

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UBER TECHNOLOGIES, INC.,
Petitioner

v.

SURGETECH LLC,
Patent Owner

Case IPR2023-00738
Patent 11,475,047

**PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 11,475,047**

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LIST OF EXHIBITS

Exhibit	Description
EX1001	U.S. Patent No. 11,475,047
EX1002	U.S. Patent No. 11,475,047 File History
EX1003	Declaration of Dr. Amelia Regan
EX1004	U.S. Patent Pub. No. 2007/0075136 (“Jacob”)
EX1005	Certified Translation of Japanese Patent Application Publication JP 2005-332346 (“Tamura”)
EX1006	Japanese Patent Application Publication JP 2005-332346
EX1007	Certified Translation of Japanese Patent Application Publication JP 2002-104622 (“Kono”)
EX1008	Japanese Patent Application Publication JP 2002-104622
EX1009	Franklin & Zdonik, “Dissemination-Based Information Systems,” <i>“Bulletin of the Technical Committee on Data Engineering,”</i> Vol. 19, No. 3 (September 1996) (“Franklin”)
EX1010	U.S. Patent No. 7,996,265 (“Evangelist”)
EX1011	U.S. Patent No. 7,894,936 (“Walker”)
EX1012	U.S. Patent Pub. No. 2006/0085296 (“Strickland”)
EX1013	U.S. Patent Pub. No. 2002/0186144 (“Meunier”)
EX1014	U.S. Patent No. 8,050,976 (“Staib”)
EX1015	U.S. Patent No. 8,051,015 (“Veit”)
EX1016	U.S. Provisional Patent App. No. 60/737,071 (“Staib Provisional Application”)
EX1017	<i>U.S. District Courts—National Judicial Caseload Profile, available at https://www.uscourts.gov/sites/default/files/data_tables/fcms_na_distprofile0930.2022.pdf (September 30, 2022)</i>
EX1018	Dkt. 34 (Scheduling Order), Dkt. 49 (Stipulation to Extend Time), Dkt. 55 (Stipulation to Extend Time), <i>SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber</i> , No. 1:22-cv-00882-GBW
EX1019	Declaration of Sayem Osman on April 3, 2023
EX1020	March 27, 2023 Email re: SurgeTech, LLC v. Uber Technologies, Inc. (Fintiv Stipulation)

EX1021	Defendant Uber Technologies, Inc.’s Identification of Claim Constructions, <i>SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber</i> , No. 1:22-cv-00882-GBW
EX1022	Plaintiff SurgeTech LLC’s Responses and Proposed Constructions to Defendant Uber Technologies, Inc.’s Identification of Claim Constructions, <i>SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber</i> , No. 1:22-cv-00882-GBW
EX1023	OMITTED
EX1024	March 22, 2023 Affidavit of Nathaniel E. Frank-White (regarding Franklin)
EX1025	IEEE Technical Committee on Data Engineering, Data Engineering Bulletin Issues, available at http://sites.computer.org/debull/bull_issues.html
EX1026	Choi, S. and Kimes, S., “Electronic Distribution Channels’ Effect on Hotel Revenue Management,” <i>Cornell Hotel and Restaurant Administration Quarterly</i> , Vol.43, Issue 2, June 2002.
EX1027	Listing of Issues of Cornell Hotel and Restaurant Administration Quarterly, <i>available at</i> https://www.sciencedirect.com/journal/the-cornell-hotel-and-restaurant-administration-quarterly/issues .
EX1028	Screenshot of https://journals.sagepub.com/doi/abs/10.1177/0010880402433002 showing Electronic Distribution Channels’ effect on Hotel Revenue Management
EX1029	Excerpts of Phillips, R., “Pricing and Revenue Optimization” (2005) (“Phillips”) ¹
EX1030	OMITTED
EX1031	Excerpts of Phillips, R., “Pricing and Revenue Optimization” (2005) from Library of Congress from Copies 1 and 2 (including March 27 and 28, 2023 Declarations of Kyle Noreiga)
EX1032	March 22, 2023 Affidavit of Nathaniel E. Frank-White (regarding Phillips)
EX1033	Excerpts of Phillips, R., “Pricing and Revenue Optimization” (2005) from George Washington University Library

¹ Petitioner is willing to provide a full copy of Phillips for inspection upon request.

EX1034	Gelman Library at George Washington University MARC Record for EX1033
EX1035	Library of Congress Catalog Record for EX1031
EX1036	University of Washington Catalog Record for EX1029
EX1037	OMITTED
EX1038	U.S. Patent No. 11,334,598
EX1039	Dkt.63, Plaintiff SurgeTech LLC's and Defendant Uber Technologies, Inc.'s Joint Claim Construction Chart, <i>SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber</i> , No. 1:22-cv-00882-GBW

Uber Technologies, Inc. (“Petitioner”) petitions, under §§311-319 and §42.1,² for IPR of Claims 1-6 (“Claims”) of U.S. Patent 11,475,047 (“’047”), assigned to SurgeTech, LLC (“PO”/“SurgeTech”). There is a reasonable likelihood at least one Claim is unpatentable for the reasons herein, and Petitioner requests review of, and judgment against, these Claims under §103.

The Claims generally concern concepts well-known long before ’047’s earliest-claimed May 18, 2006 priority date:³ *establishing a channel interface* that provides bidirectional communication between a server and vendor computing device, *storing a channel record* for a plurality of distribution channels, *selecting* participant channels for the transportation services inventory, *establishing active and inactive channel records* based upon the participant and non-participant channels, respectively, *receiving sale data* corresponding to at least one additional vendor computing device, *processing* that sale data, and *adjusting price* of such inventory if the results show that performance fails to meet a threshold. EX1003, ¶¶31-32.

² Sections are from 35 U.S.C. or 37 C.F.R. as context indicates, and emphases/annotations (including highlighting/colored markings) added and internal quotations/citations omitted unless noted.

³ This is through a continuation-in-part and Australian provisional. See EX1002, 4-5. Petitioner reserves the right to argue a later date applies.

The Claims' remaining limitations merely catalog trivial implementation choices well understood by "POSITA"⁴—and the resulting combinations were certainly obvious.

I. '047 PATENT

'047 issued from App. No. 17/749,091 (EX1002) and states it relates to a "method of managing online bookings for transportation services inventory." EX1001, Abstract. '047 states "[a] particular problem exists when selling inventory, such as travel services.... The problem is a result of the manner in which such inventory is allocated to various re-sellers, referred to as distribution channels ("Channels"), which can be ad hoc and thus inefficient." EX1001, 1:30-38; EX1038, cl.24 (requiring user input) (related patent); EX1003, ¶¶79-85, 88.

⁴ Persons of ordinary skill in the art, as of May 18, 2006. *See* §VI.B.

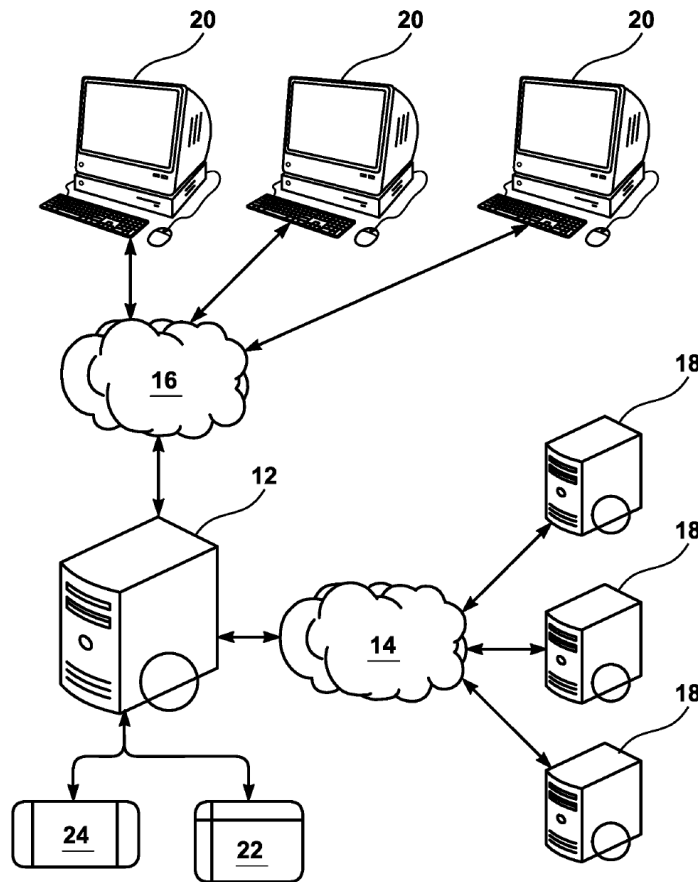


FIG. 1

II. BACKGROUND OF THE ART

'047's claimed concepts were well-known before its earliest-claimed 2006 priority date. *See* EX1003, ¶¶21-76, 86. *E.g.*:

Establishing a channel interface that provides bidirectional communication between a server computing device and a vendor computing device—was well-known; *see* EX1003, ¶¶33-47. *E.g.*, EX1004 (**Jacob**),⁵ ¶¶[0007], [0082], [0093]-

⁵ *See* VI.C.1.

[0094], [0086], Fig.8 (Property communicating with RezTrip database), Fig.12 (examples of RezTrip vendors (e.g., “Properties”)):

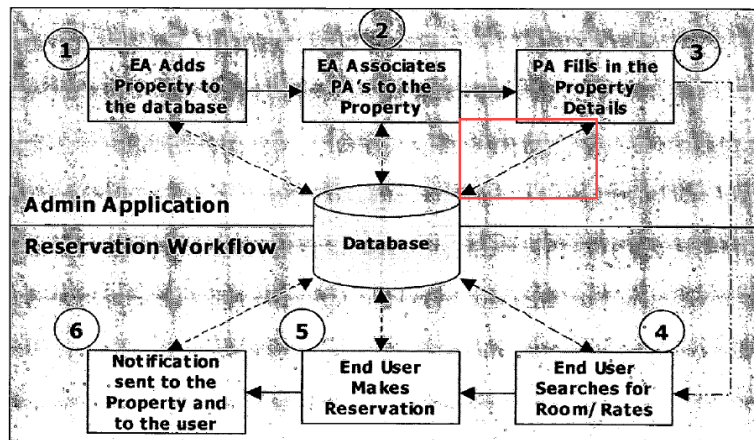


Figure 8

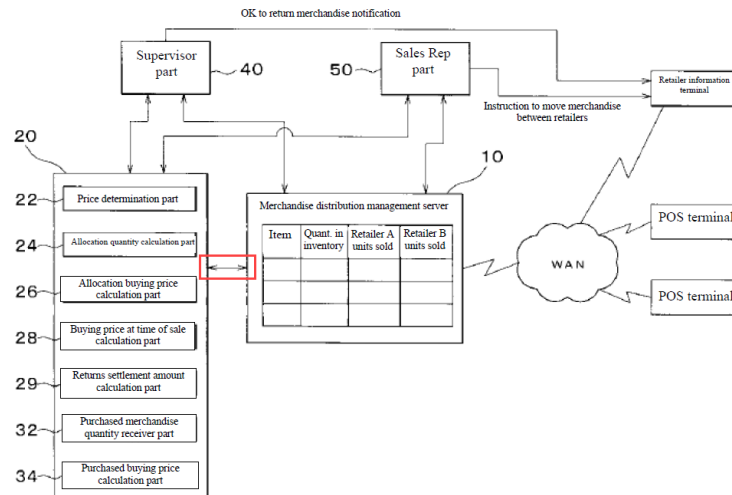
Select	First Name	Last Name	Property Name	Property ID	User Name	Roles	Email
☐	John	Smith	Taj Radisson	101	jsmith	P. A.	john_smith@hotmail.com
☐	Joseph	Fernandez	Taj Metropolitan Hotel Radisson	111	fernandez	P.B.U.	fernandez@yahoo.com
☐	Roberto	Carlos	Taj Radisson	110	rcarlos	E.R.U.	roberto_1992@hotmail.com
☐	Jon	SRE	Taj	105	rcarlos	P.A.	roberto_1992@hotmail.com
☐	Lilest	Carl	Taj	104	rcarlos	E.R.U.	roberto_1992@hotmail.com
☐	Brian	Carlos	Radisson	103	rcarlos	E.R.U.	roberto_1992@hotmail.com
☐	David	XYZ	Taj	201	rcarlos	E.R.U.	roberto_1992@hotmail.com
☐	Sharon	Carlos	Taj	204	rcarlos	E.R.U.	roberto_1992@hotmail.com
☐	Roberto	PQRS	Taj	200	rcarlos	P.A.	roberto_1992@hotmail.com
☐	Paul	ARE	Taj	201	rcarlos	P.H.	roberto_1992@hotmail.com

Figure 12

EX1005 (Tamura),⁶ ¶¶[0017], [0026], [0031], Figs.1, 3:

⁶ See VI.C.3.

Fig. 3

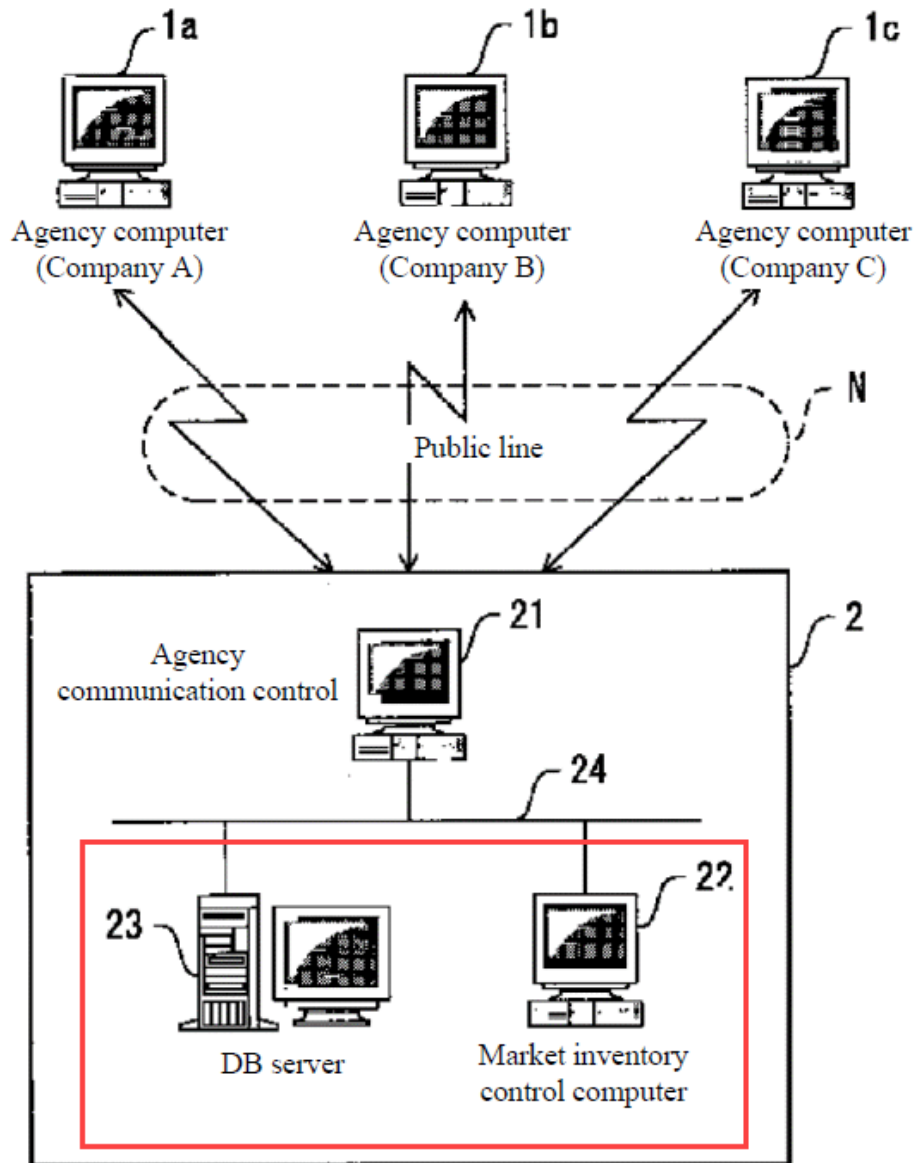


EX1007 (Kono),⁷ ¶¶[0024]-[0025], cl.1, Fig.1.

Storing, via a channel data structure, a channel record for each of a plurality of distribution channels—was also well-known; see EX1003, ¶¶38-43. E.g., EX1004, ¶¶[0007], [0084]; EX1005, ¶¶[0014], [0017], Fig.3: EX1007, ¶¶[0026], [0042]-[0043], Figs.1, 2, 4:

⁷ See VI.C.4.

[FIG. 1]



EX1005, ¶¶[0010], [0013], [0018], cl.1, Fig. 3 (“allocation quantity calculation part”); EX1007, ¶¶[0026], [0042]-[0043], Figs.1 (“DB server” and “market inventory control computer”), 2, 4; EX1010, Abstract, 7:29-36, 8:16-23; 9:48-51, cls.1, 8, 10, 17, 19, 22, Figs.1, 5 (“allocate inventory for on-line... inventory”); EX1029 (Phillips),⁹ 120. EX1029, 79-80, 26.

Establishing, via the channel data structure, one or more inactive channel records based upon one or more non-participant channels for the transportation service; see EX1003, ¶¶50-52. *E.g.*, EX1004, ¶¶[0085], [0176]; EX1029, 26, 29, 79, 126, 137-138.

Linking the one or more active channel records to the channel interface; see EX1003, ¶¶53-55. *E.g.*, EX1004, ¶[0083], Figs.7-8:

⁹ See VI.C.2.

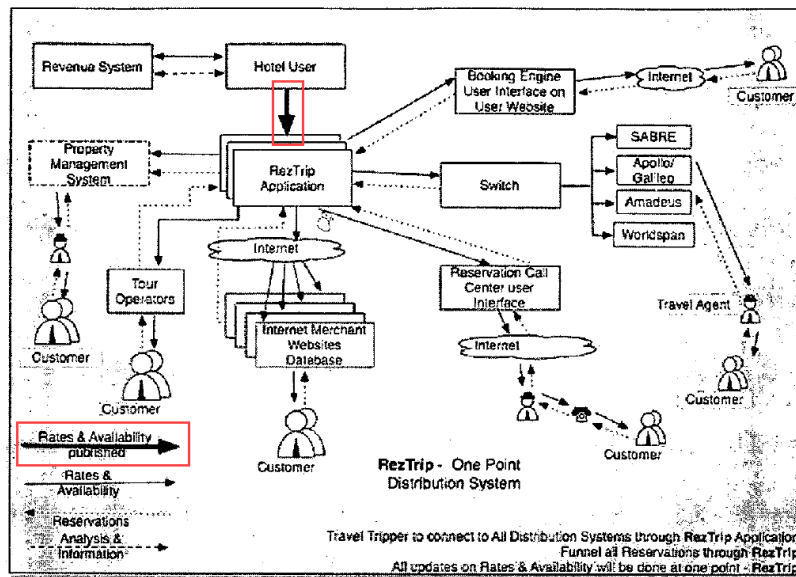


Figure 7

E.g., EX1007, ¶¶[0043], Fig.4.

Receiving, in real time for the one or more participant channels corresponding to the one or more active channel records linked to the channel interface, sale data corresponding to at least one or more additional vendor computing devices; see EX1003, ¶¶56-62. E.g., EX1004, ¶¶[0005], [0009], [0010], [0086], [0192] (“reservation engine data”), Fig. 7; EX1005, ¶¶[0014], [0017], cl.5; see also EX1005, ¶¶[0024]-[0026], Figs.1-3; EX1007, ¶¶[0010], [0014], [0026], [0042], Fig.4; EX1010, 5:20-26, Figs.1-2; EX1009 (Franklin),¹⁰ ¶¶[0015]-[0016], [0018], ¶¶[0002], [0029]; EX1029, 126, 135-36, 123, 30, 33, 7.

¹⁰ See VI.C.6.

Determining a performance indicator in real time, for each of the one or more participant channels corresponding to the one or more active channel records linked to the channel interface, based at least on the sale data corresponding to said at least one or more additional vendor computing devices; see EX1003, ¶¶63-69. E.g., EX1004, ¶¶[0005]-[0006], [0010], [0131]-[0133], [0180], [0185], Fig. 7; EX1005, ¶¶[0013], [0035], cl.4, Figs.2-3; EX1007, ¶¶[0009]-[0010], [0013]-[0014], [0025], cls.1, 3, Figs.2-3; EX1010, 5:26-32; EX1029, 123, 30, 33, 126, 7.

Adjusting, via the channel interface, a price of the transportation service by an adjustment factor depending on whether the performance indicator indicates a performance that fails to meet a performance threshold; see EX1003, ¶¶70-76. E.g., EX1004, ¶¶[0074], [0180], cl.13, Fig.7; EX1005, ¶¶[0019], [0025], cl.1, Figs.2-3; EX1011 (filed 10/15/04, issued 2/22/11), 5:34-37; EX1029, 26, 101; EX1014 (provisional filed 11/15/05, issued 11/1/11), 3:57-4:7, 5:33-36; see also EX1016, 3-4, 6; EX1015 (filed 7/28/04, issued 11/1/11), 2:15-22.

'047 itself concedes processors, non-transitory computer-readable storage media, servers, and databases/data structures for storing information were also well-known. EX1003, ¶¶77-78; e.g., EX1001, 32:46-52, 8:4-5, 10:62-64, 32:29-31, 32:1-4; see also, e.g., EX1004, ¶¶[0082]-[0083]; EX1010, 4:9-18, 4:36-61; EX1011, 3:34-42, 3:55-4:17.

III. MANDATORY NOTICES (§42.8)

Petitioner and Real Parties in Interest: Uber Technologies, Inc. is sole petitioner. Out of an abundance of caution, Petitioner also identifies, as a potential RPI, Uber Freight Holding Corp., the entity that controls the Uber Freight product/service, which PO has maintained is infringing '047 in litigation. The listing of a non-Petitioner RPI entity should not be deemed as an acknowledgement or admission that any such entity actually controls this matter.

Related Matters Under Rule §42.8(b)(2): PO asserted '047 (and two related patents) against Uber Technologies, Inc. in *SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber*, Case No. 1:22-cv-00882-GBW (D. Del.).¹¹ Uber has challenged, in IPR2023-00735, -00736, and -00737, two other patents asserted against Uber.

Lead and Back-Up Counsel and Service Information Under

§§42.8(b)(3)-(4): Lead: Megan Raymond (Reg. No. 72,997), GROOMBRIDGE, WU, BAUGHMAN & STONE LLP, 801 17th Street, NW, Suite 1050, Washington, DC 20006, P: (202)505-5878, megan.raymond@groombridgewu.com;

¹¹ Allotz.com Limited has claimed '047 ownership, and is also being served. Allotz.com Limited is in liquidation and is being served through the appointed liquidator and his counsel.

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IV. STANDING (§42.104(a))

Petitioner certifies '047 is eligible for, and Petitioner is not barred or estopped from requesting, IPR. Petitioner was served a Complaint asserting infringement of '047 on November 28, 2022.

V. GROUNDS (§§42.22 and 42.104(b))

Claims 1-6 are rendered obvious by Jacob in view of Phillips (**Ground 1**), Jacob in view of Phillips and Evangelist (**Ground 2**), Jacob in view of Phillips and Franklin (**Ground 3**), Jacob in view of Phillips, Evangelist, and Franklin (**Ground 4**), Jacob in view of Phillips and Tamura (**Ground 5**), Jacob in view of Phillips, Evangelist, and Tamura (**Ground 6**), Jacob in view of Phillips, Franklin, and

Tamura (**Ground 7**), Jacob in view of Phillips, Evangelist, Franklin, and Tamura (**Ground 8**), Jacob in view of Phillips, Tamura, and Kono (**Ground 9**), Jacob in view of Phillips, Evangelist, Tamura, and Kono (**Ground 10**), Jacob in view of Phillips, Franklin, Tamura, and Kono (**Ground 11**), Jacob in view of Phillips, Evangelist, Franklin, Tamura, and Kono (**Ground 12**). EX1003, ¶¶104, 577.

§VI.C.8 provides charts specifying how the art renders the Claims obvious. In further support, technical expert Dr. Amelia Regan’s Declaration (EX1003) is attached. *See also* EX1003, App’x C (claim charts).

VI. DETAILED REASONS FOR RELIEF

There is a reasonable likelihood Petitioner will prevail with respect to at least one Claim (§314(a)), as all are obvious.

A. Claim Construction¹²

Petitioner construes Claims herein per *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*); §42.100(b), presuming terms have their ordinary and customary meaning as understood by POSITA. Petitioner additionally applies the construction below:

¹² Construction is required only as “necessary to resolve the controversy.” *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

“receiving... in real time” (all): receiving most recent data by “push” method. The specification repeatedly contrasts “real time” with “request-based” or “poll[ing],” and the opposite of request-based or polling is push. EX1001, 7:1-19 (“Two methods... for receiving... ‘real-time’ and ‘request-based’ methods.... Channels that report values in real-time back to the computer... On the other hand, request-based channels are polled...”), 32:16-19, Fig.4 (84 to 82 arrow).¹³ See also EX1039, 5.

B. Level Of Ordinary Skill

POSITA would at minimum have a bachelor’s degree in software/computer/electrical engineering, computer science, or industrial engineering and management with at least two years’ experience in inventory and pricing management, including with respect to systems for dynamically managing inventory and pricing of transportation services or other types of inventory, or the equivalent. Additional

¹³ This is consistent with “in real time” meaning “provided automatically to indicate the most recent data” and with “determining...in real time... based on at least the sale data,” meaning the sale data need not be requested to perform the calculations—instead, data pushed/provided automatically is used.

graduate education could substitute for professional experience, or significant inventory and pricing management experience could substitute for formal education. EX1003, ¶17. POSITA are presumed knowledgeable of all relevant art, and would thus have been familiar with each reference cited herein and its full teachings.

C. Obviousness Grounds

1. Jacob (EX1004)

Jacob, “Hotel Inventory Management System and Method” (U.S. Pub. 2007/0075136, filed 9/26/2005; published 4/5/2007), is prior art under at least pre-AIA §102(e). Jacob discloses “computer program systems,” including “code segments,” “to manage the sales, pricing, and inventory information related to time-dependent items” “such as hotel rooms, rental automobiles, and airline seats as well as associated items.” EX1004, Abstract, ¶¶[0006], [0082].

Jacob includes a “computerized database... configured to manage hotel data comprising,” *e.g.*, “room type data, rate type data,” “inventory data,” “sales channel data,” “communications data, and other data.” EX1004, ¶[0084]. Jacob’s system (running, *e.g.*, the “RezTrip Application”) communicates with “hotel staff, the hotel property management database, and a plurality of selling channels” such as “a hotel web site, consolidator web sites such as ExpediaTM or TravelocityTM, [and] computerized reservation systems....” EX1004, ¶¶[0007], [0077]-[0078], [0085],

Fig. 7:

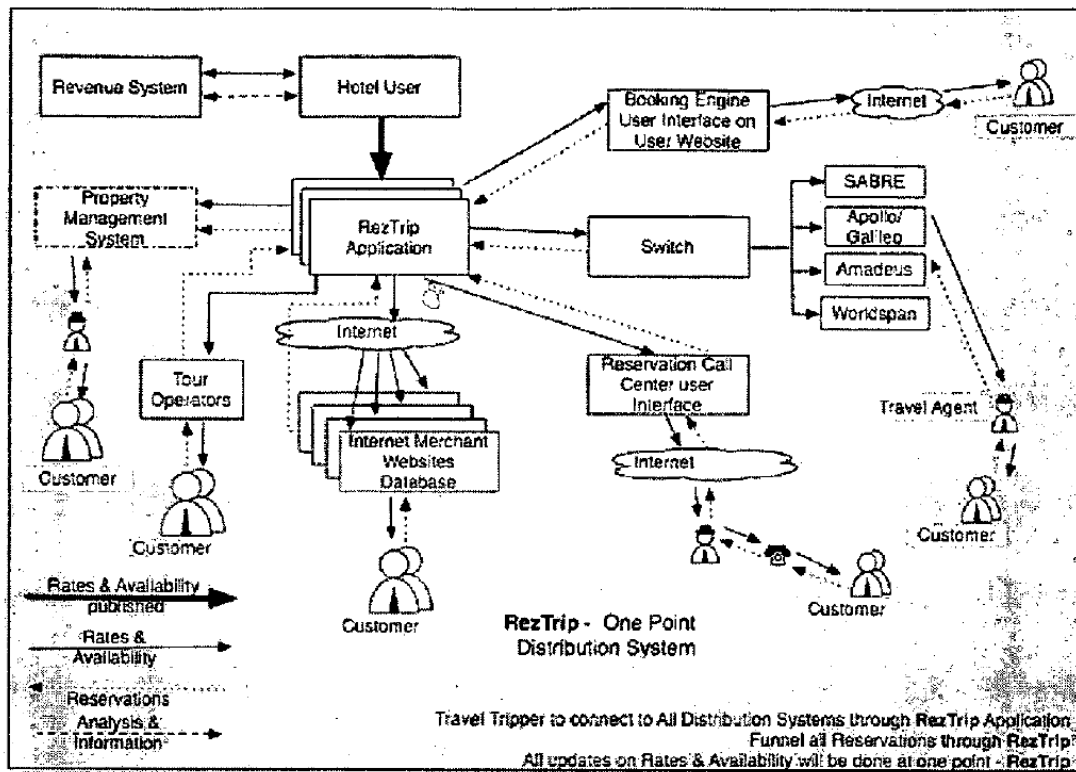


Figure 7

EX1003, ¶¶105-110.

The system enables time-dependent inventory administration by configuring pricing and inventory information. EX1004, ¶¶[0007], [0066], [0191]; EX1003, ¶111. “[P]ricing [and] inventory information... is communicated to the selling channels” and a “revenue management code segment” is “used to analyze the information received from sales channels” to “maximize hotel revenue.” EX1004, ¶[191]; EX1003, ¶¶112-114. For example, “[i]f a sales channel’s Room Type inventory is selling better than other channels,” inventory can be *“reallocate[d]... to the better selling channel,”* or, e.g., “the *Rate Type/Room Type*, for a given date

or a series of dates, for certain channels” *can be “closed.”* E.g., EX1004, ¶[0180]; *see also id.* ¶¶[0009], [0176], [0191]; EX1003, ¶114.

Jacob discloses configuring the system “to perform calculations automatically” (e.g., EX1004, ¶[0132]; *see n.32*), and, “in response to a triggering event” “sen[ding]” “updated pricing and availability inf[o]rmation... to selling channels electronically over... networks....” EX1004, ¶[0191]; *see also id.*, cl.6; EX1003, ¶¶112, 115.

2. Phillips (EX1029)

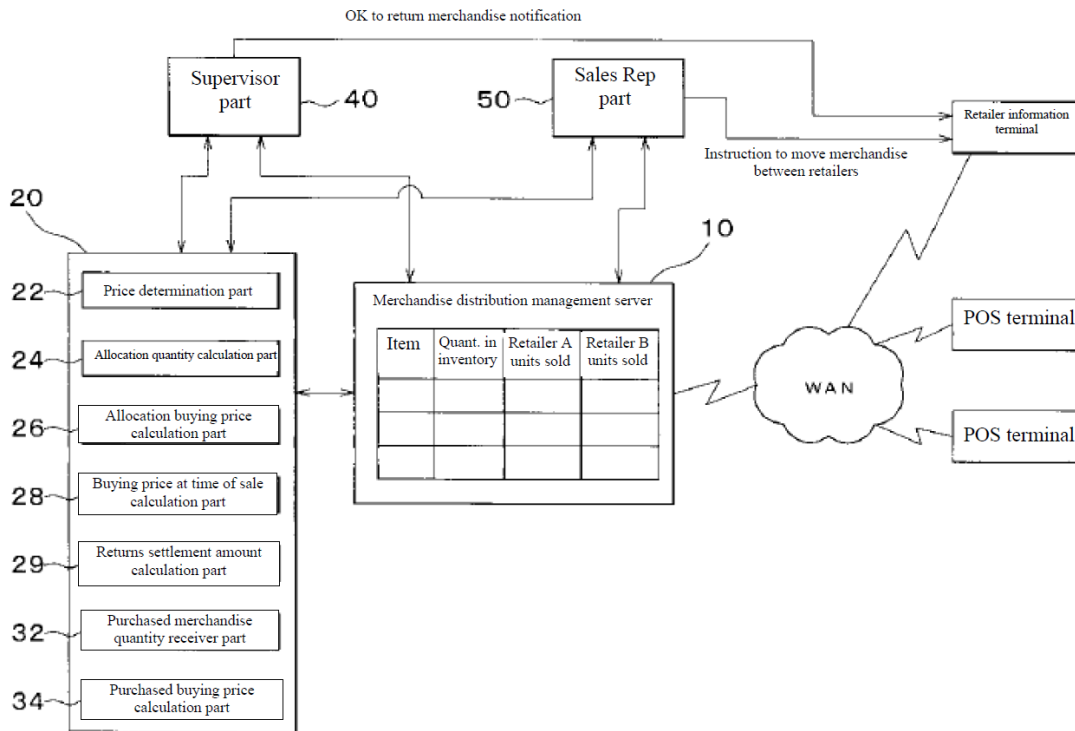
Phillips (“Pricing and Revenue Optimization”) is prior art under at least pre-AIA §102(a). Stanford Business Books published Phillips in 2005. EX1029, p.5 (2005 copyright, ISBN0804746982), p.98 (9/2005 and 3/2006 due date stamps); EX1031, 9 (2005 copyright, 10/17/05 copyright office stamp, ISBN0804746982); EX1032, 5 (Stanford University Press indicating “available online” 9/11/05); EX1033, 7; EX1034; EX1003, ¶116. Phillips discloses the basic economics underlying pricing decisions, explaining “[c]omputerized reservation systems... play major roles in the way that revenue management is actually implemented” and “solve the underlying optimization problem.” EX1029, 1, 15, 121-123, 125-126, 30, 33, 134-135; EX1003, ¶116. Phillips states “[e]very major... hotel... has a revenue management department [that] rel[ies] on computerized systems to recommend actions based on sophisticated mathematical algorithms,” EX1029, 121, 33,

and “determin[ing] moment by moment which fare classes are available,” *id.* 136; EX1003, ¶116.

3. Tamura (EX1005)

Tamura, “Sales Management System and Method” (published 12/2/2005), is prior art under at least pre-AIA §102(a). Tamura discloses “a sales management system” that “reduces the risk of bad inventory... while reducing lost sales opportunities.” EX1005, ¶[0009]. Tamura “determines the reference retail price for items sold based on the amount of inventory and the number of [each] part[] sold,” received from “point-of-sale (POS) terminals... in each retail store” and stored in “merchandise distribution management server 10.” EX1005, ¶¶[0010], [0014], [0017]; Fig.3:

Fig. 3



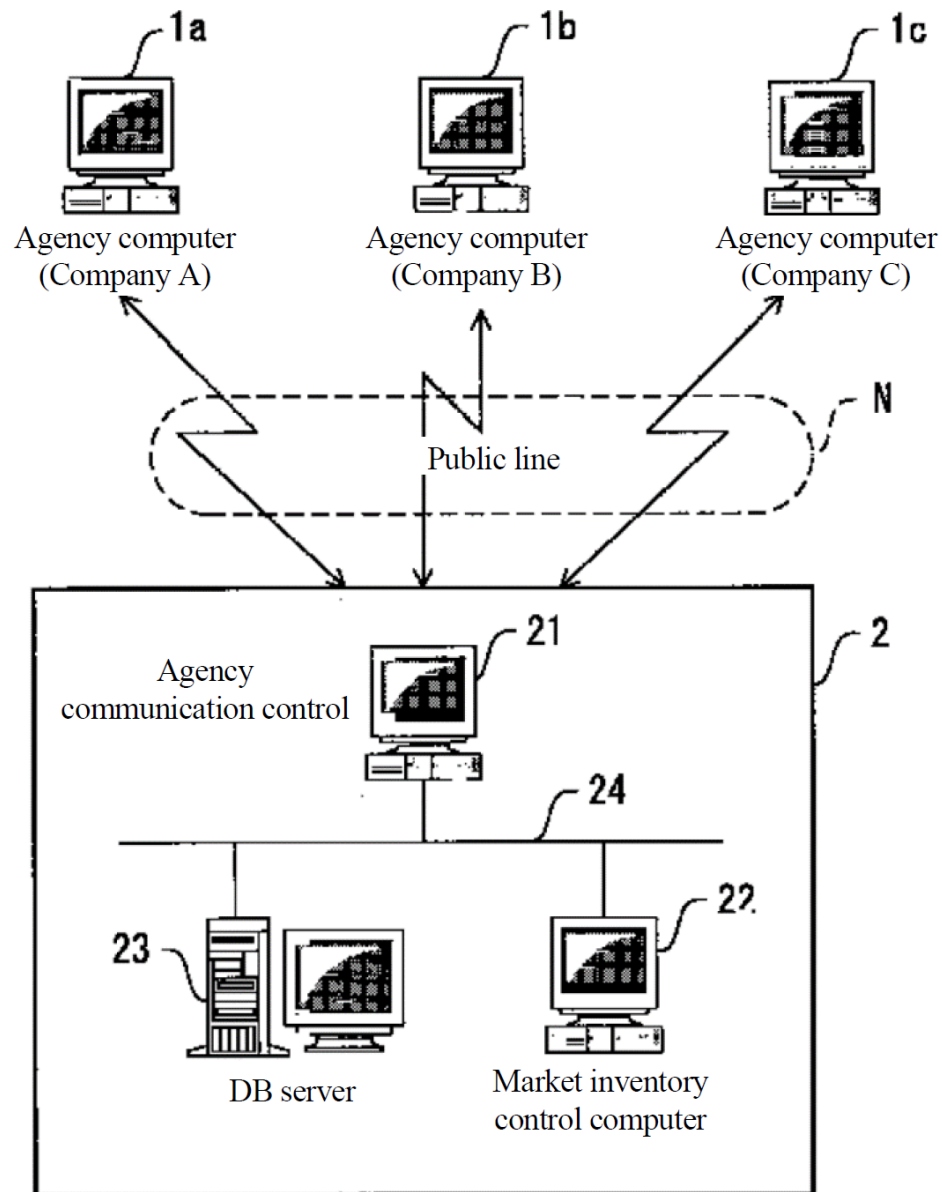
EX1003, ¶¶117-118. *E.g.*, if “number of units sold during the... period is favorable to the sales volume target, the price determination part 22 takes a strong attitude toward the reference retail price, and if... unfavorable, it takes a weak attitude... or plans a sales promotion strategy.” EX1005, ¶[0019]; EX1003, ¶¶119-120.

Tamura’s system determines “sales progress rate” for multiple channels (*e.g.*, “retailers”). EX1005, cl.4; *see also id.* ¶¶[0013], [0035], Fig.3; EX1003, ¶¶120.

4. Kono (EX1007)

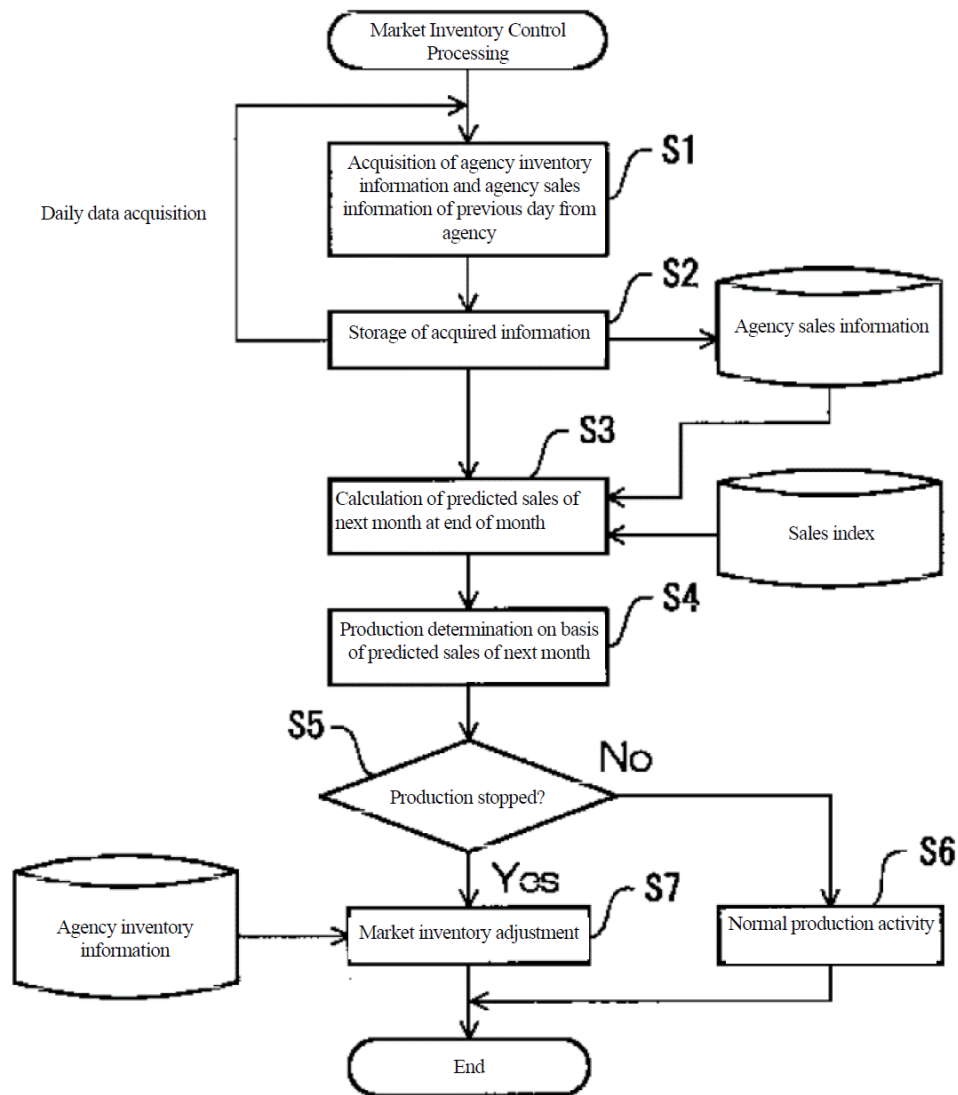
Kono, “Market Inventory Control System and Market Inventory Control Method” (published 4/10/2002), is prior art under at least pre-AIA §102(a), (b). Kono discloses a “market inventory control system” with “an agency terminal installed at each agency and a manufacturer server device”—connected by a network—so “product inventory information of each agency is controlled by a manufacturer server device.” EX1007, ¶¶[0009], [0024]; Fig.1:

[FIG. 1]



EX1003, ¶¶121-122. Its system “acquire[s] product shipment information from the agency to a retail store and product inventory information of the agency,” “performs a sales analysis at each agency.” EX1007, ¶¶[0009], [0045]; Fig.3:

[FIG. 3]

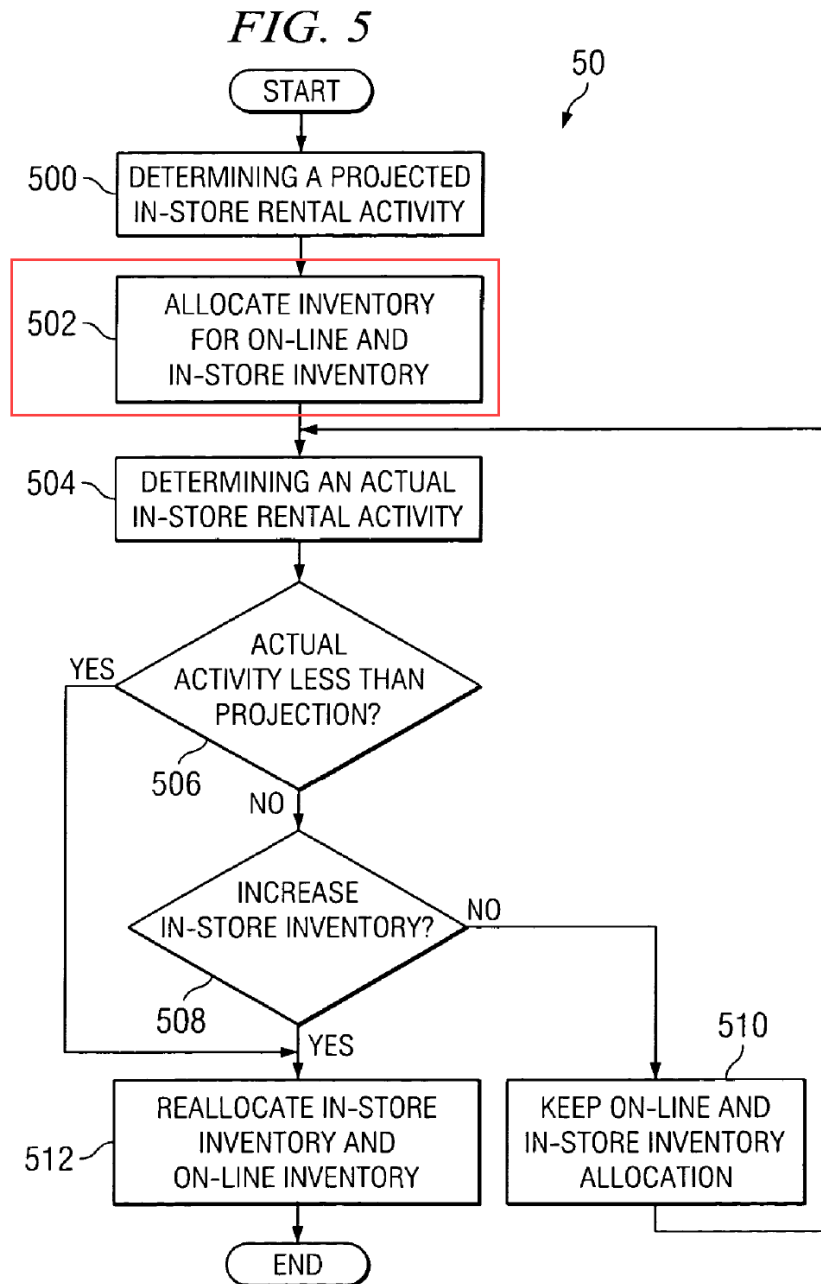


EX1003, ¶123.

5. Evangelist (EX1010)

Evangelist, “System and Method for Fulfilling a Media Request” (U.S. Pat. 7,996,265, filed 5/19/05, issued 8/9/11) is prior art under at least pre-AIA §102(e). Evangelist discloses a system/method for receiving and fulfilling requests for “on-

line inventory” that has been “allocate[d]” to, *e.g.*, “on-line... channels.” EX1010, 6:58-63, Fig.5:



EX1003, ¶¶124-125.

6. Franklin (EX1009)

Franklin is prior art under at least pre-AIA §102(a), (b). Franklin published in 1996 in Volume 19, No.3 of IEEE's regularly published periodical "*Bulletin of the Technical Committee on Data Engineering*," copyrighted 1996. EX1009; EX1024 (including parallel disclosures), 4 (URL showing March 7, 2005 ("20050307") availability); EX1025, 5; EX1003, ¶126. Franklin discloses "distributed information systems that incorporate the ability to push data out to clients (i.e., dissemination) in addition to having clients pull data from servers." EX1009, ¶[0001]; EX1003, ¶127. Franklin discloses sending/pushing data from one machine to another in "periodic fashion" or "[p]eriodic push," allowing for "intelligent scheduling." EX1009, ¶¶[0002], [0018]-[0019], [0021], [0029], [0041], Fig.1 (especially Push→Periodic→P-to-P); EX1003, ¶128.

7. The Prior Art Is Analogous

'047 relates to managing inventory sold by multiple channels by collecting and analyzing sale data to adjust prices, using a computer. EX1001, Abstract, 1:25-26, cl.1; *see* EX1001, 3:58-66; EX1003, ¶129. '047 is directed to determining "an optimum price for, and supply of the inventory in each Channel...." EX1001, 3:38-41. '047 states it is "intended to cover a wide variety of inventory-types," and "travel and accommodation industries, in particular would benefit

greatly from efficient allocations of inventory to various Channels.” EX1001, 3:44-47. EX1003, ¶129.

Jacob, Tamura, Kono, Evangelist, and Phillips are (like ’047) directed to systems and methods for management and distribution of inventory sold by multiple channels, and are thus in the same field of art as, and analogous to, ’047 and one another. *E.g.*, EX1004, ¶¶[0001]-[0003]; EX1005, ¶[0009]; EX1007, ¶¶[0009], [0017]; EX1010, Abstract, 1:24-47, 6:53-57, cls.1, 8, 19; EX1029, 1, 79-80, 101, 121, 141; EX1003, ¶¶130, 132. They all also collect and analyze sales data to adjust prices and/or reallocate inventory among the channels. *E.g.*, EX1004, ¶¶[0176], [0180]; EX1005, ¶¶[0013], [0019]; EX1007, ¶¶[0009], [0045]; EX1010, 3:35-52, 6:58-61, Figs.1-3, 5; EX1003, ¶131; EX1029, 1, 15, 26, 74, 79-80, 131, 136-138. Additionally, like ’047, Jacob and Phillips disclose management and distribution of, *e.g.*, “time-dependent [hotel] inventory....” (*e.g.*, EX1004, ¶[0001]), EX1029, 6, 9, 15-16, 101, 122-123, 125-126, 134-138; EX1003, ¶131. Additionally, ’047 and Franklin disclose data communications networks and distributed information systems exchanging data (*e.g.*, by pushing) between producers and consumers, and are thus analogous. EX1009, ¶¶[0001]-[0002]; EX1001, Abstract, 1:25-26, 1:56-61, Fig.1; EX1003, ¶130.

Each asserted reference is also analogous because each is reasonably pertinent to ’047’s problem—that inventory allocation to numerous resellers “can be *ad*

hoc and thus inefficient.” EX1001, 3:67-4:6, 1:30-38; EX1003, ¶¶133, 140. **Jacob** similarly explains the “wide variety of sales channels... has created a sales and inventory *management problem*” and a *systematic approach* is needed “to *respond quickly* to the dynamic nature of the marketplace, pricing and repricing inventory as necessary....” EX1004, ¶[0005], ¶[0002]- ¶ [0003]; EX1003, ¶134. **Phillips**, too, presents a *solution to ad hoc allocation and pricing*: “ensure... right prices... for all their products... through all their channels.” EX1029, 1; *see also id.* 7, 13, 120, 138; EX1003, ¶135. Likewise, **Tamura** discloses a *systematic approach* for managing inventory sold by multiple channels (*e.g.*, “retailers”), describing a system “*based on scientific, rational, and empirical marketing*,” that is “is especially suitable for industries with... complex distribution mechanisms,” and “*reduc[es] lost sales opportunities*.” EX1005, ¶¶[0015], [0009]; EX1003, ¶136. Additionally, **Kono** similarly discloses a “market inventory *control system*” for managing inventory sold by multiple channels (*e.g.*, “agencies”) such that “*unnecessary inventory on the market can be effectively and successfully reduced....*” EX1007, ¶[0009]; EX1003, ¶137. And **Evangelist** similarly discloses systematically managing “on-line inventory” sold through multiple online channels (*e.g.*, “stores”) and “provid[ing] more efficient operations” by “[a]djusting the inventory to meet customer demand.” EX1010, 1:34-46, 5:20-26, Figs.1-2; EX1003, ¶138. **Franklin** is similarly pertinent to ’047’s identified problems (EX1001, 1:25-

26, 1:36-46, 1:56-61, 3:67-4:6, Fig.1), disclosing *efficient* transmission (e.g., push) and use of real-time information in distributed information systems exchanging data between clients and servers and from producers to consumers, EX1009, ¶¶[0001]-[0002]; EX1003, ¶139.

None of these references was before the Examiner during prosecution. *See* EX1003, ¶141.

8. Claim Chart: Grounds 1-12

For ease of presentation, claims 1-3 are discussed first.

(a) Claims 1-3

Claim Limitation	Exemplary Prior Art Disclosures
1[pre] ^{14, 15}	Jacob discloses a computer-implemented method (e.g., “computer program systems comprised of a series of code segments,” implemented with “computer software[,]... hardware[,] or a combination,” “computerized database”) of managing online bookings (e.g., “reservations”) for transportation services in-inventory (e.g., “method for managing time-dependent inventory such as hotel rooms, rental automobiles, and airline seats, [etc.]”). EX1003, ¶¶143-154. Phillips discloses a computer-implemented method (e.g., “computerized reservation systems”; “computerized revenue management systems”, “computerized pricing support system,”

¹⁴ The Claim Appendix identifies elements.

¹⁵ Though not limiting, the Board need not decide this, as 1[pre] is disclosed. *See* n.12; EX1003, n.5.

“software systems,” “Pricing and revenue optimization systems”), including in the context of managing online bookings (e.g., “Web site”; “Expedia/Travelocity”) for transportation services (e.g., “hotels,” “ticket for... airline,” etc.), using software to optimize and automate functions so they can be performed without human intervention (e.g., “software systems that solve the underlying optimization problem”, “recommend actions based on sophisticated mathematical algorithms,” “computerized systems to recommend actions based on sophisticated mathematical algorithms”, “majority of prices will be updated automatically” including “moment to moment”). EX1003, ¶¶155-162.

EX1004, Abstract (“*method for managing time-dependent inventory such as hotel rooms, rental automobiles, and airline seats,*” etc.), ¶[0001]-¶[0002], ¶[0006] (“*computer program systems comprised of a series of code segments, computer software[,],... hardware or... combination*”), ¶[0009] (“*reservations*”), ¶[0078], ¶[0082]-¶[0084] (“*computerized database*”), Fig.7:

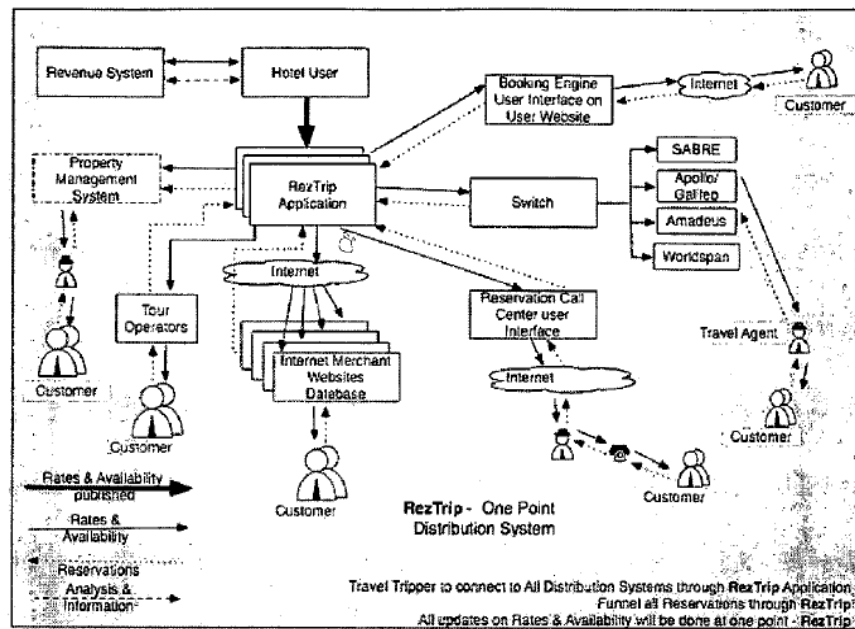


Figure 7

	EX1029, 9 (“Pricing and revenue optimization systems.”), 30 (“software systems that solve the underlying optimization problem”; “prices... updated automatically”; “revenue management systems... moment to moment”), 31, 32, 33 (“computerized pricing support system”), 121, 122 (“computerized revenue management systems”), 126, 134-135 (“revenue management system is to calculate and update the booking limits”; “feed of bookings”; “<i>forecasting module</i> generates and updates for all products/fare class combinations”; “forecasts... based on current and recent bookings”), 141 (“computerized systems to recommend actions based on... algorithms”), 1, 137-138 (“hotels”), 137 (“on a hotel’s own Web site”; “Expedia/Travelocity”; “ticket for... airline”).
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Jacob performs its functions (*see, e.g.*, cl.1[h]-[i]) automatically, including, *e.g.*, “perform[ing]” price “calculations automatically,” code segments “to analyze the information received from the sales channels,” and receiving sale data. *E.g.*, EX1004, ¶¶[0005], [0006], [0010], [0131]-[0133]; cl.4. EX1003, ¶154. If further disclosure of performing Jacob’s functions automatically/without human interven-

tion is required, **it would have been obvious based on Jacob in view of Phillips.**^{16, 17} EX1003, ¶154. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob’s disclosed inventory management method using Phillips’s beneficial teachings of automating sales processes.** EX1003, ¶¶163-164. This would have advantageously increased the system’s ability to monitor/track accurately each channel’s revenue and inventory status, permitting the system to better and more quickly adapt—to “maximize revenue” and whether/if a particular sales channel is in danger of running (or has run) out of inventory, and to compare/determine accurately whether a channel

¹⁶ Jacob and Phillips (and, for later limitations, Evangelist, Tamura, and Kono) describe inventory management systems that allocate inventory to distribution channels and use received sale data to more efficiently manage inventory and better adapt to demand. *E.g.*, EX1004, ¶¶[0001]-[0002], ¶¶[0005], [0010], [0154], [0176], [0180]; EX1029, 9, 30, 33, 121-122, 134-135, 141; EX1010, 1:34-46, 8:16-19; EX1005, ¶¶[0001], [0009], [0015], [0041]; EX1007, Summary, ¶¶[0005], [0009]-[0010], [0014]-[0017]; EX1003, ¶258.

¹⁷ While this automaticity is disclosed (or, alternatively, rendered obvious) by Jacob alone, Petitioner is not asserting a separate Jacob-only Ground, instead beginning all of its Grounds’ combinations with Jacob-Phillips.

is selling inventory better than other channels without having to wait for a human to perform calculations or otherwise provide input, and without introducing unnecessary human error. EX1003, ¶164. This would have furthered Jacob’s goal of “maximiz[ing] revenue” of Jacob’s “time-dependent inventory” by, *e.g.*, increasing the efficiency of the system in responding to changing market conditions by adjusting prices and/or reallocating inventory from sales channel(s) with excess inventory to channels that are selling better or are in danger of running out of inventory. *E.g.*, EX1004, ¶[0002], [0005]; EX1003, ¶164. This also would have minimized the need for costly human labor and furthered Phillips’s goals of “pricing revenue and optimization” and “ensure[ing companies] have the right prices in place for all their products, to all their customers, through all their channels, all the time.” *E.g.*, EX1029, 1, 5, 7, 33; EX1003, ¶164. It would have been a routine implementation choice, and clear it would work, providing the expected functionality and predictable results with a reasonable expectation of success (“REOS”).¹⁸ EX1003, ¶¶164-165.

¹⁸ As discussed (*e.g.*, §II), as is true for the other Grounds herein, POSITA’s REOS here is further confirmed by this technology’s predictability. *E.g.*, EX1004, ¶[0084]; EX1011, 5:6-12, 5:34-37; EX1013, ¶[0156]; EX1015, 2:15-22; EX1026,

1[a]¹⁹	Jacob discloses establishing a channel interface (<i>e.g.</i>, portion of “computer program system[]” (<i>see</i> cl.1[pre]) configured to manage communication between computers used by, <i>e.g.</i>, “hotel staff”/“employees” including over computerized “networks”) that provides bidirectional communication (<i>e.g.</i>, enables “communications over... networks”—<i>e.g.</i>, to permit hotel personnel to “set up”/“initially” “adminster[]” inventory “by entering relevant Property information” used by “reservation engine”/“RezTrip Application”; “delivers output to users, and accepts input from users”; “communicate[s] with the hotel staff”) between at least one server computing device (<i>e.g.</i>, “[s]erver”/“computerized database” “implement[ing]” “RezTrip Application” (Fig.7)/“system to manage the sales, pricing, and inventory information”) and a vendor computing device (<i>e.g.</i>, computer of “Hotel User” (<i>see</i> Fig.7) used by a hotel’s “staff,” to communicate “through a... network” with, <i>e.g.</i>, “server”/“computerized database” “implement[ing]” “RezTrip Application”; “computer software or[,].... hardware or a combination” used by “Superuser”/“Engine Administrator”/“Property Administrators” of “clients” including “management company or chain that owns several properties,” or “Portal,” to “administer[]”/“manage” the “Property,” “group of properties,” “batches of Rooms,” “several properties,” or “Portal”). EX1003, ¶¶166-185. Tamura discloses establishing a channel interface (<i>e.g.</i>, portion of “sales management server 20” and “merchandise distribution server 10” enabling “connect[ion]” between one another/“connect[ion] to network” (<i>see</i> Fig.3); portion of “sales management server 20” and “merchandise distribution server 10” enabling
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1-2, 3-4, 8; EX1029, 7, 30-31, 33, 79-80, 101, 106-107, 112-113, 120-124, 126, 131, 133-136, 141, 170, 264, Fig.6.1.

¹⁹ ’047 states “‘vendor’ is used broadly and can be interchanged with ‘Property.’”

EX1001, 31:1-3. *See also* EX1001, 8:19-24, 28:48-60. EX1003, n.2.

	“connect[ion]” between “sales management system 20”/“merchandise distribution server 10” and “sales rep part 50” (see Fig.3)) that provides bidirectional communication (e.g., bidirectional communication links in Figs.1, 3; bidirectional communication links in Fig.3) between at least one server computing device (e.g., “Merchandise distribution management server 10”) and a vendor computing device (e.g., “sales management system 20”; “sales rep part 50”). EX1003, ¶¶186-193. Kono discloses establishing a channel interface (e.g., portion of “Market inventory control computer” and “DB server”/“database server” enabling communication via “LAN” to “Agency communication control computer”) that provides bidirectional communication (e.g., “acqui[sition]” of “information” by “DB server”; “acquiring product shipment information from the agency to the retail store and product inventory information of the agency”; “send instructions for product transfer”) between at least one server computing device (e.g., “Agency communication control computer”) and a vendor computing device (e.g., “Market inventory control computer” and “DB server” (Fig.1)/“database server”). EX1003, ¶¶194-202. EX1004, ¶[0006] (“<i>computer program systems</i>”; “<i>implemented in... computer software[,]</i>... <i>hardware or a combination</i>”; “<i>system to manage the sales, pricing, and inventory information related to time-dependent items</i>”), ¶[0007] (“<i>configured to communicate with the hotel staff... hotel property management database... computerized reservation systems</i>”), ¶[0008] (“property administrators... manage”), ¶[0009]-¶[0010], ¶[0064] (“Superuser”; “<i>portal</i>”; “<i>Property</i>”), ¶[0065] (“Engine Administrator”), ¶[0066] (“Property Administrator”; “<i>employees</i>”), ¶[0069]-¶[0070] (“<i>individual properties</i>”), ¶[0071], ¶[0082] (“<i>communications over... networks</i>”; “<i>user interaction code segment configured to manage user interaction that delivers output to users, and accepts input from users via an interface utilizing a web browser</i>”), ¶[0083]-¶[0084] (“<i>computerized database</i>”; “<i>wired or wireless networks</i>”); ¶[0085]-¶[0086] (“<i>PA administrators... Property</i>”), ¶[0088], ¶[0092], ¶[0093]-¶[0097] (“<i>clients... comprise... group of Properties[,]</i> Individual Properties[.]
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Companies... bought batches of Rooms from other properties to sell to clients[,] management company... owns several properties.”), ¶[0099], ¶[0111], ¶[0113], ¶[0133], ¶[0185], ¶[0191]-¶[0192], cls.1,5-6, Figs.7-8, 12-13:

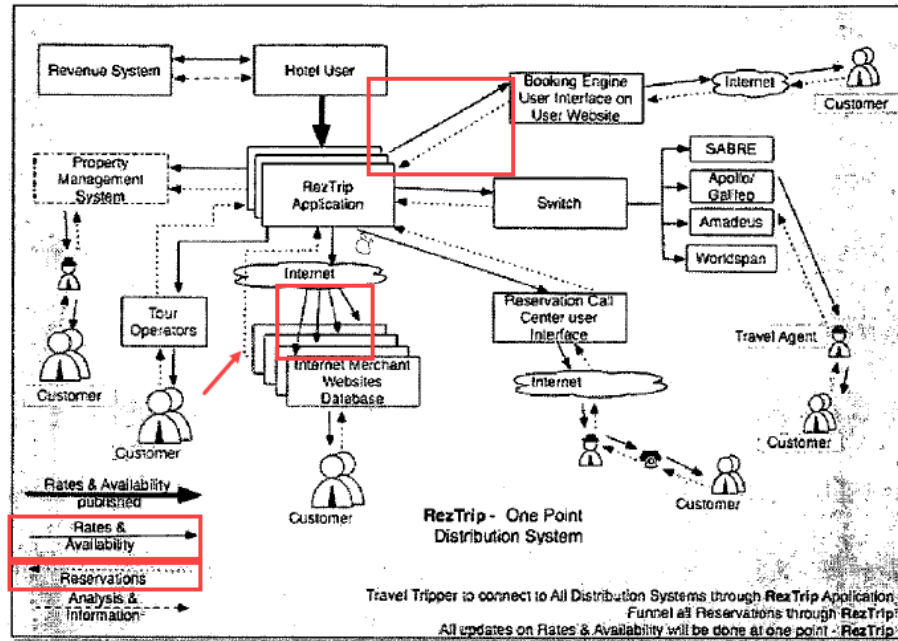


Figure 7

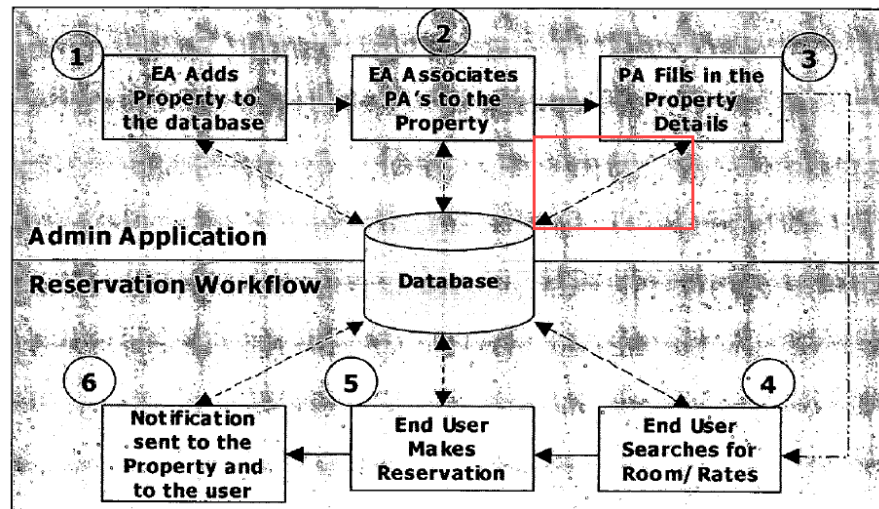


Figure 8

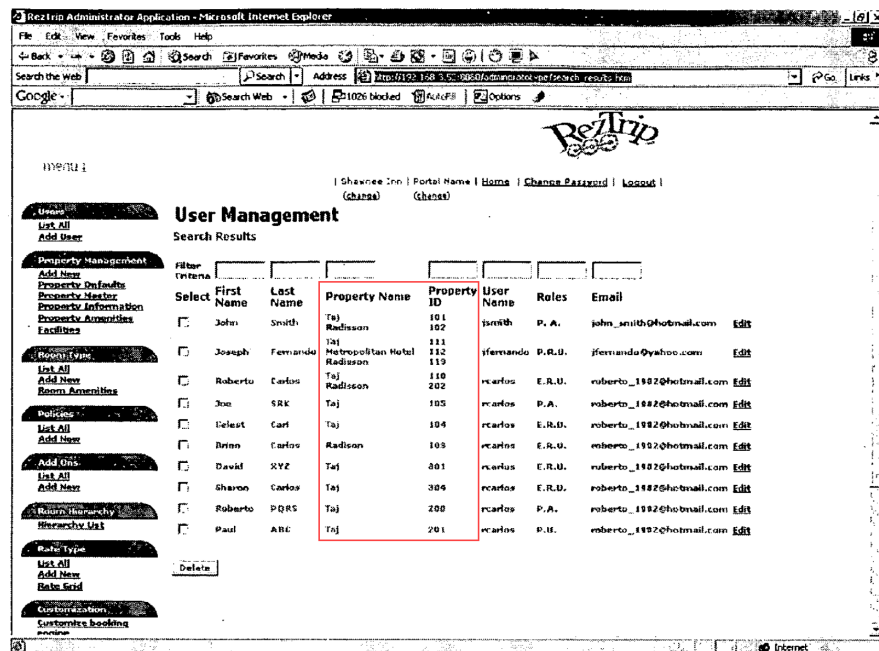


Figure 12

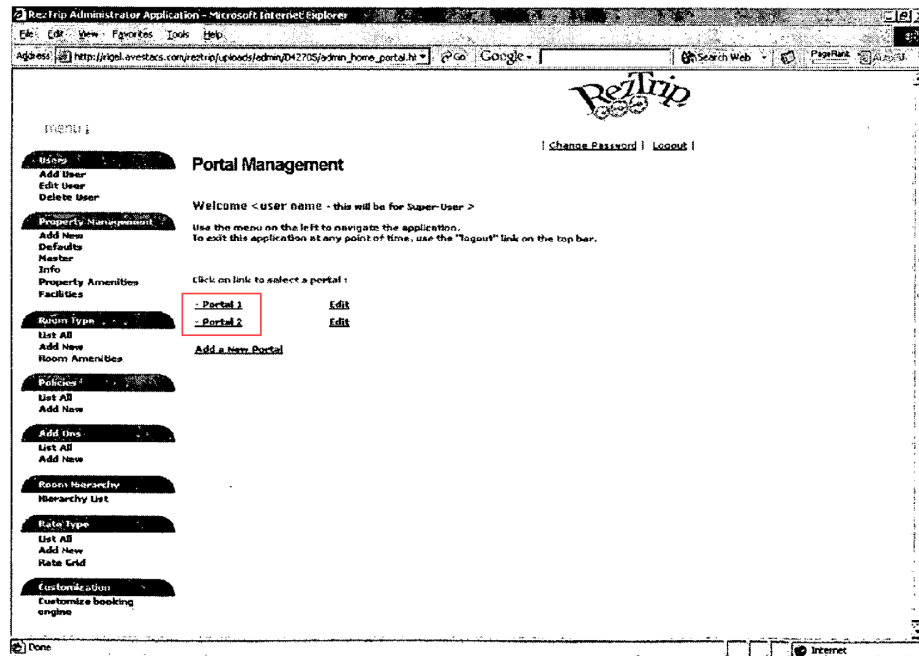


Figure 13

EX1005, ¶[0017], ¶[0026], ¶[0031] (“sales management system 20... connected to... merchandise distribution management server 10... [and] sales rep part 50”), ¶[0034], Figs.1, 3:

Fig. 1

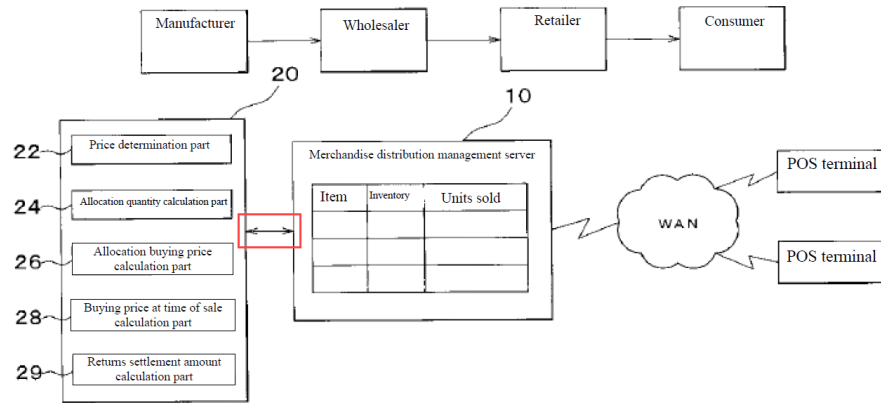
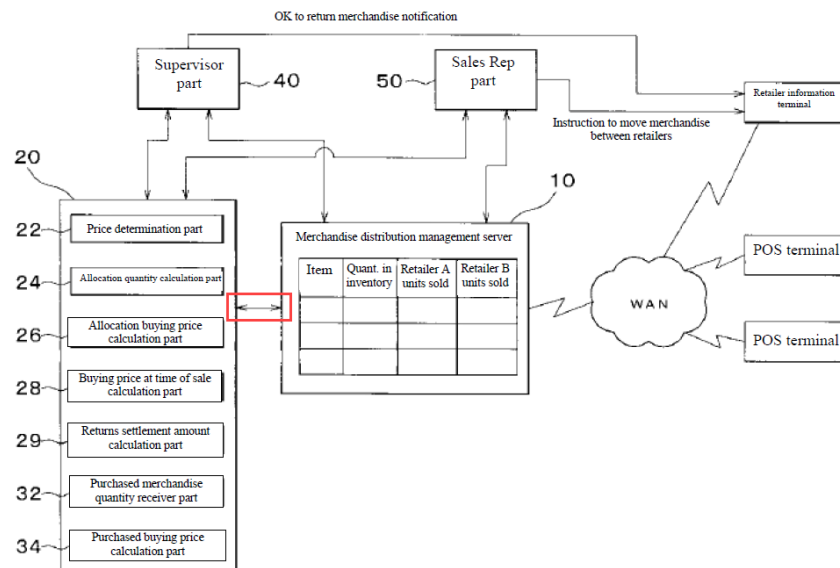
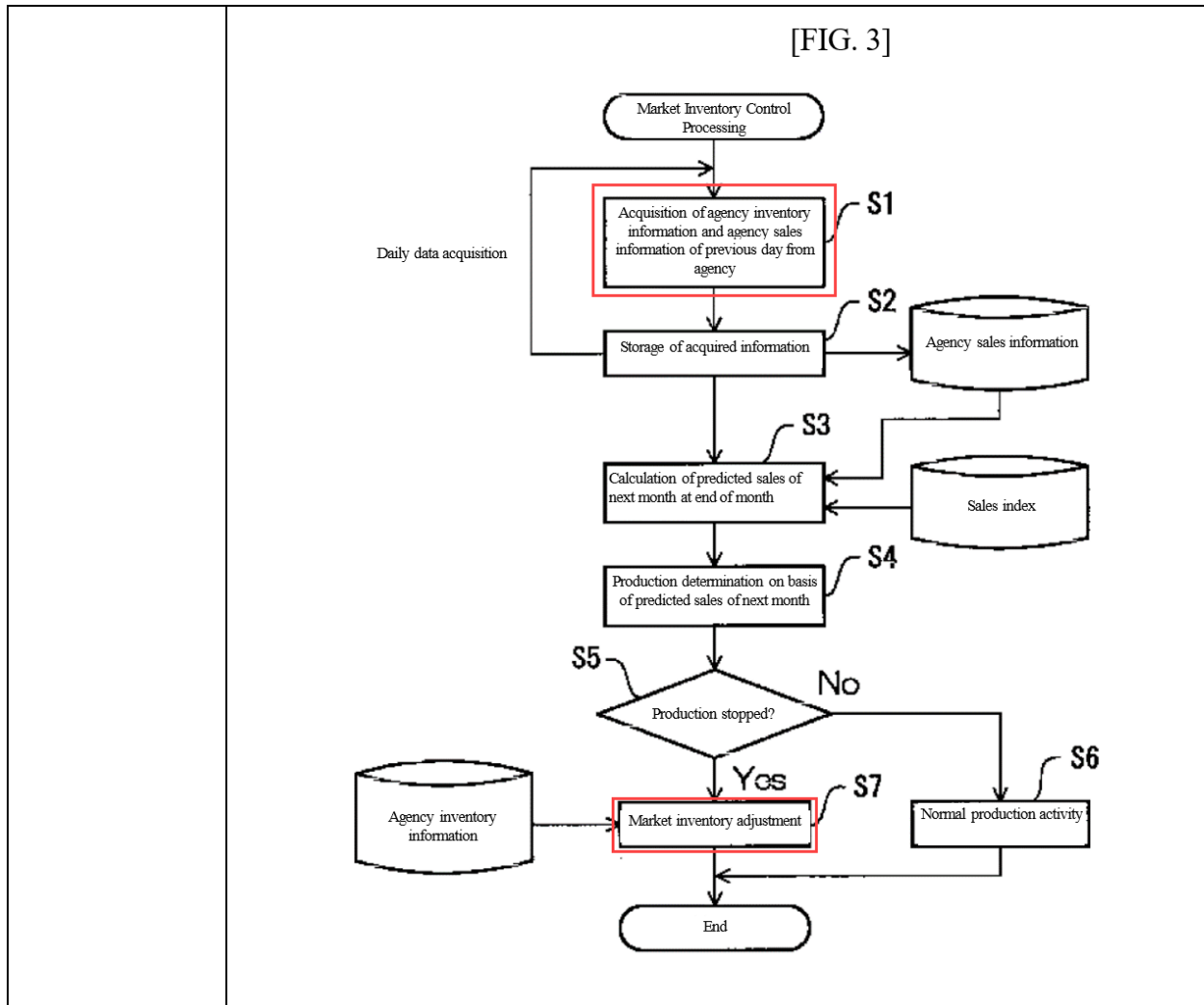


Fig. 3



EX1007, ¶[0024], ¶[0025] (“server”; “market inventory control computer”; “database server”), ¶[0046], Fig.1 (“DB server”), Fig.3:



Jacob's system (*e.g.*, computer/server running, *e.g.*, the “RezTrip” application (“REZTRIP”)) includes “computer software[,]*... hardware[,]* or a combination” used by personnel (*e.g.*, “Property Administrators”) of inventory-selling “clients” (*e.g.*, vendors such as “Individual Properties”/“group of Properties”) to “set up” and “administer[.]” Properties and communicate information to REZTRIP. *E.g.*, EX1004, ¶¶[0006], [0069], [0084]-[0086], [0093]-[0097], Figs.7-8; EX1003, ¶180. Jacob further discloses its invention is, *e.g.*, “located... on a plurality of

computers connected to one another through... network,” *e.g.*, EX1004, ¶[0082],
Fig.7 (“Hotel User” and “Revenue System” indicate computer/system, while “Customer,” etc. indicate people):

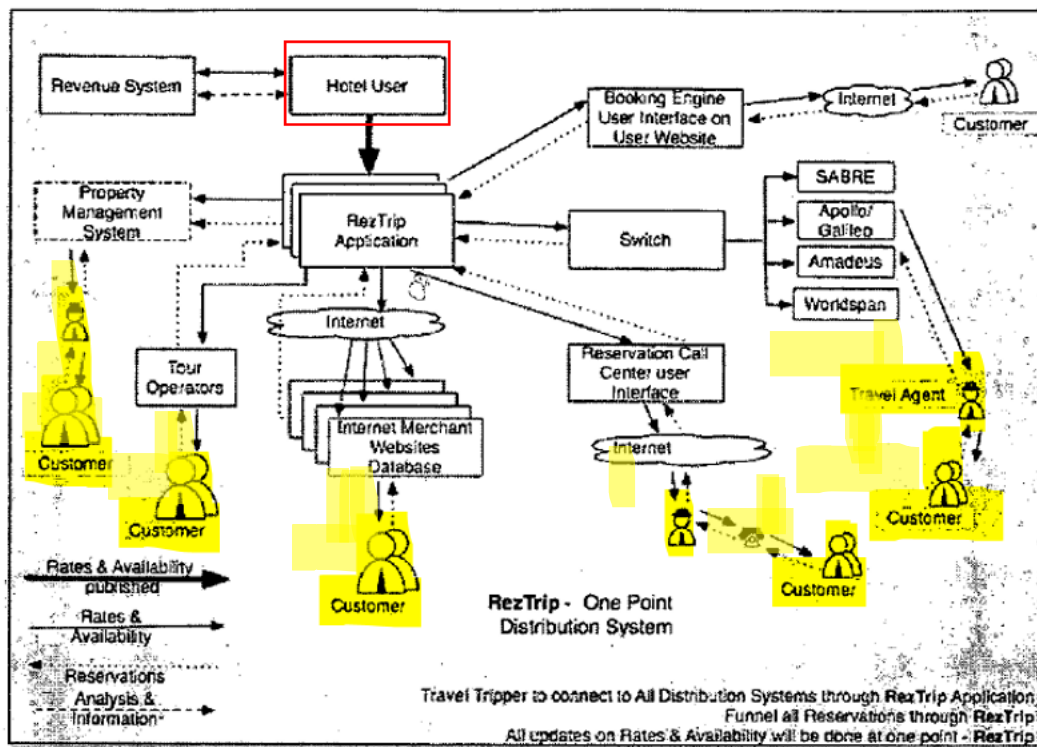


Figure 7

EX1003, ¶180. POSITA would thus have understood Jacob to disclose, expressly, a “vendor computing device.” See n.19; EX1003, ¶181.

If further disclosure of a vendor computing device is required, Jacob (in the recited combinations (“+combinations”)), or Jacob (+combinations) in view of Tamura’s or Kono’s disclosures render this obvious (*see chart, supra*). See

n.15; EX1003, ¶¶186, 194. **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob’s system (+combinations) using Jacob’s disclosure that “[e]mbodiments... may be located... on a *plurality* of computers connected to one another through... network,” such that RezTrip’s multiple clients (*e.g.*, “Properties”) use their own vendor computing device(s) that exchange information with, *e.g.*, REZTRIP. Alternatively, POSITA would have found it obvious, straightforward, and advantageous to implement Jacob’s system (+combinations) using Tamura’s or Kono’s beneficial teachings of vendor computing devices (*e.g.*, Tamura’s “sales management system 20”/“sales rep part 50,” Kono’s “Market inventory control computer”/“DB server”).** EX1003, ¶¶191-192, 200-201. This would have enabled a company’s personnel to connect to REZTRIP, and thus, *inter alia*, beneficially: permit multiple employees (and multiple properties) in multiple locations to use a single shared server/database without requiring replicating the RezTrip application/data and without constantly updating in separate locations; enabling the use of fewer more powerful/faster—and, thus, more costly—computer/server installations running RezTrip; and allowing more updates to RezTrip to be done centrally. EX1003, ¶¶192, 201. This would have, *e.g.*, further increased the system’s speed/efficiency in managing property/inventory-related information, furthering Jacob’s goals (p.31), Tamura’s goal of “reducing lost sales opportunities,” and Kono’s goals of

“effectively utiliz[ing] market inventory by collectively controlling the inventory control of each agency” and reducing “unnecessary inventory on the market,” *see also* EX1004, ¶[0005], and would have beneficially facilitated communication and data sharing between and among Jacob’s different users/administrators of properties/groups of properties, or across properties/groups of properties. EX1003, ¶¶192, 201. For each combination in this narrative, it would have been a routine implementation choice, and clear it would work and provide the expected functionality to yield predictable results with REOS.²⁰ EX1003, ¶¶191-192, 200-201.

If further disclosure of a “*server* computing device” is required, **POSITA would have found this obvious from Jacob (+combinations) or Jacob (+combinations) in view of Tamura’s or Kono’s disclosures** (*see* chart, *supra*). *See* n.16; EX1003, ¶¶186, 194. Jacob discloses database servers (*e.g.*, “SQL ServerTM”) “to manage hotel data” of the kinds input by hotel personnel for use by the RezTrip application, and further discloses RezTrip may have multiple “clients.” *E.g.*, EX1004, ¶¶[0001]-[0002], [0084], [0093]-[0097], [0176], [0180]; EX1003, ¶171. **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob’s disclosed inventory management system (+combinations) such that in the combined system the functions of REZTRIP are performed**

²⁰ *See* n.18.

by a server computing device (including, *e.g.*, by a database server). Alternatively, POSITA would have found it obvious, straightforward, and advantageous to implement Jacob’s system (+combinations) using Tamura’s or Kono’s beneficial teachings of server computing devices (*e.g.*, Tamura’s “merchandise distribution server,” Kono’s “Agency communication control”).

EX1003, ¶¶191, 200. Implementing REZTRIP on a server computing device would, *inter alia*, have beneficially provided additional memory, processing capability, and accessibility by other software/processors, thus allowing the system to more quickly process and store data and make it available to the “computers connected to one another” of Jacob’s system (as well as to other systems), allowing the system to work over a larger system topology with larger data sets (*e.g.*, sale data), to more simply analyze external data, and respond more quickly to changing market dynamics, furthering Jacob’s/Tamura’s/Kono’s goals. *See also* EX1004, ¶[0005]; EX1003, ¶¶191, 200.

1[b]	Jacob discloses storing (<i>e.g.</i> , “store[]”), via a channel data structure (<i>e.g.</i> , “database” stored in “computer readable medium”), a channel record (<i>e.g.</i> , record for a channel stored in “database configured to manage hotel data” comprising, <i>e.g.</i> , “inventory data,” “sales channel data,” “communications data,” and “other data”) for each of a plurality of distribution channels (<i>e.g.</i> , “sales channels”/“selling channels” (including, <i>e.g.</i> ,
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	“web sites,” “other computerized reservations systems,” “application used by EU’s to make reservations,” “Internet Merchant Website[],” (Fig.7), “User Website,” (Fig.7), and “hotel’s own website”). EX1003, ¶¶203-213. Tamura discloses storing (e.g., “stor[ing]”; “recording”), via a channel data structure (e.g., data stored on “merchandise distribution management server”/“sales management system”), a channel record (e.g., “merchandise distribution information”/“figures stored in the merchandise distribution management server” comprising, e.g., “item,” “quant. in inventory,” (Fig.3) “Retailer A units sold,” (Fig.3) “Retailer B units sold” (Fig.3)) for each of a plurality of distribution channels (e.g., “retailers”) (see Fig.3). EX1003, ¶¶214-223. Kono discloses storing (e.g., “acquired product sales information,” “product inventory information” “is stored”), via a channel data structure (e.g., “agency inventory information database”; “agency sales (shipping) information database”; “form for performing an inventory analysis”), a channel record (e.g., record for an agency comprising, e.g., “agency sales information”; “agency inventory information”) for each of a plurality of distribution channels (e.g., “agencies”) (see Fig.4). EX1003, ¶¶224-233. EX1004, ¶[0003] (“hotels”), ¶[0006]-¶[0007] (“database”; “<i>selling channels...</i>”; “sales channels”), ¶[0063] (“major travel reservation systems”), ¶[0071] (“<i>application used by EU’s to make reservations</i>”), ¶[0077], ¶[0082] (“<i>inventory data</i>”; “stored”), ¶[0083]-¶[0084] (“<i>database...</i> comprising... inventory data... sales channel data, communications data, and other data”; “sales channels”), ¶[0085] (“<i>internet web merchants</i>” “<i>hotel’s own website</i>”), cl.1 (“<i>database</i>”; “selling channels”), Figs.3, 7:
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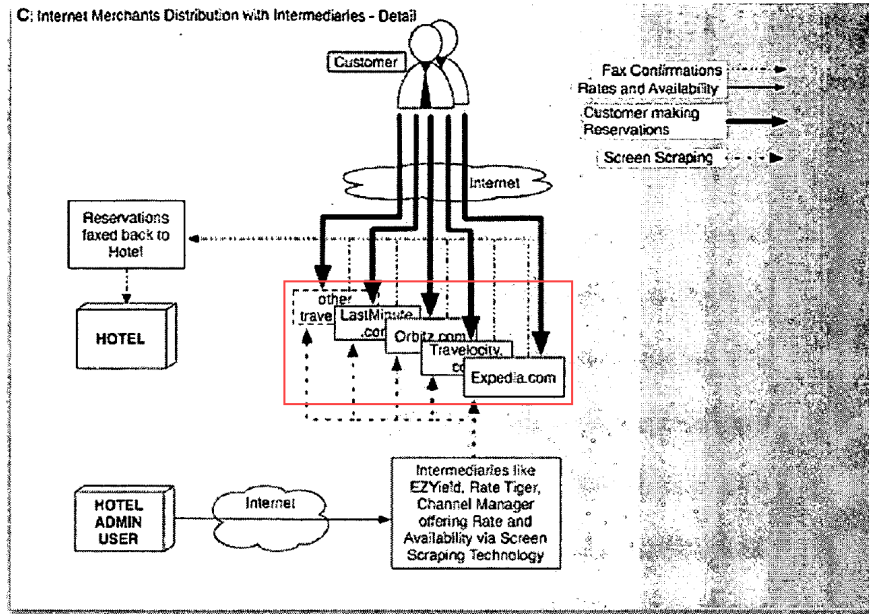


Figure 3

EX1005, ¶[0014] (“*merchandise distribution management server*”), ¶[0017] (“*sales management system 20*”; “merchandise distribution information”), ¶[0019] (“*item*”; “retailers”), ¶[0020] (“figures stored in the merchandise distribution management server”), ¶[0025], cl.1, cl.5 (“*recording*”), Figs.2-3:

Fig. 2

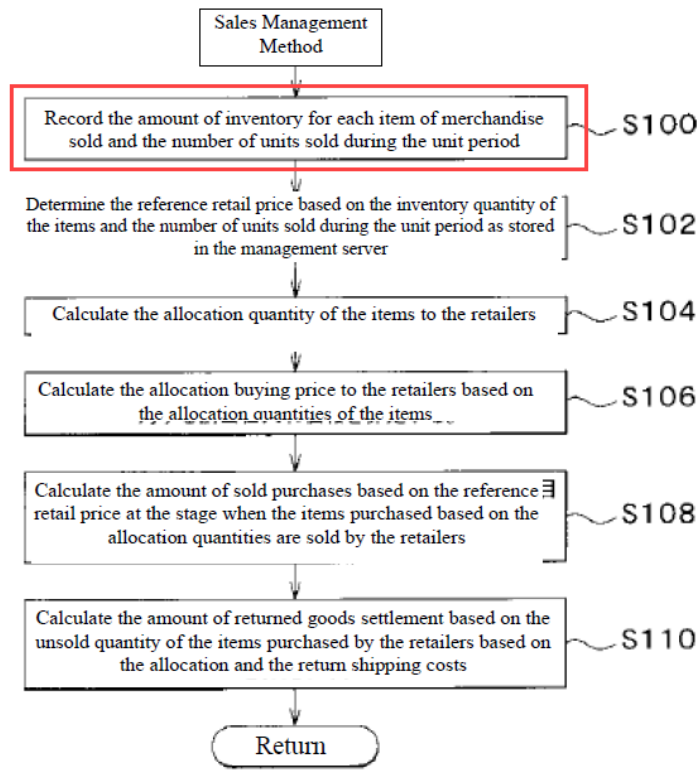
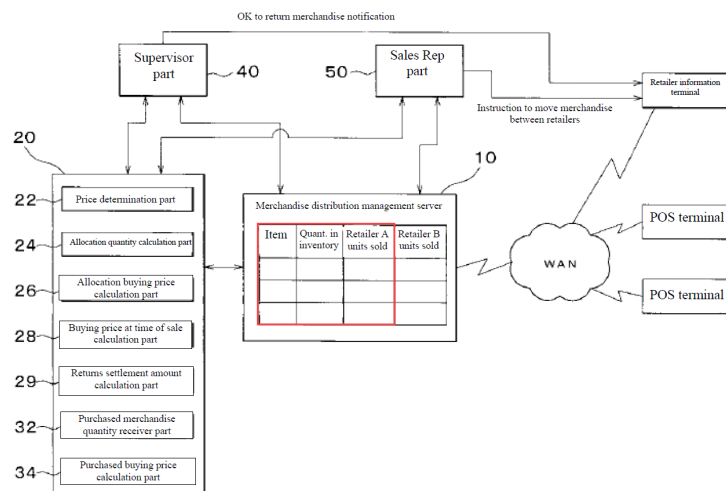


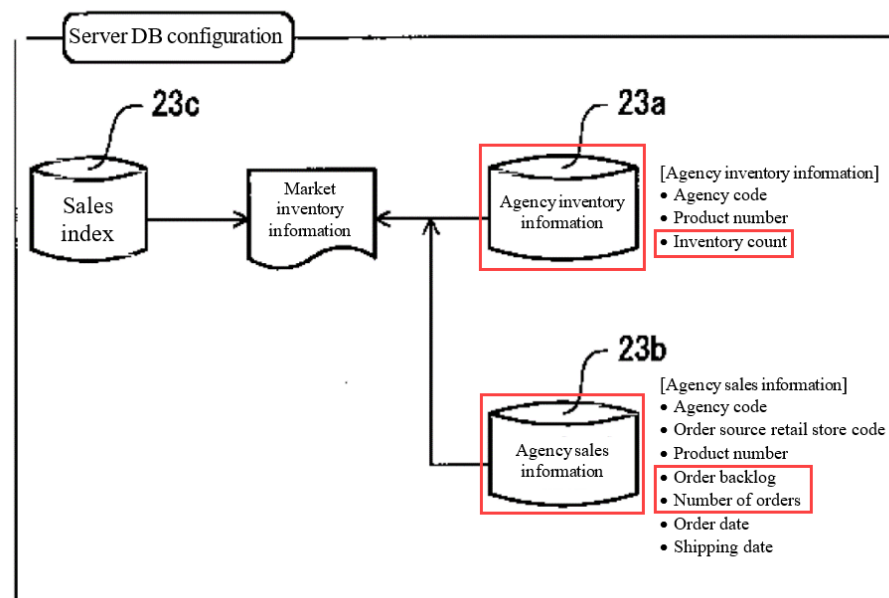
Fig. 3



EX1007, ¶[0009]-¶[0010] (“*product inventory information*”), ¶[0014], ¶[0020], ¶[0025], ¶[0026] (“*agency inventory information database... agency sales (shipping) information database*”), ¶[0039] (“*acquired product sales information is stored in the agency sales information database... of... database... and... product inventory information is stored in... agency inventory information database*”), cl.2, Brief Description of Drawings, Figs.2-4:

[FIG. 2]

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[FIG. 4]							
Good Class.	Product No.	Product Name	Agency Name	Inventory Count	Order Backlog	Shipping Volume	Inventory Date
KC0742	AAAAAA	Sorting pedal bin #40	aaaa	100	0	3	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	bbbb	336	2390	2351	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	cccc	560	20	15	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	dddd	365	1200	1350	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	eeee	10	10	10	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	ffff	2500	250	250	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	gggg	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	hhhh	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	iiii	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	jjjj	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	kkkk	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	llll	9	5	10	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	mmmm	45	5	5	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	nnnn	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	oooo	9	3	20	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	pppp	5	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	qqqq	96	20	85	8/22/2000

Jacob discloses this limitation. Jacob discloses its system stores—in, *e.g.*, a “computerized... relational database[]”—data, including *e.g.*, “inventory data,” “availability data,” “audit trail data,” “sales channel data,” “communications data,” and “other data.” *E.g.*, EX1004, ¶[0084]; EX1003, ¶210. Jacob further discloses its system comprises code segments (*e.g.*, EX1004, ¶[0082]) to, *e.g.*, “communicate with other systems” (*e.g.*, EX1004, ¶[0084]), such as “web sites” (*e.g.*, EX1004, ¶¶[0007], [0077], [0085], Fig.7); EX1003, ¶210. Jacob further discloses, *e.g.*, REZTRIP is “configured to run on general purpose computers,” its system “comprises a computerized database,” (*e.g.*, EX1004, ¶¶[0083]-[0084]), and its system communicates, *inter alia*, “pricing and inventory information to the sales channels” (*e.g.*, EX1004, ¶[0185]) and receives/processes information from channels to make channel-specific determinations, (*e.g.*, EX1004, ¶[00180], cls.1[h]-[i],

2); EX1003, ¶210. **POSITA** would thus have understood Jacob expressly discloses its system stores, via a channel data structure (including, *e.g.*, in a “relational database[]”), a channel record for *each* of a plurality of distribution channels. EX1003, ¶211. At minimum, **POSITA** would have understood **REZTRIP** necessarily, and thus inherently, stores, via a channel data structure, a channel record for each of a plurality of distribution channels, to facilitate computerized storage in Jacob’s disclosed databases of channel-specific information to which it requires access, and to facilitate communications with Jacob’s plurality of distribution channels, including the storage and communication of pricing and inventory information over, *e.g.*, “networks.” EX1003, ¶211.

If further disclosure is required, **POSITA** would have found it obvious, straightforward, and advantageous to implement Jacob’s system (+combinations) such that it stores, via a channel data structure, a channel record for *each* of a plurality of distribution channels, or, alternatively, to implement Jacob’s system (+combinations) using (1) Tamura’s or (2) Kono’s beneficial teachings of storing, via a channel data structure, a channel record for *each* distribution channel (*see* chart, *supra*). *See* n.16; EX1003, ¶¶212, 222, 232. This would have, *e.g.*, facilitated consistent, automatic storage and more accurate tracking of, *e.g.*, initial inventory allocations, ongoing reallocations, and sales/inventory

levels, and storing and modifying of pricing information and other data by, *e.g.*, REZTRIP, and facilitated efficient and automatic communication of such data/receipt of data to/from channels, furthering Jacob's/Tamura's/Kono's goals (*see* pp.39-40) while minimizing the data entry required by, *e.g.*, hotel staff and ensuring availability of up-to-date information at sales channels. EX1004, ¶¶[0002], [0005], [0010], [0154]. EX1003, ¶¶212, 222, 232. It would have been routine to make such an implementation choice, and clear it would work, providing the expected functionality to yield predictable results with REOS. EX1003, ¶¶212, 222, 232.

1[c]	Jacob discloses receiving (<i>e.g.</i>, receiving from “user interaction code segment”), from the vendor computing device (<i>see</i> cl.1[a]) through the channel interface (<i>see</i> cl.1[a]), a selection (<i>e.g.</i>, vendor’s “[]allocat[ion]... to the... channel”), from the plurality of distribution channels (<i>see</i> cl.1[b]), of one or more participant channels for a transportation service (<i>e.g.</i>, particular “sales channel”/“selling channel”/“Internet Merchant[]” (Fig.7)/“internet web merchant”/“User Website” (Fig.7) through which “reservation” is “made”; “sales channel” that is “selling”; <i>see</i> cl.1[b]). EX1003, ¶¶234-247. Evangelist discloses receiving a selection, from a plurality of distribution channels, of one or more participant channels for inventory (<i>e.g.</i>, “Controller” “allocat[es] a first portion of inventory for on-line fulfillment to... inventory location”/“allocate[s] inventory for... on-line... fulfillment” to, <i>e.g.</i>, “Web site that accepts requests for delivery of movies to customers,” “store” or “on-line... channels”/“initially designate[s]” as “on-line inventory” of “store” or “on-line... channel”; “Controller...
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initially allocates inventory... to... stores”). EX1003, ¶¶248-260.

EX1004, ¶[0007] (“*selling channels*”; “*computerized reservation systems*”; “*sales channels*”), ¶[0009], ¶[0010], ¶[0063], ¶[0071] (“*Reservation Engine*”; “*RezTrip™ Reservation Application*”), ¶[0077], ¶[0082] (“*input from users*”), ¶[0085] (“*internet web merchants*”), ¶[0086] (“*made... reservation*”), ¶[0180] (“*reallocate inventory to the better-selling channel*”), Fig.7:

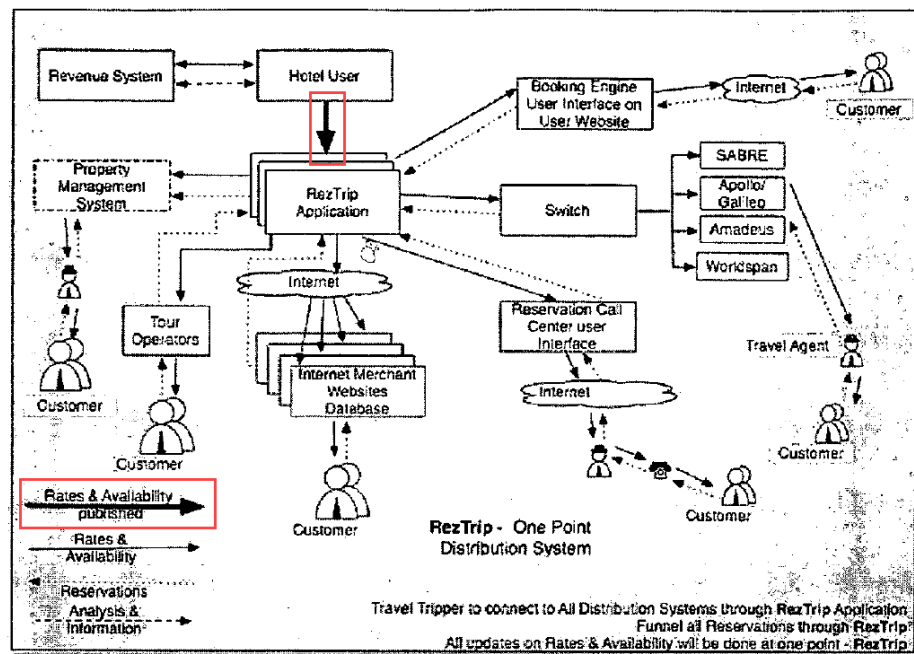
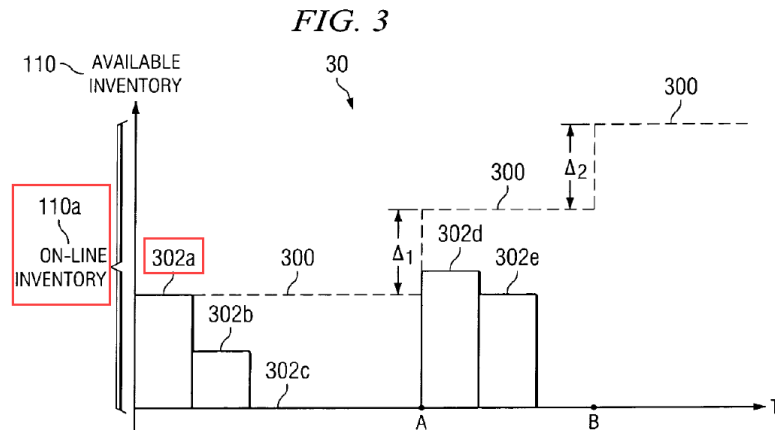
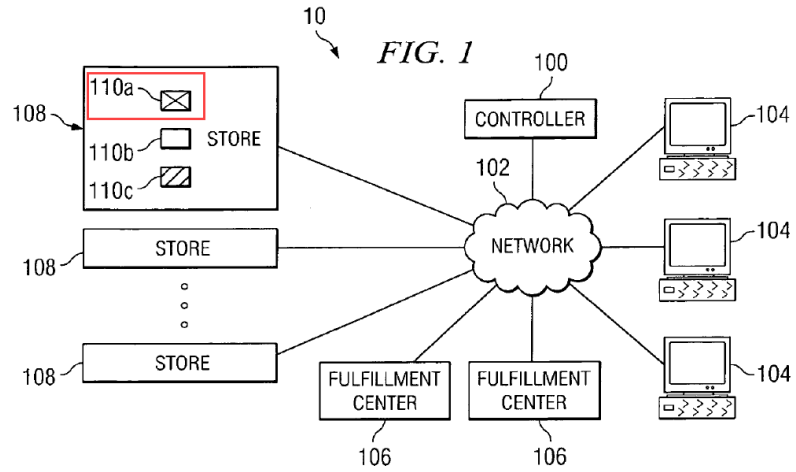
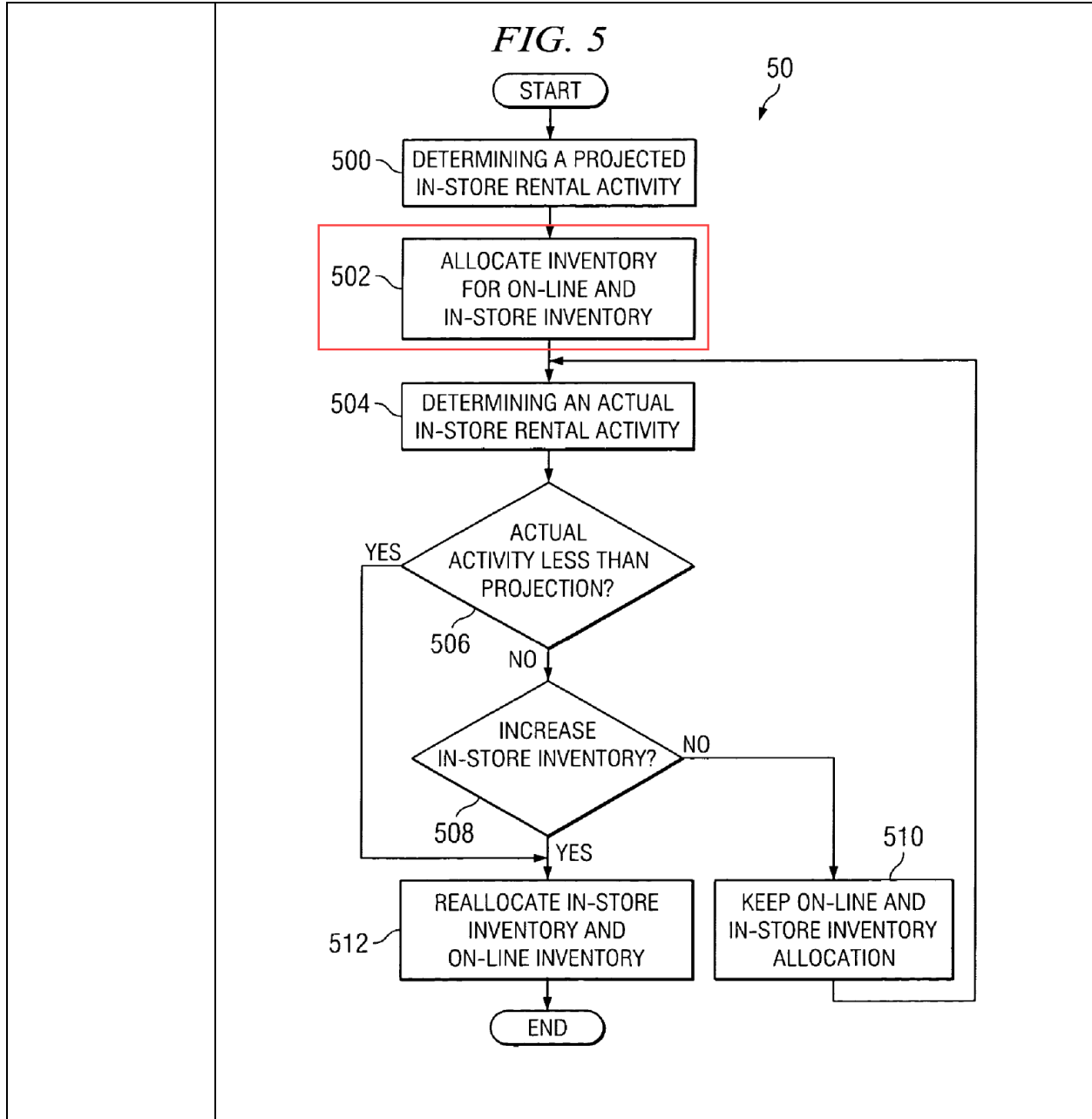


Figure 7

EX1010, 1:34-46 (“*allocate inventory for... on-line... fulfillment*”), 2:30-32 (“Web site that accepts requests for delivery of movies to customers”), 2:49-60, 3:35-52, 5:20-38, 6:59-7:17 (“initially designated... on-line inventory”), 7:18-38, 7:39-60, 8:10-29 (“*Controller... initially allocates inventory... to... stores*”), 9:17-29, cl.1 (“allocating... to a particular inventory location”), cls.9-10, 18-19, 22-23, Figs.1-3, 5:





Jacob discloses a “Property Administrator” (e.g., EX1004, ¶[0066]) “might choose to reallocate inventory to the better-selling channel” (e.g., EX1004, ¶[0180]), and allocating/“allott[ing]” inventory for various purposes (e.g., EX1004, ¶[0189] (specific “Rate Types,” “Date Range[s]”), Fig.40), including to different

distribution channels (e.g., EX1004, ¶[0180]); EX1003, ¶244. POSITA would have understood this to expressly disclose that Jacob’s Property (e.g., hotel) personnel have—by communicating with REZTRIP through a vendor computing device (see cl.1[a])—previously performed an *allocation* of inventory (i.e., a selection of participant channels) to each distribution channel prior to “*relocat[ing]*” such inventory and that such allocation was thus received from the vendor computing device.²¹ See, e.g., EX1004, ¶[0086]; EX1003, ¶245. That a Property’s personnel perform this allocating/selecting by connecting to REZTRIP from their vendor computing device is further confirmed by Jacob’s disclosure of REZTRIP *communicating*—to each channel—*information about* this allocation and the inventory allocated. See, e.g., EX1004, ¶¶[0154], [0086], [0180]-[0181], [0185], [0191], cls.5&6, Fig.7 (“Rates and Availability” provided to channels); EX1003, ¶245. Alternatively, POSITA would have recognized that to “*reallocate* inventory” Jacob necessarily, and thus inherently, allocates such inventory/selects a channel prior to “*relocat[ing]*”: without an initial “allocation” there could be no “*relocat[ing]*.” EX1003, ¶245. Further, POSITA would have recognized Jacob’s

²¹ Jacob also teaches defining “room constraints” for various purposes, including constraints as to specific “Rate Types” and “room types” (e.g., EX1004, ¶¶[0008], [0162], Figs.5, 6). EX1003, n.13.

disclosure of “**reallocat[ing]** inventory to the better-selling channel” as disclosing making changes to an *already-existing original inventory allocation* (or at minimum would have found such an original allocation was necessarily, and thus inherently, disclosed). EX1003, ¶245. If further disclosure is required, **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob’s system (+combinations) using Jacob’s beneficial teachings of “reallocat[ing] inventory” such that Jacob’s vendor computing device (see cl.1[a]) performs an allocation (i.e., selection) of each item of Jacob’s transportation services inventory to a distribution channel.** EX1003, ¶246. This would have, *e.g.*, beneficially allowed Jacob’s Property personnel to initially allocate inventory—through a vendor computing device—to certain selected/preferred distribution channels (*e.g.*, channels that better suit the needs of the inventory provider or have a greater likelihood of selling at, *e.g.*, a higher price/quantities), furthering Jacob’s goals. *See* p.31; EX1003, ¶246. For each combination in this narrative, it would have been routine to make such an implementation choice, and clear it would work, providing the expected functionality to yield predictable results with REOS.²² EX1003, ¶¶246, 259.

²² *See* n.18.

If further disclosure of allocating/selecting is required, **POSITA would have found it obvious based on Jacob (+combinations) in view of Evangelist.** *See* n.16; EX1003, ¶248. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob’s disclosed method of managing online bookings for transportation services inventory using Evangelist’s beneficial teachings of initially allocating inventory to distribution channels.** EX1003, ¶259. Implementing Jacob’s inventory management method (+combinations)—including with initial input/“set up” information received from the vendor computing device (*e.g.*, EX1004, ¶[0086])—using Evangelist’s beneficial teachings of, *e.g.*, initially allocating inventory to such channels, including by using, *e.g.*, projections to select such channels automatically, would have beneficially increased the likelihood that proper quantities/types of inventory are initially allocated to each channel, fulfilling Jacob’s goals. *See* p.31; EX1003, ¶259.

1[d]	Jacob discloses establishing (<i>e.g.</i>, designating), via the channel data structure (<i>e.g.</i>, cl.1[b]), one or more active channel records (<i>e.g.</i>, channel record (<i>see</i> cl.1[b]) with entry/entries showing “sales channel” is active (<i>e.g.</i>, via “sales channel data,” “inventory data,” “other data” reflecting, <i>e.g.</i>, channel is allocated inventory (<i>see</i> cl.1[c])/actively selling)) based upon the one or more participant channels for the transportation service (<i>see</i> cl.1[c]). EX1003, ¶¶261-270.
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	Tamura discloses establishing (<i>e.g.</i>, designating), via the channel data structure (<i>e.g.</i>, cl.1[b]), one or more active channel records (<i>e.g.</i>, channel record (<i>see</i> cl.1[b]) with entry/entries showing “retailer” is selling) based upon one or more participant channels (<i>e.g.</i>, particular “retailer” (<i>e.g.</i>, “Retailer A” (Fig.3), “Retailer B” (Fig.3)) by which “item of merchandise” is “sold”) (<i>see</i> Fig.3). EX1003, ¶¶271-277. Kono discloses establishing (<i>e.g.</i>, designating), via the channel data structure (<i>e.g.</i>, cl.1[b]), one or more active channel records (<i>e.g.</i>, channel record (<i>see</i> cl.1[b]) with entry/entries (<i>e.g.</i>, “contents of...form”) showing “agency” is selling) based upon one or more participant channels (<i>e.g.</i>, agency (<i>e.g.</i>, “aaaa,” (Fig.4) “bbbb,” “Company A,” (Fig.1) “Company B,” (Fig.1) “Company C” (Fig.1)) at which “order” or “orders” are placed; agency with more than “0” “Inventory Count,” “Order Backlog” and “Shipping Volume”) (<i>see</i> Fig.4). EX1003, ¶¶278-285. EX1004, ¶[0006], ¶[0078], ¶[0082]-¶[0083], ¶[0084] (“<i>inventory data... sales channel data... other data</i>”). EX1005, ¶[0014], ¶[0017], ¶[0024] (“<i>retailer</i>”; “<i>sold merchandise</i>”), ¶[0026], cl.5 (“<i>item of merchandise</i>”), Figs.2-3:
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Fig. 2

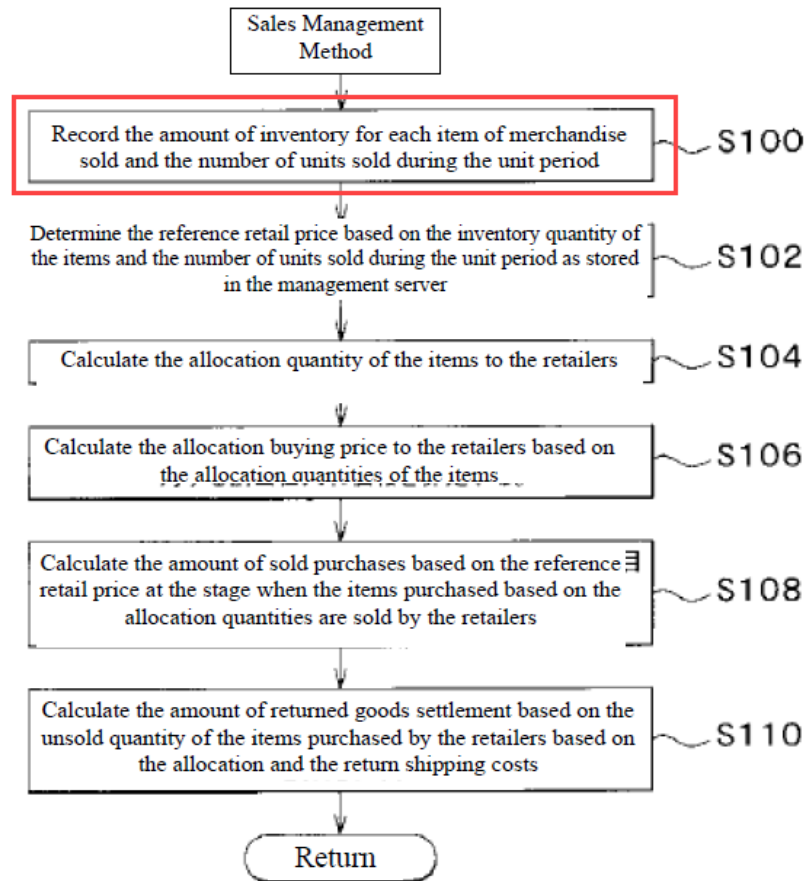
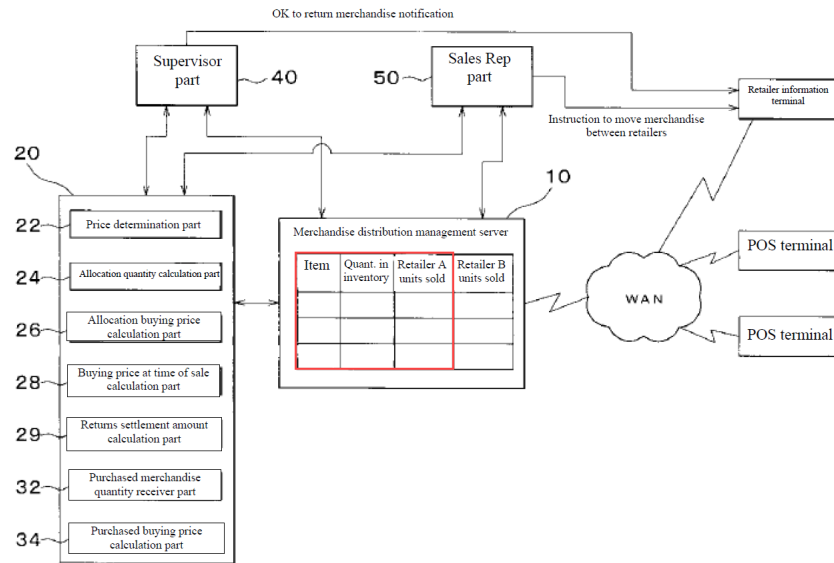


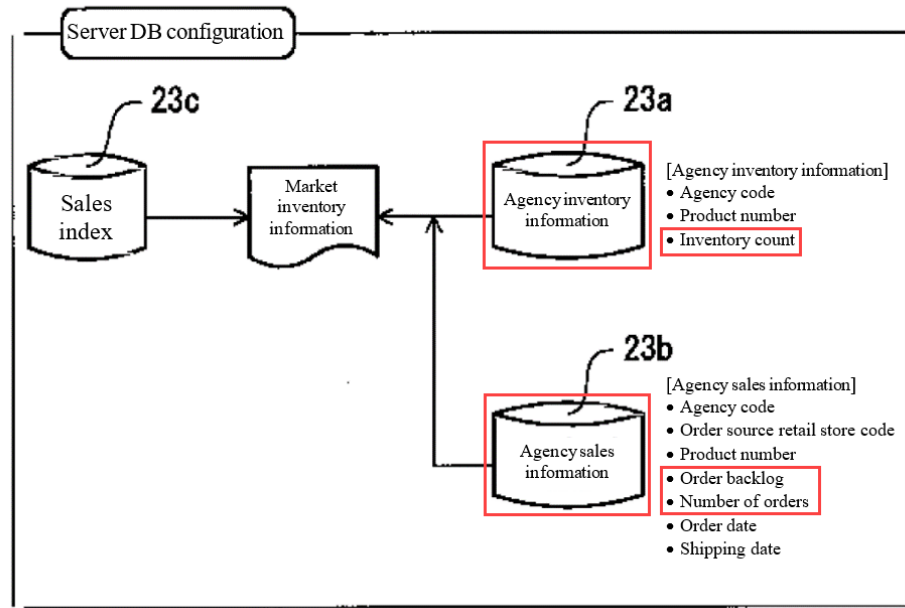
Fig. 3



EX1007, Summary (“*agency*”), ¶[0026], ¶[0043] (“*contents of this form*”; “agency “ffff”... shipping volume”; “orders” “agency ‘bbbb,’... inventory count”), Figs.1-2, 4:

[FIG. 2]

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[FIG. 4]

Good Class.	Product No.	Product Name	Agency Name	Inventory Count	Order Backlog	Shipping Volume	Inventory Date
KC0742	AAAAAA	Sorting pedal bin #40	aaaa	100	0	3	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	bbbb	336	2390	2351	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	cccc	560	20	15	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	dddd	365	1200	1350	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	eeee	10	10	10	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	ffff	2500	250	250	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	gggg	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	hhhh	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	iiii	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	jjjj	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	kkkk	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	llll	9	5	10	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	mmmm	45	5	5	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	nnnn	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	oooo	9	3	20	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	pppp	5	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	qqqq	96	20	85	8/22/2000

Jacob discloses or at minimum renders obvious storing “hotel data,” including, *e.g.*, “sales channel data” and “inventory data” (*e.g.*, EX1004, ¶[0084]) via a channel data structure (*see* cl.1[b]); EX1003, ¶267. Jacob (+combinations) also

discloses allocating inventory to each channel (*see* cl.1[c]) and closing Rate Types/Room Types for certain channels (*e.g.*, EX1004, ¶[0180]); EX1003, ¶267. **POSITA would have further understood Jacob’s system (+combinations) differentiates between channels that are allocated inventory and selling (*i.e.*, participant channels) and those that are not, and does so by designating, via data stored in the channel data structure (*i.e.*, record for a channel comprising, *e.g.*, “inventory data,” “availability data,” “audit trail data,” “sales channel data,” “communications data,” and “other data”) a record of such participant channels (*e.g.*, record contains data indicating channel is active—allocated inventory/selling). EX1003, ¶268. At minimum, **POSITA would have understood Jacob necessarily, and thus inherently does so in order to allow Jacob’s system to differentiate between channels that are selling and those that are not.** EX1003, ¶268.**

If further disclosure is required, **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob’s disclosed channel data structure and storage of “hotel data” using Jacob’s beneficial teachings of allocating inventory to/selecting particular sales channels such that Jacob’s system (+combinations) establishes, via the channel data structure, one or more active channel records based upon the one or more participant channels for the transportation service.** EX1003, ¶269. Alternatively, **POSITA would**

have been motivated and found it obvious, straightforward, and advantageous to implement Jacob's system (+combinations) using (1) Tamura's or (2) Kono's beneficial teachings of establishing one or more active channel records based upon one or more participant channels (*see* chart, *supra*). *See* n.16; EX1003, ¶¶271, 276, 278, 284. This would have, *e.g.*, beneficially allowed the system to differentiate simply and quickly between channels that are allocated inventory and those that are not, increasing the system's efficiency/speed of processing channel-performance information, increasing the system's ability to track/monitor and reprice/reallocate allocated inventory, furthering Jacob's/Tamura's/Kono's goals. *See* pp.39-40; EX1003, ¶¶269, 276, 284. It would have been routine to make such an implementation choice, and clear it would work and provide the expected functionality to yield predictable results with REOS.²³ EX1003, ¶¶269, 276, 284.

1[e]	Jacob discloses establishing (<i>see</i> cl.1[d]), via the channel data structure (<i>see</i> cl.1[b]), one or more inactive channel records based upon one or more non-participant channels for the transportation service (<i>e.g.</i>, channel record (<i>see</i> cl.1[b]) with entry/entries showing "sales channel" is inactive (<i>e.g.</i>, via "sales channel data," "inventory data," "other data" reflecting, <i>e.g.</i>, channel is not allocated inventory (<i>see</i> cl.1[c])/not actively selling), "Rate Type/Room Type" "close[d]" "for certain channels") (<i>see</i> cl.1[c], [d]). EX1003, ¶¶286-296.
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²³ *See* n.18.

	Phillips discloses establishing one or more non-participant channels for a transportation service that are known to be inactive (<i>e.g.</i>, “Some products may not be offered through some channels”; “Southwest Airlines and JetBlue... do not accept bookings through any... GDS” other than “SABRE”). EX1003, ¶¶297-305. EX1004, ¶[0007], ¶[0063], ¶[0077] (“Sales Channel”), ¶[0084] (“<i>inventory data</i>”; “<i>sales channel data</i>”; “other data”), ¶[0085], ¶[0154], ¶[0180] (“<i>close... Rate Type/Room Type... for certain channels</i>”), Fig.7. EX1029, 26 (“Some products may not be offered through some channels”), 126 (“<i>Southwest Airlines... do[es] not accept bookings through any other GDS</i>”), 29, 137-138, 79, 31.
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Jacob discloses or at minimum renders obvious storing “hotel data,” including, *e.g.*, “sales channel data” and “inventory data” (*e.g.*, EX1004, ¶[0084]) via a channel data structure (*see* cl.1[b], 1[d]), as well as allocating inventory to each channel (*see* cl.1[c]) and closing Rate Types/Room Types for certain channels (*e.g.*, EX1004, ¶[0180]); EX1003, ¶293. Jacob further discloses not selecting (or de-selecting) certain channels—*e.g.*, “**for certain channels**” a “**Rate Type/Room Type**” may be “**close[d]**” (EX1004, ¶¶[0154], [0180]); EX1003, ¶293. **POSITA**

would thus have further understood Jacob's system (+combinations) differentiates between channels that are not allocated inventory/selling (*i.e.*, non-participant channels) and those that *are*, and does so by designating, via data stored in the channel data structure a record of such non-participant channels (*e.g.*, record contains data indicating channel is inactive—not allocated inventory/not selling). EX1003, ¶294 At minimum, POSITA would have understood that Jacob necessarily, and thus inherently does so in order to allow Jacob's system to differentiate between channels that are selling and those that are not. EX1003, ¶295.

If further disclosure is required, this would have been obvious based on Jacob (+combinations) in view of Phillips (*see* chart, *supra*). *See* n.16; EX1003, ¶297. Phillips discloses the existence of non-participant channels that are known to be inactive, teaching that, *e.g.*, “[s]ome products may not be offered through some channels.” *E.g.*, EX1029, 26, 126, 29, 31, 79, 137-38; EX1003, ¶303. POSITA would have found it obvious, straightforward, and advantageous to implement Jacob's system (+combinations), using Jacob's and Phillips's beneficial teachings of not selecting/de-selecting certain channels to participate/from participating in selling Jacob's transportation services inventory such that the system (+combinations) establishes, via the channel data struc-

ture, one or more inactive channel records based upon one or more non-participant channels for the transportation service, including by establishing a record of non-participant channels with data reflecting they are inactive. EX1003, ¶304. This would have, *e.g.*, beneficially allowed the system to differentiate simply and quickly between channels that are allocated inventory/selling and those that are not, increasing the efficiency and speed of information processing regarding relative performance of active, selling channels, increasing the system's ability to track/monitor and reprice/reallocate allocated inventory, and enabling more rapid determinations of which additional channels are available to sell inventory if needed, furthering Jacob's/Phillips's goals. *See* p.31; EX1003, ¶304. It would have been routine to make such an implementation choice, and clear it would work, providing the expected functionality to yield predictable results with REOS. EX1003, ¶304.

1[f]	Jacob discloses linking the one or more active channel records (<i>e.g.</i>, cl.1[d]) to the channel interface (<i>see</i> cl.1[a]) (<i>e.g.</i>, making the records available via the interface (including, <i>e.g.</i>, using “code segments configured to interact with the [system’s] database” that allow the RezTrip computer/server to access the “system database”), such that, “[o]nce the PA has set up the Property within the system, EUs may connect to the reservation engine [RezTrip]... and make a reservation.”) (<i>see</i> cl.1[a]). EX1003, ¶¶306-315.
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Kono discloses linking the one or more active channel records (e.g., cl.1[d]) to the channel interface (see cl.1[a]) (e.g., making the records available via the interface) (see cl.1[a]).
EX1003, ¶¶316-322.

EX1004, ¶[0082], ¶[0084] (“code segments configured to interact with the database”), ¶[0085] (“the RezTrip™ system communicates with the hotel user, the hotel property management system, tour operators, internet web merchants”), ¶[0086] (“system database”; “Once the PA has set up the Property... EUs may connect to the reservation engine... and make a reservation.”), Fig.7:

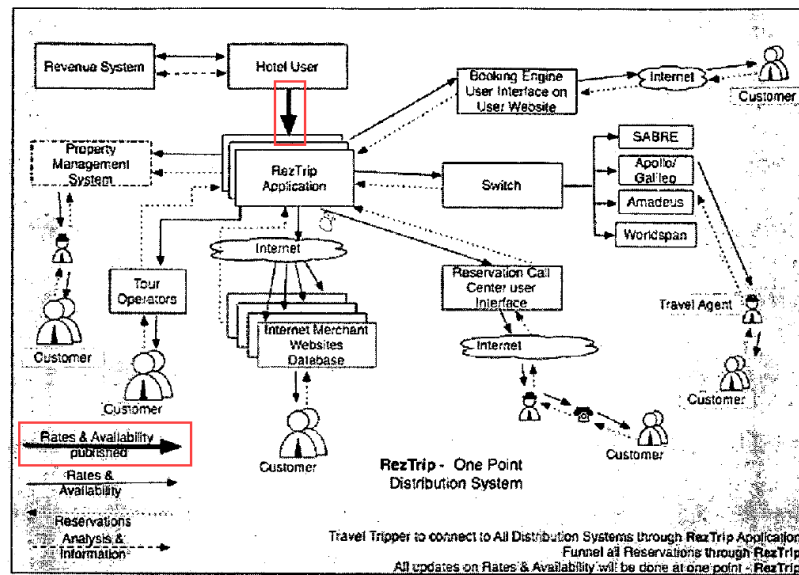


Figure 7

EX1007, ¶[0043], ¶[0024]-¶[0025], Fig.4.

As shown (cls.1[a]-[c]), Jacob (+combinations) discloses or at minimum renders obvious a channel interface (see cl.1[b]) and explains, “[o]nce the PA has

set up the Property within the system, [end users] may connect to the reservation engine [RezTrip]... and make a reservation.” *E.g.*, EX1004, ¶¶[0086], [0066], [0113]-[0115] [0176], [0180], Figs.20-47; EX1003, ¶312. Jacob’s software includes “code segments configured to interact with the database,” which, *inter alia*, stores “sales channel data,” “inventory data,” and “other data” (*e.g.*, EX1004, ¶¶[0082]-[0084]), and a “code segment configured to communicate pricing information and inventory information to... channels” (*e.g.*, EX1004, cl.5). *See also* EX1004, ¶[0005]; EX1003, ¶312. **POSITA would have thus understood that Jacob expressly discloses making available the one or more stored active channel records (see cl.1[b]) to the channel interface to permit Property personnel using the vendor computing device to exchange data with REZTRIP through the channel interface, to perform initial setup of/later modification to, such records used by REZTRIP. EX1003, ¶313. At minimum, POSITA would have understood Jacob (+combinations) necessarily, and thus inherently, discloses that these records are made available via the channel interface to enable Jacob’s above-discussed setup and modification of, and access to, the active channel records. EX1003, ¶313.**

Alternatively, if further disclosure is required, **POSITA would have found it obvious, straightforward, and advantageous to implement the combined sys-**

tem's disclosed database and code segments, and initial setup/later modification to attributes of Jacob's time-dependent inventory (+combinations) such that the system's one or more active channel records are made available to the channel interface. EX1003, ¶314. POSITA would also have found it obvious, straightforward, and advantageous to implement Jacob's system (+combinations) using Kono's beneficial teaching of linking the one or more active channel records to the channel interface (see chart, *supra*).²⁴ See n.16; EX1003, ¶¶316, 321. This would have, *e.g.*, beneficially allowed the system and its users to use and modify the active channel records using Jacob's (+combinations) disclosed computer hardware/software to, *e.g.*, set and update pricing information and/or allocations in response to changing market conditions, and enabled the use of the data these records contain, furthering Jacob's/Kono's goals. See pp.39-40; EX1003, ¶¶314, 321. It would have been routine to make such an implementation choice, and clear it would work and provide the expected functionality to yield predictable results with REOS.²⁵ EX1003, ¶¶314, 321.

²⁴ Kono discloses making available the "contents of" its Fig.4 form (including, *e.g.*, channel-specific inventory/shipping information) to the channel interface so the form's inventory and shipping information can be kept up to date. EX1003, ¶320.

²⁵ See n.18.

1[g]	Jacob discloses receiving (e.g., “receiv[ing]”), in real time²⁶ (e.g., “communication code segment” receives, e.g., “information” pushed from sales channels; “confirmation information is sent to... the property”; <i>see also</i> receiving information in “real time” over “Internet,” “networks,” etc. (<i>see</i> cl.1[b])) for the one or more participant channels corresponding to the one or more active channel records linked to the channel interface (<i>see</i> cl.1[c]-[d], [f]), sale data²⁷ (e.g., “information received from the sales channels”) corresponding to at least one or more additional vendor computing devices (e.g., regarding inventory “time-dependent inventory” corresponding to an additional vendor computing device (<i>see</i> cl.1[a]) of, e.g., an additional “Superuser”/“Engine Administrator”/“Property Administrator[.]”— resulting in multiple “clients” from, e.g., the same company (e.g., at same or multiple “Properties” of the same
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²⁶ “[R]eceiving, in real time” indicates receiving the most recent data “pushed” (sent by “push” method) from channels. *See* §VI.A. Jacob (+combinations) discloses or Jacob-Phillips/Jacob-Phillips-Franklin renders this obvious. PO has construed “in real time” as “in which the input and processing of data occurs concurrently with an external activity and in time to affect that activity.” EX1022, 2. Jacob (+combinations) discloses or at minimum renders obvious receiving “in real time” under PO’s interpretation.

²⁷ Jacob discloses “sale data” as cl.1[g] requires. If further disclosure is required, Jacob in view of Tamura or Kono renders obvious “sale data,” *see infra*.

	company (e.g., hotel chain))—selling through the same channel). EX1003, ¶¶323-350. Tamura discloses receiving (e.g., “merchandise distribution management server” “receives sales information from POS terminals at each retail store”) sale data (e.g., data reflecting “number of units sold”) for one or more participant channels (see cl.1[c]) corresponding to the one or more active channel records (see cl.1[d]). EX1003, ¶¶361-372. Kono discloses receiving (e.g., “acquir[ing]”) sale data (e.g., “product shipment information and product inventory information of each agency”; “agency sales information”) for one or more participant channels (see cl.1[c]) corresponding to the one or more active channel records (see cl.1[d]). EX1003, ¶¶373-380. Franklin discloses receiving (e.g., “data is sent... to one other machine” that receives it; “data delivery”) data (e.g., “data”) in real time (e.g., data transmitted by “push,”) from another computer (e.g., “data is sent from a data source”). EX1003, ¶¶351-360. EX1004, ¶[0005] (“<i>real time</i>”), ¶[0006]-¶[0008] (“property administrators”; “<i>communication code segment</i>”), ¶[0009]-¶[0010] (“<i>information received from the sales channels</i>”), ¶[0064] (“Superuser”), ¶[0065] (“Engine Administrator”), ¶[0066], ¶[0069]-[0070], ¶[0082] (“<i>time-dependent inventory</i>”; “<i>networks</i>”; “<i>internet</i>”), ¶[0083]-¶[0086] (“<i>confirmation information is sent to... the Property</i>”), ¶[0088], ¶[0092]-¶[0097] (“group of Properties”; “management company”), ¶[0099], ¶[0111], ¶[0113], ¶[0123]-¶[0125], ¶[0133], ¶[0176], ¶[0185],
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¶[0191]-¶[0192], (“application sends confirmations to... PA via communications over... networks”), cls.1, 6, Figs.7, 12-13, 42:

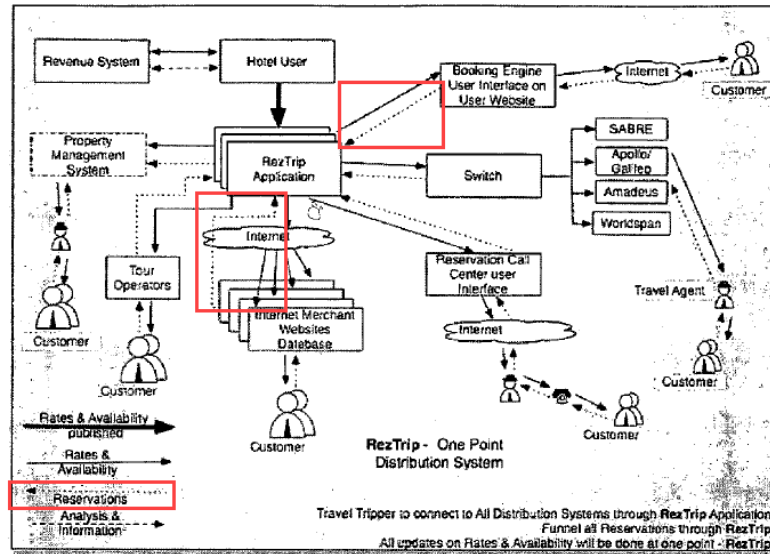


Figure 7

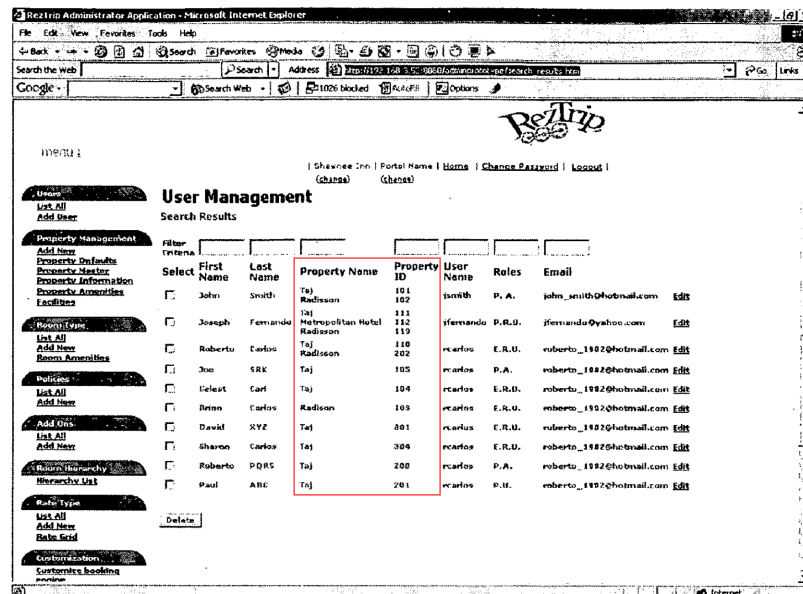


Figure 12

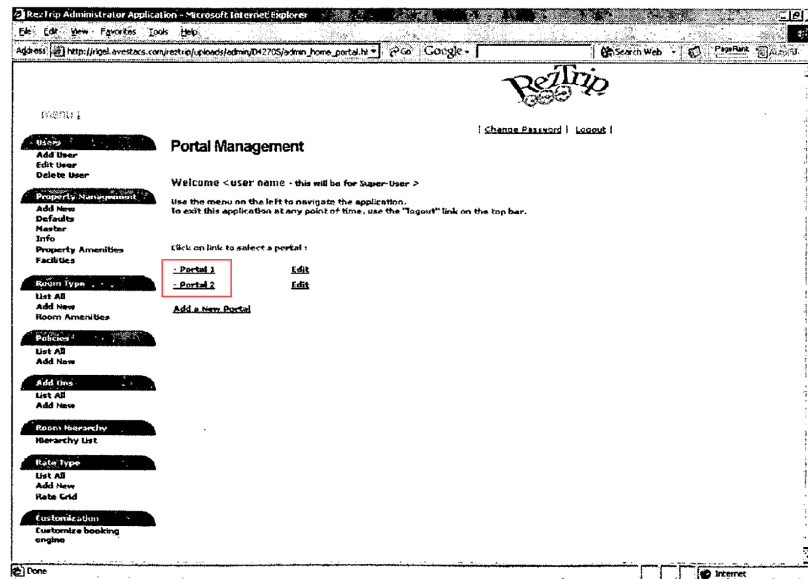


Figure 13

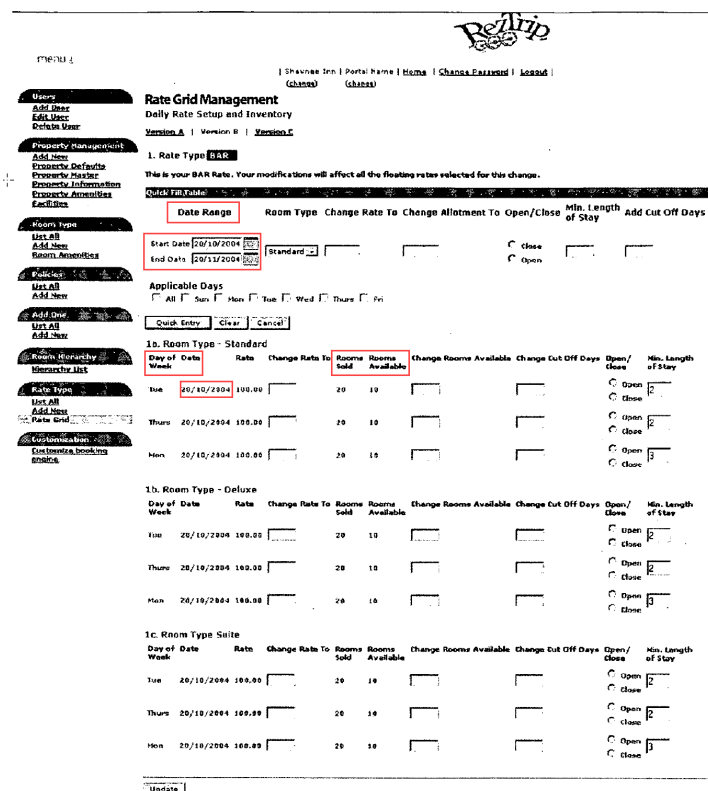


Figure 42

EX1004, ¶[0124], ¶[0220]:

Rate Type	Standard Room-		
	04/11/05	04/12/05	04/13/05
Default Rate	\$139	\$159	\$199
AAA [™] Rate	\$126	\$144	\$180
Government Rate	\$130	\$150	\$190
Summer Package Rate	\$100	\$100	\$100

Multiplier	Details
Per stay	The charge would be added to the reservation and is not dependent on the number of travelers. It is multiplied by the number of rooms in the reservation. For example, high-speed internet priced at \$50 If 3 rooms were booked the total charge would be \$150.
Per occupant per stay	The charge would be per occupant for the duration of the stay. It does not depend on the number of nights. For example, airport pickup, \$8 per person.
Per night	This is a charge per room per night. For example, parking, \$24 per night.
Per occupant per night	For example, breakfast at \$12. For 3 persons for a 3 night stay, the total charge would be \$108 (12 × 3 × 3).

EX1005, Means of Solving the Problems, ¶[0013]-¶[0014], ¶[0017] (“*merchandise distribution management server... receives sales information from POS terminals at the retail stores*” “number of units sold”), ¶[0019], ¶[0024]-¶[0026], ¶[0031], ¶[0034]-¶[0035], cls.4-.5, Figs.1-3:

Fig. 1

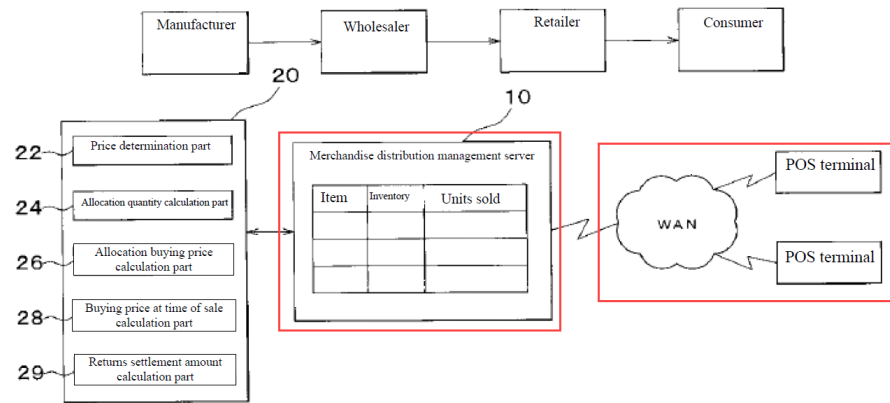


Fig. 2

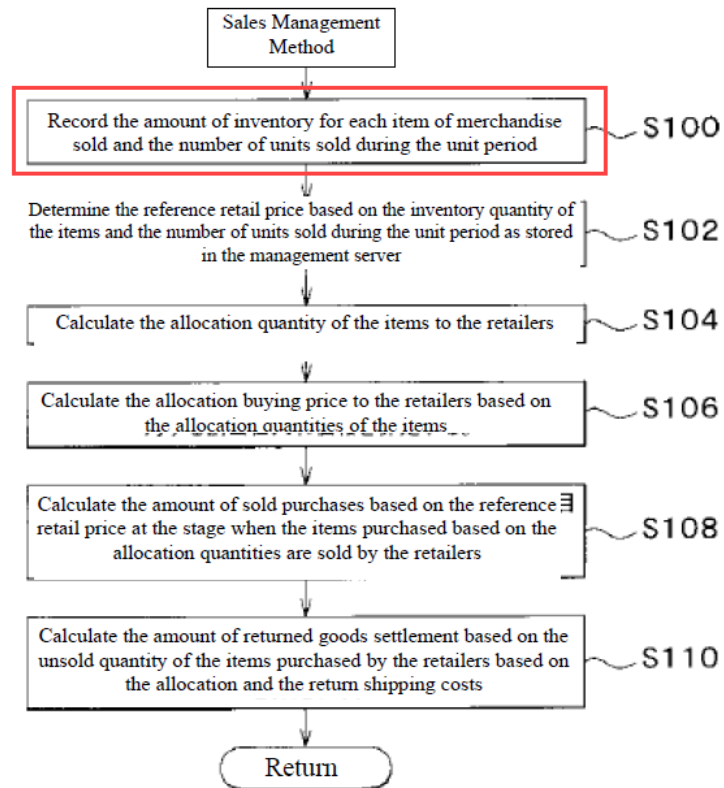
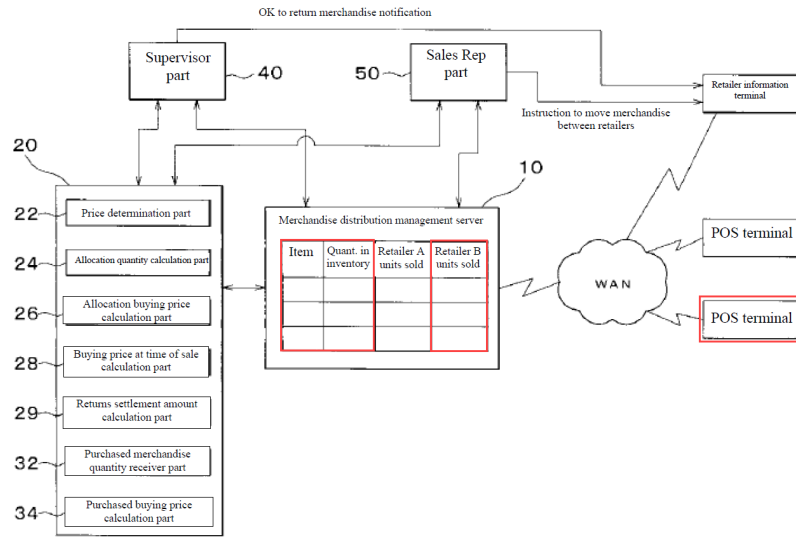
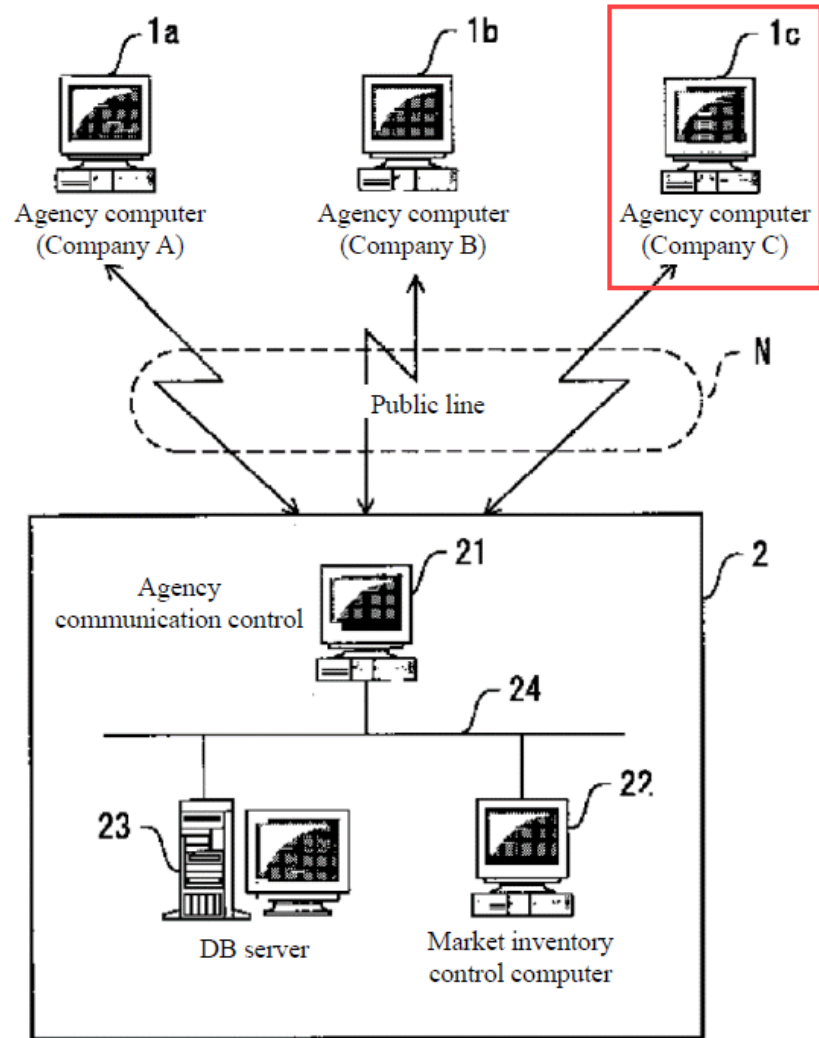


Fig. 3



EX1007, ¶[0009] (“*product shipment information and product inventory information of each agency*”), ¶[0010]; ¶[0014], ¶[0024]-¶[0026] (“*agency sales information*”), Figs.1, 4:

[FIG. 1]



[FIG. 4]

Good Class.	Product No.	Product Name	Agency Name	Inventory Count	Order Backlog	Shipping Volume	Inventory Date
KC0742	AAAAAA	Sorting pedal bin #40	aaaa	100	0	3	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	bbbb	336	2390	2351	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	cccc	560	20	15	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	dddd	365	1200	1350	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	eeee	10	10	10	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	ffff	2500	250	250	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	gggg	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	hhhh	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	iiii	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	jjjj	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	kkkk	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	llll	9	5	10	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	mmmm	45	5	5	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	nnnn	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	oooo	9	3	20	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	pppp	5	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	qqqq	96	20	85	8/22/2000

	EX1009, ¶[0015]-[0016] (“data delivery”), ¶[0018] (“push”), ¶[0019] (“Periodic push”), ¶[0041], ¶[0021] (“ <i>data is sent from a data source... to one other machine</i> ”), Fig.1 (Push→Periodic).
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Jacob discloses its system may have multiple users from the same company (e.g., same/another “Property” in hotel chain (e.g., different “Taj” hotels, each of which is a RezTrip “client,” EX1003, n.17, 18)) (and thus multiple vendor computing devices) selling through the same channel, and Jacob’s users use “computer software[,]. . . hardware[,]. . . or a combination.” E.g., EX1004, ¶¶[0006], [0069], [0093]-[0097]; EX1003, ¶347. **POSITA would thus have understood Jacob expressly discloses multiple vendor computing devices, and, as discussed below, receiving sale data corresponding to such computing devices. EX1003, ¶348.** At minimum, **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob’s (+combinations) disclosed companies with multiple properties using Jacob’s computer software/hardware/comboination such that the resulting system utilized one or more additional vendor computing devices, and received sale data corresponding to such additional vendor computing devices. EX1003, ¶348.** This would have, e.g., beneficially allowed the system and its additional clients/users/Properties to, *inter alia*, modify active

channel records using Jacob’s disclosed computer hardware/software to, *e.g.*, update pricing information in response to changing market conditions across multiple products from different vendors (*e.g.*, of the same company) within each channel, furthering Jacob’s goals. *See* p.31; EX1003, ¶348. For each combination in this narrative, it would have been routine to make such an implementation choice, and clear it would work and provide the expected functionality to yield predictable results with REOS.²⁸ EX1003, ¶¶348, 358-359, 371, 379.

Because Jacob’s channels “push” data to REZTRIP, without the system issuing a request (*e.g.*, EX1004, ¶[0086]), **POSITA would have understood Jacob discloses receiving this “pushed” sale data in “real time”** (when a reservation is made, *i.e.*, on an aperiodic basis). EX1003, ¶349.

If further disclosure of “real time” is required as to Jacob’s disclosure of push, **this would have been obvious based on Jacob (+combinations) in view of Franklin.** EX1003, ¶351. Jacob discloses preferably updating pricing and availability in “real time” (*e.g.*, EX1004, ¶[0005]) and “[f]requent updating and communication... keeps the information fresh at the sales channel,” *e.g.*, EX1004, ¶[0185]; EX1003, ¶357. However, while Jacob discloses sale data is transmitted from channels without a request, Jacob does not use the word “push.” EX1003,

²⁸ *See* n.18.

¶357. Franklin explicitly discloses beneficially *pushing* data from a data source, explaining that, advantageously, unlike pull, push does not require a “backchannel” for each request, nor must the data-providing nodes (here, Jacob’s channels) be continuously interrupted to deal with such requests (meaning less strain on, *e.g.*, Jacob’s wireless communication networks (*e.g.*, EX1004, ¶[0082]), which may reflect network and other asymmetries). *E.g.*, EX1009, ¶¶[0006], [0005]-[0010], [0013], [0016], [0020]; EX1003, ¶357. Franklin additionally explains data sources can push data “in either an aperiodic or periodic fashion,” and that *periodic* push (pushing data on a “*regular, repeating schedule*”) is particularly useful where the data-receiving node’s processing load is high (another asymmetry), as Jacob’s processor(s) running, *e.g.*, this function of the RezTrip application also performs the other RezTrip application functions. *E.g.*, EX1009, [0018]; *see also id.* [0019]-[0020], [0014], Fig.1; EX1003, ¶357. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement communications between Jacob’s channels and REZTRIP (+combinations) using Franklin’s beneficial teachings of push.** EX1003, ¶358. Periodic push would have beneficially allowed the system to “obtain the maximal benefit from the available bandwidth” (*e.g.*, EX1009, ¶[0042]), and does not “assume[] that clients are either always listening and able to respond to what is being sent or that missing

some information is not crucial,” (*e.g.*, EX1009, ¶[0019]). EX1003, ¶358. Further, periodic push affords POSITA a design option regarding how frequently to schedule the push, increasing flexibility, as POSITA would have recognized different benefits to scheduling push at very short or longer intervals, depending on the particular application.²⁹ EX1003, ¶358. It would have been beneficial and obvious based on Jacob’s disclosures above to implement Jacob’s updating using Franklin’s teachings of periodic push to schedule push at *short intervals* to facilitate REZTRIP having more up-to-date information when processing sale data. *E.g.*, EX1004, ¶[0185]; EX1003, ¶358. But in applications where individual sales and reallocations occur less frequently and cost/efficiency concerns were a higher priority than near-term predictive accuracy, POSITA would have recognized it was

²⁹ Jacob teaches sending sale data whenever the reservation is made (*i.e.*, aperiodically). *E.g.*, EX1004, ¶[0086]. If argued that Jacob doesn’t disclose this limitation under this interpretation, Franklin teaches aperiodic push. *E.g.*, EX1009, ¶[0026]. Though there are tradeoffs between periodic and aperiodic push, aperiodic push ensures bandwidth is only used when there is an update and ensures the server has the most up-to-date information, and it would also have been obvious and advantageous to implement Jacob (+combinations) using Franklin’s teachings of aperiodic push with REOS. *See* EX1009, ¶[0026]; EX1003, n.19.

beneficial to schedule push in the combined Jacob-Franklin system at *longer intervals* because, as of the priority date, sending data could be expensive and error-prone, and sending data less frequently in batches would generally have presented lower costs/more efficiency. EX1003, ¶358. Whether with shorter or longer intervals (discussed above), POSITA implementing Franklin’s express teaching of periodic push in Jacob would have found it obvious and advantageous to *schedule each channel to push data in the same sequence in the same repeating interval* (e.g., every minute, or different interval as appropriate to the particular products/channels), with each channel associated with a different interval, so that Jacob’s processor receives and processes the new sale data for a channel in the same sequence and same repeating interval while other channels’ additional sale data is acquired, beneficially: (a) allowing Jacob’s processor to receive and process sale data from one channel at a time in succession, increasing efficiency while lowering processing load, latency, and overhead (including, e.g., reducing the possibility of data collisions), and (b) allowing Jacob’s processor to calculate new prices promptly after the last channel’s data was received and processed. EX1003, ¶358.

If “real time” required data be sent relatively quickly/frequently, “real time” in the temporal sense (including with periodic push over vanishingly short intervals (e.g., EX1004, ¶[0185] (“fresh[er]” data)) in situations with unexpectedly rapid

sales or requests for reallocation/re-pricing) would also have been obvious for the above-discussed reasons. EX1003, ¶359.

If further disclosure of receiving *sale data* is required, **it would have been obvious based on Jacob (+combinations) in view of Kono's or Tamura's disclosures** (*see chart, supra*). EX1003, ¶¶361, 373. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement REZTRIP (+combinations) using Tamura's or Kono's beneficial teachings of receiving sale data from distribution channels.** EX1003, ¶¶371, 379. This would have, *e.g.*, advantageously increased REZTRIP's ability to fulfill Jacob's/Kono's/Tamura's/Evangelists goals. *See* pp.39-40; EX1003, ¶¶371, 379.

1[h] ^{30, 31}	Jacob discloses determining (<i>e.g.</i> , “analyz[ing] the information received from the sales channels”; combining (<i>e.g.</i> , adding, averaging, etc.) data across individual “reservations”; “perform[ing] calculations automatically ^[32] ”) a performance indicator (<i>e.g.</i> , parameter showing “sales channel’s Room Type inventory is sold out”; parameter such as speed of sales in channel for inventory item(s) (indicating, <i>e.g.</i> , “day within the Rate Type active period is selling more quickly than other days in the period” or “might be selling out,” etc.)) in real time (<i>e.g.</i> , based on most re-
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³⁰ ’047 states a “performance rating can be in the form of a number of parameters.” EX1001, 6:46-49, 4:45-47, 6:25-33. POSITA would have understood these examples of “performance rating[s]” are also “performance indicator[s].” EX1003, n.22.

³¹ In cl.1[g], above, “receiving, in real time” indicates receiving the most recent data “pushed” (sent by “push” method) from the channels, and, in cl.1[h], “determining a performance indicator in real time” indicates this most recently received “pushed” data is processed to determine a performance indicator. Jacob (+combinations) discloses or Jacob-Phillips (+combinations) renders obvious “determining... in real time.”

³² ’047 does not require “automatic” step performance. *E.g.*, EX1001, 5:11-14, 30:59-67, 31:54-60, and automatic performance of 1[h] is disclosed/rendered obvious by Jacob (+combinations) in view of Phillips, Tamura, or Kono. *See also* cl.1[pre].

cent received data “pushed” from channels (*see* 1[g]); “rate management process may be repeated on a regular schedule”), **for each of the one or more participant channels** (*see* cl.1[c]) **corresponding to the one or more active channel records linked to the channel interface** (*see* cl.1[d], [f]), **based at least on the sale data corresponding to said one or more additional vendor computing devices** (*e.g.*, “Room Type inventory” or “Rate Type” of particular company available on “sales channel” (*e.g.*, “a sales channel’s Room Type inventory is sold out or is selling better than other channels”; “a day within the Rate Type active period is selling more quickly than other days in the period”); *see* cl.1[g]). EX1003, ¶¶381-391.

Phillips discloses automatically/without the need for human intervention carrying out the revenue management process determining (*e.g.*, “recommend actions based on sophisticated mathematical algorithms,” “calculate[s]... booking limits,” “software and analytical capabilities,” “forecasts... based on current and recent bookings”), **including based on sale data** (*e.g.*, “feed of bookings,” “based on current and recent booking”), **a performance indicator in real time** (*e.g.*, “moment by moment” calculation of, *e.g.*, “return”; “a price-response function associated with each... channel”; demand/“anticipated changes in demand” for a “seller”; “revenue per available seat mile, or RASM”). *See also* cl.1[pre], [i]. EX1003, ¶¶392-404.

Tamura discloses determining (*e.g.*, mathematically analyzing) **a performance indicator** (*e.g.*, parameter (*e.g.*, “sales progress rate for each retailer of the items”) indicating, *e.g.*, retailer has “low” or “high” “sales progress rate”) **for each of the one or more participant channels** (*see* cl.1[c]) **corresponding to the one or more active channel records** (*see* cl.1[d]) **based on at least the sale data corresponding to one or more additional vendor computing devices** (*e.g.*, “sales progress rate” of “group

	of merchandise among retailers and merchandise planning entities” with additional vendor computing device (<i>see</i> cl.1[a]) corresponding to additional “retailer” or additional “merchandise planning entities”; “with reference to the merchandise’s distribution market”). EX1003, ¶¶405-413. Kono discloses determining (<i>e.g.</i>, “perform[ing] a sales analysis at each agency”; <i>see</i> cl.1[g]) a performance indicator (<i>e.g.</i>, “result” of “sales analysis at each agency”) for each of the one or more participant channels (<i>see</i> cl.1[c]) corresponding to the one or more active channel records (<i>see</i> cl.1[d]). EX1003, ¶¶414-422. EX1004, ¶[0010] (“<i>analyze the information received from the sales channels</i>”), ¶[0131] (“<i>perform calculations automatically</i>”), ¶[0176] (“<i>day within the Rate Type active period</i> is selling more quickly than other days in the period”), ¶[0180] (“<i>Room Type inventory is sold out or is selling better than other channels</i>”), ¶[0185] (“<i>rate management process... on a regular schedule</i>”), Fig.7:
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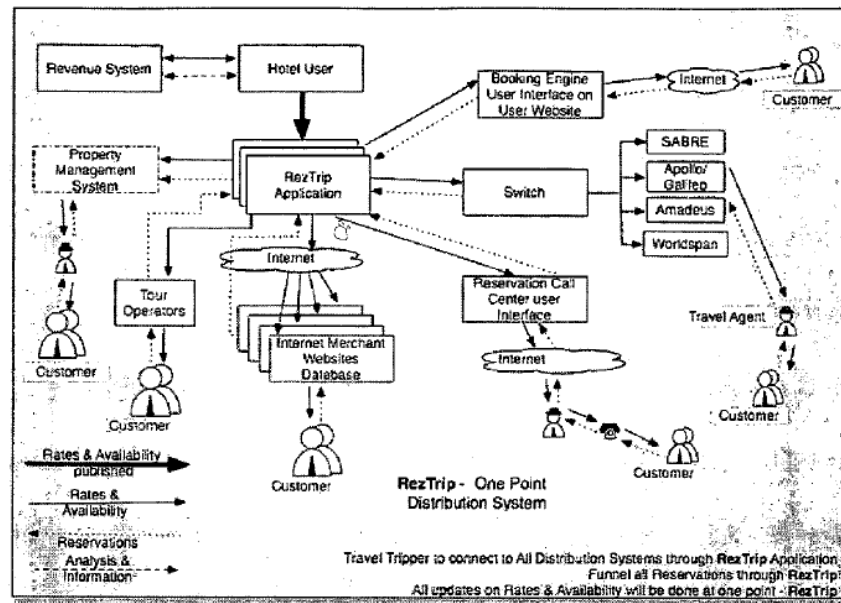


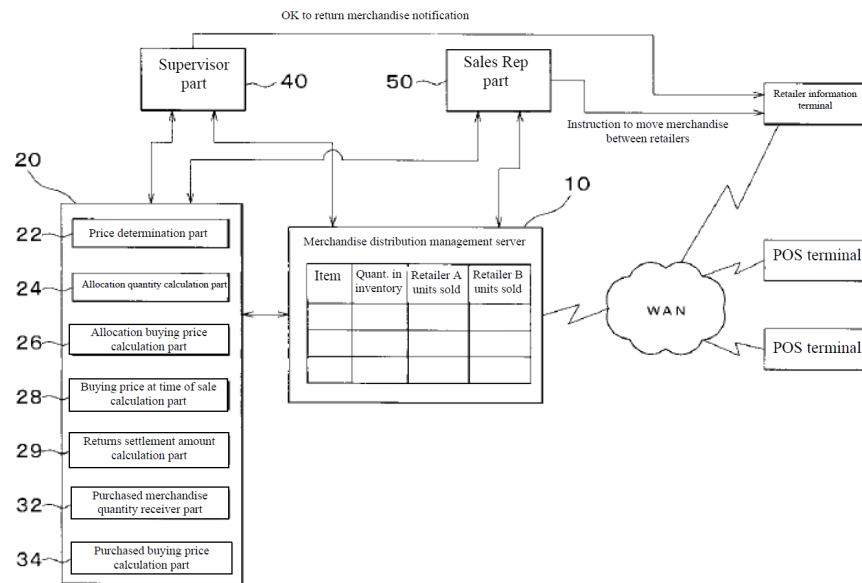
Figure 7

EX1029, 121 (“computerized systems to recommend actions based on... algorithms”), 136 (“*moment by moment*”), 135 (“*forecasts [of demand] based on current and recent bookings*”), 30, 107 (“*anticipated changes in demand... maximize return*”), 29 (“*software and analytical capabilities*”), 134-135 (“calculate and update the booking limits”; “feed of bookings”), 131 (“*calculate... booking limits*”), 135, 29, Fig.2.4, 31, 32, 38-61 (“*price-response function associated with each combination of product, market-segment, and channel.... specifies demand for the product of a single seller as a function of the price*”), 137-138, 126 (“*moment by moment*”), 140-141 (“*revenue per available seat mile, or RASM*”).

EX1005, ¶[0013], ¶[0019] (“*with reference to the merchandise’s distribution market*”), ¶[0035] (“retailer with... low sales progress rate... retailers with... high sales progress rate”; “group

of merchandise among retailers and merchandise planning entities”), cl.4 (“**retailer...** having... low sales progress... retailers having a high sales progress rate”), Fig.3:

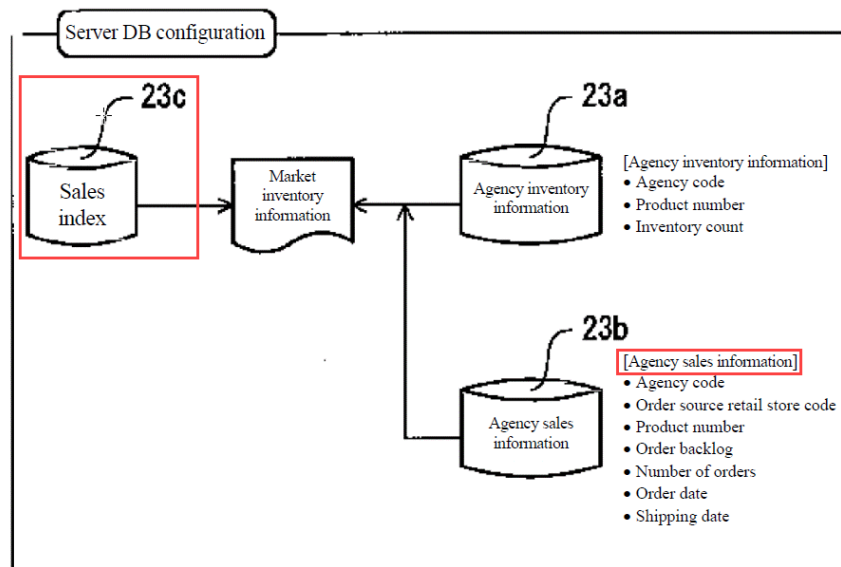
Fig. 3



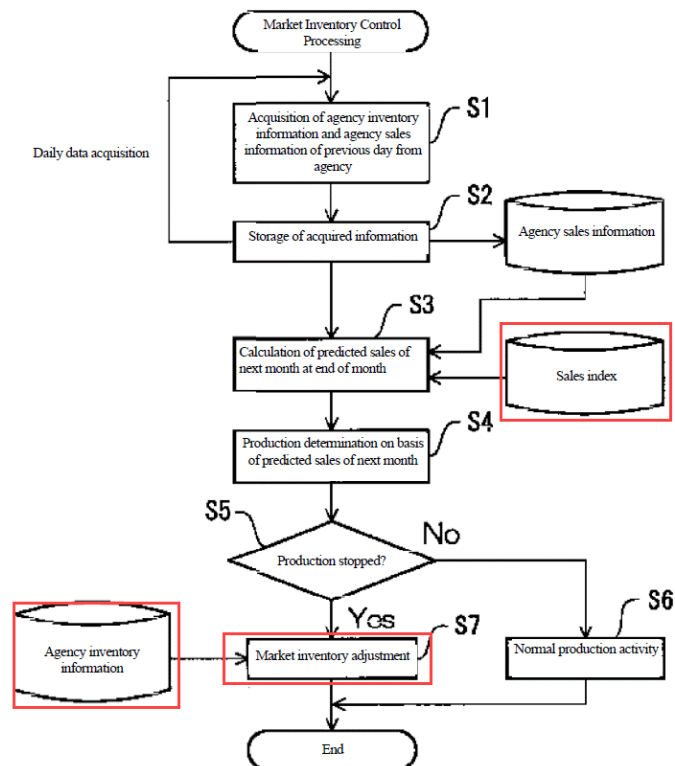
EX1007, ¶[0009] (“**sales analysis at each agency**”; “result”), ¶[0010], ¶[0014], ¶[0025] (“**sales analysis at each agency**”; “**result of the sales analysis**”); ¶[0026], ¶[0030], ¶[0050], cl.1, cl.2, Figs.2-3:

[FIG. 2]

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[FIG. 3]



POSITA would have understood Jacob’s express disclosures of “perform[ing]” price calculations (including “automatically”) using, *e.g.*, code segments, and receiving sale data relating to a sale price of each item (*e.g.*, EX1004, ¶¶[0006], [0010], [0131]-[0133]; cl.4), to apply to performing calculations as to both *prices* and “*inventory*” (*e.g.*, EX1004, ¶¶[0176], [0180])³³ and as requiring calculations of speed/current inventory. *E.g.*, EX1004, ¶[0180], Fig.41; EX1003, ¶388. **POSITA would have understood that Jacob (+combinations) discloses determining a performance indicator in real time (from the most recent “pushed” data (see cl.1[g])) for each participant channel based on at least sale data corresponding to at least one or more additional vendor computing devices (see cl.1[g]). EX1003, ¶389. Alternatively, POSITA have recognized that in order to determine, *e.g.*, “a day within the Rate Type active period is selling more quickly than other[s],” such that, *e.g.*, “inventory” is “selling out”/“sold out”, Jacob necessarily, and thus inherently, performs calculations as to both prices and inventory to determine a performance indicator in real time for**

³³ Jacob thus discloses or at minimum renders obvious cl.2’s additional limitation, *infra*.

each participant channel based on sale data corresponding to at least one or more additional vendor computing devices. EX1003, ¶389.

Even if “real time” required determining a performance indicator relatively quickly/frequently, “real time” in the temporal sense **would have been obvious based on Jacob (+combinations) or Jacob (+combinations) in view of Phillips.** *See* n.16; EX1003, ¶¶390, 392. Phillips discloses “booking control mechanisms that determine moment by moment which fare classes are available for sale” and “within a very short time (typically less than 200 milliseconds) the reservation system needs to send a message whether or not [a reservation] request can be accepted.” *E.g.*, EX1029, 31, 136; EX1003, ¶400. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob’s system (+combinations) using Phillips’s beneficial teachings of determining a performance indicator in real time, in the temporal sense, if required.** EX1003, ¶401. Determining a performance indicator in real time, in the temporal sense, using sale data corresponding to the at least one or more additional vendor computing devices would have beneficially ensured “fresh[er]” data (*e.g.*, EX1004, ¶[0185]) in situations with unexpectedly rapid sales/re-pricing requests and increased the resulting systems’ ability/speed to monitor/track accurately the overall performance of each channel, including total inventory/prices of available inventory, permitting the system to more rapidly take into account data regarding

the overall market to determine a performance indicator for each channel, furthering Jacob's goals (*see* p.31). EX1003, ¶401. For each combination in this narrative, it would have been a routine implementation choice, and clear it would work, providing the expected functionality to yield predictable results with REOS.³⁴ EX1003, ¶¶401, 404, 412, 421.

If further disclosure determining *a performance indicator* is required, **this would have been obvious based on Jacob or Jacob-Phillips (+combinations) in further view of Phillips's, Tamura's, or Kono's disclosures (*see* chart, *supra*).** EX1003, ¶¶402-403, 405, 412, 414, 421. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob's system (+combinations) using (1) Phillips's, (2) Tamura's, or (3) Kono's beneficial teachings of determining a performance indicator automatically,** which would have advantageously yielded a persistent indicator, increasing the system's ability/speed to monitor/track accurately—without user intervention—inventory status and availability at each channel (including across multiple products sold by different vendors within each channel), permitting the system to more rapidly determine/analyze how quickly a channel is selling inventory, and more

³⁴ *See* n.18.

quickly compare/determine whether a channel is selling inventory better than others/at a higher price. EX1003, ¶¶404, 412, 421. This would have furthered Jacob's/Phillips's/Tamura's/Kono's goals (*see* cl.1[pre]; pp.39-40).

1[i] ³⁵	Jacob discloses for each of the one or more participant channels corresponding to the one or more active channel records linked to the channel interface (<i>see</i> cl.1[c]-[d], [f]), adjusting (<i>e.g.</i>, “close the Rate Type... for a given date or a series of dates, for certain channels”; “adjusting prices in response to changes in room inventory”; “price of an unreserved room may be lowered”), via the channel interface (<i>see</i> cl.1[a]), a price of the transportation service (<i>e.g.</i>, “Rate Type... for a given date or a series of dates”; “price”; “selling rate” of inventory related to “the vendor computing device” (<i>see</i> cl.1[a])) by an adjustment factor (<i>e.g.</i>, “discounted rates”; “special discounts”; “[p]romotional discounts”; “promotion rate”; “promotion Rate Type”; “absolute dollar amount”; “percentage off the rate for that Room Type”; “dollar amount off the rate for that Room Type”) if the performance indicator (<i>see</i> cl.1[h]) indicates a performance that fails to meet a performance threshold (<i>e.g.</i>, performance comprising “unreserved”/“vacant” room; “day within the Rate Type active period is” not “selling [as] quickly” as “other days in the period” regarding inventory related to the “at least one or more additional vendor computing devices” (<i>see</i> cl.1[g])). EX1003, ¶¶423-441, 443.
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³⁵ '047 does not require “automatic” performance, including for “adjusting.” *See* n.32; *see also* cl.1[h].

	Phillips discloses automatically/without the need for human intervention (<i>see</i> cl.1[pre]) adjusting the price of an inventory item up or down (<i>e.g.</i>, “<i>forecasting module</i> generates and updates for all products/fare class combinations”, “prices will be updated automatically,” “periodically updat[ing] the prices and/or availabilities [seller] is offering,” “[p]eriodically recalculat[ing] all booking limits based on total bookings and demand expected in each class,” “revenue management [system]... to calculate and... update the booking limits”). EX1003, ¶¶442, 444-451. Tamura discloses for each of the one or more participant channels corresponding to the one or more active channel records (<i>see</i> cl.1[c]-[d]), adjusting (<i>e.g.</i>, “determines the reference retail price for items sold based on the amount of inventory and the number of parts sold during the part period for each item sold” “with reference to the merchandise’s distribution market”), via the channel interface (<i>see</i> cl.1[a]), a price (<i>e.g.</i>, “price”) if the performance indicator (<i>see</i> cl.1[h]) indicates a performance that fails to meet a performance threshold (<i>e.g.</i>, “unfavorable” to “sales volume target” (<i>e.g.</i>, channel has “low sales progress relative to the allocated quantity”)). EX1003, ¶¶452-463. EX1004, ¶¶[0005]-¶¶[0006], ¶¶[0008] (“special discounts”), ¶¶[0078], ¶¶[0082]-¶¶[0083], ¶¶[0121] (“Promotional discounts”), ¶¶[0123]-¶¶[0124], ¶¶[0131]-¶¶[0133], ¶¶[0152] (“Promotion Rate”; “promotion Rate Type”; “absolute dollar amounts”), ¶¶[0153], ¶¶[0176] (“day within the Rate Type active period is selling more quickly than other days in the period”; “adjust the price”; “price of an unreserved room may be lowered”; “vacant”), ¶¶[0180] (“close the Rate Type/Room Type, for a given date or a series of dates, for certain channels”), ¶¶[0185], ¶¶[0191], ¶¶[0224] (“discounted rates”), ¶¶[0225]-¶¶[0227] (“percentage off the rate”),
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¶[0228] (“dollar amount off the rate”), cls.5-6, cl.13 (“*adjusting prices in response to changes in room inventory*”), Figs.5-7³⁶:

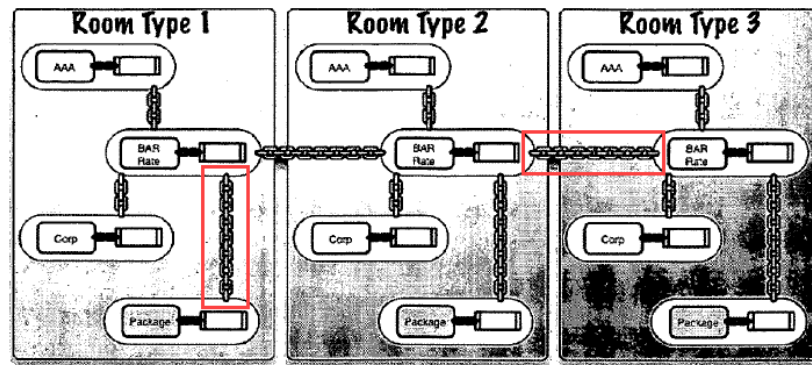


Figure 5

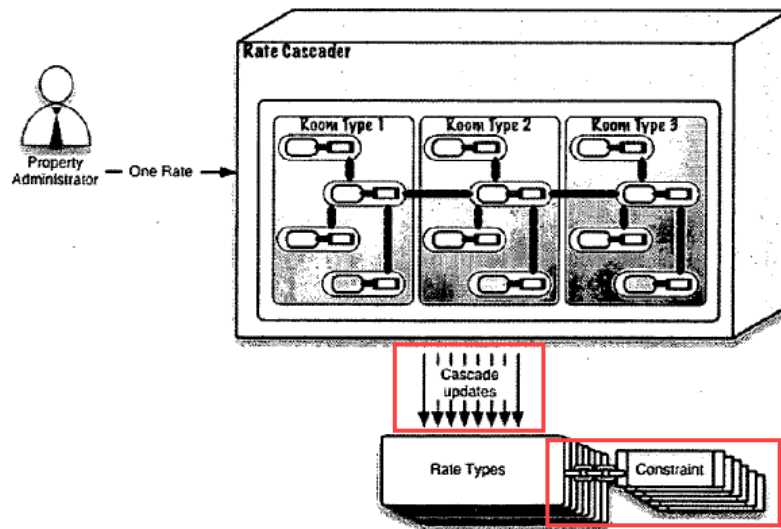


Figure 6

³⁶ Jacob figures 5-6 are cited for obviousness.

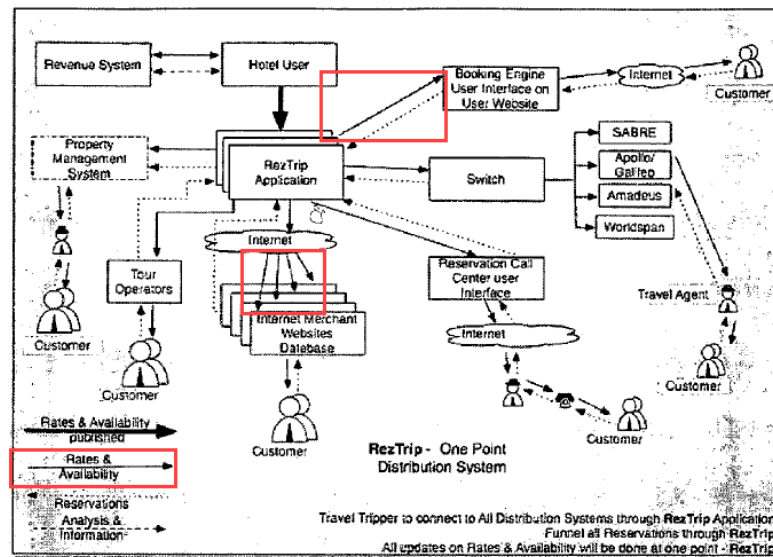
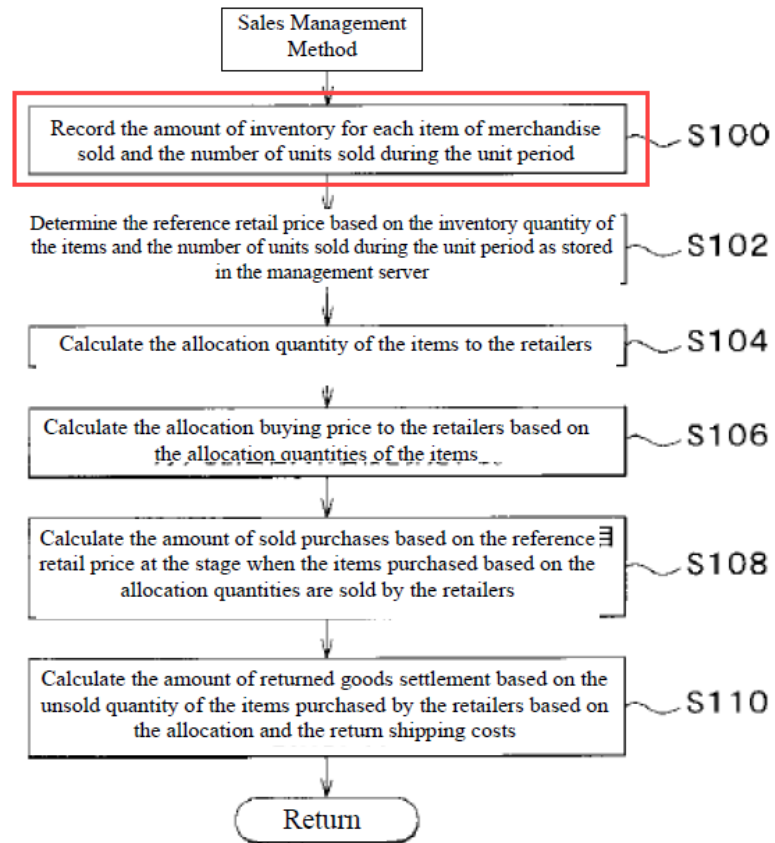


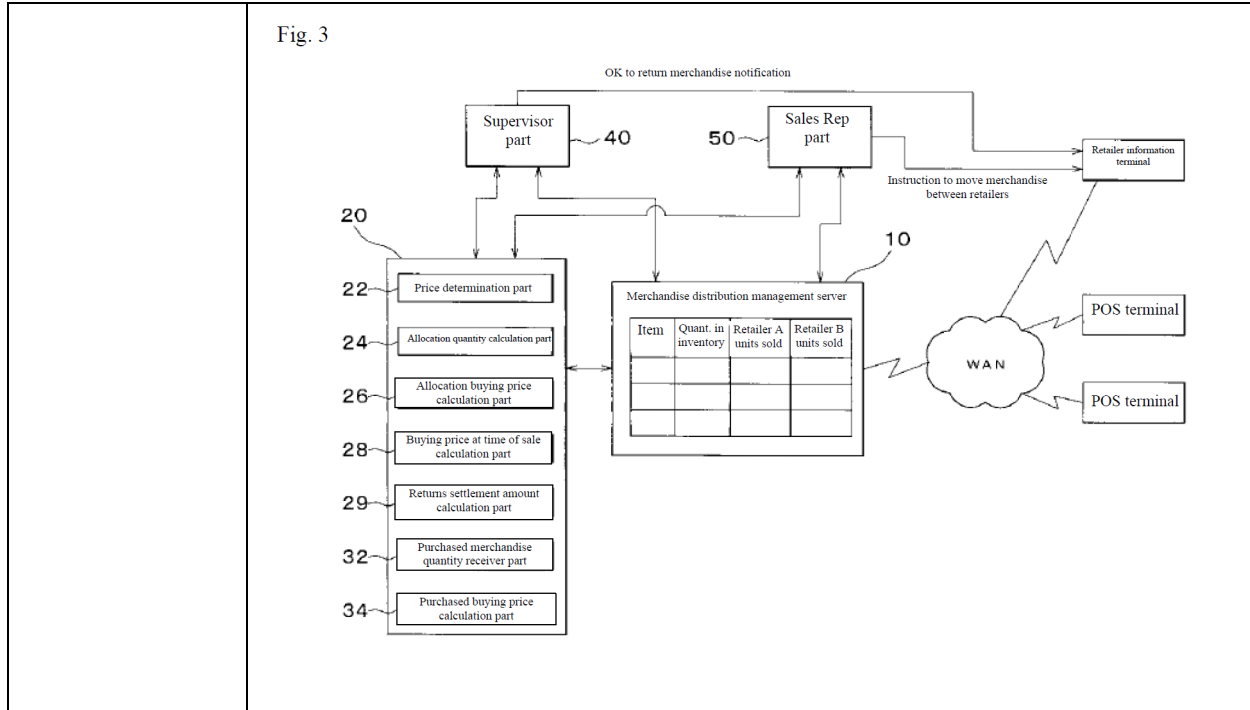
Figure 7

EX1029, 30 (“*prices... updated automatically*”), 134-135 (“*calculate and update the booking limits*”; “*forecasting module generates and updates for all products/fare class combinations*”; “*forecasts... based on current and recent bookings*”), 126, 131 (“*calculate and periodically update booking limits*”), 133, 99, 106-107, 112-113, 79-80, 123-124, 101, 31, 120, 26, 170 (“*Periodically recalculate all booking limits based on total bookings and demand*”), 264 (“*periodically updates the prices and/or availabilities he is offering*”).

EX1005, Means of Solving the Problems (“*determines the reference retail price for items sold based on the amount of inventory and the number of parts sold during the part period for each item sold*”), ¶[0014], ¶[0019] (“*price*”; “*unfavorable*” to “*sales volume target*”; “*with reference to the merchandise’s distribution market*”), ¶[0021]-¶[0022], ¶[0025], cl.1, cl.4 (“*low sales progress relative to the allocated quantity*”), Figs.2-3:

Fig. 2





Jacob discloses “computer program systems” “perform the [invention’s] methods/functions.” EX1004, ¶[0082]-[00083], [0131]-[0133], [0180], [0191], [0006], [0010], cls.6, 31; cl.1[pre]; EX1003, ¶440. **POSITA would have understood this expressly discloses—as an alternative to human-input triggered actions—automatically “adjusting” a price of the transportation service by an adjustment factor if the performance indicator indicates a performance that fails to meet a performance threshold.** EX1003, ¶441.

If further disclosure is required, Jacob in view of Phillips (+combinations) renders obvious carrying out Jacob's functions³⁷ *automatically* (see cl.1[pre]). EX1003, ¶442.

If further disclosure of automatically “**adjusting**” if performance fails to meet a performance threshold is required, **it would have been obvious based Jacob or Jacob-Phillips (+combinations) in view of Tamura** (see chart, *supra*). EX1003, ¶¶452, 461. Tamura discloses “merchandise distribution management server 10 that executes each step” (e.g., EX1005, ¶[0014]), “a price determination part that determines the reference retail price... based on the inventory and the number of items sold during the unit period for each item for sale,” and “announc[ing] to retailers... the current market value of the item for sale, considering the amount of inventory and sales speed (number of units sold in a unit period) of the merchandise,” which POSITA would have understood is the sales progress rate, and “with reference to the merchandise's distribution market,” which POSITA would have understood discloses adjusting based on sale data corresponding to at least one or more additional vendor computing devices (see cl.1[g]). E.g., EX1005, cl.1; see also EX1005, ¶[0019], [0025], Fig.3); EX1003, ¶460. **POSITA**

³⁷ This also applies to, e.g., cls.1[pre]-[h].

would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob or Jacob-Phillips’s system (+combinations) using Tamura’s beneficial teachings of automatically adjusting a price of items if performance fails to meet a performance threshold. EX1003, ¶461.

This would have beneficially furthered Jacob’s/Tamura’s goals (*see* pp.39-40) by, *e.g.*, reducing response time/increasing the system’s speed and ability to account for the result of processing sale data from multiple channels in determining whether/how to adjust price. EX1003, ¶461. It would have been a routine implementation choice, and clear it would work, providing the expected functionality and predictable results with REOS.^{38, 39, 40} EX1003, ¶461.

³⁸ *See* n.18.

³⁹ Tamura discloses two sales channels (“Retailer A,” “Retailer B”). While Jacob provides multi-channel examples, POSITA would have understood their combined disclosures (including adjusting price) applied to two-channel systems. EX1003, ¶462.

⁴⁰ It would have been obvious to modify the recited combinations, *including those with Kono*, using Tamura’s beneficial teachings of automatically adjusting price, beneficially furthering Jacob’s/Tamura’s/Kono’s goals. *See* n.16; EX1003, ¶¶464-466. It would have been a routine implementation choice, and clear it would work,

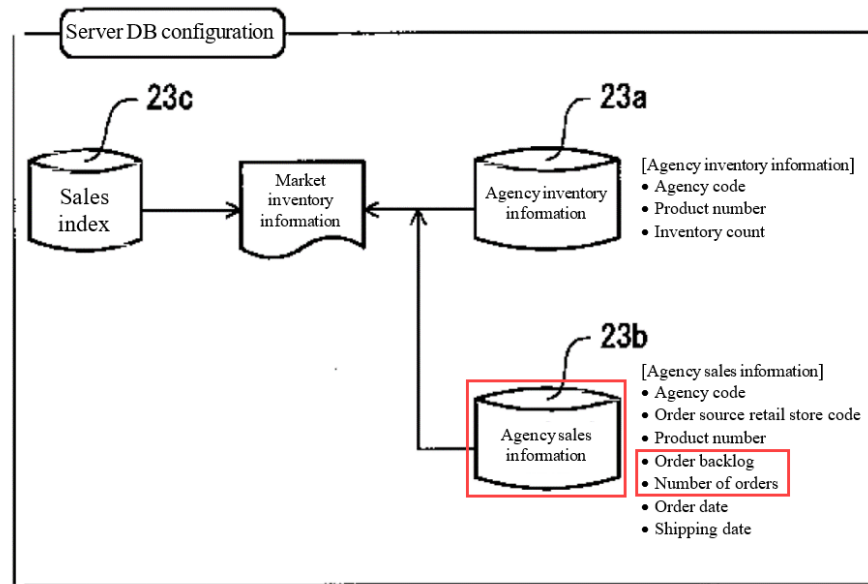
2	Jacob discloses processing the sale data (<i>e.g.</i>, “analyz[ing] the information received from the sales channels”; <i>see</i> cl.1[g], [h]) comprises determining whether or not a supply of transportation services inventory exceeds demand or vice versa per participant channel (<i>e.g.</i>, determining whether/“[i]f a sales channel’s Room Type inventory is sold out”; determining “days that might be selling out soonest”). EX1003, ¶¶467-473. Kono discloses processing the sale data (<i>e.g.</i>, “sales analysis at each agency”; <i>see</i> cl.1[g], [h]) comprises determining whether or not a supply of exceeds demand or vice versa per distribution channel (<i>e.g.</i>, “check[ing] the sales of each agency” to determine if there exists a “backlog of orders” but “products are presently... out of stock”; determining “excess inventory and inventory shortage on the agency side”; determining “agencies having excess inventory”/“agencies having insufficient inventory”). EX1003, ¶¶474-481. EX1004, ¶[0010] (“<i>analyze the information received from the sales channels</i>”), ¶[0131]-¶[0132], ¶[0176] (“<i>days that might be selling out soonest</i>”), ¶[0180] (“<i>If a sales channel’s Room Type inventory is sold out</i>”). EX1007, Summary, ¶[0009] (“<i>sales analysis at each agency</i>”), ¶[0010], ¶[0014], ¶[0042] (“<i>backlog of orders</i>”), ¶[0043] (“checks the sales of each agency”; “<i>backlog of orders</i>”; “<i>products are presently still out of stock</i>”), ¶[0050] (“<i>excess inventory</i>”).
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providing the expected functionality and predictable results with REOS. *See* n.18; EX1003, ¶464.

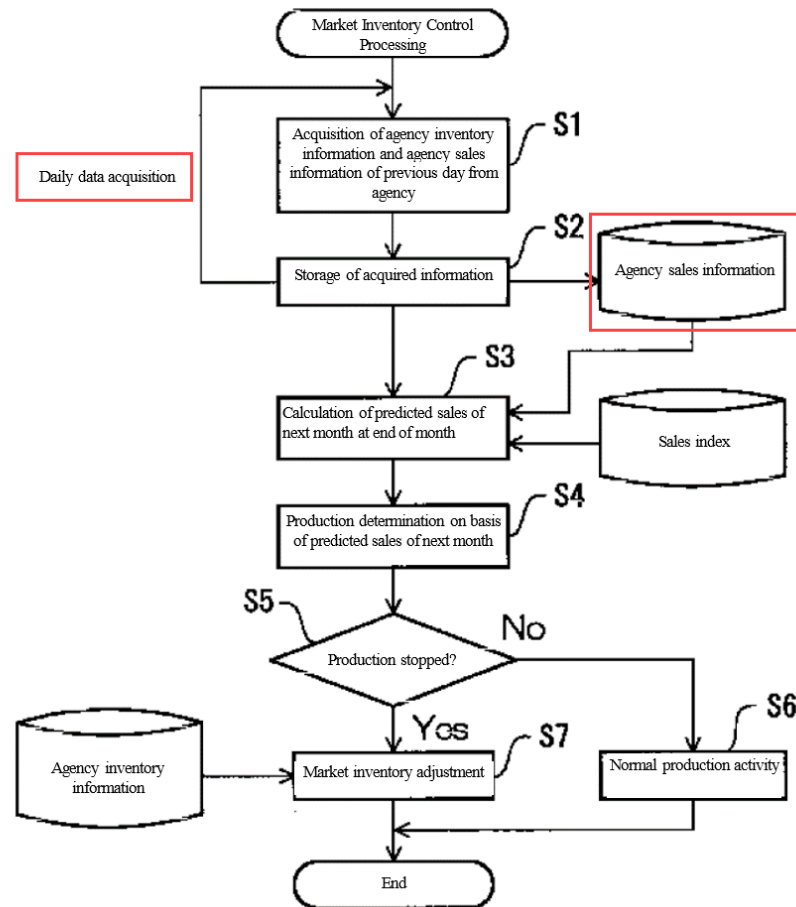
and inventory shortage on the agency side”), ¶[0053] (“agencies having excess inventory”; “agencies having insufficient inventory”), Figs.2-4:

[FIG. 2]

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[FIG. 3]



[FIG. 4]

Good Class.	Product No.	Product Name	Agency Name	Inventory Count	Order Backlog	Shipping Volume	Inventory Date
KC0742	AAAAAA	Sorting pedal bin #40	aaaa	100	0	3	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	bbbb	336	2390	2351	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	cccc	560	20	15	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	dddd	365	1200	1350	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	eeee	10	10	10	8/21/2000
KC0742	AAAAAA	Sorting pedal bin #40	ffff	2500	250	250	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	gggg	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	hhhh	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	iiii	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	jjjj	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	kkkk	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	llll	9	5	10	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	mmmm	45	5	5	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	nnnn	0	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	oooo	9	3	20	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	pppp	5	0	0	8/22/2000
KC0742	AAAAAA	Sorting pedal bin #40	qqqq	96	20	85	8/22/2000

Jacob discloses cl.2's additional limitation. *E.g.*, EX1004, ¶[0180]; EX1003, ¶472. If further disclosure is required, **Jacob (*see* n.33) (+combinations) in view of Kono renders it obvious.** *See* n.16; EX1003, ¶474. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob's system (+combinations) using Kono's beneficial teachings (*see* chart, *supra*) of determining whether or not inventory supply exceeds demand or vice versa per participant channel.** EX1003, ¶481. This would have beneficially increased the system's ability to monitor/track accurately inventory status/availability at each channel, furthering Jacob's/Kono's goals. *See* pp.39-40; EX1003, ¶481. It would have been routine to make this implementation choice, and clear it would work, providing the expected functionality and predictable results with REOS. EX1003, ¶¶481-482.

3	Jacob discloses active channel records are linked to the channel interface (<i>see</i> cl.1[a], [d], [f]). EX1003, ¶¶483-485. Phillips discloses establishing one or more non-participant channels for a transportation service that are known to be inactive (<i>see</i> cl.1[e]). EX1003, ¶¶486-492. EX1029, 126 (“Some products may not be offered through some channels”), 29, 137-138, 79, 31.
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Jacob discloses active channel records are linked to the channel interface.

See cl.1[a], [d], [f]; EX1003, ¶491. Phillips discloses establishing non-participant channels for a transportation service that are known to be inactive. *See* cl.1[c]; EX1003, ¶491. **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob (+combinations) using Jacob's and Phillips's beneficial teachings of not selecting/de-selecting certain channels (*supra*) so the system (+combinations) establishes, via the channel data structure, one or more inactive channel records based upon one or more non-participant channels for the transportation service**, including by establishing channel records of non-participant channels with data reflecting that they are inactive, and not linking such channel records to/omitting such records from the channel interface. EX1003, ¶492. This would have, *e.g.*, beneficially allowed the system to differentiate simply and quickly between channels that are or are not allocated inventory, increasing efficiency and speed of processing regarding relative performance of active/selling channels—including by maintaining records of the inactive channels, but omitting those records from the channel interface for communication between the vendor computing device and the REZTRIP unless and until they become active records (thereby reducing complexity and increasing efficiency by, *e.g.*, reducing the number of linked channel records, saving bandwidth and avoiding unnecessary presentation of material to Property personnel), furthering Jacob's/Phillips's

goals. *See* p.31; EX1003, ¶492. It would have been routine to make such an implementation choice, and clear it would work, providing the expected functionality and predictable results with REOS. EX1003, ¶¶492-493.

(b) Claims 4-6

The arguments and evidence for claims 1-3 include the arguments and evidence establishing claims 4-6 are also unpatentable as obvious based on the same grounds, with certain additions for claim 4 below (EX1003, ¶¶494-574):

4[i] ⁴¹	Jacob discloses for each of the one or more participant channels corresponding to the one or more active channel records linked to the channel interface (<i>see</i> cl.1[c]-[d], [f]), adjusting (<i>see</i> cl.1[i]), via the channel interface (<i>see</i> cl.1[a], [i]), a price of the transportation service (<i>see</i> cl.1[a], [i]) by an adjustment factor (“close the Rate Type... for a given date or series of dates, for certain channels”; <i>see</i> cl.1[i]) if the performance indicator (<i>see</i> cl.1[h], [i]) indicates a performance that meets a performance threshold (“sales channel’s Room Type inventory is sold out or is selling better than other channels”; “day within the Rate Type active period is selling more quickly”; “days that might be selling out soonest”; <i>see</i> cl.1[g], [i]). EX1003, ¶¶529-548. <i>See</i> cl.1[i], discussing Phillips. EX1003, ¶549. Tamura discloses for each of the one or more participant channels corresponding to the one or more active channel
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⁴¹ *See* n.35; *see also* cl.1[h].

records (see cl.1[c]-[d], [i]), **adjusting** (see cl.1[i]), **via the channel interface** (see cl.1[a], [i]), **a price** (see cl.1[i]) **if the performance indicator** (see cl.1[h], [i]) **indicates a performance that meets a performance threshold** (e.g., “favorable” to “sales volume target” (e.g., channel has a “high” “sales progress relative to the allocated quantity”)). EX1003, ¶¶550-564.

EX1004, ¶[0005]-¶[0006], ¶[0008], ¶[0078], ¶[0082]-¶[0083], ¶[0121], ¶[0123]-¶[0124], ¶[0131] (“price”), ¶[0132]-¶[0133], ¶[0152]-¶[0153], ¶[0176], (“*days that might be selling out soonest*”; “*day within the Rate Type active period is selling more quickly than other days in the period*”; “*adjust the price*”), ¶[0180] (“*sales channel’s Room Type inventory is sold out or is selling better than other channels... close the Rate Type/Room Type, for a given date or a series of dates, for certain channels*”), ¶[0185], ¶[0191], ¶[0224]-¶[0228], cls.5-6, cl.13 (“*adjusting prices in response to changes in room inventory*”), Figs.5-7⁴²:

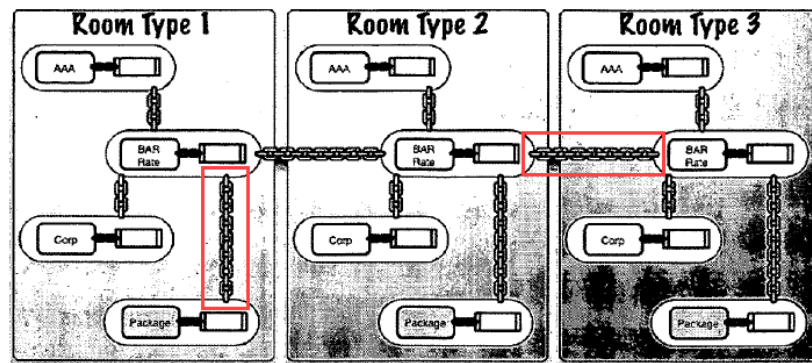


Figure 5

⁴² See n.36.

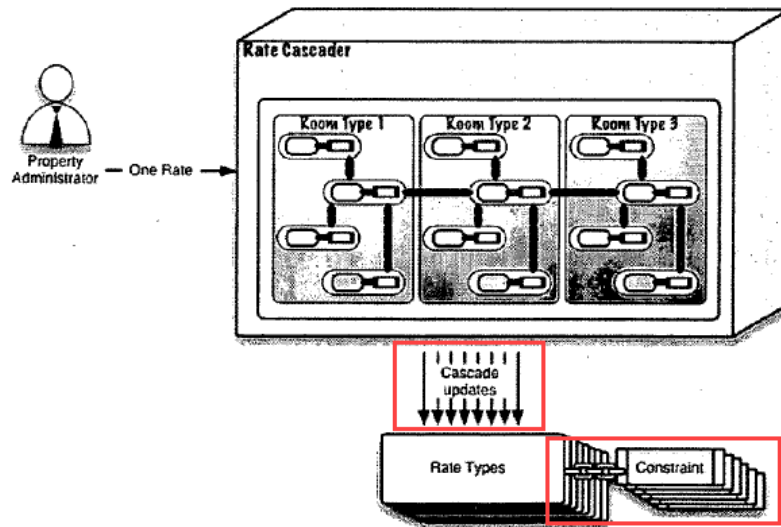


Figure 6

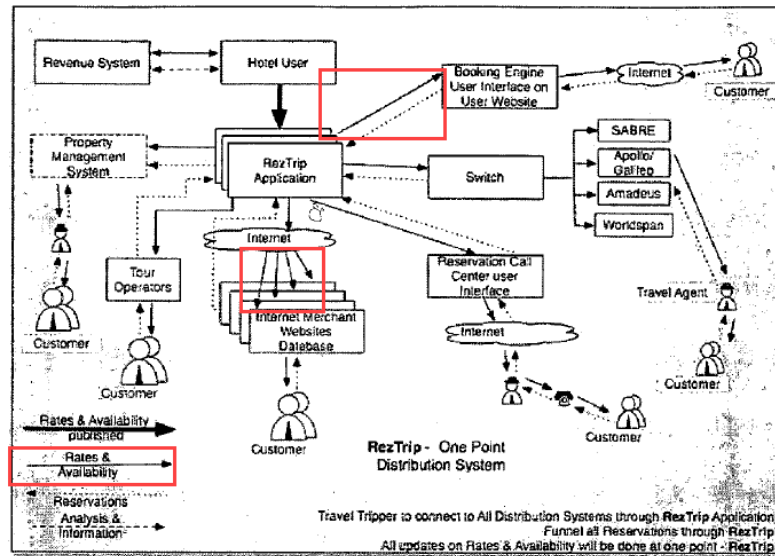


Figure 7

EX1005, Means of Solving the Problems (“*determines the reference retail price for items sold based on the amount of inventory and the number of parts sold during the part period for each item sold*”), ¶[0014], ¶[0019] (“*price*”; “*favorable*” to “*sales volume target*”; “*with reference to the merchandise’s distribution market*”), ¶[0021]-¶[0022], ¶[0025], cl.1, cl.4

(“high” “sales progress relative to the allocated quantity”),
Figs.2-3:

Fig. 2

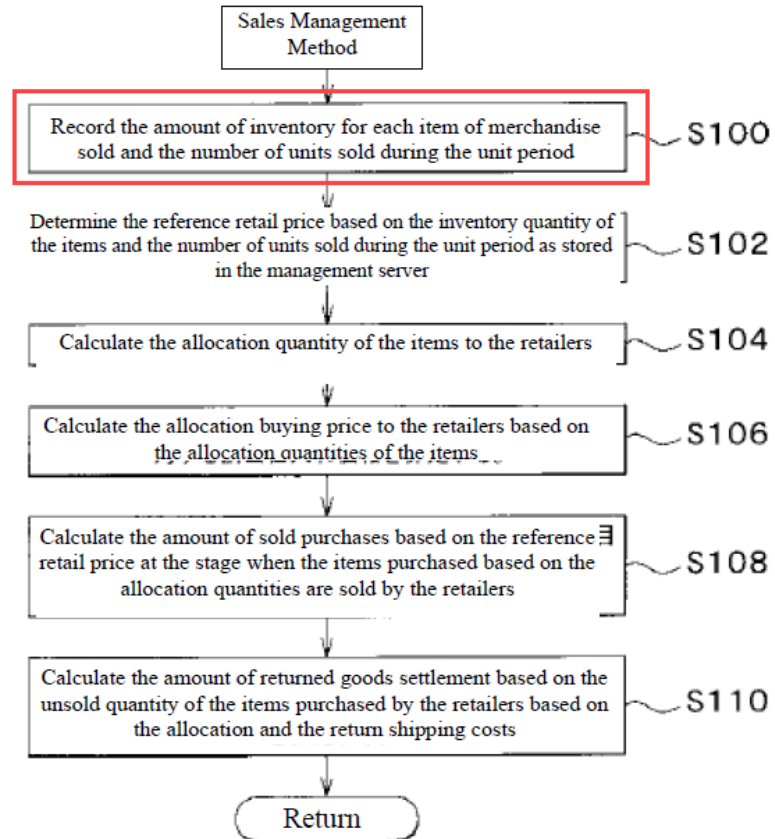
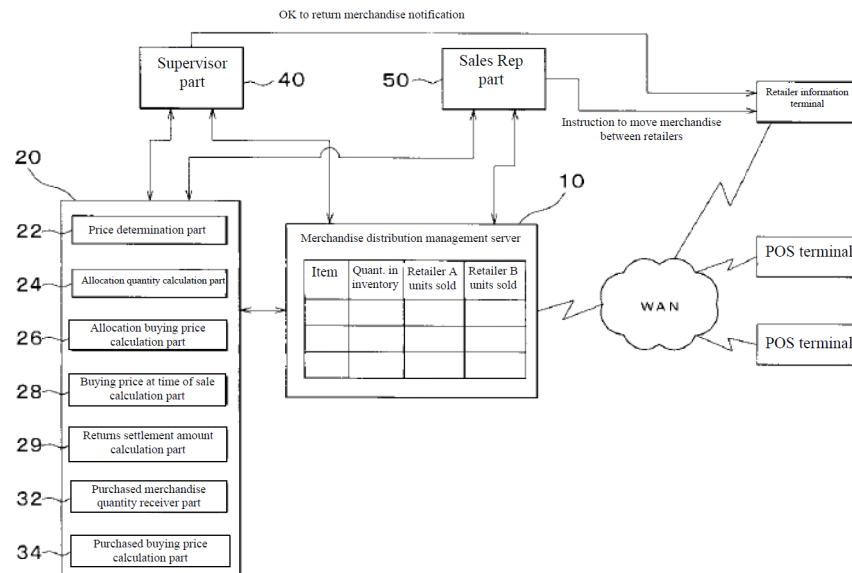


Fig. 3



As to adjusting a price by an adjustment factor if a performance indicator indicates a performance that meets a performance threshold, Jacob discloses, *e.g.*, “clos[ing] the Rate Type... for a given date or series of dates, for certain channels” if, *e.g.*, “sales channel’s Room Type inventory is sold out or is selling better than other channels,” and further discloses determining a “day within the Rate Type active period is selling more quickly”/“days that might be selling out soonest” (*see* cl.1[g], [i]), and communicating price adjustments to both the system’s clients and sales channels. *E.g.*, EX1004, ¶¶[0176], [0180], cl.5-6; EX1003, ¶546. Tamura discloses adjusting price if, *e.g.*, a channel has a “high” “sales progress relative to

the allocated quantity.” *E.g.*, EX1005, Means of Solving the Problems, ¶[0019], cl.4; EX1003, ¶551. *See* cl.1[i].

For the additional limitations of cl.4[i], *see* cl.1[i].

* * *

Petitioner is aware of no evidence from PO of secondary considerations with a nexus to '047, and reserves the right to address any PO raises. *Petroleum Geo-Servs. Inc. v. WesternGeco LLC*, IPR2014-01475, Pap.18, 28 (Mar. 17, 2015). EX1003, ¶575.

VII. THE BOARD SHOULD NOT EXERCISE §314(a) DISCRETION

The *Fintiv* factors do not support denial.

A. Stay Is Likely

Uber intends to move for a stay after institution. The judge assigned in the parallel litigation has granted stays pending IPR where, as here, fact discovery was ongoing and expert discovery had not yet begun. *E.g.*, *Int’l Bus. Machs. Corp. v. Rakuten, Inc.*, No. 21-461-GBW, 2022 WL 17848779, at *12 (D. Del. Dec. 22, 2022); *Cisco Sys. v. Ramot at Tel Aviv Univ., Ltd*, No. 21-1365-GBW, 2023 WL 315615, at *2-3 (D. Del. Jan. 19, 2023). Thus, a stay is likely if IPR is instituted. At minimum, this does not support denial.

B. Median Time to Trial Is Seven Months After Statutory Deadline

The *Interim Procedure for Discretionary Denials* explains “scheduled trial dates are unreliable” and “the PTAB will consider the [district’s] *median* time from filing to disposition....” https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf (June 21, 2022) (“Guidance”), 3, 8. Even when, as here, a trial date is set, *median* time-to-trial (when longer) governs. See *Apple Inc. v. Arigna Tech. Ltd.*, IPR2022-00651, Pap.12, 9-12 (Oct. 6, 2022) (factor weighed against denial where trial scheduled *before* FWD, but *median* time-to-trial about a month *after* deadline). In Delaware, this median was 34.9 months as of September 2022 (EX1017, 14), which *would not yield a trial date* for this June 29, 2022 litigation until approximately *late May, 2025*—approximately *seven months after the estimated October 2024 FWD deadline*. *Novartis Pharms. Corp. v. Shilpa Pharma, Inc.*, IPR2022-00886, Pap.13, 41 (Oct. 26, 2022) (factor weighed against denial where trial scheduled ten days before FWD, but median time-to-trial was “well past the statutory [FWD] date”); *Google LLC v. Jawbone Innovations, LLC*, IPR2022-01060, Pap.12, 12-13 (Jan. 3, 2023) (“*Jawbone*”). This weighs strongly against denial.

C. No Significant Investment in the Parallel Proceeding Because It Is at an Early Stage

The parallel proceeding is at an early stage. The claim construction hearing is not until August, 2023. EX1018, 15. Fact discovery will not close until January, 2024; no expert reports or depositions have been completed; and, but for a Rule 12(c) motion, substantive motion-practice is yet to come. EX1018; *Jawbone*, 13-14. This weighs against denial. *Lite-On Tech. Corp. v. Sensor Elec. Tech., Inc.*, IPR2022-00780, Pap.11, 11 (Oct. 28, 2022); *see also* *Extractiontek Sales LLC v. Gene Pool Techs., Inc.*, IPR2022-00832, Pap.15, 10-11 (Oct. 31, 2022).

D. No Substantial Overlap Between Issues Will Remain

The Grounds herein include references not asserted in litigation, including Franklin (EX1009) and Phillips (EX1029). Additionally, if instituted, Petitioner will not pursue invalidity against the Challenged Claims using any anticipation or obviousness ground that includes the primary reference, Jacob. EX1020; *Western Digital Techs., Inc. v. Viasat, Inc.*, IPR2022-01171, Pap.13, 12 (Dec. 19, 2022) (addressing narrower *Sand Revolution* stipulation); *Ericsson Inc. v. Koninklijke KPN N.V.*, IPR2022-00079, Pap.9, 12-13 (May 25, 2022). And, estoppel will broadly attach once the FWD issues, likely before trial. *Cf. Lite-On*, Pap.11, 12. This weighs against denial.

E. Same Petitioner And Defendant In Parallel Proceeding

Petitioner is the litigation Defendant, favoring institution. *Lite-On*, Pap.11, 12-13.

F. The Petition's Compelling Case

Fintiv factors 1-5 do not favor denial. The Board thus need not reach this factor. *Commscope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Pap.23, 4-5 (Feb. 27, 2023). Nonetheless, the Petition raises a compelling case of unpatentability. This weighs against discretionary denial.

VIII. CONCLUSION

Petitioner requests this Petition be instituted and the Claims found unpatentable/canceled. The Director is authorized to charge any fee deficiency (including for any later paper filed by this firm) to Deposit Account DA604974.

Respectfully submitted:

/s/ Megan Raymond
Megan F. Raymond

April 7, 2023

CLAIM APPENDIX

The claim listing below assigns element labels to the independent claim(s) corresponding to the mappings provided in the Petition.

Limitation	Text
1[pre]	A computer-implemented method of managing online bookings for transportation services inventory, the computer-implemented method comprising:
1[a]	establishing a channel interface that provides bidirectional communication between at least one server computing device and a vendor computing device;
1[b]	storing, via a channel data structure, a channel record for each of a plurality of distribution channels;
1[c]	receiving, from the vendor computing device through the channel interface, a selection, from the plurality of distribution channels, of one or more participant channels for a transportation service;
1[d]	establishing, via the channel data structure, one or more active channel records based upon the one or more participant channels for the transportation service;
1[e]	establishing, via the channel data structure, one or more inactive channel records based upon one or more non-participant channels for the transportation service;
1[f]	linking the one or more active channel records to the channel interface;
1[g]	receiving, in real time for the one or more participant channels corresponding to the one or more active channel records linked to the channel interface, sale data corresponding to at least one or more additional vendor computing devices;
1[h]	determining a performance indicator in real time, for each of the one or more participant channels corresponding to the one or more active channel records linked to the channel interface, based at least on

	the sale data corresponding to said at least one or more additional vendor computing devices;
1[i]	and for each of the one or more participant channels corresponding to the one or more active channel records linked to the channel interface, adjusting, via the channel interface, a price of the transportation service by an adjustment factor if the performance indicator indicates a performance that fails to meet a performance threshold.
2	The computer-implemented method of claim 1, wherein the processing the sale data comprises determining whether or not a supply of transportation services inventory exceeds demand or vice versa per participant channel.
3	The computer-implemented method of claim 1, wherein the one or more active channel records are linked to the channel interface without the one or more inactive channel records.
4[pre]	A computer-implemented method of managing online bookings for transportation services inventory, the computer-implemented method comprising:
4[a]	establishing a channel interface that provides bidirectional communication between at least one server computing device and a vendor computing device;
4[b]	storing, via a channel data structure, a channel record for each of a plurality of distribution channels;
4[c]	receiving, from the vendor computing device through the channel interface, a selection, from the plurality of distribution channels, of one or more participant channels for a transportation service;
4[d]	establishing, via the channel data structure, one or more active channel records based upon the one or more participant channels for the transportation service;

4[e]	establishing, via the channel data structure, one or more inactive channel records based upon one or more non-participant channels for the transportation service;
4[f]	linking the one or more active channel records to the channel interface;
4[g]	receiving, in real time for the one or more participant channels corresponding to the one or more active channel records linked to the channel interface, sale data corresponding to at least one or more additional vendor computing devices;
4[h]	determining a performance indicator in real time, for each of the one or more participant channels corresponding to the one or more active channel records linked to the channel interface, based at least on the sale data corresponding to said at least one or more additional vendor computing devices;
4[i]	and for each of the one or more participant channels corresponding to the one or more active channel records linked to the channel interface, adjusting, via the channel interface, a price of the transportation service by an adjustment factor if the performance indicator indicates a performance that meets a performance threshold.
5	The computer-implemented method of claim 4, wherein the processing the sale data comprises determining whether or not a supply of transportation services inventory exceeds demand or vice versa per participant channel.
6	The computer-implemented method of claim 4, wherein the one or more active channel records are linked to the channel interface without the one or more inactive channel records.

CERTIFICATION UNDER 37 CFR §42.24(d)

Pursuant to 37 CFR §42.24(d), the undersigned certifies that this Petition complies with the type-volume limitation of 37 CFR §42.24(a). The word count application of the word processing program used to prepare this Petition indicates that the Petition contains 13,989 words, excluding the parts of the brief exempted by 37 C.F.R. §42.24(a).

Respectfully submitted:

/s/ Michael Milea
Michael F. Milea

April 7, 2023

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the following documents has been served in its entirety on the patent owner as provided in 37 CFR §42.105:

Petition For *Inter Partes* Review of United States Patent No. 11,475,047 and accompanying exhibits:

Exhibit	Description
EX1001	U.S. Patent No. 11,475,047
EX1002	U.S. Patent No. 11,475,047 File History
EX1003	Declaration of Dr. Amelia Regan
EX1004	U.S. Patent Pub. No. 2007/0075136 (“Jacob”)
EX1005	Certified Translation of Japanese Patent Application Publication JP 2005-332346 (“Tamura”)
EX1006	Japanese Patent Application Publication JP 2005-332346
EX1007	Certified Translation of Japanese Patent Application Publication JP 2002-104622 (“Kono”)
EX1008	Japanese Patent Application Publication JP 2002-104622
EX1009	Franklin & Zdonik, “Dissemination-Based Information Systems,” <i>“Bulletin of the Technical Committee on Data Engineering,”</i> Vol. 19, No. 3 (September 1996) (“Franklin”)
EX1010	U.S. Patent No. 7,996,265 (“Evangelist”)
EX1011	U.S. Patent No. 7,894,936 (“Walker”)
EX1012	U.S. Patent Pub. No. 2006/0085296 (“Strickland”)
EX1013	U.S. Patent Pub. No. 2002/0186144 (“Meunier”)
EX1014	U.S. Patent No. 8,050,976 (“Staib”)
EX1015	U.S. Patent No. 8,051,015 (“Veit”)
EX1016	U.S. Provisional Patent App. No. 60/737,071 (“Staib Provisional Application”)
EX1017	<i>U.S. District Courts—National Judicial Caseload Profile, available at https://www.uscourts.gov/sites/default/files/data_tables/fcms_na_distprofile0930.2022.pdf (September 30, 2022)</i>

EX1018	Dkt. 34 (Scheduling Order), Dkt. 49 (Stipulation to Extend Time), Dkt. 55 (Stipulation to Extend Time), <i>SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber</i> , No. 1:22-cv-00882-GBW
EX1019	Declaration of Sayem Osman on April 3, 2023
EX1020	March 27, 2023 Email re: SurgeTech, LLC v. Uber Technologies, Inc. (Fintiv Stipulation)
EX1021	Defendant Uber Technologies, Inc.’s Identification of Claim Constructions, <i>SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber</i> , No. 1:22-cv-00882-GBW
EX1022	Plaintiff SurgeTech LLC’s Responses and Proposed Constructions to Defendant Uber Technologies, Inc.’s Identification of Claim Constructions, <i>SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber</i> , No. 1:22-cv-00882-GBW
EX1023	OMITTED
EX1024	March 22, 2023 Affidavit of Nathaniel E. Frank-White (regarding Franklin)
EX1025	IEEE Technical Committee on Data Engineering, Data Engineering Bulletin Issues, available at http://sites.computer.org/debull/bull_issues.html
EX1026	Choi, S. and Kimes, S., “Electronic Distribution Channels’ Effect on Hotel Revenue Management,” <i>Cornell Hotel and Restaurant Administration Quarterly</i> , Vol.43, Issue 2, June 2002.
EX1027	Listing of Issues of <i>Cornell Hotel and Restaurant Administration Quarterly</i> , available at https://www.sciencedirect.com/journal/the-cornell-hotel-and-restaurant-administration-quarterly/issues .
EX1028	Screenshot of https://journals.sagepub.com/doi/abs/10.1177/0010880402433002 showing Electronic Distribution Channels’ effect on Hotel Revenue Management
EX1029	Excerpts of Phillips, R., “Pricing and Revenue Optimization” (2005) (“Phillips”)
EX1030	OMITTED
EX1031	Excerpts of Phillips, R., “Pricing and Revenue Optimization” (2005) from Library of Congress from Copies 1 and 2 (including March 27 and 28, 2023 Declarations of Kyle Noreiga)

EX1032	March 22, 2023 Affidavit of Nathaniel E. Frank-White (regarding Phillips)
EX1033	Excerpts of Phillips, R., “Pricing and Revenue Optimization” (2005) from George Washington University Library
EX1034	Gelman Library at George Washington University MARC Record for EX1033
EX1035	Library of Congress Catalog Record for EX1031
EX1036	University of Washington Catalog Record for EX1029
EX1037	OMITTED
EX1038	U.S. Patent No. 11,334,598
EX1039	Dkt.63, Plaintiff SurgeTech LLC’s and Defendant Uber Technologies, Inc.’s Joint Claim Construction Chart, <i>SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber</i> , No. 1:22-cv-00882-GBW

The copy has been served on April 7, 2023 by causing the aforementioned document to be mailed by Priority Mail Express to the following attorneys of record for patent owner listed below:

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Dated: April 7, 2023

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Sayem Osman