IN THE

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LIGHTSPEED COMMERCE INC.
Petitioner

v.

CLOUDOFCHANGE, LLC
Patent Owner

Inter Partes Review Case No. IPR2022-01143

Patent No. 11,226,793

PETITION FOR *INTER PARTES* REVIEW UNDER 35 U.S.C. §§311-319 AND 37 C.F.R. §42

Mail Stop Patent Board
Patent Trial and Appeal Board
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June 13, 2022

LIST OF EXHIBITS

1001	Baratta et al., U.S. Patent No. 11,226,793 ("the '793 patent")
1002	Expert Declaration of Stephen Gray
1003	Prosecution History File Wrapper of the '793 patent
1004	U.S. Patent Publication No. 2007/0265935 ("*Woycik*")
1005	U.S. Patent Publication No. 2005/0049921 ("*Tengler*")
1006	U.S. Patent Publication No. 2008/0208696 ("*Olson*")
1007	U.S. Patent Publication No. 2004/0181454 ("*Manno*")
1008	U.S. Patent Publication No. 2006/0235755 ("*Mueller*")
1009	U.S. Patent Publication No. 2004/0128199 ("*Cusack*")
1010	United Kingdom Patent Application GB2369201 ("*Tomlinson*")
1011	U.S. Pat. No. 5,818,428 ("*Eisenbrandt*")
1012	Plaintiff's Response in Opposition to Defendant's Motion for Summary Judgment, *CloudofChange, LLC v. NCR Corporation*, 6-19-cv-00513 (W.D. Tex.)
1013	WO 02/39226 A2 ("*Thompson*")
1014	Plaintiff's Motion in *Limine*, *CloudofChange, LLC v. NCR Corporation*, 6-19-cv-00513 (W.D. Tex.)
1015	U.S. Patent Publication No. 2004/0103037 ("*Wetmore*")
1016	RESERVED
1017	Plaintiff's First Amended Preliminary Infringement Contentions Exhibit A3, *CloudofChange, LLC v. Lightspeed POS Inc.*, 6-21-cv-01102 (W.D. Tex.)
1018	First Amended Scheduling Order, *CloudofChange, LLC v. Lightspeed POS Inc.*, 6-21-cv-01102, D.I. 31 (W.D. Tex.)
1019	U.S. Patent Publication No. 2002/0194074 ("*Jacobs*")
1020	U.S. Patent No. 7,051,091 ("*Cohen*")

1021	U.S. Patent No. 6,384,850 ("*McNally*")
1022	U.S. Patent No. 6,002,395 ("*Wagner*")
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1025	Supplemental Claim Construction Order, *CloudofChange, LLC v. NCR Corporation*, 6-19-cv-00513 (W.D. Tex.)
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II. MANDATORY NOTICES UNDER 37 C.F.R. §42.8

A. Real Parties-in-Interest Under 37 C.F.R. §42.8(b)(1)

Lightspeed Commerce Inc. ("Petitioner"), formerly known as Lightspeed POS Inc., is the real party-in-interest. No other party had access to, control over, or contributed to funding of this Petition's preparation or filing. Petitioner's Subsidiaries may also be real parties-in-interest, including Lightspeed Commerce USA Inc., Lightspeed POS USA Inc., Upserve, Inc., Vend Limited, and Kounta Pty Limited.

Petitioner is a Canadian corporation with a principal place of business at 700 Saint-Antoine Street East, Suite 300, Montréal, Québec, Canada H2Y 1A6.

B. 37 C.F.R. §42.8(b)(2) Related Matters

CloudOfChange, LLC ("Patent Owner" or "PO") sued Petitioner for infringement of related U.S. Patent Nos. 9,400,640 ("the '640 patent") and 10,083,012 ("the '012 patent"). *CloudofChange, LLC v. Lightspeed POS Inc.*, 6:21-cv-01102 (W.D. Tex. Oct. 22, 2021) ("Lightspeed Litigation"). Petitioner filed petitions challenging the '640 (IPR2022-00779) and the '012 patents (IPR2022-00997). PO's May 2, 2022 amended complaint in the Lightspeed Litigation alleged infringement of U.S. Patent No. 11,226,793 ("the '793 patent"), a continuation of the '640 and '012 patents. The '793 patent has not previously been the subject of litigation or an IPR petition.

C. 37 C.F.R. §42.8(b)(3) Lead and Back-up Counel

Slayden Grubert Beard PLLC provides the following designation of counsel, all of whom are included in Customer No. 86,528 identified in Slayden Grubert Beard PLLC's Power of Attorney, filed concurrently herewith under 37 C.F.R. §42.10(b).

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D. 37 C.F.R. §42.8(b)(4) Service Information

Service information for Slayden Grubert Beard PLLC, 401 Congress Ave., Suite 1650, Austin, Texas 78701; Tel. 512-402-3550; Fax 512-402-6865. Petitioner consents to service by electronic mail at litigation@sgbfirm.com, jgray@sgbfirm.com, coberembt@sgbfirm.com, tfenton@sgbfirm.com, and tflores@sgbfirm.com.

III. STANDING AND FEES

A. 37 C.F.R. §42.104(a) Standing

Petitioner certifies the '793 patent, a pre-AIA patent, is eligible for IPR and Petitioner is not barred or estopped from requesting IPR.

B. 37 C.F.R. §42.15(a) Fees

Petitioner paid the filing fee via its "active" debit card. Any additional fees may be charged to Deposit Account No. 50-6736.

IV. SUMMARY OF GROUNDS

Petitioner requests cancellation of the '793 patent claims as follows:[1]

Ground	Basis	References	Challenged Claims
1	§103	*Woycik*	1-4, 7-28, 31-44
2	§103	*Tengler*	1-4, 7-28, 31-44

V. SUMMARY OF THE '793 PATENT

A. The Patent

The '793 patent relates to a method for building a point of sale (POS) system to manage business operations. EX1001, 1:22-29.

The '793 patent's background describes the "[c]urrent practice in the field of assembling point of sale systems includes manually coding front-of-screen information," e.g., with programmer help. *Id.*,1:33-44. Manually "building and editing" POS terminal user interfaces (POS screens) by means of a "complex

[1] References to §103 are to the pre-AIA version. Petitioner reserves all rights to raise patentability requirements unavailable in IPR elsewhere.

interface to a front-of-screen programming language" required specially trained people, was prone to mistakes and time-consuming. *Id.*, 1:39-49.

The '793 patent purports to improve the process of creating/modifying POS screens by using the Internet to access screen design software on a networked server. *Id.*, 2:16-33, 5:43-6:11, Claim 1.

B. Prosecution History

The '793 patent application was filed Nov. 30, 2017, and claims priority to February 5, 2008, the '640 patent's filing date. EX1001, [22], [63]. The '793 patent issued January 18, 2022.

In response to prior art rejections, applicant amended all claims to include the "further information" limitations (e.g., 1[e]-1[f]) of the '793 claims. *See* EX1003.109-127. The examiner identified these limitations in the Reasons for Allowance. EX1003.26-27.

VI. STATE OF THE ART

Web-based POS systems were known. EX1002, ¶31 (citing *Woycik, Olson, etc.*). POS builder software was known. *Id.*, ¶32 (citing *Manno, Woycik, etc.*). PO "does not dispute that the prior art discloses POS builder software." EX1012, 7 n.3.

Web-based access to POS builder systems was also known. EX1002, ¶34 (citing *Manno, Woycik, etc.*). POS builder software (and interfaces for accessing

such software) allowing creation and editing of user interfaces, including POS screens and web pages, was also known. *Id.* (citing *Woycik, Tengler, Bernardo*). Using the Internet for communications between a POS server and POS terminals was known. *Id.*, ¶35 (citing *Woycik, Mueller, etc.*). Configuring POS terminals with information from a POS builder interface to display POS screens during a transaction, including based on order- and customer-specific information (e.g., item/option selections, past orders, customer identity/picture) was also known. *Id.* (citing *Woycik, Tengler*).

VII. PRIOR ART OVERVIEW

A. *Woycik*

Woycik was filed May 1, 2007 and published Nov. 15, 2017. EX1004. *Woycik* is prior art under at least §§102(a), (e).

Woycik discloses a web-based administrative tool for building/editing user interfaces displayed on POS screens of self-service touchscreen POS kiosks. EX1004, Abstract, [0071]-[0073]. The administrative tool is installed on a central server and accessible by "web access." *Id.*, [0075]. The administrative tool and its user interfaces enable administrators "to perform various administrative functions such as configuring kiosks [and] creating and editing menus and available food items." *Id.*, [0073]. The central server configures kiosks over the Internet with

information from the administrative tool's user interface to create/modify a set of hierarchical POS screens with selection buttons based on a manager's inputs to the interface, including POS screens displayed based on order history, items added/updated, and other customer- and order-specific information, e.g., to allow returning customers to "quickly order items ordered in the past without having to rebuild" them each time. [0089], [0091], [0140]-[0142], Fig. 40. EX1002, ¶56.

B. *Tengler*

Tengler, §102(b) prior art, published March 3, 2005, more than one year before the '793 patent's priority date. EX1005, [43].

Tengler discloses an "order processing system" for merchants. EX1005, [0003]. Restaurant Management Software runs on a web server and POS terminal devices display POS screens with touchscreen buttons/keys. *Id*., [0095]. *Tengler's* system allows "a manager to access a management database of a quick-serve restaurant location remotely through a web interface." *Id.*, [0022]. The manager's web interface includes a "user interface designer" allowing managers to "edit the user interface of the register and self-service applications" running on POS terminals. *Id.*, [0103]. EX1002, ¶39. The server configures POS terminals with information from the manager's web interface to create/modify hierarchical POS screens with selection buttons based on a manager's interface inputs; POS screens

include customer- and order-specific information (including items added/updated, price, tax, and customer picture). *Id.*, [0017]-[0018], [0076], Figs. 9-10. EX1002, ¶58.

VIII. LEVEL OF ORDINARY SKILL

A "person of ordinary skill in the art" (POSITA) on the '793 patent's effective filing date would have had a working knowledge of designing, developing, and deploying web-based systems. A POSITA would have a Bachelor of Science in computer science or a related field, and approximately two years of professional experience or equivalent study in the design and development of web-based systems, including web-based POS systems. Additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education. EX1002, ¶¶29-30.

IX. CLAIM CONSTRUCTION[2]

Unless noted, Petitioner submits terms should be given "ordinary and customary meaning" to a POSITA. 37 C.F.R. §42.100(b). Petitioner reserves the opportunity to respond to constructions offered by Patent Owner or adopted by the Board.

[2] Prior *Markman* orders do not impact the Petition's grounds. EX1024, EX1025.

A. "wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of…" (all claims)[3]

This term recites two lists of alternatives and is met if any of "the information," "the further information," **or** "a combination thereof" includes at least one of the enumerated information types. *Cf. Ex parte Jung*, 2016-008290, (PTAB Mar. 22, 2017). A POSITA would understand that "a combination" of "the information" and "the further information" includes a combination of all or some of each category of information (e.g., if information from each category is used to create/modify a POS screen). EX1002, ¶49.

B. "display interfaces" (all claims)

Display interfaces at least include buttons or keys for display on POS screens. EX1001, Cl. 9. A "display interface" is a display area of a POS screen, e.g., for displaying content and/or inputting information. EX1002, ¶50.

C. "the input interface element" (claim 23)

The term "input interface element" appears in claims 23, 25, and 26, however claim 23 recites "the input interface element" without antecedent basis. For this

[3] Claim 43 replaces "POS transactions" with "transactions" but is treated the same here.

petition, Petitioner assumes claim 23 includes "the display interface comprises an input interface element" limitation of claim 25.

D. "the web server"/"the at least one web server" (claim 38)

Claim 38 depends from claim 27 and recites "the web server" and "the at least one web server," neither of which has antecedent basis. Petitioner assumes here these terms refer to "at least one server" recited in claim 27.

E. "creating or modifying functionality of the one or POS terminals" (claim 44)

Claim 44 is similar to claim 1, but more broadly claims "creating or modifying *functionality of the one or POS terminals*" (44[c]) instead of "creating or modifying *the one or more POS screens*" (1[c]). A POSITA would understand creating/modifying POS screens is a subset of creating/modifying POS terminal functionality because modifying POS screens and buttons modifies how the POS terminal functions (e.g., which screens are displayed and which items/options are added to the cart when a particular area of a POS screen receives input or particular buttons/keys are selected). *Id.* Limitation 44[f] in view of 44[c] supports Petitioner's understanding by reciting, "***information*** for creating or modifying ***functionality of***" POS terminals (44[c]) followed by "***the information*** used for creating or modifying ***the one or more POS screens***" (44[f])—the latter of which lacks antecedent basis in

claim 44 and suggests creating/modifying functionality includes at least creating/modifying POS screens. EX1002, ¶53.

X. DISCRETIONARY DENIAL IS UNWARRANTED

A. Institution is Proper Under §314(a)

No IPR has previously been filed regarding the '793 patent, and the *Apple v. Fintiv* (IPR2020-00019) factors favor institution.

Factor 1: Neutral. Petitioner will seek a stay of the Litigation should the Board institute.

Factor 2: Neutral. The Litigation is in its infancy—the '793 patent issued on January 18, 2022, discovery has not commenced, a *Markman* hearing is scheduled September 21, 2022, and jury selection/trial is tentatively scheduled September 20, 2023, although "[t]he Court expects to set these dates at the conclusion of the Markman hearing." EX1018. A FWD in this IPR is expected proximate to the conclusion of the Litigation (including post-trial briefing).

Factor 3: Favors institution. The parties and the court have made minimal investment in the Litigation. Petitioner filed this Petition expeditiously after receiving PO's infringement contentions for the '793 patent served March 30, 2022.

Factor 4: Strongly favors institution. Petitioner challenges over four times as many claims as PO asserts in district court (40 challenged; 9 asserted). Thus,

"[i]nstituting trial here serves overall system efficiency and integrity goals … by resolving materially different patentability issues." *Apple, Inc. v. SEVEN Networks, LLC*, IPR2020-00156, Paper 10 at 19 (PTAB June 15, 2020) (finding this factor "strongly" favored institution).

Nevertheless, to eliminate potential overlap between this IPR and the court proceeding, if this IPR is instituted and *Fintiv* remains precedential at the time of institution, Petitioner stipulates not to pursue in court any ground raised or that could have reasonably been raised in IPR (*i.e.*, under §§102 or 103 based on prior art patents or printed publications alone).

Factor 5: Neutral.

Factor 6: Favors institution. These grounds are strong. This IPR will resolve issues beyond those in the Litigation and may prevent future litigation as PO, a non-practicing entity, sent notice letters for the related '640 patent to at least 25 entities. EX1014, 6. The Office has not previously considered these grounds/arguments.

B. Institution is Proper Under §325(d)

Although both *Woycik* and *Tengler* are listed on the '793 patent's face, institution is proper because the art cited was "not applied by the examiner … in any rejection of claims." *Comcast Cable Commc'ns, LLC v. Promptu Sys. Corp.*,

IPR2018-00342, Paper 13, 17 (PTAB Jan. 15, 2019). *Woycik* was not used in any rejection or otherwise discussed during prosecution.[4]

The *Tengler*-based ground herein was not considered by the examiner, and the Office has never considered *Tengler* relative to the claims challenged. *See* EX1002, ¶60. *Tengler* was cited, "but only in a very limited fashion" in an obviousness combination rejecting video-related claims (claims 5-6 and 29-30) not challenged here. *See Asetek Danmark a/s v. Coolit Sys., Inc.*, No. IPR2019-00705, Paper 19, 9 (PTAB Sept. 6, 2019) (granting institution). "In contrast, Petitioner uses [*Tengler*] as a primary reference" against different claims. *Id.* While limited portions of *Tengler* were "considered during examination, the Examiner did not evaluate Petitioner's assertions that [*Tengler*] teaches or suggests most limitations recited in the challenged claims." *Id.*, 10. "There also is little overlap between the arguments considered during prosecution and" those set forth herein. *Id.*, 10-11.

Accordingly, both grounds rely on noncumulative prior art and arguments not previously considered, which favors institution. *Oticon Medical AB v. Cochlear Ltd.*, IPR2019-00975, Paper 15, 18-20 (PTAB Oct. 16, 2019) (precedential).

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[4] The examiner erroneously identified *Woycik* (EX1003.145) because no rejection addresses *Woycik*. *See generally* EX1003.

XI. RECITATION OF THE CHALLENGED CLAIMS

1	1 [pre] A web-based point of sale (POS) builder system comprising: 1[a] at least one server configured to: 1[b] communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens; 1[c] receive, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; 1[d] receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items; 1[e] configure the one or more POS terminals with the information over the network to create or modify based on the further information regarding one or more POS transactions the one or more POS screens displayed on the one or more POS terminals; and 1[f] wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; 1[g] wherein said further information regarding the one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

2	The web-based point of sale (POS) builder system of claim 1, wherein the POS builder interface is configured to run on a computing device.
3	The web-based point of sale (POS) builder system of claim 1, wherein the one or more POS terminals comprise a plurality of POS terminals in a plurality of locations.
4	The web-based point of sale (POS) builder system of claim 1, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.
7	The web-based point of sale (POS) builder system of claim 1, wherein the information regarding one or more POS transactions comprises one or more of the employee clock information, the customer add/update information, the item add/update information, or the promotion information.
8	The web-based point of sale (POS) builder system of claim 1, wherein the information regarding one or more POS transactions are viewable via the POS builder interface.
9	The web-based point of sale (POS) builder system of claim 1, wherein the one or more display interfaces comprise one or more buttons or keys.
10	The web-based point of sale (POS) builder system of claim 1, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.
11	The web-based point of sale (POS) builder system of claim 1, wherein the POS builder interface is accessible via a web browser.
12	The web-based point of sale (POS) builder system of claim 1, wherein the one or more display interfaces are accessible on the POS builder interface.
13	The web-based point of sale (POS) builder system of claim 1, wherein the at least one server is further configured to: receive, over the network from the POS builder interface, second information regarding a modification to at least one of the one or more POS screens; and

	update the at least one of the one or more POS screens on the one or more POS terminals based on the second information.
14	The web-based point of sale (POS) builder system of claim 1, wherein the at least one server is further configured to store information regarding the one or more POS screens.
15	The web-based point of sale (POS) builder system of claim 1, wherein the at least one server is located remotely from the one or more POS terminals.
16	The web-based point of sale (POS) builder system of claim 1, wherein the at least one server is further configured to receive the information for creating or modifying the one or more POS screens and create or modify the one or more POS screens in real time while the one or more POS terminals are in use performing one or more POS transactions.
17	The web-based point of sale (POS) builder system of claim 1, wherein the one or more POS terminals use the one or more POS screens after completing a pending POS transaction.
18	The web-based point of sale (POS) builder system of claim 1, wherein the at least one server is further configured to maintain information regarding POS screens for separate sets of POS terminals separately.
19	The web-based point of sale (POS) builder system of claim 1, wherein instructions to the POS builder interface for programmatic creation and modification of the POS terminals are not formatted in programming code.
20	The web-based point of sale (POS) builder system of claim 1, wherein the at least one server is further configured to maintain information regarding the one or more POS screens.
21	The web-based point of sale (POS) builder system of claim 1, wherein the received information comprises one or more attributes of the one or more items.
22	The web-based point of sale (POS) builder system of claim 1, wherein the POS terminals are configured to perform transactions independently of a connection with the network.

23	The web-based point of sale (POS) builder system of claim 1, wherein the input interface element comprises a data interface for inputting at least some of said further information.
24	The web-based point of sale (POS) builder system of claim 1, wherein to configure the one or more POS terminals comprises dynamically configuring the one or more POS terminals specific for the corresponding customer based on the one or more transactions by the corresponding customer.
25	The web-based point of sale (POS) builder system of claim 1, wherein the POS builder interface is configured to create or modify at least one of: a position or operation of a first display interface of the one or more display interfaces, wherein the first display interface comprises an input interface element.
26	The web-based point of sale (POS) builder system of claim 25, wherein the input interface element comprises a touch screen input interface element.
27	27[pre] A web-based point of sale (POS) builder system comprising: 27[a] at least one POS terminal configured to: display one or more POS screens; 27[b] communicate with at least one server over a network comprising the Internet; 27[c] receive, over the network from the at least one server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; 27[d] perform one or more transactions with respect to the one or more items; and 27[e] transmit, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items; and

	27[f] create or modify based on the received information or further information the one or more POS screens; 27[g] wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and 27[h] wherein said one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.
28	The web-based point of sale (POS) builder system of claim 27, wherein the at least one POS terminal comprises a plurality of POS terminals in a plurality of locations.
31	The web-based point of sale (POS) builder system of claim 27, wherein the one or more display interfaces comprise one or more buttons or keys.
32	The web-based point of sale (POS) builder system of claim 27, wherein the received information comprises information indicative of at least one of a number, shape, or arrangement of the one or more display interfaces.
33	The web-based point of sale (POS) builder system of claim 27, wherein the at least one server is located remotely from the at least one POS terminal.
34	The web-based point of sale (POS) builder system of claim 27, wherein the at least one POS terminal is further configured to perform the one or more transactions in real time while the one or more POS screens are created or modified.
35	The web-based point of sale (POS) builder system of claim 34, wherein the at least one POS terminal uses the created or modified one or more POS screens after completing a pending POS transaction.
36	The web-based point of sale (POS) builder system of claim 27, wherein the received information comprises one or more attributes of the one or more items.
37	The web-based point of sale (POS) builder system of claim 27, wherein the one or more items comprise at least one of: one or more items for sale, one or more promotions, or one or more loyalty points programs.

38	The web-based point of sale (POS) builder system of claim 27, wherein the at least one POS terminal is further configured to perform the one or more transactions without a connection to the web server and transmit the information regarding the one or more transactions to the at least one web server after performing the one or more transactions and when the connection to the web server is established.
39	The web-based point of sale (POS) builder system of claim 38, wherein the at least one POS terminal is further configured to store locally the information regarding the one or more transactions.
40	The web-based point of sale (POS) builder system of claim 27, wherein a position or operation of a first display interface of the one or more display interfaces is created or modified, wherein the first display interface comprises an input interface element.
41	The web-based point of sale (POS) builder system of claim 40, wherein the input interface element comprises a touch screen input interface element.
42	42[pre] A method of implementing a web-based point of sale (POS) builder system, the method comprising: 42[a] communicating with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens; 42[b] receiving, over the network from a POS builder interface, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; 42[c] receiving, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items; and 42[d] provisioning the one or more POS terminals with the information over the network to create, or modify based on the further information the one or more POS screens displayed on the one or more POS terminals;

	42[e] wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and 42[f] wherein said further information regarding the one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.
43	43[pre] A method of implementing a web-based point of sale (POS) builder system, the method comprising: 43[a] displaying one or more POS screens; 43[b] communicating with at least one server over a network comprising the Internet; 43[c] receiving, over the network from the at least one server, information used for creating or modifying the one or more POS screens including creating or modifying one or more display interfaces for display on the one or more POS screens, the one or more display interfaces being associated with one or more items; 43[d] performing one or more transactions with respect to the one or more items; 43[e] transmitting, to the at least one server, over the network, further information regarding one or more transactions corresponding to the one or more items; and 43[f] creating or modifying based on the received information the one or more POS screens; 43[g] wherein the further information regarding the one or more transactions, the information used for creating or modifying the one or

	more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and 43[h] wherein said further information regarding the one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.
44	44[pre] A web-based point of sale (POS) builder system comprising: 44[a] at least one server configured to: 44[b] communicate with one or more POS terminals over a network comprising the Internet, wherein the one or more POS terminals are configured to display one or more POS screens; 44[c] receive, over the network from a POS builder interface, information for creating or modifying functionality of the one or more POS terminals; 44[d] receive, from at least one of the one or more POS terminals over the network, further information regarding one or more POS transactions corresponding to the one or more items; and 44[e] configure the one or more POS terminals with the information over the network to create, or modify based on the further information the functionality of the one or more POS terminals; 44[f] wherein the further information regarding the one or more POS transactions, the information used for creating or modifying the one or more POS screens, or a combination thereof comprises one or more of employee clock information, customer add/update information, item add/update information, promotion information, loyalty point information, discount information, taxation information, item cost information, or inventory information; and

	44[g] wherein said further information regarding the one or more POS transactions relate to one or more transactions by corresponding customers respectively associated with at least one of said one or more POS terminals.

XII. GROUND 1: *WOYCIK* IN VIEW OF THE KNOWLEDGE OF A POSITA RENDERS OBVIOUS CLAIMS 1-4, 7-28, AND 31-44

A. Claim 1

1. 1[pre][5]

Woycik discloses a computer-based POS system "for ordering goods and services [that] includes" "self-service client terminals and a server." EX1004, Abstract; *see also* [0006]-[0009], [0129]. The system includes an "administrative tool" (POS builder) providing "a menu editor" enabling "the administrator to create and edit the interactive menu screens" displayed on self-service terminals/kiosks. *Id.* Abstract, [0011]-[0012], [0016]-[0017], [0041], [0050]-[0051], [0079], [0081], [0097]-[0099], [0112]. The administrative tool is available via "web access" to a central server "using a simplified user interface … from any Internet-connected computer." *Id.*, [0075], [0080]. EX1002, ¶¶62-63.

[5] While PO contends the preamble is not limiting (EX1017, p.5), it is disclosed in each ground.

2. 1[a]-1[b]

Woycik discloses a computer-based "point of sale system for ordering an item" including "self-service client terminals and a server." EX1004, Abstract, [0129]; *see also* [0004]-[0008]. "[C]entral server 22" is configured to communicate with kiosks 16, 30, and/or 36 over a network comprising "Internet 18." EX1004, [0071], Fig. 1:[6]

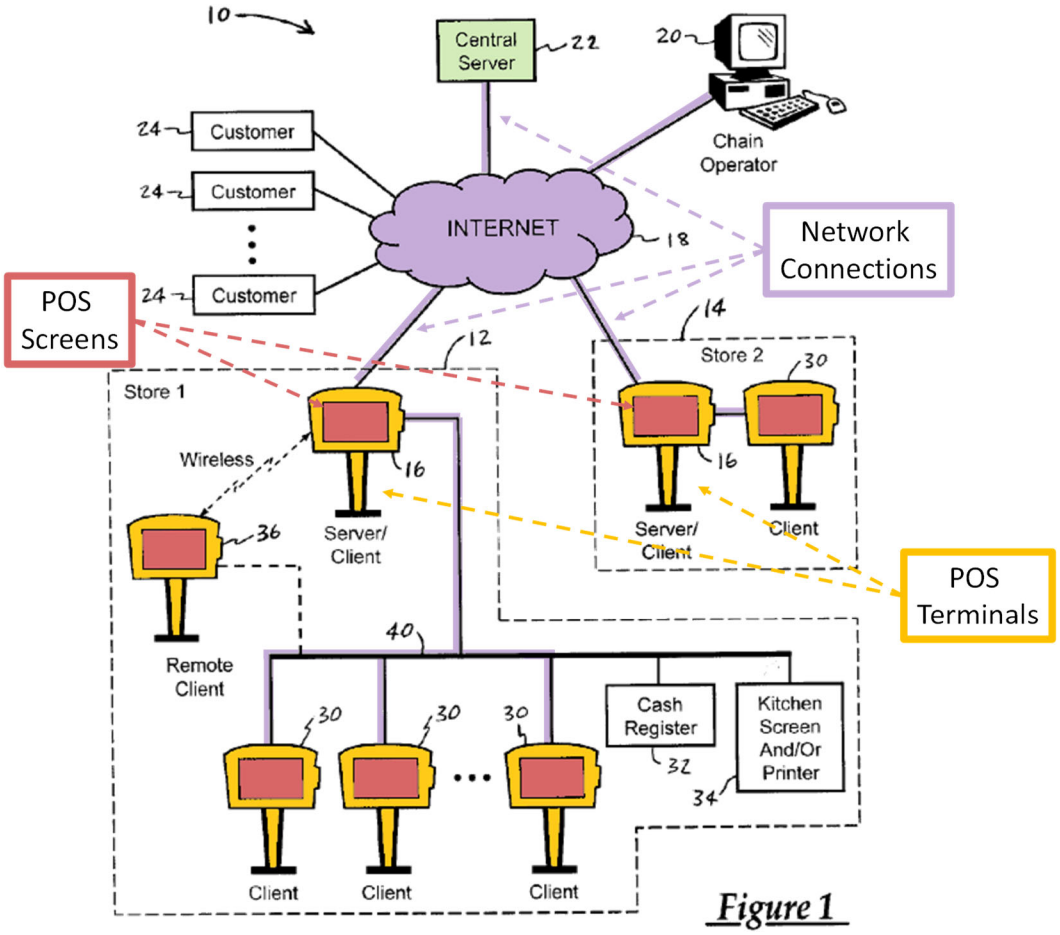


Figure 1

[6] All annotations/emphases in the Petition added unless otherwise noted.

When discussing software, *Woycik* refers to central server 22 as "central server 84" and kiosk 16 as "client/server kiosk 82." *Id.*, [0078], Fig. 3:

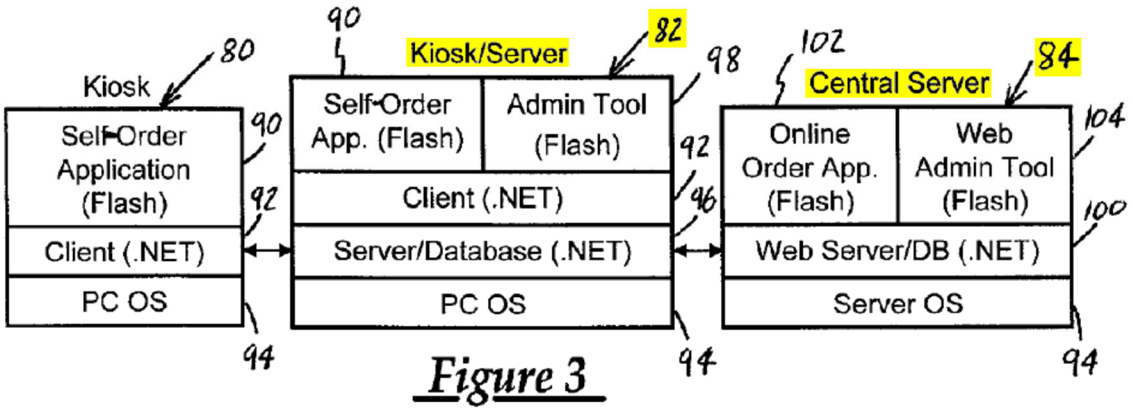


Figure 3

Woycik thus discloses kiosks 16/82 communicate with the central server over the Internet (thus disclosing 1[a] and 1[b]), while kiosks 30/36 communicate with the central server over a network comprising the Internet and network 40 (additionally disclosing 1[a] and 1[b]). *Id.*, [0074] (any "device on the network 40 can be connected to … the Internet 18"); *see also* [0124], Fig. 27. A POSITA would understand these "comprising" claims contemplate a network that includes the Internet and other network nodes/elements, e.g., devices interconnected via a local area network connected to the Internet. EX1002, ¶64.

Kiosks are "self-service terminals" (POS terminals) that display "interactive menu screens having [touchscreen] buttons" (POS screens). EX1004, Abstract, [0014]-[0016], [0077], [0082], [0100], Figs. 4-9:

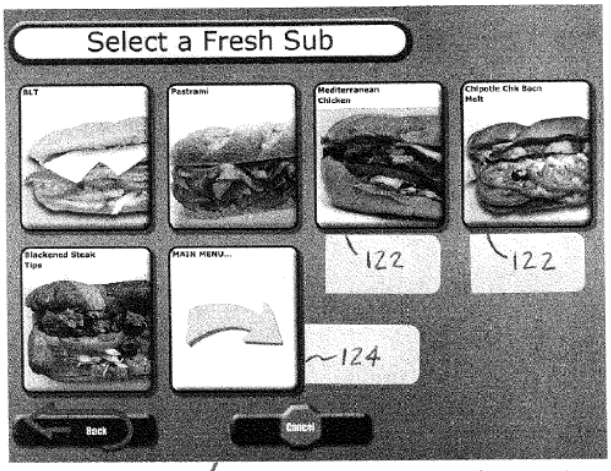


Figure 4

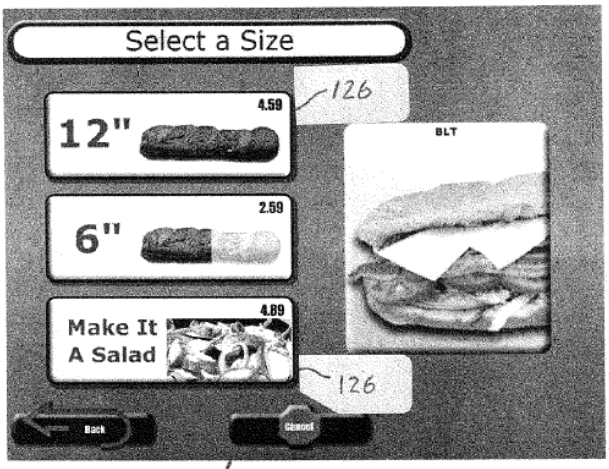


Figure 5

Kiosks/terminals display "a set of interactive screens that guide the customer through the process of placing an order." *Id.*, [0073], [0082], Fig. 3.

Accordingly, *Woycik* discloses at least one server (central server 22/84) configured to communicate with POS terminals (kiosks 16/82 and/or kiosks 30/36) over a network comprising the Internet (Internet 18 alone or in combination with network 40), wherein the POS terminals are configured to display POS screens (interactive menu screens depicting buttons/keys, e.g., Figs. 4-9). EX1002, ¶¶64-66.

3. 1[c]

Woycik discloses "[u]sing a standard web browser" and Internet 18, chain operator 20 has web access to an "administrative tool loaded on the central server" 22/84. EX1004, [0075]; *see also* [0017], [0071], [0080]-[0081], [0121]-[0122], Figs. 1, 3. The "administrative tool" includes a "**user interface** application" "accessed by the administrator to perform various administrative functions such as configuring

kiosks, creating and editing menus and available food items, and specifying tax and payment features of the system." *Id.*, [0073], [0079]. "Thus, the store owner or chain operator can carry out administration of the system **using a simplified user interface**" (POS builder interface) "from any Internet-connected computer." *Id.*, [0080], [0121].

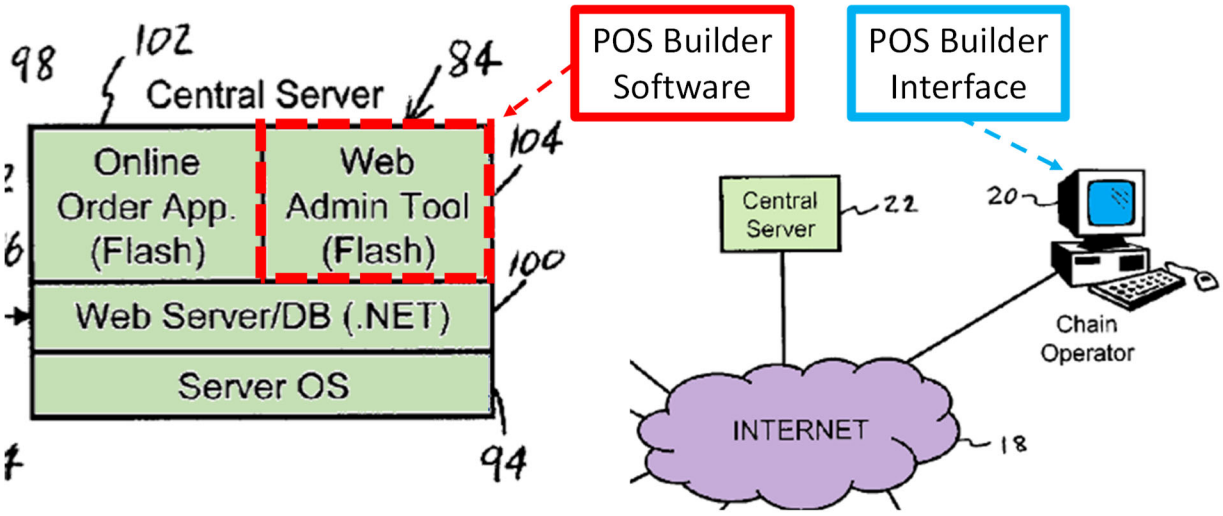
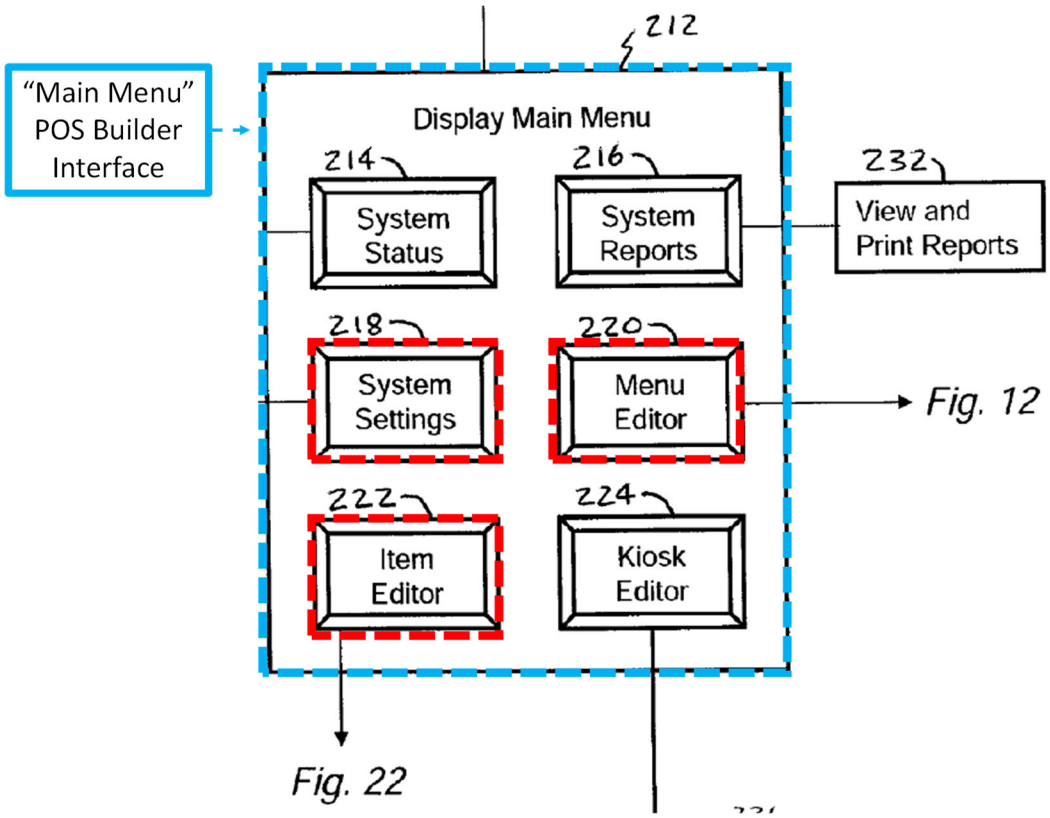


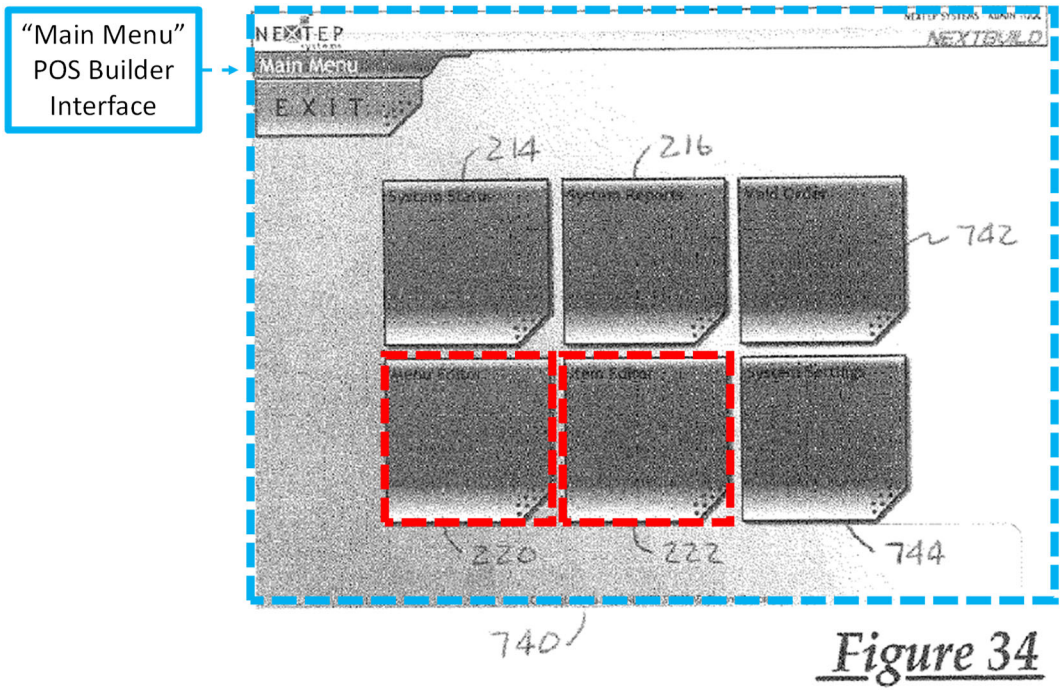
Fig. 3 (excerpted) **Fig. 1 (excerpted)**

EX1002, ¶67.

The main menu interface displays options including "system settings 218, menu editor 220, [and] item editor 222." EX1004, [0096]-[0097], Fig. 10 (excerpted):



See also, [0132], Fig. 34:



"System settings 218 enable the administrator to … enter sales tax percentages [and] enter customer ids." *Id.*, [0097], Fig. 10. Administrators use "menu editor [220]" "to create and edit the interactive menu screens provided by the self-order application at the self-service client terminals" in stores, including the "hierarchy of menus to guide the customers through the order process." *Id.*, [0013], [0109]; *see also* [0016], [0019]-[0020], [0073], [0079], [0098]-[0099], Figs. 11-13:

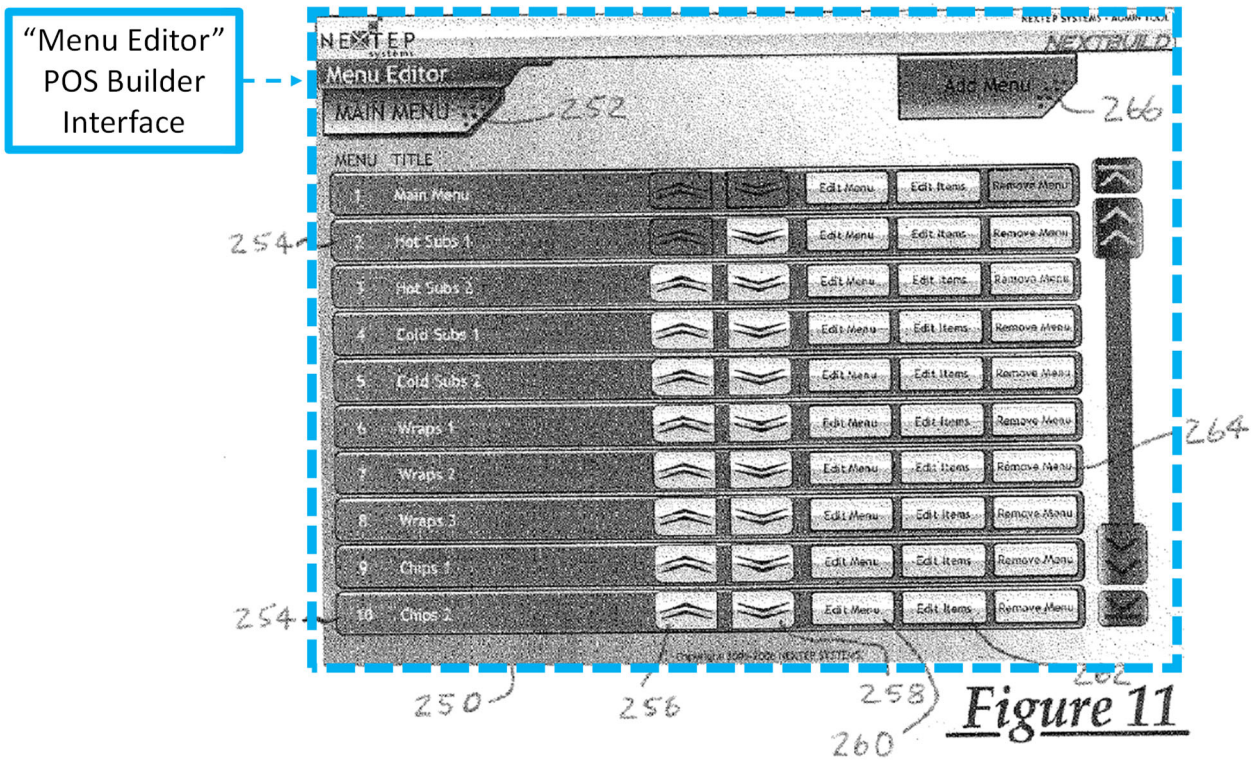


Figure 11

"The individual items or products available for sale are edited in the item editor" where administrators can "configure the various food items and options." *Id.*, [0112]; *see also*, [0110]-[0113], Figs. 20-22:

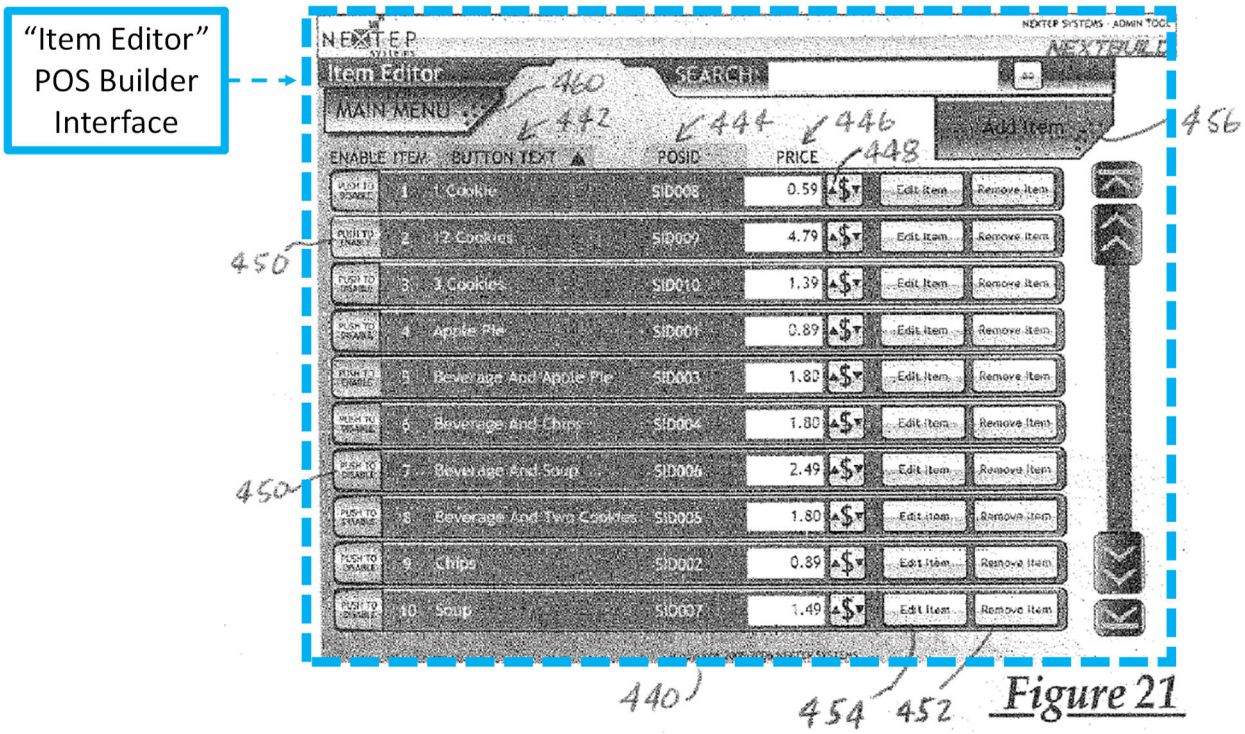


Figure 21

"The primary components of each menu screen are **buttons** that allow the customer to make selections among available items and options." *Id.*, [0100]. *Woycik*'s POS screen buttons are display interfaces. EX1002, ¶69; *supra* §IX.B. The administrative tool interface allows administrators to define the layout (number, shape, and arrangement) of POS screen buttons, either individually or by template. *Id.*, [0098], [0100], [0112]; *see also* [0019]-[0020],[0079], [0082], [0101]-[0107], Figs. 4-9:

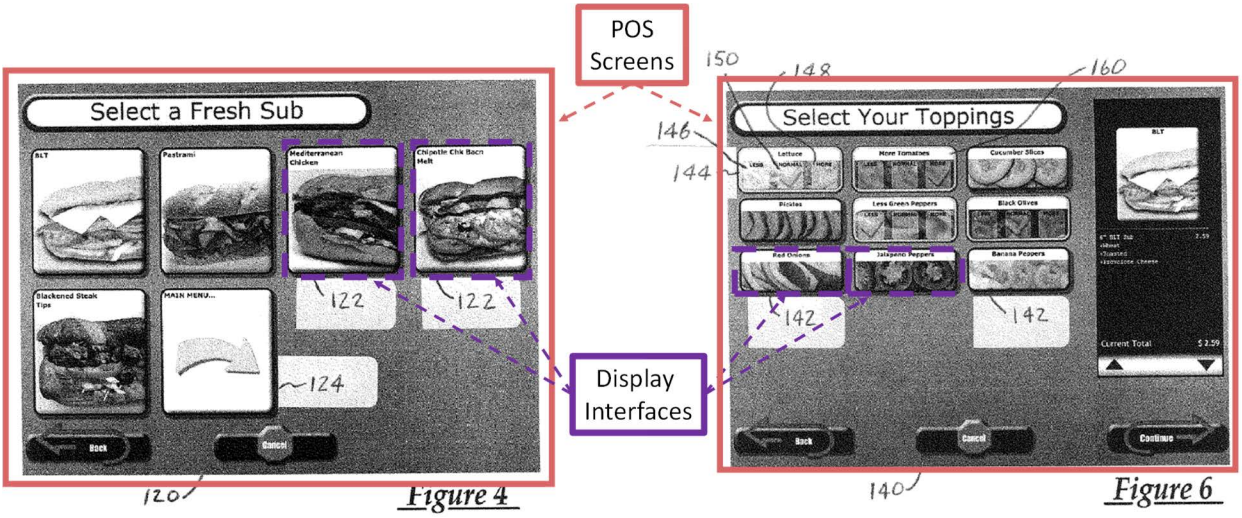


Figure 4 *Figure 6*

The administrators "edit the individual buttons and **associate them with food items and options** and associated button text, graphics, voiceovers, and button behaviors." *Id.*, [0108], Fig. 12:

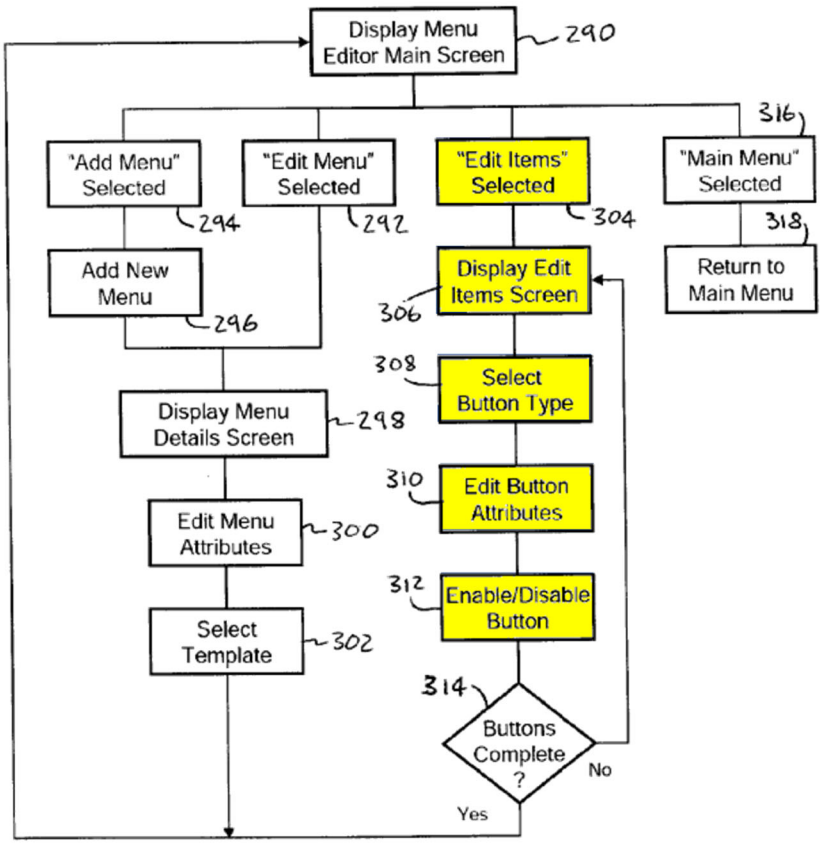


Figure 12

The server stores configuration changes made in the administrative tool user interface and can automatically updates in-store kiosks 16/82. EX1004, [0115], [0121]-[0122]. EX1002, ¶69.

Woycik thus discloses information received by central server 22/84 from the administrative tool user interface (POS builder interface) over the network including Internet 18 used for creating/modifying interactive menu screens (POS screens), including creating/modifying buttons/keys (display interfaces) associated with items. EX1002, ¶¶67-70.

4. 1[d], 1[g]

Woycik discloses central server 22/84 receives further information over the network (including Internet 18) regarding POS transactions by respective customers ordering items (POS transactions) from kiosks 16/82 (POS terminals), e.g., customer information, order and item details, payment (including tax information), and loyalty/discount/promotion information. EX1004, [0028], [0030], [0089]-[0092].

Central server 22/84 retains information regarding "previous orders by the customer" received from kiosks 16/82, e.g., items the customer added/updated in those orders. *Id.*, [0089], [0091]. "Customer orders or other information that is to be retained to enhance the customer experience" is received from POS terminals/kiosks 16/82 and "stored at the central server," e.g., in a "table or database," and can be provided "to the central server in real-time throughout the day." *Id*., [0030], [0089]; *see also* [0128], [0141].

Woycik thus discloses and suggests the received further information relates to POS transactions by corresponding customers respectively associated with kiosks 16/82 because customers use POS terminals to place orders, and the database at the central server stores customer information including their respective orders to facilitate customer recognition and provide an "enhanced customer experience." *Id.*, [0028]-[0030], Figs. 39-40; EX1002, ¶¶71-74.

5. 1[e]

As explained for limitation 1[c], *Woycik's* central server receives information (input by managers/administrators) over Internet 18 from the administrative tool's user interface (POS builder interface) used to create/modify interactive menus (POS screens) displayed on kiosks 16/82 (POS terminals). EX1004, [0071], [0073], [0075]. Central server 22/84 "automatically" transmits configuration information and updates (e.g., menus/items and edits/additions) to kiosk 16/82 over Internet 18, and kiosks 16/82 are configured to display POS screens using the new/updated configuration information. *Id.*, [0122]; *see also* [0115], [0076]. Kiosks use such information and "graphical user interface application 90" to display "a set of interactive screens that guide the customer through the process of placing an order." *Id.*, [0073], [0082], Fig. 3.

When selecting items/options, "pricing information is updated live on the display … as items are added to or removed from the order." EX1004, [0090].

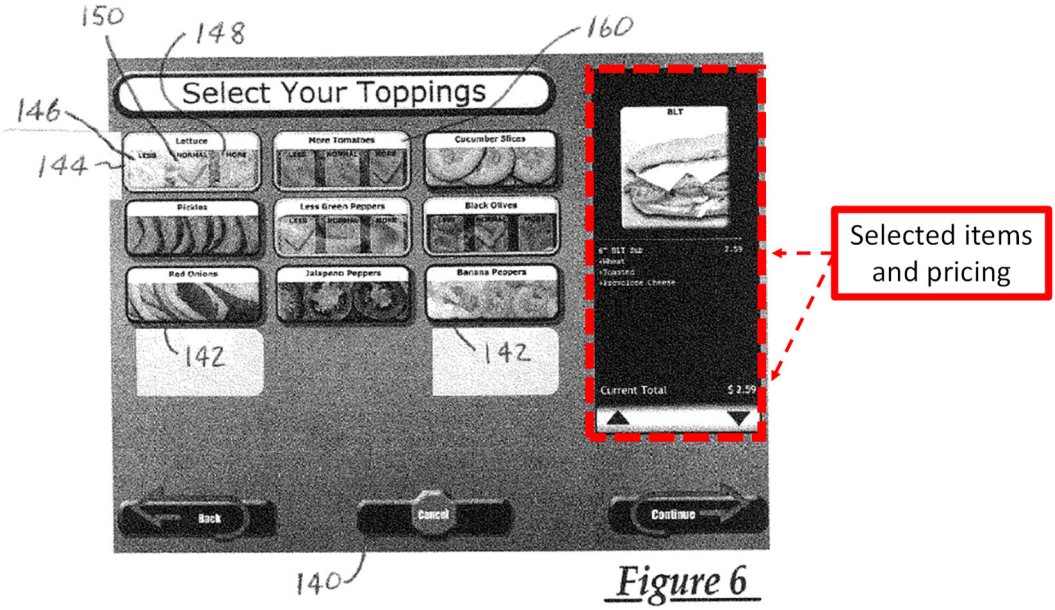


Figure 6

Customers can change toppings and amounts using buttons, e.g., to "eliminate the cheese and add tomatoes … in which case the changes are registered by the system, the American Cheese overlay buttons are eliminated, and new overlay buttons are displayed on the tomato button" with different button text and updated price information. *Id.*, [0088], Figs. 7-9:

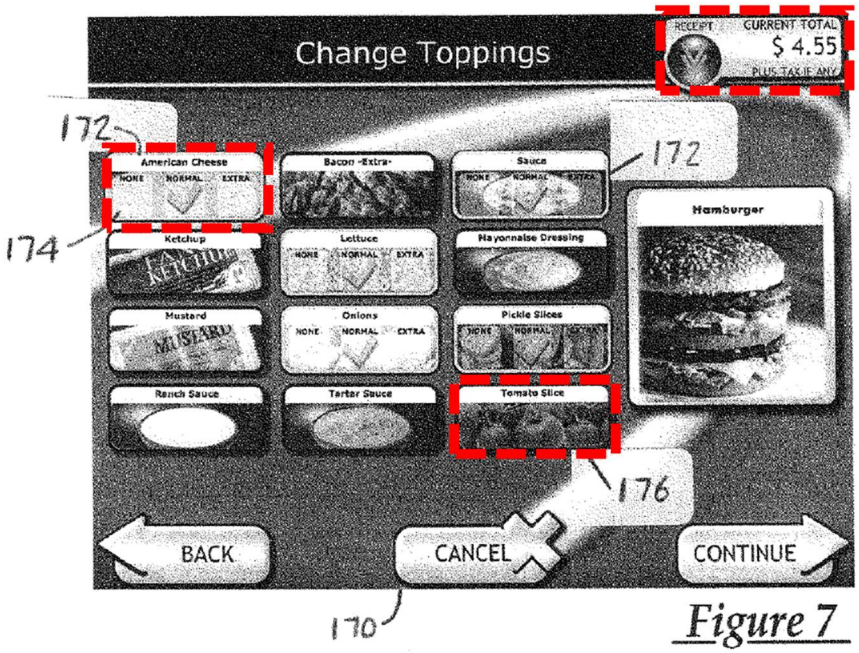


Figure 7

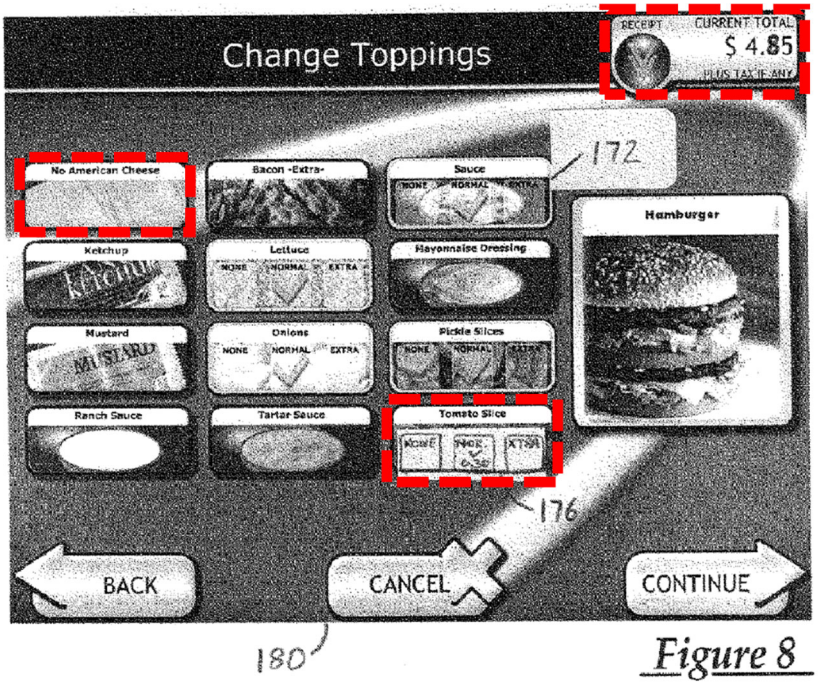


Figure 8

Woycik thus discloses and suggests managers specify POS screens with menu categories and successive screens for items/options within those categories for display based on a customer's selections. *Id.*, Figs. 4-6. The POS builder interface

information is thus used to configure kiosks 16/82 (POS terminals) to display POS screens including screens based on user input such as items and options added/updated to an order ("further information" stored by server 22/84 for completed transactions). EX1002, ¶76.

Woycik also discloses examples of configuring kiosks with information received from the POS builder interface to create/modify POS screens based on "further information" regarding returning customers. EX1002, ¶77. Such further information (e.g., past order details) is stored at the central server. EX1004, [0028], [0030], [0089]-[0092]. The system may recognize returning customers using "a customer loyalty card" or "credit card" and modify POS screens displayed using prior transaction information from the central server. *Id.*, [0028], [0089], [0091], [0140]-[0142]. "Customer recognition has many advantages," including "returning customers can quickly order items ordered in the past without having to rebuild the order each time they use a kiosk. For this purpose, the system tracks customer orders and stores them on the server." *Id.*, [0089], [0140]. Customer recognition screen 860 shows the self-order application for a returning customer. *Id.*, [0142], Fig. 40:

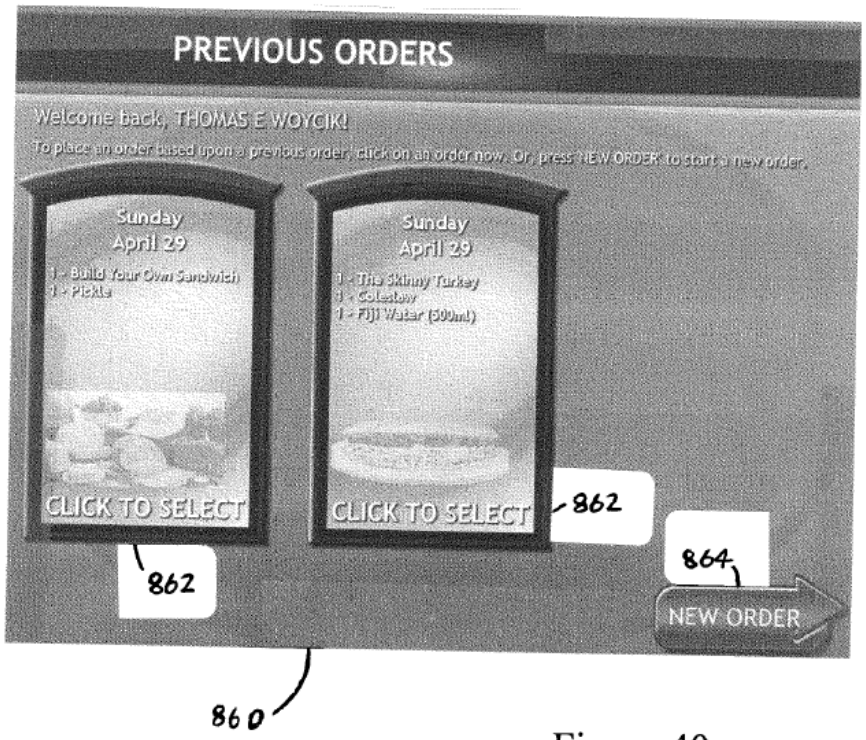


Figure 40

"The customer may choose to duplicate an entire previous order," or "can simply select an item to customize (if desired) and add to his current order." *Id.*, [0089].

Woycik thus discloses and suggests the central server configures kiosks with information from the POS builder interface to create/modify POS screens based on "further information" about previous POS transactions stored at the central server. *Woycik* suggests a customer can select a previous order and the prior selections will be preselect for further customization in a screen like Fig. 7, "to modify the contents of the item selected … by touching one of the contents on the touch screen." *Id.*, [0089]; *see also* [0088], Fig. 7:

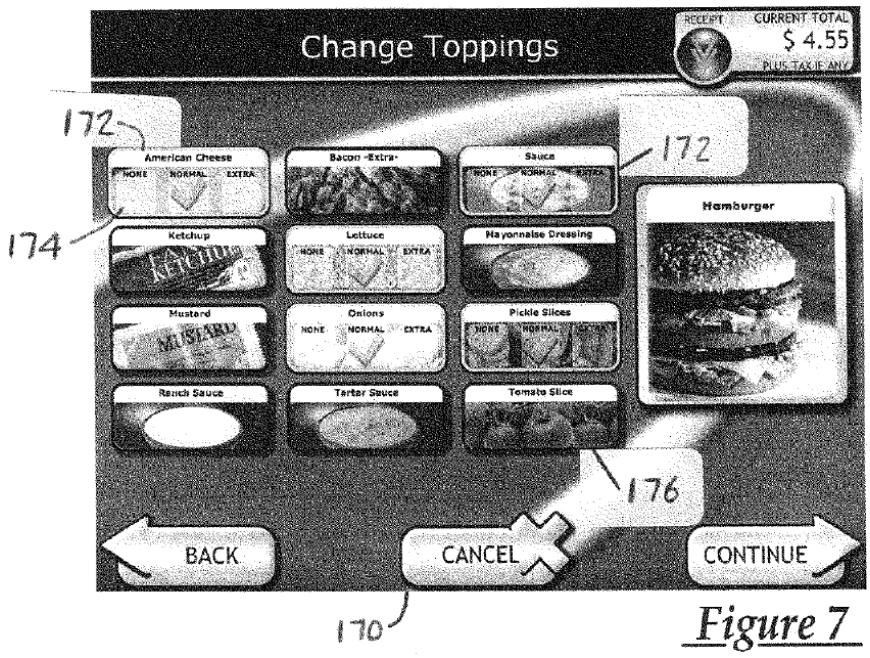


Figure 7

EX1002, ¶¶79-81.

Another advantage enables the system to "recommend new or additional products to the customer or can provide the customer with a customer loyalty discount or award." EX1004, [0089], [0091]. The "upsell feature" suggests items based on "the order history of recognized customers." *Id.*, [0091]. This suggests a modified POS screen displays specific items based on historical customer/order data. EX1002, ¶82.

Woycik thus uses manager-defined screen layouts/functionalities to create/modify POS screens to display based on customer- and order-specific information received before and during a transaction. *Woycik* thus discloses and suggests central server 22/84 configures POS terminals using information from the

administrative tool user interface (POS builder interface) over the network (1[c]) to create/modify POS screens, including creating/modifying POS screens based on further information regarding POS transactions (e.g., customer and order information, such as a customer's identity, items added/updated to an order, previous orders and selections, and loyalty/discount/promotion information) stored at central server 22/84. EX1002, ¶¶75-84.

6. 1[f]

Woycik discloses information received from the administrative tool's user interface (POS builder interface) used to create/modify interactive menus (POS screens) displayed on kiosks (POS terminals) includes item add/update, customer add/update, tax, and cost information—each of which satisfies this limitation (*supra* IX.A).

The "administrative tool" provides "a menu editor" to create/modify POS screens. *Id.*, [0013], [0016]-[0017], [0041], [0050], [0108], [0112], Figs. 11-13, 20. It further provides "an item/product editor screen," which "enables the editing of the individual items/products for sale." *Id.*, [0051], Fig. 21:

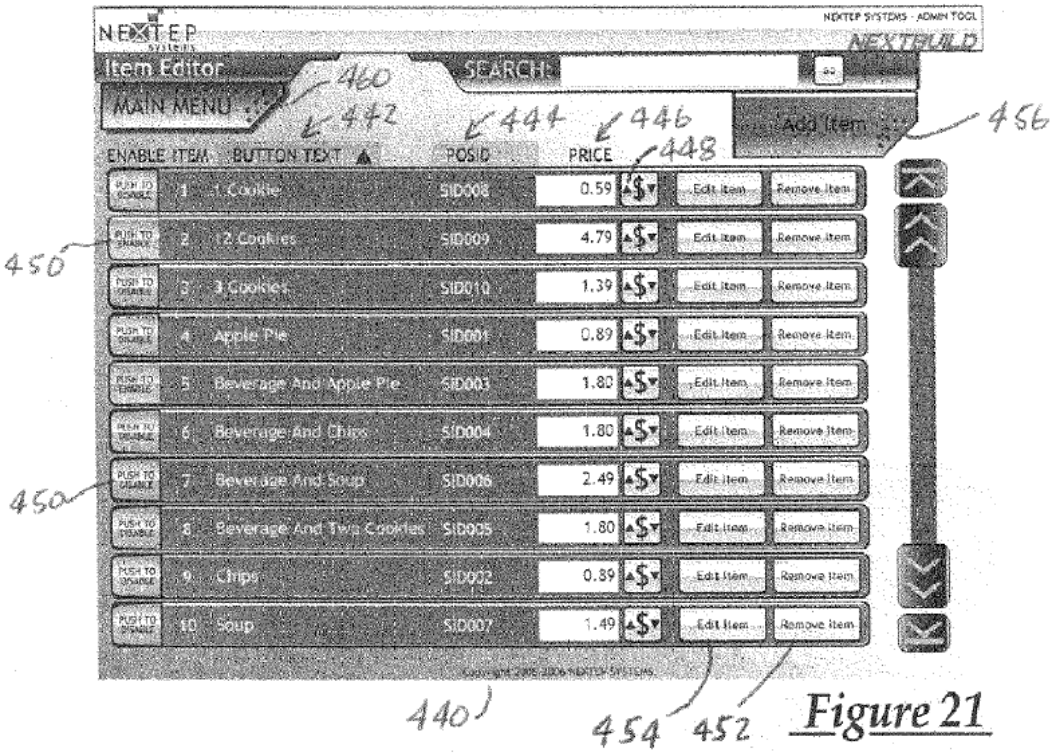


Figure 21

See also [0112], Fig. 22:

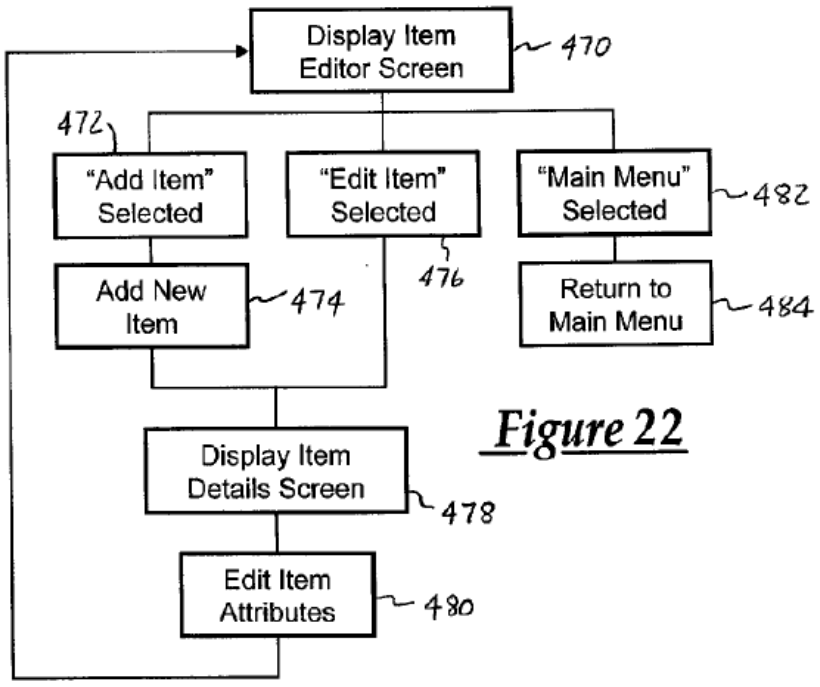


Figure 22

Thus, the POS builder interface information is used for creating/modifying POS screens, including item add/update information. EX1002, ¶86. As explained below, customers also add/update items during ordering.

Using the POS builder interface, the administrator can also "specify[] tax and payment features of the system," including "sales tax percentages" (taxation information). *Id.*, [0073], [0079], [0097]. "Enter customer ids" (customer add/update information) (*Id.*, [0097]) and "pricing information related to the cost" of additional items (item cost information). *Id.*, [0088]. EX1002, ¶87.

As explained for 1[e], *Woycik* discloses customers provide item add/update information ("further information") by "selecting items, modifying ingredients, adding side items, etc," using the interactive menus (POS screens) displayed on POS terminals. EX1004, [0089]. Further, returning customers "may choose to duplicate an entire previous order or individual items from that order," e.g., they "can simply select an item to customize (if desired) and add to [the] current order." *Id.*, [0089]. As explained for 1[d], 1[g], order and other information retained to enhance the customer experience is transmitted from the POS terminals to central server 22/84, e.g., "in real-time throughout the day." *Id.*, [0030], [0089]; *see also* [0128], [0141].

Additionally, *Woycik* discloses recognizing returning customers by "swiping a customer loyalty card" and the system "can provide the customer with a customer

loyalty discount or award." EX1004, [0089]. *Woycik* thus discloses and suggests further information regarding POS transactions, alone and/or in combination with the POS builder interface information, including promotion, discount, and loyalty program information in addition to item add/update information. EX1002, ¶89. A POSITA would understand such loyalty discounts/awards would be displayed to customers for selection, and a customer's redemption of a discount/award (promotion) would be transmitted to and stored by the central server as part of order information. *Id.*

Accordingly, *Woycik* discloses, suggests, and renders obvious limitation 1[f]. EX1002, ¶¶85-90.

B. Claims 2 and 11

As explained for 1[c], "the store owner or chain operator can carry out administration of the system using a simplified user interface" to the administrative tool (POS builder interface) "from any Internet-connected computer (such as a home office computer)" (computing device). EX1004, [0080]-[0081], [0121], Figs. 11, 13-21. Fig. 1:

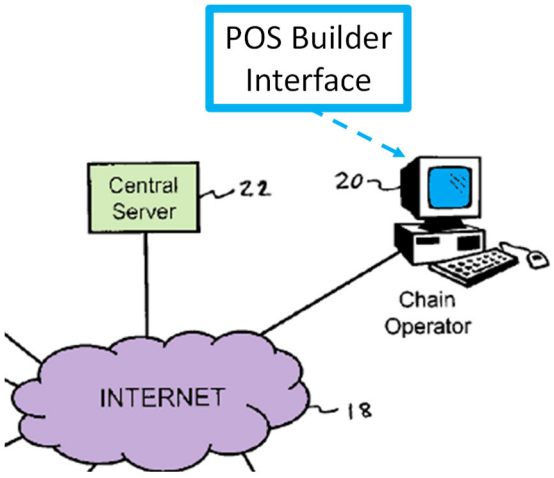


Fig. 1 (excerpted)

The administrative tool, which provides the administrative user interfaces, is installed on central server 22/84 (computing device). *Id.*, Figs. 1 & 3. The POS builder interface is thus configured to run on a computing device. Regarding claim 11, administrators can "access the administrative tools remotely using a standard web browser." *Id.*, [0121]. EX1002, ¶¶91-92.

C. Claim 3

As explained for 1[b], *Woycik* discloses a plurality of kiosks 16/82 (POS terminals) in a plurality of locations—e.g., one in "Store 1" and one in "Store 2." EX1004, [0071], [0074], Fig. 1:

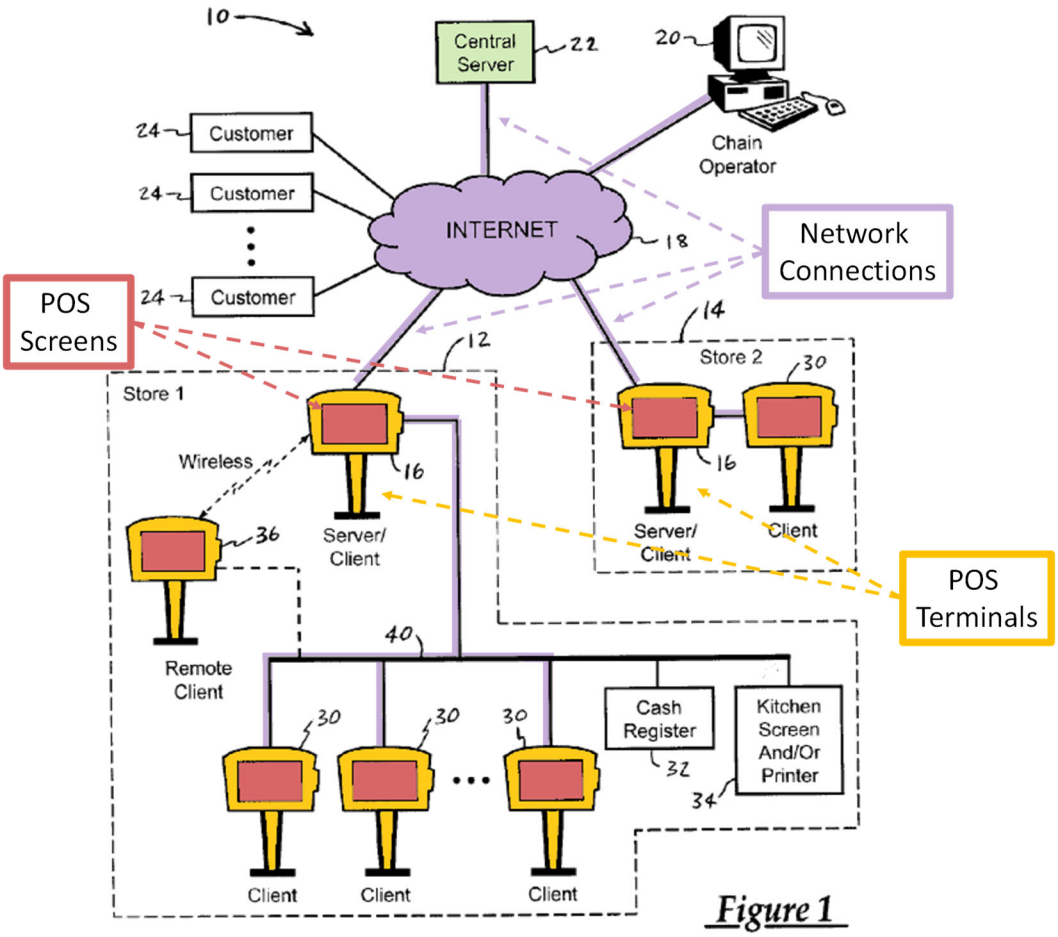


Figure 1

Woycik also discloses and suggests a plurality of POS terminals in *each* of a plurality of locations in two ways. First, as discussed for 1[a]-1[b], *Woycik* discloses additional kiosks 30 and 36 in/around each store connected to central server 22/84 over Internet 18 via kiosks 16/82 and "network 40." *Id.*, [0071]-[0072], [0074], [0124], Figs. 1, 27. Central server 22/84 thus communicates with kiosks 30/36 over the network comprising the Internet. EX1002, ¶94.

Second, *Woycik* discloses "a single store location will include *at least one* local server [kiosk] 16." EX1004, [0071]. That suggests a single location may have

a plurality of kiosks 16/82 connected to central server 22/84 over Internet 18. EX1002, ¶¶93-96.

D. Claims 4 and 9

As explained for 1[c], *Woycik* discloses and suggests items associated with buttons/keys (display interfaces) on POS screens that are created/edited via the POS builder interface include items for sale (e.g., "food items") and, as explained for 1[f], customer loyalty discounts/awards (promotions and loyalty points programs). EX1004, [0079], [0082], [0089], [0098], [0100], Figs. 4-9, 11, 20-21:

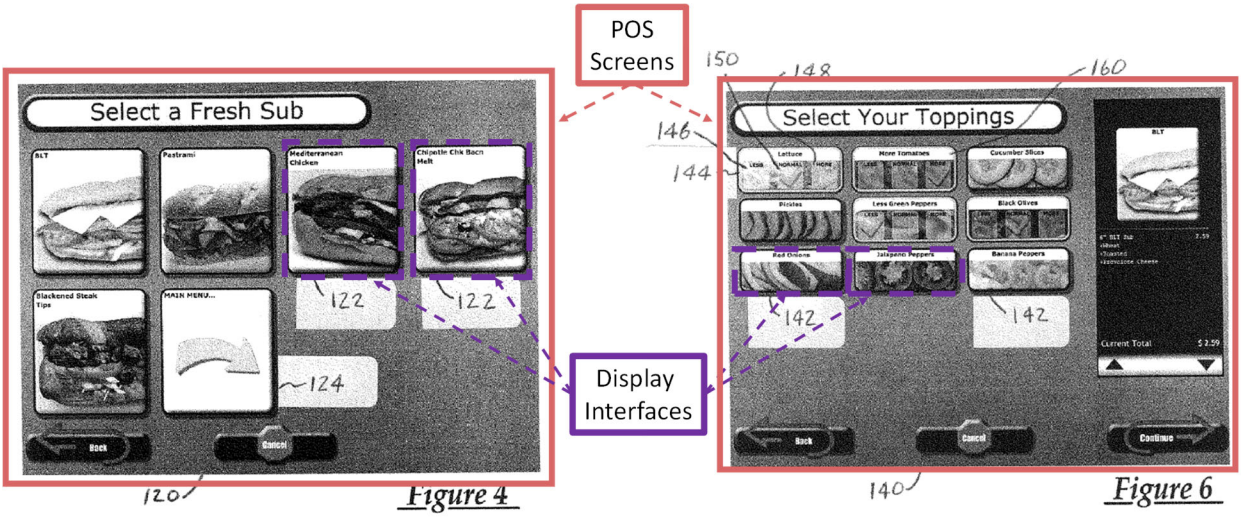


Figure 4 Figure 6

EX1002, ¶¶97-98.

E. Claim 7[7]

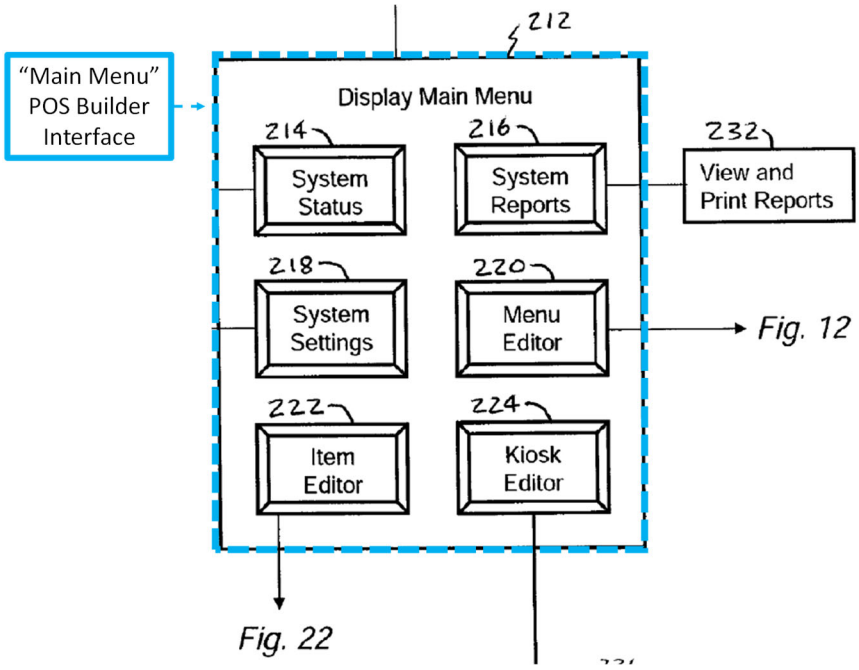
As explained for 1[e]-1[f], *Woycik* discloses central server 22/84 receiving further information from kiosks (POS terminals) regarding orders (POS transactions) that includes item add/update information based on new and/or returning customers adding or updating items in an order. EX1004, [0028], [0089], [0091], [0140]-[0142]. Additionally, *Woycik* discloses recognizing returning customers by "swiping a customer loyalty card," whereby the system "can provide the customer with a customer loyalty discount or award." EX1004, [0089]. A POSITA would understand such discount/award would be displayed on a POS screen for selection by the customer and the POS terminal would transmit "further information" (e.g., information regarding redemption of the discount/award) to central server 22/84 to update customer information. Thus, the (further) information regarding POS transactions also includes loyalty program promotion and customer update information. EX1002, ¶¶99-100.

---

[7] Claims 7 and 8 recite "the information regarding one or more POS transactions," which refer to "**further** information regarding one or more POS transactions" of 1[d] and not "the information used for creating or modifying the one or more POS screens" of 1[c].

F. Claim 8

As explained for 1[c], *Woycik's* web-based "administrative tool" user interface (POS builder interface) allows "the administrator to perform various administrative functions." EX1004, [0073], [0075]-[0076]. The administrator can "run reports, check the system status, add or remove kiosks from the system, or edit the screen displays that the customers see." *Id.*, [0095]-[0097], [0128], Fig. 10 (excerpted):



As explained for 1[d], the further information includes details regarding customer orders (POS transactions), which is stored by central server 22/84 for later use. EX1004, [0028], [0030], [0089], [0091], [0128]. Using the administrative tool interface, the administrator can also "view and print sales reports" for "any

individual kiosk" and "time period." *Id.*, [0097]. "Administrators request data or a report from the remote server that then supplies the data or report requested (blocks 598, 600)." *Id.*, [0128], Fig. 28:

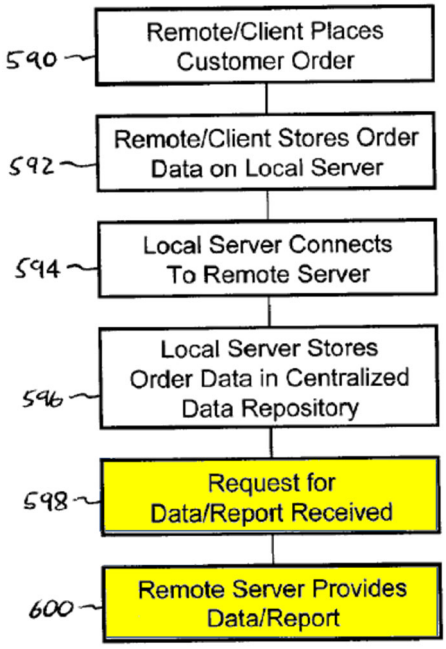


Figure 28

Woycik thus discloses and suggests reports displayed on the administrative tool user interface for a specific kiosk/terminal include information regarding one or more POS transactions performed at that kiosk/terminal. EX1002, ¶¶101-103.

G. Claim 10

As explained for limitation 1[c], *Woycik's* administrative tool allows the manager/administrator to define the layout (number, shape, and arrangement) of buttons (display interfaces) on POS screens. EX1004, [0100]. "Buttons can be

directly added one at a time by the administrator from an available collection of different buttons when building the screens." *Id.* "Alternatively … templates containing predefined groupings of buttons are used to develop the menu screens," and "define the overall layout of the menu such as the number and types of buttons, and placement of buttons." *Id.*; *see also*, [0101]-[0107], Figs. 14-19:

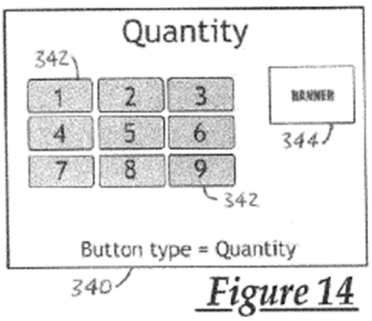


Figure 14

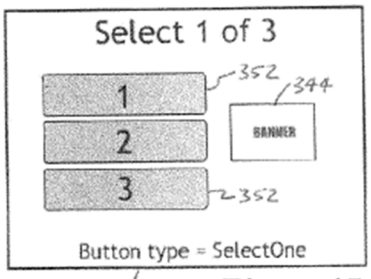


Figure 15

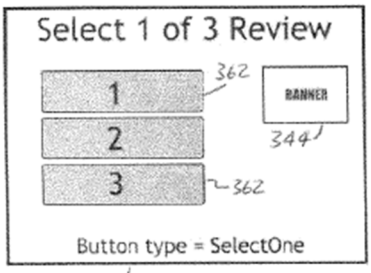


Figure 16

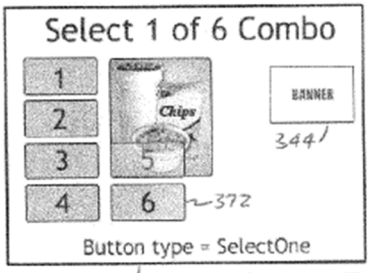


Figure 17

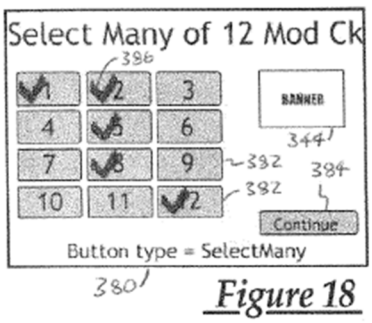


Figure 18

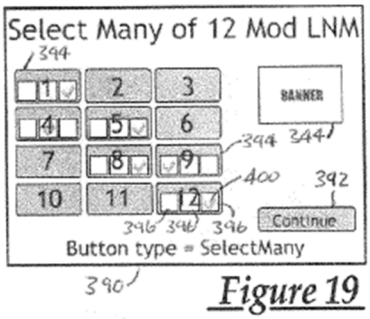


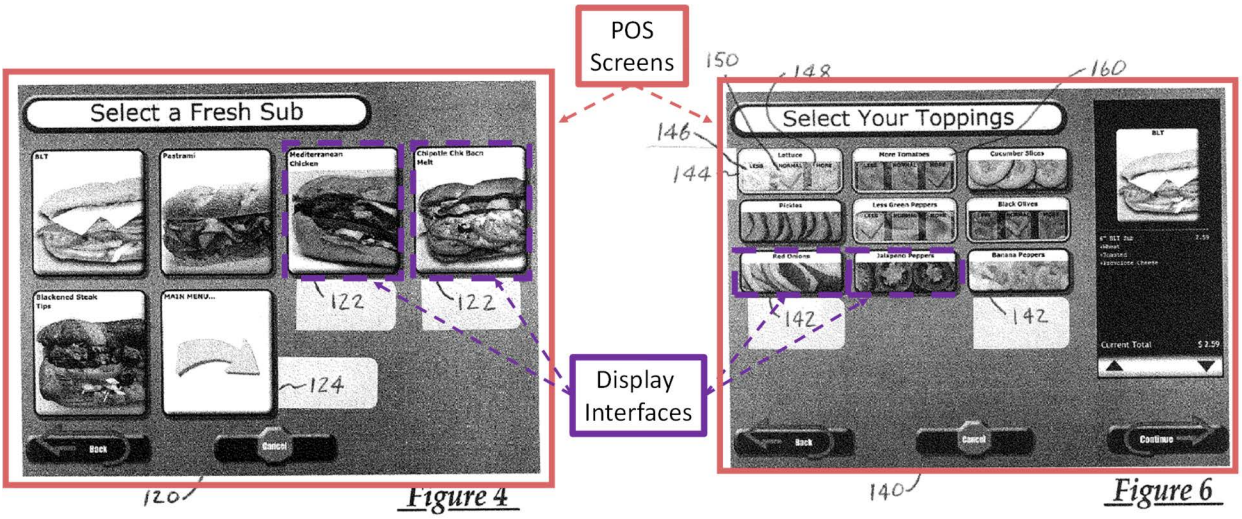
Figure 19

The server receives information from the POS builder interface regarding the "number of buttons a customer sees on the menu, what happens when a customer

selects a button …, and the overall appearance of the menu" (number, shape, and arrangement of buttons/keys). *Id.* EX1002, ¶¶104-105.

H. Claim 12

As explained for claims 1[c] and 9-10, *Woycik* discloses buttons/keys on the POS screens (display interfaces). EX1004, [0079], [0082], [0098], [0100], Figs. 4-9:



Those buttons are added/edited using the administrative tool user interface (POS builder interface). *Id.*, [0098], [0100], [0108], [0112], Fig. 12. For example, the buttons may be created individually or from a template. [0100]-[0107], Figs. 14-19:

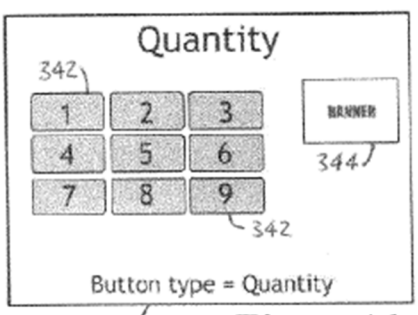


Figure 14

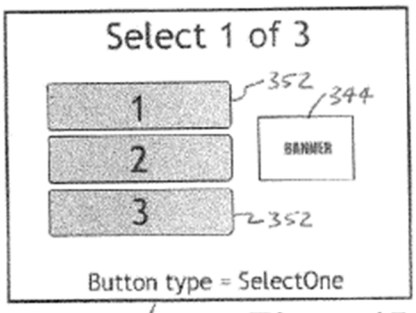


Figure 15

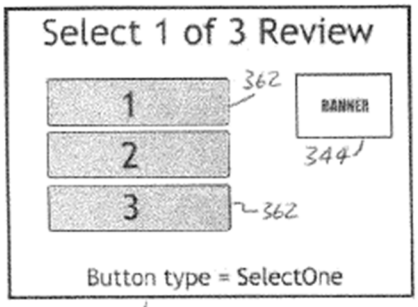


Figure 16

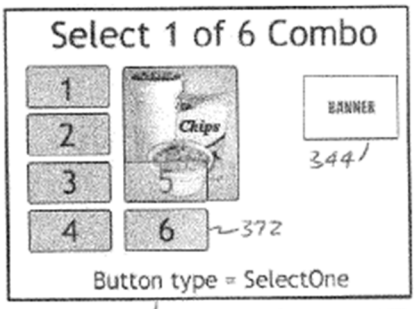


Figure 17

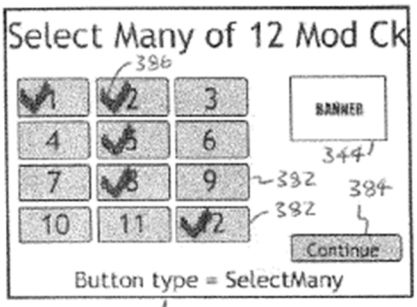


Figure 18

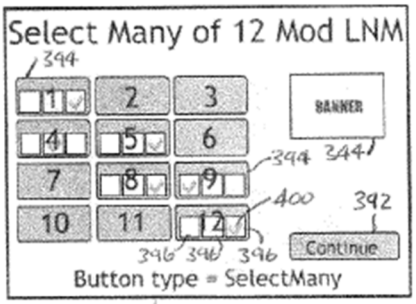


Figure 19

Woycik thus discloses and suggests the buttons (display interfaces) are accessible on the POS builder interface. EX1002, ¶106.

Further, *Woycik* suggests administrators can preview POS screens to accept or reject changes. EX1004, [0112]. A POSITA would have been motivated to allow administrators to access POS screens and buttons (display interfaces) to preview

modified screens/buttons before transmitting changes to POS terminals to ensure accuracy and to test functionality of the updated POS screens. EX1002, ¶106-108.

I. Claim 13

As explained for 1[c], *Woycik's* web-based administrative tool interface (POS builder interface) allows administrators to "edit the screen displays that the customers see." EX1004, [0095], [0073]. "The individual items or products available for sale are edited in the item editor" where the administrator can "configure the various food items and options" including modifying pricing information, button text, and enabling/disabling buttons. *Id.*, [0112]; *see also*, [0110]-[0113], Figs. 20-22:

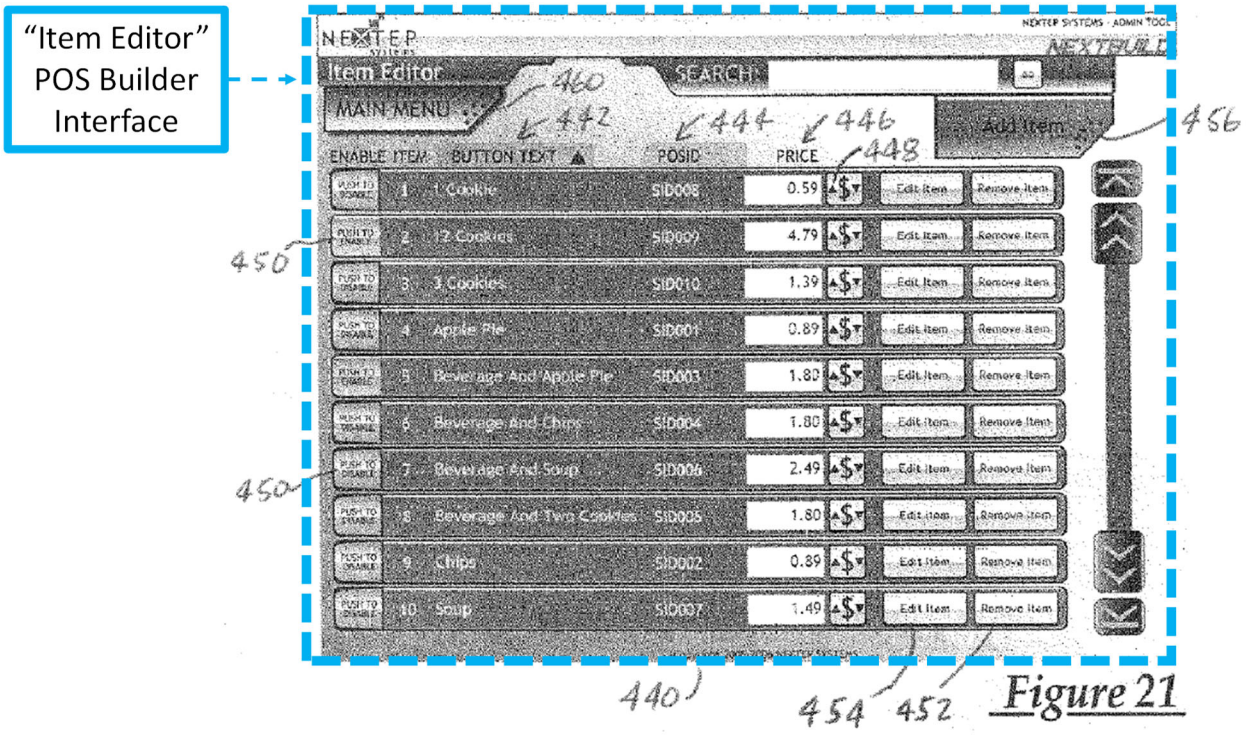


Figure 21

When "editing an existing item, the administrative tool launches a separate items detail screen with multiple tabs to edit various item attributes." *Id.*, [0112]-[0113]; *see also* [0108], Figs. 12, 22:

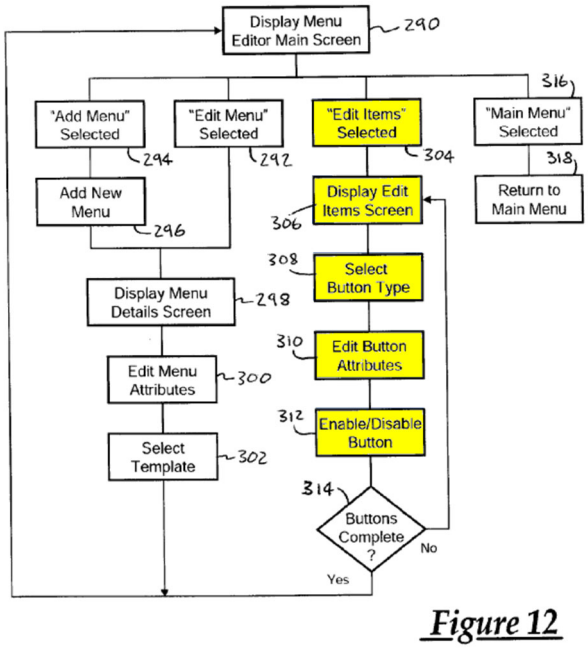


Figure 12

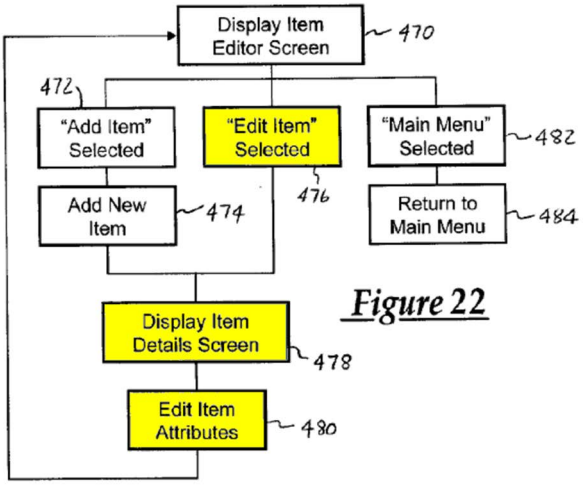


Figure 22

Information received by central server 22/84 from the administrative tool interface to modify the attributes of *existing* items/buttons is "second information" regarding a POS screen modification that is different than information used to originally create the items/buttons. EX1002, ¶109.

"The administrative tool saves all changes to the server after the administrator has made all desired changes to the customer interface using the administrative tool." EX1004, [0115]. Those modified "menu configurations" are then sent to the POS terminals/kiosks to update POS screens based on the second information regarding

POS screen modification. *Id.*, [0120]-[0122]; *see also* [0071], [0075]-[0076], [0095], [0117]. EX1002, ¶¶109-111.

J. Claim 14

As explained for claim 13, *Woycik's* "administrative tool saves all changes to the server after the administrator has made all desired changes to the customer interface using the administrative tool." EX1004, [0115]. That server can be central server 22/84. [0121]-[0122]; *see also* [0071], [0075]-[0076], [0095]. EX1002, ¶¶112-113.

K. Claim 15

As explained for 1[a]-1[b], central server 22/84 is remote from the POS terminals/kiosks. EX1004, [0071], [0075]-[0076], Fig. 1:

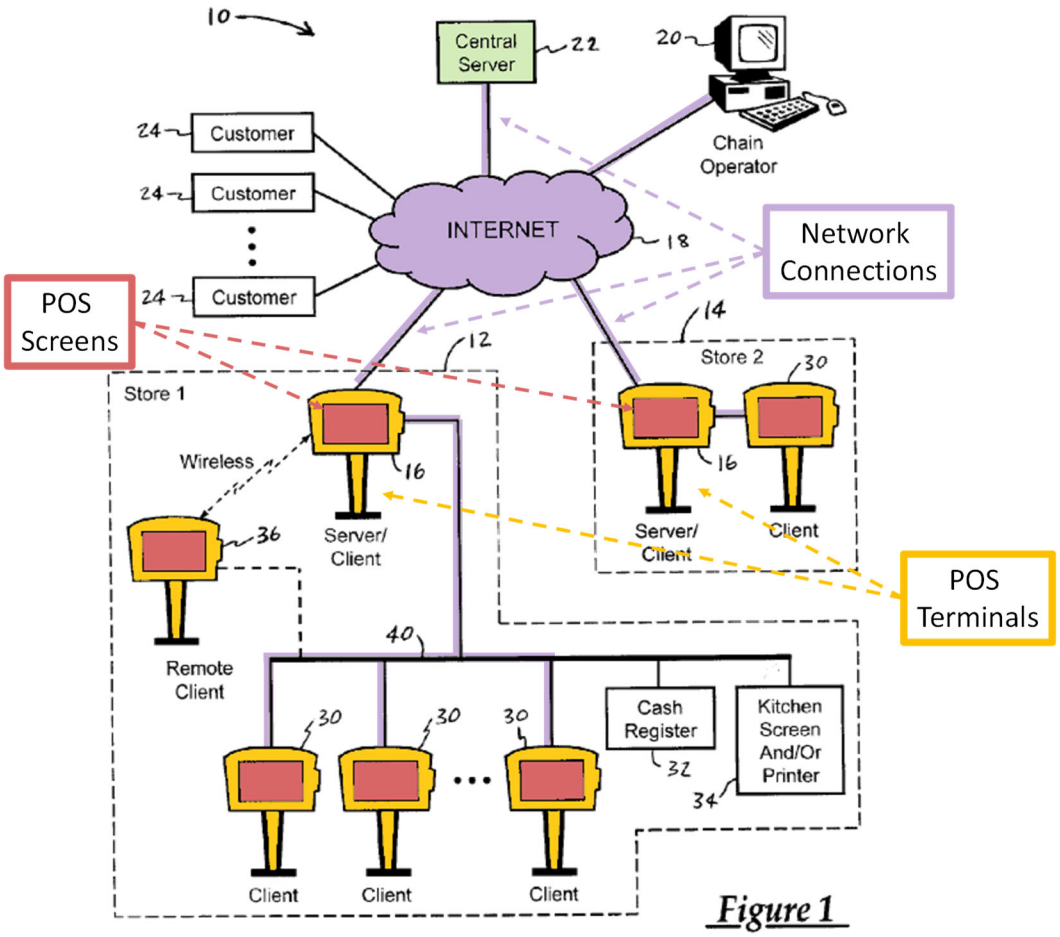


Figure 1

EX1002, ¶¶114-115.

L. Claim 16

As explained for 1[c], *Woycik's* central server receives from a POS builder interface information for creating/modifying interactive menu screens (POS screens). EX1004, [0013], [0016], [0019]-[0020], [0073], [0075], [0079], [0098]-[0099], [0109]-[0110], Figs. 11-13. Configuration changes (e.g., menu/item changes) made over the Internet with the administrative tool at central server 22/84 are saved to the central server, then pushed to local store kiosks. *Id.*, [0115], [0076],

[0122]. Changes are saved to the central server when the administrator enters them and clicks the "OK button" at "block 314 … when button editing is completed to return to the menu editor main screen." *Id.*, [0108], [0111], Figs. 12, 13, 20:

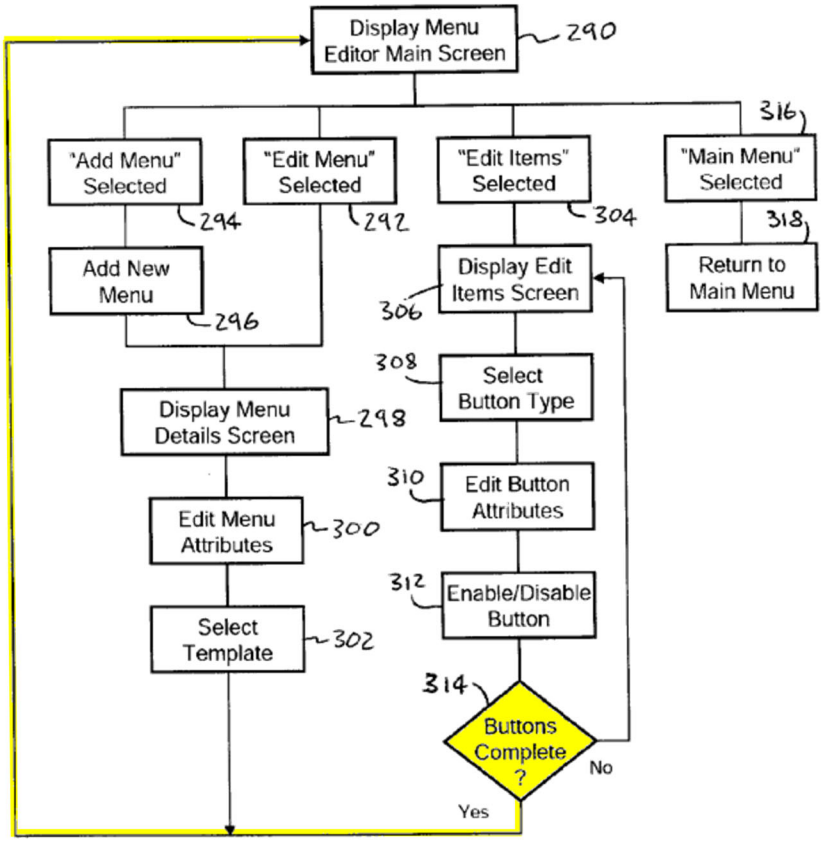


Figure 12

The central server can "automatically send the changes to the local server" kiosk 16/82 via Internet 18. *Id.*; *see also* [0071], [0072], [0115]. *Woycik* teaches central server 22/84 communicates with in-store kiosks/terminals 16/82 "in real-time throughout the day." *Id.*, [0030]. *Woycik* thus discloses and suggests receiving information for and creating/modifying POS screens stored on the central server in

real time. EX1002, ¶116. *Woycik* discloses "the kiosk's status (idle, in use, etc.)" is determined by the system, and that changes made and saved on the server can be pushed down to kiosks when they are idle. EX1004, [0097], [0015]. That suggests, and it would be obvious, that information can be received in real time, and changes to POS screens can be made and saved at central server 22/84 in real time, while kiosks (POS terminals) are in use by customers placing orders. EX1002, ¶116.

Additionally, as explained for claim 12, *Woycik* suggests administrators can preview POS screens and accept or reject changes. EX1004, [0112]. This suggests POS screens are created/modified at the server in real time while in-store POS terminals are in use, e.g., to facilitate the preview functionality. EX1002, ¶¶116–118.

M. Claim 17

Woycik discloses a "kiosk's status (idle, in use, etc.)" may be determined by the system. EX1004, [0097]. Further, updates to the POS screens may be made "during idle time when the kiosk is not in use." *Id.*, [0115], [0117]. *Woycik* thus discloses and suggests waiting until after a POS terminal's pending transaction is complete to update POS screens during idle time. This suggests and renders obvious a POS terminal's continued use of existing POS screens for a pending transaction before updating screens during subsequent idle time—after which the kiosk uses the

updated screens. EX1002, ¶119. Additionally, a POSITA would understand the kiosks reuse POS screens for each new transaction after a prior transaction is complete, thus using/re-using updated POS screens after completing each transaction. *Id.*, ¶¶119-120.

N. Claims 18 & 20

As explained for claim 16, configuration changes (e.g., menu and item changes) made over the Internet with the administrative tool at central server 22/84 are saved to (thus maintained by) the central server, then pushed to local store kiosks. EX1004, [0115], [0076], [0122]. *Woycik* teaches that, sometimes, "not all store locations are intended to use the same menus or pricing," and the "changes can be sent to less than all stores." *Id.*, [0122]. In that scenario, a POSITA would understand, and be motivated to ensure, that the central server separately stores/maintains different sets of interactive menus (POS screens) used by POS terminals at those different store locations to ensure communication of correct menus/pricing. EX1002, ¶¶121-122.

O. Claim 19

The administrative tool provides "a simplified user interface that requires little if any training or experience with computers." EX1004, [0080]. It "provides a graphical representation of menu options, button selections, images, text fields, etc.

on the kiosk." *Id.*, [0095]. "An advantage of this approach is that it enables administrators and store owners to make changes to the store offerings and customer interface without requiring any knowledge of the underlying code." *Id.* Further, it "eliminates the need for administrators to write their own code to develop the layout and behavior of the menus." *Id.*, [0100]. *Woycik* thus discloses and suggests instructions to the administrative tool GUI (POS builder interface) for the creation/modification of POS screens (and thus creation/modification of POS terminals), are not formatted in programming code. EX1002, ¶¶123-124.

P. Claim 21

As discussed for 1[c], *Woycik* discloses the central server receives information for creating/modifying buttons associated with items (including food items) and their attributes. *Woycik's* administrative tool includes "the same functions typically used to add, delete, and configure kiosks in the system, to make global settings (e.g., set time, sales tax percentage, receipt header and footer text), to create display screens (e.g., food ordering menus), to create a list of food items that are used on the different menu screens, and to **edit the various attributes of the food items (e.g., name, associated graphic, price)**." EX1004, [0079]. "The individual items or products available for sale are edited in the item editor" where the administrator can

"configure the various food items and options." *Id.*, [0112]; *see also*, [0110]-[0113], Figs. 20-22:

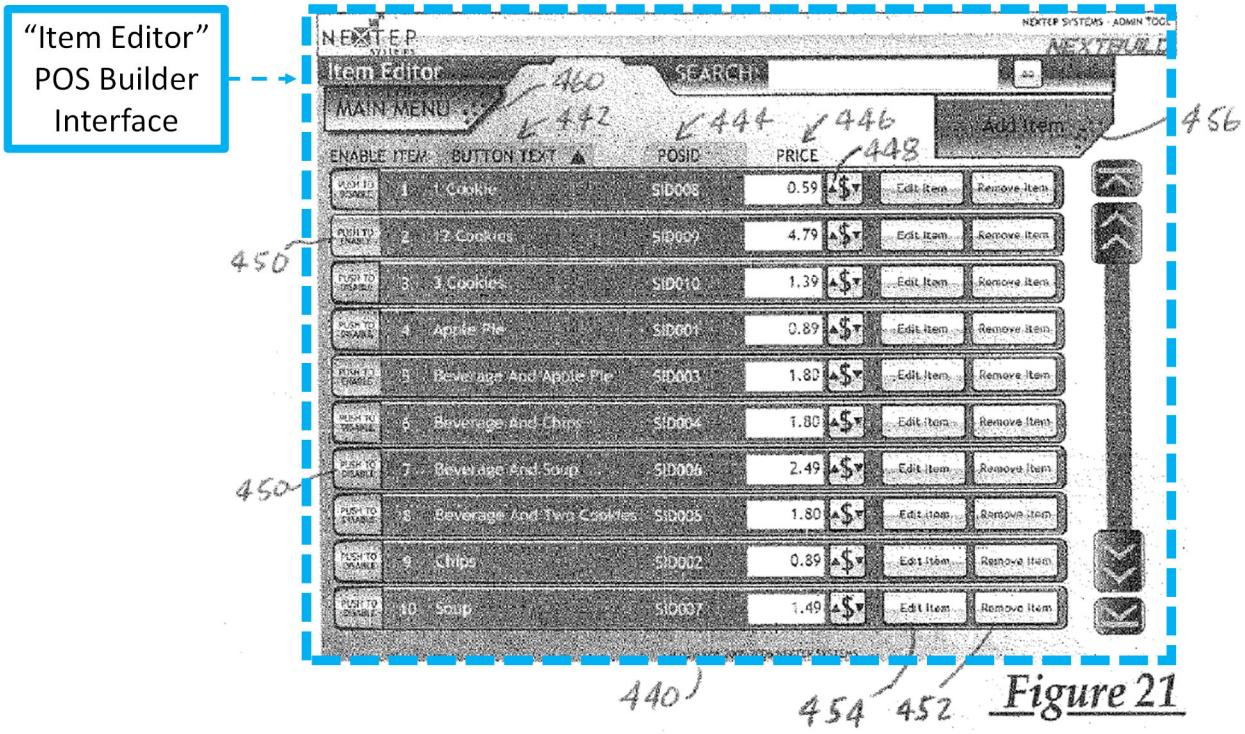


Figure 21

EX1002, ¶¶125-126.

Q. Claim 22

Woycik discloses "a single store location will include at least one" local server kiosk 16/82 (POS terminal), and that some store locations "can have a simple one" kiosk setup and thus would have one network connection between kiosk 16/82 and central server 22/84. EX1004, [0071], [0074]. "[L]ocal server [kiosk 16/82] connects to the remote server [central server 22/84] periodically and stores the customer and order data in the centralized data repository." *Id.*, [0128]. That suggests, and it would

be obvious, that sometimes a store with a single POS terminal (kiosk 16/82) operates without an Internet 18 connection to the central server but is configured to perform transactions independently of that connection, store customer/order data locally, and then later reconnect to transmit the data to the central server. EX1002, ¶¶127-128.

R. Claim 23

In *Woycik*, "[t]he primary components of each menu screen are **buttons** that allow the customer to make selections among available items and options." EX1004, [0100]. As explained in 1[c], those buttons are display interfaces associated with items. *Id.*, [0098], [0100], [0112], Figs. 4-9:

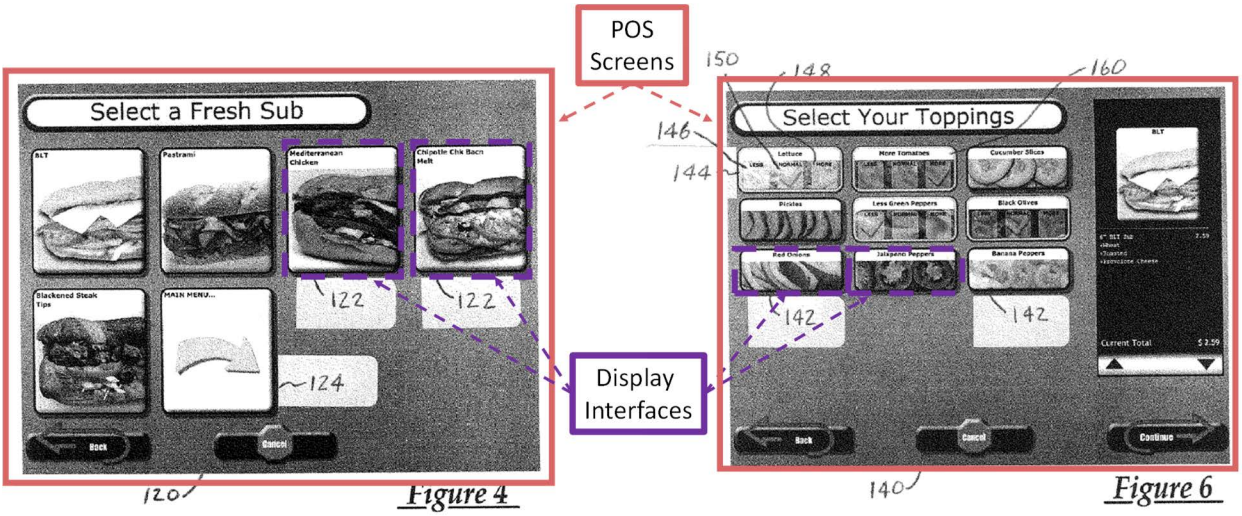


Figure 4 Figure 6

As explained in 1[d] and 1[g], the further information includes information regarding items ordered by a customer. Customers input that information using buttons (display interfaces) on the interactive menu (POS screen) at the POS terminal "to select and customize the desired food items, specify quantity, options,

etc." *Id.*, [0073]. *Woycik* discloses multiple types of buttons, including "quantity buttons (Quantity), less/normal/more buttons (LNM), and none/normal/extra buttons (NNE)." *Id.*, [0083]-[0088], Figs. 6-9:

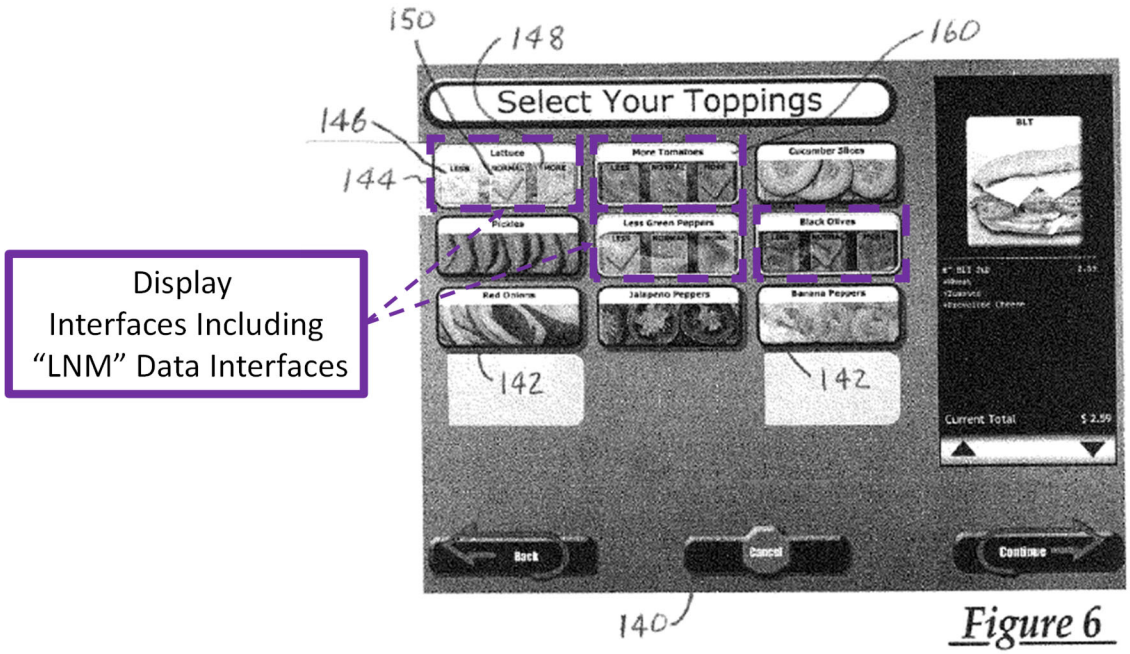


Figure 6

Such buttons thus are or include a data interface for inputting at least some of the further information (data) regarding an order/transaction, e.g., items and options selected (item add/update information). EX1002, ¶¶129-130. Additionally, a POSITA would be motivated to include a display interface for text entry, e.g., to allow a customer to make special requests for further item customization. *Id.*, ¶¶129-132.

S. Claim 24

As explained for 1[c], *Woycik* discloses several examples of dynamically configuring kiosks to display POS screens specific to individual customers based on "further [kiosk] information" regarding his/her POS transactions (e.g., previous order information). EX1002, ¶133. The system may recognize returning customers using "a customer loyalty card" or "credit card" and create/modify the POS screens displayed based on such further information. *Id.*, [0028], [0089], [0091], [0140]-[0142]. For example, "FIG. 40 illustrates a customer recognition screen 860 displayed by the self-order application when a returning customer is recognized." *Id.*, [0142]:

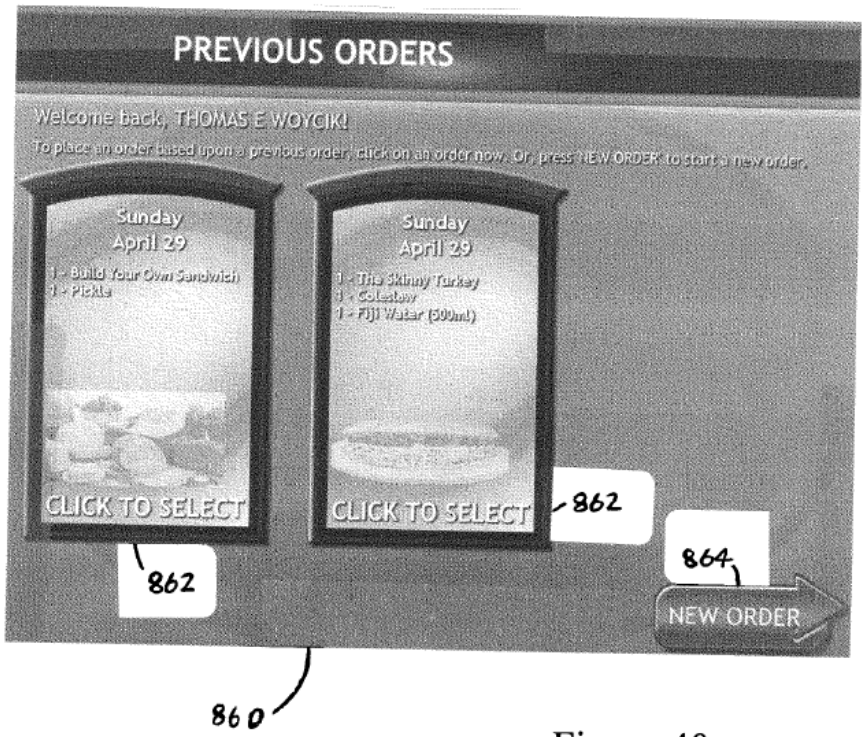


Figure 40

"The customer may choose to duplicate an entire previous order or individual items from that order," e.g., he "can simply select an item to customize (if desired) and add to his current order." *Id.*, [0089]. Further, "the system includes some button types … that have dynamically generated content based on the customer's order." *Id.*, [0103]. EX1002, ¶¶133-134.

T. Claims 25-26

As explained in 1[c] and claim 10, *Woycik* discloses the POS builder interface is configured to create/modify POS screen layout, including button position and operation (display interfaces). Buttons can be added individually or from a template that defines "the overall layout of the menu such as the number and types of buttons, and **placement of buttons**." EX1004, [0100]; *see also*, [0101]-[0107], Figs. 14-19:

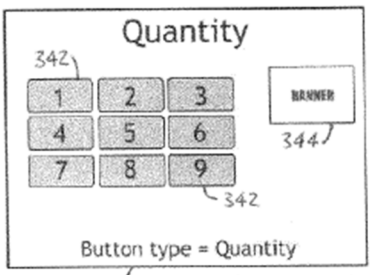


Figure 14

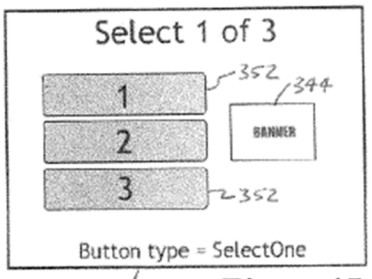


Figure 15

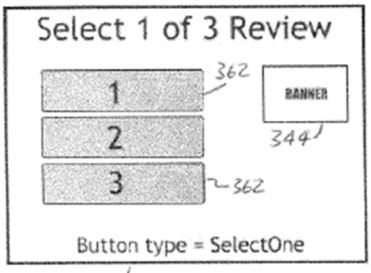


Figure 16

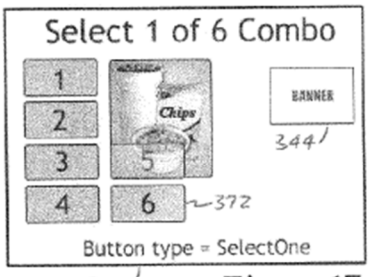


Figure 17

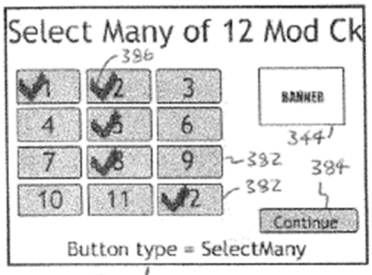


Figure 18

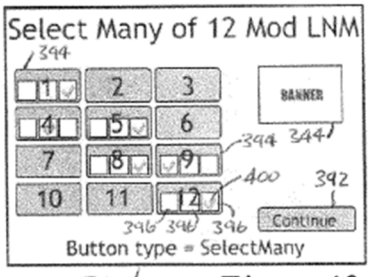


Figure 19

Further, the button operation or "behavior (e.g., how the system responds to the button being pressed)" can be configured. *Id.*, [0102], [0100], [0108].

As explained for claim 23, *Woycik* discloses buttons (display interfaces) that are and/or include input interface elements such as "LNM" data interfaces. *Id.*, [0073], [0083]-[0088], Figs. 6-9:

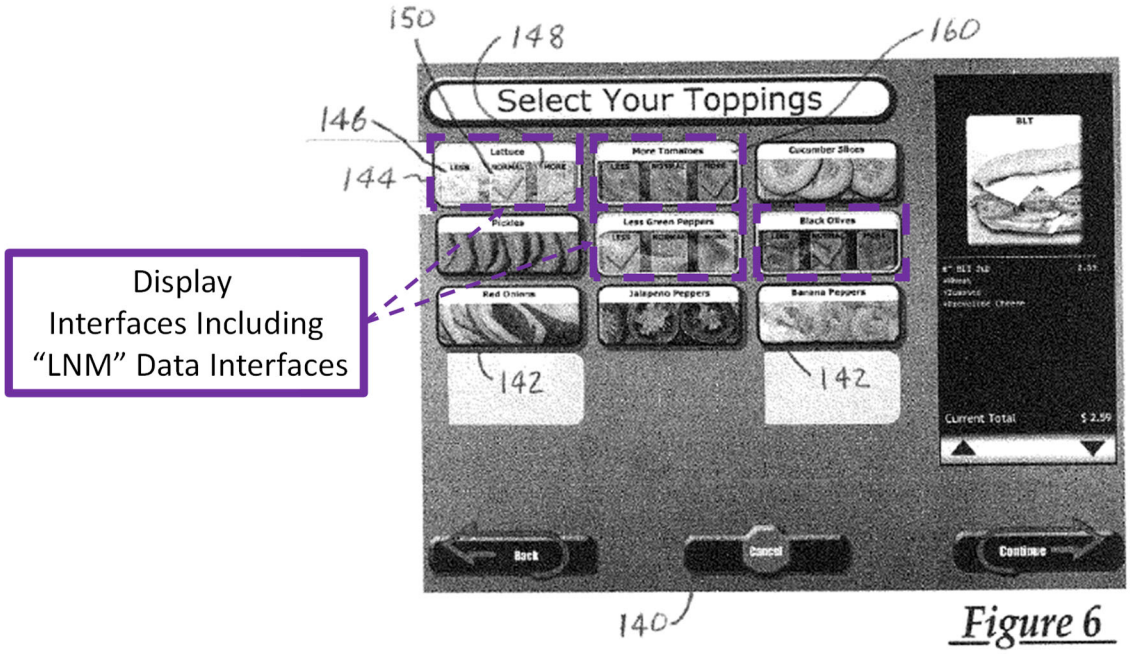


Figure 6

Woycik's POS terminals include "a display screen having a touch screen for accepting user input." *Id.*, [0014], *see also*, [0077]-[0078], [0089]. The buttons thus include touch screen input interface elements. EX1002, ¶¶137-137.

U. Claim 27

Claim 27 is similar to claim 1 but drafted from the perspective of a POS terminal rather than a server. Similar elements are obvious for the same reasons as in claim 1 explained below. EX1002, ¶¶138-156.

1. 27[pre]

See 1[pre], XII.A.1.

2. 27[a]-27[b]

See 1[a]-1[b], XII.A.2. *See also*, EX1004, [0071], Fig. 1:

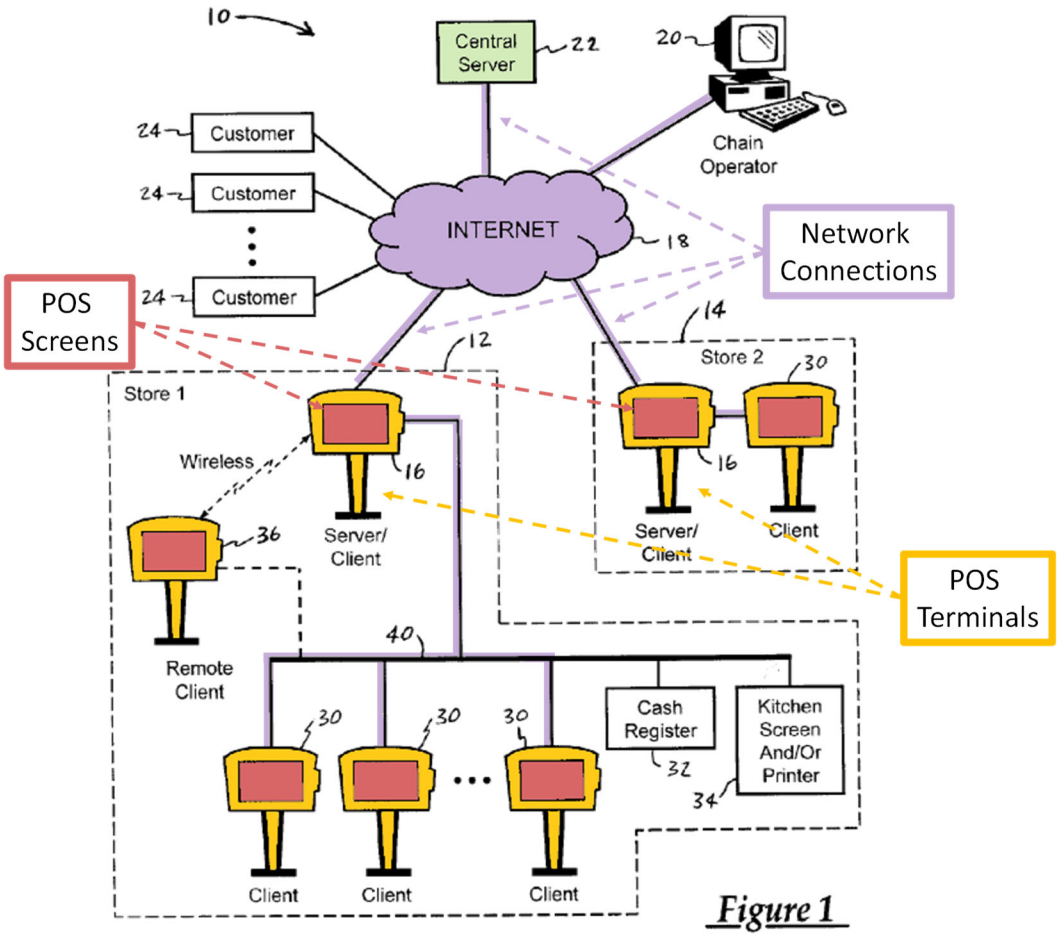


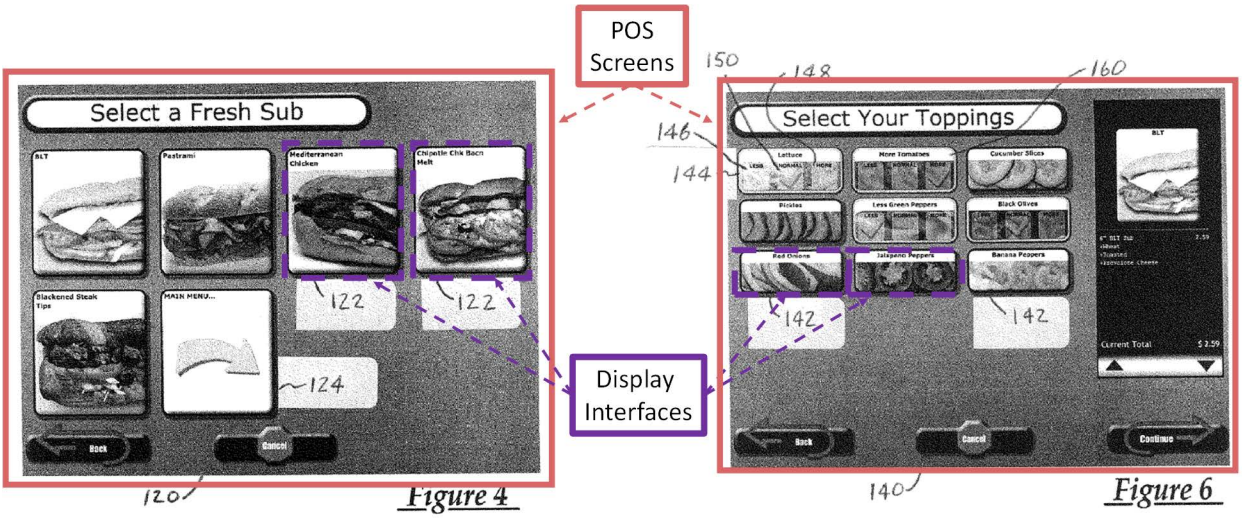
Figure 1

3. 27[c]

This limitation is similar to 1[c] but recites a POS terminal receiving information from the server rather than a server receiving information from a POS builder interface. That difference is addressed below. The remaining limitations of 27[c] are obvious for the same reasons explained for 1[c]. *See* XII.A.3.

As explained in 1[c], central server 22/84 receives POS builder interface information used for creating/modifying interactive menus (POS screens), including creating/modifying buttons (display interfaces) on POS screens associated with food

items. EX1004, Abstract, [0013], [0016]-[0017], [0073], [0079], [0100]-[0107], Figs. 4-9:



As explained for claim 16, *Woycik's* configuration changes (e.g., menu/item changes) made over the Internet with the administrative tool at central server 22/84 are saved to the central server, then pushed to local store POS terminals. *Id.*, [0115], [0076], [0122]. Kiosks 16/82 (POS terminals) thus receive that information from central server 22/84 over the network comprising the Internet. EX1002, ¶¶143-146.

4. 27[d]

Woycik discloses POS terminals are "used directly by the customer to order goods" and complete "the transaction (order, payment, etc.)." EX1004, [0006]-[0007]; *see also*, [0074], [0089]-[0092]. "Once an order is placed, regardless if at a kiosk or through a web client, the system generates a kitchen build for each item in the order." *Id.*, [0094]; *see* 1[d], 1[g], XII.A.4. EX1002, ¶¶147-148.

5. 27[e], 27[h]

See 1[d], 1[g], XII.A.4.

As explained in 1[d], the POS transactions and the further information regarding POS transactions relate to transactions by corresponding customers using respective POS terminals to order items, and the further information is transmitted from the POS terminal and received and stored at the central server. EX1004, [0028], [0030], [0089]-[0092]. EX1002, ¶¶149-151.

6. 27[f]

See 1[e], XII.A.5. Additionally, 27[f] allows a POS terminal to create or modify POS screens "based on the received information ***or*** further information." As explained for 1[e], *Woycik* discloses POS terminals configured to create and modify POS screens based on information provided by a manager using the administrative tool ***and*** based on further information about POS transactions transmitted from POS terminals to the central server.

7. 27[g]

See 1[f], XII.A.6.

V. Claims 28, 31-38, 40-41

These claims recite similar limitations to those depending from claim 1 and are obvious for the same reasons.

Claim 28	Claim 3, XII.A.C

Claim 31	Claim 9, XII.A.D
Claim 32	Claim 10, XII.A.G
Claim 33	Claim 15, XII.A.K
Claim 34	Claim 16, XII.A.L Claim 34 is like claim 16 but from the perspective of the POS terminal rather than the server. As explained for claim 16, *Woycik's* administrative tool can be used to create/modify POS screens on the server in real time while the POS terminal/kiosk is used by a customer, then the server pushes the changes down to reconfigure the terminal/kiosk to display new/modified POS screens after transaction completion.
Claim 35	Claim 17, XII.A.M
Claim 36	Claim 21, XII.A.P
Claim 37	Claim 4, XII.A.D
Claim 38	Claim 22, XII.A.Q Claim 38 is like claim 22 but adds additional limitations regarding transmitting the information regarding POS transaction to the server upon transaction completion and the POS terminal establishes a server connection. *Woycik's* central server is also a web server. EX1004, [0076], [0081], [0093]. As explained for claim 22, *Woycik's* POS terminals/kiosks can perform transactions and then later establish a central server 22 connection and upload the transaction data periodically. *Id.*, [0128]. That suggests and renders obvious performing transactions without a server connection. EX1002, ¶157.
Claims 40-41	Claim 25-26, XII.A.T

EX1002, ¶¶157-158.

W. Claim 39

As explained for claims 22 and 38, *Woycik's* kiosks 16/82 can perform transactions, store transaction data locally, and then periodically establish a central server 22 connection and upload transaction data. EX1004, [0128], see also, [0093]. EX1002, ¶¶159-160.

X. Claim 42

Claim 42's method steps are similar to the functions of claim 1's system but omits the server limitation (hence numbering discrepancy) and is obvious for the same reasons. EX1002, ¶¶161-163.

42[pre]	1[pre], XII.A.1.
42[a]	1[a]-1[b], XII.A.2.
42[b]	1[c], XII.A.3.
42[c], 42[f]	1[d], 1[g], XII.A.4.
42[d][8]	1[e], XII.A.5.
42[e]	1[f], XII.A.6.

[8] Limitation 42[d] replaces "configure" with "provisioning," a broad term without meaningful distinction here.

Y. Claim 43

Claim 43's method steps are nearly identical to the functions of claim 27's system. The following chart identifies the corresponding limitations of claim 27, which in turn reference claim 1 for several limitations (parallel references to claim 1 are provide for convenience).

43[pre]	27[pre], XII.U.1 (1[pre], XII.A.1)
43[a]-43[b]	27[a]-27[b], XII.U.2 (1[a]-1[b], XII.A.2)
43[c]	27[c], XII.U.3 (1[c], XII.A.3)
43[d]	27[d], XII.U.4
43[e], 43[h]	27[e], 27[h], XII.U.5 (1[d], 1[g], XII.A.4)
43[f]	27[f], XII.U.6 (1[e], XII.A.5) As explained for 1[e] and 27[f], *Woycik* discloses POS terminals configured to create and modify POS screens based on information provided by a manager using the administrative tool ("received information" of 43[f]) ***and*** based on further information about POS transactions transmitted from POS terminals to the central server ("transmitted information" of 43[e]).
43[g]	27[g], XII.U.7 (1[f], XII.A.6)

EX1002, ¶¶163-164.

Z. Claim 44

Claim 44 recites similar limitations to claim 1, but more broadly claims "creating or modifying *functionality of the one or POS terminals*" (44[c]). *Woycik's*

disclosure regarding creating and modifying a series of interactive POS screens and buttons displayed on POS terminals/kiosks (including button behavior/functionality) renders obvious the broader limitations regarding functionality for the same reasons as explained for claim 1. Additionally, *Woycik's* button functionality or "behavior (e.g., how the system responds to the button being pressed)" can be configured. EX1004, [0102], [0100], [0108]. EX1002, ¶¶165-166.

44[pre]	1[pre], XII.A.1.
44[a]-44[b]	1[a]-1[b], XII.A.2.
44[c]	1[c], XII.A.3.
44[d], 44[g]	1[d], 1[g], XII.A.4.
44[e]	1[e], XII.A.5.
44[f]	1[f], XII.A.6.

XIII. GROUND 2: *TENGLER* IN VIEW OF THE KNOWLEDGE OF A POSITA RENDERS OBVIOUS CLAIMS 1-4, 7-28, AND 31-44

A. Claim 1

1. 1[pre]

Tengler discloses an order processing/management system for use in restaurants/stores. EX1005, [0002]-[0006], [0024], [0026]. It includes a server and point-of-sale "stations enabling users to enter orders" and "a network interconnecting the stations," which may be "a Transmission Control Protocol/Internet Protocol (TCP/IP) network." *Id.*, [0011], [0014], [0078]. Cashiers

may use "order terminals 52 to enter orders" and customers may use "self-service kiosks 74." *Id.*, [0062], [0074], [0075]; Fig. 2:

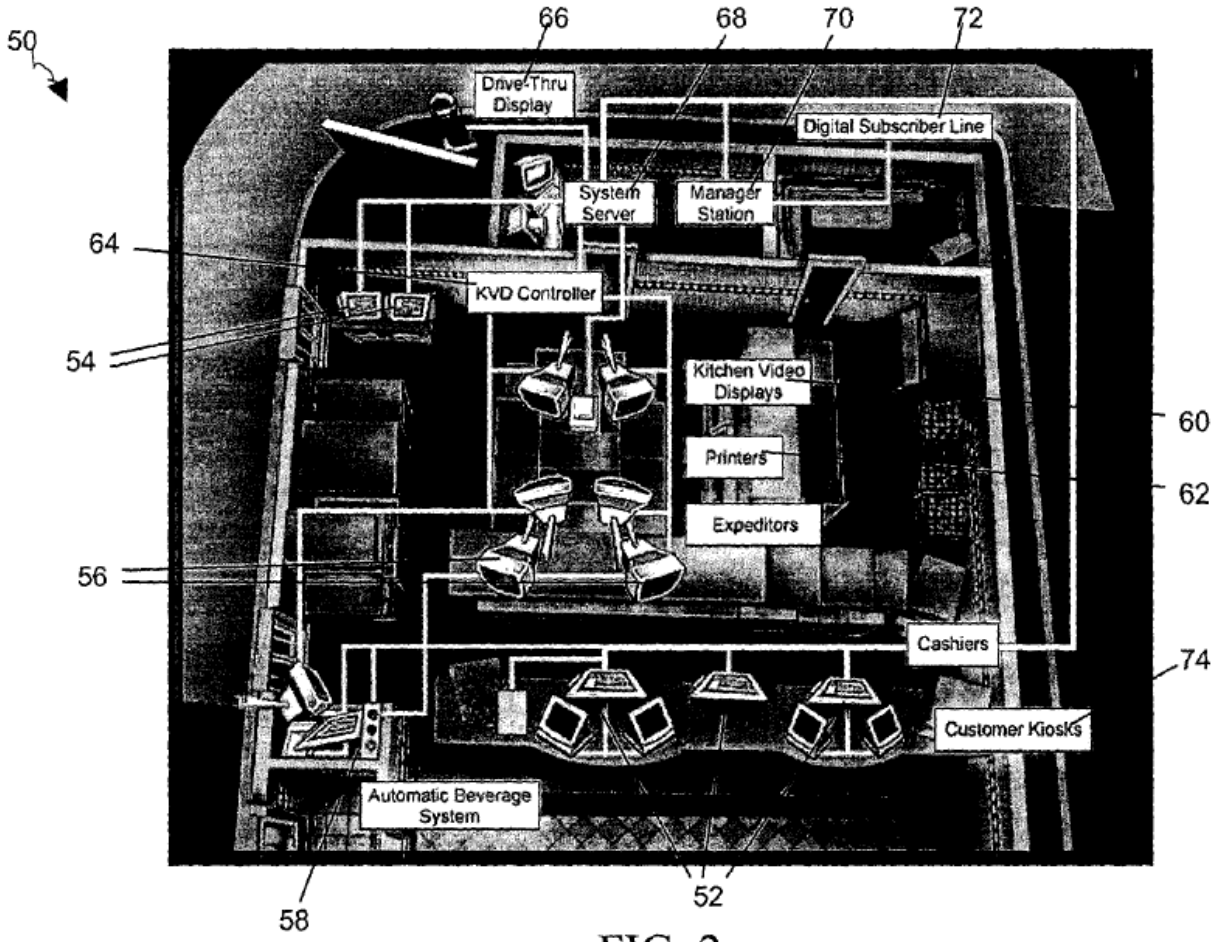


FIG. 2

Tengler's system is web-based because it allows "a manager to access a management database of a quick-serve restaurant location remotely through a web interface" "over the Internet." *Id.*, [0022], [0073], Cl. 42, Figs. 7, 7A, 7B. As explained for 1[c], *Tengler* discloses a POS builder system because it includes "user interface designer 614 [that] allows management to edit the user interface of the

register and self-service applications and also saves the specifications in the database 602." *Id.*, [0103], [0107]; *see also* [0121]. "Graphical User Interface (GUI) design objects 756 implement the logic for the user interface designer 614." *Id.*, [0121]. EX1002, ¶¶167-169.

2. 1[a]-1[b]

Tengler discloses the "restaurant management software run[s] on server 464," which communicates with other in-store devices "using network 462" and is accessible "over the Internet." EX1005, [0073], [0078], [0109]-[0111]. Server 464 "runs the system server software 604, the database 602, the store-resident web server software 620, the production display service 609, and the drive-through display service 610." *Id.*, [0115]-[0116], Fig. 15:

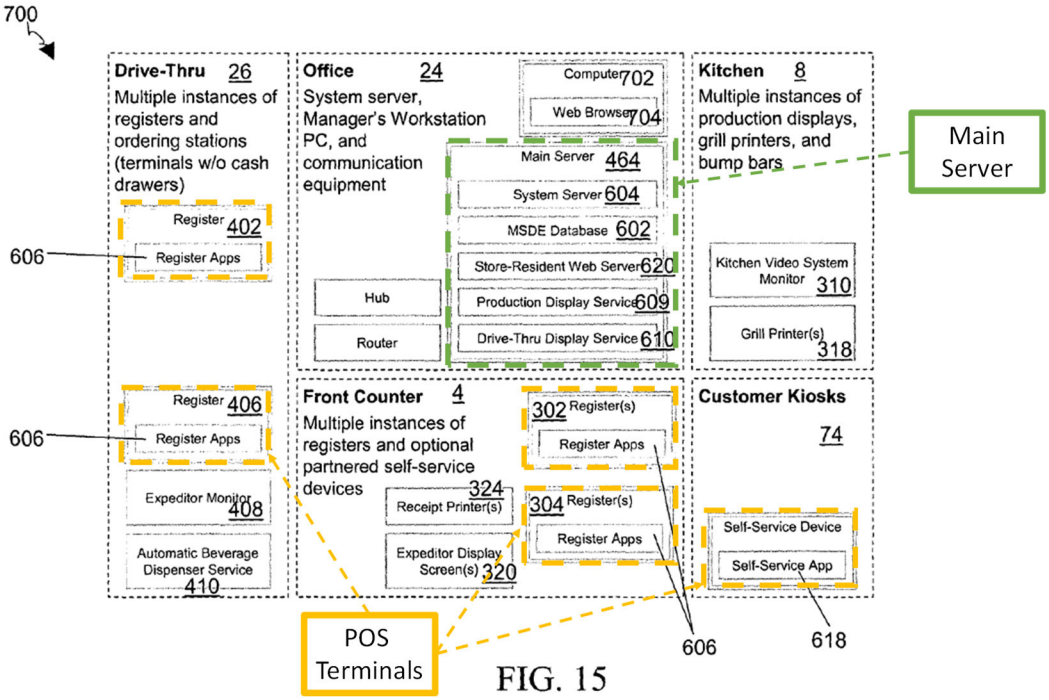


FIG. 15

Tengler discloses "stations enabling users to enter orders" (POS terminals) and "a network interconnecting the stations." *Id.*, [0011], [0014]; *see also* Fig. 2 (order terminals 52). POS terminals/stations (e.g., "cashier stations 302, 304, 382, 402 [sic, 404], order entry stations 370, 372, 374," and "customer self-service kiosks 74") "are linked together using a network 462 (shown in FIG. 12)," which may be "a Transmission Control Protocol/Internet Protocol (TCP/IP) network" (e.g., the Internet). *Id.*, [0077]-[0078]; EX1002, ¶171. *See* also, Figs. 11-12:

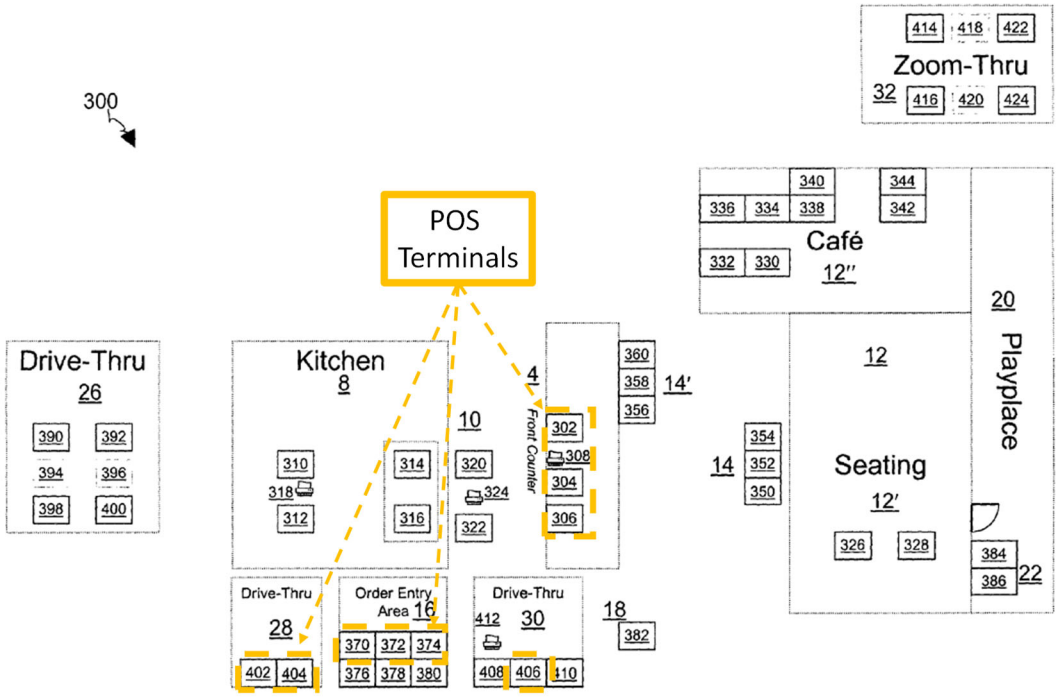


FIG. 11

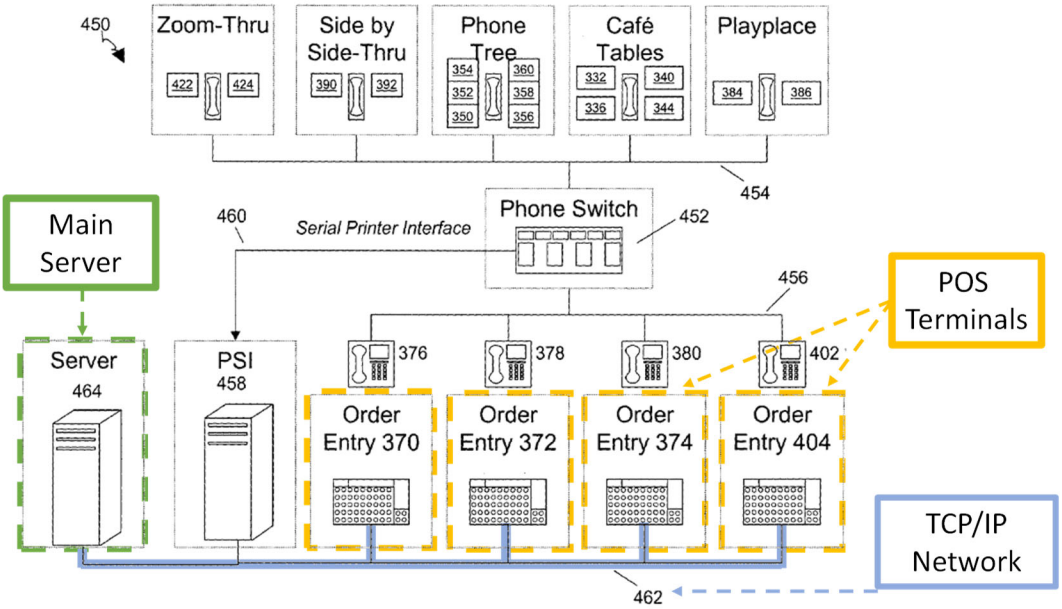


FIG. 12

Tengler further teaches remote call center POS terminals communicate with server 464 via a remote proxy session (*id.*, [0060], [0114]) and managers access server 464 "over the Internet" (*id.*, [0073], [0109]-[0111]). *Tengler* thus discloses and suggests the network interconnecting *Tengler*'s devices (manager computers, main server 464, and POS terminals) includes the Internet between at least some of its nodes (it is a network comprising the Internet). EX1002, ¶171.

Additionally, *Tengler* discloses a central server used for "enterprise management of multiple restaurants," including by "provid[ing] features to manage a set of restaurants 2." EX1005, [0108]. By 2008, a POSITA would know the Internet was a well-understood and routine way to implement a TCP/IP connection between network nodes, including between a shared central server and its clients.

EX1002, ¶172. A POSITA would be motivated to use the Internet to connect the central (web) server to in-store POS terminals (e.g., via server 464) providing a simple, ubiquitous, and inexpensive network connection to stores in different locations managed from the central server. *Id.* A POSITA would be motivated to locate software and functionality common to multiple restaurants at the central server to facilitate *Tengler's* suggested "centralized point of control for enterprise management of multiple restaurants." EX1005, [0108]. For example, locating the POS builder and database functionality at the central server would enable a manager to update menus at multiple locations quickly and efficiently from a single location, and centralizing database functionality at the central server would provide accounting and reporting functionality for multiple restaurants from a common database. Installing *Tengler's* POS builder on an Internet-connected central server would also eliminate the need for redundant POS builder software at restaurants with multiple locations (e.g., a franchisee with multiple locations and common menus). *Id.* In such an arrangement, the central server would communicate with POS terminals (e.g., to update POS screens and to receive order/customer data) over a network comprising the Internet and network 462. EX1002, ¶172.

Tengler's POS terminals display POS screens. EX1002, ¶173. *Tengler* discloses employees/cashiers "use a graphical user interface 100 displayed on the

order terminals 52, to enter orders" and "graphical user interface 125 displayed on the order terminals 52 to enter payment." EX1005, [0062]; *see also* [0026], [0032]-[0033]; Figs. 3-4:

FIG. 3

FIG. 4

"Telephone order takers at the call center use the same interface 100 as order takers in restaurant 2 to enter customer orders." *Id.*, [0114]. Similarly, "[c]ustomer self-service kiosks 74 enable customers to enter orders" themselves, e.g., via "an interface 200 on a touch screen" that "enables the customer to add different food items to the order." *Id.*, [0074]-[0076]; Figs. 8-9:

FIG. 9

Customers may pay by credit card "at the customer self-service kiosk." *Id.*, [0055].

Accordingly, *Tengler* discloses and suggests limitations 1[a]-1[b], and further renders them obvious in view of POSITA knowledge. EX1002, ¶¶170-174.

3. 1[c]

Tengler discloses a POS builder as "user interface designer 614"[9] remotely accessible via web server 620. EX1005, [0103], [0107], [0121]. Managers access the POS builder through manager graphical user interfaces such as 190, 192, and 196 (POS builder interface), accessible via Internet communication with server 464 (over the network including the Internet). EX1005, [0073], [0103], [0107], [0109]; Figs. 7, 7A-7B.

As explained for limitations 1[a]-1[b], server 464 includes web server software 620 and database 602. *Id.*, [0115]-[0116], Fig. 15. "The store resident web server 620 also allows managers to edit the user interface of the register [606] and self-service applications [618] and also saves the specifications in the database 602." *Id.*, [0103], [0107]; *see also* [0073]. The server thus receives information over the network from the POS builder interface used to create/edit user interfaces of register and self-service applications (POS screens). Server 464 then configures POS terminals running register application 606 and self-service application 618 to display the new/modified POS screens. *Id.*, [0103], [0107], Fig. 15:

[9] References herein to "user interface designer" include related software and system objects. *See* EX1005, Fig. 16, [0121].

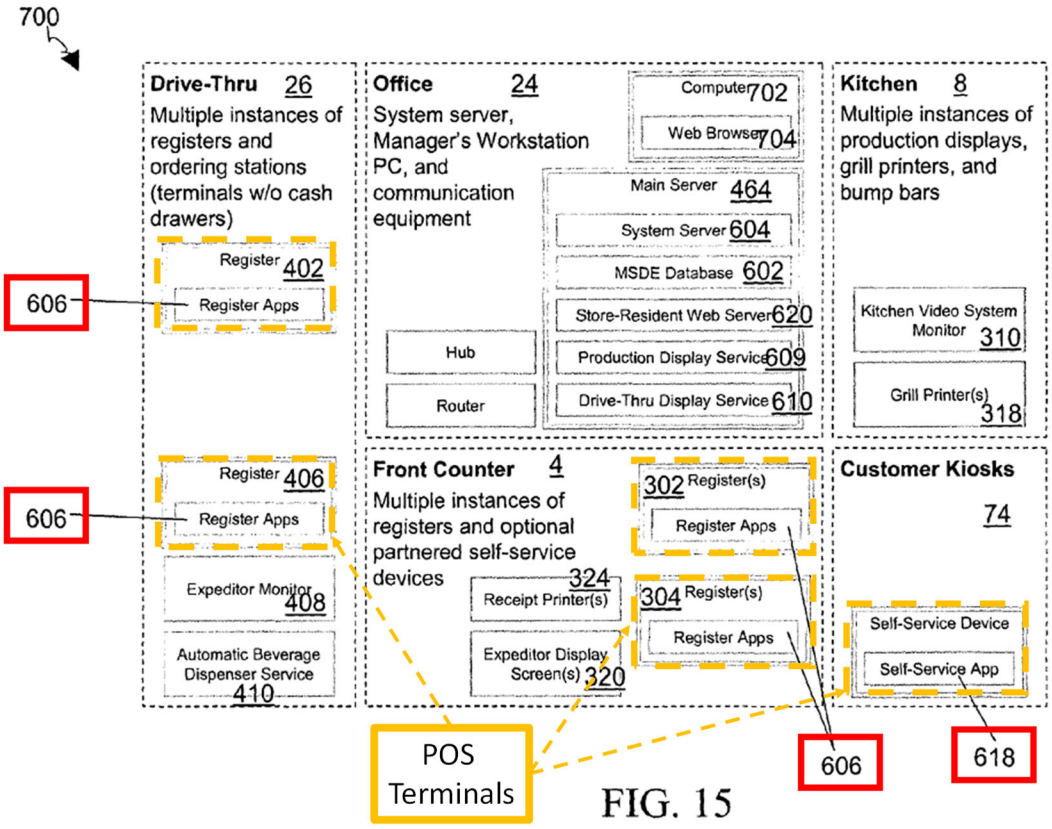


FIG. 15

For example, managers can "modify menus and change prices using interfaces 192 and 196." *Id.*, [0073]. The "product editor" screen of interface 192 lists various categories that can be modified/edited (including recipe, item type, product info, and pricing) and options for adding new products and copying existing products. *Id.*, [0073]; Fig. 7A:

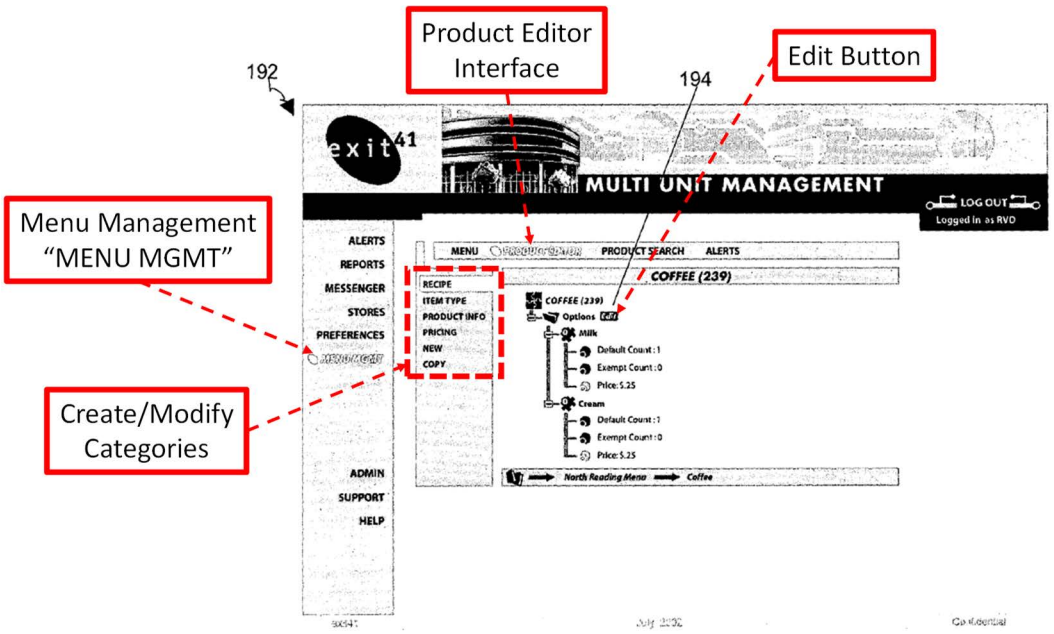


FIG. 7A

The "MENU MGMT" screen of Interface 196 includes options for managing and modifying menus, items, "discounts," and "merchandise." EX1005, Fig. 7B:

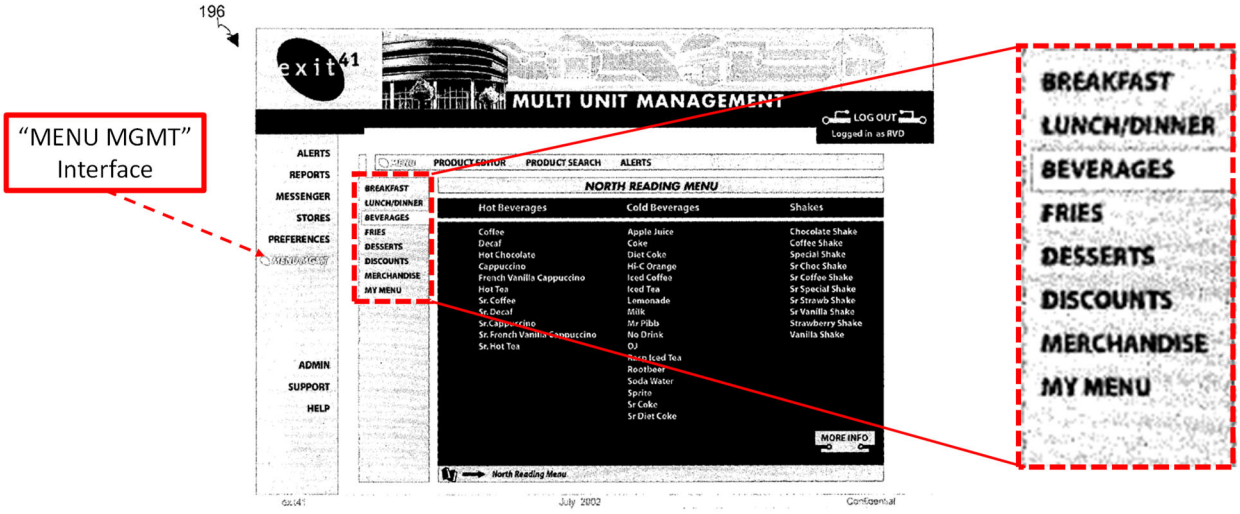


FIG. 7B

Using POS builder interfaces such as 192 and 196, managers provide information used to create/modify items associated with buttons displayed on POS screens. *See* §XIII.A.2; EX1005, [0062], [0074]-[0076], [0032], [0040]. *Tengler* discloses various layouts of circular, square, and rectangular buttons (display interfaces) of POS screens associated with items for sale and placing orders, and also display interfaces associated with order information (items, price, tax, total, etc.). *See id.*, Figs. 3-4, 8-10. Figs. 3, 9:

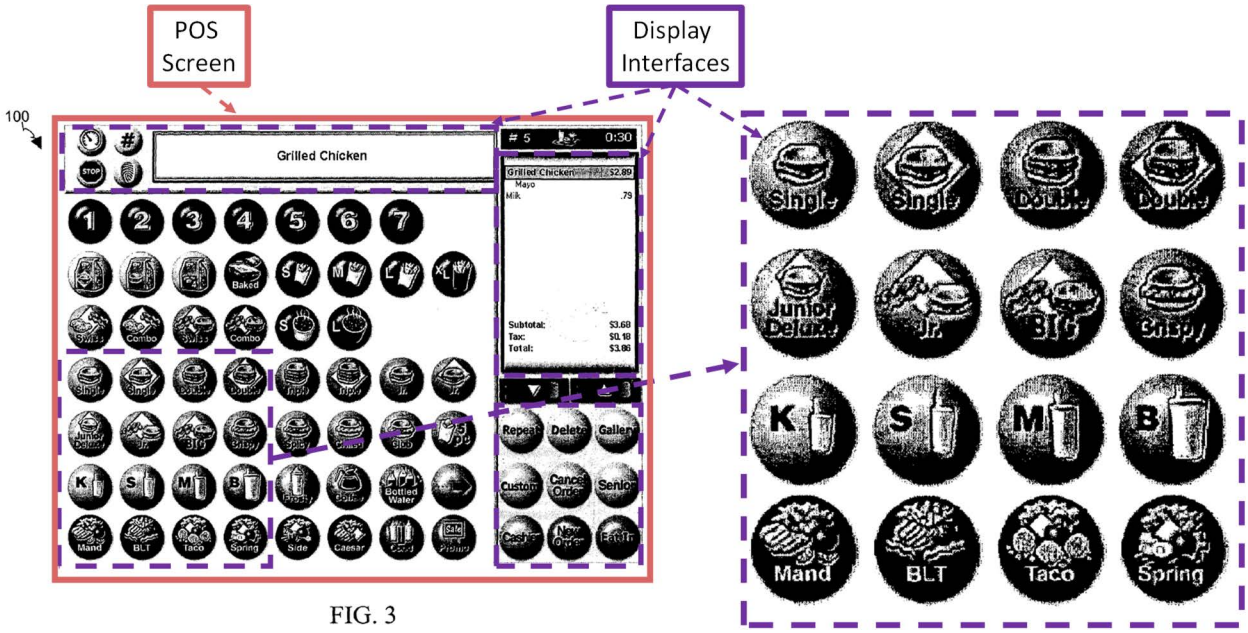


FIG. 3

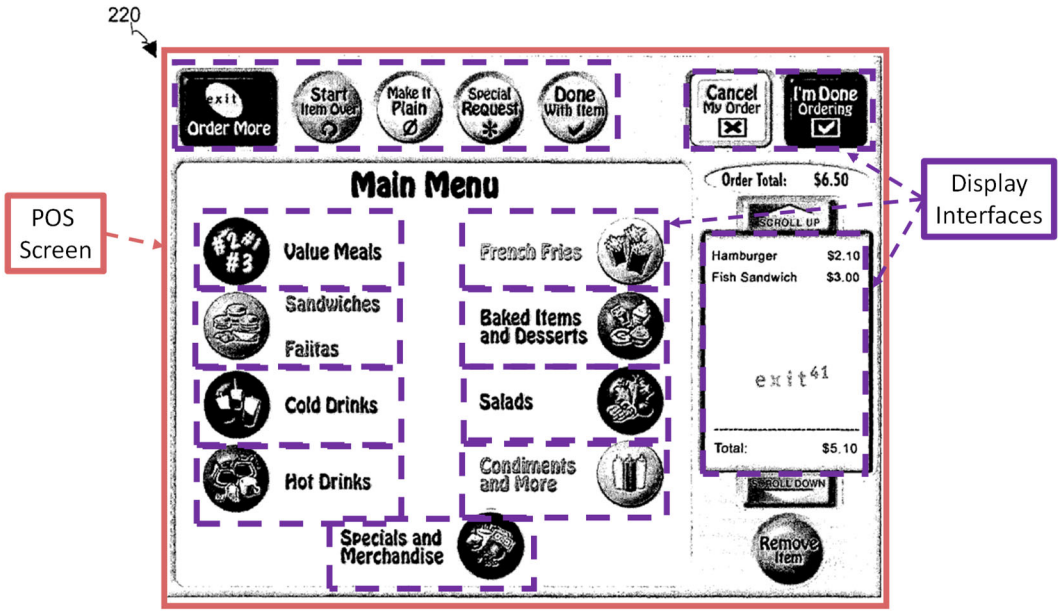


FIG. 9

Tengler thus discloses and suggests interfaces 192 and 196 allowing managers to create/modify POS screens displayed on POS terminals, including by providing information used to create or modify display interfaces (buttons and their associated text/labels) associated with new/modified items (food, discounts/specials, and merchandise). EX1002, ¶179. When managers add/remove menu items (and/or their associated attributes/options), such interfaces (192/196) would provide information to the server used to modify POS screens (including screen layouts and hierarchies, buttons, and item names/prices). *Id.* For example, adding a new food/beverage category, item, or option would create a new or modify an existing button/key on the POS screens for displaying the new category/item/option. *Id.* Additionally, a POSITA would understand modifying an item name would in turn modify the

corresponding POS screen button (e.g., if "Bottled Water" in Fig. 3 was edited to "Water"). *Id.*

Tengler thus discloses and suggests server 464 receiving from a POS builder interface over the network comprising the Internet, information used to create/modify POS screens, including creating/modifying display interfaces (buttons) associated with items. EX1002, ¶¶175-181.

4. 1[d], 1[g]

Server 464 receives, via the network, further information regarding POS transactions from ordering stations/kiosks (POS terminals) used by employees and customers to order items. EX1002, ¶182. For example, database 602 of server 464 "maintains a complete history of orders for a long period of time for later analysis and display." EX1005, [0089]. Figure 17 illustrates "an example of an object-oriented data structure for an order" corresponding to items purchased. *Id.*, [0125], Fig. 17:

800

802 Class	804 Guest Check		Level 806
808 Order	Order #591456		0
ItemLine	810 1 Hamburger	2.29	1
OptionLine	812 *no onions*		2
OptionLine	814 *extra mustard*		2
ItemLine	816 2 EVM #1 SS	9.78	1
ComponentLine	818 Dbl QP/Cheese		2
OptionLine	824 *side pickles*		3
ComponentLine	820 SS Fries		2
OptionLine	826 *no salt*		3
ComponentLine	822 SS Coke		2
ItemLine	1 Lg Coke	1.29	1
SubtotalLine	Subtotal	13.36	1
TaxLine	MA Tax 5%	0.67	1
TotalLine	Total	14.03	1
TenderedLine	Cash Tendered	20.00	1
ChangeLine	Change	5.97	1

FIG. 17

Tengler discloses this further information about customer transactions (e.g., items ordered, options selected, prices, tax, total) is transmitted from POS terminals over the network and stored in a server 464 database. *Id.*, [0049]-[0051], [0055], [0058], [0089], [0116], [0121]. *Tengler* discloses and suggests such information relates to transactions by corresponding customers respectively associated with POS terminals because employees and customers use POS terminals to enter customer

orders and because, as explained below, customer images are associated with their respective orders. EX1002, ¶183.

Tengler also discloses and suggests 1[b] and 1[g] by capturing a customer photo "at the ordering location" "and associating the electronic image with an order of a customer." EX1005, [0017]-[0019]. When customers place orders and pay "using customer self-service kiosks" the kiosk takes their picture and stores the image in the database linked to the order. *Id.*, [0055]; *see also* Cls. 16, 19, 21-22, 36. Additional examples include, "an order number 132, the contents of the order 134," changes to the order, and the customer's location. *Id.*, [0063], [0079], Cl. 37; *see also* [0051], [0083], [0125]-[0127]. When an order is created or updated, server 464 receives information regarding "the current time," the POS terminal/station "that issued the update, and the worker using the station." *Id.*, [0128].

Thus, *Tengler* discloses and suggests server 464 receives from POS terminals over the network further information regarding POS transactions corresponding to items (1[d]) that is related to transactions by corresponding customers respectively associated with the POS terminals (1[g]). EX1002, ¶¶182-186.

5. 1[e]

As explained for limitations 1[a]-[c], server 464 configures stations/kiosks (POS terminals) to display POS screens based on information provided from manager user interfaces (POS builder interface) over the network comprising the

Internet. EX1005, [0073], [0103], [0109], [0115]-[0116], Fig. 15. *Tengler* also discloses and suggests server 464 configures POS terminals with information from the POS builder interface to create/modify a series of POS screens based at least in part on further information provided by employees/customers relating to orders (e.g., user selections) and received by server 464.

For example, "interface 220 enables the customer to add different food items to the order" and to "add more food to the order by clicking on a button 234." *Id.*, [0076], Figs. 9-10. During an order, wherein the customer inputs this "item add/update information" as the "further information," POS terminals display successive POS screens with such items (and options/prices) added to the order. *See id.*, Figs. 3-4, 9-10 (displaying selected items, options, and prices); EX1002, ¶188.

When paying for an order, the POS screen is modified to include details of the order (e.g., items, options, price, tax, etc.) based on user selections, which is further information about the transaction transmitted to server 464 as part of order information. EX1005, [0062], Fig. 17, Fig. 4:

FIG. 4

The same applies for self-service kiosks. EX1005, [0076], Fig. 10:

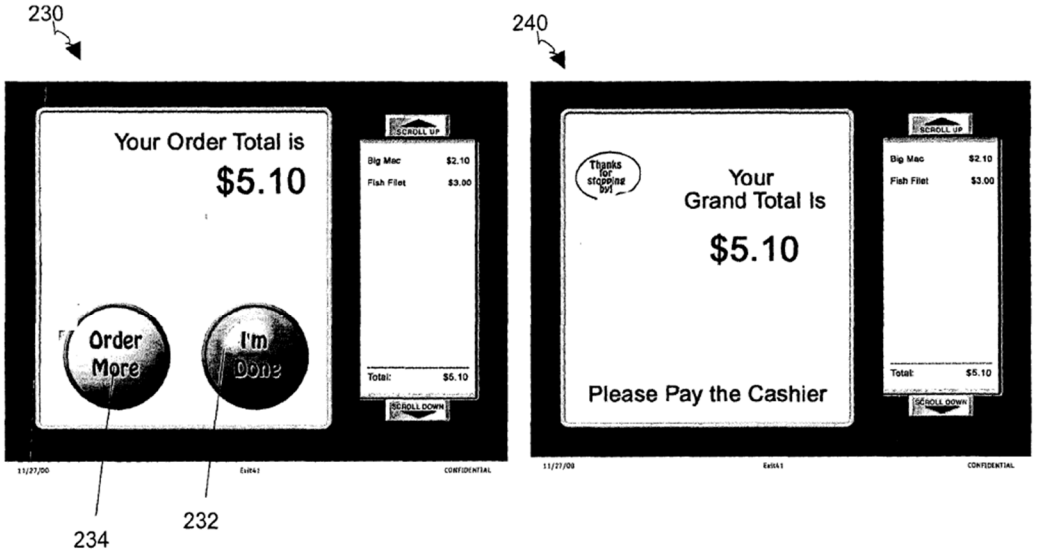


FIG. 10

EX1002, ¶189.

As another example, *Tengler* discloses and suggests interface 196 allows managers to create/modify menu categories and sub-categories and items/options, thus creating/modifying hierarchical POS screens to be displayed based on user selections (order information). *Id*. (citing Figs. 7B & 9). Addition of a new category item (e.g., "brunch" in Fig. 7B) or sub-category item (e.g., "other beverages" in Fig. 7B) and food/beverage items would create new or modified POS screens and buttons to be displayed on POS terminal. *Id.* Addition or modification of a food/beverage/discount item, its price, or its options would likewise create or modify successive POS screens with buttons for such items/options to be displayed on POS terminals during a transaction. *Id*.

POS screens are also modified based on the customer's image so orders can be delivered to the right person. EX1005, [0017]-[0019]. "The contents of the order may be displayed with the electronic image" of the customer captured "at the kiosk when the order is placed." *Id.*, [0018]-[0019], Cl. 17; *see also* [0055], [0065], [0074], [0088]. Images can be displayed on the same terminals used to enter orders and take payment, e.g., when ordering from a drive-through cashier. *Id.*, [0058], [0062], [0065], [0077] ("drive-through cashier payment area 28 includes … order entry"), [0088]. *Tengler* thus discloses and suggests a POS screen displaying order contents is modified to include the electronic image of the customer. EX1002, ¶191.

When orders are updated, the server "broadcasts the new version of the order to" the kiosks. EX1005, [0126]. Specifically, "RMS server 604 updates the display model and rebuilds the display" (POS screen) shown on the station/kiosk. *Id.*, [0127]. Server 604 is part of main server 464. *Id.*, [0116], Fig. 15.

Tengler thus discloses and suggests the information from the POS builder interface regarding menu items, categories, options, pricing, tax rate, customer recognition, etc., is used to configure POS terminals to create/modify POS screens based on further information about orders (POS transactions) by corresponding customers that is received and stored by server 464. EX1002, ¶¶187-194.

6. 1[f]

Tengler discloses information received from the POS builder interface to create/modify POS screens includes information for adding/updating items, tax information, discount information, and promotion information, any of which is alternatively sufficient to show 1[f]. EX1002, ¶195.

As explained for 1[b], *Tengler* discloses POS screens showing menu, item, and price information with buttons/keys allowing employees and customers to order items in a restaurant. EX1002, ¶196; EX1005, [0062], Figs. 3-4:

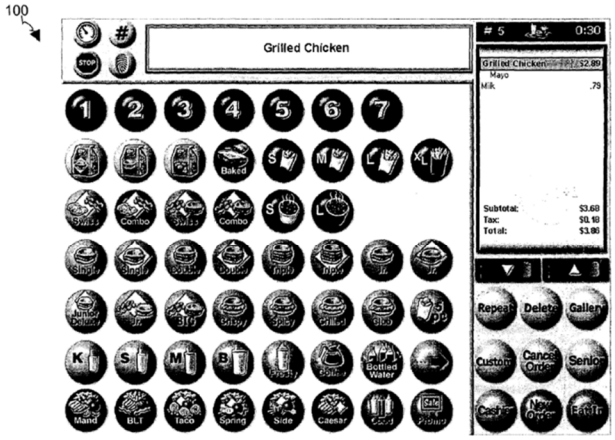


FIG. 3

FIG. 4

See also, id., [0074]-[0076]; Fig. 9:

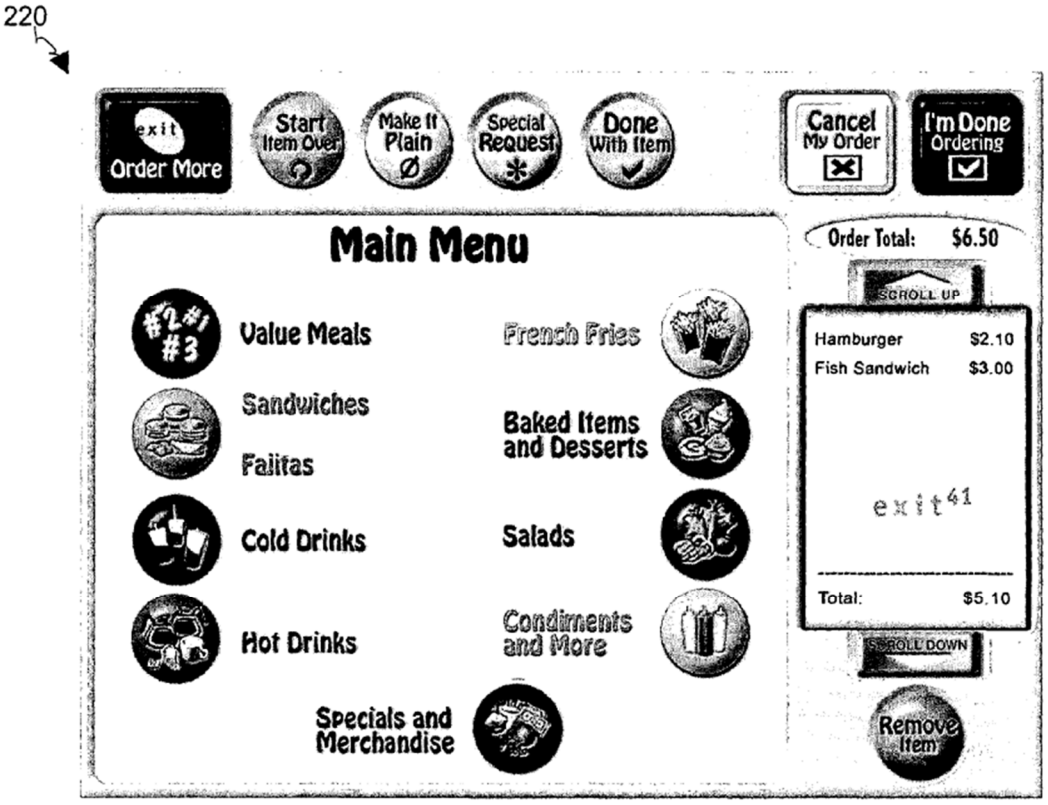
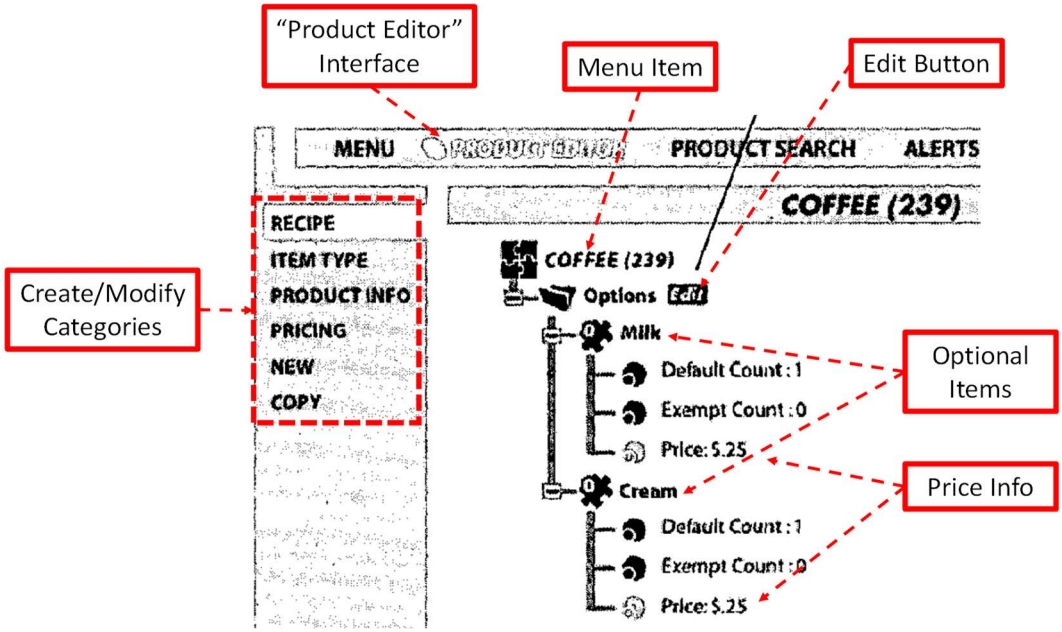


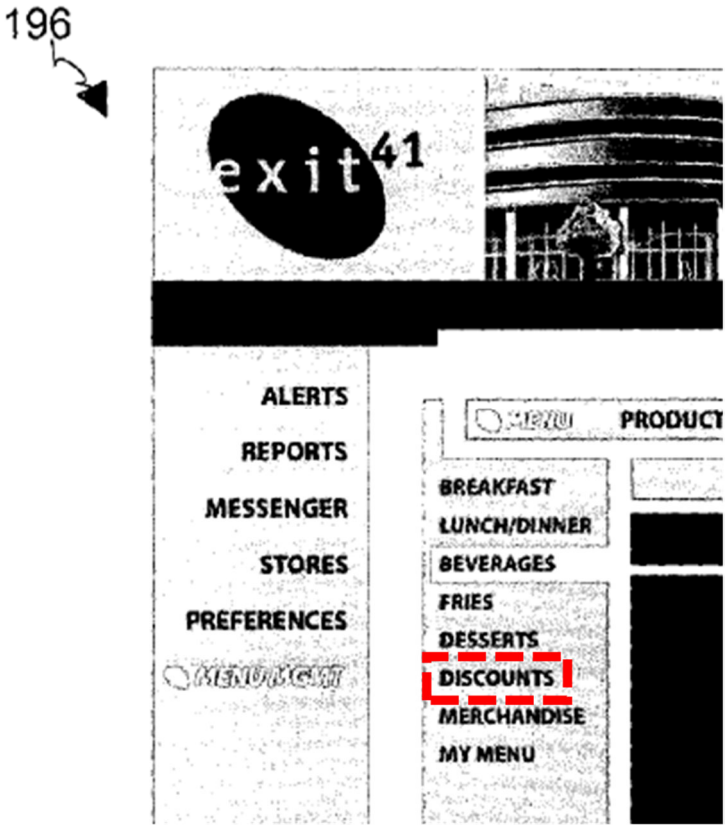
FIG. 9

As explained for 1[c], *Tengler* discloses and suggests a POS builder interface managers use to create/modify such POS screens and items associated with buttons. EX1005, [0073], [0103], [0107], [0109]; Figs. 7A-7B; EX1002, ¶197. That interface includes options for creating new menu items and editing the "recipe," the "item type," "product info," and "pricing" information for menu items. *Id.*, Fig. 7A (excerpted):



The information managers provide via interface 192 to create/modify menu items that appear on POS screens thus includes item add/update information. EX1002, ¶197.

Tengler also discloses and suggests managers can input discount information using interface 196. EX1005, Fig. 7B (excerpted):



Tengler thus discloses and suggests using interface 196, managers can create/modify "discounts," thus providing "discount information" for display on POS screens (and suggesting "promotion information") on POS terminals. *Id.*, Fig. 7B; *see also* Fig. 9 (button for "Specials and Merchandise"), [0103] ("The self service ordering application 618 is a platform for promotions and loyalty programs."). EX1002, ¶198.

Further, *Tengler* discloses and suggests managers can enter state/local sales tax percentages (e.g., "MA Tax 5%"). *Id.*, Fig. 17:

800

802 Class	804 Guest Check		Level 806
808 Order	Order #591456		0
ItemLine	810 1 Hamburger	2.29	1
OptionLine	812 *no onions*		2
OptionLine	814 *extra mustard*		2
ItemLine	816 2 EVM #1 SS	9.78	1
ComponentLine	818 Dbl QP/Cheese		2
OptionLine	824 *side pickles*		3
ComponentLine	820 SS Fries		2
OptionLine	826 *no salt*		3
ComponentLine	822 SS Coke		2
ItemLine	1 Lg Coke	1.29	1
SubtotalLine	Subtotal	13.36	1
TaxLine	MA Tax 5%	0.67	1
TotalLine	Total	14.03	1
TenderedLine	Cash Tendered	20.00	1
ChangeLine	Change	5.97	1

FIG. 17

As explained for 1[e], the item, price, and tax information are used to create/modify POS screens. EX1002, ¶199; EX1005, Fig. 4:

FIG. 4

Limitation 1[f] can be alternatively shown by further information. *Tengler's* further information regarding POS transactions received from the POS terminals includes item add/update, employee clock, customer add/update, and loyalty/promotion information. EX1002, ¶200.

Tengler discloses receiving information from POS terminals regarding orders (POS transactions) that includes item add/update information, e.g., for items purchased and options selected. EX1005, [0076], Figs. 9-10; *see also* [0127]-[0131]. As explained for 1[d], orders may be updated with further information regarding changes to the order. *Id.*, [0125]-[0127]. For example, a "customer may add items to the order" before payment (item add/update information). *Id.*, [0083]; *see also*,

[0076]. When an order is updated, the server also receives information regarding "the current time … and the worker using the station" (employee clock information). *Id.*, [0128]. EX1002, ¶201.

As explained for 1[d], the ordering station/kiosk (POS terminal) takes a customer's picture and stores the image in the database. EX1005, [0017]-[0019], [0055]. There, "[i]nformation about the customer is associated with the electronic image of the customer," e.g., "historical information about orders previously placed by the customer." *Id.*, [0018]. A POSITA would understand that creating/updating a customer record or order in the database with a customer image is or suggests customer add/update information received from POS terminals. EX1002, ¶202.

Tengler also discloses "[t]he self service ordering application 618" running on the kiosk is "a platform for promotions and loyalty programs." EX1005, [0103]; *see also* Fig. 9 (button for "Specials and Merchandise"). *Tengler's* disclosure of a "discounts" category for interface 196 and a "Specials and Merchandise" button on a POS screen for the self-service ordering application suggests further information provided by POS terminals to server 464 includes promotion information, discount information, and/or loyalty point information (e.g., to track performance of promotions and discounts and to associate the order with the customer's loyalty point account). *Id.* EX1002, ¶¶195-204.

B. Claims 2 and 11

As explained for 1[c], *Tengler's* POS builder (which provides manager GUIs such as 190, 192, and 196) runs on "main server computer 464" (computing device). EX1005, [0109], [0116], *see also*, [0103], [0107]. Managers access manager GUIs (POS builder interface) "over the Internet" "using the web server 620," which allows access "remotely through a web interface." *Id.*, [0073], [0109], [0022]. For example, managers can use "web browser 704" on computer 702 (computing device). *Id.*, [0116], [0073]. *Tengler* thus discloses the POS builder interface is configured to run on a computing device accessible via a web browser. EX1002, ¶¶205-206.

C. Claim 3

As explained for 1[b], *Tengler* discloses a plurality of POS terminals in a plurality of locations within and around "restaurant 2." EX1005, [0073]-[0075], [0077]-[0078], [0115]-[0120], Figs. 11, 15:

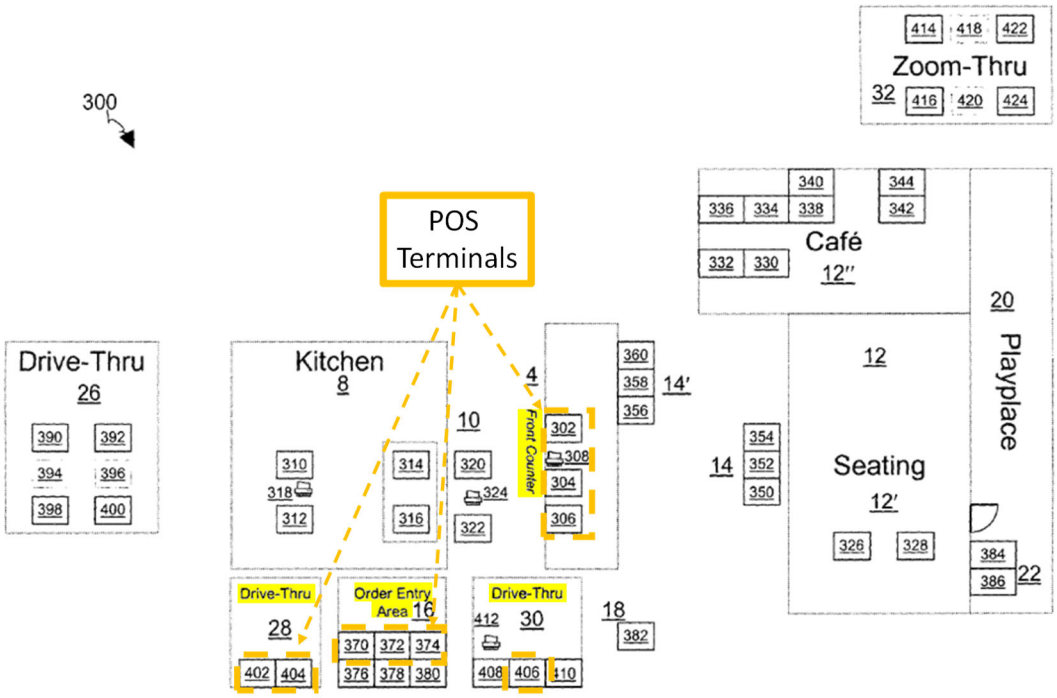

300
POS Terminals
Zoom-Thru
32
414
418
422
416
420
424
Café
12''
340
344
336
334
338
342
332
330
Drive-Thru
26
390
392
394
396
398
400
Kitchen
8
310
318
312
314
316
10
320
324
322
4
Front Counter
302
308
304
306
360
358
356
14'
354
352
350
14
12
Seating
12'
326
328
20
Playplace
384
386
22
Drive-Thru
28
402
404
Order Entry Area
16
370
372
374
376
378
380
Drive-Thru
30
412
408
406
410
18
382

FIG. 11

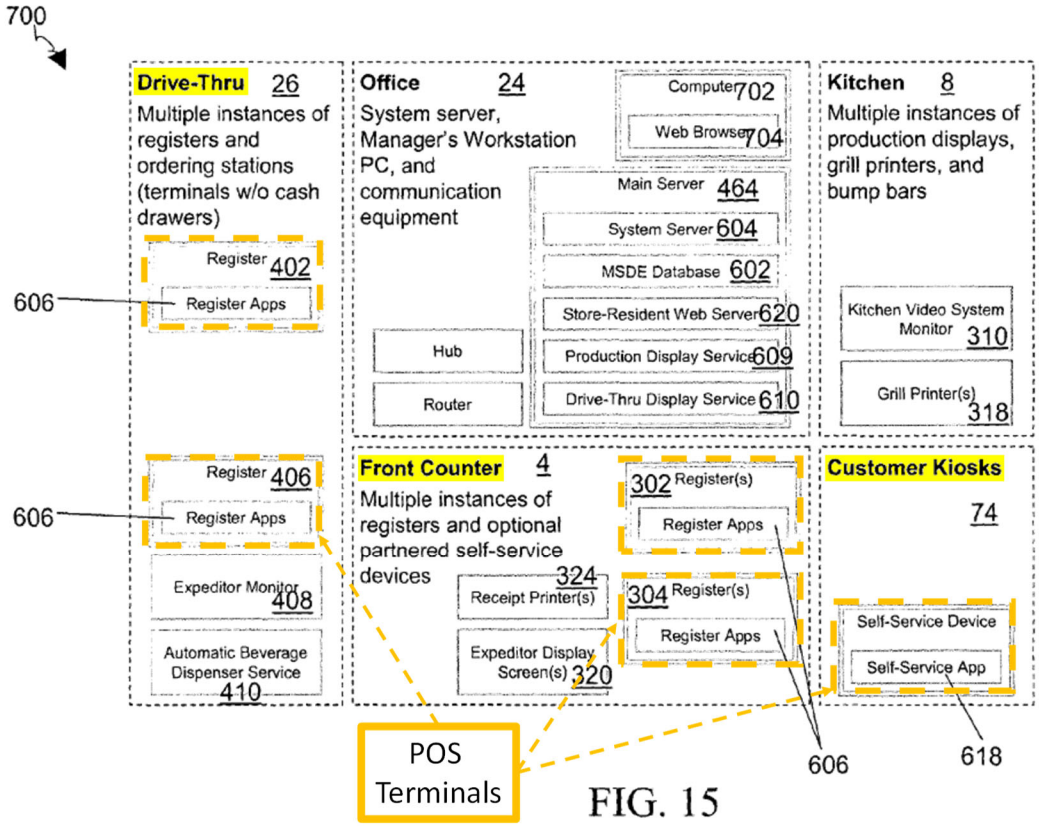

700
Drive-Thru 26
Multiple instances of registers and ordering stations (terminals w/o cash drawers)
Register 402
Register Apps
606
Register 406
Register Apps
606
Expeditor Monitor 408
Automatic Beverage Dispenser Service 410
Office 24
System server, Manager's Workstation PC, and communication equipment
Computer 702
Web Browser 704
Main Server 464
System Server 604
MSDE Database 602
Store-Resident Web Server 620
Production Display Service 609
Drive-Thru Display Service 610
Hub
Router
Front Counter 4
Multiple instances of registers and optional partnered self-service devices
302 Register(s)
Register Apps
304 Register(s)
Register Apps
Receipt Printer(s) 324
Expeditor Display Screen(s) 320
Kitchen 8
Multiple instances of production displays, grill printers, and bump bars
Kitchen Video System Monitor 310
Grill Printer(s) 318
Customer Kiosks 74
Self-Service Device
Self-Service App
618
606
POS Terminals

FIG. 15

Tengler also discloses a plurality of POS terminals running register applications 627 via proxies with RMS server 604 (on server 464) at a remote call center where "telephone order takers at the call center use the same interface 100 as order takers in restaurant 2 to enter customer orders." *Id.*, [0114]; *see also* [0016], [0025], [0112]-[0113]. *Tengler* thus discloses and suggests a plurality of in-store terminals and a plurality of remote call center terminals in network communication with server 464. EX1002, ¶¶207-209.

D. Claims 4 & 9

As explained for 1[c], *Tengler* discloses items associated with buttons/keys (display interfaces) on POS screens that are added/updated via the POS builder interface are items for sale, e.g., "food items" in a restaurant (claim 4). EX1005, [0003], [0062], [0076], Figs. 3, 9:

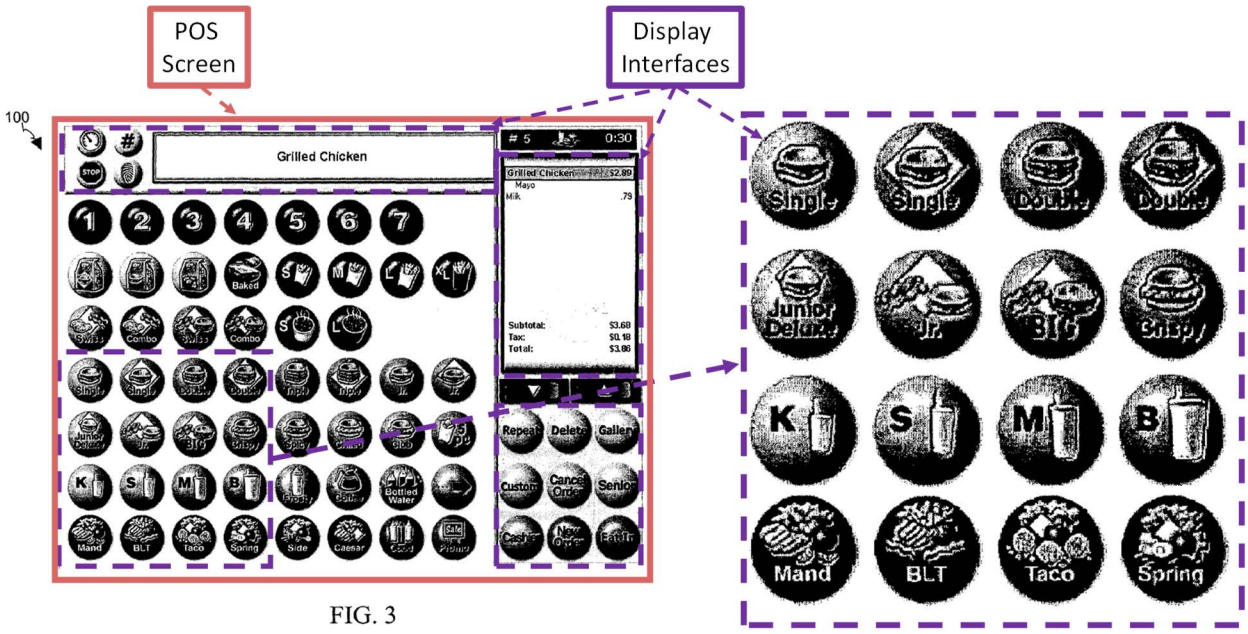


FIG. 3

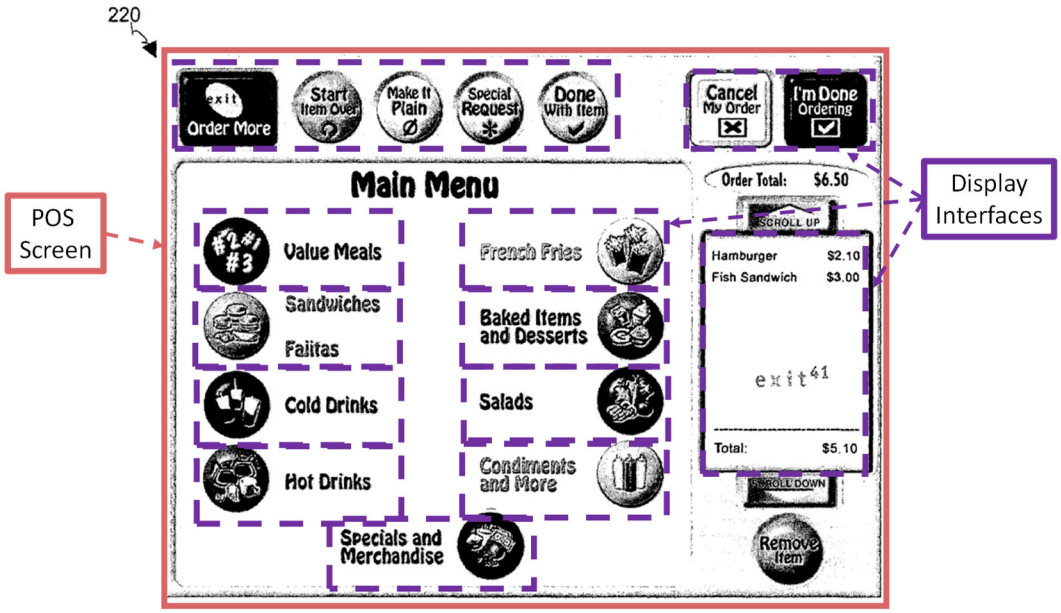


FIG. 9

Further, as explained for 1[f], *Tengler* discloses "[t]he self service ordering application 618" running on the kiosk is also "a platform for promotions and loyalty programs." *Id.*, [0103]; *see also* Fig. 9 (button for "Specials and Merchandise"). *Tengler* thus discloses and suggests allowing managers to create and modify buttons/keys (display interfaces) on POS screens (claim 9) related to promotions/specials and loyalty point programs (and items associated with promotions/programs) the same way managers do for food items, e.g., to allow customers to redeem discounts/promotions/loyalty points and check loyalty point balances. EX1002, ¶¶210-211.

E. Claim 7

As explained for 1[e]-1[f], *Tengler's* further information regarding POS transactions includes item add/update, customer add/update, employee clock, and promotion information (e.g., as part of a loyalty program).

Tengler discloses server 464 receiving information from POS terminals regarding orders (POS transactions) that includes item add/update information based on customers adding/updating items in an order. EX1005, [0076], Figs. 9-10. *Tengler* discloses receiving "[i]nformation about the customer," including customer images and order histories, saving the information in a database, associating it with orders, and displaying it on POS screens (customer add/update information). EX1005, [0017]-[0019], [0055], Cl. 22. When an order is updated, the server also receives information regarding "the current time … and the worker using the station" (employee clock information). *Id.*, [0128]. Further, because *Tengler's* POS terminals/screens provide "a platform for promotions and loyalty programs" and include a "Specials and Merchandise" menu option (*id.*, Fig. 9), a POSITA would understand and it would be obvious that promotion information is received from POS terminals and stored on server 464 when participating customers purchase discount/promotion items. EX1005, [0103]. EX1002, ¶¶212-214.

F. Claim 8

As explained for 1[c], *Tengler's* POS builder interface includes manager GUIs 190, 192, and 196 accessible via server 464, which also includes database 602. EX1005, [0073], [0103], [0107], [0109], [0115]-[0116]; Figs. 7A-7B. *Tengler's* "database 602 … maintains a complete history of orders for a long period of time for later analysis and display." *Id.*, [0089]. Managers can access that information "remotely through a web interface," e.g., "using the interface 190," which includes a "Reports" tab. *Id.*, [0022], [0073], [0130], Fig. 7:

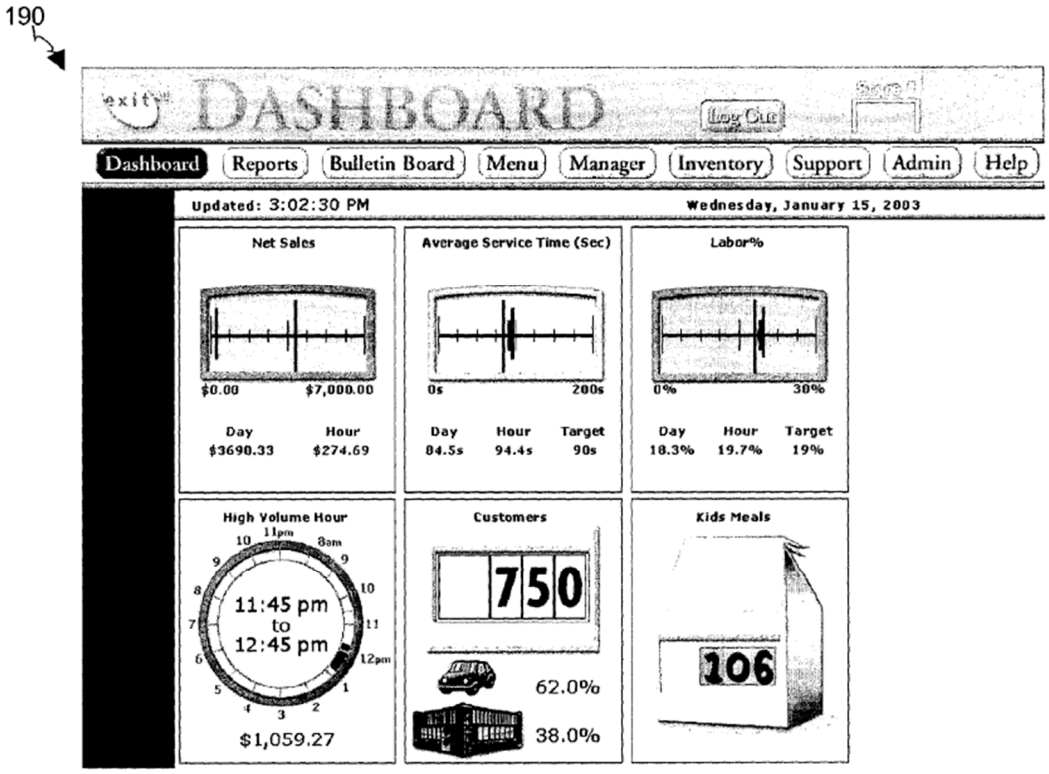


FIG. 7

Because interface 190 is a "Dashboard" interface to access manager functionality (reports, menus, etc.), it is part of *Tengler*'s POS builder interface. *Tengler* thus discloses and suggests managers can view (via the POS builder interface) customer orders (POS transactions) and "Reports" regarding customer orders, each containing information regarding POS transactions. EX1002, ¶¶215-216.

G. Claim 10

As explained for 1[c], *Tengler's* "user interface designer 614 allows management to edit the user interface of the register and self-service applications and also saves the specifications in the database 602." EX1005, [0103]. Managers edit the user interfaces employees and customers use to place orders by creating/modifying menus, items, and thus their associated buttons displayed on POS screens. *Id.*, [0062], [0074]-[0076]. *Tengler* discloses various layouts/arrangements of circular, square, and rectangular buttons (display interfaces) and other interfaces displaying information regarding an order. *See id.*, Figs. 8-10. Figs. 3, 9:

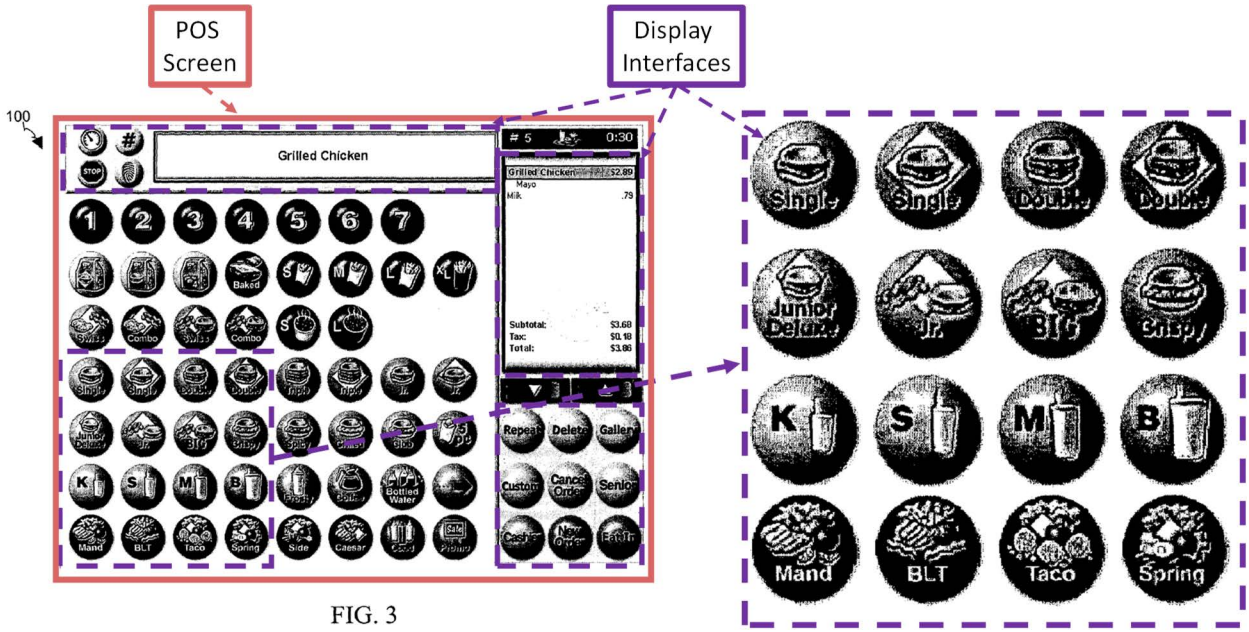


FIG. 3

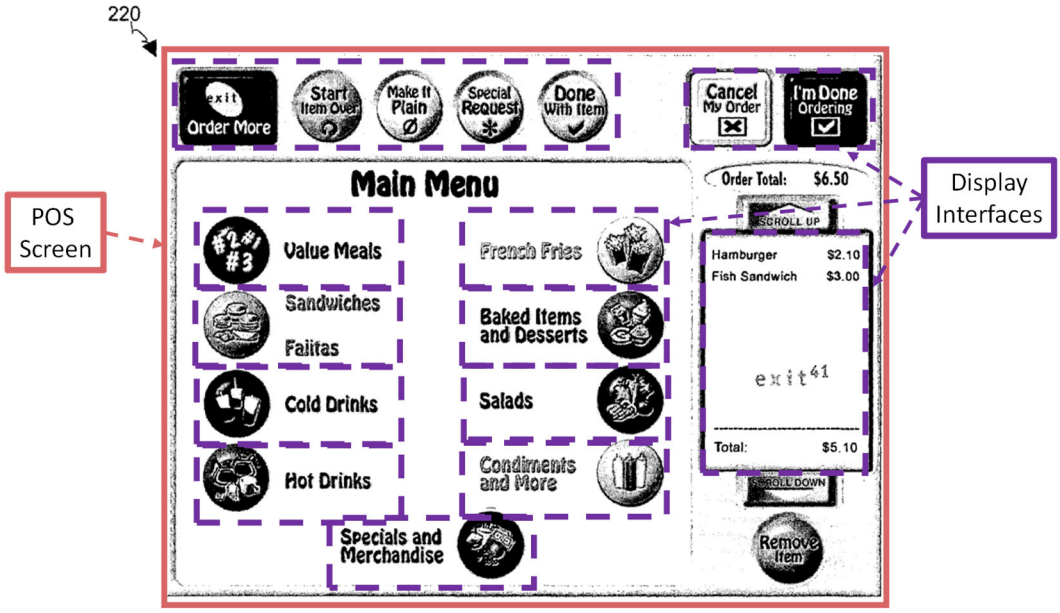


FIG. 9

A POSITA would understand *Tengler* discloses and suggests manager edits to menus and items includes information indicative of at least one of a number, shape, and arrangement of display interfaces (buttons) appearing on POS screens associated

with such menus and items. EX1002, ¶217. For example, adding a new category to the main menu using the menu editor would modify the main menu screen to include an additional category button for selection. Likewise, adding a new beverage item to an existing category (e.g., "Cold Drinks") would modify the screen for such category to include an additional button associated with such item. Additionally, interface logic is implemented on the backend using GUI "design objects" in an object-oriented structure. EX1005, [0121]. A POSITA would understand object-oriented GUI design discloses or suggests allowing a manager to customize the layout and functionality of design objects, e.g., buttons and other display interfaces. EX1002, ¶¶217-219.

H. Claim 12

As explained for claims 1[c] and 9-10, *Tengler* discloses buttons/keys on POS screens (display interfaces). EX1005, [0062], [0074]-[0076], Figs. 3, 8-10. *Tengler's* "user interface designer 614 allows management to edit the user interface of the register and self-service applications and also saves the specifications in the database 602." EX1005, [0103]. For example, manager interfaces such as 190, 192, and 196 (POS builder interface) allow managers to create/edit menus, items, and attributes displayed on POS screens and associated with display interfaces (buttons/keys). *Tengler* thus suggests managers access buttons and other display interfaces on the

POS builder interface to edit POS screens. EX1002, 220. *Tengler* further renders this claim obvious because a POSITA would have been motivated to enhance functionality and customization options for user interface designer (e.g., enabling a manager to view POS screens customers see and to preview changes) and would have had a reasonable expectation of success because *Tengler* includes GUI design objects and elements "for creating GUIs for client applications." *Id*., [0121]; EX1002, ¶¶220-221.

I. Claim 13

As explained for 1[c], *Tengler's* server receives information over the network from a POS builder interface to create/modify POS screens displayed on POS terminals, which is used to configure POS terminals to reflect those changes. EX1005, [0073], [0094], [0103], [0107], [0109], [0121]. Managers "modify menus and change prices using interfaces 192 and 196" iteratively and/or as many times as desired. *Id.*, [0073]. Additional (second) information regarding a modification to a menu item or price is thus received when managers make changes using the POS builder interface a second time after using it a first time. EX1002, ¶222. The system saves revised "specifications in the database 602" and updates POS screens on POS terminals based on each set of revised specifications. EX1005, [0103], [0073], [0094], [0107]. *Tengler* thus discloses and suggests receiving second information to

modify a POS screen, saving that information in the 464 server database, then updating the POS terminal screens to reflect those modifications. EX1002, ¶¶222-223.

J. Claim 14

As explained for claim 13, *Tengler's* "user interface designer 614 allows management to edit the user interface of the register and self-service applications and also saves the specifications in the database 602." EX1005, [0103], [0073]. Database 602 is part of main server 464. *Id.*, [0115]-[0116], Fig. 15:

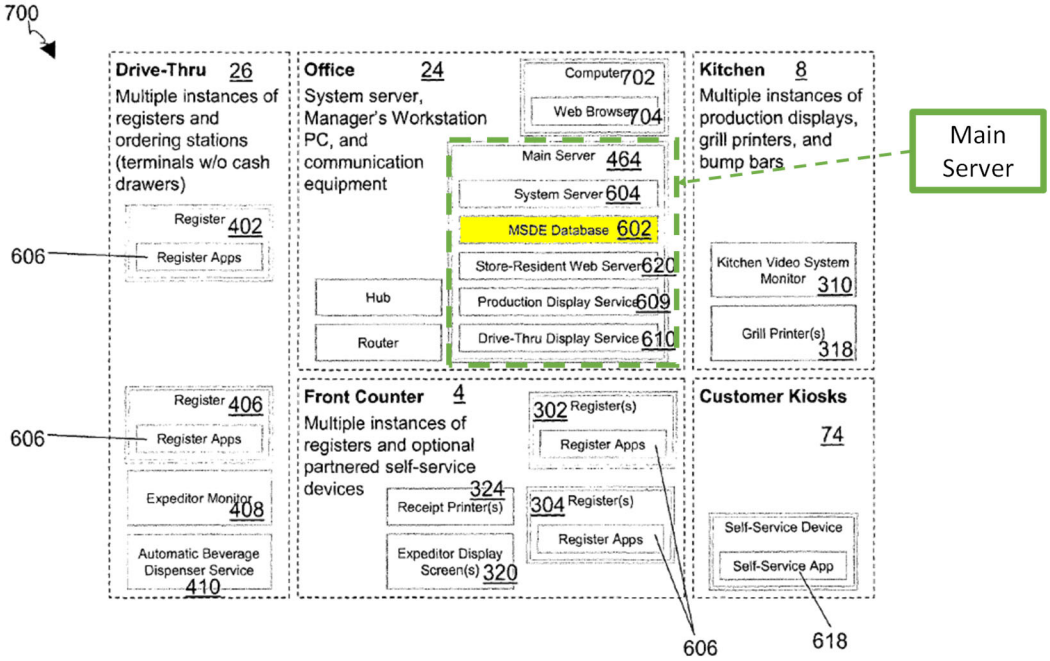


FIG. 15

Server 464 is thus configured to store POS screen information. EX1002, ¶¶224-225.

K. Claim 15

As explained for 1[a]-1[b], *Tengler's* server 464 is in "manager's office 24," which is in a different part of the restaurant than, and thus remote from, the order entry stations (POS terminals). EX1005, [0056], [0115]-[0116], Figs. 1, 15:

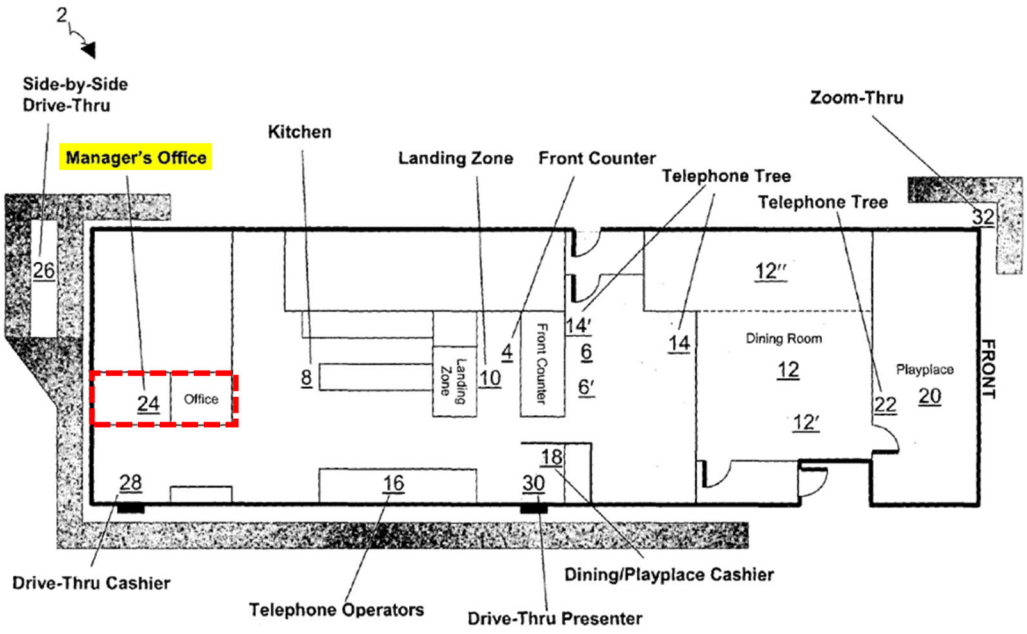


FIG. 1

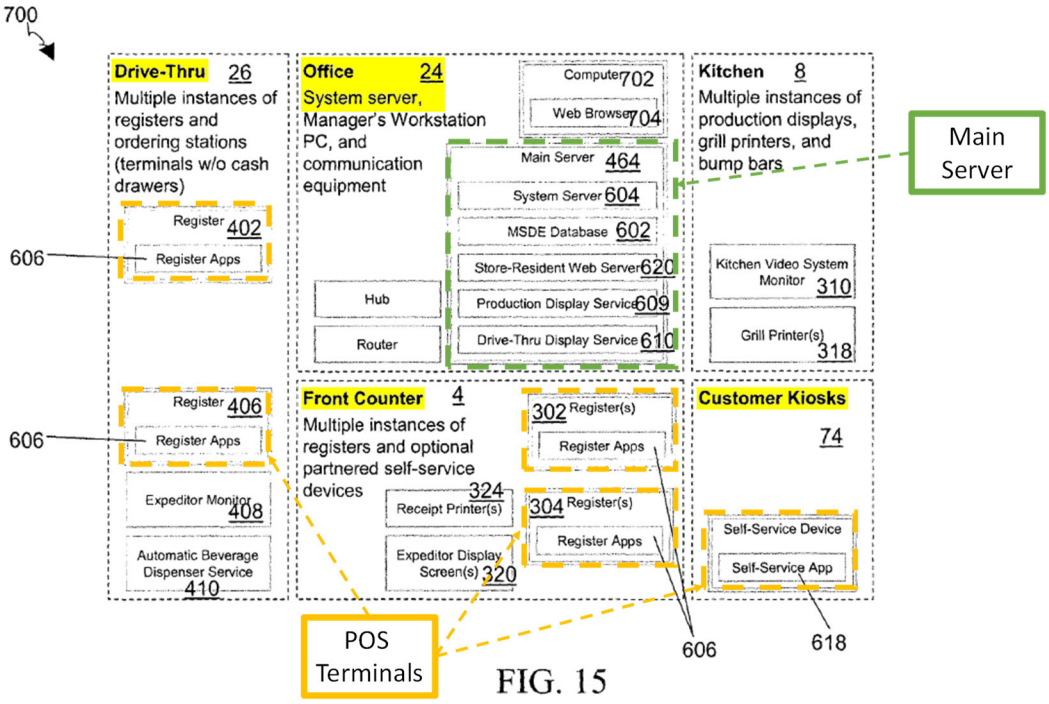


FIG. 15

Tengler also discloses a plurality of POS terminals at a remote call center running register applications 627 via proxies with RMS server 604 on main server 464 where "telephone order takers at the call center use the same interface 100 as order takers in restaurant 2 to enter customer orders." *Id.*, [0114]; *see also* [0016], [0025], [0112]-[0113]. Server 464 is thus located remotely from such POS terminals. *Id.*, [0028] (call center can handle "calls from restaurants in different time zones").

As discussed for 1[a]-1[b], *Tengler* also discloses and suggests a central server can "provide[] features to manage a set of restaurants." EX1005, [0108]-[0111]. *Tengler* thus discloses and suggests that a server located remotely from the restaurant could be used to provide "enterprise management of multiple restaurants." *Id.* EX1002, ¶¶226-229.

L. Claim 16

As discussed in 1[c], "user interface designer 614," remotely accessible via web server 620 of main server 464, "allows managers to edit user interfaces of client applications and save modified specifications to database 602." EX1005, [0103], [0107], [0073]. *Tengler* thus suggests managers can make real-time changes during their shifts during POS terminal transactions. EX1002, ¶230. *Tengler* also discloses real-time communication with server 464 and its components, e.g., RMS server 604 and database 602. *Id.*, [0055]-[0056], [0089], [0094]-[0095], [0107], [0112], [0115]-[0116], Fig. 15; *see also*, [0121], [0126]-[0127]. *Tengler* thus discloses and suggests server 464 receives information from the POS builder interface and makes real time POS screen modifications during POS terminal transactions, then provides modified specifications to POS terminals after the manager saves changes to database 602 changes. EX1002, ¶¶230-231.

M. Claim 17

As explained for 1[c], 1[e], and claim 16, *Tengler* discloses managers can modify previously created POS screens. EX1005, [0073], [0103], [0107]. For example, "managers can also modify menus and change prices using interfaces 192 and 196." *Id.*, [0073]. A POSITA would have been motivated to ensure manager changes are not immediately propagated to terminals during a transaction, e.g., to avoid customer and employee dissatisfaction with changing menu items, options,

and prices during a pending transaction. EX1002, ¶232. Such POS terminals would subsequently display modified POS screens. *Id.*, ¶¶232-233.

N. Claims 18 & 20

As explained for 1[b] and 16, *Tengler* discloses database 602 of server 464 maintains POS screen information (claim 20). "A user interface designer 614 allows management to edit the user interface of the register and self-service applications and also saves the specifications in the database 602." EX1005, [0103]. The register application displays POS screens for employees at order terminals 52, and the self-service application displays a separate set of POS screens for customers at self-service kiosks 74. EX1005, [0062], [0074]-[0076], Fig. 2; *see also* [0026], [0032]-[0033]; Figs. 3-4 (register application at terminals 52):

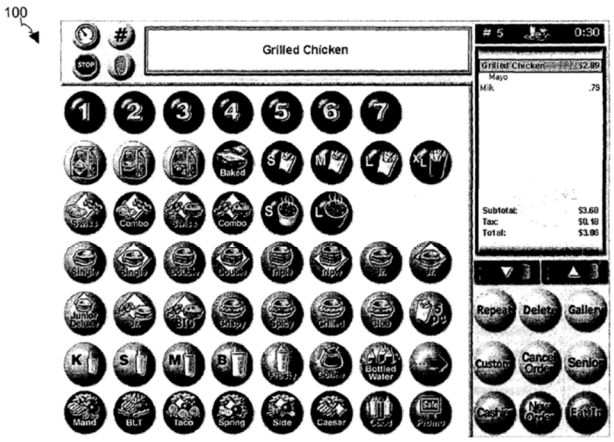


FIG. 3

FIG. 4

Figs. 8-9 (self-service application at customer kiosks 74):

FIG. 9

A POSITA would understand employee and self-service terminals are separate sets of POS terminals and that database 602 would store POS screen information for each set of POS terminals separately to ensure each respective terminal displays appropriate screens. *Id.*, [0073], [0103], [0107]. EX1002, ¶¶234-236.

O. Claim 19

As explained in 1[c], *Tengler* discloses a POS builder interface for accessing user interface designer for creating/modifying POS screens. Manager instructions to the POS builder interface are made using the GUI and are thus not formatted in

programming code because the manager is not entering programming code into the interface. EX1002, ¶237. For example, managers "modify menus and change prices using interfaces 192 and 196" without access to "programming code." EX1005, [0073]; *see also* [0103], [0108]-[0109], Figs. 7A and 7B (excerpted):

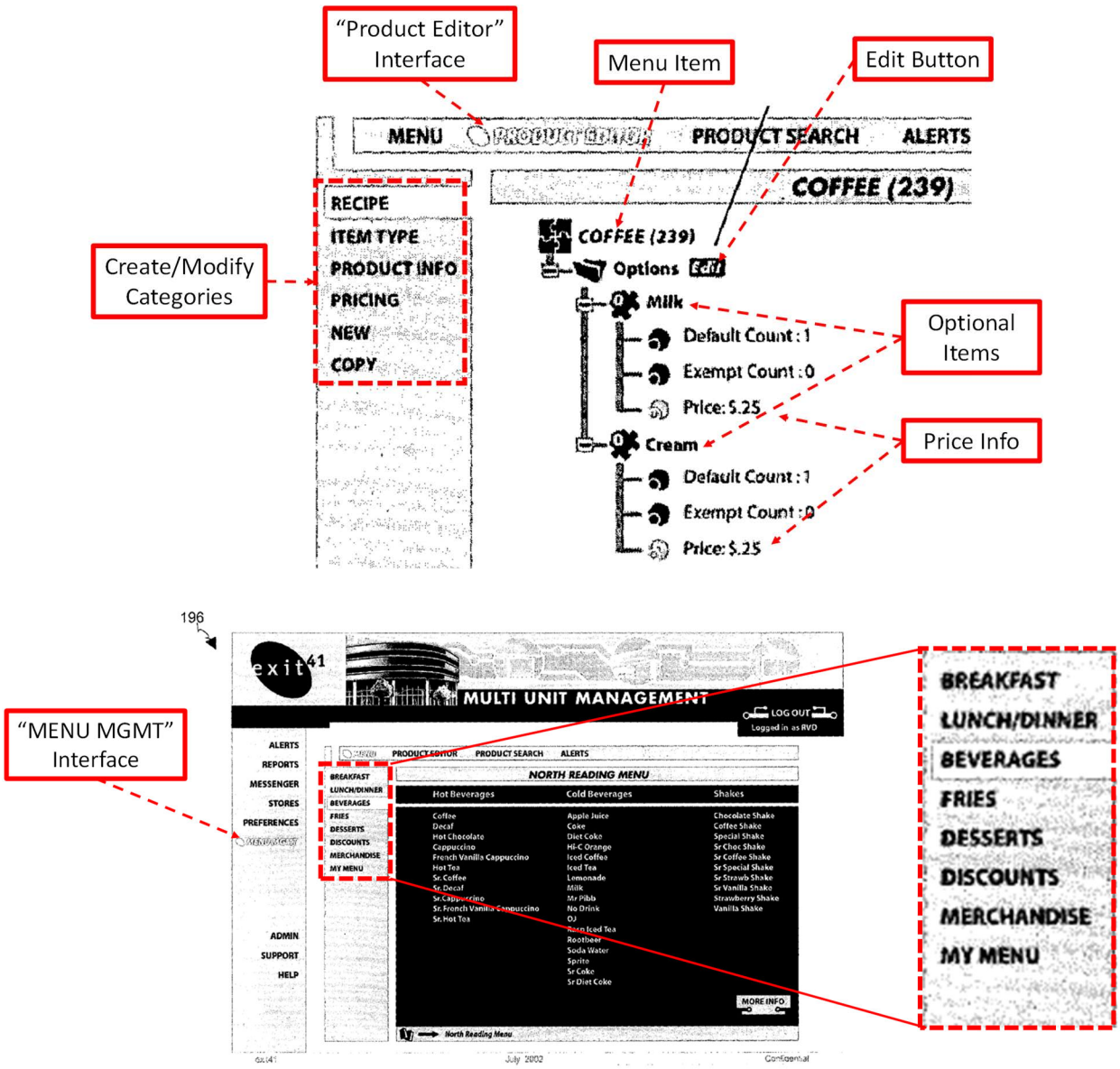
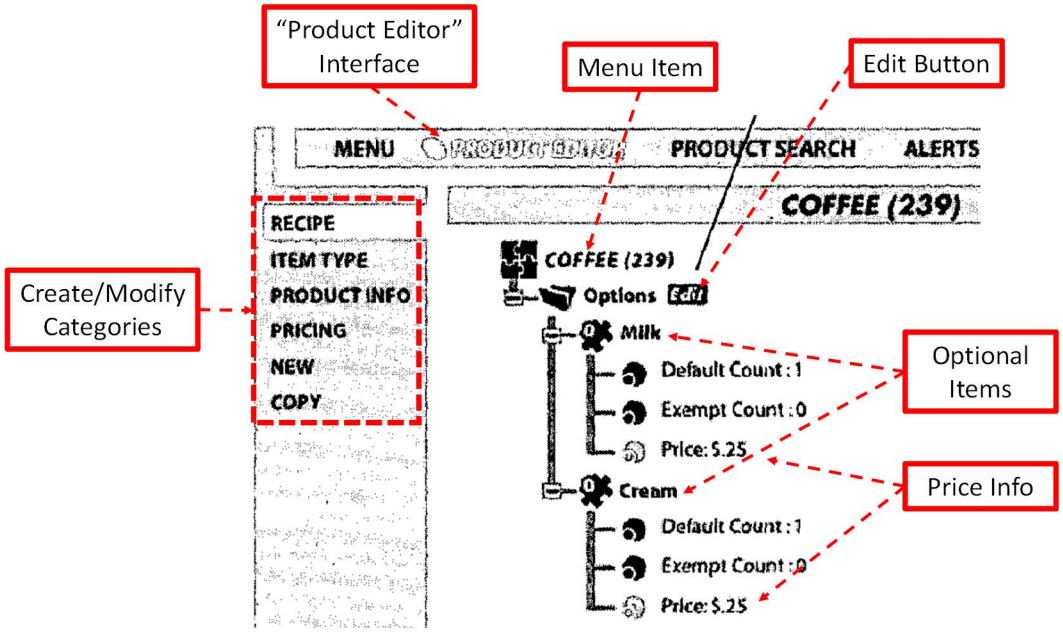


FIG. 7B

EX1002, ¶¶237-238.

P. Claim 21

As explained in 1[c], managers can "modify menus and change prices using interfaces 192 and 196." *Id.*, [0073]. The "product editor" screen of interface 192 lists various item modifiable/editable attributes (including recipe, item type, product info, and pricing) and options for adding products and copying existing products. *Id.*, [0073], Fig. 7A (excerpted):



Tengler thus discloses and suggests the server receives information comprising attributes (options, pricing) of menu items for display on POS screens of POS terminals. EX1002, ¶¶239-240.

Q. Claim 22

Tengler discloses POS terminals comprise client application 606 (such as register or self-service application) and database 607, and "each of the stations operates using the cached copies of the data if the station is disconnected from the network." EX1005, [0011], [0090], Cl. 6. This allows POS terminals to run "in a standalone mode by operating on stored or cached data in any of the cashier stations become disconnected from network 462." *Id.*, [0090]. POS terminals may thus perform transactions independently of a network connection. EX1002, ¶¶241-242.

R. Claim 23

As explained for 1[c] and claim 9, *Tengler* discloses display interfaces for inputting information (data interfaces) associated with ordering items in a restaurant (selecting/removing items, options, etc.). EX1005, [0003], [0062], [0076], Figs. 3-4, 8-10:

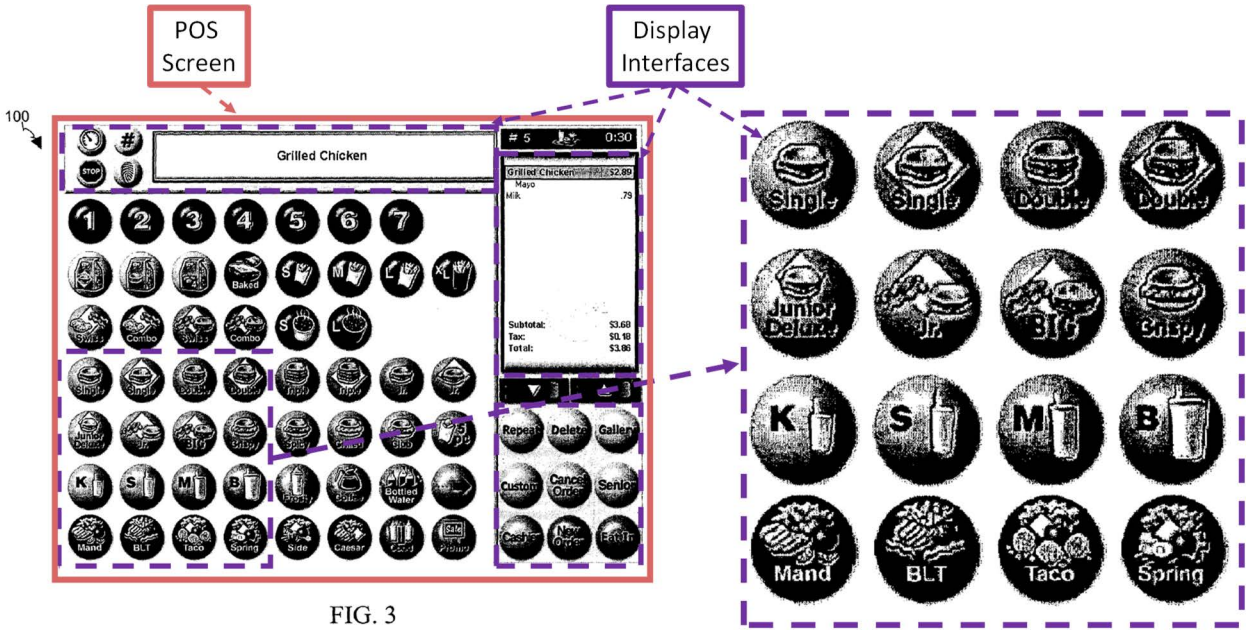

POS Screen
Display Interfaces
100
Grilled Chicken
Subtotal:
Tax:
Total:
Repeat
Delete
Gallery
Mand
BLT
Taco
Spring

FIG. 3

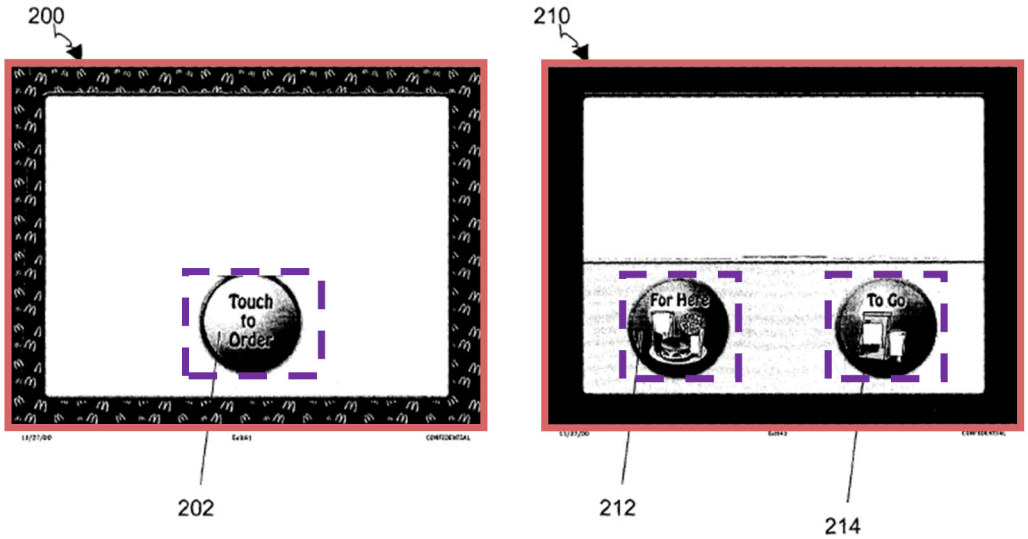

200
210
Touch to Order
For Here
To Go
202
212
214

FIG. 8

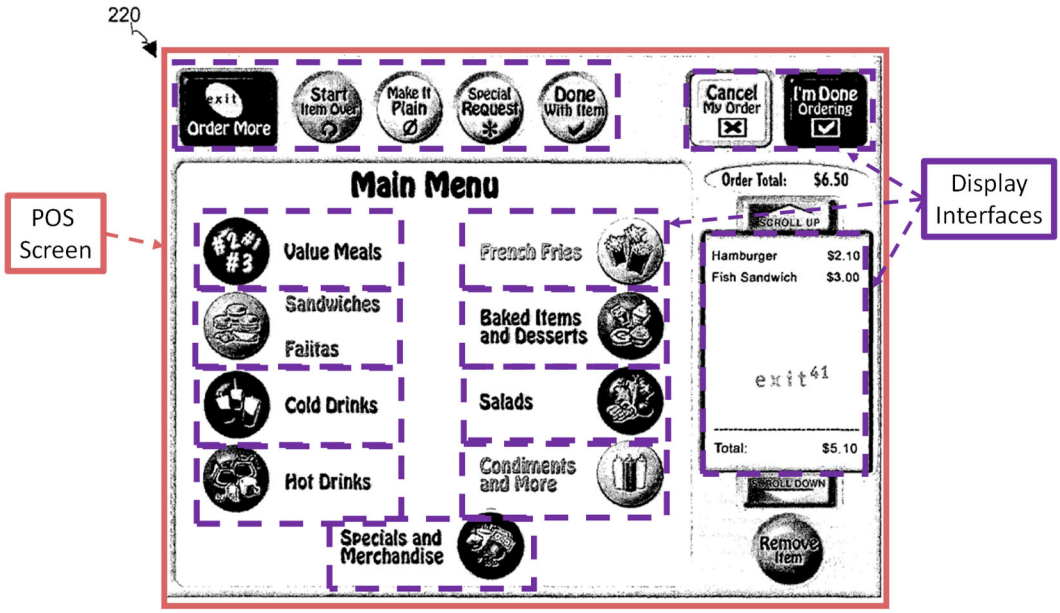


FIG. 9

In addition to buttons, a POSITA would be motivated to allow managers to specify a display interface element allowing text entry, e.g., to allow a customer to make special requests for further item customization. EX1002, 244. User selections for completed orders (including items/options/customization) are further information transmitted to server 464, which "maintains a complete history of orders for a long period of time for later analysis and display." EX1005, [0089]. EX1002, ¶¶243-245.

S. Claim 24

As explained for 1[d] and 1[e], *Tengler* discloses "receiving an electronic image of a customer, and associating the electronic image with an order of a customer," which "is captured at the ordering location" and stored in the database.

EX1005, [0017]-[0019], [0055]. POS screens are modified based on the customer's image so orders, including subsequent orders, are delivered to the right person. *Id.* *Tengler* thus discloses and suggests dynamically configuring POS terminals specific to a corresponding customer based on information about the customer's transactions received from POS terminals and stored in the database. EX1002, ¶¶246-247.

T. Claims 25-26

Tengler's "user interface designer 614 allows management to edit the user interfaces of register and self-service applications and also saves the specifications in the database 602." EX1005, [0103]; *see also*, [0062], [0074]-[0076], Figs. 3-4, 8-10:

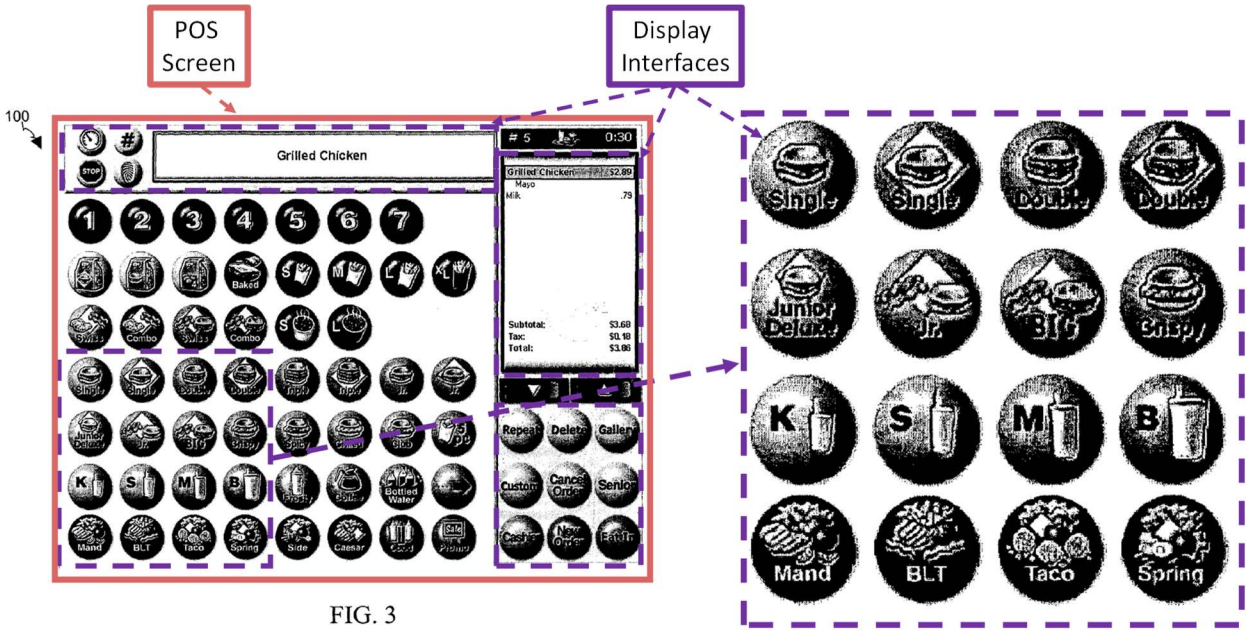


FIG. 3

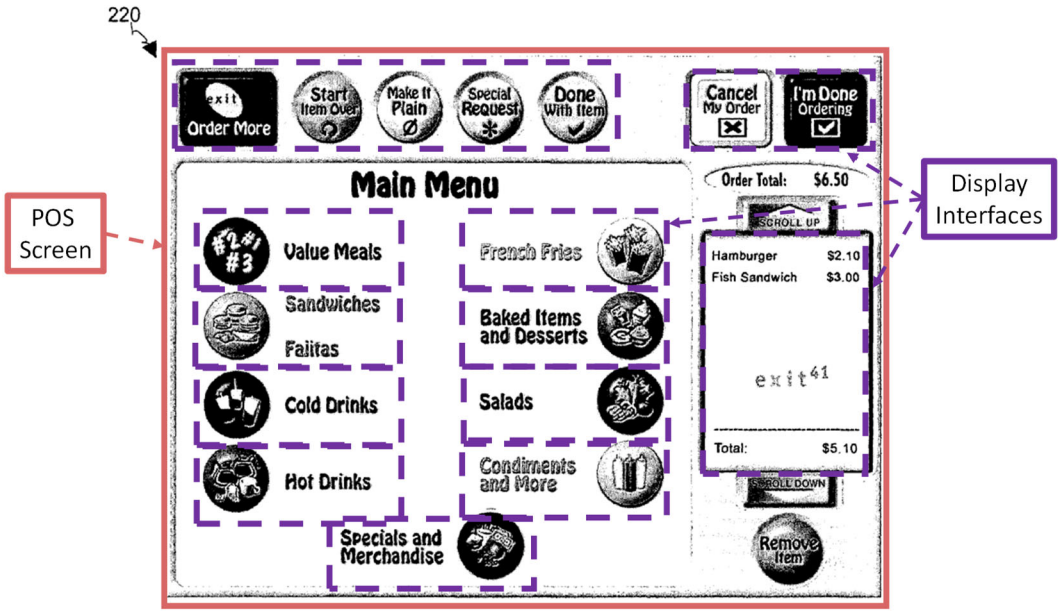


FIG. 9

As explained for 1[c], new and existing items, and their associated buttons (display interfaces), are created/modified using the POS builder interface. *Id.*, [0073], [0103], [0107], [0109]; Figs. 7, 7A-7B. As explained for claim 10, *Tengler* discloses and suggests the server receives specifications/information from managers to create/modify POS screens displayed on POS terminals, including at least one of a number, shape, and arrangement of buttons (including their position). EX1002, ¶249. Further, because changing the item/option associated with a button would modify terminal operation by altering how it responds when that button (area) of the screen is selected, *Tengler* discloses and suggests creating/modifying button operation. *Id.* Because the display interfaces are buttons for inputting

data/information on a touchscreen, they are and/or include an input interface element. EX1005, [0075]; EX1002, ¶¶249-250.

U. Claim 27

Claim 27 is similar to claim 1 but drafted from a POS terminal perspective rather than a server. Similar elements are obvious for the same reasons as in claim 1 and as explained below. EX1002, ¶251-267.

1. 27[pre]

See 1[pre], XIII.A.1.

2. 27[a]-27[b]

See 1[a]-1[b], XIII.A.2.

3. 27[c]

This limitation is similar to 1[c] but recites a POS terminal receiving information from the server rather than a server receiving information from a POS builder interface. That difference is addressed below. The remaining limitations of 27[c] are obvious for the same reasons explained for 1[c].

As explained in 1[c], *Tengler's* POS builder resides on main server 464 and is accessible remotely over the Internet via webserver 620. EX1005, [0073], [0103], [0107], [0109], [0121]; Figs. 7, 7A-7B. Server 464 includes web server software 620 and database 602. *Id.*, [0115]-[0116], Fig. 15. "The store resident web server 620 also allows managers to edit the user interface of the register [606] and self-service

applications [618] and also saves the specifications in the database 602." *Id.*, [0103], [0107]; *see also* [0073]. POS terminals running register application 606 and self-service application 618 display their user interfaces (POS screens) to employees and customers. *Id.*, [0103], [0107], Fig. 15. POS terminals "contact the restaurant's RMS server 604 … to display the appropriate user interface, so that the order taker can enter the customer's order." *Id.*, [0112]. *Tengler* thus discloses and suggests the POS screen specifications are received by the POS terminals from database 602, part of server 464, over the network to display POS screens and process orders. EX1002, ¶257.

4. 27[d]

As explained for 1[a]-1[b], *Tengler's* POS terminals enable "users to enter orders" and process payment. EX1005, [0011], [0055], [0062], [0074]-[0076], Figs. 3-4, 8-10. *Tengler's* POS terminals thus perform food item transactions ordered in a restaurant. EX1002, ¶¶259-260.

5. 27[e], 27[h]

See 1[d], 1[g], XIII.A.4.

As explained in 1[d], the further information regarding POS transactions relates to customer food item order transactions, either from cashier order terminals 52 or via self-service kiosks 74. EX1005, [0011], [0055], [0062], [0074]-[0076]. The information is transmitted from the POS terminals to main server 464 and stored in

its database 602. *Id.*, [0049]-[0051], [0055], [0058], [0089], [0116], [0121]; *see also* [0125], Fig. 17. EX1002, ¶¶261-263.

6. 27[f]

See 1[e], XIII.A.5. Additionally, 27[f] allows a POS terminal to create or modify POS screens "based on the received information ***or*** further information." As explained for 1[e], *Tengler* discloses POS terminals configured to create and modify POS screens based on information provided from the POS builder interface ***and*** based on further information about POS transactions.

7. 27[g]

See 1[f], XIII.A.6.

V. Claims 28, 31-38, 40-41

These claims recite similar limitations to those depending from claim 1 and are obvious for the same reasons. EX1002, ¶¶268-269.

Claim 28	Claim 3, XIII.A.C
Claim 31	Claim 9, XIII.A.D
Claim 32	Claim 10, XIII.A.G
Claim 33	Claim 15, XIII.A.K
Claim 34	Claim 16, XIII.A.L Claim 34 is like claim 16 but from the perspective of the POS terminal rather than server. As explained for claim 16, *Tengler* discloses and suggests managers create/modify POS screens on the server in real time while POS terminals are in use performing transactions in real time as the customer is placing the order.

Claim 35	Claim 17, XIII.A.M
Claim 36	Claim 21, XIII.A.P
Claim 37	Claim 4, XIII.A.D
Claim 38	Claim 22, XIII.A.Q Claim 38 is like claim 22 but adds limitations regarding transmitting POS transaction information to the server upon transaction completion and the POS terminal establishes a server connection. *Tengler's* server 464 includes "web server software 620" for remote access to the POS builder via the Internet, and it is thus also a web server. EX1005, [0073], [0103], [0109], [0116]. As explained for claim 22, *Tengler's* POS terminals operate in standalone mode (disconnected from the network) and then later establish a network connection and upload transaction data to database 602. *Id.*, [0011], [0089]-[0090]. That discloses and suggests performing transactions without a server connection. EX1002, ¶268.
Claims 40-41	Claim 25-26, XIII.A.T

W. Claim 39

As explained for claims 22 and 38, *Tengler's* POS terminals can perform transactions, store transaction information locally, and then establish a main server 464 connection and upload transaction data to database 602. EX1005, [0011], [0089]-[0090]. EX1002, ¶¶270-271.

X. Claim 42

Claim 42's method steps are similar to the functions of claim 1's system but omit the server limitation (hence numbering discrepancy). Claim 42 is obvious for the same reasons. EX1002, ¶¶272-273.

42[pre]	1[pre], XIII.A.1.
42[a]	1[a]-1[b], XIII.A.2.
42[b]	1[c], XIII.A.3.
42[c], 42[f]	1[d], 1[g], XIII.A.4.
42[d]	1[e], XIII.A.5.
42[e]	1[f], XIII.A.6.

Y. Claim 43

Claim 43's method steps are similar to the functions of claim 27's system. The following chart identifies the corresponding limitations of claim 27, which in turn reference claim 1 for several limitations (parallel references to claim 1 are provide for convenience). EX1002, ¶¶274-275.

43[pre]	27[pre], XIII.U.1 (1[pre], XIII.A.1)
43[a]-43[b]	27[a]-27[b], XIII.U.2 (1[a]-1[b], XIII.A.2)
43[c]	27[c], XIII.U.3 (1[c], XIII.A.3)
43[d]	27[d], XIII.U.4
43[e], 43[h]	27[e], 27[h], XIII.U.5 (1[d], 1[g], XIII.A.4)
43[f]	27[f], XIII.U.6 (1[e], XIII.A.5)

	As explained for 1[e] and 27[f], *Tengler* discloses POS terminals configured to create and modify POS screens based on information provided by a manager using the POS builder interface ("received information" of 43[f]) ***and*** based on further information about POS transactions transmitted from POS terminals to the central server ("transmitted information" of 43[e]).
43[g]	27[g], XIII.U.7 (1[f], XIII.A.6)

Z. Claim 44

Claim 44 recites similar limitations to claim 1, but more broadly claims "creating or modifying *functionality of the one or POS terminals*" (44[c]). *Tengler's* disclosure regarding creating and modifying a series of POS screens and items/buttons displayed on POS terminals/kiosks renders obvious the broader limitations regarding functionality for the same reasons as explained for claim 1. EX1002, ¶¶276-277. The following chart identifies the corresponding limitations.

44[pre]	1[pre], XIII.A.1.
44[a]-44[b]	1[a]-1[b], XIII.A.2.
44[c]	1[c], XIII.A.3.
44[d], 44[g]	1[d], 1[g], XIII.A.4.
44[e]	1[e], XIII.A.5.
44[f]	1[f], XIII.A.6.

XIV. CONCLUSION

For the above reasons, Petitioner respectfully requests cancellation of claims 1-4, 7-28, and 31-44 of the '793 patent.

June 13, 2022
Date

/s/ *Joseph D. Gray*

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Counsel for Petitioner

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. §42.24(d), the undersigned certifies that the foregoing Petition, exclusive of the exempted portions as provided in 37 C.F.R. §42.24(a), contains 13,992 words and complies with the type-volume limitations of 37 C.F.R. §42.24(a). The word count was calculated by Microsoft Word.

June 13, 2022
Date

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6(e), the undersigned certifies that the foregoing Petition and Exhibits 1001-1026 have been served simultaneously with filing. Service is via FedEx Express® or Express Mail, which is at least as fast and reliable as Priority Mail Express.

Pursuant to 37 C.F.R. §42.105, service of the petition and supporting evidence has been made on the Patent Owner at the correspondence address of record for the '793 patent, which is:

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