

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UBER TECHNOLOGIES, INC.,
Petitioner

v.

SURGETECH LLC,
Patent Owner

Case IPR2023-00737
Patent 11,360,999

**PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 11,360,999**

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Exhibit	Description
EX1001	U.S. Patent No. 11,360,999
EX1002	U.S. Patent No. 11,360,999 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”)
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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
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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
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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	Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, Exhibit B, <i>SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber</i> , No. 1:22-cv-00882-GBW
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 1-10 (“Claims”) of U.S. Pat. 11,360,999 (“’999”), 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 ’999’s earliest-claimed May 18, 2006 priority date:³ ***receiving sale data*** pertaining to inventory items allocated to respective distribution channels, ***processing*** that data, and ***adjusting price and/or allocation*** of such inventory based on the results. The Claims’ remaining limitations merely catalog trivial implementation choices well understood by “POSITA”⁴—and the resulting combinations were certainly obvious.

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.

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

I. '999 PATENT

'999 issued from App. 16/924,395 (EX1002) and states it relates to a “method of managing inventory allocations includ[ing] the steps of receiving, in a data processing apparatus, data relating to the sale of items of inventory allocated to respective re-sellers.” EX1001, Abstract. The “dat[a] is processed to obtain data relating to sales performance of one or more of the respective re-sellers” before adjusting price and/or re-allocating inventory in the channels. *See, e.g.*, EX1001, Abstract, Fig.1; EX1038, cl.24 (requiring user input) (related patent); EX1003, ¶¶75-82, 84:

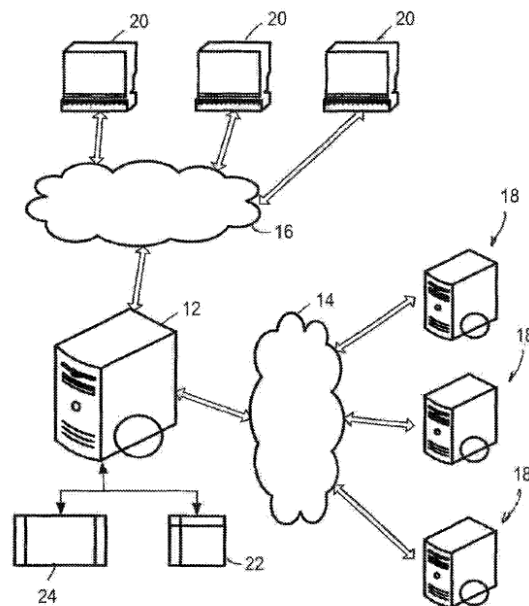


FIG. 1

'999's claims generally require receiving and processing sale data pertaining to inventory items allocated to the channels, and adjusting price and/or re-allocating items among channels. EX1001, Abstract.

II. BACKGROUND OF THE ART

'999's claimed concepts were well-known before its earliest-claimed 2006 priority date. *See* EX1003, ¶¶21-39. *E.g.*:

Receiving sale data in real time or near real time, from distribution channels, and relating to the sale of inventory items allocated to the respective channels was found throughout the art. *E.g.*,: EX1004 (**Jacob**)⁵ EX1004, ¶¶[0005] [0009]-[0010], [0086], [0192], Fig. 7; EX1005 (**Tamura**)⁶ ¶¶[0014], [0017], [0022], [0024]-[0025], cl.5, Figs.1-3; EX1007 (**Kono**)⁷ ¶¶[0010], [0014]; *see also id.* ¶¶[0026] (“number of orders”), [0042] (“shipment count... at agencies”);

⁵ *See* VI.C.1.

⁶ *See* VI.C.3.

⁷ *See* VI.C.4.

EX1010 (**Evangelist**)⁸ 5:20-26, Figs.1-2; EX1009 (**Franklin**)⁹ ¶¶[0002], [0029]; (**Phillips**)¹⁰ EX1029, 7, 30, 33, 123, 126, 135-136; EX1003, ¶¶40-47.

Receiving data cyclically, including by scheduled push at regular intervals was also well-known. E.g., EX1009, ¶[0018]-[0019], [0021], Fig. 1 (especially Push→Periodic→P-to-P); EX1003, ¶45.

As discussed below, '999's other claimed features were also well known, and combining them would have been obvious. *E.g.:*

*Processing sale data by carrying out calculations to obtain a performance rating for each distribution channel; see EX1003, ¶¶48-53. E.g., EX1005, ¶¶[0013], [0035] (retailer where “product... **not selling well**”), cl.4, Figs.2-3; EX1007, ¶¶[0009]-[0010], [0014], [0025], cls.1, 3, Figs.2-3; EX1010, 5:26-32, cls.7, 15-16, 23; **including processing sale data cyclically to do so.** EX1004, ¶¶[0010], [0131]-[0133], [0180], [0185], Fig.7; EX1003, ¶49.*

Querying whether the performance rating of each distribution channel is greater than a performance rating of other distribution channels; see EX1003,

⁸ See VI.C.5.

⁹ See VI.C.7.

¹⁰ See VI.C.2.

¶¶54-57. *E.g.*, EX1004, ¶[0180]; EX1005, cl.4, ¶¶[0013]-[0014], [0035], Figs.2-3; EX1007, Summary, ¶¶[0009]-[0010], [0014], [0025]-[0026], cl.1, 3, Figs.2-3.

Based on the query, adjusting a price of inventory; see EX1003, ¶¶58-65.
E.g.: EX1004, ¶¶[0074], [0180], Fig.7, cl.13; *see infra*, cl.9[e]-[g]; EX1005, Means of Solving the Problem, ¶¶[0019], [0025], cl.1, Figs.2-3; EX1011 (U.S. Pat. 7,894,936 (filed October 15, 2004)), 5:34-37; EX1014 (U.S. Pat. 8,050,976 (provisional filed November 15, 2005)), 3:57-4:7, 5:33-36; *see also* EX1016, 3-4, 6; EX1015 (U.S. Pat. 8,051,015 (filed July 28, 2004)), 2:15-22; EX1029, 26, 101.

And/or based on the query, re-allocating inventory items between the distribution channels; see EX1003, ¶¶66-72. *E.g.*: EX1004, ¶¶[0180], [0185], [0191], cls.5-6, Fig.7; EX1005, ¶¶[0013], [0035], cl.4, Fig.3; EX1007, ¶[0009], Summary, ¶¶[0010], [0014], [0025], [0045] (“maker-side device... instructs... re-sale of... product from... agency ‘ffff’ to... agency ‘bbbb’”), [0046], cl.1, Fig.3; EX1010, 6:53-57, 7:53-61; EX1012 (U.S. Pub. 2006/0085296 (published April 20, 2006)), ¶[0029]; *see also* EX1029, 80, 101.

’999 itself concedes processors, non-transitory computer-readable storage media, and databases/data structures for storing information were also well-known. *E.g.*, EX1001, 12:16-17, 15:15-17, 36:53-56, 37:30-36, 37:13-15, 42:41-55;

EX1004, ¶¶[0082]-[0083]; EX1010, 4:9-18, 4:36-61; EX1011, 3:34-42, 3:55-4:17;
see also EX1003, ¶¶73-74.

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 '999 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 '999 (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.). Uber has challenged, in IPR2023-00735, IPR2023-00736, and will be challenging in IPR2023-00738, certain claims of the other patents asserted against Uber.

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IV. STANDING (§42.104(a))

Petitioner certifies '999 is eligible for, and Petitioner is not barred or estopped from requesting, IPR. Petitioner was served a Complaint asserting infringement of '999 on July 1, 2022.

V. GROUNDS (§§42.22 and 42.104(b))

Claims 1-3, 5, and 9-10 are rendered obvious by Jacob in view of Phillips and Franklin (**Ground 1**), Jacob in view of Phillips, Franklin, and Evangelist (**Ground 2**), Jacob in view of Phillips, Franklin, Evangelist, and Kono (**Ground 5**), and Jacob in view of Phillips, Franklin, and Kono (**Ground 8**). **Claims 1-3 and 5-10** are rendered obvious by Jacob in view of Phillips, Franklin, Evangelist, and Tamura (**Ground 3**), Jacob in view of Phillips, Franklin, Evangelist, Tamura, and Kono (**Ground 4**), Jacob in view of Phillips, Franklin, and Tamura (**Ground**

6), and Jacob in view of Phillips, Franklin, Tamura, and Kono (**Ground 7**). **Claim 4** is rendered obvious by Jacob in view of Phillips, Franklin, Evangelist, Tamura, and Addington (**Ground 9**), Jacob in view of Phillips, Franklin, Evangelist, Tamura, Kono, and Addington (**Ground 10**), Jacob in view of Phillips, Franklin, Tamura, and Addington (**Ground 11**), and Jacob in view of Phillips, Franklin, Tamura, Kono, and Addington (**Ground 12**). EX1003, ¶¶100, 655.

§VI.C.9 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 Construction¹¹

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

¹¹ 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). In litigation Petitioner identified as indefinite certain terms (*e.g.*, “*near* real time”) with unclear outer boundaries, and understands PO disagrees. Because the asserted art

and customary meaning as understood by POSITA. Petitioner additionally applies the constructions below:

“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, 10:54-11:5 (“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...”), 36:67-37:3, Fig.4 (84 to 82 arrow). *See also* EX1039, 5.

“carrying out at least one of the following steps: adjusting...; and re-allocating...” (all): consistent with PO’s litigation interpretation (EX1037, 3) and PO’s interpretation during prosecution of a related application of “at least one of” (EX1002, 767, 777), this requires *either* adjusting *or* re-allocating. EX1001, Figs.2-3 (esp. step 52), 4:32-36, 6:9-11, 7:1-12; *Dealertrack, Inc. v. Huber*, No.

falls within these terms without implicating their outer contours (*e.g.*, disclosing real time), this is no obstacle here (where indefiniteness cannot be raised). *See id.*; *Mylan Pharms. Inc. v. Horizon Pharma USA*, IPR2017-01995, Pap. 20 (Mar. 28, 2019) at 5-6 (Board “need not necessarily determine [claim’s] outer boundaries” to address anticipation, obviousness).

06-cv-2335, 2008 WL 5792509, at *7 (C.D. Cal. Sept. 27, 2008) (disjunctive because “at least one of is followed by a colon, and then a list separated by semicolons” and “grammatical structure”); *Power-One, Inc. v. Artesyn Techs., Inc.*, No. 2:05-cv-463, 2007 WL 896093, at *14 (E.D. Tex. Mar. 22, 2007) (disjunctive because “specification teaches embodiments that do not require each category of the enumerated set”).

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 inventory, or the equivalent. Additional 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.” EX1004, Abstract, ¶¶[0006], [0082].

The system 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:

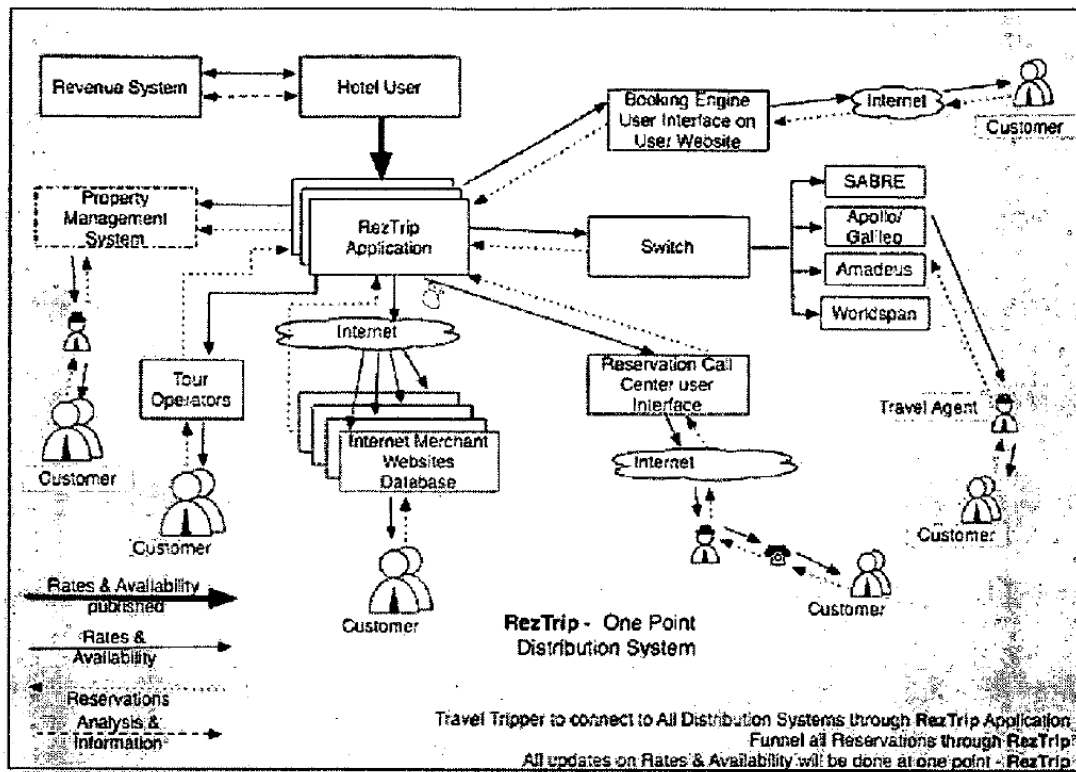


Figure 7

EX1003, ¶¶101-106.

The system enables time-dependent inventory administration by configuring pricing and inventory information. EX1004, ¶¶[0007], [0066], [0191]. “[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]. 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.* ¶¶[0191], [0176], [0009]. EX1003, ¶¶107-111.

Jacob discloses configuring the system “to perform calculations automatically” (e.g., EX1004, ¶[0132]; *see n.26*), and, “in response to a triggering event,” “sen[ding]” “updated pricing and availability inf[o]rmation... to selling channels electronically over wired or wireless networks....” EX1004, ¶[0191]; *see also id.*, cl.6; EX1003, ¶108.

2. Phillips (EX1029)

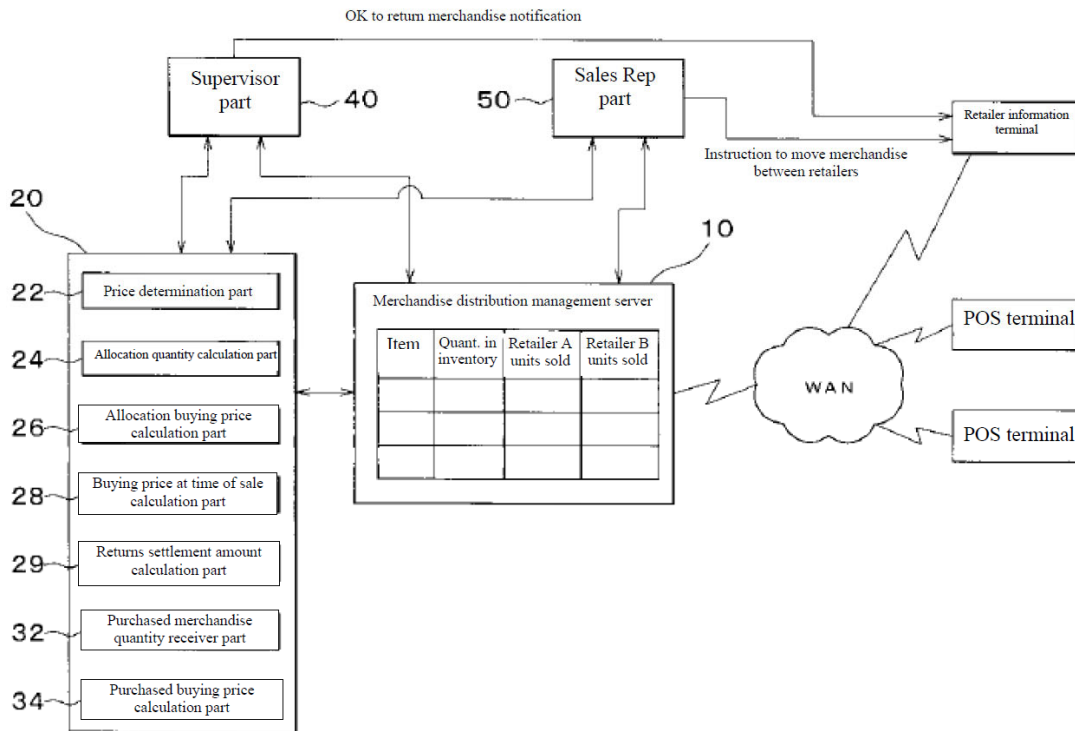
Phillips (“Pricing and Revenue Optimization”) is prior art under at least pre-AIA §102(a). Stanford Business Books published Phillips in 2005. EX1029, p.5 (2005 copyright, ISBN0804746982), p.98 (9/2005 and 3/2006 due date stamps); EX1031, 9 (2005 copyright, 10/17/05 copyright office stamp, ISBN0804746982); EX1032, 5 (Stanford University Press indicating “available online” 9/11/05); EX1033, 7; EX1034; EX1003, ¶112. Phillips discloses the basic economics underlying pricing decisions, and explains “[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. 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; EX1003, ¶112, and “determin[ing] moment by moment which fare classes are available,” *id.* 136. Phillips further explains that maximizing expected net revenue (or “expected net contribution”) involves accounting for incremental costs presented by the different sales channels, including, *e.g.*, “commissions.” EX1029, 136-138; EX1003, ¶112.

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]. To do so, Tamura “determines the reference retail price for items sold based on the amount of inventory and the number of [each] part[] sold,” which Tamura receives from “point-of-sale (POS) terminals... in each retail store” and stores in “merchandise distribution management server 10.” EX1005, ¶¶[0010], [0014], [0017]; Fig.3:

Fig. 3



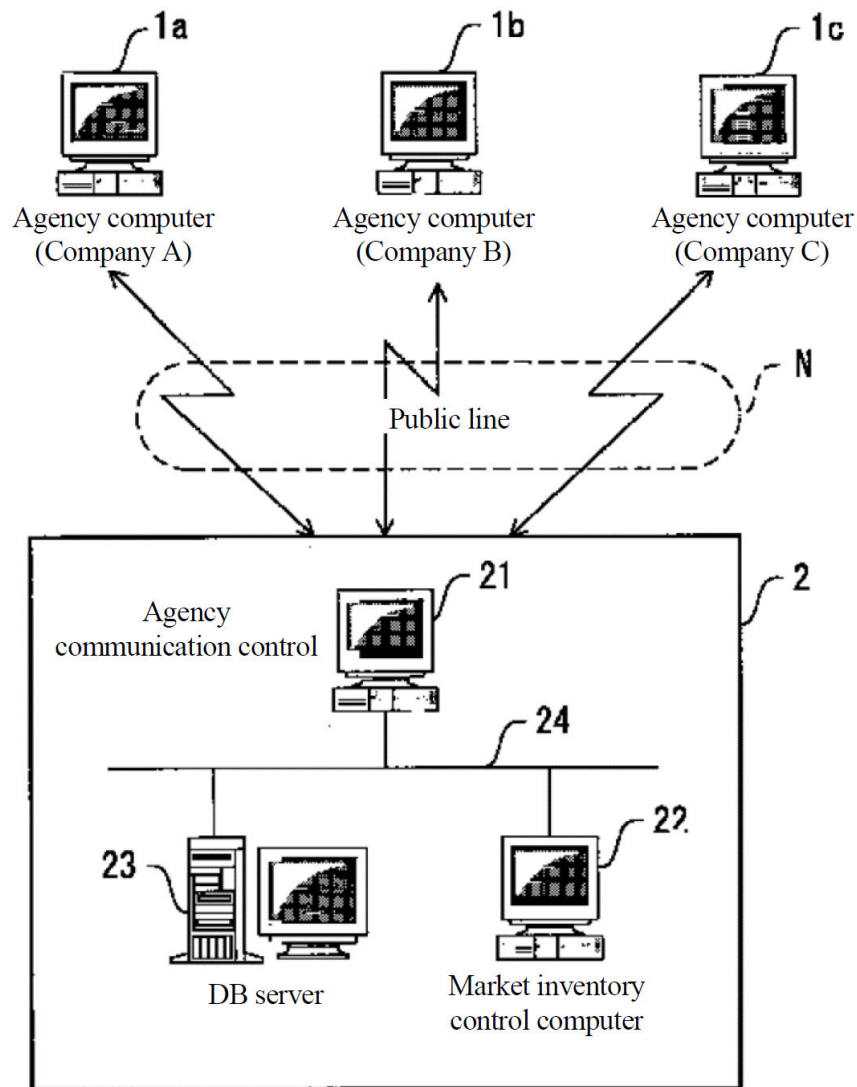
E.g., “if the number of units sold during the... period is favorable to the sales volume target, the price determination part 22 takes a strong attitude toward the reference retail price, and if... unfavorable, it takes a weak attitude... or plans a sales promotion strategy.” EX1005, ¶[0019].

Tamura’s system determines “sales progress rate” for multiple channels (*e.g.*, “retailers”), and “transfer[s] the items from retailers having a low sales progress rate relative to the allocated quantity to retailers having a high sales progress rate.” EX1005, cl.4; *see also id.* ¶¶[0013], [0035], Fig.3; EX1003, ¶¶113-116.

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—such that “product inventory information of each agency is controlled by a manufacturer server device.” EX1007, ¶¶[0009], [0024]; Fig.1:

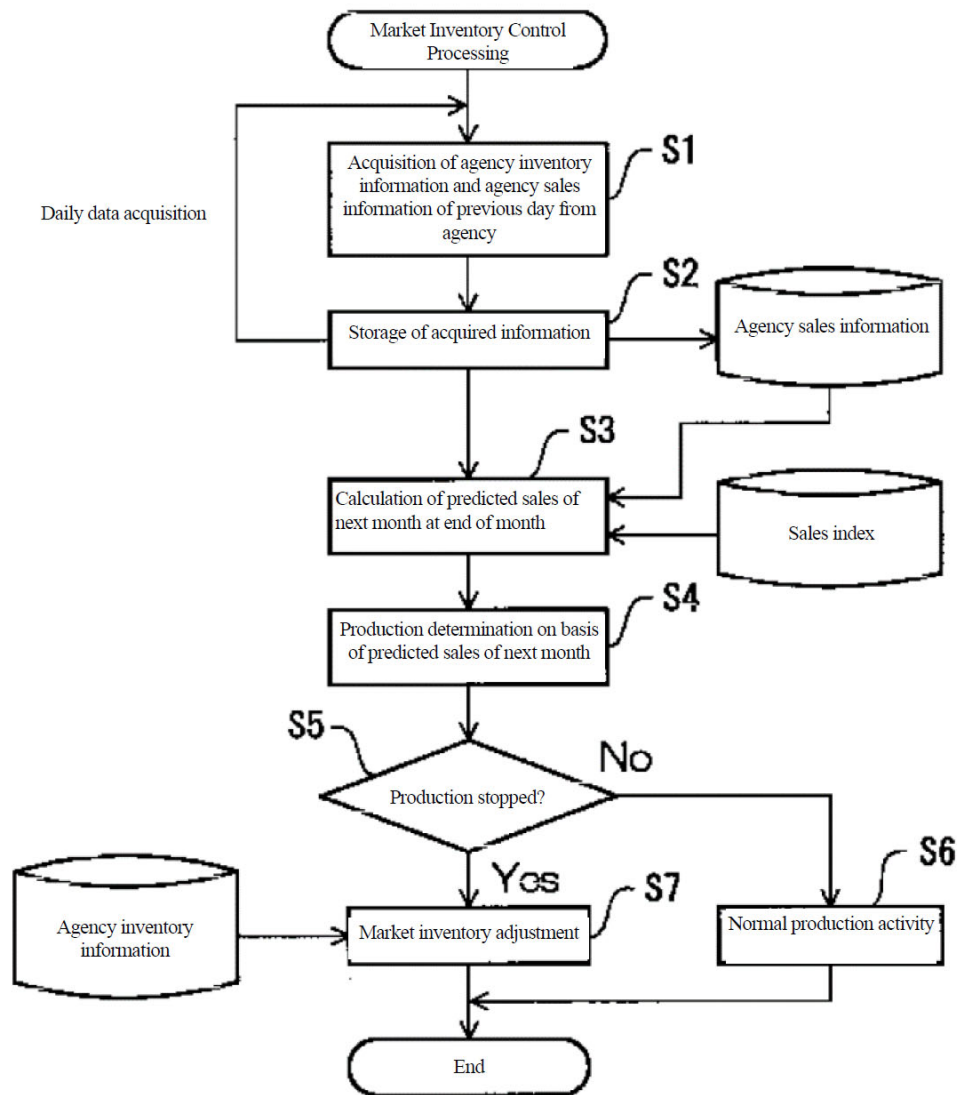
[FIG. 1]



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,” and, “as a result,” “instruct[s] transfer of inventory product from the agency where sales have fallen to an agency that still sells.” EX1007,

¶¶[0009], [0045]; Fig.3:

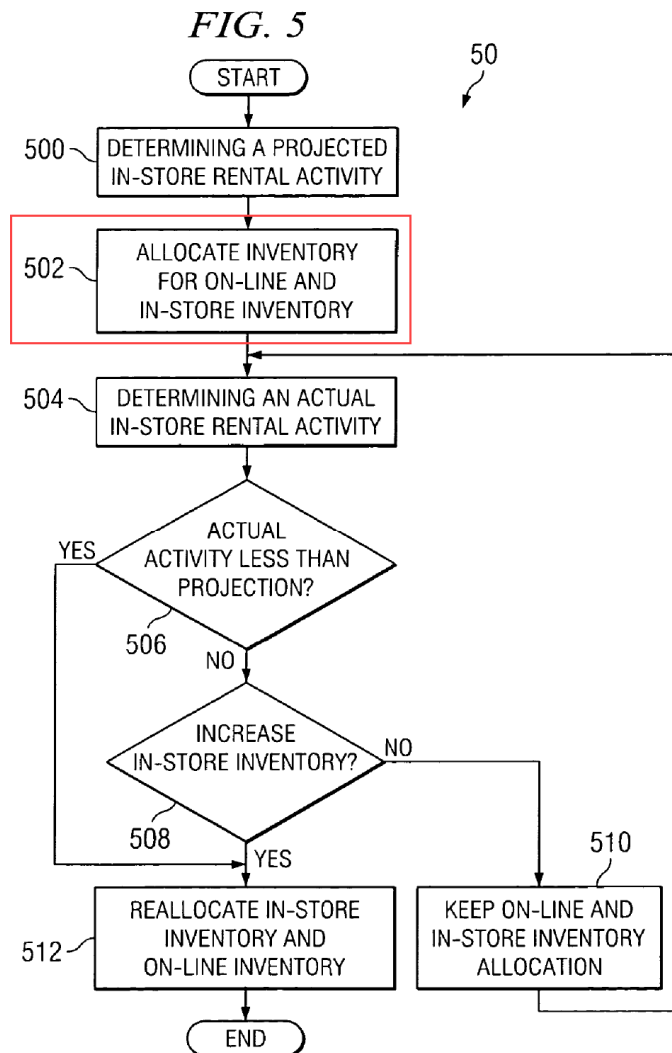
[FIG. 3]



Kono explains “unnecessary inventory... can be effectively and successfully reduced by flexible responses such as... resale of inventory products between agencies.” EX1007, ¶¶0017; EX1003, ¶¶117-119.

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



Evangelist further discloses receiving and analyzing sale data, “determining performance data associated with inventory locations,” and automatically performing “reallocations...” EX1010, 7:29-36, 8:16-23, 9:48-51, Figs.1,5; EX1003, ¶¶120-121.

6. Addington (EX1030)

U.S. Pub. 2008/016221 (“System and Method for Buying and Selling Event Tickets,” filed 5/9/2006, pub’d 7/3/2008) is prior art under at least pre-AIA §102(a). Addington describes, *e.g.*, a “system and method... for facilitating the buying and selling of event tickets,” including “valuing and selling unsold tickets shortly before and/or during the event.” EX1030, Abstract. Addington discloses “users interact with a ticket trading system... to search for tickets available for sale” and “incrementally adjust[ing] the prices of the available tickets according to one or more demand variables... that reflect various demand indicators,” and such “variables can be established based on demand indicators evaluated shortly before and/or during the event.” EX1030, Abstract. Addington further discloses “logging” sales-related “relevant, accurate accounting-based information,” including “commissions.” EX1030 (Addington), ¶¶[0028]-[0029]; EX1003, ¶122.

7. 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. 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]-[00002], [00029]. Franklin expressly discloses sending/pushing data from one machine to another in a “periodic fashion” or “[p]eriodic push,” allowing for “intelligent scheduling.” EX1009, ¶[0018], [0019], [0021], Fig.1 (especially Push→Periodic→P-to-P); EX1003, ¶¶123-125.

8. The Prior Art Is Analogous

’999 relates to managing inventory sold by multiple channels by collecting and analyzing sale data to adjust prices or reallocate inventory, using a computer. EX1001, Abstract, 1:19-22, cl.1. ’999 is directed to determining “an optimum price for, and supply of the inventory in each Channel...” EX1001, 1:32-37; EX1003, ¶126. ’999 states “this invention is intended to cover a wide variety of inventory-types,” and “travel and accommodation industries, in particular, would benefit greatly from efficient allocations... to various channels.” EX1001, 1:38-42.

Jacob, Tamura, Kono, Evangelist, Phillips, and Addington are (like ’999) directed to systems and methods for management and distribution of inventory sold

by multiple channels, and thus in the same field of art as, and analogous to, '999 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; EX1030, ¶¶[0001]-[0002], [0013]; EX1003, ¶¶127, 129. 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; EX1029, 1, 15, 26, 74, 79-80, 131, 136-138; EX1030, ¶¶[0013], [0055], [0099]-[0101]. Additionally, like '999, 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), and '999 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, 1:19-22, cl.1 Fig.1; EX1003, ¶¶127-28.

Each asserted reference is also analogous to '999 because each is reasonably pertinent to '999's problem—that inventory allocation to numerous resellers “can be *ad hoc and thus inefficient*.” EX1001, 1:46-48, 1:26-31; EX1003, ¶¶130, 138. **Jacob** similarly explains the “wide variety of sales channels... has created a sales and inventory *management problem*” and a *systematic approach* is needed “to *re-*

spond quickly to the dynamic nature of the marketplace, pricing and repricing inventory as necessary....” EX1004, ¶¶[0005], ¶[0002]- ¶ [0003]; EX1003, ¶131. 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, ¶132. 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, ¶133. 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, ¶134. Additionally, **Phillips** 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. And **Addington** disclosed a “*system and method... to help drive the sale* of unsold tickets” by, e.g., “adjusting the price of event tickets” based on demand or “creating a new sales channel specifically designed for events with low or less-than-high demand and/or for the period near the start of an event.”

EX1030, ¶¶[0009], [0011], [0013]; *see also id.* ¶[0005], ¶[0008]; EX1003, ¶136.

Franklin is similarly pertinent to '999's identified problems (EX1001, 1:49-61), 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]. *See* EX1003, ¶137.

None of these references was before the Examiner during prosecution. *See* EX1003, ¶139.

9. Claim Chart: Grounds 1-12

For ease of presentation, system claim 9 is discussed first, followed by Beauregard claim 10, and method claims 1-8.

(a) Claim 9

9[pre] ^{12, 13}	Jacob discloses a computing device (<i>e.g.</i>, “general purpose computer[]”/“computer” “configured to perform certain methods and/or functions of the invention” and accessible by other computers within, <i>e.g.</i>, “plurality of computers connected... through... network” (<i>see</i> Fig.7)). EX1003, ¶¶141-148. EX1004, ¶[0006], ¶[0078], ¶[0082] (“<i>configured to perform... the invention.... a plurality of computers connected to one another through a wired or wireless network.</i>”), ¶[0083] (“<i>general purpose computers</i>”), Fig.7:
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¹² The Claim Appendix identifies elements.

¹³ Though not limiting, the Board need not decide this, as 9[pre] is disclosed. *See* n.11; EX1003, n.4.

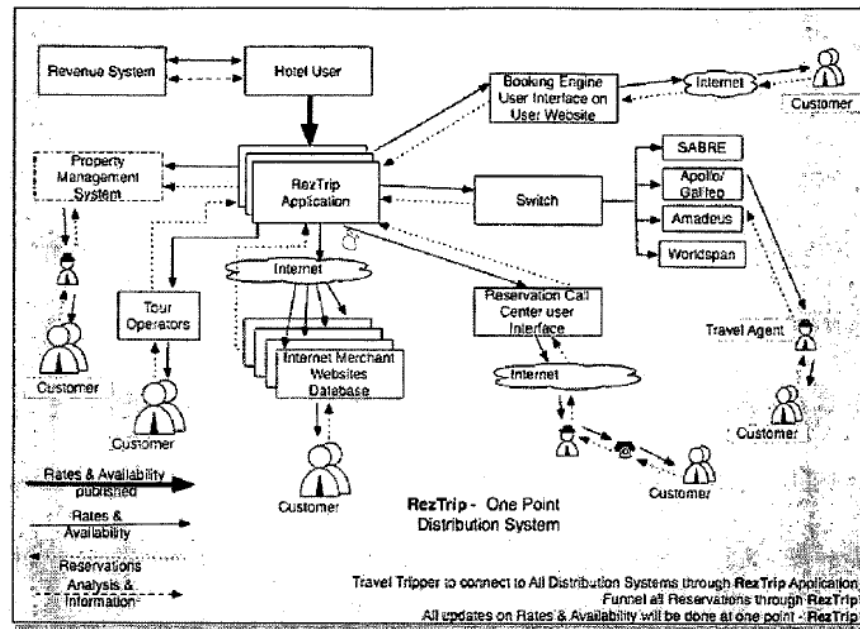


Figure 7

9[a]-[b] **Jacob discloses the computing server comprises a memory** (e.g., “computer readable medium such as hard disk storage, compact disk storage, digital video disk storage, random access memory, dynamic random access memory, read-only memory, static random access memory, and magnetic tape”; “hard disk storage”) **and at least one processor** (e.g., “central processing unit” of “general purpose computers” that “run” the system, comprising, e.g., “computer software[,]. . . hardware or a combination,” including “computerized database”) **configured to perform a method for managing inventory allocations** (e.g., “computer program systems [comprised of code segments] configured to manage the data and perform the methods/functions of the invention”; “run” the “system and method for managing time-dependent inventory”; see cl.9[c]). EX1003, ¶¶149-159.

Phillips discloses a computer-implemented method (e.g., “computerized reservation systems”; “computerized revenue management systems”, “computerized pricing support system,” “software systems,” “computerized systems,” “revenue management systems,” “Pricing

and revenue optimization systems”), including in the context of managing inventory allocations (e.g., “hotel’s own Web site,” “Expedia/Travelocity,” airline’s “Web site,” 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,” “the majority of prices will be updated automatically” including “moment to moment”). EX1003, ¶¶160-172.

Evangelist discloses inventory allocations (see cl.9[c]). EX1003, ¶¶173-174.

EX1004, Abstract (“*managing time-dependent inventory...*”), ¶¶[0001]-¶[0002], ¶[0005]-¶[0006], ¶[0078], ¶[0082] (“*computer readable medium... hard disk storage...*”), ¶[0083] (“*run...general purpose computers... central processing unit...*”), ¶[0084], Fig.7:

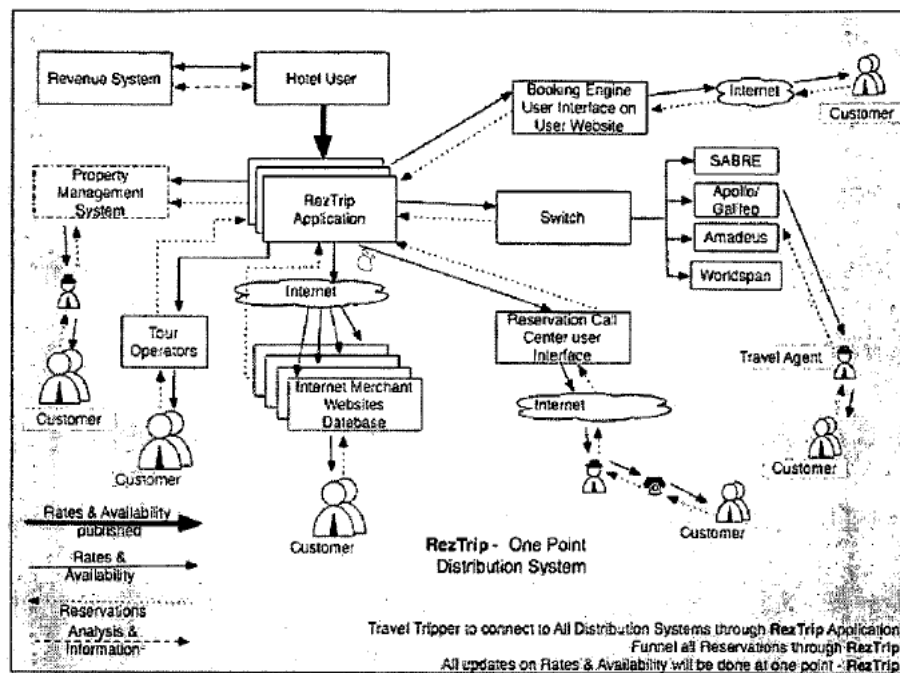


Figure 7

	EX1029, 9, 30 (“software... solve... optimization problem”; “majority of prices will be updated automatically”; “ revenue management... moment to moment ”), 31-32, 33 (“computerized pricing support...”), 121, 122, 126, 134-135 (“calculate and update the booking limits”), 141 (“hotel... computerized systems... sophisticated mathematical algorithms”), 1, 137 (“ hotel’s own Web site ”), Fig.6.4 (p.137) (“Expedia/Travelocity”), 137-138.
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Jacob discloses performing its functions (*see, e.g.*, cl.9[c]-[e], [g]-[h]) automatically (without needing human intervention), including, *e.g.*, “perform[ing]” price “calculations automatically,” code segments “to analyze the information received from the sales channels,” and/or receiving sale data relating to sale price of each item. *E.g.*, EX1004, ¶¶[0005], [0006], [0010], [0131]-[0133]; cl.4 (*e.g.*, “reservation” or reservation “confirmation information” including “Rate Type”/“selling rate”). EX1003, ¶160. Jacob discloses that an inventory management system “should allow the administrator to change the pricing... with a minimum of data entry....” *E.g.*, EX1004, ¶[0005]; EX1003, ¶170. If further disclosure of performing Jacob’s functions automatically/without human intervention is required,

POSITA would have found it obvious from Jacob in view of Phillips.^{14, 15}

EX1003, ¶160. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob’s disclosed computer-implemented method of managing online bookings of inventory using Phillips’s beneficial teachings of automating sales processes (including the analysis and “moment to moment” updating of prices and allocations; see cl.9[c]-[e], [g]-[h].).** EX1003, ¶¶171-172. This would have advantageously increased the sys-

¹⁴ Jacob and Phillips (and, for later limitations, Evangelist) 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] (“maximize use of time-dependent inventory”), ¶¶[0005], [0010], [0154], [0176], [0180]; EX1029, 9, 30, 33, 121-122, 134-135, 141; EX1010, 1:34-46, 8:16-19; EX1003, ¶¶170, 218.

¹⁵ To reduce unnecessary burden on the Board and parties, while this automaticity is disclosed (or, alternatively, rendered obvious) by Jacob alone, Petitioner is not asserting a separate Jacob-only Ground, and instead begins all Grounds with Jacob-Phillips.

tem's ability to monitor/track accurately each channel's revenue and inventory status, permitting the system to better and more quickly adapt—including, *e.g.*, to analyze whether and how prices/allocations should be adjusted to “maximize revenue” and whether a particular channel is in danger of running (or has run) out of inventory, and to compare and determine accurately whether a channel is selling inventory better than others, without having to wait for human input or human-performed calculations, or introducing unnecessary human error. EX1003, ¶171.

This would have furthered Jacob's goal of “maximiz[ing] revenue” of “time-dependent inventory” by, *e.g.*, increasing the system's efficiency in responding to changing conditions by adjusting prices or reallocating from channel(s) with excess inventory to channels that are selling better or risk running out. EX1004, ¶[0002]; EX1003, ¶171. This also would have reduced the system's response time/increased its speed (*e.g.*, by reducing the need to wait for/address user intervention) in addressing changing conditions, better “insur[ing] maximum use of time-dependent inventory” with a “minimum of [staff] data entry” per Jacob (EX1004, ¶¶[0002], [0005])—minimizing the need for costly human labor, and furthering Phillips's goals of “pricing revenue and optimization” and “ensur[ing companies] have the right prices in place for all... products, to all... customers, through all... channels, all the time.” EX1029, 1, 5, 7, 33; EX1003, ¶171. For POSITA it would have been routine to make these implementation choices, and

clear they would work, providing the expected functionality and predictable results with a reasonable expectation of success (“REOS”). EX1003, ¶171.

Jacob discloses managing inventory allocations. If further disclosure is required, **this would have been obvious from Jacob (in the recited combinations (“+combinations”)) in view of Evangelist.** See cl.9[c]; EX1003, ¶¶173-174.

9[c]	Jacob discloses receiving (e.g., “receiv[ing]”) sale data¹⁶ (e.g., “information received from the sales channels” including “reservations”; “reservation engine data”; “sales channel data”; “confirmation information” including “Rate Type,” “selling rate,” “rooms sold” on “day”; “number of rooms in... reservation”), in real time (e.g., “communication code segment” receives, e.g., “information” pushed from sales channels; “confirmation information is sent to... the Property”; see also “application sends... notifications to the PA... over... networks”; receiving information in “real time”), from respective distribution channels (e.g., “information received from the sales channels”; “incoming information”) and relating to sale of inventory items (e.g., “reservations” for, e.g., “inventory”) allocated to the respective distribution channels (e.g., “[]allocat[ing]... to the... channel”—including, e.g., each of a “plurality of sales channels”/“selling channels,” e.g., “consolidator”/“Internet Merchant Website[s],” “Booking Engine[s]” (Fig.7), “global distribution systems,” “computerized reservation [providers/systems],” “application... to make reservations,” “major travel reservation systems,” “hotel’s own website,” etc.; “reallocat[ing] inventory”). EX1003, ¶¶175-207. Evangelist discloses inventory items allocated to distribution channels (e.g., “allocating... inventory... to a particular inventory location,” “for... on-line... fulfillment” to, e.g., “store,” “on-line... channels,”
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¹⁶ “Sale data” includes, e.g., data “relating to” “sale price... and number of inventory items sold over a predetermined length of time.” E.g., EX1001, cl.4.

	“Web site that accepts requests for delivery of movies”; “initially designate[]” as “on-line inventory” of “store” or “on-line... channel”; “initially allocate[] inventory... to... stores”; “allocates inventory”). EX1003, ¶¶208-220, 232. Franklin discloses receiving (e.g., “data is sent... to one other machine” that receives it; “data delivery”) data (e.g., “data”) cyclically (e.g., “periodic,” “periodic fashion”) in real time¹⁷ (e.g., “periodic push”) from another computer (e.g., “data is sent from a data source”). EX1003, ¶¶221-232. Tamura discloses receiving (e.g., “sales information... transmitted from... POS terminal to... sales management system... and... merchandise distribution management server”) sale data (e.g., data reflecting “number of units sold during a specific unit period”; “sales information”) from respective distribution channels (e.g., “retailers”) and relating to sale of inventory items (e.g., “sold merchandise”; “inventory”; “items”; “units”) allocated to respective distribution channels (e.g., “inventory quantity” at “retailer”; “Quant. in inventory” (Fig.3); “amount of inventory”; “allocated quantity to retailer[]”; “allocation quantity”). EX1003, ¶¶242-251. Kono discloses receiving (e.g., “acquiring”) sale data (e.g., “product shipment information from... agency to... retail store and product inventory information of the agency from each agency”; “[n]umber of orders”; “agency sales information of previous day”/“information of the day before”) from respective distribution channels (e.g., “agencies”) and relating to sale of inventory items (e.g., “product”; “inventory”; “product shipment information from the agency to the retail store”) allocated to respective distribution channels (e.g., “Inventory Count” plus “Shipping Volume” (Fig.4) at each “Agency”). EX1003, ¶¶233-241.
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¹⁷ Because Franklin discloses “real time,” its disclosures also satisfy the “near real time” of cl.1. EX1003, n.11.

EX1004, Abstract (“*time-dependent inventory...*”), ¶[0003] (“*Expedita™... Sabre[]™...*”), ¶[0005] (“*inventory...real time*”), ¶[0006]-¶[0007] (“*selling channels... computerized reservation...*”), ¶[0008] (“rate type... communication code segment”), ¶[0009] (“*incoming information... reservations... inventory*”), ¶[0010] (“*information received from the sales channels*”), ¶[0063], ¶[0071], ¶[0077], ¶[0082] (“*inventory... plurality of sales channels*”), ¶[0084]-¶[0086] (“confirmation”), ¶[0123]-¶[0125], ¶[0132], ¶[0154], ¶[0176], ¶[0180] (“*reallocate inventory to the better-selling channel...*”), ¶[0181], ¶[0185] (“*rate management process... repeated...*”), ¶[0189] (“Rate Types... days... inventory”), ¶[0190]¹⁸-¶[0192] (“*sends... notifications... via... networks*”), ¶[0220], cls.13, 5-6, Figs.7, 40, 43¹⁹:

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

¹⁸ This disclosure is for obviousness.

¹⁹ Figs.5-6, 40-43 are for obviousness.

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 <u>number of rooms in the reservation</u> . 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 ($12 \times 3 \times 3$).

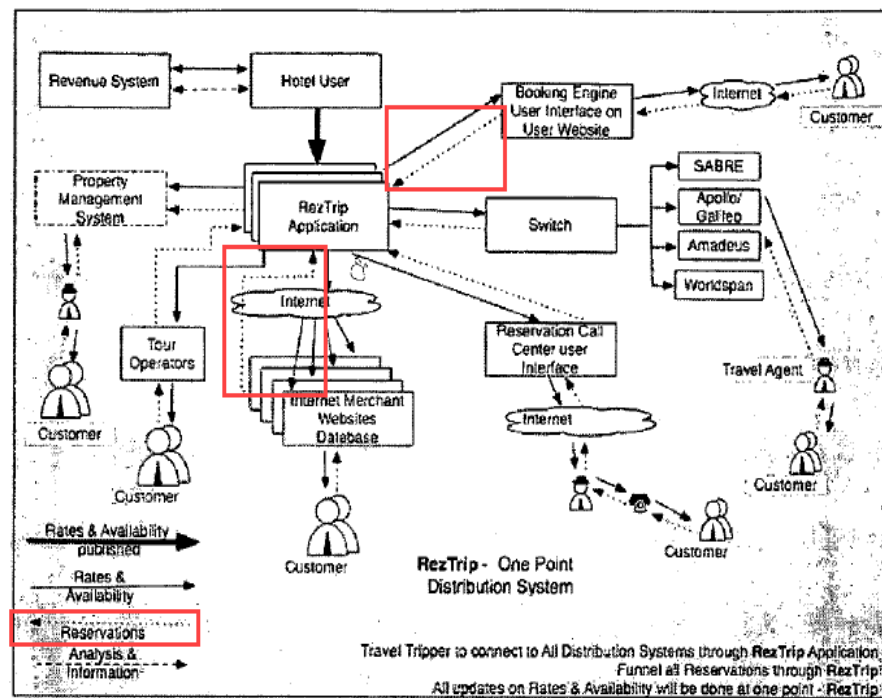


Figure 7

Figure 40

EX1010, 1:34-46 (“*allocate inventory for... on-line... fulfillment*”), 2:49-60, 3:35-52, 5:20-38, 6:59-7:17, 7:18-38, 7:39-60 (“on-line... channels...”), 8:10-29, 9:17-29, cls.1, 9-10, 18-19, 22-23, Figs.1-3, 5:

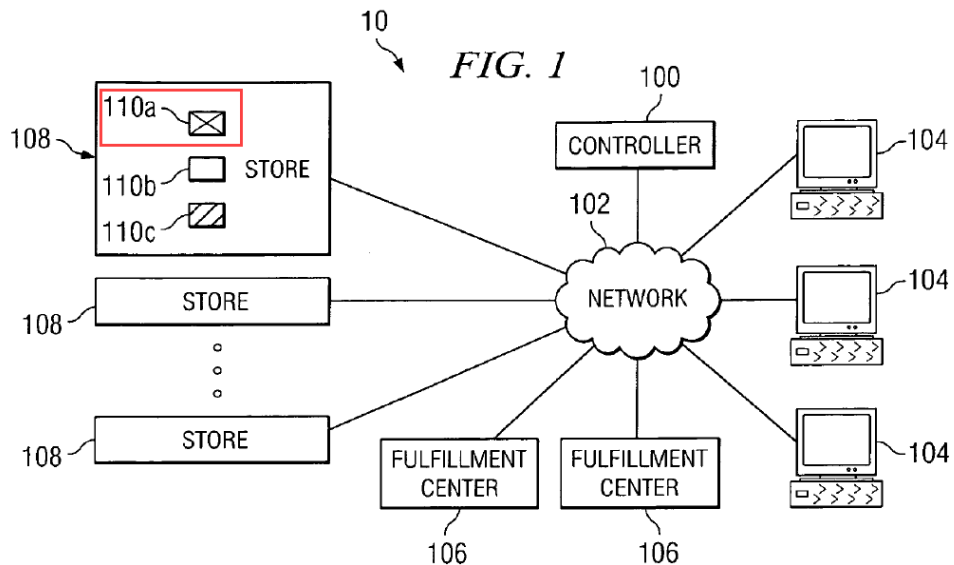


FIG. 2

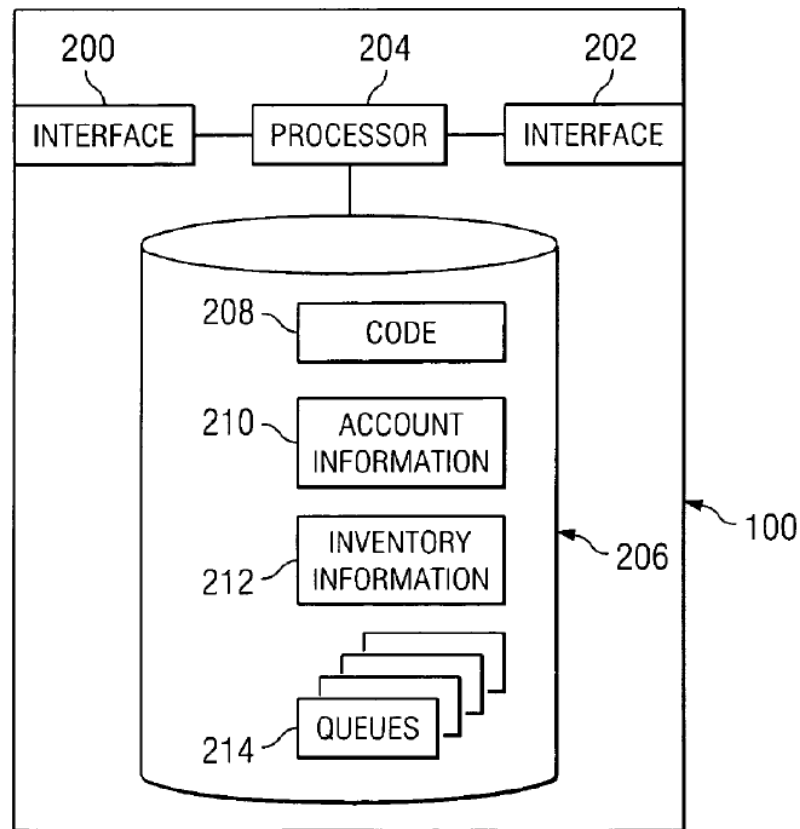
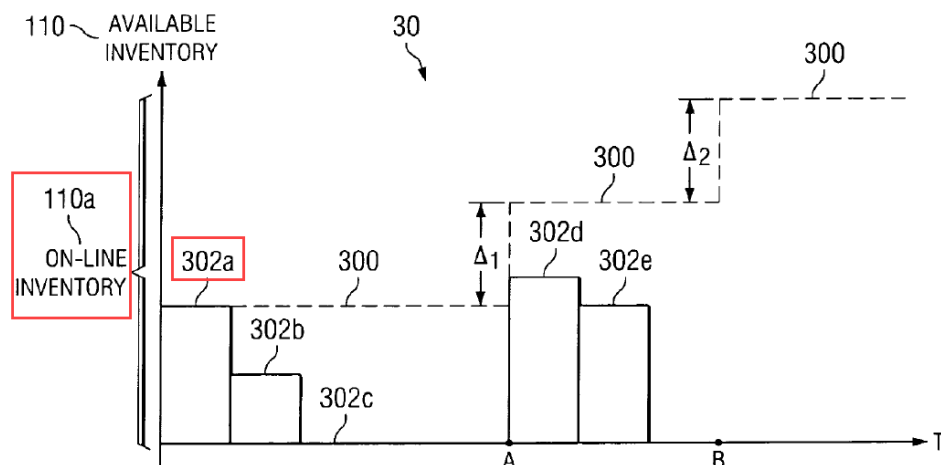


FIG. 3



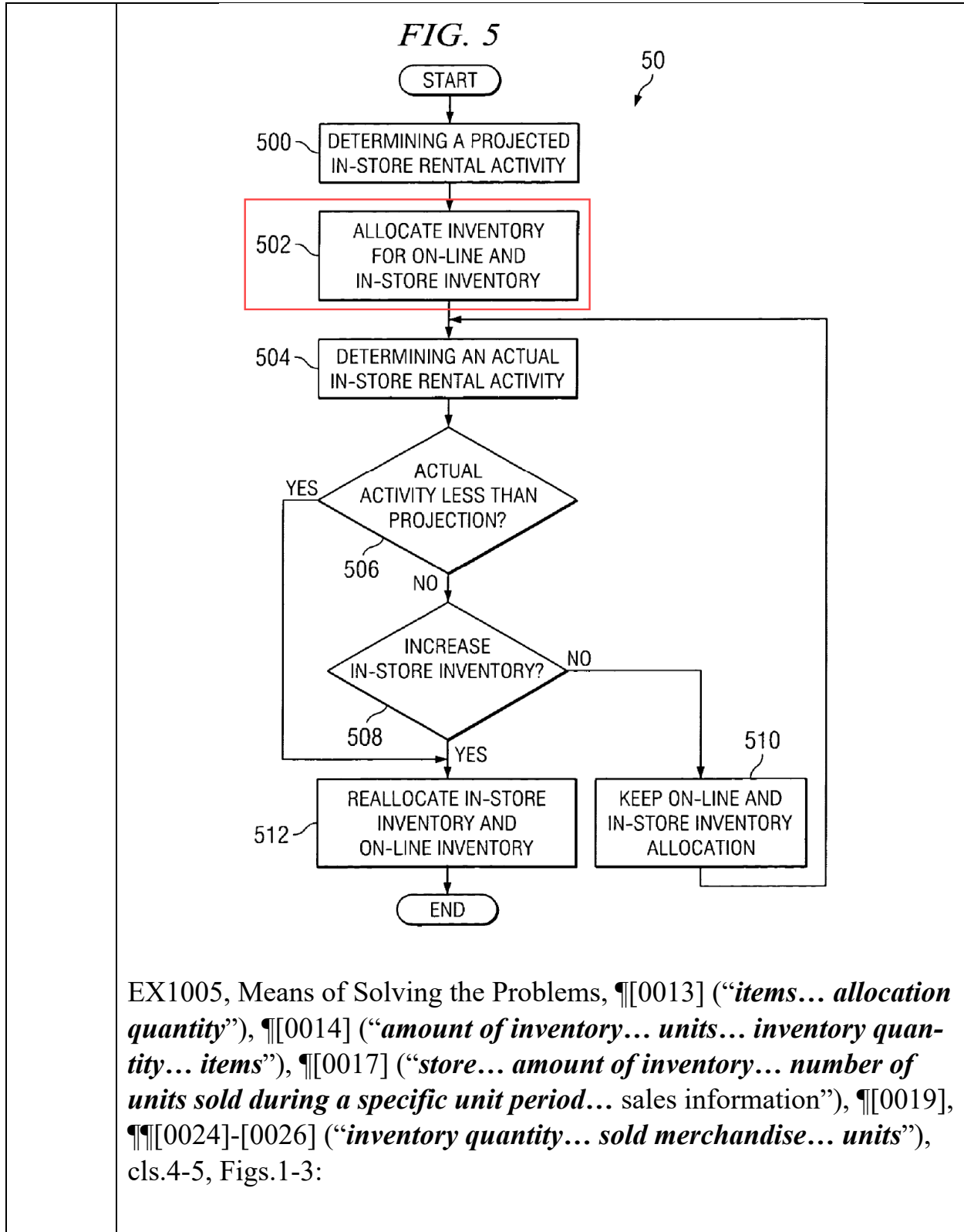


Fig. 1

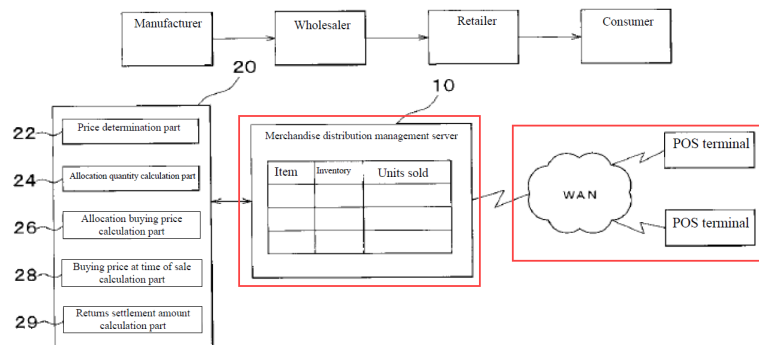


Fig. 2

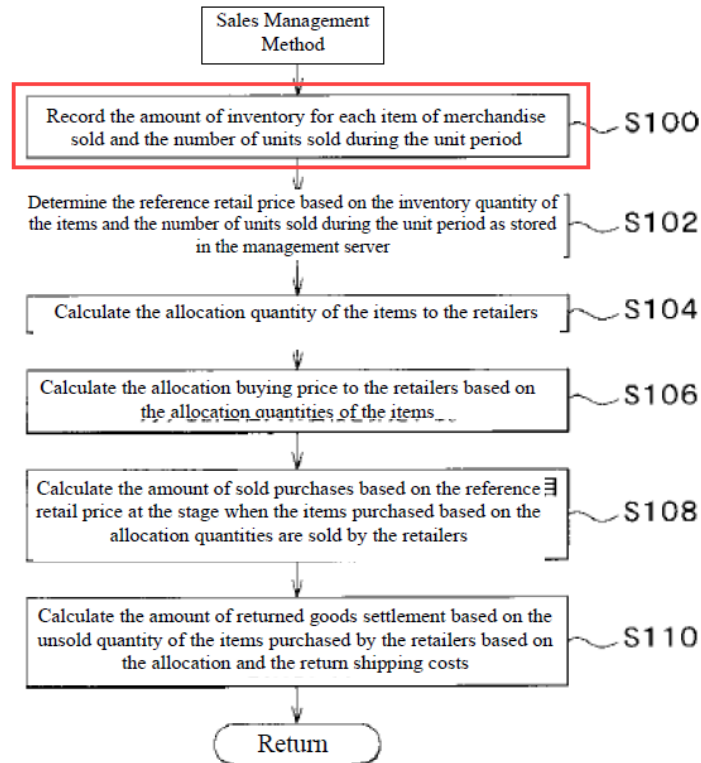
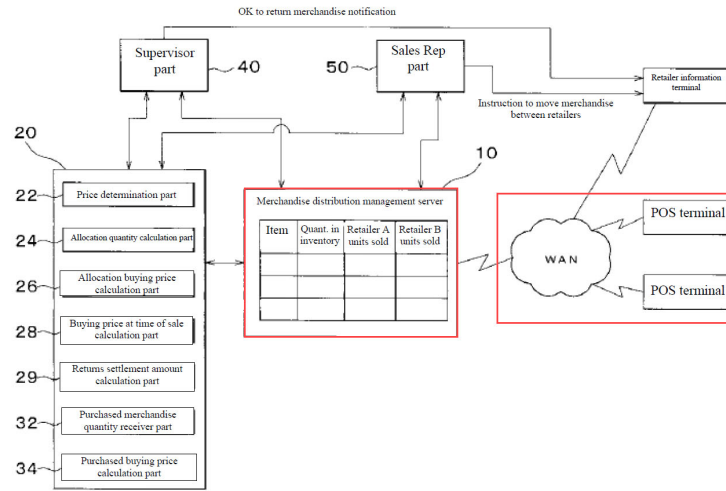


Fig. 3



EX1007, ¶[0010] (“*product shipment information from the agency to the retail store and product inventory... real time... inventory product*”), ¶[0014], ¶[0024]-¶[0026] (“*agency inventory... inventory count... store... number of orders... agency sales*”), ¶[0042], ¶[0050], Fig.4:

[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] (“*periodic fashion*”), ¶[0019] (“*Periodic push*”), ¶[0041], ¶[0021] (“*data is sent... to one other machine...*”), Fig.1.

POSITA would at minimum have found “receiving sale data cyclically, in real time” **obvious from Jacob (+combinations) in view of Franklin**. EX1003, ¶221. As discussed below, this is true whether cyclically requires receiving on a

regular/scheduled basis²⁰ and/or repeatedly, in the same order. Jacob discloses using sale data received from distribution channels to more efficiently manage inventory and better adapt to demand. *See* n.14; EX1003, ¶¶221. Jacob discloses that, *e.g.*, its computer/server running the RezTrip application (“REZTRIP”) receives data from channels; updating pricing/availability in “real time” is preferable; and “[f]requent updating and communication of pricing and inventory information to... channels keeps the information fresh....” EX1004, ¶¶[0005], [0185]; EX1003, ¶227. However, while Jacob discloses sale data is transmitted without a request, Jacob does not use the word “push” or disclose that that push from channels to REZTRIP is periodic. EX1003, ¶228. Franklin discloses push advantageously does not require a “backchannel” for each request, nor must the data-providing nodes (here, Jacob’s channels) be continuously interrupted to deal with push (meaning less strain on, *e.g.*, Jacob’s wireless communication networks (EX1004, ¶[0082]), which may reflect network and other asymmetries). EX1009, ¶¶[0006], [0005]-[0010], [0013], [0016], [0020]; EX1003, ¶228. Franklin explains *periodic* push (on a “*regular, repeating schedule*”) is particularly useful with high processing loads (another asymmetry) at the receiving node (*e.g.*, REZTRIP, which performs multiple functions). EX1009, ¶¶[0018]-[0020], [0014], Fig.1; EX1003,

²⁰ EX1037, 2.

¶228. 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 periodic push. EX1003, ¶229. Periodic push would have beneficially enabled “obtain[ing] the maximal benefit from the available bandwidth,” and does not “assume[] clients are either always listening and able to respond to what is being sent or that missing some information is not crucial.” EX1009, ¶[0042], ¶[0019]; EX1003, ¶229. Further, periodic push affords POSITA design choices as to scheduling frequency for push, providing increased flexibility—POSITA would have recognized different benefits to scheduling push at very short or longer intervals, depending on the particular practical application.²¹ EX1003, ¶229. For example, Jacob acknowledges the benefit of “[f]requent updating” (EX1004, ¶[0185]) and it would have been beneficial to implement Jacob’s updating using Franklin’s periodic push teachings to schedule push at *short intervals*, facilitating Jacob’s (+combinations’) REZTRIP having more up-to-date information when processing sale

²¹ Because real time is obvious, cl.1’s “near real time” (which includes “real time”) is also obvious. If, *arguendo*, some temporal requirement for “near real time” existed, Petitioner has shown cyclical receipt of data was obvious over a range of timing including very quickly.

data. EX1003, ¶229. However, where sales and reallocations were expected to occur less frequently and cost/efficiency concerns were a higher priority than near-term predictive accuracy, POSITA would have recognized benefits to scheduling push in the combined system at *longer intervals*. EX1003, ¶229. Even if, *arguendo*, “real time” required data be sent relatively quickly/frequently, “real time” in the temporal sense (including with periodic push over vanishingly short intervals, which would ensure “fresh[er]” data in situations with unexpectedly rapid sales or requests for reallocation/re-pricing) would also have been obvious for the reasons described above involving Jacob-Franklin. EX1003, ¶231. For POSITA it would have been routine to make these implementation choices, and clear they would work, providing the expected functionality and predictable results with REOS. EX1003, ¶229. *See, e.g.*, EX1029 (discussing push (*e.g.*, 135-136), and context-specific timing based on transaction “cadence” (*e.g.*, 30, 33, 126, 7)).²²

POSITA implementing Franklin’s express periodic push disclosure (on a “regular, repeating schedule”) in Jacob would additionally have found it obvious and advantageous to *schedule each channel to push data in the same sequence in*

²² If further disclosure of “real time” in the temporal sense is required, this would have been obvious from Phillips’s disclosures (already part of these combinations) for the same reasons immediately above. EX1003, n.13.

the same, repeating interval (e.g., smaller/greater as appropriate to the particular products/channels), with each channel associated with a different interval in the sequence, so Jacob’s processor would receive and could act on (*i.e.*, process) a channel’s new sale data while additional data was being acquired for the *others*.

EX1003, ¶230.

Even if, *arguendo*, “real time” required data be sent relatively quickly/frequently, “real time” in the temporal sense (including periodic push over vanishingly short intervals) would also have been obvious for the reasons described above involving Jacob-Franklin. EX1003, ¶231.

“***[I]nventory items allocated***” is disclosed by Jacob’s repeated, iterative “re-allocat[ion]” of inventory. *See* EX1004, ¶[0180]; EX1003, ¶207. Even if this limitation were restricted to the *first* allocation to a channel, **POSITA would have understood Jacob’s reference to “reallocation” to disclose that Jacob has previously performed an *allocation* of inventory to each distribution channel prior to “re-allocat[ing]” such inventory.** EX1003, ¶207. This is confirmed by Jacob disclosing *communicating*—to each channel—*information about* this per-channel allocation and the inventory allocated. *See, e.g.*, EX1004, ¶¶[0154], [0180]-[0181], [0185], [0191], Fig.7; EX1003, ¶207. Alternatively, POSITA would at

minimum have recognized that to “*reallocate* inventory to the better-selling channel” **Jacob necessarily, and thus inherently, allocates such inventory prior to “reallocat[ing].”** EX1003, ¶207.

If further disclosure of allocating is required, **POSITA would have found it obvious from Jacob (+combinations) in view of Evangelist.** *See* n.14; EX1003, ¶208. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob’s (+combinations’) computer-implemented inventory management using Evangelist’s beneficial teachings of initially allocating inventory to channels.** EX1003, ¶219. This would have beneficially increased the likelihood the proper quantities/most relevant inventory types are initially allocated to each channel. For POSITA it would have been routine to make this implementation choice, and clear it would work, providing the expected functionality and predictable results with REOS.²³ EX1003, ¶219.

²³ 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.*, EX1010, 6:53-57, 7:55-61; EX1011, 5:34-37; EX1012, ¶[0029]; EX1015, 2:15-22; EX1026, 1-2, 3-4, 8; EX1029, 7, 15, 26, 30-31, 33, 35, 74, 79, 80, 99, 101, 106-107, 112-113, 120, 123-124, 126, 131, 133-136, 138, 141, 170, 264.

If further disclosure of receiving *sale data* is required, it would have been obvious from Jacob (+combinations)²⁴ **in view of Kono’s or Tamura’s disclosures** (*see chart, supra*).²⁵ EX1003, ¶¶234, 242. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob’s (+combinations’) system using (1) Kono’s or (2) Tamura’s beneficial teachings of receiving sale data including data related to sale of inventory items allocated to channels.** EX1003, ¶¶240, 250. This would, *e.g.*, have advantageously increased the system’s ability to fulfill Jacob’s goal of “maximiz[ing]... revenue,” Evangelist’s of “promot[ing] efficient operations,” and Tamura’s of “reducing lost sales....” *See also* EX1004, ¶[0005]; EX1003, ¶¶240, 250. For POSITA it would have been routine to make these implementation choices, and

²⁴ “+combinations” does not refer to combining Tamura and Kono except for cl.9[f] and the dependent claims.

²⁵ Jacob, Tamura, Evangelist, and Kono describe inventory management systems using sale data received from channels to more efficiently manage inventory and better adapt to market demand. *E.g.*, EX1007, Summary, ¶¶[0005], [0009]-[0010], [0014]-[0017]; EX1004, ¶¶[0001]-[0002], [0005], [0010], [0154]; EX1005, ¶¶[0001], [0009], [0015], [0041]; EX1010, 1:34-46; EX1003, ¶¶218, 239, 249, 292, 388.

clear they would work, providing the expected functionality and predictable results with REOS. *See, e.g.*, EX1029, 135, 126; EX1003, ¶¶240, 250.

9[d]	Jacob discloses processing... by carrying out calculations (<i>e.g.</i>, “analyz[ing] information received from the sales channels”; combining (<i>e.g.</i>, adding, averaging, etc.) data across individual “reservations”; “perform[ing] calculations automatically^[26] and/or perform[ing] calculations in response to a user initiated triggering event”) cyclically (<i>e.g.</i>, “rate management process may be repeated on a regular schedule, such as twice daily... depending upon the needs of the Property”; “(i) adjusting prices... (l) repeating steps (i) through (l) on a regular basis”) the sale data (<i>see</i> cl.9[c]) to obtain a performance rating²⁷ for each of the respective distribution channels (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.)). EX1003, ¶¶252-265. Phillips discloses automatically/without the need for human intervention carrying out the revenue management process, including with respect to calculations (<i>e.g.</i>, “recommend actions based on sophisticated mathematical algorithms,” “calculate[s]... booking limits,” “software and analytical capabilities,” “forecasts... based on current and recent bookings”), including on sale data (<i>e.g.</i>, “feed of book-
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²⁶ ’999 does not require “automatic” step performance, but, as with 9[b]-[c] and 9[e]-[h], automatic performance of 9[d] is disclosed/rendered obvious by Jacob-Phillips. *See* 9[b].

²⁷ ’999 states “performance rating can be in the form of a number of parameters.” EX1001, 10:30-33, 8:28-32, 10:6-14.

ings,” “based on current and recent booking”), **to obtain a performance rating** (e.g., calculation of, e.g., “return”; “price-response function associated with each combination of product, market-segment, and channel... [which] specifies *demand for the product of a single seller as a function of the price*”; demand/“anticipated changes in demand” for “seller”; “revenue per available seat mile” (“RASM”)). See cls.9[b], [g]-[h]. EX1003, ¶¶264, 266-276.

Tamura discloses processing... by carrying out calculations (e.g., mathematically analyzing) **the sale data** (see cl.9[c]; e.g., “number of units sold” and “allocated quantity”) **to obtain a performance rating** (e.g., parameter (e.g., “sales progress rate for each retailer of the items”) indicating, e.g., retailer has “low sales progress rate,” “high sales progress rate”). EX1003, ¶¶277-285.

Kono discloses processing... by carrying out calculations (e.g., “perform[ing] a sales analysis at each agency”) **the sale data** (see cl.9[c]) **to obtain a performance rating** (e.g., “result” of “sales analysis at each agency”). EX1003, ¶¶286-294.

EX1004, ¶[0006], ¶[0010] (“*analyze the information... from the sales channels*”), ¶[0131] (“*perform calculations automatically...*”), ¶[0176] (“*Rate Type active period* is selling more quickly...”), ¶[0180] (“If... channel’s Room Type inventory is sold out”), ¶[0185] (“rate management process... regular schedule...”), cl.13, Fig.7:

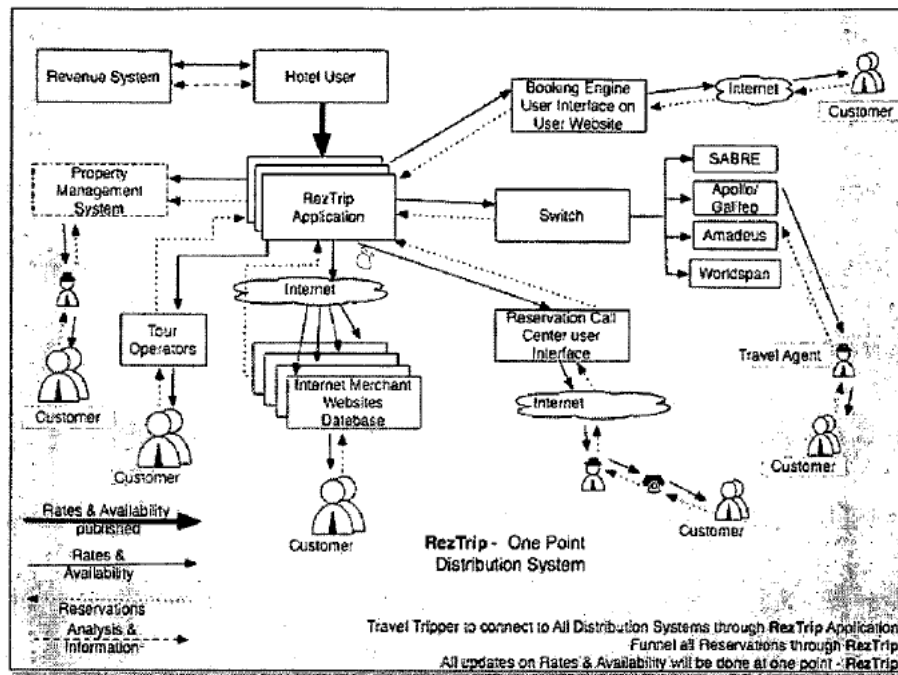


Figure 7

EX1029, 121 (“computerized systems to recommend actions based on sophisticated mathematical algorithms”), 134-138 (“Revenue management systems... feed of bookings”; *“forecasts... based on current and recent bookings”*), 30 (*“updated automatically”*), 106-107, 29 (*“analytical capabilities”*), 131, Fig.2.4, 31-32, 38-61 (*“seller”*), 126, 140-141 (“return”), 38 (“price-response function... specif[ying] demand for the product of a single seller as a function of the price”).

EX1005, ¶[0013] (*“low sales progress...high sales progress rate”*), ¶[0035], cl.4 (*“allocated quantity”*), Figs.2-3:

Fig. 3

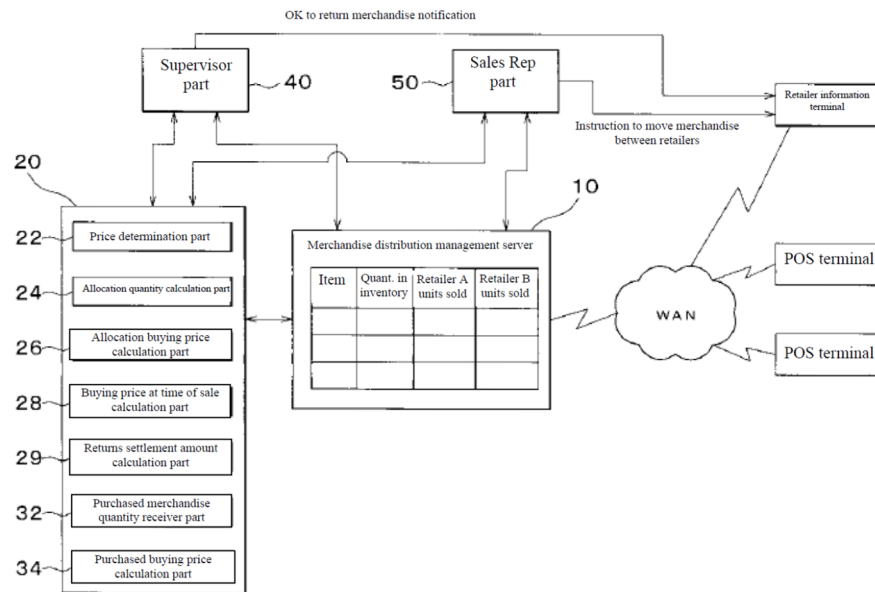
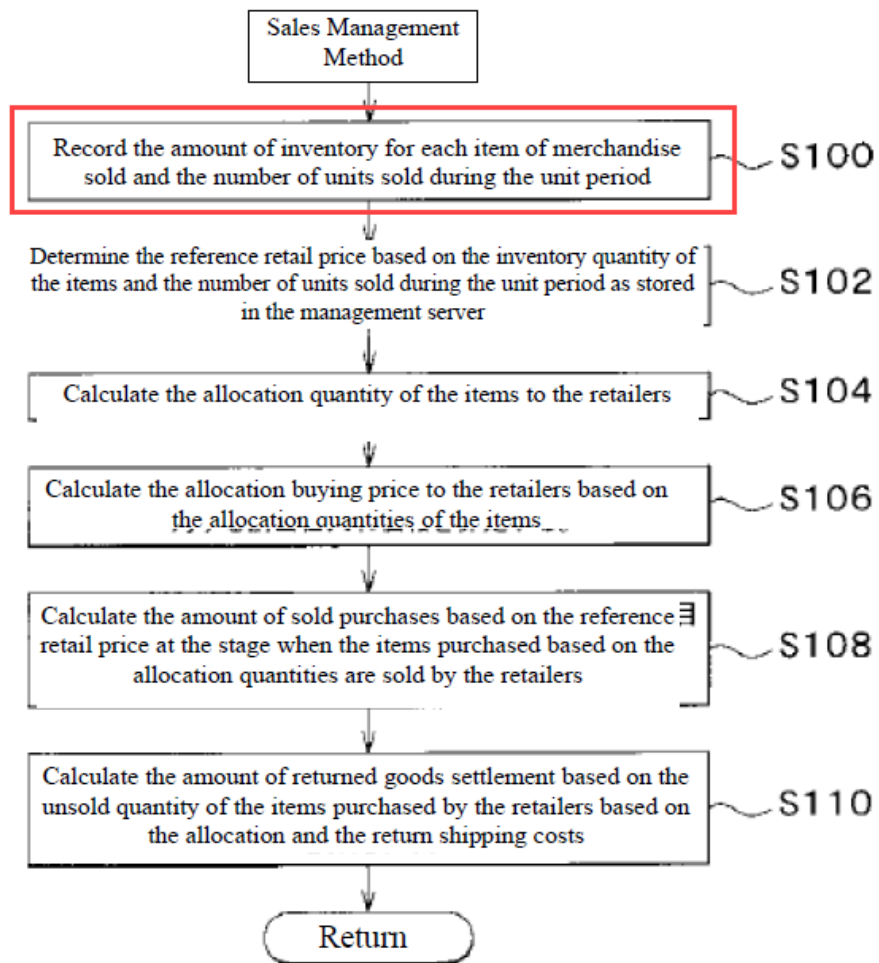


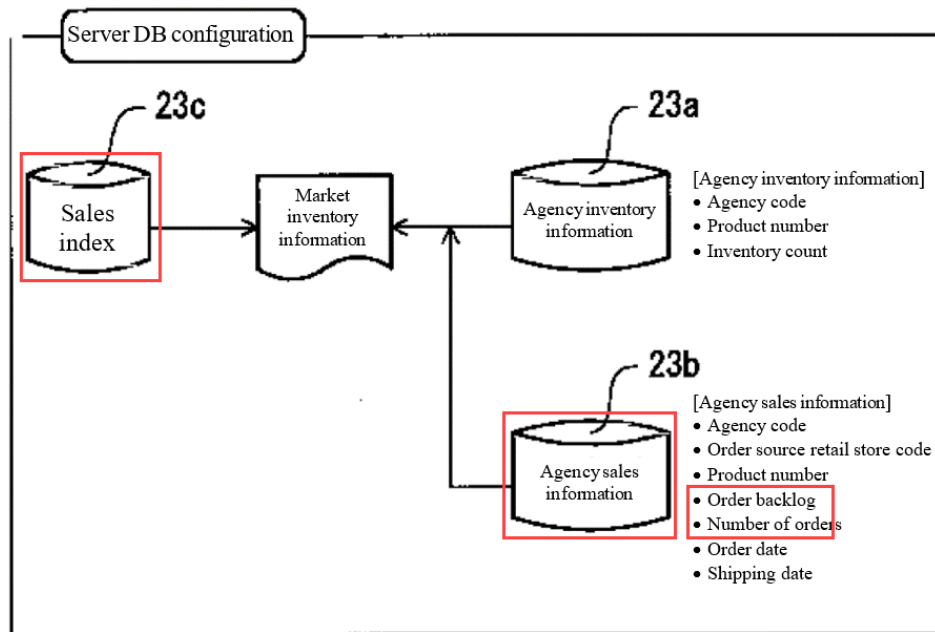
Fig. 2



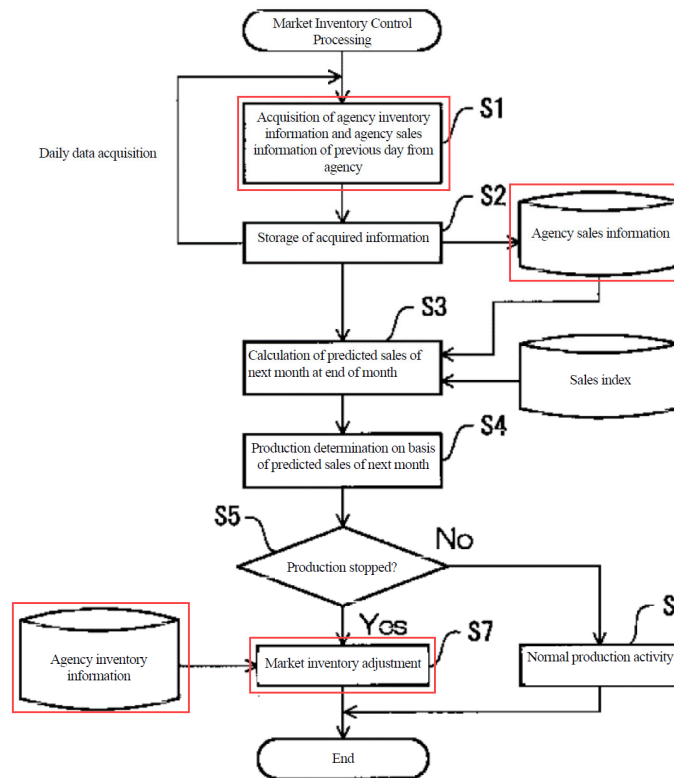
EX1007, ¶[0009]-¶[0010], ¶[0014], ¶[0025] (“inventory... *performs a sales analysis at each agency... result... inventory*”), ¶[0026], ¶[0030], ¶[0050], cls.1-2, Figs.2-3:

[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 sale price (*e.g.*, EX1004, ¶¶[0006], [0010], [0131]-[0133]; cl.4), to apply to performing calculations as to both *prices*—to determine, *e.g.*, “a day within the Rate Type active period is selling more quickly than other[s]” so the “price for rooms... on that date” should be “adjusted” (*e.g.*, EX1004, ¶[0176]) or a “Rate Type” should be “closed” (*e.g.*, EX1004, ¶[0180])—and “*inventory*”²⁸—to determine, *e.g.*, remaining “Rooms Available,” and whether a “channel’s” “inventory” is “selling out”/“sold out” (*see also* cl.1[d] (“selling better”))—and as requiring calculations of speed/current inventory. *E.g.*, EX1004, ¶[0180], Fig.41. EX1003, ¶262. Thus, **POSITA would have understood Jacob (+combinations) discloses performing calculations as to both prices and inventory to obtain a performance rating.** EX1003, ¶263. Alternatively, **Jacob necessarily, and thus inherently, performs calculations as**

²⁸ Jacob (+combinations) thus discloses or at minimum renders obvious cl.5’s additional limitation. EX1003, n.18.

to both prices and inventory to obtain a performance rating (*e.g.*, speed of inventory item sales in a channel). EX1003, ¶263.

Jacob-Phillips (+combinations) renders obvious carrying out Jacob's functions²⁹ (including performing performance rating calculations) *automatically*. *See* cl.9[b]; EX1003, ¶264. Further, as to Jacob (+combinations), making these determinations/comparisons by *performing calculations* (rather than, *e.g.*, relying on estimates/approximations) as to prices and inventory would have advantageously increased the system's ability to monitor/track accurately each channel's revenue and inventory status, thereby permitting the system to better/more quickly analyze whether prices/allocations should be adjusted to "maximize revenue" or a channel is in danger of running (or is) out of inventory, and to compare/determine accurately whether a channel is selling better than others. This would have furthered Jacob's goal of "maximiz[ing] revenue" of "time-dependent inventory." *Supra* p.29; EX1003, ¶264. For POSITA it would have been routine to make these implementation choices, and clear it would work, providing the expected functionality and predictable results with REOS.³⁰ EX1003, ¶264.

²⁹ This also applies to, *e.g.*, cls.9[b]-[c], 9[e]-[h], 5-8. *See* 9[b].

³⁰ POSITA's REOS here and for all obviousness arguments herein is further confirmed by this technology's predictability. *See supra* n.23.

If argued further disclosure of processing the sale data by carrying out calculations to obtain *a performance rating* is required, **this would have been obvious from Jacob in view of Phillips (+combinations) (see cl.9[b]), or Tamura, or Kono (see n.14, 25).** EX1003, ¶¶277, 286. For the reasons in, *e.g.*, cl.9[b], POSITA would have found it obvious to implement Jacob using Phillips’s teachings of performing calculations (including, *e.g.*, adjustments) automatically on sale data (*e.g.*, information from current and recent bookings) to obtain performance ratings for each channel (*e.g.*, current price-response functions, measures of demand/changes in demand, and revenue measures like RASM). EX1003, ¶274. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob’s or Jacob-Phillips’s (+combinations’) system (including Jacob’s disclosures of “performing calculations automatically” as to “inventory”) using (1) Phillips’s, or (2) Tamura’s, or (3) Kono’s beneficial teachings of processing sale data by automatically carrying out calculations to obtain a performance rating,** which would have advantageously yielded a persistent indicator and increased the system’s speed/ability to monitor and track accurately—without user intervention—inventory status and availability at each channel, permitting the system to more rapidly determine/analyze how quickly a channel is selling inventory and whether it is running out, and more quickly compare/determine whether a channel is selling better than others or at a

higher price. EX1003, ¶¶275, 284, 293. This would have furthered Jacob’s goal of “maximiz[ing] revenue” of “time-dependent inventory” by better “insur[ing its] maximum use” (EX1004, ¶[0002]), Tamura’s of “reducing lost sales opportunities” by, *e.g.*, increasing efficiency (EX1005, ¶[0001]), and Kono’s of “effectively utiliz[ing] market inventory by collectively controlling [each agency’s] inventory control” (EX1007, Summary) and reducing “unnecessary inventory” (EX1007, ¶¶[0011], [0015], [0017]), as well as Phillips’ goals (*see* cl.9[b]). *See also* EX1004, ¶[0005]; EX1003, ¶¶275, 284, 293. For POSITA it would have been routine to make these implementation choices, and clear they would work, providing the expected functionality and predictable results with REOS. *See, e.g.*, EX1029, 134-35, 30, 126; EX1003, ¶275, 284, 293.

PO’s litigation contentions interpret processing **cyclically** as processing on a periodic basis, which Jacob discloses. EX1037, 2. Jacob discloses this limitation even if cyclically requires receiving on a regular/scheduled basis and/or repeatedly, in the same order. EX1003, ¶265. For the reasons in cl.9[c], **POSITA implementing periodic push in Jacob (+combinations) would have found it obvious and advantageous to schedule each channel to push data in the same sequence in the same, repeating interval**, with each channel associated with a different interval in the sequence, so Jacob’s processor would receive and be able to process a

channel's new sale data cyclically (as claimed) while additional data was being acquired for the *others*, beneficially: (a) allowing Jacob's processor to receive and process sale data from one channel at a time successively, thus lowering processing load, latency, and overhead, and (b) allowing Jacob's processor to calculate new prices and reallocate inventory promptly after the last channel's data was received and processed. EX1003, ¶265. POSITA would thus have understood Jacob (+combinations) at minimum renders obvious processing sale data both on a regular/scheduled basis and repeatedly, in the same order. EX1003, ¶265. For POSITA 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, ¶265.

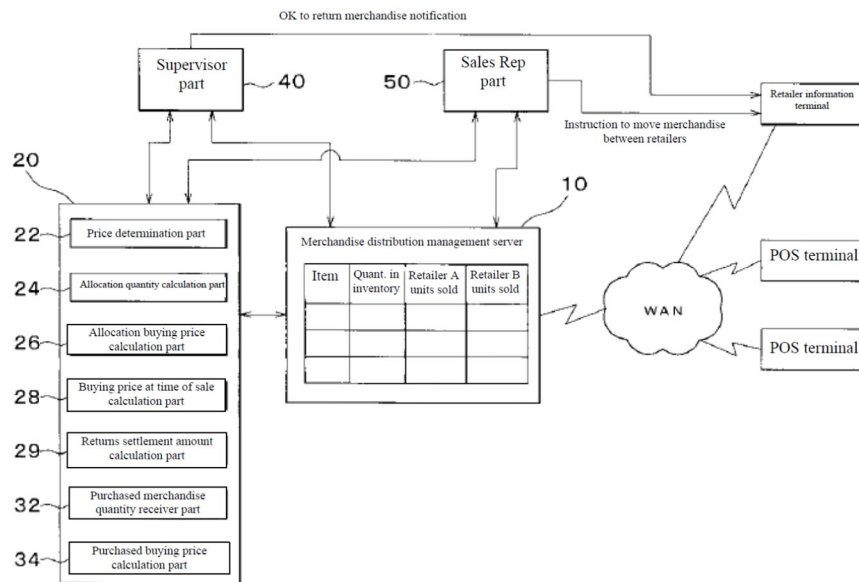
9[e]	Jacob discloses querying whether the performance rating of each of the respective distribution channels is greater than a performance rating of other distribution channels (<i>e.g.</i>, querying whether/"[i]f a sales channel's" "inventory" "is selling better than other channels"). EX1003, ¶¶295-304. Tamura discloses querying whether the performance rating of each of the respective distribution channels is greater than a performance rating of other distribution channels (<i>e.g.</i>, querying whether "retailer" is one with "low sales progress rate" rather than one of "retailers with a high sales progress rate"). EX1003, ¶¶305-311. Kono discloses querying whether the performance rating of each of the respective distribution channels is greater than a performance rating of other distribution channels (<i>e.g.</i>, querying whether an agency is "agency where sales have fallen," rather than "agency that
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still sells,” based on, *e.g.*, “result” of “sales analysis at each agency”).
EX1003, ¶¶312-320.

EX1004, ¶[0180] (“*sales channel’s... inventory... selling better than other channels*”).

EX1005, ¶[0013]-¶[0014] (“inventory”), ¶[0035] (“*retailer...low sales progress rate...high sales progress rate*”), cl.4, Figs.2-3:

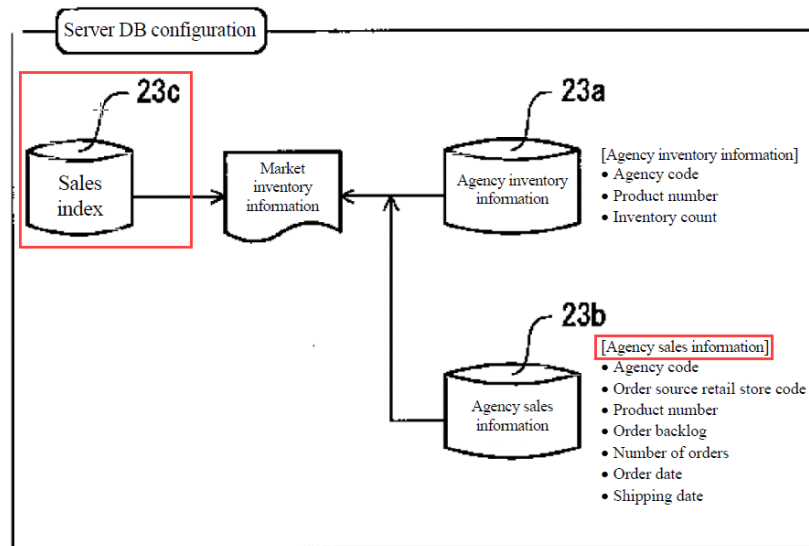
Fig. 3



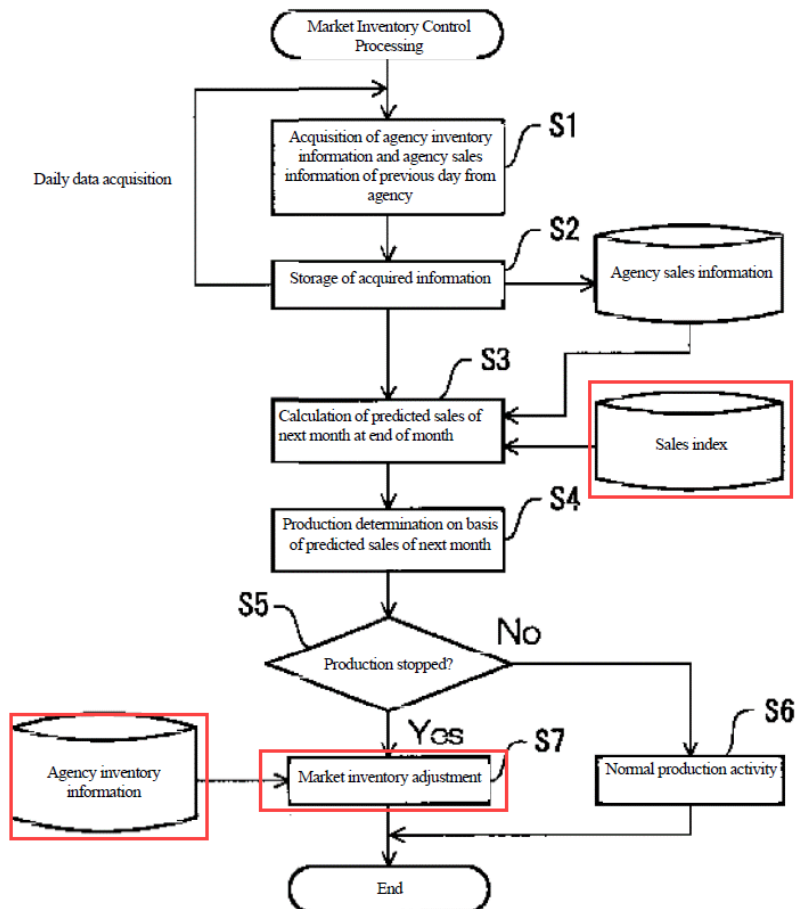
EX1007, Summary, ¶[0009] (“*sales analysis at each agency... inventory... agency where sales have fallen...agency that still sells... sales analysis at each agency.*”), ¶[0010], ¶[0014], ¶[0025]-¶[0026], ¶[0030], cl.1, Figs.2-3:

[FIG. 2]

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[FIG. 3]



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Jacob discloses “reallocat[ing]” “[i]f a sales channel’s” “inventory” “is selling better than other channels,” and “computer program segments configured to manage the data and perform the [invention’s] methods/functions.” *E.g.*, EX1004, ¶¶[0006], [0010], [0082], [0180]; EX1003, ¶302. POSITA would have understood **Jacob (+combinations) discloses its system queries whether/“[i]f a sales channel’s” “inventory” “is selling better than other channels”** (including automatically). *See* cl.9[g]; EX1003, ¶303. If argued further disclosure is required, for the same reasons as discussed, **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob’s teachings of the above-discussed express disclosures (+combinations) so its resulting system queries (e.g., by comparing with other channels’ performance ratings), e.g., whether/“[i]f a... channel’s” “inventory” “is selling better,” whether a channel’s “demand” or “revenue per available seat mile” is greater.** *See* cl.9[d]; EX1003, ¶303. For POSITA, 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, ¶303.

And for the reasons discussed for cl.9[d], **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob (+combinations) using Tamura’s disclosure of querying whether a particular “retailer”**

has a “low sales progress rate” or, instead, is one with a “high sales progress rate” (and thus has a greater sales progress rating). EX1003, ¶310. For POSITA it would have been routine to make these implementation choices, and clear they would work, providing the expected functionality and predictable results with REOS. EX1003, ¶310.

As also discussed, if, *arguendo*, further disclosure is required, POSITA would have found it obvious to implement Jacob’s system from cl.9[d] (+combinations) using Kono’s beneficial teachings of processing sale data by carrying out calculations to obtain a performance rating. EX1003, ¶319. For the same reasons as discussed with respect to cl.9[d], **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob (+combinations) using Kono’s disclosure of querying whether an agency is one “where sales have fallen” or, instead, one with a greater sales rating (*i.e.*, “still sells”) based on “result[s]” of “sales analysis at each agency.”** *See* cl.9[d]. EX1003, ¶319. For POSITA it would have been routine to make this implementation choice, and clear it would work, providing the expected functionality, yielding predictable results with REOS. EX1003, ¶319.

9[f] **Jacob discloses based on the query** (*see* cl.9[g], cl.9[h], below). EX1003, ¶¶321-328.

Tamura discloses based on the query (*see* cl.9[g], cl.9[h], below). EX1003, ¶¶329-335.

Kono discloses based on the query (*see* cl.9[h], below). EX1003, ¶¶336-344.

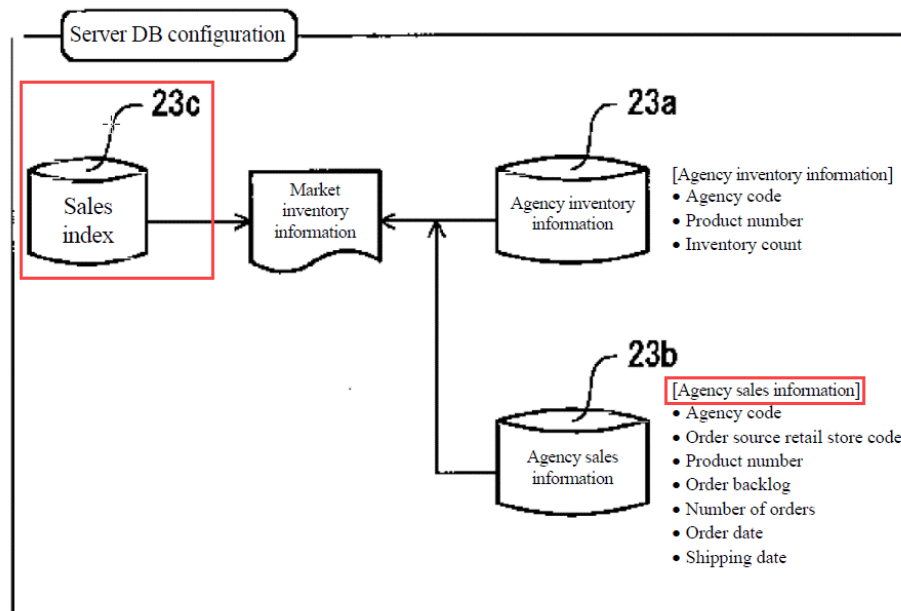
EX1004, ¶[0074], ¶[0082] (“*computer program systems...perform the... invention...plurality of computers*”), ¶[0083] (“*general purpose computers...central processing unit*”), ¶[0131]-[0133], ¶[0180].

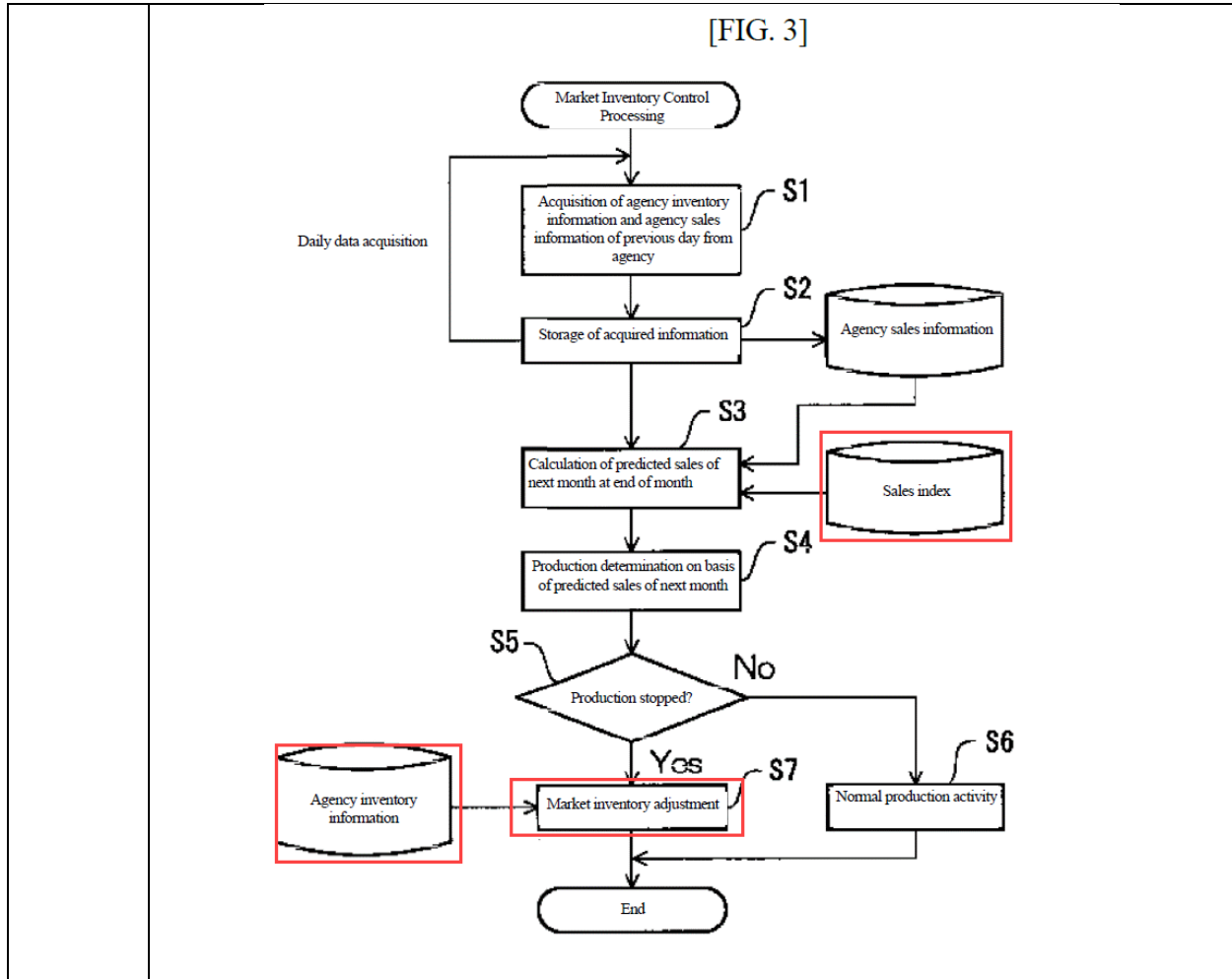
EX1005, ¶[0013]-¶[0014], ¶[0035], cl.4, Figs.2-3.

EX1007, Summary (“*agency that still sells*”), ¶[0009]-¶[0010], ¶[0014], ¶[0025]-¶[0026], cl.1, Figs.2-3:

[FIG. 2]

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For the reasons in cl.9[e](narrative), Jacob (+combinations) discloses or at minimum renders obvious carrying out “at least one of the following steps” (see cl.9[g], cl.9[h]) based on the query (e.g., because this would have beneficially enabled better determining, systematically, whether a channel is, e.g., selling better). EX1003, ¶327. POSITA would have found it routine to make this implementation choice, and clear it would work, providing the expected functionality and predictable results with REOS. E.g., EX1004, ¶[0180]; EX1003, ¶327.

As discussed, Jacob (+combinations) in view of Tamura or Kono renders obvious “querying....” *See* cl.9[e]. For the same reasons, these combinations render obvious carrying out “at least one of the following steps” (*see* cl.9[g], cl.9[h]) based on the query. EX1003, ¶¶334, 343. POSITA would have found this obvious from the same disclosures, routine to make this implementation choice, and clear it would work, providing the expected functionality and predictable results with REOS. *See* cls.9[g]-[h]; EX1003, ¶¶334, 343.

9[g] ³¹	Jacob discloses, based on the query (<i>see</i> cl.9[f]), adjusting (“updating and communicat[ing]... pricing and... information to the sales channels”; <i>see</i> cls.9[b]-[c]), a price of inventory items allocated to each of the respective channels (<i>e.g.</i>, “close the Rate Type... for a given date or... series of dates, for certain channels” when, <i>e.g.</i>, “channel’s inventory is . . . selling better than other channels”; “adjusting prices in response to changes in room inventory”; <i>see</i> cl.9[c]). EX1003, ¶¶345-366. Phillips discloses automatically/without the need for human intervention (<i>see</i> cl.9[b]) adjusting the price of an inventory item up or down (<i>e.g.</i>, “forecasting module generates and updates for all products/fare class combinations”, “prices will be updated automatically,” “periodically updat[ing] the prices and/or availabilities...,” “[p]eriodically recalculat[ing] all booking limits...based on total bookings and demand” “revenue management [system]... to calculate and... update the booking limits”). EX1003, ¶¶367-376.
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³¹ ’999 does not require its steps such as “adjusting” be performed “automatically.”

E.g., EX1001, 8:61-64, 35:45-56, 36:39-46. *See* n.26.

Tamura discloses, based on the query (see cl.9[f]), adjusting (e.g., “announce to retailers... current market value of the item for sale” using “computer or information processing terminal connected to... network”), a price of inventory items (e.g., “determines the reference retail price... based on... amount of inventory and... number of parts sold during the part period for each item” (e.g., channel has “high[er]” “sales progress relative to the allocated quantity”)). EX1003, ¶¶377-389.

EX1004, ¶[0005]-¶[0006], ¶[0078] (“computer algorithms... ”), ¶[0082]-¶[0083], ¶[0131]-¶[0133], ¶[0176], ¶[0180] (“*sales channel’s Room Type inventory is sold out or is selling better than other channels... for a given date or a series of dates, for certain channels*”), ¶[0185] (“*updating and communication of pricing and inventory information to the sales channels*”), ¶[0191], cls.5-6, cl.13 (“*adjusting prices in response to changes in room inventory*”), Figs.5-7³²:

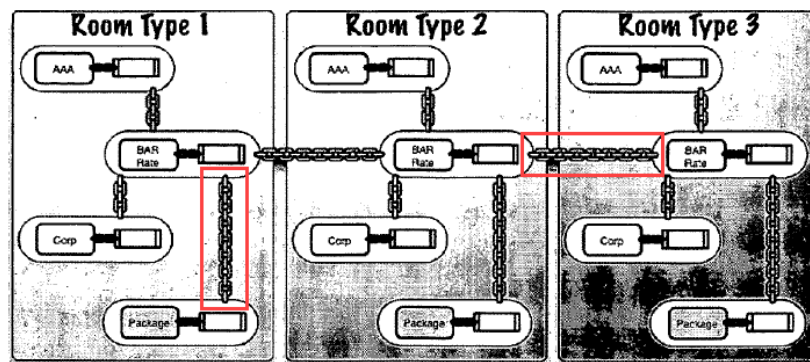


Figure 5

³² Figs.5-6 are for obviousness.

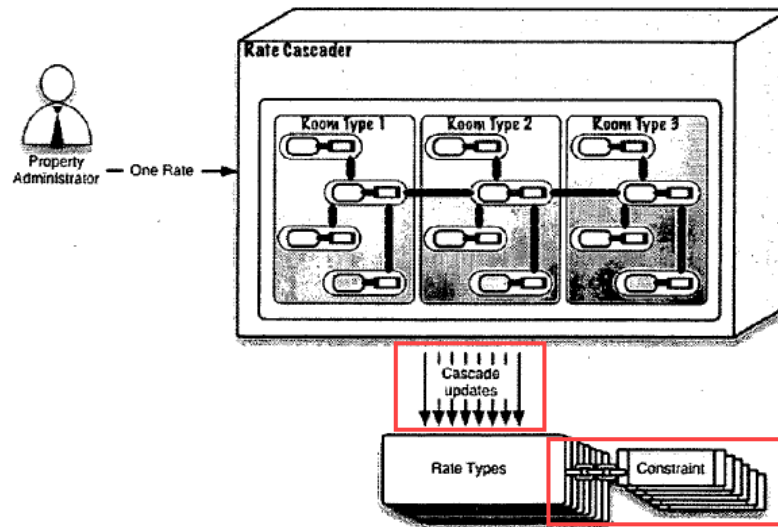


Figure 6

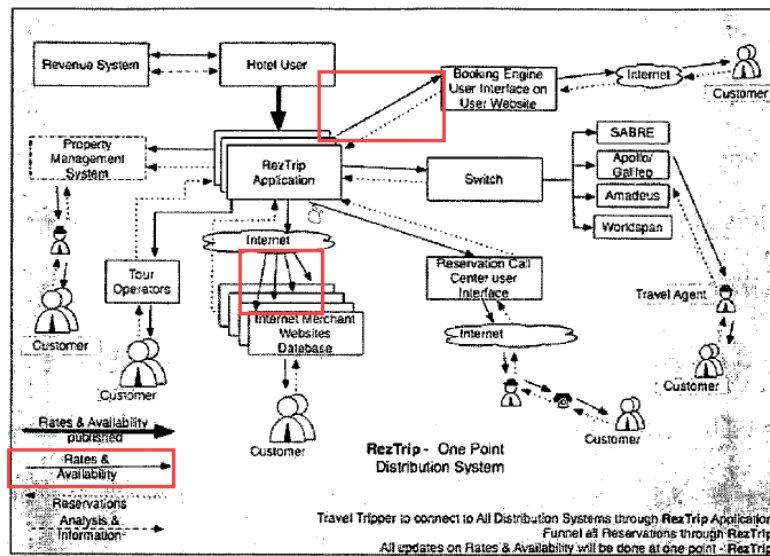
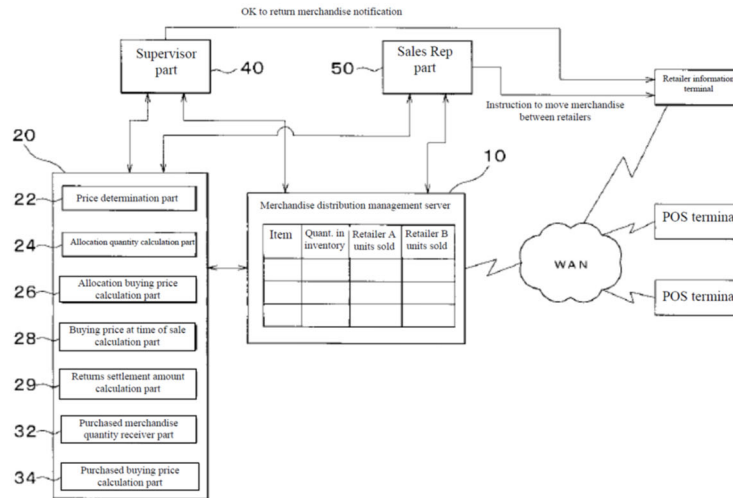


Figure 7

EX1029, 30 (“*the majority of prices will be updated automatically*”), 134-135 (“Revenue Management Systems... feed of bookings... *forecasting module* generates and updates... *based on current and recent bookings*”), 126, 123, 131, 133, 99, 106-107 (“*anticipated changes in demand... return*”), 112-113 (“return”), 120 (“*seller*”), 79-80, 124, 101, 31, 26, 170 (“Periodically recalculate...”), 264 (“periodically updates the prices...”)).

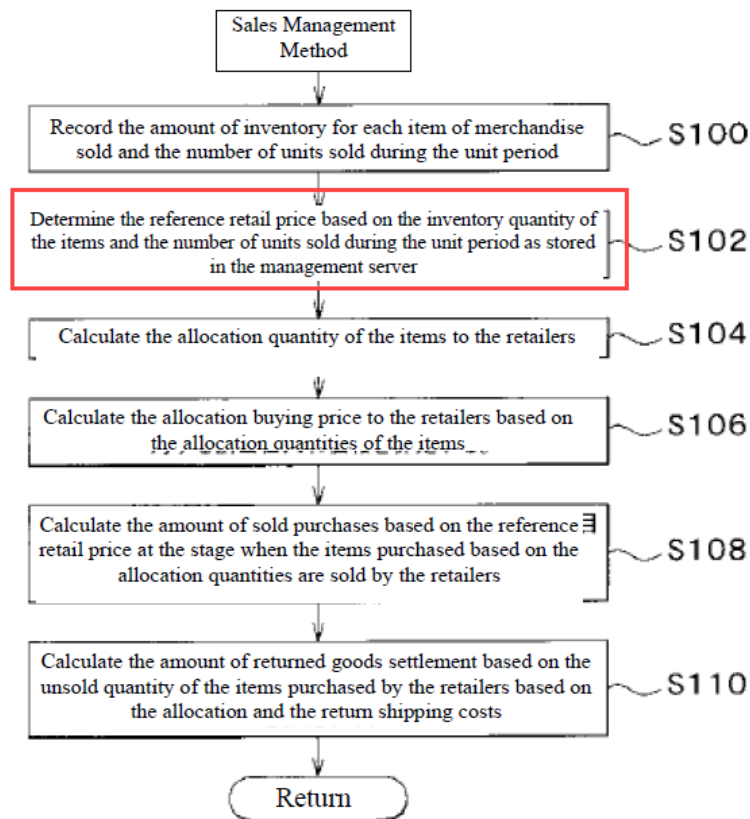
EX1005, Means of Solving the Problems (“determines the reference retail price for items sold based on the *amount of inventory and the number of parts sold during the part period for each item sold*”), ¶[0014], ¶[0019] (“announce... current market value”), ¶[0025], Fig.3:

Fig. 3



EX1005, ¶[0035] (“*high*... computer or information processing terminal... communication line network”), cl.1., cl.4 (“sales progress relative to the allocated quantity”), Fig.2:

Fig. 2



Jacob discloses “computer program systems” “perform the [invention’s] methods/functions,” including “a code segment to automatically communicate pricing information and inventory information to a plurality of selling channels in response to a triggering event.” EX1004, ¶[0082]-[00083], [0131]-[0133], [0180], [0191], [0006], [0010], cls.6, 31; cl.9[b]; EX1003, ¶¶360-361. **POSITA would have understood these to be express disclosure—as an alternative to human-input-triggered actions—of automatically “adjusting...” based on the query.**

EX1003, ¶362. If, *arguendo*, further disclosure of automatically is required, as discussed in 9[b], Jacob-Phillips (+combinations) renders obvious carrying out all of Jacob's functions³³ ***automatically***. EX1003, ¶¶367-376.

If further disclosure of automatically “adjusting...” based on the query is required, **it would have been obvious from Jacob or Jacob-Phillips (+combinations) in view of Tamura**. See cl.9[g](chart); EX1004, ¶[0005]; n.25; EX1003, ¶377. Tamura discloses “merchandise distribution management server 10 that executes each step” (EX1005, ¶[0014]), “a price determination part that determines the reference retail price of an item for sale based on the inventory and the number of items sold,” and “announc[ing] to retailers... the current market value of the item..., considering the amount of inventory and sales speed (number of units sold in a unit period),” 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 the query. EX1005, cl.1, ¶[0019], [0025], Fig.3; EX1003, ¶384. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob's or Jacob-Phillips's (+combinations') system using Tamura's beneficial teachings of automatically adjusting a price of inventory items based on the query, so in**

³³ See n.29, *supra*.

the resulting system adjusting occurs automatically without needing user instructions. EX1003, ¶385. This would have beneficially furthered Jacob's and Tamura's goals (*see* p.54) by, *e.g.*, reducing response time/increasing speed (*e.g.*, reducing the need to wait for/address user intervention) and increasing the ability to account for the result of processing sale data from multiple channels in determining whether/how to adjust price, facilitating more quickly and effectively addressing changing conditions by adjusting price. *See* n.25; EX1003, ¶385. For POSITA it would have been routine to make these implementation choices, and clear they would work, providing the expected functionality and predictable results

with REOS. *See, e.g.*, EX1029³⁴ (discussing existing systems automatically adjusting price and channel allocations—*e.g.*, 30-31, 123-124, 126, 131, 134, 99, 106-07, 112-13, 120, 79-80, 101, 170, 264); EX1026, 2^{35, 36}; EX1003, ¶385.

³⁴ If further disclosure is required, this would have been obvious from Phillips (already in the recited combinations) for the same reasons as above.

³⁵ 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, ¶386.

³⁶ It would have been obvious to modify the recited combinations, *including those with Kono*, using Tamura’s beneficial teachings of automatically adjusting price. *Cf. n.24; e.g.*, EX1005, ¶¶[0001] (“reducing lost sales”), [0009], [0015], [0041]; EX1007, Summary, ¶¶[0005], [0009]-[0010], [0014]-[0017] (“reduc[ing]” “unnecessary inventory”). EX1003, ¶¶387-388. This would have beneficially furthered Jacob’s/Tamura’s/Kono’s goals. *See n.25*. For POSITA it would have been routine to make this implementation choice, and clear it would work, providing the expected functionality and predictable results with REOS. *See n.23, supra*; EX1003, ¶388.

Cls.9[f]-[h] require “*either* (1) adjust[ing] a price of inventory items... *or* (2) re-allocat[ing] inventory items.” *See* §VI.A. If argued cls.9[f]-[h] require *both*, Jacob discloses this. EX1003, ¶¶363-365. POSITA would have further understood that Jacob’s disclosures applied to systems with two or more channels. EX1003, ¶366. It would have been obvious to upwardly “adjust” prices in one or more channels while downwardly “adjusting” prices in the other(s), while also reallocat- ing inventory across channels based on the query being answered in the affirma- tive. *E.g.*, EX1029, 1 (“[p]rice differentiation”), 6 (“[c]hannel pricing”); 74, 76, 15, 26, 78, 99, 101, 136-37; EX1003, ¶366. This would have beneficially in- creased the ability to respond more fulsomely to changing conditions by adjust- ing/modifying *multiple* revenue-impacting parameters. EX1003, ¶366. For POSITA it would have been routine to make this implementation choice, and clear it would work and provide the expected functionality, yielding predictable results with REOS.³⁷ EX1003, ¶366.

9[h]	Jacob discloses, based on the query (<i>see</i> cl.9[f]), re-allocating³⁸ in- ventory items to or from said each of the respective distribution channels from or to the other distribution channels (<i>e.g.</i> “updating
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³⁷ REOS for all obviousness arguments herein is further confirmed by this technol-
ogy’s predictability and use of well-known hardware/software. *See* §II, n.23.

³⁸ *See* n.26.

	and” “reallocat[ing]... pricing and inventory information to the sales channels”). EX1003, ¶¶390-405. Phillips discloses adjusting automatically/without the need for human intervention information related to inventory (<i>see</i> cl.9[b], cl.9[g]), including inventory allocation (<i>e.g.</i>, “forecasting module generates and updates for all products/fare class combinations,” “revenue management [system]... to calculate and... update the booking limits,” “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,” “allocations... to manage the shortage”). <i>See</i> cl.9[g]; EX1003, ¶¶406-410. Tamura discloses, based on the query (<i>see</i> cl.9[f]), re-allocating inventory items to or from said each of the respective distribution channels from or to the other distribution channels (<i>e.g.</i>, “sales rep part... authori[zed] to transfer items from a retailer with a low sales progress rate in relation to the allocation quantity to retailers with a high sales progress rate”). EX1003, ¶¶411-419. Kono discloses, based on the query (<i>see</i> cl.9[f]), re-allocating inventory items to or from said each of the respective distribution channels from or to the other distribution channels (<i>e.g.</i>, “maker-side server device... instructs... resale of... product from... agency ‘ffff’ to... agency ‘bbbb’”; “instructing transfer of inventory product from the agency where sales have fallen to the agency that still sells”). EX1003, ¶¶420-430. EX1004, ¶¶[0005]-[0006], ¶¶[0082]-[0083], ¶[0131]-¶[0133], ¶[0180] (“<i>reallocate inventory to the better-selling channel</i>”), ¶[0185] (“<i>updating and communication of pricing and inventory information to the sales channels</i>”), ¶[0191], cls.5-6,13, Figs.5-7, 40-43³⁹:
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³⁹ *See* n.32.

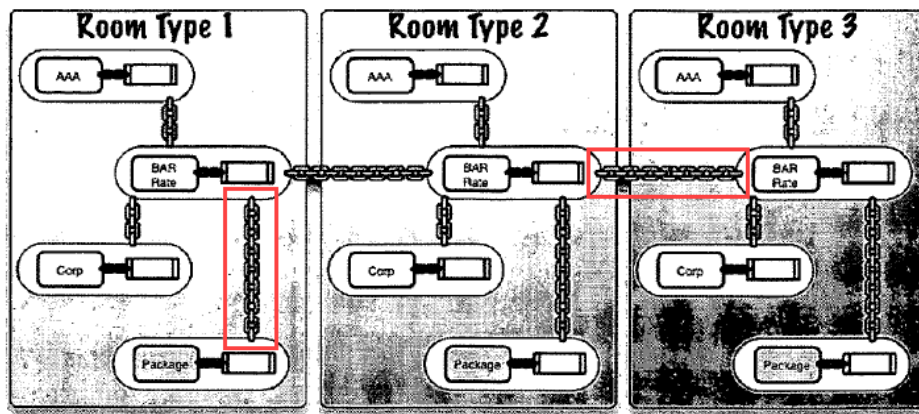


Figure 5

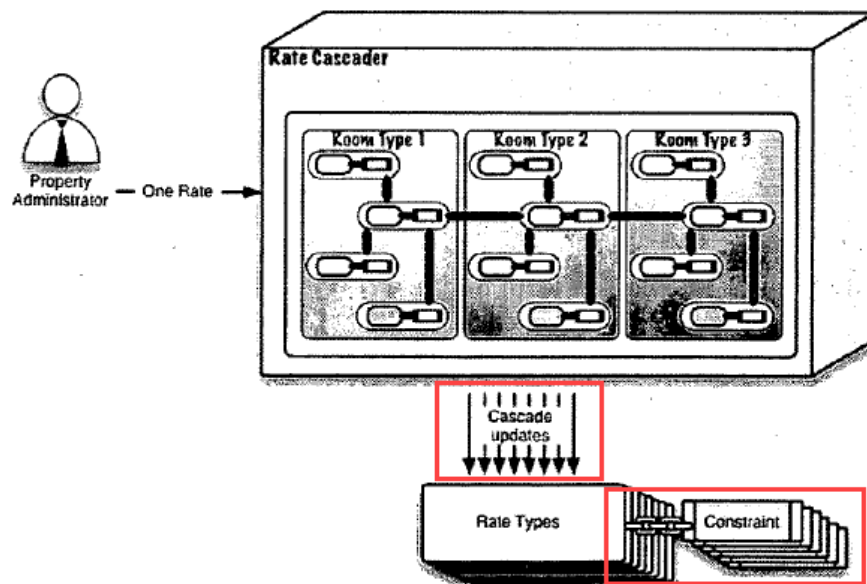


Figure 6

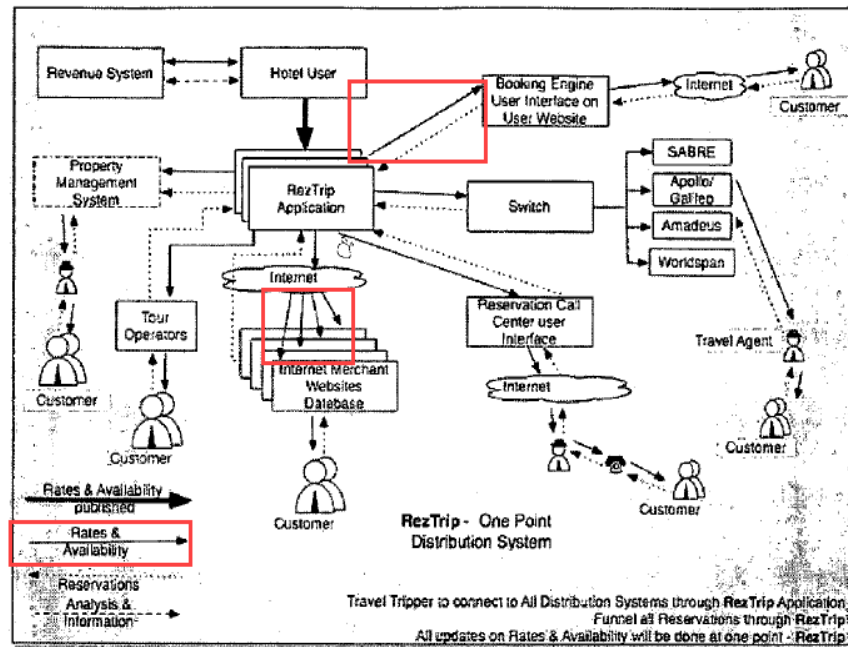


Figure 7

The screenshot shows the 'RezTrip Rate Grid Management' web application. The interface includes a sidebar with navigation links (Users, Property Management, Room Types, Rates, etc.) and a main content area for 'Rate Grid Management'. The 'Change by Date Range' section is active, showing a table with columns: 'Allotment Date Range', 'Room Type', 'Change Rate To', 'Change Allotment To', 'Open/Close', 'Min. Length of Stay', and 'Add Cut Off Days'. The 'Change Allotment To' column is highlighted with a red box. Below this, the 'Applicable Days' section shows a grid of days (All, Sun, Mon, Tue, Wed, Thurs, Fri, Sat) with checkboxes. The 'Rate Type' is set to 'Senior Citizen'. The 'Change Allotment To' field is also highlighted with a red box. The 'Update' button is visible at the bottom.

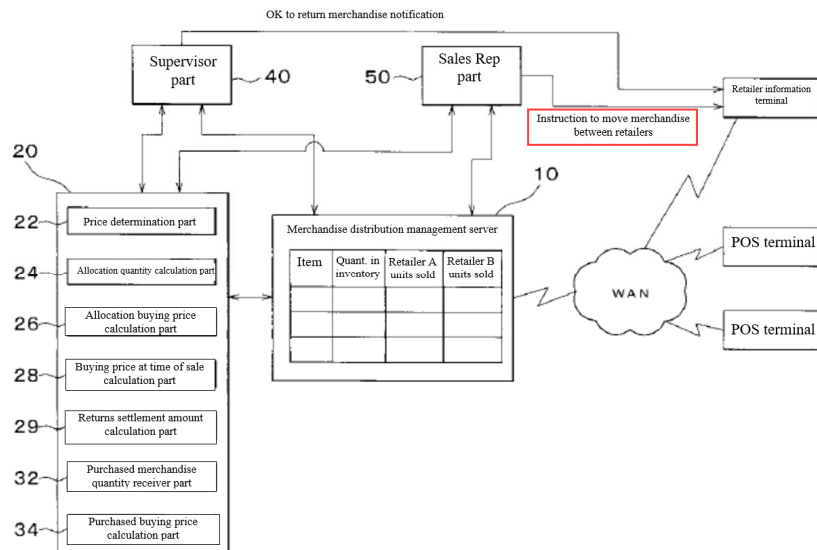
Figure 40

EX1029, 134-135 (“calculate and update the booking limits... send messages to update the booking limits... *forecasting module* generates and updates for all products/fare class combinations... *forecasts*...

based on current and recent bookings”), 101 (“combination of allocations and price rises”), 137-138, 170 (“Periodically recalculate...”), 264 (“periodically updates the prices...”) EX1029, 264.

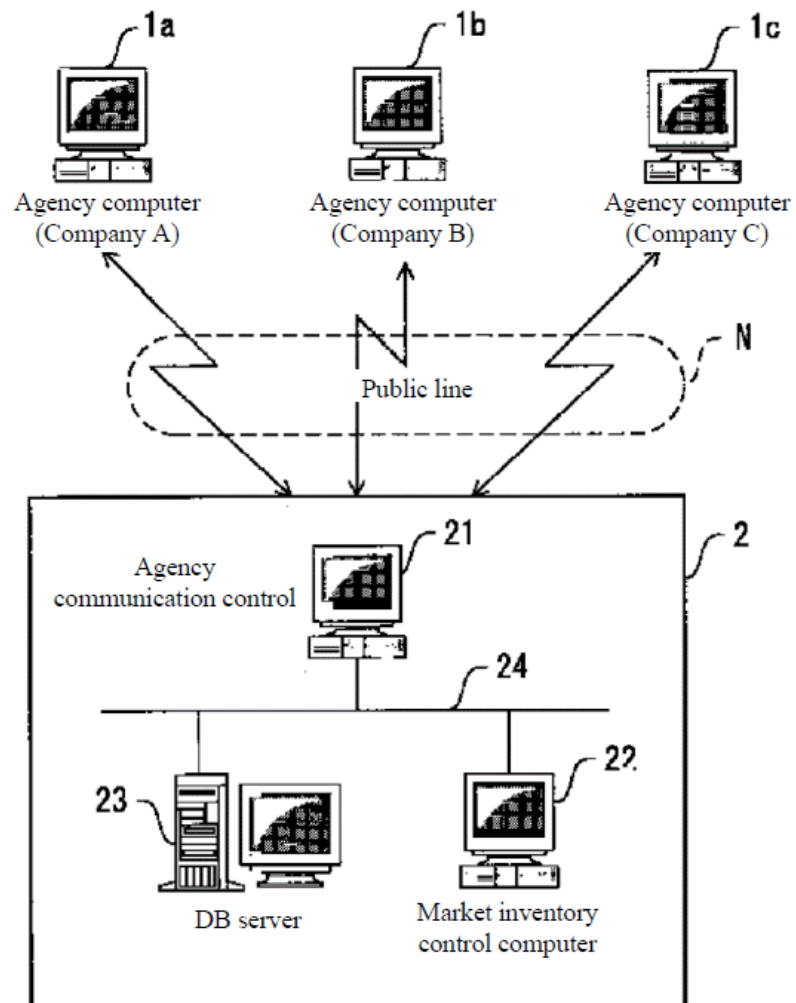
EX1005, ¶¶[0013]-[0014] (“return”), ¶[0034] (“return”), ¶[0035] (“***sales rep part... to transfer items from a retailer with a low sales progress rate... to...high sales progress rate***”), cl.4, Fig.3:

Fig. 3



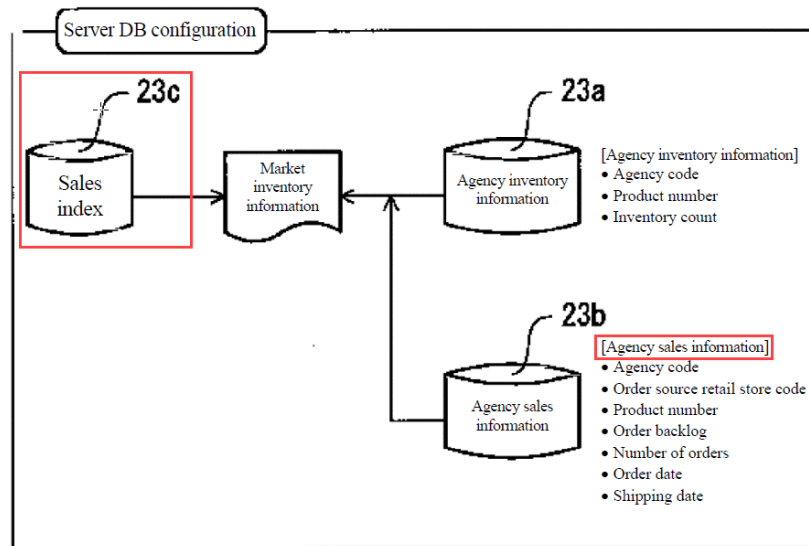
EX1007, Summary, ¶[0009]-¶[0010], ¶[0014], ¶¶[0025]-[0026] (“***instructing transfer of inventory product from the agency where sales have fallen to the agency that still sells***”), ¶¶[0045]-[0046] (“***maker-side server device 2 instructs... resale of the product from the agency ‘ffff’ to the agency ‘bbbb’***”), cl.1, Figs.1-3:

[FIG. 1]

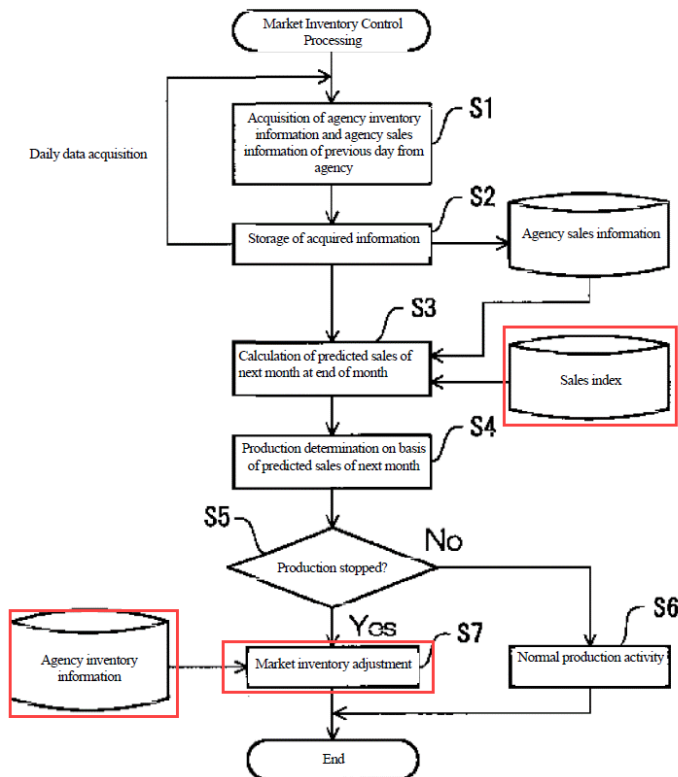


[FIG. 2]

23



[FIG. 3]



Based on these disclosures (*see* cl.9[g](narrative)), **POSITA would have understood these to be express disclosure—as an alternative to human-input-triggered actions—of automatically “re-allocating inventory items...” based on the query.** EX1003, ¶405.

If argued further disclosure is required, Jacob-Phillips (+combinations) renders obvious carrying out Jacob’s functions⁴⁰***automatically***. *See* cl.9[b]; EX1003, ¶¶406-410.

If, *arguendo*, further disclosure of automatically “reallocating” based on the query is required, **it would have been obvious from Jacob or Jacob-Phillips (+combinations) in view of Tamura or Kono.** *See* n.25; EX1003, ¶¶411, 420. Jacob discloses “computer program systems [including “code segments”] configured to manage the [system’s] data and perform the methods/functions,” which “may be implemented in computer software [and/or] hardware.” EX1004, ¶¶[0082]-[0083], ¶¶[0131]-[0133], [0191]; EX1003, ¶¶416, 427. Jacob also discloses “reallocat[ing] inventory to the better-selling channel.” *E.g.*, EX1004, ¶[0180]; EX1004, ¶¶416, 427. Tamura discloses “merchandise distribution management server... executes each step” (EX1005, ¶[0014]) and “sales rep part 50... manages the sales progress rate for each retailer... among a predetermined number

⁴⁰ *See* n.26, 29.

of retailers based on the allocation quantity; and... part 50 is authorized to transfer the items from retailers having a low sales progress relative to the allocation quantity to retailers having a high sales progress rate.” EX1005, ¶[0013], ¶¶[0034]-[0035], cl.4, Fig.3; EX1003, ¶417. **Kono** discloses *automatically* “send[ing] instructions for product transfer from the maker-side server device... to the agency-side terminals” and “instructing transfer of inventory product from the agency where sales have fallen to the agency that still sells.” EX1007, ¶¶[0045]-[0046], [0013], [0025], cl.3, Fig.3; EX1003, ¶428. **POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob’s or Jacob-Phillips’s (+combinations’) system using (1) Tamura’s or (2) Kono’s beneficial teachings of *automatically* re-allocating inventory items to or from each respective distribution channel based on the query so in the resulting system reallocating occurs automatically without the need for a user instruction.** EX1003, ¶¶418, 429 This would have beneficially furthered Jacob’s/Tamura’s/Kono’s goals (*see* cl.9[d](narrative), esp. p.54). EX1003, ¶¶418, 429. For POSITA it would have been routine to make these implementation choices, and clear it would work and provide the expected functionality, yielding

predictable results with REOS.⁴¹ See EX1029, (discussing existing systems automatically adjusting channel allocations and price); EX1026 (same for hotel inventory); cl.9[h], immediately above; EX1003, ¶¶418, 429-431.

(b) Claim 10

Claim 10 is the *Beauregard* analog of computing device claim 9. Thus, the arguments and evidence for claim 9 include the arguments and evidence establishing claim 10 is also unpatentable as obvious based on the same grounds, with certain additions for claim 10 below.

10[pre]	Jacob discloses a non-transitory computer-readable storage medium (e.g., a “computer readable medium...”; “hard disk storage”), the non-transitory computer-readable storage medium storing computer instructions (e.g., “computer program systems comprised of a series of code segments”; “Function or Functions” such as “computer algorithms or algorithmic routines which manipulate or process or store or operate upon data and/or interact with users”) to be implemented on at least one computing device (e.g., “general purpose computer[]”; “computer”; “plurality of computers”) including at least one processor (“central processing unit” of “general purpose computers” that “run” the system, comprising, e.g., “computer software[,]hardware or a combination,” including “computerized database”), the computer instructions when executed by the at least one processor cause the at least one computing device to perform a method for managing inventory allocations (e.g., “computer program systems [comprised of code segments] configured to manage
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⁴¹ REOS here and for all obviousness arguments herein is further confirmed by this technology’s predictability. See n.23. POSITA would additionally have been well-aware of re-allocating items between distribution channels. See n.23; cl.9[g].

the data and perform the methods/functions of the invention”; “run” the “system and method for managing time-dependent inventory”; see cl.9[c]). EX1003, ¶¶432-442.

See cl.9[b] (discussing Phillips).

EX1004, ¶[0006] (“*computer program... code segments... software[,]... hardware...*”), ¶[0078] (“Function...computer algorithms...manipulate or process or store...”), ¶[0082] (“*computer program systems configured to manage the data and perform the methods/functions of the invention...plurality of computers*”), ¶¶[0083]-[0084] (“central processing unit”), cls.7-12, Fig.7:

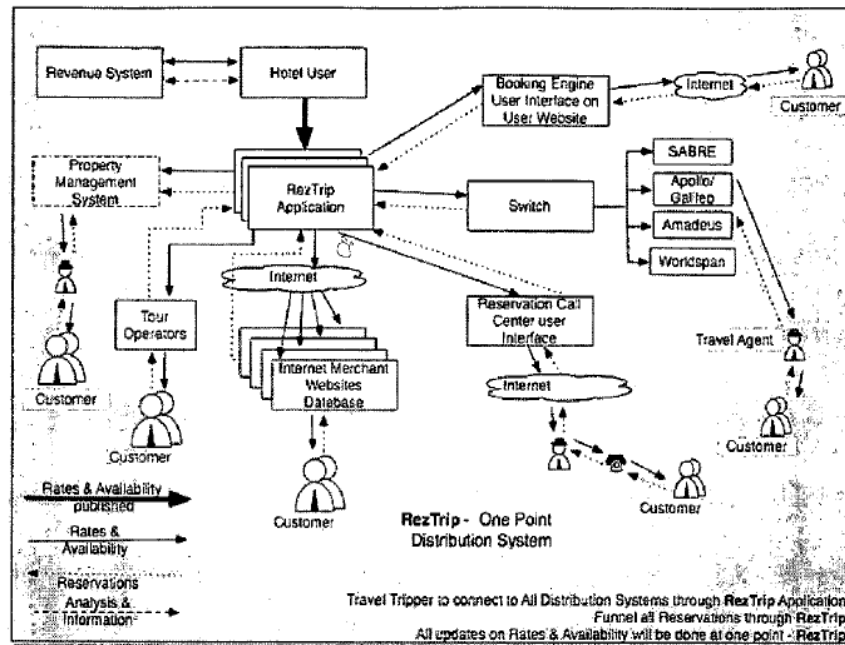


Figure 7

For cl.10[a]-10[f], see cl.9[c]-[h] respectively. EX1003, ¶¶443-470.

(c) Claims 1-8

Claim 1 is the method claim analog of computing device claim 9. Thus, the arguments and evidence establishing claim 1 is obvious is reflected in claim 9 and

based on the same grounds. For limitations 1[pre]-[e], see limitations 9[b]-[h], respectively. The additional analysis for 1[pre] and dependent claims 2-8 is below.

Claim Limitation	Exemplary Disclosures in Prior Art
1[pre] ⁴²	Jacob discloses a computer-implemented method (e.g., “computer program systems comprised of a series of code segments,” “computer software[,]. . . hardware or a combination,” “computerized database”) of managing inventory allocations (e.g., “system and method for managing time-dependent inventory”). EX1003, ¶¶471-484. <i>See</i> cl.9[b] (discussing Phillips). EX1004, Abstract (“<i>method for managing time-dependent inventory...</i>”), ¶[0001]-¶[0002], ¶[0005]-¶[0006] (“<i>series of code segments...computer software[,]. . .hardware or a combination</i>”), ¶[0082]-¶[0084] (“<i>computerized database</i>”).

⁴² Though not limiting, the preamble is disclosed. *See* n.11.

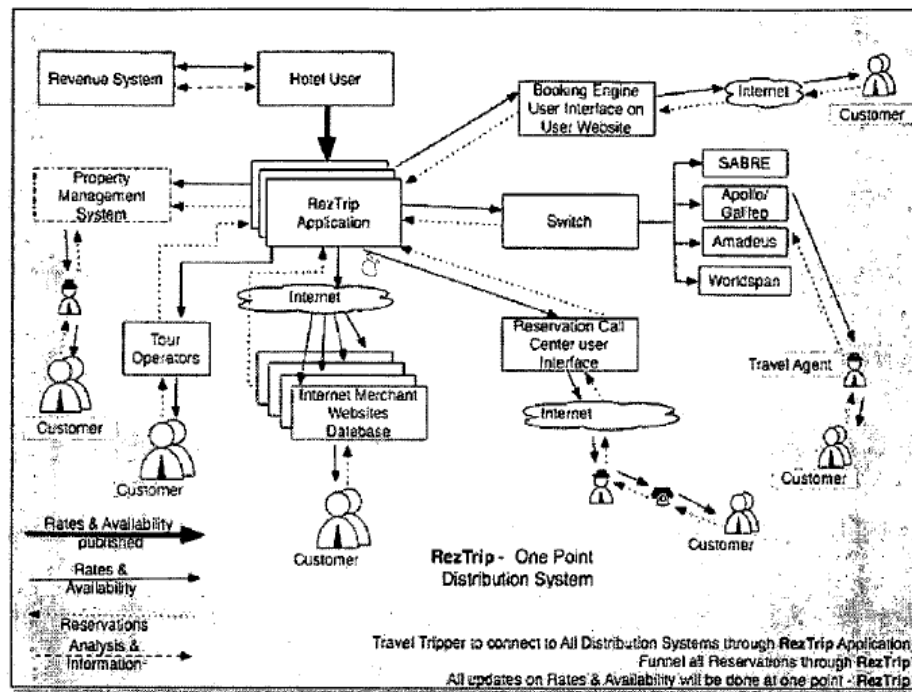


Figure 7

EX1004, Fig.7

See cl.9[b]. For 1[a]-1[e], see cl.9[b-h], respectively. EX1003, ¶¶485-512.

2

Grounds 1-8 render obvious cl.2. See cls.1, 9.

Jacob discloses storing inventory item data (e.g., storing “inventory data”; see also “sale data” (cl.9[c])) **and distribution channel data** (e.g., “sales channel data”) **in a database** (e.g., “database”). EX1003, ¶¶513-520.

Tamura discloses storing inventory item data (e.g., data “recording” “number of items sold during... unit period for each item”/“number of units sold during... unit period”; see also “sale data” (cl. 9[c])) **and distribution channel data** (e.g., data “recording” “Retailer” (e.g., “Retailer A,” (Fig.3) “Retailer B” (Fig.3))). EX1003, ¶¶521-525, 532-534, 536-537.

Kono discloses storing inventory item data (e.g., “stor[ing]”/“sav[ing],” e.g., “acquired product sales information,”

“product inventory information,” “monthly sales indexes of... previ-
ous... and current year”; “agency sales information of previous
day”/“information of... day before”; *see also* “sale data” (cl.9[c])) and
distribution channel data (data identifying, *e.g.*, “Agency Name”
(Fig.4) (*e.g.*, “agency ‘ffff,’” “agency ‘bbbb’”) and each agency’s “In-
ventory Count”). EX1003, ¶¶521, 526-533, 535-537.

EX1004, ¶[0082]-¶[0084] (“*inventory data... sales channel data*”);

EX1005, ¶[0014], ¶[0017] (“*merchandise distribution management
server... retailer*”), cl.1 (“database,” “*number of items sold during the
unit period for each item for sale...*”), cl.5, Figs.1-3:

Fig. 1

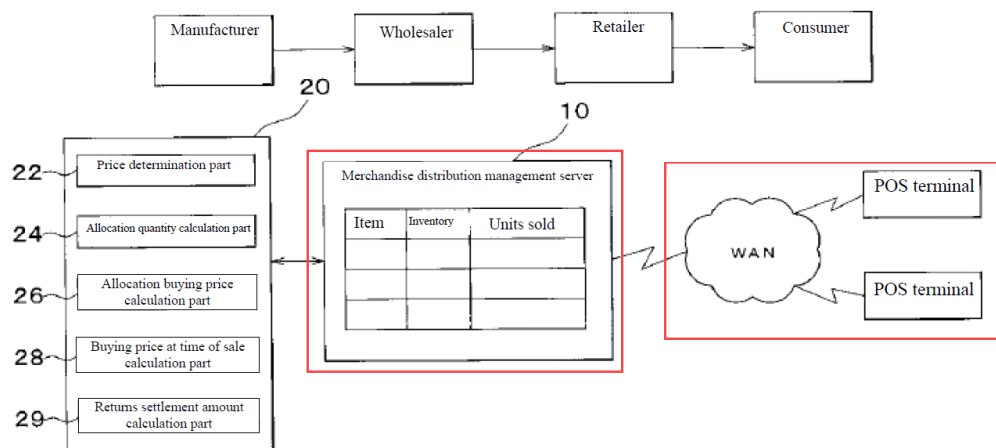


Fig. 2

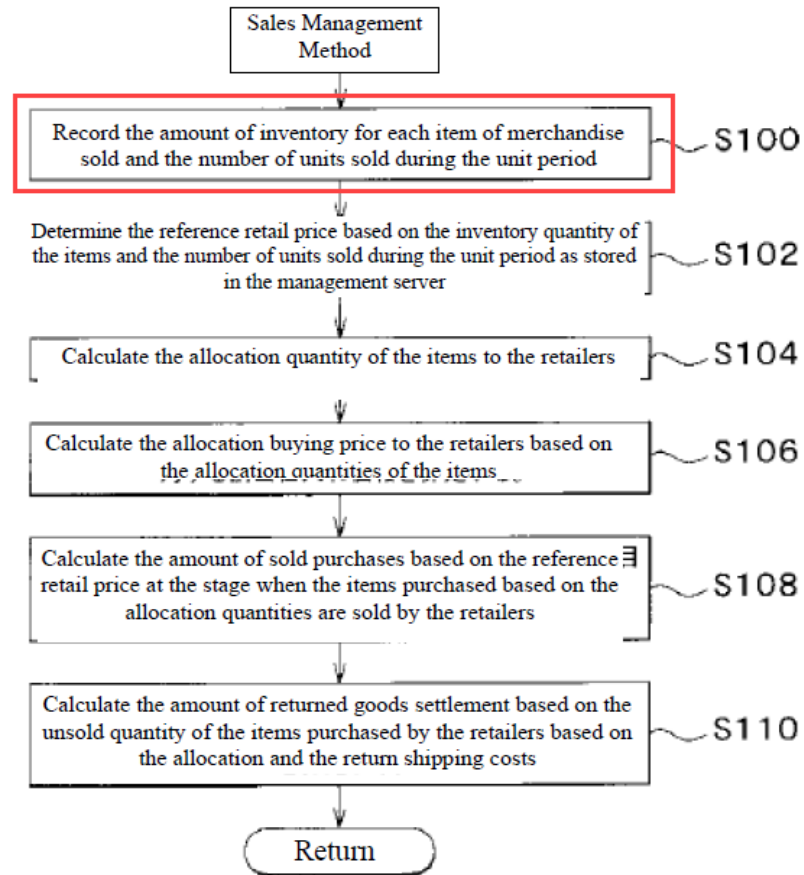
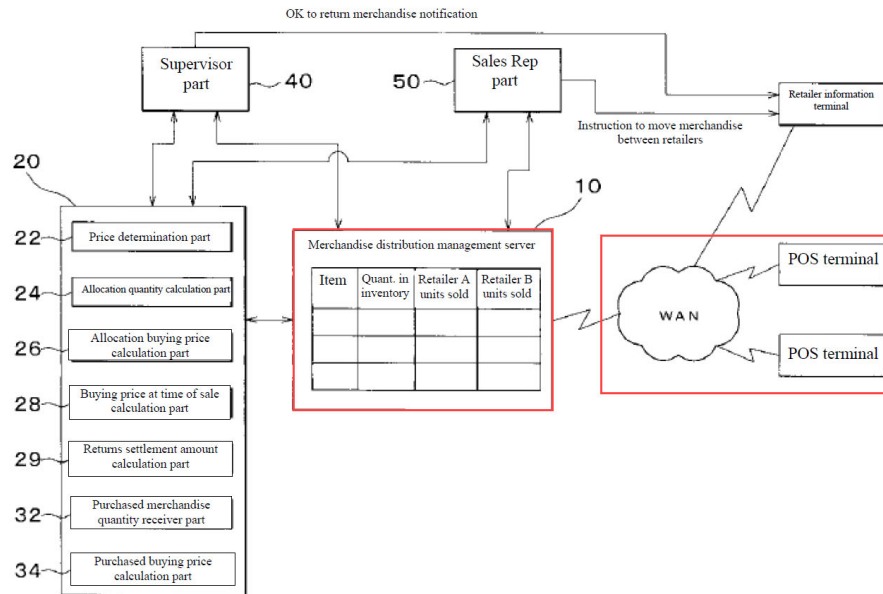
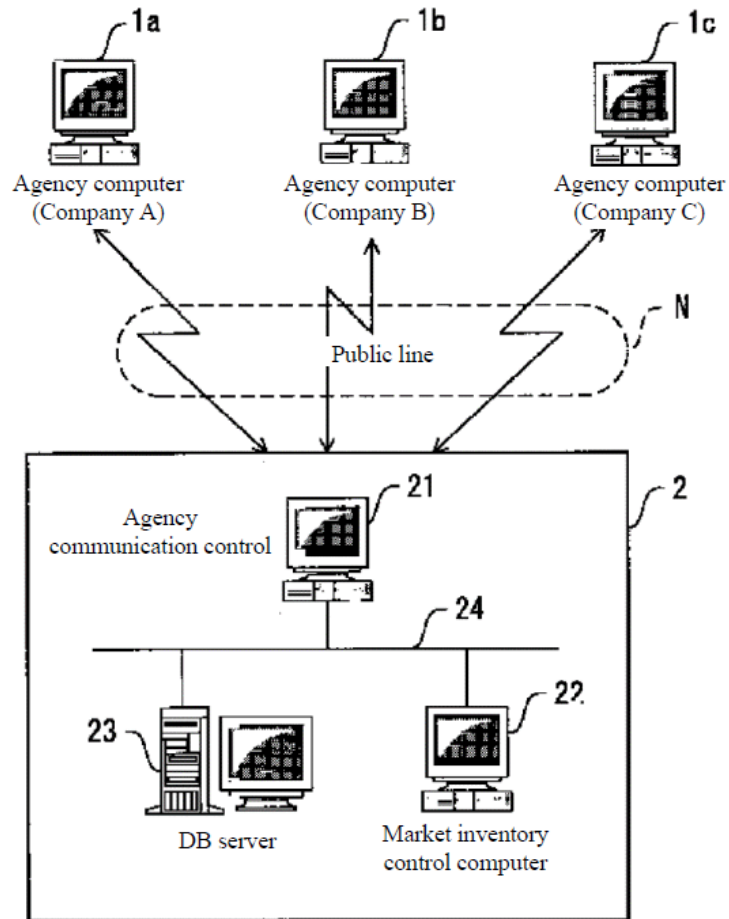


Fig. 3



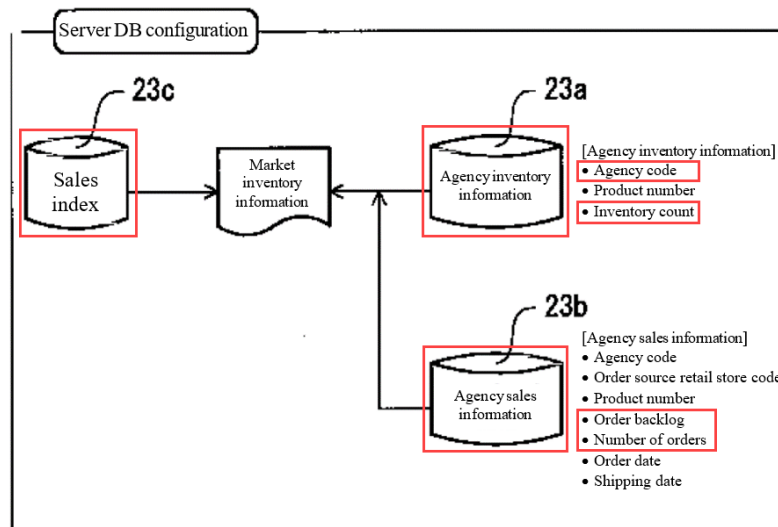
EX1007, ¶[0009]-¶[0010], ¶[0014], ¶[0025]-¶[0026] (“*inventory count... in the agency inventory information database... in the agency sales information database... monthly sales indexes...in the sales index database*”), ¶[0039] (“*information of the day before... product inventory information... acquired product sales information...*”), ¶[0043] (“*agency ‘ffff’... agency ‘bbbb,’...inventory count*”), ¶[0045]-¶[0046], Figs.1-4:

[FIG. 1]

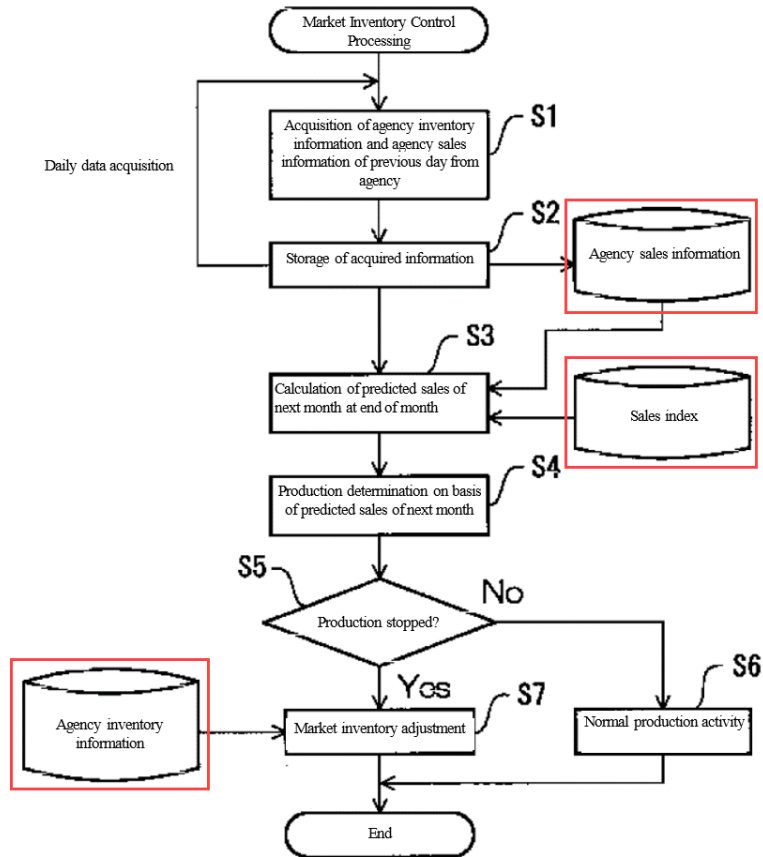


[FIG. 2]

23



[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. POSITA would have understood "sales channel data" to include data about/identifying the channel itself. EX1004, ¶[0084]; EX1003, ¶519.

If further disclosure is required, **this would have been obvious from Jacob (+combinations) in view of Tamura or Kono.** *See* n.25.; EX1003, ¶521.

POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob's (+combinations') disclosed database using (1) Tamura's or (2) Kono's beneficial teachings of storing inventory item and distribution channel data (also in a database). *See* cl.2(chart);

EX1003, ¶536. This would have beneficially furthered Jacob's/Tamura's/Kono's goals (*see* cl.9[d](narrative), esp. p.54) by, *e.g.*, facilitating the system's tracking of initial inventory allocation, ongoing sales, and inventory levels, and storing/modifying allocations in conjunction with the system's database. EX1003, ¶536. For POSITA it would have been routine to make these implementation choices, and clear they would work, providing the expected functionality and predictable results with REOS. EX1003, ¶¶536-538.

3	Grounds 1-8 render obvious claim 3. <i>See</i> cls.1, 2, 9. Jacob discloses associating distribution channels with inventory items (<i>e.g.</i> , associating "sales channels"/"selling channels" (<i>see</i> cl.2, 9[c]) with "time-dependent inventory" (<i>see</i> cl.2, 9[c]) by storing such
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associations in database, including, *e.g.*, “sales channel data” and “inventory data,” including “inventory” allocations; allocating inventory items to “channels” (*see* cl.9[b], [h])). EX1003, ¶¶539-547.

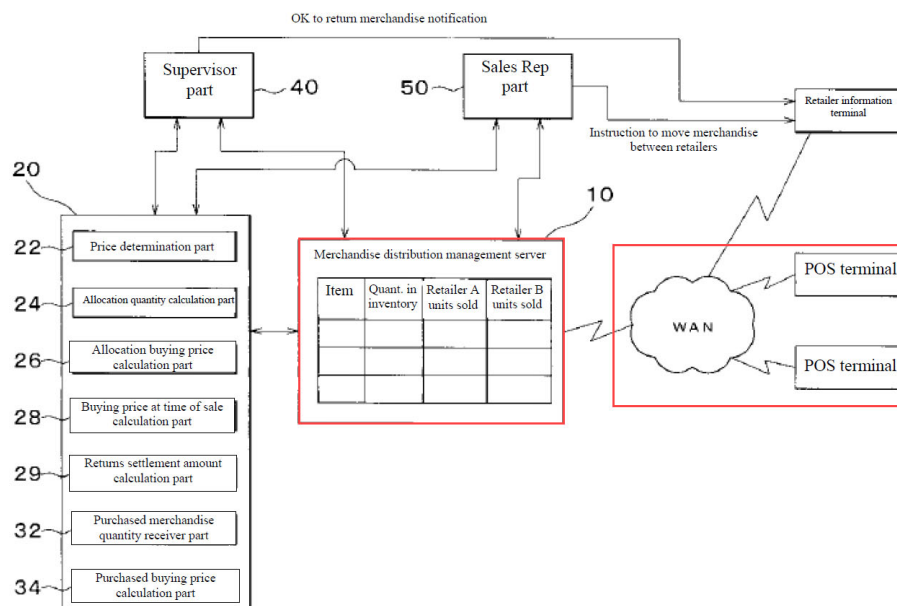
Tamura discloses associating distribution channels with inventory items (*e.g.*, associating “Item” with “Retailer A units sold” (Fig.3), “Retailer B units sold” (Fig.3); associate “allocated quantity of the items for each retailer”; *see* Fig.3); *see* cl.2, 9[c]. EX1003, ¶¶548-552, 559-562.

Kono discloses associating distribution channels (*see* cl.9[c]) **with inventory items** (*e.g.*, associating “[d]ata of an agency code, a product number, and an inventory count” with one another by “sav[ing] in the agency inventory information database”; *see* Fig.4; *see* cls.2, 9[c]). EX1003, ¶¶548, 553-562.

EX1004, ¶[0082]-¶[0084] (“*inventory data... sales channel data...*”).

EX1005, ¶[0014], ¶[0017], cl.1, cl.5 (“*recording... allocated quantity of the items for each retailer*”), Fig.3:

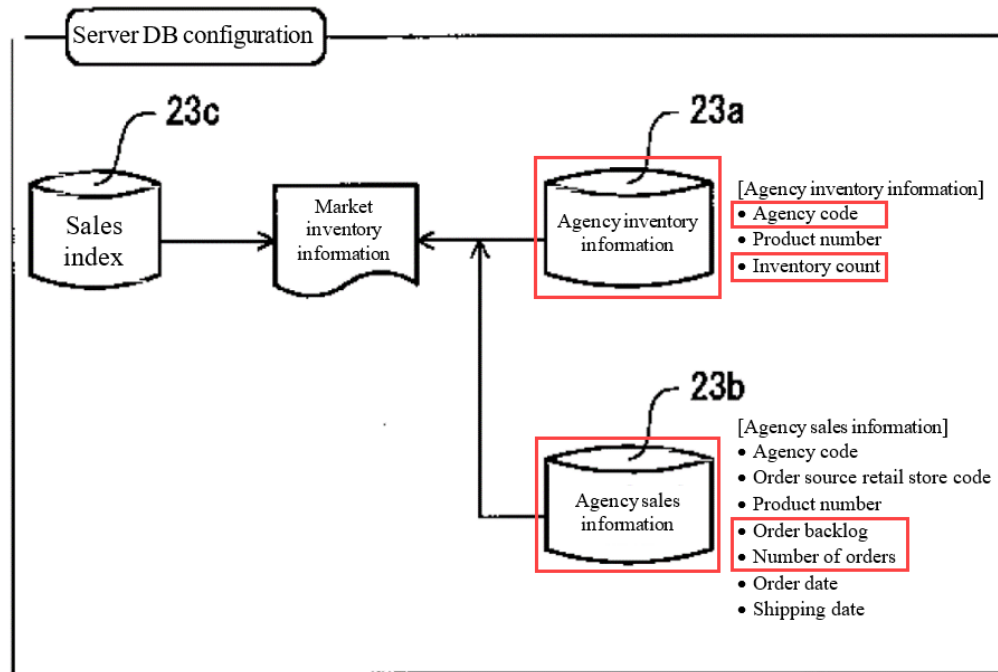
Fig. 3



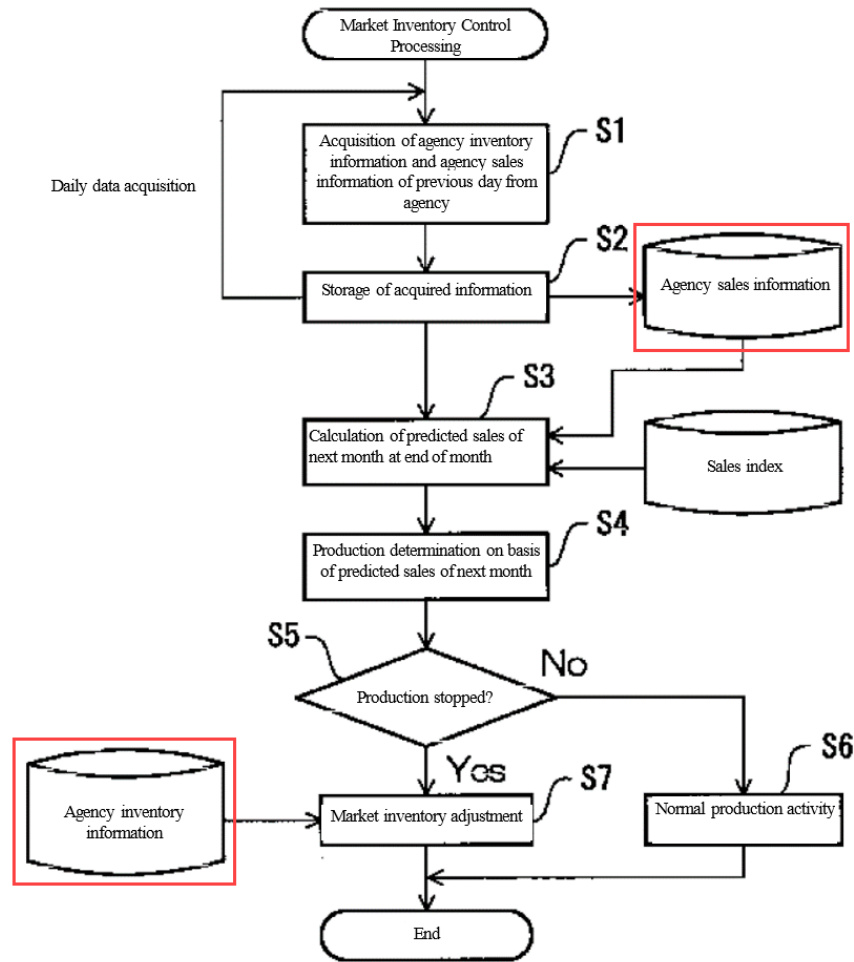
EX1007, ¶[0009]-¶[0010], ¶[0014], ¶[0025]-¶[0026] (“*inventory... Data of an agency code, a product number, and an inventory count are saved in the agency Inventory information database*”), ¶[0039], ¶[0043], ¶[0045]-¶[0046], Figs.2-4:

[FIG. 2]

23



[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 associating distribution channels with inventory items. *See* cl.3 (chart); EX1003, ¶545. **POSITA would have understood Jacob stores inventory allocations, and thus associations between “sales channel data” and “inventory data,” in, e.g., Jacob’s “hotel data” “database.”** EX1003, ¶546. At minimum POSITA would have understood **Jacob necessarily, and thus inherently does so** to allow REZTRIP to “manage the sales pricing and inventory information.” *E.g.*, EX1004, ¶[0006]; EX1003, ¶546.

Additionally, **Jacob discloses or, at minimum, Jacob-Evangelist (+combinations) renders obvious making and managing inventory allocations.** *See* cl.9[b], [c]; EX1003, ¶547.

If further disclosure is required, **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob’s database (+combinations) so the resulting system associates channels with inventory items by, e.g., connecting Jacob’s “sales channel data” and “inventory data” (including allocations) to sales channels—either from these Jacob disclosures, or, alternatively (see n.25; cl.2), in view of Tamura or Kono, using Tamura’s or Kono’s beneficial disclosures of associating distribution channels with inventory items.** *See* cl.3(chart); EX1003, ¶548. This would have beneficially enabled the resulting system to better “manage... inventory information” (as Jacob does for

each channel), and, *e.g.*, allowed it to automatically store and accurately track/analyze, per-channel inventory allocations, remaining inventory, and other data, and efficiently and automatically communicate/report these to Jacob’s channels, furthering Jacob’s goal of “[m]aximizing rental revenues” and “use of time-dependent inventory” by “tak[ing] advantage of many different... channels.” *E.g.*, EX1004, ¶¶[0002], [0005], [0010], [0154]; *see* p.54; EX1003, ¶561. For POSITA it would have been routine to make these implementation choices, and clear they would work, providing the expected functionality and predictable results with REOS. EX1003, ¶¶561-563.

4	Grounds 9-12 render obvious claim 4. <i>See</i> cls.1, 9. Jacob discloses the sale data (<i>see</i> cl.9[c]) is in a form of data relating to at least sale price of each inventory item (<i>e.g.</i>, “reservation” or “confirmation information” including “Rate Type”/“selling rate”; <i>see</i> cl.9[c]). EX1003, ¶¶564-571. Tamura discloses the sale data (<i>see</i> cl.9[c]) is in a form of data relating to at least number of inventory items sold over a predetermined length of time (<i>e.g.</i>, “number of units sold during a specific unit period”; <i>see</i> cl.9[c]). EX1003, ¶¶571-575, 584-586. Addington discloses receiving (<i>e.g.</i>, “logging”) sale data in a form of data relating to at least rate of commission (<i>e.g.</i>, “commissions,” “associated commissions”). EX1003, ¶¶576-578, 584-586. Phillips discloses sale data in a form of data relating to at least sale price of each inventory item (<i>e.g.</i>, “price (fare),” “rate” (<i>e.g.</i>, “\$28.00/day”)), rate of commission (<i>e.g.</i>, “commission” (<i>e.g.</i>, “15%”)), and number of inventory items sold over a predetermined
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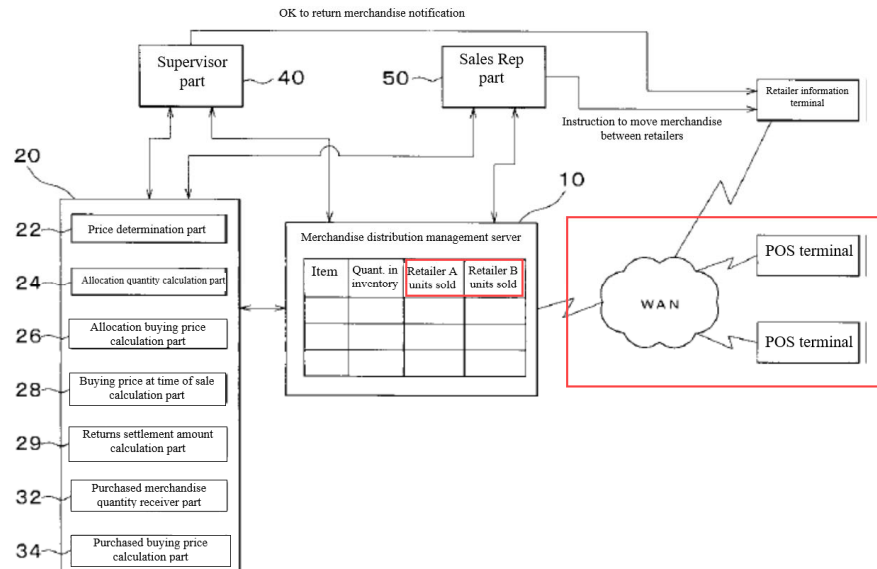
length of time (e.g., data from “markdown management system” indicating item “selling well below expectations” or “at... rate initially expected”). EX1003, ¶¶579-586.

EX1004, ¶[0074], ¶[0086] (“*reservation*”), ¶[0123] (“selling rate... Rate Types”), ¶¶[0124]-[0125], ¶[0176] (“Rate Type active period...”), ¶[0192].

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

EX1005, ¶[0017] (“*units sold during a specific unit period*”), ¶[0026], Fig.3:

Fig. 3



EX1030, ¶[0028]-¶[0029].

EX1029, 31 (“*markdown management system... selling well below expectations...*”/“*at the rate initially expected.*”), 136 (“*price (fare)*”), 137-138 (“*commissions*”; “*rate... \$28.00/day*”); Fig.6.4, Table 6.8, Table 6.9.

TABLE 6.9
Incremental cost elements for Rent-a-Lemon

Cost element	Units	Value	Description
Commissions	\$\$	15%	Commission paid for bookings through travel agents
		0%	Commission paid for bookings through other channels
Transaction cost	\$/Rental	\$8.25	Paperwork, cleaning costs, check-in and check-out costs for each rental
Daily cost	\$/Day	\$4.32	Wear and tear per day of rental

Jacob discloses receiving sale data relating to a *sale price* of each item.

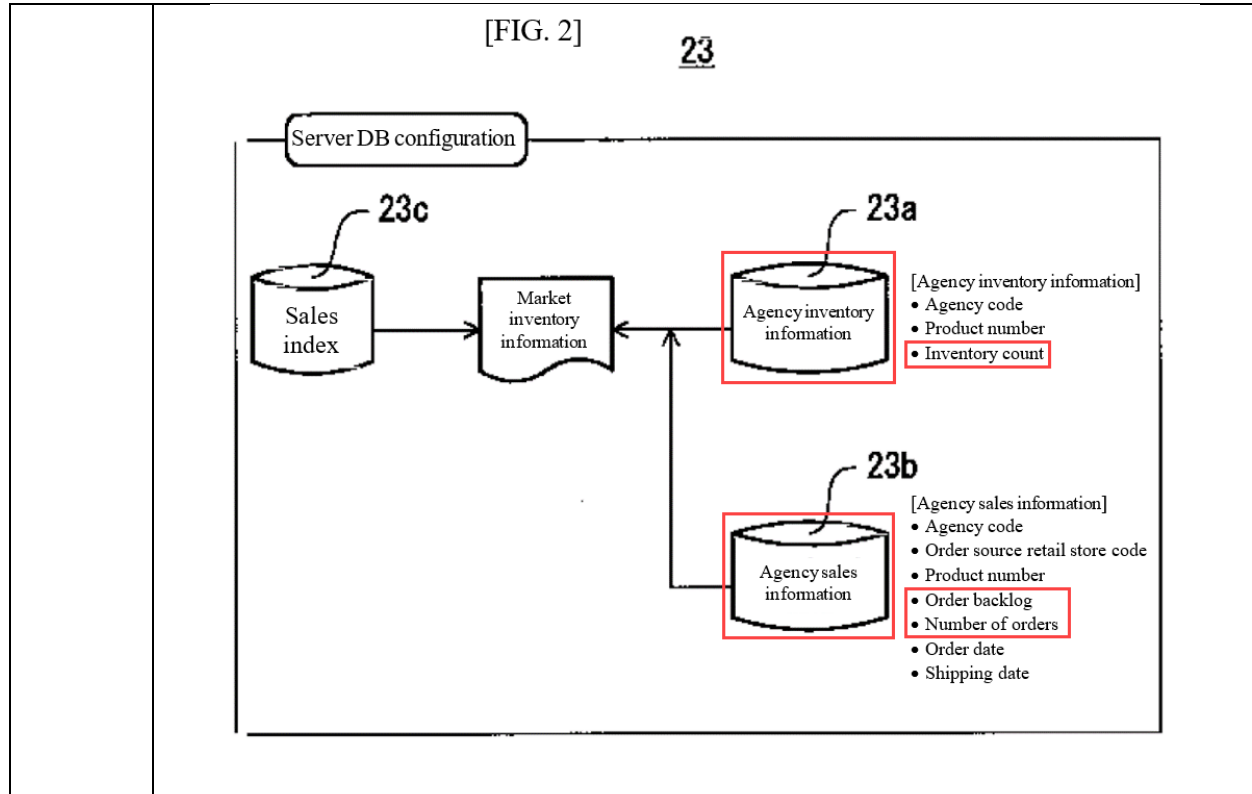
EX1003, ¶571. Additionally, receiving sale data relating to a *number of inventory items sold over a predetermined length of time* **would have been obvious from Jacob (+combinations) in view of Tamura.**⁴³ EX1003, ¶571. Jacob-Tamura’s (+combinations’) sale data (*see* cl.9[c]) includes the number of inventory items sold over a predetermined period of time. EX1003, ¶571.

As discussed, it would have been obvious from Jacob-Tamura (+combinations) and Tamura to receive sale data including *sale price* and *number of inventory items sold over a predetermined time*. EX1003, ¶571. **POSITA would have**

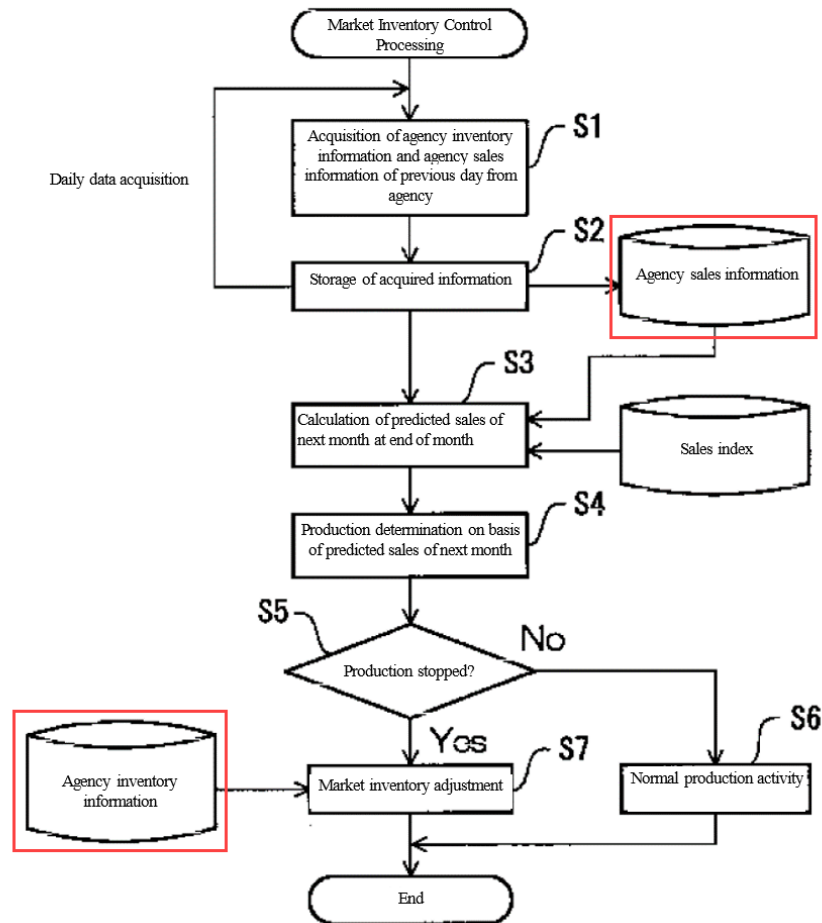
⁴³ If argued cl.4 requires sale data relating to all items sold by a channel (*i.e.*, more than one item type), this is disclosed by, *e.g.*, Tamura (EX1005, Fig.3 (multiple “Item” rows)). EX1003, n.37.

found it obvious for this sale data to additionally include a “*rate of commission*” for each sold item from Jacob-Tamura (+combinations) in further view of (1) Addington or (2) Phillips. EX1003, ¶584. POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob-Tamura’s (+combinations’) receipt of sale data from channels using (1) Addington’s beneficial teachings of including commission information in sale data received by the server or (2) Phillips’s beneficial teachings of accounting for “commissions” information in revenue management decisions (along with sale price and number of items sold over a predetermined time) (*see* cl.4(chart)); EX1003, ¶586. This would have beneficially facilitated (1) “logging [this] relevant... information,” per Addington (EX1030, ¶[0029]), and (2) “estimat[ing] incremental costs accurately and... incorporat[ing] them into revenue management decisions,” given “*tremendous economic incentive... to steer demand as much as possible through lower-cost channels*,” per Phillips (EX1029, 137-138), better reflecting channel-specific distribution costs and allowing consideration of *post-commission* revenue in analyzing and considering, *e.g.*, price/allocation adjustments. EX1003, ¶586. For POSITA it would have been routine to make these implementation choices, and clear they would work, providing the expected functionality and predictable results with REOS. EX1003, ¶¶586-587.

5	Grounds 1-8 render obvious cl.2. See cls.1, 9. Jacob and Kono each disclose processing the sale data (see cl.9[d]) includes a determination of whether or not a supply of inventory items exceeds demand or vice versa per distribution channel (e.g., (1) Jacob: determining whether/“[i]f a sales channel’s Room Type inventory is sold out,” “days that might be selling out soonest”; (2) Kono: “check[ing] the sales of each agency” to determine if “backlog of orders” but “products are presently... out of stock,” determining “agencies having excess inventory”/“agencies having insufficient inventory”). EX1003, ¶¶588-601. <i>See cl.7.</i> EX1004, ¶[0131]-¶[0132], ¶[0176] (“<i>days that might be selling out soonest</i>”), ¶[0180] (“<i>channel’s Room Type inventory is sold out....</i>”). EX1007, Summary, ¶[0009]-¶[0010], ¶[0014], ¶[0042]-¶[0043] (“checks the sales of each agency... <i>backlog of orders...</i>,” “<i>products... out of stock.</i>”), ¶[0050] (“rapidly respond... (<i>excess inventory and inventory shortage...</i>).”), ¶[0053] (“<i>agencies having excess[/insufficient] inventory...</i>”); see cl.11, Figs.2-4:
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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.5's additional limitation. *E.g.*, EX1004, ¶¶[0176], [0180]; EX1003, ¶590. If, *arguendo*, further disclosure is required, **it would have been obvious from Jacob (see n.28) (+combinations) in view of Kono. See n.25; EX1003, ¶594. POSITA would have been motivated and found it obvious, straightforward, and advantageous to implement Jacob's (+combinations') system using Kono's beneficial teachings (see cl.5(chart)) of determining per channel whether or not supply exceeds demand. EX1003, ¶601; see cl.9[b].** This would have beneficially increased the system's ability to monitor/track accurately inventory status/availability at each channel, furthering Jacob's and Kono's goals. *See* cl.9[d](narrative); EX1003, ¶601. For POSITA it would have been routine to make these implementation choices, and clear they would work, providing the expected functionality and predictable results with REOS. EX1003, ¶¶601-602.

6	Grounds 3-4 and 6-7 render obvious cl.6. See cls.1, 9. Jacob discloses processing the sale data (see cl.9[d]) includes processing a number of items sold (e.g., "Rooms Sold" (Fig.42)) in that distribution channel and a number of items available for sale in that distribution channel (e.g., "Rooms Available" (Fig.42); "allotment"; allocation before "reallocat[ing]"). EX1003, ¶¶603-609. Tamura discloses processing the sale data (see cl.9[d]) includes calculating a sale rate index (e.g., calculating "sales progress rate") for each distribution channel in the form of a ratio of a number of items sold in a predetermined to a number of items available for
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sale in that distribution channel (e.g., “sales progress relative to the allocated quantity”; “progress rate in relation to the allocation quantity”; see cl.4). EX1003, ¶¶610-615.

EX1004, ¶¶[0109], [0176], [0180] (“reallocate”), ¶[0190] (“date ranges... days... inventory allotment”), ¶¶[0193], [0202], cl.13, Fig.42:

The screenshot displays the 'Rate Grid Management' interface for 'Shannon Inn'. The left sidebar contains navigation links: Users, Property Management, Room Types, Rates, and Rooms. The main content area is titled 'Rate Grid Management' and includes a 'Quick Fill Table' and three data tables for different room types.

1. Rate Type - BAR

This is your BAR Rate. Your modifications will affect all the floating rates selected for this change.

Quick Fill Table

Date Range	Room Type	Change Rate To	Change Allotment To	Open/Close	Min. Length of Stay	Add Cut Off Days
Start Date: 20/10/2004 End Date: 20/11/2004	Standard			☐ Close ☐ Open		

Applicable Days

☐ All ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thurs ☐ Fri

1b. Room Type - Standard

Day of Week	Date	Rate	Change Rate To	Rooms Sold	Rooms Available	Change Rooms Available	Change Cut Off Days	Open/Close	Min. Length of Stay
Tue	20/10/2004	100.00		20	10			☐ Open ☐ Close	2
Thurs	20/10/2004	100.00		20	10			☐ Open ☐ Close	2
Mon	20/10/2004	100.00		20	10			☐ Open ☐ Close	3

1b. Room Type - Deluxe

Day of Week	Date	Rate	Change Rate To	Rooms Sold	Rooms Available	Change Rooms Available	Change Cut Off Days	Open/Close	Min. Length of Stay
Tue	20/10/2004	100.00		20	10			☐ Open ☐ Close	2
Thurs	20/10/2004	100.00		20	10			☐ Open ☐ Close	2
Mon	20/10/2004	100.00		20	10			☐ Open ☐ Close	3

1c. Room Type Suite

Day of Week	Date	Rate	Change Rate To	Rooms Sold	Rooms Available	Change Rooms Available	Change Cut Off Days	Open/Close	Min. Length of Stay
Tue	20/10/2004	100.00		20	10			☐ Open ☐ Close	2
Thurs	20/10/2004	100.00		20	10			☐ Open ☐ Close	2
Mon	20/10/2004	100.00		20	10			☐ Open ☐ Close	3

Update

Figure 42

EX1005, ¶[0013] (“sales progress rate”), ¶[0035] (“sales progress rate... allocation quantity...”), cl.4.

The additional limitations of claim 6 would have been obvious based Jacob (+combinations) in view of Tamura for the reasons in cl.9[d](narrative).

EX1003, ¶610. Jacob discloses processing each channel’s sale data. EX1003,

¶605. Tamura discloses calculating a per-channel sale rate index (“sales progress rate”) in the form of a ratio of the channel’s items sold (“sales progress”) “relative to the allocated quantity” (*i.e.*, items available for sale):

$$\text{Sales Progress Rate} = \frac{\text{Number of items sold within a predetermined period of time}}{\text{Number of items for sale in each distribution channel}}$$

E.g., EX1005, ¶¶[0013], [0035], cl.4; EX1003, ¶612. **POSITA would have found it obvious, straightforward, and advantageous to implement Jacob’s system (+combinations) using Tamura’s express disclosures of calculating a “sales progress rate” “relative to the allocated quantity” assigned to the retailer.** *See* cl.6(chart), n.25; *see* cl.9[g](narrative) (discussing obviousness of implementing Jacob-Kono using Tamura’s disclosures); EX1003, ¶615. Calculating a sale rate index would have advantageously increased the resulting system’s ability to monitor and track accurately inventory status/availability at each channel, providing a practical cross-channel comparator. EX1003, ¶615. This would have furthered Jacob’s/Tamura’s/Kono’s stated goals. *See* n.25, cl.9[d](narrative); EX1003, ¶615. For POSITA it would have been routine to make these implementation choices, and clear they would work, providing the expected functionality and predictable results with REOS. *See, e.g.*, EX1029, 136, 138, 31 (*see* cl.4 Phillips discussion); EX1003, ¶¶615-616.

7

Grounds 3-4 and 6-7 render obvious cl.7. See cls.1, 6, 9.

Jacob discloses for each distribution channel (see cl.9[d]) setting a predetermined price of the inventory items (e.g., “assigning a default rate type,” “Default rate”/“selling rate”/“rate,” “best available rate (BAR)” for each “Room Type”), querying whether demand exceeds supply (see cl.5), and if demand does not exceed supply (e.g., “inventory” not “sold out”), decreasing a price by a predetermined percentage (e.g., taking “percentage off the rate” “create[d]”/“assign[ed]”/“set[] up” in advance/before “reservation workflow”; “price of an unreserved room may be lowered as the reservation date approaches”; see cl.9[f]-[g]), or if demand does exceed supply, comparing the performance rating of the distribution channel with other distribution channels (e.g., if inventory “might be *selling out*”; if “inventory is *sold out*... reallocate inventory to the *better-selling channel*”). EX1003, ¶¶617-625.

Tamura discloses for each distribution channel setting a predetermined price of the inventory items (e.g., “price”), calculating the sale rate index (see cl.6), decreasing a price (e.g., “take[] weak attitude toward the reference retail price or plan[] sales promotion”; see cl.9[f]-[g]), and comparing the performance rating of the distribution channel with other distribution channels (see cl.9[e]). EX1003, ¶¶625-632.

EX1004, ¶[0123] (“Room Type... default selling rate...”).

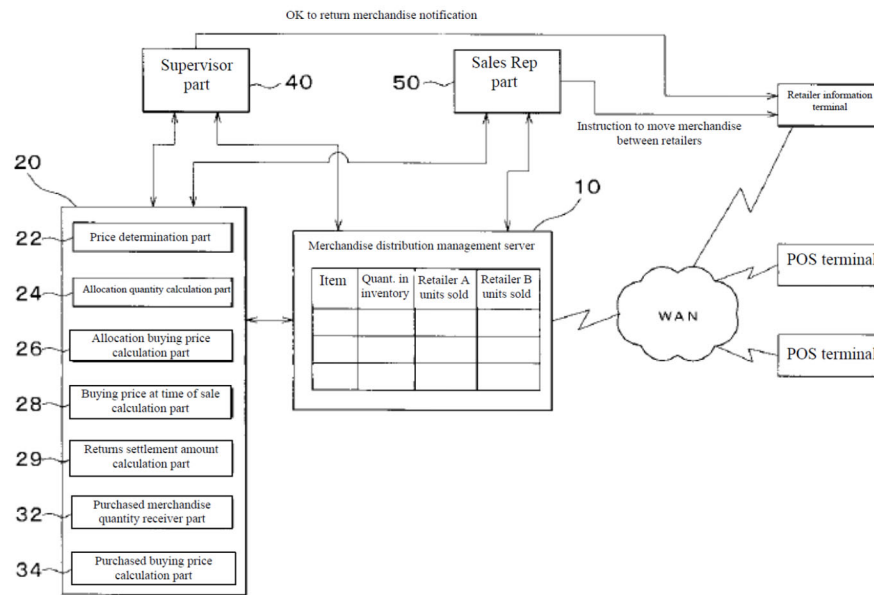
Rate Type	Standard Room-		
	04/11/05	04/12/05	04/13/05
Default Rate	\$139	\$159	\$199
AAA TM Rate	\$126	\$144	\$180
Government Rate	\$130	\$150	\$190
Summer Package Rate	\$100	\$100	\$100

EX1004, ¶¶[0123]-[0124].

EX1004, ¶[0125], ¶[0137], ¶[0176] (“inventory... Rate... *price*”), ¶[0180] (“*Room Type inventory is sold out... reallocate inventory to the better-selling channel...*”), ¶[0224] (“reservation workflow... *rates*”), ¶[0225]-¶[0227] (“*percentage off...*”), ¶[0228], cl.21 (“assigning a default rate type... room type... rate... room types.”).

EX1005, ¶[0014], ¶[0019] (“*price... inventory... weak attitude toward the reference retail price...*”), ¶[0025], Fig.3:

Fig. 3



Jacob discloses setting a predetermined price for inventory items and querying per channel whether supply exceeds demand or vice versa (*see* cl.5). EX1003, ¶¶622, 630. As discussed, Jacob (+combinations) in view of Tamura renders obvious calculating a sale rate index (*see* cl.6), and Jacob (+combinations) in view of Kono renders obvious querying whether or not supply exceeds demand per chan-

nel. *See* cl.5; EX1003, ¶630. POSITA would further have understood Jacob discloses changing prices based on determining whether demand exceeds supply, and in particular *lowering prices if it does not*: *e.g.*, “identify[ing]... days that might be selling out soonest... [and] adjust[ing] prices... for example, *the price of an unserved room may be lowered as the reservation date approaches*.” *E.g.*, EX1004, ¶[0176]. Jacob discloses such lowering can be by a predetermined percentage—*e.g.*, taking a “percentage off the rate...” *E.g.*, EX1004, ¶[0224]-[0227]; EX1003, ¶623. Additionally, Jacob discloses, if demand *does* exceed supply, comparing that channel’s performance rating with others’ for redistributing inventory: “If a sales channel’s Room Type inventory is sold out... the PA might choose to reallocate inventory to the better-selling channel.” *E.g.*, EX1004, ¶[0180]; EX1003, ¶624. POSITA would thus have understood Jacob discloses REZTRIP performs both functions (*see* cl.9[b]), determining demand exceeds supply (*e.g.*, “inventory is sold out”) and as a result comparing the channel’s performance rating with others’ (redistributes to “*better-selling* channel”). EX1003, ¶625. Alternatively, POSITA would have understood Jacob’s system necessarily, and thus inherently, compares the “sold out” channel’s performance to others to determine which channels were selling *less* well (were not “better-selling”) so their inventory could be provided to the “sold out” channel. EX1003, ¶625. As discussed, it would have

been obvious, straightforward, and advantageous to implement Jacob’s (+combinations’) combined teachings using Phillips’s or Tamura’s additional disclosure of automatically adjusting inventory price. *See* cl.9[g]. EX1003, ¶625.

For the same reasons, at minimum **it would also have been obvious, straightforward, and advantageous to implement Jacob’s teachings (+combinations (with or without Kono)), and Tamura’s additional disclosure of determining a sale rate index and automatically adjusting a price of inventory items (and optionally Kono’s teaching of querying whether supply exceeds demand or vice versa per channel), so the resulting system performs cl.7’s additional steps.**⁴⁴ EX1003, ¶631. This would have had the advantages described in cl.9[d](narrative) (esp. pp.53-54). *See* n.14, 24; EX1003, ¶¶631-632. For POSITA it would have been routine to make these implementation choices, and clear they would work, providing the expected functionality and predictable results with REOS. EX1003, ¶¶632-633.

⁴⁴ Cl.7 requires “calculating...” and, separately, “querying...,” and thus does not require the query be based on the calculated sale rate index. *Compare* cl.7, with cl.1 (“querying whether the performance rating”). If argued this is required, it is rendered obvious for the same reasons as cls.7, 9.

8	Grounds 3-4 and 6-7 render obvious cl.8. See cls.1, 7, 9. Each of Jacob, Tamura, and Kono disclose for each sales distribution channel (see cl.9[d]), querying whether the performance rating of the distribution channel is greater than the other distribution channels (see cl.9[e]) and if the performance rating of the distribution channel is greater than the other distribution channels (e.g., (1) Jacob: “sales channel’s” “inventory” “is selling better than other channels”; (2) Tamura: “retailer” has “high sales progress rate” rather than “low sales progress rate”; (3) Kono: “agency that still sells” rather than “agency where sales have fallen”; see cl.9[d]), removing inventory items from lower performing channels and adding them to the distribution channel (see cl.9[h]). EX1003, ¶¶634-651.
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For the reasons discussed for cls.7, 9[d]-[h], Jacob (+combinations) in view of Tamura or Kono renders obvious cl.8’s additional limitations. EX1003, ¶¶651-652.

* * *

Petitioner is aware of no evidence from PO of secondary considerations with a nexus to ’999, and reserves the right to address any PO raises. *Petroleum Geo-Servs. Inc. v. WesternGeco LLC*, IPR2014-01475, Pap.18, 28 (Mar. 17, 2015) (secondary considerations evidence “must be *first developed... by Patent Owner*”). EX1003, ¶653.

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 factor does not support denial.

B. Median Time to Trial Is Seven Months After The 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 factor thus weighs against denial. *Lite-On Tech. Corp. v. Sensor Elec. Tech., Inc.*, IPR2022-00780, Pap.11, 11 (Oct. 28, 2022); *see also Extracziontek 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 Tech.*, Pap.11, 12. This factor weighs against denial.

E. Same Petitioner And Defendant In Parallel Proceeding

Petitioner is the litigation Defendant, favoring institution. *Lite-On Tech.*, 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 factor 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 3, 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 inventory allocations, the computer-implemented method comprising the steps of:
1[a]	receiving sale data cyclically, in near real time, from respective distribution channels and relating to sale of inventory items allocated to the respective distribution channels;
1[b]	processing the sale data cyclically, the processing of the sale data including carrying out calculations to obtain a performance rating for each of the respective distribution channels;
1[c]	querying whether the performance rating of each of the respective distribution channels is greater than a performance rating of other distribution channels;
1[d]	and based on the query, carrying out at least one of the following steps: adjusting a price of inventory items allocated to each of the respective distribution channels;
1[e]	and re-allocating inventory items to or from said each of the respective distribution channels from or to the other distribution channels.
2	The computer-implemented method as claimed in claim 1, which includes the step of storing inventory item data and distribution channel data in a database.
3	The computer-implemented method as claimed in claim 2, which includes the step of associating distribution channels with inventory items.
4	The computer-implemented method as claimed in claim 1, in which the sale data is in a form of data relating to at least one of the following: sale price of each inventory item, rate of commission for the sale of each inventory item and number of inventory items sold over a predetermined length of time.
5	The computer-implemented method as claimed in claim 1, in which the step of processing the sale data includes a determination of

	whether or not a supply of inventory items exceeds demand or vice versa per distribution channel.
6	The computer-implemented method as claimed in claim 1, in which the step of processing the sale data includes the step of calculating a sale rate index for each distribution channel, in a form of a ratio of a number of items sold in a predetermined time to a number of items available for sale in that distribution channel.
7	The computer-implemented method as claimed in claim 6, which includes the steps of, for each distribution channel: setting a predetermined price of the inventory items; calculating the sale rate index; querying whether demand exceeds supply; and if demand does not exceed supply, decreasing price by a predetermined percentage, or, if demand does exceed supply, comparing the performance rating of the distribution channel with other distribution channels.
8	The computer-implemented method as claimed in claim 7, which includes the steps of, for each distribution channel: querying whether the performance rating of the distribution channel is greater than the other distribution channels; and if the performance rating of the distribution channel is greater than the performance rating of the other distribution channels, removing inventory items from lower performing channels and adding them to the distribution channel.
9[pre]	A computing device comprising:
9[a]	a memory;
9[b]	and at least one processor configured to perform a method for managing inventory allocations, the method comprising:
9[c]	receiving sale data cyclically, in real time, from respective distribution channels and relating to sale of inventory items allocated to the respective distribution channels;
9[d]	processing the sale data cyclically, the processing of the sale data including carrying out calculations to obtain a performance rating for each of the respective distribution channels;
9[e]	querying whether the performance rating of each of the respective distribution channels is greater than a performance rating of other distribution channels;

9[f]	and based on the query, carrying out at least one of the following steps:
9[g]	adjusting a price of inventory items allocated to each of the respective distribution channels;
9[h]	and re-allocating inventory items to or from said each of the respective distribution channels from or to the other distribution channels.
10[pre]	A non-transitory computer-readable storage medium, the non-transitory computer-readable storage medium storing computer instructions to be implemented on at least one computing device including at least one processor, the computer instructions when executed by the at least one processor cause the at least one computing device to perform a method for managing inventory allocations, the method comprising:
10[a]	receiving sale data cyclically, in real time, from respective distribution channels and relating to sale of inventory items allocated to the respective distribution channels;
10[b]	processing the sale data cyclically, the processing of the sale data including carrying out calculations to obtain a performance rating for each of the respective distribution channels;
10[c]	querying whether the performance rating of each of the respective distribution channels is greater than a performance rating of other distribution channels;
10[d]	and based on the query, carrying out at least one of the following steps:
10[e]	adjusting a price of inventory items allocated to each of the respective distribution channels;
10[f]	and re-allocating inventory items to or from said each of the respective distribution channels from or to the other distribution channels.

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 13,995 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 3, 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. 11,360,999 and accompanying exhibits:

Exhibit	Description
EX1001	U.S. Patent No. 11,360,999
EX1002	U.S. Patent No. 11,360,999 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	U.S. Patent Pub. No. 2008/0162211 (“Addington”)
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	Plaintiff’s Disclosure of Asserted Claims and Infringement Contentions, Exhibit B, <i>SurgeTech, LLC v. Uber Technologies, Inc. d/b/a Uber</i> , No. 1:22-cv-00882-GBW
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 4, 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 4, 2023

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/Sayem Osman
Sayem Osman