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(54) NETWORK OF SKILL-BASED ELECTRONIC GAME MACHINES THAT DISPENSE TICKETS FROM A PLURALITY OF PLAYER-SELECTABLE DEALS

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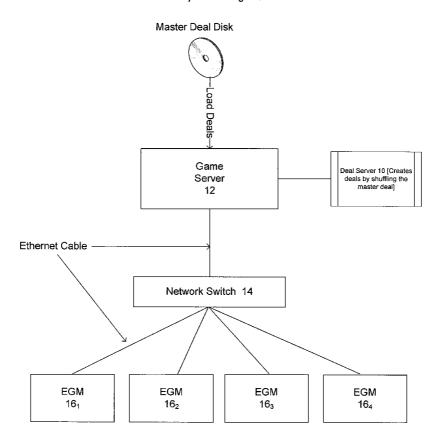
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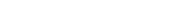
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(57) ABSTRACT

Tickets are vended from a network of electronic game machines that play a game and that are in communication with a central server. Each ticket is associated with a deal of tickets for the game that includes at least some predetermined winning tickets. Each electronic game machine is adapted to simultaneously play a plurality of different deals and includes a deal selection indicator. Deal information and the current status information for each of the different deals is displayed immediately prior to or concurrently with a patron paying for a ticket. The information includes the total number of tickets and total number of tickets that have been played or remain to be played, the number of tickets having winning symbol or number combinations and number of tickets having winning symbol or number combinations that have been played or remain to be played, and the total winnings and amount of the total winnings that have been won or amount of the total winnings that remain to be won. The patron selects at the electronic game machine which of the plurality of deals to play using the deal selection indicator. The results of the next ticket in the selected deal is provided to the electronic game machine upon payment for a ticket, and the patron is informed of the results. The current status information is updated in real time immediately after each game play.

System Configuration





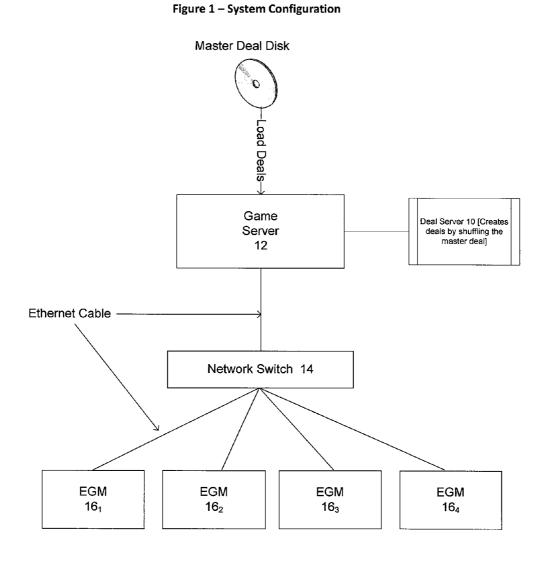
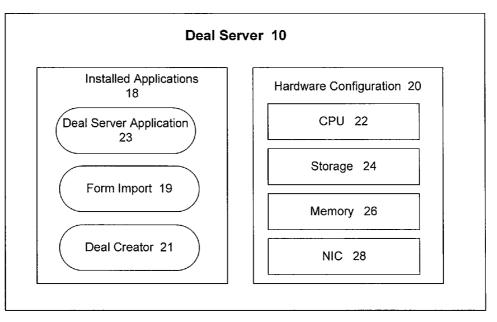


Figure 2 – Deal Server and Game Server Basic Components and Installed Applications



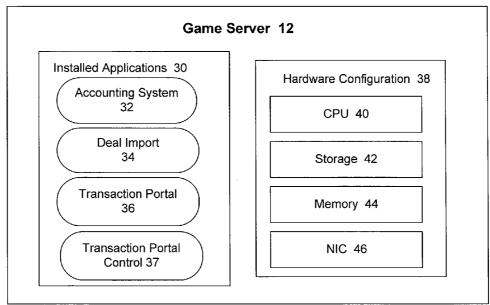


Figure 3 – Basic EGM Configuration

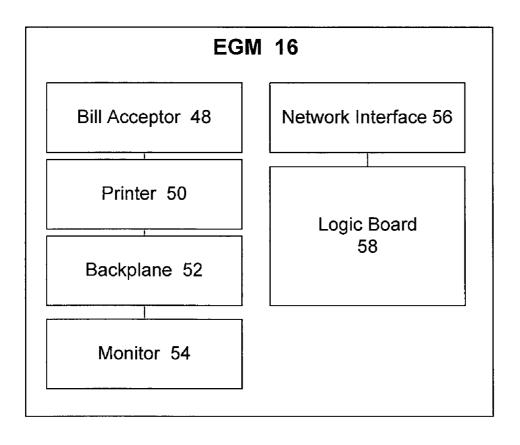
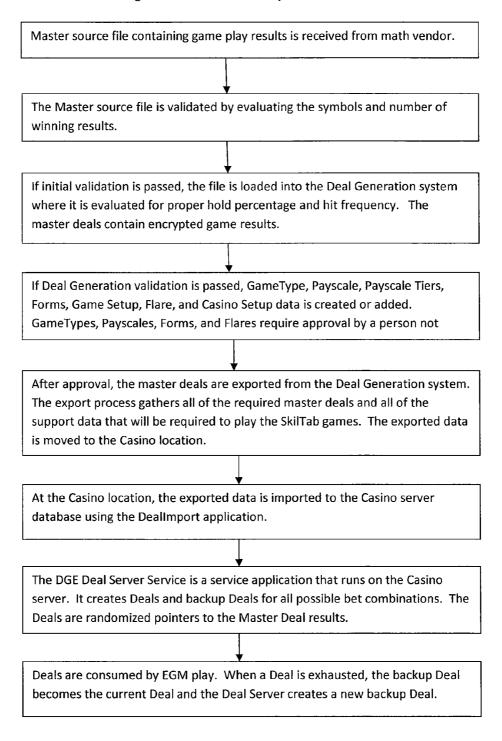


Figure 4 - Skiltab Deal Lifecycle



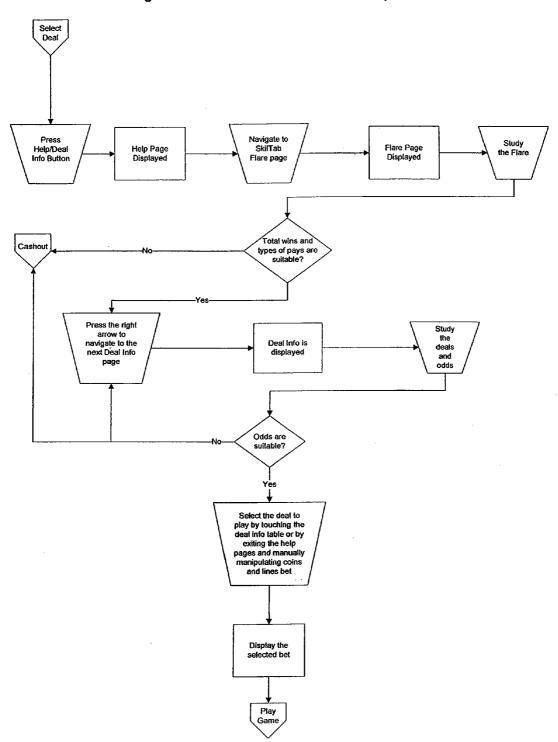


Figure 5 - SkilTab Deal Selection - Skill Component

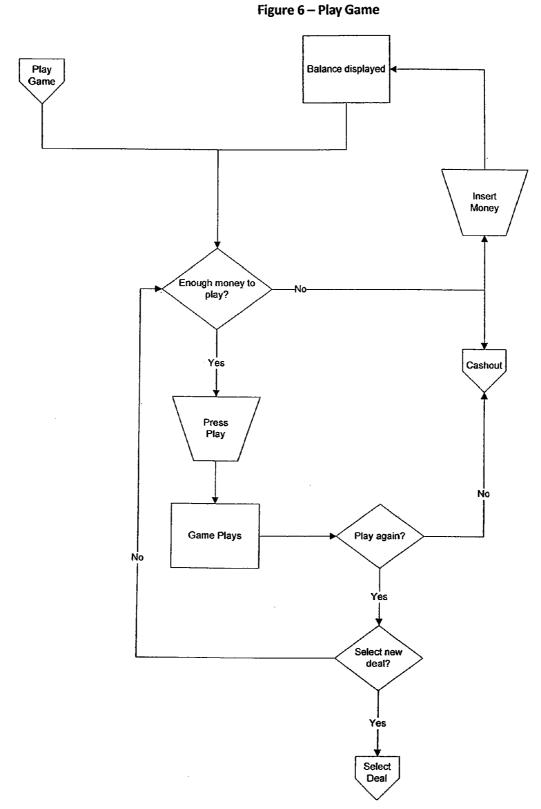


Figure 7 - Cash out

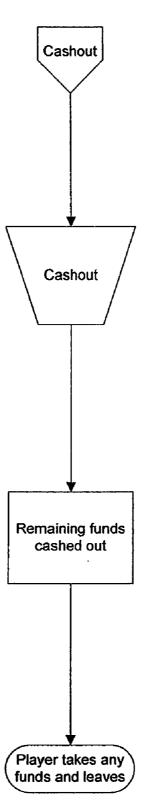


Figure 8A - SkilTab Deal Information - As Represented to Player

Deal information as of 2009 07-23 11:27:47

1Line 1 Credit		
Dispensed Total in Deal		
Tabs:	12	480,000
Jackpots:	0	1
Winning Tabs:	2	16,775
Winnings:	\$0.84	\$3,840.00

	ies 1 Cre Number: 25	288
	Dispensed	Total in Deal
Tabs:	0	480 000
Jackpots:	0	1
Winning Tabs:	0	60130
Winnings:	\$0.00	\$11,520.00

5Lines 1 Credit Deal Number: 25290		
Dispensed	Total in Deal	
. 0	480000	
·O,	1	
O.	61288	
\$0.00	\$20,400.00	
	Number: 25 Dispensed 0 0 0	

9Lin	es 1 Cre	dit
Deal Number: 25292		
	Dispensed	Total in Deal
Tabs:	0	480000
Jackpots:	0	1
Winning Tabs:	, O	114378
Winnings:	\$0.00	\$38,016.00

15Lines 1 Credit Deal Number: 25294		
	Dispensed	Total in Deal
Tabs:	0	480000
Jackpots:	· · ·	1
Winning Tabs:	0	146097
Winnings:	\$0.00	\$63,360.00

20Lines 1 Gredit Deal Number: 25296		
		Total in Deal
Tabs:	· o	480000
Jackpots:	. 0	10
Vinning Tabs:	. 0	206800
Winnings:	\$0.00	\$90,240.00

1 Line 3 Credits Deal Number: 25298		
	Dispensed	Total in Deal
Tabs:		480000
Jackpots:	0	
Winning Tabs:		16775
Winnings:	\$0.00	\$11,520.00

1Line 7 Credits		
Deal Number: 25300		
Dispensed Total in Deal		
Tabs:	0	480000
Jackpots.	0	1
Winning Tabs:	0	60130
Winnings:	\$0.00	\$34,560.00

5Lines 3 Credits Deal Number: 25302		
	Dispensed	Total in Deal
Tabs:	66	480000
Jackpots:	0	. 1
Vinning Tabs.		81288
Winnings:	\$9.12	\$61,200.00





Deal information as of 2009 07-23 10:36:48

9Lines 3 Credits Deal Number: 25304			
	Dispensed	Tot	al in Deal
Tabs:	0	1.5	480000
Jackpots:	D		1
Winning Tabs:	. 0	1.3	114378
Winnings	\$0.00	\$11	4.048.00

15Lines 3 Credits Deal Number: 25306		
	Dispensed	Total in Deal
Tabs:	O	480000
Jackpots:		1
Winning Tabs:		146097
Winnings:	\$0.00	\$190,080.00

20Lines 3 Credits			
Deal Number: 25308			
	Dispensed	Total in Deal	
Tabs:	0	480000	
Jackpots:	. 0	10	
Winning Tabs:	0	206800	
Winnings:	\$0.00	\$270,720.00	

1Lir	e 5 Cred	its
Deal	Number: 25	310
	Dispensed	Total in Deal
Tabs:	. 0	480000
Jackpots:		1
Winning Tabs:		16775
Winnings:	\$0.00	\$19,200.00

3Lines 5 Credits		
Deal Number: 25312		
Dispensed Total in Deal		
Tabs:	0	480000
Jackpots:	0	1
Winning Tabs:	0	60130
Winnings:	\$0.00	\$57,600.00

5Lines 5 Gredits		
Deal Number: 25314		
	Dispensed	Total in Deal
Tabs:		480000
Jackpots:		1
Minning Tabs:		81288 \$102,000.00
Winnings:	\$0.00	\$102,000.00

	es 5 Cred Number: 25	
Dea		
	Dispensed	Total in Deal
Tabs	. 0	480000
Jackpots		1
Winning Tabs	: Œ	114378
Winnings	\$0.00	\$190,080.00

15Lines 5 Credits		
Deal Number: 25318		
Dispensed Total in Deal		
Tabs:	. 0	480000
Jackpots:	. 0	1
Winning Tabs:	. 0	146097
Winnings:	\$0.00	\$316,800.00

20Lines 5 Credits		
Deal Number: 25320		
	Dispensed	Total in Deal
Tabs:		480000
Jackpots:		10
Minning Tabs:	0	206800
Winnings:	\$0.00	\$451,200.00







Figure 8B – SkilTab Deal Information – As Represented to Player

Deal information as of 2009 07-23 10:36:48

1Line 7 Credits Deal Number: 25322		
Dispensed Total in Deal		
Tabs:	0	480000
Jackpots:	0	. 1
Winning Tabs:	• 0	16776
Winnings:	\$0.00	\$26,880.00

3Lines 7 Credits Deal Number: 25324		
	Dispensed	Total in Deal
Tabs:	0	480000
Jackpots:		1
Winning Tabs:	. 0	60130
Winnings:	\$0.00	\$80,640.00

5Lines 7 Credits Deal Number: 25326		
	Dispensed	Total in Deal
Tabs:	0	480000
Jackpots:		1
Winning Tabs:	. 0	81288
Winnings:	\$0.00	\$142,800.00

9Lines 7 Credits Deal Number: 25328		
	ispensed	Total in Deal
Tabs:	0	480000
Jackpots:	0	1
Winning Tabs:	.0	114378
Winnings:	\$0.00	\$266,112.00

15Lines 7 Credits Deal Number: 25330		
	Dispensed	Total in Deal
Tabs:	0	480000
Jackpols:	0	. 1
Winning Tabs:	0	146097
Winnings:	\$0.00	\$443,520.00

20Lines 7 Credits Deal Number: 25332		
	Dispensed	Total in Deal
Tabs:	O	480000
Jackpots:	Ö	10
Winning Tabs:	Ò	206800
Winnings:	\$0.00	\$631,800.00

1Line 10Credits			its
	Deal Nu	mber: 25	334
•	Die	spensed	Total in Deal
	Tabs:	0	480000
	Jackpots:	. 0	1
	Winning Tabs:	0	16775
Į	Winnings:	\$0.00	\$38,400.00

3Lines 10Credits		
Deal Number: 25336		
Dispensed Total in Deal		
Tabs:	0	480000
Jackpots:	D	1
Winning Tabs:	0	60130
Winnings:	\$0.00	\$115,200.00

5Lines 10Credits			
Deal Number: 25338			
Dispensed Total in Deal			
Tabs:	0	480000	
Jackpots:	0	. 1	
Winning Tabs:	a	81288	
Winnings:	\$0.00	\$204,000.00	





Deal information as of 2009 07-23 10:36:48

9Lines 10Credits			
Deal Number: 25340			
	Dispensed	Total in Deal	
Tabs:	0	480000	
Jackpots:	0	1	
Winning Tabs:	. 0	114378	
Winnings:	\$0.00	\$380,160.00	

15Lines 10Credits Deal Number: 25342			
Tabs:	0	480000	
Jackpots:		1	
Winning Tabs:	. 0	146097	
Winnings:	\$0.00	\$633,600.00	

20Lines 10Credits				
Deal Number: 25344				
Dispensed Total in Deal				
Tabs:	0	480000		
Jackpots:	0	10		
Winning Tabs:	0	206800		
Winnings:	\$0.00	\$902,400.00		

1Lines 15Credits Deal Number: 25346		
	Dispensed	Total in Deal
Tabs:		480000
Jackpots: Winning Tabs:	0	1
Winning Tabs:	D	16775
Winnings:	\$0.00	\$57,600.00

3Lines 15Credits Deal Number: 25348		
Dispensed	Total in Deal	
. 0	480000	
. 0	. 1	
. 0	60130	
\$0.00	\$172,800.00	
	Number: 25 Dispensed 0 0	

5Lines 15Credits Deal Number: 25348		
Dispensed Total in Deal		
Tabs:	0	480000
Jackpots:		1
Winning Tabs:		81288
Winnings:	\$0.00	\$306,000.00

9Lines 15Credits Deal Number: 25352		
£	Dispensed	Total in Deal
Tabs:	0	480000
Jackpots:	. 0	1
Winning Tabs:	· 0.	114378
Winnings:	\$0.00	\$570,240.00
Jackpots: Winning Tabs:	0	1143

15Lines 15Credits Deal Number: 25354		
Tabs:	0	480000
Jackpots:		. 1
Winning Tabs:		146097
Winnings:	\$0.00	\$950,400.00

20Lines 15Credits Deal Number: 25356			
Dispensed Total in Deal			
Tabs:	0	480000	
Jackpots:		10.	
Winning Tabs:		206800	
Winnings: \$0.00 \$1,353,600.00			





Figure 9 – SkilTab Game Flare Information – As Represented to Player

			2	10,15,23	10, 15, 20	10,15,20
	74	172	344	909	1006	1083
9	42	1037	1880	3627	5708	10077
100	15	25	55	104	127	126
50	74	199	353	651	1041	1206
	613	1706	3284	5769	9426	18937
100	ဗ္ဗ	78	<u>C</u>	262	366	358
	173	457	795	1510	2364	3400
	1721	4682	8269	15220	24448	48801
100	17	20	114	204	323	322
3 2	173	369	689	1245	2119	2757
5	759	2034	3680	5807	10857	20554
100	45	100	179	341	538	513
25	166	494	980	1583	2553	4165
ເກ	1341	3472	6412	12029	19145	36215
100	22	20	115		277	294
. 25	110	301	507	126	1503	2368
is	740	1991	3457	6592	10595	25607
~	2261	6369	11053	24989	49180	103825
C. OH MORE ANYWHERE WINS BONUS	3500 seems	3500	3500	3500	3500	6383
ANYWHERE WINS SCAFFER BOND	s 9646	33408	35280	36509	35427	42043

Figure 10- SkilTab database/table information

Databases related to SkilTab: CASINO

Tables and Columns related to SkilTab:

Table Name	Column Name	Description
		Game Flare related tables and columns
MACH_SETUP	BANK_NO	Used to link to the Bank Table to retrieve the BANK.GAME_TYPE_CODE which is
		used to retrieve a count of related FLARE table rows in stored procedure
		tpGetEGMFlareData
FLARE	FLARE_ID	Flare table identifier, returned to the EGM from stored procedure
		tpGetEGMFlareData.
	LONG_NAME	Flare description, returned to the EGM from stored procedure
		tpGetEGMFlareData.
	BET_COMBO_COUNT	Header count value, returned to the EGM from stored procedure
		tpGetEGMFlareData.
	TIER_COUNT	Number of Flare detail lines
FLARE_HEADER	FLARE_HEADER_ID	Flare header unique identifier
	FLARE_ID	Link to FLARE table
	COLUMN_NUMBER	Flare header column number
	LINES_BET	Number of Lines bet
	CREDITS_BET	'+' character delimited number of Credits bet
FLARE_TIER	FLARE_TIER_ID	Flare Tier unique identifier
	FLARE_ID	Link to FLARE table
	TIER_LEVEL	Tier Level value
	SYMBOLS	Symbol numbers to display
	BASE_CREDITS	Base credits
	WIN_COUNT_LIST	'+' character delimited number of winning combinations per Deal
		Deal Information related tables and columns
ETAB_SEQUENCE	DEAL_NO	Deal number returned to EGM by stored procedure tpGetDealPlayStats
DEAL_SETUP	DEAL_NO	Link from ETAB_SEQUENCE to DEAL_SETUP to retrieve FORM_NUMB
	FORM_NUMB	Used to link to the CASINO_FORMS table
CASINO_FORMS	DENOMINATION	Denomination of the Deal
	COINS_BET	Used to display the number of Credits Bet for the Deal
	LINES_BET	Used to display the number of Lines Bet for the Deal
	TABS_PER_DEAL	Used to display the total Tabs in the Deal
	JACKPOT COUNT	Used to display the total number of Jackpots in the Deal
	WINS_PER_DEAL	Used to display the total number of Wins in the Deal
	TOTAL_AMT_OUT	Used to display the total Winnings for the Deal
DEAL_STATS	PLAY_COUNT	Used to display the number of Tabs Dispensed
	WIN_COUNT	Used to display the number of Dispensed Winning Tabs
	JACKPOT COUNT	Used to display the number of Dispensed Jackpot Tabs
	BASE AMOUNT WON	Used to display the Dispensed Winnings amount to date
	1	The state of the superiors trainings amount to date

MACH_SETUP BANK FLARE: Column Name Condensed Type Column Name Condensed Type Column Name | Condensed Type MACH_NO char(5) BANK_NO FLARE_ID MODEL_DESC varchar(64) BANK_DESCR varchar(128) GAME_TYPE_CODE varchar(2) MACH_DENOM smallmoney FORM_NUMB varchar(10) LONG_NAME varchar(64) TYPE_ID char(1) PROG_FLAG BET_COMBO_COUNT bit smallint PROG_AMT GAME_CODE varchar(3) TIER_COUNT FORM_NUMB varchar(10) LAST_JP_AMOUNT money BANK_NO Int LAST_IP_TIME datetime IP_ADDRESS varchar(24) GAME_TYPE_CODE varchar(2) MAC_ADDR varchar(32) PRODUCT_LINE_ID smallint ACTIVE_FLAG tinyint 15_PAPER FLARE_HEADER bit SD_RS_FLAG bit smallmoney LOCKUP_AMOUNT Column Name Condensed Type P FLARE_HEADER_ID REMOVED_FLAG bit ENTRY_TICKET_FACTOR int int LAST ACTIVITY FLARE_ID datetime ENTRY_TICKET_AMOUNT int smallmoney MACH_SERIAL_NO COLUMN_NUMBER varchar(15) DBA_LOCKUP_AMOUNT smallint money CASINO_MACH_NO LINE5_BET varchar(8) IS_ACTIVE bit tinyint BALANCE CREDITS_BET money varchar(64) GAME_RELEASE varchar(16) OS_VERSION varchar(16) PROMO BALANCE money FLARE_TIER METER_TRANS_NO int VOUCHER_PRINTING bit - Column Name: Condensed Type FLARE_TIER_ID int FLARE_ID int TIER_LEVEL smallint SYMBOLS varchar(32) BASE CREDITS int FLARE_TIER_NAME varchar(32) WIN_COUNT_LIST varchar(256)

Figure 11 - Game flare-related tables

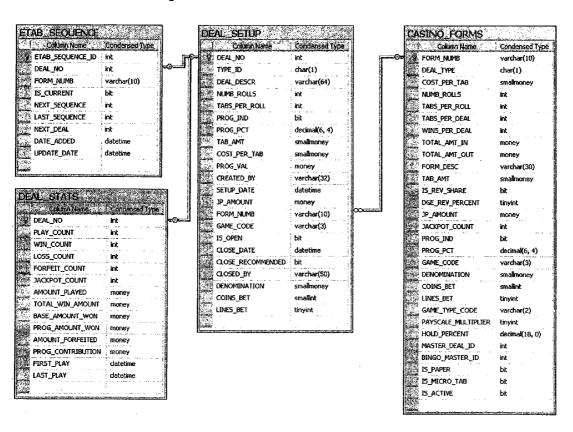
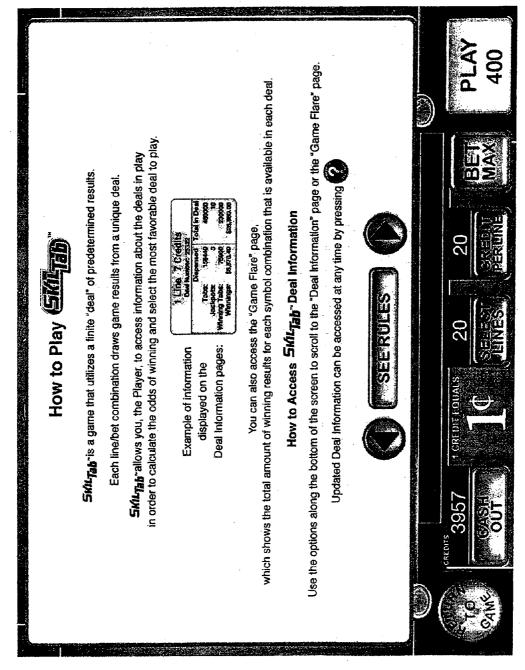


Figure 12 - Deal information-related tables

Figure 13 - SkilTab Help Page





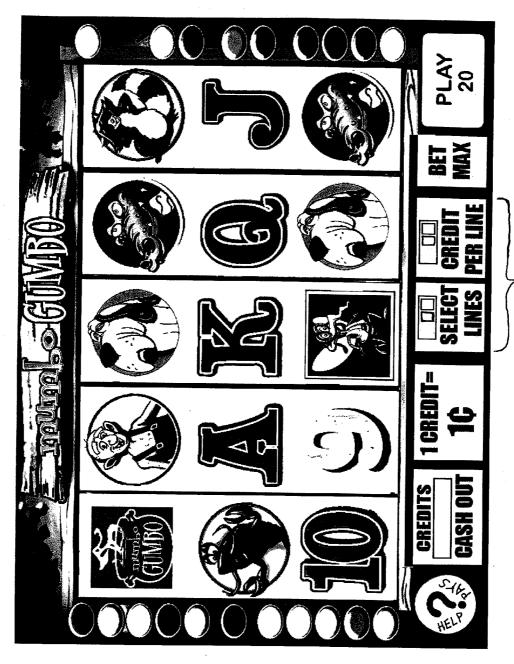


Figure 14



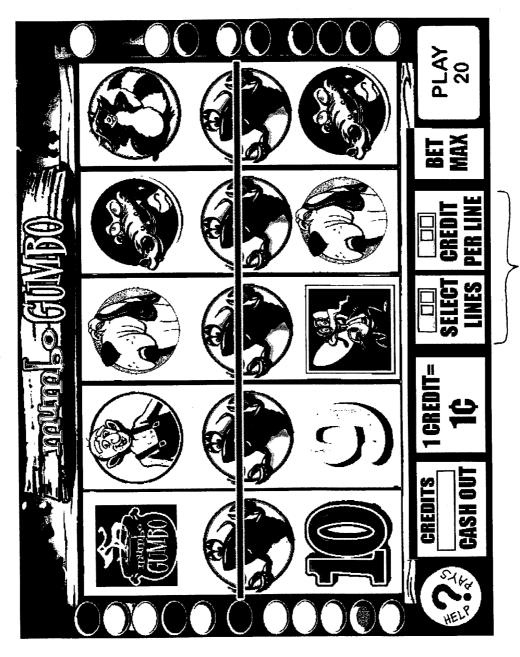


Figure 15

NETWORK OF SKILL-BASED ELECTRONIC GAME MACHINES THAT DISPENSE TICKETS FROM A PLURALITY OF PLAYER-SELECTABLE DEALS

BACKGROUND OF THE INVENTION

[0001] Gaming machines are generally classified as either being skill games or chance games. Blackjack, poker and so-called "re-spin" slot machine reel games are examples of skill games. (Skill games typically include an element of chance, but allow for a player to improve their odds of winning from default odds by applying mental calculations in some manner to the state of the game.) Conventional slot machines and conventional physical and electronic pull tab machines are examples of chance games. Governmental regulatory authorities often restrict gaming machines at selected venues based on their classifications. For example, some regulatory authorities only permit skill games to be played at selected venues.

[0002] Some electronic pull tab machines are designed to simulate the spinning reels of slot machines, thereby providing a play experience similar to slot machines. The outcome of the spinning reels match the results of the next pull tab in a previously defined deal of game results. These types of game machines are very popular. However, they are permitted in selected venues because they are games of chance.

[0003] Accordingly, there is an unmet need to allow certain types of game machines that are normally played as games of chance to be modified so that they can be installed in venues where they would normally be prohibited. The present invention fulfills such a need.

[0004] In one preferred embodiment of the present invention, a conventional electronic pull tab machine, or a network of such machines, is modified so as to allow a player to select from and play a plurality of different deals at a machine, and to receive deal information regarding the current status of such deals. By analyzing the deal information, an element of skill is added because a player has an opportunity to select deals that have better odds of winning than other deals, provided that the player correctly processes the deal information. The modified electronic pull tab machine thus becomes a game of skill and can be offered in venues where such machines would normally be prohibited. In other preferred embodiments, other conventional game machines, such as instant lottery machines, can be modified in a similar manner and also offered in such venues.

BRIEF SUMMARY OF THE INVENTION

[0005] Tickets are vended from a network of electronic game machines that play a game and that are in communication with a central server. Each ticket is associated with a deal of tickets for the game that includes at least some predetermined winning tickets. Each electronic game machine is adapted to simultaneously play a plurality of different deals and includes a deal selection indicator. Deal information and the current status information for each of the different deals is displayed immediately prior to or concurrently with a patron paying for a ticket. The information includes the total number of tickets and total number of tickets that have been played or remain to be played, the number of tickets having winning symbol or number combinations and number of tickets having winning symbol or number combinations that have been played or remain to be played, and the total winnings and

amount of the total winnings that have been won or amount of the total winnings that remain to be won. The patron selects at the electronic game machine which of the plurality of deals to play using the deal selection indicator. The results of the next ticket in the selected deal is provided to the electronic game machine upon payment for a ticket, and the patron is informed of the results. The current status information is updated in real time immediately after each game play.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The foregoing summary, as well as the following detailed description of preferred embodiments of the invention, will be better understood when read in conjunction with the appended drawings. For the purpose of illustrating the invention, there is shown in the drawings embodiments which are presently preferred. However, the invention is not limited to the precise arrangements and instrumentalities shown.

[0007] In the drawings:

[0008] FIG. 1 shows an overall system configuration in accordance with one preferred embodiment of the present invention.

[0009] FIG. 2 shows components of a deal server and game server in accordance with one preferred embodiment of the present invention.

[0010] FIG. 3 shows hardware components of an electronic game machine (EGM) in accordance with one preferred embodiment of the present invention.

[0011] FIG. 4 shows a flowchart that describes deal life-cycle, in accordance with one preferred embodiment of the present invention.

[0012] FIGS. 5-7 show flowcharts that describe deal selection, game play and cash out processes in accordance with one preferred embodiment of the present invention.

[0013] FIGS. 8A and 8B, taken together, shows deal information as represented to a player in accordance with one preferred embodiment of the present invention.

[0014] FIG. 9 shows game flare information as represented to a player in accordance with one preferred embodiment of the present invention.

[0015] FIGS. 10-12 show database and table information for deal and flare data in accordance with one preferred embodiment of the present invention.

[0016] FIG. 13 shows an attraction display screen in accordance with one preferred embodiment of the present invention.

[0017] FIGS. 14 and 15 show screen shots of games in accordance with one preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0018] Certain terminology is used herein for convenience only and is not to be taken as a limitation on the present invention.

[0019] The present invention is described in the context of a video reel game commercially available from Diamond Game Enterprises, Inc., Chatsworth, Calif., and referred to as "SkilTab™." This embodiment is a new form of a pull tab machine. However, more broadly, the present invention may be used for any form of ticket-based games wherein the tickets are associated with a deal of tickets that includes at least some predetermined winning tickets. Instant win tickets sold in state lotteries are one example of such ticket-based games.

[0020] In one preferred embodiment, the system is operated via a standard off-the-shelf Windows® XP computer that communicates with game machines using TCP/IP, configured as discussed below. However, the scope of the present invention is not limited to this commercial embodiment or to any particular hardware or software platform.

[0021] FIGS. 1-3 show the hardware and software components of the system. Referring to FIG. 1, a deal server 10 creates deals and loads the deals into a game server (central server) 12. The deals are then communicated to a plurality of electronic game machines (EGM's) 16_1 - 16_n via a network switch 14 and ethernet cables.

[0022] FIG. 2 shows additional details of the deal server 10 and the game server 12. The deal server 10 includes a plurality of installed applications 18 including a deal server application 23, a deal creator 19, and a hardware configuration 20 that includes a CPU 22, storage 24, memory 26 and a network interface card (NIC) 28. The game server 12 includes a plurality of installed applications 30 including an accounting system 32, a deal import 34 and a transaction portal. The game server also includes a hardware configuration 38 that includes a CPU 40, storage 42, memory 44 and a network interface card (NIC) 46. Storage 24 and 42 are permanent storage, such as resident disk drive(s), whereas memory 26 and 44 are temporary storage, such as resident RAM.

[0023] FIG. 3 shows hardware components of one of the EGM's 16 which includes bill acceptor 48, printer 50, backplane 52, monitor 54, network interface 56 and logic board 58. One suitable logic board is an Innocore DPX-S410-SDVO board, available from Innocore, Ltd.

[0024] An electronic game machine 16 is preferably installed in an upright cabinet with a single LCD touch screen video display (monitor 54). The LCD touch screen display (monitor 54) is used for displaying game outcomes, pay table information and attendant menu features. One suitable touch screen display (monitor 54) is a 19" ELO Touch Monitor, commercially available from Tyco Electronics. The front of the cabinet preferably has a button panel and a card reader on it. This is used in conjunction with a technician card to access the attendant menu feature. When the correct card is inserted, the attendant menu is opened; when the card is removed, the attendant menu is exited. The cabinet contains a logic board 58, bill acceptor 48 and a ticket printer 50. The interior of the game machine 16 can be accessed through the main and cashbox doors, each with its own separate lock. The main door gives access to the logic board 58, printer 50, bill acceptor 48 and power switch. The cashbox door gives access to a stacker, which is behind another lock, and all of the other items that the main door gives access to. Each of the doors has a two-way switch that is monitored by the logic board 58. The video display (monitor 54) may be accessed by opening the main door. The logic board 58 is a locked compartment that may be reached after opening the main door. The logic board 58 is also monitored by a two-way switch. The logic board 58 has two positions for compact flash cards, namely, an inner compact flash position for the system card, and another position where the game compact flash is connected. Both cards must be present during game play and configuration, and a RAM clear is also performed with both cards in position.

[0025] SkilTab games are electronic pull tab games that differ from traditional pull tab games in that they offer pieces of information to the player (patron) in order to calculate the odds of winning and select the most favorable deal to play. These pull tab results come from a master deal. A master deal

is a specific, finite set of predetermined results. Each master deal is loaded onto the game server 12 along with the supporting data necessary to play the games. The game server 12 creates deals which are sets of pointers into master deals. Each master deal is loaded into a SQL database on the game server 12.

[0026] The deals provide a chronological inclusive set of sequence numbers and a set of ticket numbers that have been randomly shuffled by an RNG shuffler. The sequence number will be in the range of 1 to n where n is the number of results in the master deal. The ticket numbers will include each number from 1 to n where n is the number of results in the master deal. The RNG shuffler is resident only on the deal server 10. A form exists for every bet combination that the game machine can generate. For example, a game which is displayed as a "5 reel slot" game may have the betting options of 1, 3, 5, 7, 9, 15 or 20 lines and 1 or 2 credits bet per line. A deal can then be created for each possible combination, such as 1 line and 1 credit per line, 1 line and 2 credits per line, and 3 lines and 1 credit per line. During game play, tab results are drawn from a deal sequentially. Since the ticket numbers are shuffled, results from the master deal are presented in random

[0027] Referring to FIGS. 8A, 8B and 9, the following information is preferably given to a player (patron) in order to make an informed bet:

- [0028] 1. Deal number and type (e.g., 1 Line 1 Credit and Deal#).
- [0029] 2. Tabs dispensed and total tabs in a deal (more generally, total number of tickets in a deal, and total number of tickets that have been played (purchased) or remain to be played (purchased) in the deal).
- [0030] 3. Jackpots dispensed and total jackpots in deal (more generally, total number of jackpots in a deal, and total number of jackpots that have been won or remain to be won in the deal).
- [0031] 4. Winning tabs dispensed and total winning tabs in the deal (more generally, number of winning symbol or number combinations in a deal, and number of tickets having winning symbol or number combinations that have been played or remain to be played in the deal). This includes any tab (ticket) that wins any amount other than 0.
- [0032] 5. Winnings in dollars dispensed and total winnings in the deal (more generally, total winnings in a deal and amount of the total winnings that have been won in a deal or amount of the total winnings that remain to be won in the deal).

[0033] This information is given for each and every deal. The player is also given a list of "flare" information, as shown in FIG. 9. The "flare" information counts for each type of win in the game for each bet possibility (e.g., 1 Line and 1 Credit bet per line).

[0034] In an alternative embodiment, the tickets having winning symbol or number combinations that have been played or remain to be played in the deal are not just provided as a total number, but are broken down by win types, for example, as set forth in the game flare.

[0035] The deal information shown in FIGS. 8A and 8B is presented numerically. However, the scope of the present invention includes presentation formats other than numerical, such as by percentage, or in bar graphs or pie charts.

[0036] When a game machine 16 is initially connected to the game server 12, the game server 12 verifies that the game

machine 16 has been set up within the server configuration (see FIGS. 1 and 2 for system and server setup/configuration) by implementing the following steps: (i) When the game machine 16 is turned on, it connects to the Transaction Portal 36. (ii) The game machine 16 sends a request for setup and gathers the information that the game machine 16 needs to run, which includes the game machine type and payscale information, and it is sent back to the game machine 16 if the game machine's IP address is found and not flagged as 'removed' in the server configuration. (iii) If the game machine 16 is not found, or if there are any errors in the server configuration, the process will error out. (iv) Once verified, the game machine 16 is registered as connected, and the game server 12 will start logging messages and accounting data for that game machine 16.

[0037] The game machines 16 themselves keep track of critical data such as meter information, game recall and event history. This is stored on NVRAM resident on the game machine's logic board 58. Game history is only recallable on the game machine 16. No functionality exists on the game server 12 to recall game history.

[0038] A game machine 16, once initialized and registered by the game server 12, begins play by selecting bet options and then committing to a bet via the play button. The game machine 16 will send a play message to the game server 12, including information on what deal is being played (i.e., the bet options). The game server 12 will receive and respond by handing out the next sequential tab from the appropriate deal. These pieces of information are encoded at the application layer via a proprietary scheme. The network layer has no built in security, only basic cyclic redundancy check (CRC) provided by TCP/IP protocol. The encoded data sent to a game machine 16 will include all relevant information to display an appropriate win, including the win amount and the specific reel combination to display appropriate to the game type. The game server 12 will continue to send out game results in such a manner until the entire deal is out of tabs. At this point, a follow-up deal may be used (typically created when the deals are first randomly shuffled into place), or a new deal will have to be created and then initialized. The game machine 16 keeps up-to-date SkilTab information for the player based on when the player enters the help screens. Once a player selects the help screen button, a request is sent to the game server 12 for information on the deal, and the game server 12 will return updated results at that instant.

[0039] The deal server 10 and the game server 12 are comprised of many different components (installed applications 18 and 30). The following components are the major pieces: [0040] 1. Deal Import 34

[0041] The Deal Import application imports deal data from the form information files. These forms are master sets of game results. The Deal Import 34 takes these game results and puts them into a back office system database (not shown) so that they may be used by games and other system components. The Deal Import application also will generate logs and reports of each import action, giving details of successes and failures or other pertinent events during the importing pro-

[0042] 2. Deal Server application 23

[0043] The Deal Server application 23 is a component of the back office system that is used for creating deals for games. This component creates random sequences of master deals. In this way new deals are created that have the same payback percentages and mathematical statistics, only they

will not have a predictable arrangement of wins and losses. Each deal is composed of a list of game outcomes and a ticket number for each outcome. The deal server application 23 will create new deals in the database that randomly reshuffle the order of those ticket numbers.

[0044] 3. Accounting System 32

The Accounting System 32 allows authorized users the ability to print various auditing, transaction and user reports from the data stored in the back office database. After launching the application and entering a valid username and password, the user selects a report to be printed from several listed in a "Report" menu item (not shown). Upon selecting a report, the user is presented a "Criteria" window (not shown) in which report specific data is entered, such as a date range. After valid criteria are entered, the onscreen version of the report is displayed via a print preview screen. The user can review each page of the report onscreen. If desired, the user can print the report or export it to a file for later use. Reports are available for a large variance of data, most importantly for accounting data such as revenue and hold percentages over a time period (e.g., dollars in/out, play counts, dollars and games played per bet amount, win counts). This accounting system is meant to be used with many different games on a casino floor at once, so some reports are by machine number, and some are for a specific game or pay table of a game. The Accounting System 32 also has a "Maintenance" menu (not shown) which allows configuration options for setting up casino level data, pay tables available, bank setup (as in a bank of machines), and machine setup (e.g., setting of jackpot amounts, pay tables, games). The availability of functionality accessible in this program is determined by the appropriate user permissions. User permissions are controlled by the administrator user account, which can give any level of permissions to existing or new users.

[0046] 4. Transaction Portal 36

[0047] The Transaction Portal 36 is the communication component of the game server 30, handling communications between the game machines 16 and the game server 12. This component handles transferring information between the back office system database and the games, including their configuration, events and game play results.

[0048] 5. Transaction Portal Control 37

[0049] The Transaction Portal Control 37 is an application that allows monitoring of the currently connected game machines 16 to the game server 12 and their status. It also allows the ability to manage the Transaction Portal 36 itself, as well as options for logging events from the Transaction Portal 36.

[0050] FIG. 4 is a self-explanatory flowchart that describes SkilTab's deal lifecycle.

[0051] FIG. 5-7 are self-explanatory flowcharts that describe deal selection (FIG. 5), game play (FIG. 6), and cash out processes (FIG. 7).

[0052] FIGS. 10-12 show database and table information for deal and flare data that implement the preferred embodiment of the present invention described above. FIG. 10 shows the databases that are used. FIG. 11 is an entity relationship diagram of the game flare-related tables. FIG. 12 is an entity relationship diagram of the deal information-related tables.

[0053] FIG. 13 shows an attraction display screen for SkilTab. The attraction display screen informs the player of the type of deal information that is available, as well as informing the player that the game flare page is viewable.

[0054] FIG. 14 shows a screen shot of a game in accordance with one preferred embodiment of the present invention. This game has a 3 line, 5 column matrix. However, the scope of the present invention includes other conventional line/column matrices.

[0055] Having described the hardware and software for implementing SkilTab, the following set of step-by-step rules may be followed for game play:

[0056] 1. When not being played, the monitor displays either the last game played or the deal information noted above. The screen toggles between the two displays in screensaver fashion. The Deal Information shown on a particular game machine in the screen-saver mode is the information that was most recently retrieved from the database server by the previous player. The Deal Information page is timestamped to show when the information was retrieved. Players should additionally have the ability to access the Help Pages, the Pay Table page, the Deal Information pages and the Game Flare page both before and/or after they insert money into the game machine. The Deal Information pages should be updated upon touching the "help" button without needing to insert money into the game machine. The phrase "To Get Latest Deal Information Press Help" should be displayed on the screen saver version of the deal information page only.

[0057] 2. Upon insertion of currency or a ticket voucher, the game machine will automatically retrieve the latest Deal Information. The database server records every transaction and play in real time, so the information retrieved is always current. The Deal Information page, which shows information for every deal that can be played on that game machine, is displayed to the player. The time to register the credits and retrieve and display the latest Deal Information preferably takes less than 5 seconds, thereby ensuring that the player is presented with the most current Deal Information.

[0058] 3. The Deal Information for each deal is labeled clearly with a deal number and the line and credit combination corresponding to such deal, e.g. 10 lines, 5 credits per line. It is organized on the page in the order that the deals can be played on the game machine, e.g., 1 line, 1 credit, 1 line, 2 credits . . . 1 line, 20 credits, to whatever the max bet may be, such as 8 lines, 20 credits.

[0059] 4. The player analyzes the Deal Information and makes a decision as to which deal to play. The player presses the "Return to Game" button to go back to the main screen and select the line and credits combination corresponding to the deal that the player has discerned has the best odds of winning. In an alternative embodiment, the deal information screens (FIGS. 8A and 8B) may be used to select the deal by touching the desired deal. The player then presses the play button. The game machine requests the next result from the game server and displays it on the screen. The game machine is always sent the next tab in order from the deal. The game machine has no affect on which tab is delivered. Further, the game server has no affect on which tab is sent, rather it merely sends the next tab in order. The player account is updated and the transaction is recorded by the accounting system.

[0060] 5. At any time during play, the player can press the Help button to get basic information about the game, as well as retrieve updated Deal Information. Upon pressing the Help button, the game machine queries the database server and retrieves the latest Deal Information and updates that page. The Deal Information does not need to be shown when the player changes the bet.

[0061] The display screen will show the previous game play as the player prepares to select the PLAY button in the same manner as conventional game machines. The display screen in FIG. 14 is not a winning game play based on the game flare. FIG. 15 shows a winning game play.

[0062] Referring again to FIG. 14, if the player does not change the deal selection and hits the PLAY button, the same deal is played. A player may thus mimic the speed of a conventional slot machine if the deal selection is not changed between game plays.

[0063] As discussed above, the present invention is not limited to pull tab ticket environments, and is suitable for use in any ticket-based environment wherein a pool of tickets is established before game play via a deal. The tickets may have any combination of symbols and/or numbers.

[0064] The embodiment of the present invention described above and shown in FIGS. 8A and 8B provides a different deal for each different line/credit combination. In an alternative embodiment of the present invention, multiple deals having the same line/credit combination may be provided for selection. For example, there may be multiple 1 line/1 credit deals and multiple 1 line/3 credit deals to choose from. In another alternative embodiment, there may be multiple deals but only one line/credit combination (e.g., 1 line/1 credit).

[0065] In the embodiment of the present invention described above, all deals are stored at a central game server 12 and the next play in each deal is distributed from the game server 12 to the electronic game machine 16 upon request by a player to purchase a ticket. In an alternative embodiment of the present invention, the deals stored at the game server 12 are initially divided into a plurality of deal subsets, and then the deal subsets are distributed to the electronic gaming machines 16 so that each electronic game machine 16 contains its own deal subsets that are playable independent of the deal subsets played on other electronic game machines 16. In this manner, it is not be necessary for the electronic game machine 16 to communicate with the game server 12 to deliver the next ticket in the selected deal to the electronic game machine 16 upon payment for a ticket since the next ticket would already be present on the electronic game machine 16. Communications preferably still occur between the game server 12 and the electronic game machines 16 for accounting purposes and for loading of new deals, but not for purposes of providing the next ticket in the selected deal to the electronic game machine 16 upon payment for a ticket.

[0066] The pull tabs or tickets may exist in physical form in a manner similar to the pull tabs used in the Lucky Tab IITM gaming machine pull tab dispenser, available from Diamond Game Enterprises, Inc., Chatsworth, Calif. Such a dispenser releases one pull tab ticket at a time off a roll contained inside the cabinet. A barcode scanner reads the back of the ticket as it is dispensed and displays the contents of the ticket on a video monitor. Examples of pull tab machines are shown in U.S. Pat. No. 5,941,771 (Haste, III) and U.S. Pat. No. 5,348, 299 (Clapper, Jr.). Machines such as these may be used to implement the present invention, especially in jurisdictions that require the existence of a physical (paper) version of the game results. These machines need not be connected to a central server for purposes of retrieving deal information since the deal information may be stored locally. Thus, these machines would play as they currently do, except that multiple deals are loaded into the machines, and a deal selection indicator is provided.

[0067] Electronic pull tab machines also exist. These machines are electronically loaded with one or more electronic "digital deals" (i.e., an electronic version of a set of physical tickets). Unlike a lottery terminal or slot machine, the electronic pull tab machine does not select the outcome. It merely dispenses the set of tickets which have predetermined content that provides a predetermined outcome. The electronic pull tabs are dispensed in a previously determined order, such as sequentially. A touch screen is often provided on such machines. Upon receipt of payment, a pull tab appears on the touch screen and the player touches each tab or window to reveal its hidden content. Another type of electronic pull tab machine uses spinning reels which simulate physical reels that display tab results upon stopping. A receipt is printed if the electronic pull tab ticket is a winner. When all of the pull tabs in each available deal are sold, new digital deals must be electronically loaded into the machine to allow for continued play. One example of a touch screen electronic pull tab machine that dispenses "digital pull tabs" is commercially available from Tekbilt USA, Huntingdon Valley, Pa. The digital deal is loaded into the Tekbilt USA machine using a floppy disk and security key. The present invention may be used with such "digital deals," especially in jurisdictions that do not require the existence of a physical (paper) version of the game results. The present invention may be used with networked or stand-alone embodiments of such digital pull tab machines loaded with a plurality of different digital deals. [0068] Some electronic pull tab machines have a multiplier feature. Different deals are assigned to different multipliers. That is, there is a first deal for single credits $(1\times)$, a second deal for double (2x) credits, and a third deal for triple (3x) credits. Thus, if a patron plays 1x and then decides next to play 3x, the electronic pull tab for the 3x is not the next pull tab in the $1 \times$ deal, but instead is the next pull tab in the $3 \times$ deal. If the patron subsequently decides to play another 1x deal (and no other patron has played in between), then the patron receives the next pull tab from the 1x deal. The present invention may be used with such multiple deal machines to add a skill level to such machines that does not currently exist because in conventional electronic pull tab machines that have a multiplier feature, the player does not know the current status of the different deals.

[0069] It will be appreciated by those skilled in the art that changes could be made to the embodiments described above without departing from the broad inventive concept thereof. It is understood, therefore, that this invention is not limited to the particular embodiments disclosed, but it is intended to cover modifications within the spirit and scope of the present invention.

What is claimed is:

- 1.A method of vending tickets from a network of electronic game machines that play a game in communication with a central server, each ticket being associated with a deal of tickets that includes at least some predetermined winning tickets, each electronic game machine adapted to simultaneously play a plurality of different deals and including a deal selection indicator, the method comprising:
 - (a) providing an electronic memory at the central server that includes:
 - (i) a plurality of different deals of tickets for the game;
 - (ii) for each of the different deals:
 - (A) total number of tickets,
 - (B) number of tickets having winning symbol or number combinations, and
 - (C) total winnings; and

- (iii) current status information for each of the different deals including:
 - (A) total number of tickets that have been played or remain to be played,
 - (B) number of tickets having winning symbol or number combinations that have been played or remain to be played, and
 - (C) amount of the total winnings that have been won or amount of the total winnings that remains to be won.
- (b) displaying deal information and the current status information for each of the different deals immediately prior to or concurrently with a patron paying for a ticket, including:
 - (i) total number of tickets and total number of tickets that have been played or remain to be played,
 - (ii) number of tickets having winning symbol or number combinations and number of tickets having winning symbol or number combinations that have been played or remain to be played, and
 - (iii) total winnings and amount of the total winnings that have been won or amount of the total winnings that remain to be won:
- (c) the patron selecting at an electronic game machine which of the plurality of deals to play using the deal selection indicator;
- (d) providing results of the next ticket in the selected deal to the electronic game machine upon payment for a ticket, and informing the patron of the results; and
- (e) updating the current status information in real time immediately after each game play.
- 2. The method of claim 1 wherein step (b) occurs on a display screen of the game machine.
- 3. The method of claim 1 wherein each of the different deals represents at least one of (i) a different bet level, and (ii) a different number of pay lines.
- **4**. The method of claim **1** wherein the tickets are lottery tickets.
- 5. The method of claim 1 wherein the tickets are pull-tab
- 6. The method of claim 1 wherein each ticket is preprinted with game content.
- 7. The method of claim 1 wherein the electronic memory at the central server further includes for each of the different deals:
 - (D) winning symbol or number combinations and their respective winning amounts, and step (b) further comprises displaying the winning symbol or number combinations and their respective winning amounts on a game flare display screen.
- 8. The method of claim 1 wherein step (a)(ii) further comprises (D) total jackpots, step (a)(iii) further comprises (D) total jackpots won or total jackpots that remain to be won, and step (b) further comprises displaying (iv) total jackpot and total jackpots won or total jackpots that remain to be won.
- 9. The method of claim 1 wherein the game includes multiple bet levels and there are multiple deals per bet level.
- 10. The method of claim 1 wherein the game includes only one bet level and there are multiple deals for the one bet level.
- 11. The method of claim 1 wherein step (d) further comprises the electronic game machines retrieving the next ticket in the selected deal from the central server.

- 12. The method of claim 1 further comprising:
- (f) initially dividing the different deals of tickets into a plurality of deal subsets; and
- (g) distributing the plurality of deal subsets to each of the electronic game machines for storage therein,
- wherein step (d) further comprises retrieving the next ticket in the selected deal from the respective deal subset stored in the electronic game machine.
- 13. An apparatus for vending tickets associated with a game, each ticket being associated with a deal of tickets that includes at least some predetermined winning tickets, the apparatus comprising:
 - (a) a central server including an electronic memory that stores:
 - (i) a plurality of different deals of tickets;
 - (ii) for each of the different deals:
 - (A) total number of tickets,
 - (B) number of tickets having winning symbol or number combinations, and
 - (C) total winnings; and
 - (iii) current status information for each of the different deals including:
 - (A) total number of tickets that have been played or remain to be played,
 - (B) number of tickets having winning symbol or number combinations that have been played or remain to be played, and
 - (C) amount of the total winnings that have been won or amount of the total winnings that remains to be won:
 - (b) at least one display screen that displays deal information and the current status information for each of the different deals immediately prior to or concurrently with a patron paying for a ticket, including:
 - (i) total number of tickets and total number of tickets that have been played or remain to be played,
 - (ii) number of tickets having winning symbol or number combinations and number of tickets having winning symbol or number combinations that have been played or remain to be played, and
 - (iii) total winnings and amount of the total winnings that have been won or amount of the total winnings that remain to be won;
 - (c) a network of electronic game machines in communication with the central server, each electronic game machine adapted to simultaneously play a plurality of the different deals associated with the game, and including:
 - (i) a deal selection indicator adapted to allow the patron to select at the electronic game machine which of the plurality of deals to play, and

- (ii) a game display screen that provides results of the next ticket in the selected deal to the electronic game machine upon payment for a ticket for informing the patron of the results, wherein the current status information is updated in real time immediately after each game play.
- **14**. The apparatus of claim **13** wherein the at least one display screen is the game display screen of the electronic game machine.
- 15. The apparatus of claim 13 wherein each of the different deals represents at least one of (i) a different bet level, and (ii) a different number of pay lines.
- 16. The apparatus of claim 13 wherein the tickets are lottery tickets.
- 17. The apparatus of claim 13 wherein the tickets are pull-tab tickets.
- 18. The apparatus of claim 13 wherein each ticket is preprinted with game content.
- 19. The apparatus of claim 13 wherein the electronic memory at the central server further includes for each of the different deals:
 - (D) winning symbol or number combinations and their respective winning amounts, and the at least one display screen further displays the winning symbol or number combinations and their respective winning amounts on a game flare display screen.
- 20. The apparatus of claim 13 wherein the electronic memory further stores for each of the different deals (D) total jackpots, and current information for each of the different deals regarding (D) total jackpots won or total jackpots that remain to be won, and the at least one display screen further displays (iv) total jackpots and total jackpots won or total jackpots that remain to be won.
- 21. The apparatus of claim 13 wherein the game includes multiple bet levels and there are multiple deals per bet level.
- 22. The apparatus of claim 13 wherein the game includes only one bet level and there are multiple deals for the one level.
- 23. The apparatus of claim 13 wherein the electronic game machines are configured to retrieve the results of the next ticket in the selected deal from the central server.
- 24. The apparatus of claim 13 wherein the central server is configured to initially divide the different deals of tickets into a plurality of deal subsets, and distribute the plurality of deal subsets to each of the electronic game machines for storage therein, and wherein the electronic game machines are configured to retrieve the next ticket in the selected deal from the respective deal subset stored therein.

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