100 shares of IBM stock at the market price," which may happen over the internet. *Id.* "The customer places the order with a cost estimate based on the real-time quotes for the security." *Id.*

Step 302 includes E*TRADE Australia providing a preview of the order and vetting 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, and the estimated commissions and fees for a cross-border trade to the US. *Id.* At step 303, E*TRADE Australia transmits the requested order at the market price to E*TRADE Global. *Id.* At step 304, E*TRADE Global transmits the order to the U.S. local affiliate. *Id.* At step 305, the U.S. local affiliate places an order with an exchange member, such as a U.S. market maker in a U.S. exchange, who then executes the trade. *Id.* At step 306, the U.S. local affiliate receives the execution details. *Id.* At step 307, the U.S. local affiliate transmits the execution details to E*TRADE Global. *Id.* Calo further discloses that

> [p]referably immediately after the equity order is executed and reported to E*TRADE Global, E*TRADE Global transacts a foreign exchange order prior to confirming the trade back to E*TRADE Australia in step 310. At step 308, E*TRADE Global transmits an order to the foreign exchange facility to sell Australian dollars. At step 309, the foreign exchange facility confirms the FX deal to E*TRADE Global. . . . At step 310, 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. 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. *Overview of Rude*

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.

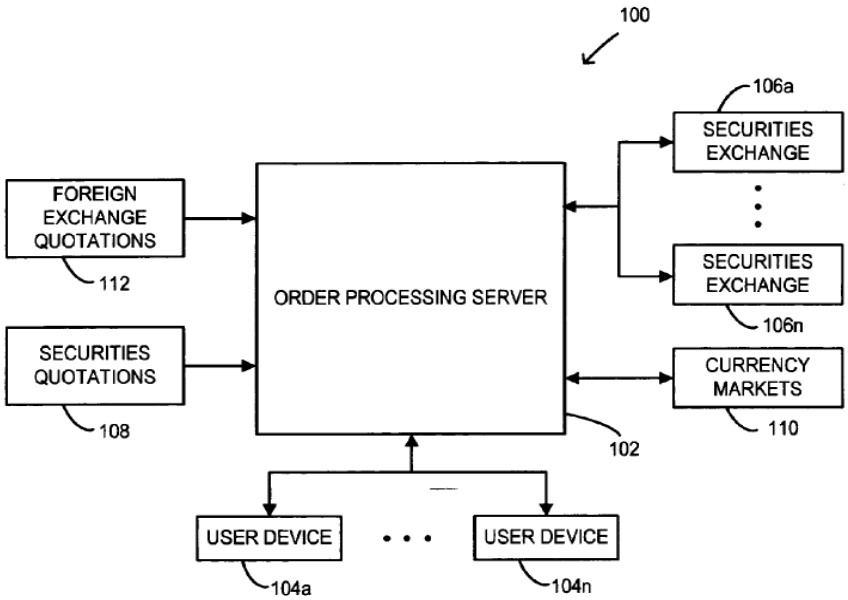

FIG. 1

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 . . . 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. *Overview of 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.

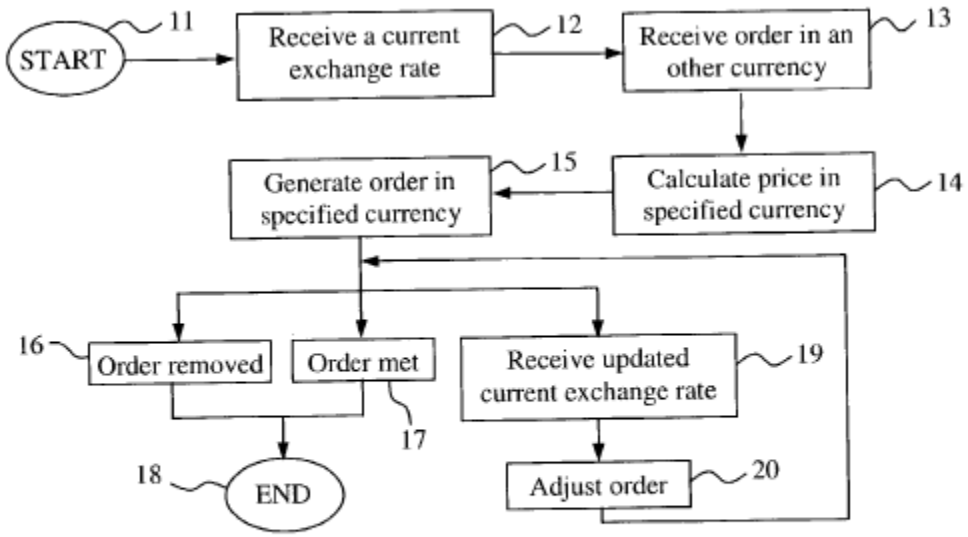

Fig. 1

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, in a 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. *Discussion*

Petitioner argues that the prior art "discloses each and every element of Claims 1-7, 9-13 and 16-18, 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 30–45, 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.[3] *Id.* at 43 (citing 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,

[3] In its proposed construction for the term "prevailing exchange rate," Petitioner argues that a "prevailing exchange rate" includes a "forward" rate or a "spot" rate. *See* Pet. 28–29.

257–260, 578, 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' [as required for independent claim 1], this is clearly disclosed by Sellberg." *Id.* (citing Ex. 1019 ¶¶ 23–25; Ex. 1002 ¶ 181). In sum, Petitioner contends that "[c]laims 1-7, 9-13, and 16-18 are invalid as obvious." *Id.* (citing Ex. 1002, Section VII.1–7, 9–13, and 16–18; *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.").

We have reviewed Petitioner's arguments and evidence regarding how the cited prior art allegedly would have rendered obvious claims 1–7, 9–13, and 16–18. *E.g.*, Pet. 30–45, 56–61. Based on our review, we determine Petitioner has demonstrated a reasonable likelihood of establishing that independent claim 1 would have been obvious over the combination of Calo, Rude, and Sellberg. Given this, the merits of Petitioner's currently undisputed challenges to claims 8, 14, and 15 over Calo, Rude, Sellberg, and either Davidowitz or Kedia are best addressed after institution of *inter partes review*. We turn now to a detailed discussion of Petitioner's challenge of independent claim 1 as allegedly obvious over Calo, Rude, and Sellberg.

a) Independent Claim 1

(1) Preamble

In its preamble, claim 1 recites "[a] method for providing a consolidated trading platform." Ex. 1001, 8:45–46. Petitioner argues that consolidated trading platforms are described in both Calo and Rude. Pet. 44,

56 (citing Ex. 1002 ¶¶ 208–219; Ex. 1005 ¶ 27, Fig. 2; Ex. 1006 ¶ 21, Fig. 1). To the extent claim 1's preamble may be limiting[4], for purposes of demonstrating a reasonable likelihood of establishing obviousness of claim 1, Petitioner has presented sufficiently persuasive arguments and evidence regarding the preamble.

(2) Step [A]

Claim 1's step [A] requires "providing a trading server coupled to one or more currency exchange servers and one or more market exchange servers." Ex. 1001, 8:47–49. According to Petitioner, this step is disclosed by both Calo and Rude. Pet. 44, 56 (citing Ex. 1002 ¶¶ 220–223; Ex. 1005 ¶ 27; Ex. 1006 ¶ 21, Fig. 1). Petitioner's position that step [A] is disclosed in the cited prior art is sufficiently supported to meet Petitioner's burden of showing a reasonable likelihood of prevailing. For example, at this stage of the proceeding, Rude's disclosure of securities exchanges 106 and currency markets 110 linked to trading system 100 supports sufficiently Petitioner's argument that the prior art discloses step [A]. Ex. 1006 ¶ 21, Fig. 1; Pet. 44, 56.

(3) Step [B]

Claim 1's step [B] requires "receiving in the trading server an indicator of a preferred currency from a trader." Ex. 1001, 8:50–51. Petitioner argues that step [B] is disclosed in each of Calo and Rude. Pet. 44, 56 (citing Ex. 1002 ¶¶ 224–227; Ex. 1005 ¶¶ 30, 58; Ex. 1006 ¶¶ 29, 36, 47–49, 60). Petitioner cites Calo's disclosure of supplying a security's price in "native" currency. *Id.* at 56 (citing Ex. 1005 ¶¶ 30, 58). Petitioner also

[4] On the current record, we need not and do not determine whether claim 1's preamble is limiting.

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 ¶¶ 29, 36, 47–49, 60). At this stage, Petitioner's evidence sufficiently supports the argument that Calo and Rude disclose step [B].

(4) Step [C]

Claim 1's step [C] requires "causing a client computer associated with the trader to display at least an asset in the preferred currency while the asset is being traded in a market currency." Ex. 1001, 8:52–54. According to Petitioner, this limitation is disclosed by both Calo and Rude. Pet. 44, 56–57 (citing Ex. 1002 ¶¶ 228–229; Ex. 1005 ¶¶ 30, 58; Ex. 1006 ¶¶19, 29, 47–49, 60). On this record, the arguments and evidence support Petitioner's position sufficiently for purposes of institution. For example, at this stage, Rude's disclosure of allowing advance user selection of having foreign securities quoted in the securities' local currencies or an operating currency specified by the user, as well as Rude's disclosure of automatic conversion of quotes to the user's operating currency from securities' local currencies sufficiently supports Petitioner's argument that step [C] is disclosed by the prior art. Ex. 1006 ¶¶ 58, 60; Pet. 44, 56–57.

Claim 1 also recites "wherein said causing a client computer associated with the trader to display at least an asset in the preferred currency comprises: [step [D] and step [E]]." Ex. 1001, 8:54–9:4. We address steps [D] and [E] next.

(5) Step [D]

Claim 1's step [D] requires "determining in the trading server a prevailing exchange rate between the preferred currency and the market currency, wherein the prevailing exchange rate is derived from all exchange

rates obtained from the one or more currency exchange servers when the asset is displayed in the preferred currency." Ex. 1001, 8:58–63. Petitioner asserts that this is disclosed by "Calo, Rude in view of Sellberg." Pet. 44, 57–58 (citing Ex. 1002 ¶¶ 230–235; Ex. 1005 ¶ 30; Ex. 1006 ¶¶ 19, 49; Ex. 1019 ¶¶ 23–25).

Petitioner cites disclosure in Calo of supplying an equity's price in the native currency using "the real-time quote." *Id.* at 57 (citing Ex. 1005 ¶ 30). Petitioner also cites Mr. Reid's testimony, which cites Calo's disclosure of receiving and communicating foreign exchange rates to local affiliates. *Id.* at 44, 58 (citing Ex. 1002 ¶ 232 (quoting Ex. 1005 ¶ 50)).

According to Petitioner, "Rude discloses using real-time, prevailing rates." *Id.* at 57 (citing Ex. 1006 ¶ 49). Petitioner notes Rude's disclosure of automatic conversion of foreign securities exchange prices to the operating currency of a trader, along with display in the operating currency of the trader. *Id.* (quoting Ex. 1006 ¶ 19). According to Petitioner, "both the spot rate and the forward rate" are disclosed in Rude. *Id.* at 43 (citing Ex. 1002 ¶ 214).

Petitioner further argues that Sellberg teaches that it is preferable when performing a transaction to use "the last exchange rate just prior to the submitting the order." *Id.* at 57 (citing Ex. 1019 ¶¶ 23–25) (emphasis omitted). Petitioner asserts that it would have been obvious to combine the disclosures of Calos, Rude, and Sellberg, contending that it would have been simple for a person of ordinary skill in the art to add Sellberg's currency exchange features to the teachings of Calo and Rude. *Id.* at 43 (citing Ex. 1002 ¶¶ 95–124, 178–185, 234, 257–260, 578, 583–584).

At this stage, for purposes of demonstrating a reasonable likelihood of prevailing, Petitioner's evidence sufficiently supports its position that, in combination, Calo, Rude, and Sellberg disclose "determining in the trading server a prevailing exchange rate between the preferred currency and the market currency, wherein the prevailing exchange rate is derived from all exchange rates obtained from the one or more currency exchange servers when the asset is displayed in the preferred currency."

(6) Step [E]

Claim 1's step [E] requires "displaying all costs and fees in the preferred currency to own or sell the asset, wherein the all costs and fees are dynamically changed in accordance with the prevailing exchange rate updated constantly even when a market value of the asset 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, 8:64–9:4. Petitioner contends that step [E] is disclosed by "Calo, Rude in view of Sellberg." Pet. 44, 58 (citing Ex. 1002 ¶¶ 236–240; Ex. 1005 ¶¶ 30, 38, 70; Ex. 1006 ¶ 53; Ex. 1019 ¶¶ 23–25). According to Petitioner, Calo discloses real-time updating of costs and fees displayed in the preferred currency before a trade. *Id.* at 58 (citing Ex. 1005 ¶¶ 30, 38, 70). Petitioner also argues that all fees are determined in the preferred currency by Rude. *Id.* (citing Ex. 1006 ¶ 53). Petitioner further contends that "Sellberg teaches to use an updated exchange rate, preferabl[y] <u>the last exchange rate just prior to the submitting the order</u>." *Id.* (citing Ex. 1019 ¶¶ 23–25).

At this stage, for purposes of demonstrating a reasonable likelihood of prevailing, Petitioner's evidence sufficiently supports its position that step [E] is disclosed by Calo, Rude, and Sellberg, in combination. For example,

in a passage cited by Petitioner, Calo refers to "real-time quotes" and a currency market in connection with customer orders and providing an order preview. Ex. 1005 ¶ 30. This comports with Petitioner's argument that Calo discloses real-time updating and display of costs and fees.

(7) Step [F]

Claim 1's step [F] requires "conducting in the trading server 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. 1001, 9:5–8. Petitioner contends that step [F] is disclosed by each of Calo and Rude. Pet. 44, 58 (citing Ex. 1002 ¶¶ 241–242; 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[F].

(8) Step [G]

Claim 1's step [G] requires the following:

> receiving a settlement notification in the trading server when 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 is configured to calculate the prevailing exchange rate from all exchange rates obtained from the one or more currency exchange servers right before the transaction takes place when the asset is not priced in the preferred currency, and executes the transaction with the

> calculated prevailing exchange rate obtained at the transaction to prevent uncertainty in currency exchanges in another time.

Ex. 1001, 9:9–22. According to Petitioner, this step is disclosed by "Calo and Rude in view of Sellberg." Pet. 44, 59 (citing 1002 ¶¶ 243–247; Ex. 1005 ¶ 30; Ex. 1006 ¶ 62; Ex. 1019 ¶¶23–25). Petitioner cites disclosure in Calo related to confirmation of a trade value "locked-in" in the currency of the customer. *Id.* at 59 (citing Ex. 1005 ¶ 30). Additionally, Petitioner argues that Rude discloses using "the real-time exchange rate" when performing a trade. *Id.* (citing Ex. 1006 ¶ 62). Petitioner further argues that "Sellberg discloses using the prevailing exchange rate right before the transaction takes place." *Id.* (citing Ex. 1019 ¶¶23–25).

At this stage, for purposes of demonstrating a reasonable likelihood of prevailing, Petitioner's evidence sufficiently supports its position that step [F] is disclosed by Calo, Rude, and Sellberg, in combination. For example, with respect to the claim requirement of using an exchange rate "from the one or more currency exchange servers right before the transaction takes place," Petitioner cites Sellberg's disclosure of automatically receiving an updated exchange rate repeatedly at a frequency that "may be . . . several times a second" and using "the last received updated exchange rate . . . as the received current exchange rate." Ex. 1019 ¶¶ 24–25; Pet. 59.

(9) Step [H]

Claim 1's step [H] requires "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 calculated prevailing

exchange rate." Ex. 1001, 9:23–27. Petitioner argues that this step is disclosed by "Calo and Rude in view of Sellberg." Pet. 44, 59–60 (citing Ex. 1002 ¶¶ 248–261; Ex. 1005 ¶¶ 35, 36, 42, 57; Ex. 1006 ¶¶ 20, 24, 54).

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. Petitioner further cites other passages of Calo, including Calo's discussion of an example in which a U.S. equity is sold by an Australian customer. Pet. 59. 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.

Additionally, Petitioner argues that Rude discloses executing an order for a foreign security in the foreign exchange's local currency, followed by automatically converting the resulting settlement amount "to the trader's operating currency through a forward foreign exchange transaction, effectively mitigating foreign exchange risk." Pet. 60 (citing Ex. 1006 ¶¶ 20, 24). Petitioner also cites Rude's disclosure of the following:

> 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 discloses that prevailing rates may include current (spot) and forward rates." Pet. 61 (citing Ex. 1006 ¶ 20).

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

D. ALLEGED OBVIOUSNESS BASED ON CALO, RUDE, SELLBERG, AND OTHER PRIOR ART

Petitioner argues that claims 14 and 15 would have been obvious over Calo, Rude, Sellberg, and Davidowitz. Pet. 50–53. In doing so, Petitioner cites Davidowitz for allegedly disclosing "the need for an automated system that can continuously monitor the various markets and automatically execute transactions based upon the realization of specific parameters chosen by the investor" and providing a system to "monitor the relationships between securities in various foreign currencies and revalue such securities into a single currency in order to facilitate an investor's trading strategy." *Id.* at 51–52 (citing Ex. 1018 ¶ 8; Ex. 1002 ¶¶ 174–177, 381). Petitioner argues that "[t]he skilled person would have been motivated to combine the teachings . . . to reduce risk" and "a [person of ordinary skill in the art]

would have had a reasonable expectation of success when making this combination." *Id.* at 53 (citing Ex. 1002 ¶¶ 383, 580).

Petitioner also argues that claim 8 would have been obvious over Calo, Rude, Sellberg, and Kedia. *Id.* at 53–55. In doing so, Petitioner cites Kedia for "disclos[ing] systems and methods for displaying on a graphical user interface at least one of stock and other equity type information for trade related actions by a user with an electronic exchange, said displaying being configurable by the user." *Id.* at 53 (citing Ex. 1017, Abstr.). Petitioner argues that

> it would have been obvious to modify the display in the Calo-Rude system to determine a first portion of the transaction that was bought or sold from another trader with the same preferred currency as the trader was performing the transaction and to update the currency conversion only on a second portion of the transaction that was bought or sold from another trader with a different preferred currency.

Id. at 55 (citing Ex. 1002 ¶ 297).

Given that Petitioner has demonstrated a reasonable likelihood of establishing obviousness of claim 1 over Calo, Rude, and Sellberg, the merits of Petitioner's currently undisputed challenges to claims 8, 14, and 15 over Calo, Rude, Sellberg, and either Davidowitz or Kedia are best addressed after institution of *inter partes review*.

E. ALLEGED OBVIOUSNESS OVER CALO, RUDE, AND SZOC

1. *Overview of 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.

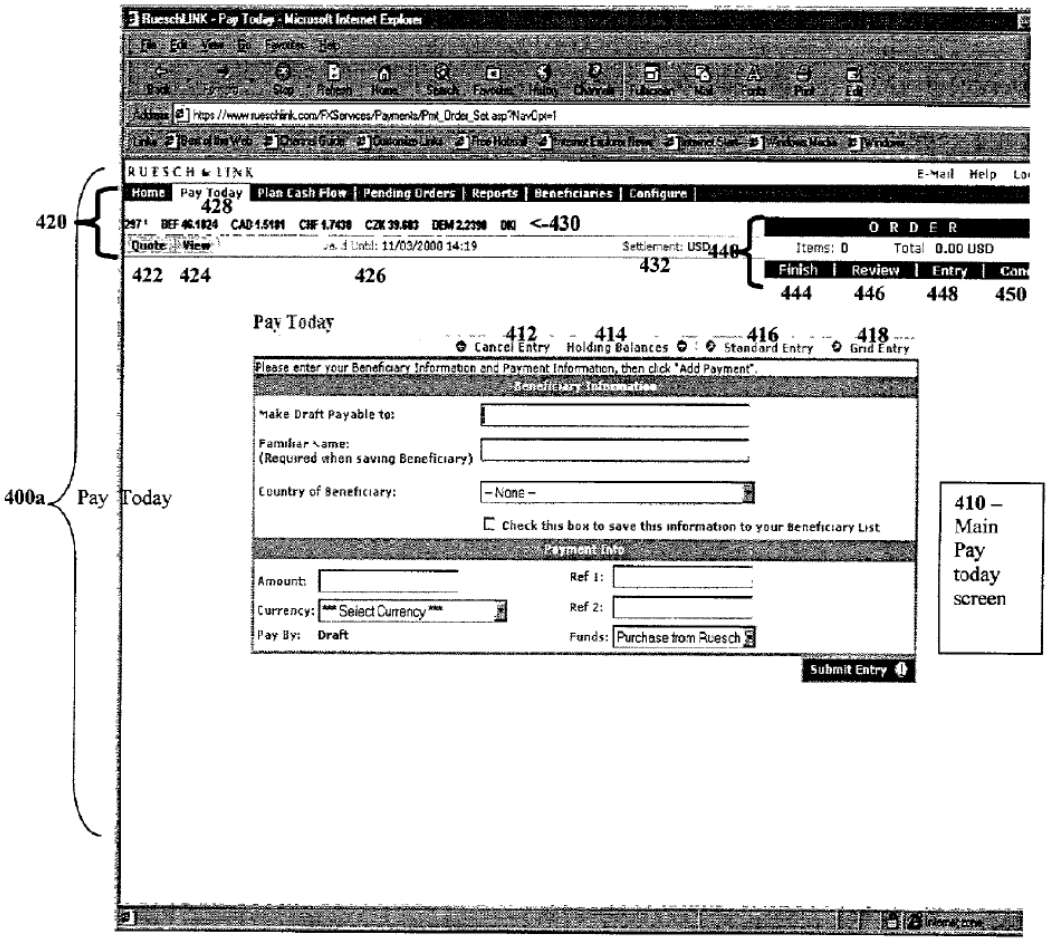

FIGURE 4A

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.

2. *Discussion*

Petitioner argues that the combination of Calo, Rude, and Szoc discloses each and every element of claims 1–7, 9–13 and 16–18. Pet. 45. 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 48–49, 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.*

Noting that Szoc was not considered during prosecution of the '107 patent (*id.* at 45 (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 48 (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' [as required for independent claim 1], 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 1–7, 9–13, and 16–18 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 1 over Calo, Rude, and Sellberg, the merits of Petitioner's currently undisputed challenges to claims 1-7, 9-13, and 16-18 over Calo, Rude, and Szoc, are best addressed after institution of *inter partes review*.

F. ALLEGED OBVIOUSNESS BASED ON CALO, RUDE, SZOC, AND OTHER PRIOR ART

Petitioner argues that claims 14 and 15 would have been obvious over Calo, Rude, Szoc, and Davidowitz. Pet. 50–53. In doing so, Petitioner cites Davidowitz for allegedly disclosing "the need for an automated system that can continuously monitor the various markets and automatically execute transactions based upon the realization of specific parameters chosen by the investor" and providing a system to "monitor the relationships between securities in various foreign currencies and revalue such securities into a single currency in order to facilitate an investor's trading strategy." *Id.* at 51–52 (citing Ex. 1018 ¶ 8; Ex. 1002 ¶¶ 174–177, 381). Petitioner argues

that "[t]he skilled person would have been motivated to combine the teachings . . . to reduce risk" and "a [person of ordinary skill in the art] would have had a reasonable expectation of success when making this combination." *Id.* at 53 (citing Ex. 1002 ¶¶ 383, 580).

Petitioner also argues that claim 8 would have been obvious over Calo, Rude, Szoc, and Kedia. *Id.* at 53–55. In doing so, Petitioner cites Kedia for "disclos[ing] systems and methods for displaying on a graphical user interface at least one of stock and other equity type information for trade related actions by a user with an electronic exchange, said displaying being configurable by the user." *Id.* at 53 (citing Ex. 1017, Abstr.). Petitioner argues that

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Id. at 55 (citing Ex. 1002 ¶ 297).

Given that Petitioner has demonstrated a reasonable likelihood of establishing obviousness of claim 1 over Calo, Rude, and Sellberg, the merits of Petitioner's currently undisputed challenges to claims 8, 14, and 15 over Calo, Rude, Szoc, and either Davidowitz or Kedia are best addressed after institution of *inter partes review*.

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).

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claims or any underlying factual or legal issues. The final determination will be based on the record as developed during the *inter partes* review.

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 1–18 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.

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