

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTERACTIVE COMMUNICATIONS INTERNATIONAL, INC.,

Petitioner,

v.

BLACKHAWK NETWORK INC.,

Patent Owner.

Case No. IPR2024-00465

U.S. Patent No. 11,488,451

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 11,488,451**

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EXHIBIT LIST

Ex.	Description
1001	U.S. Patent No. 11,488,451 (“’451 patent”)
1002	File History for U.S. Patent No. 11,488,451
1003	Declaration of Michael Hutton
1004	<i>Curriculum Vitae</i> of Michael Hutton
1005	U.S. Patent No 7,627,497 (Szrek)
1006	U.S. Pat. Pub. No. 2013/0441768 (Llach)
1007	<i>Interactive Communications International, Inc., v. Blackhawk Network Inc.</i> , PGR2020-00084, Paper 2 (Petition for Post-Grant Review of U.S. Patent 10,769,894)
1008	<i>Interactive Communications International, Inc., v. Blackhawk Network Inc.</i> , PGR2020-00084, Paper 47 (Final Written Decision)
1009	<i>Blackhawk Network, Inc. v. Interactive Communications International, Inc.</i> , 2022-1650, Dkt. 43 (Fed. Cir. June 7, 2023)
1010	U.S. Patent No. 5,511,114 (Stimson-I)
1011	U.S. Patent No. 5,577,109 (Stimson-II)
1012	U.S. Patent No. 5,777,305 (Smith-I)
1013	U.S. Patent No. 6,000,608 (Dorf)
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1017	U.S. Patent No. 8,706,630 (Graves)
1018	U.S. Patent No. 7,093,761 (Smith-II)

1019	U.S. Patent No. 7,344,067 (Beck)
1020	U.S. Patent No. 8,083,133 (Seifert)
1021	U.S. Patent Publication No. US 2010/0051691 (Brooks)
1022	U.S. Patent No. 8,862,504 (Sobek)
1023	U.S. Patent No. 8,424,758 (Esslinger)
1024	U.S. Patent Publication No. 2004/0193464 (Szrek Publication)
1025	U.S. Patent No. 10,296,895 (Llach)
1026	U.S. Patent No. 6,899,621 (Behm)
1027	U.S. Patent No. 6,267,670 (Walker)
1028	U.S. Patent Publication No. 2009/0163263 (Herndon)
1029	U.S. Patent Publication No. 2005/0233797 (Gilmore)
1030	U.S. Patent No. 9,405,984 (Irwin)
1031	Turk & Pentland, “Eigenfaces for Recognition,” <i>Journal of Cognitive Neuroscience</i> , Vol. 3, No. 1 (1991)
1032	<i>Interactive Communications International, Inc., v. Blackhawk Network Inc.</i> , PGR2020-00084, Paper 30 (Petitioner’s Reply to PO’s Response)
1033	File History for U.S. Patent No. 10,769,894
1034	Viola & Jones, “Rapid Object Detection using a Boosted Cascade of Simple Features,” <i>Conference on Computer Vision and Pattern Recognition</i> 2001
1035	<i>Blackhawk Network Inc. v. SL Card Company d/b/a Linq3</i> , Superior Court of the State of Arizona (Complaint)

LIST OF CHALLENGED CLAIMS

Claim	Limitation
1[pre]	A method for providing a manufactured, pre-printed, random draw lottery ticket comprising:
1[a]	(a) receiving, by a third-party transaction processor, a transaction request from a retailer point of sale (POS) to activate the manufactured, pre-printed, random draw lottery ticket, wherein the manufactured, pre-printed, random draw lottery ticket is selected by a customer prior to initiation of a check-out process and is presented by the customer for activation during the check-out process,
1[b]	wherein the third-party transaction processor receives transaction requests from a plurality of different retailers;
1[c]	(b) providing, via a first secured communication, by the third-party transaction processor, to a lottery administration system unique identification information associated with pre-printed lottery ticket information received from the retailer POS without the use of lottery hardware; and
1[d]	(c) receiving, via a second secured communication, by the third-party transaction processor, from the lottery administration system, indication that draw information has been associated with the manufactured, pre-printed, random draw lottery ticket.
2	The method of claim 1, wherein receiving the transaction request comprises receiving unique product information associated with the manufactured, pre-printed, random draw lottery ticket over a secure communication channel from the retailer POS.
3	The method of claim 1, wherein draw information is made available on a printed receipt; by scanning a code on the manufactured, pre-printed, random draw lottery ticket; or by

Claim	Limitation
	entering a unique identifier associated with the manufactured, pre-printed, random draw lottery ticket into an online website or mobile application.
4	The method of claim 1, further comprising receiving unique product information associated with the manufactured, pre-printed, random draw lottery ticket, and wherein the third-party transaction processor provides the transaction requests from plurality of different retailers to a single lottery system.
5	The method of claim 4, wherein the product information is sufficient to determine one or more of: a game type associated with the manufactured, pre-printed, random draw lottery ticket; a wager amount associated with the manufactured, pre-printed, random draw lottery ticket; and a number of wagers associated with the manufactured, pre-printed, random draw lottery ticket.
6	The method of claim 1, further comprising retrieving unique identification information associated with the manufactured, pre-printed, random draw lottery ticket from the received product information.
7	The method of claim 1, further comprising validating the received transaction request.

Claim	Limitation
8	The method of claim 7, wherein validating the received identification information comprises verifying that the product information corresponds to identification information associated with the manufactured, pre-printed, random draw lottery ticket.
9	The method of claim 8, wherein validating the transaction information includes verifying that the product is validly distributed by retailer of the plurality of different retailers.
10	The method of claim 7, wherein the validation comprises age validation.
11	The method of claim 1, wherein the information provided to the lottery administration system includes one or more randomly determined lottery numbers generated at the time the manufactured, pre-printed, random draw lottery ticket is purchased at the retailer POS.
12	The method of claim 1, wherein the information provided to the lottery administration system includes one or more randomly determined lottery numbers associated with the manufactured, pre-printed, random draw lottery ticket prior to the time the manufactured, pre-printed lottery ticket is purchased at the retailer POS.
13	The method of claim 1, wherein the retailer POS does not use lottery hardware at a retailer location to activate the lottery ticket.

Claim	Limitation
14	The method of claim 1, wherein the manufactured, pre-printed, random draw lottery ticket comprises a barcode.
15	The method of claim 14, wherein the barcode comprises a first party information and a second party information.
16	The method of claim 14, wherein the barcode comprises a universal product code and pre-printed lottery ticket information.
17	The method of claim 1, wherein the manufactured, pre-printed, random draw lottery ticket contains information used to redeem a winning prize.
18	The method of claim 1, wherein the lottery administration system generates wagers for the manufactured, pre-printed, random draw lottery ticket and a draw date is assigned to the wagers.
19	The method of claim 1, wherein lottery numbers are entered in a draw.
20	The method of claim 1, wherein the first secured communication, the second secured communication, or combinations thereof are encrypted.
21	The method of claim 1, wherein activation requests are received from the plurality of different retailers and for at least one of the

Claim	Limitation
	plurality of different retailers, the activation requests are received from a plurality of retailer locations and from a plurality of retailer points of sale at the plurality of retailer locations.
22	The method of claim 21, wherein the activation requests include requests for a plurality of different lottery games.
23	The method of claim 22, further comprising validating, by the third-party transaction processor, transaction information from the plurality of different retailers.
24	The method of claim 22, wherein validating the transaction information includes verifying that a product is validly distributed by a retailer of the plurality of different retailers and, where the product is verified, providing the transaction information to the lottery system.

I. INTRODUCTION

Interactive Communications International, Inc. (“Petitioner”) respectfully requests *inter partes* review of claims 1-24 of U.S. Patent No. 11,488,451 (“’451 patent”).

The Board has already found the parent of the ’451 patent, U.S. Patent No. 10,769,894 (the “’894 patent”), to be unpatentable as obvious in view of Szrek. The Federal Circuit has upheld this ruling. Ex. 1008; Ex. 1009. Patent Owner recently filed an IPR petition based on Szrek against U.S. Patent No. 9,865,135, the parent of the ’894 patent. That IPR is pending.

The ’894 and ’451 claims cover overlapping subject matter—they are both directed to conventional point of sale (POS) systems that sell and activate lottery tickets (as well as other physical substrates, such as gift cards or coupons). The ’451 patent further limits the transaction processor of the ’849 patent to a third-party transaction processor that can receive activation requests from multiple retailers. But third-party transaction processors were a well-known and obvious variant. Indeed, that the challenged claims are obvious variants to the ’894 patent’s claims is evidenced by the double patenting rejection issued during prosecution of the ’451 patent, and the terminal disclaimer the applicants filed to overcome that rejection.

As demonstrated below, Irwin discloses a lottery ticket activation system that uses a third-party transaction processor, thereby rendering obvious the Challenged Claims.

In the alternative, the claims would have been obvious over Szrek's system (which disclosed all the limitations of the '849 patent), modified to include the third-party transaction processor disclosed in Llach.

II. STANDING

Petitioner certifies that it is not barred from presenting this Petition.

Petitioner requests cancellation of 1-24 on the following grounds:

Ground	Reference(s)	Basis	Claims
1	Irwin	§103	1-9,11-24
2	Irwin, Szrek	§103	10
3	Szrek, Llach	§103	1-10,12-24
4	Szrek, Llach, Gilmore	§103	11

III. LEVEL OF ORDINARY SKILL

A person of ordinary skill in the art ("POSITA") in January 2015 is an artisan with a working knowledge of POS activation systems and lottery systems that was gained through a mixture of training and work experience in the relevant field such as (i) having a Bachelor's degree in computer science, computer communications, electrical engineering, or equivalent degree, coupled with at least three years of work experience; (ii) having a Master's degree in computer science, computer

communications, or electrical engineering, but having less work experience; or (iii) having no formal degree, but having experience in the relevant field of at least six years of work experience. Ex. 1003, ¶¶13-14. Petitioner's expert, Mr. Hutton, exceeds this definition. *Id.*, ¶15. The Board adopted this level of skill in PGR2020-00084. Ex. 1008, 11.

IV. STATE OF THE ART

A. Early POS Activation Systems

Point of sale activation systems have been in use for years. Ex. 1003, ¶¶27-32. Such activation systems began in the early 1990's in connection with prepaid phone cards. Ex. 1003, ¶33. Requiring cards to be activated avoided a problem with existing cards, where they could be used immediately without activation, which were frequent targets of theft. Ex. 1003, ¶¶34-35; Ex. 1013, 1:59-62.

POS activation systems were developed to require activation at the time of purchase. Ex. 1003, ¶36. As one example, Stimson-I's invention was to "provide a telephone pre-paid calling card system that includes on-site activation of calling cards," including "point-of-sale activation of calling cards" by scanning a barcode, sending a request, verifying the transaction and activating the card. Ex. 1010, 1:60-66, 4:16-23, 5:42-60, 5:5-14; Ex. 1003, ¶37.

B. Expanded Use of POS Activation Systems

Use of POS activation systems quickly expanded to gift cards and lottery tickets. Ex. 1003, ¶40. In Stimson-II, the same POS activation system included the

activation of prepaid “debit cards, smart cards.” Ex. 1011, 6:20-44; Ex. 1003, ¶¶40-41.

Smith-I describes another POS activation system for activating prepaid cards. Ex. 1012, 2:62-64; Ex. 1003, ¶¶42-48. A customer chooses the “prepaid debit card having the desired dollar value, and take[s] it to the cash register at the point of sale.” *Id.*, 7:2-5. There, the “identification number of the prepaid debit card together with an activation request” would be communicated to a “host computer” located “at a remote location.” *Id.*, 7:22-29. The host computer activates the card. *Id.*, 7:31-54. POS activation has become ubiquitous. Exs. 1006, 1013-1023, 1025; Ex. 1003, ¶¶49-63.

C. Sale of Lottery Tickets

Lotteries have been in existence for hundreds of years. Ex. 1003, ¶64

The '451 patent alleges that lottery tickets were only available through “single checkout lane environments such as convenience stores and gas stations” and not through “multi-lane environments such as grocery stores, discount and big box retailers.” Ex. 1001, 1:48-52. To the contrary, POS terminal activation of lottery tickets was well-known. Ex. 1005, Abstract. Szrek and Irwin, as discussed herein, describe such systems. Ex. 1003, ¶¶65-66.

Behm describes another lottery POS activation system. Ex. 1003, ¶¶67-68. Behm uses a POS system with a “pre-printed lottery game ticket dispensing system.”

Ex. 1026, 3:55-61. A “game player traveling through the store while shopping will pick up at least one lottery game token ... and take the token with them to the POS terminal where the token is presented to a sales clerk for being scanned thereat with the other items purchased.” *Id.*, 4:21-25.

Behm also addresses “on-line” lottery games wherein “preprinted lottery game ticket[s]” have a “bar-code printed on the back of the ticket” that “is scanned by the ticket dispenser bar code reader and forwarded” to an “offsite lottery computer in the form of a new ‘Ticket Activation Message.’” *Id.*, 14:5-23. Thereafter, the “the lottery computer records the ticket validation number and authorizes the ticket so that the game ticket is now ‘live,’ and in play.” *Id.*, 14:24-27.

In Walker, the retailer’s POS terminals, which “communicate with a lottery data processing system,” perform “lottery transactions in addition to merchandise transactions.” Ex. 1027, 2:63-3:1; Ex. 1003, ¶69. When a consumer purchases a lottery ticket, a “lottery ticket request” is sent from the POS terminal and received by “the lottery data processing system, which carries out the lottery transaction.” *Id.*, 3:1-8. The “lottery data processing system then transmits lottery ticket information back to the POS terminal, which prints “out a single sales receipt containing both lottery ticket information and information concerning the merchandise being purchased.” *Id.*, 3:8-13.

Herndon describes that “[l]ottery customers present a bar coded ... lottery ‘token’ to the cashier,” “such as a coupon, ticket,” and which “is scanned using the point-of-sale terminal” which sends “lottery data” to “a centralized lottery system for handling the request.” Ex. 1028, [0009]; Ex. 1003, ¶70.

Gilmore describes a system for selling tickets through a retailer POS system by scanning said tickets. Ex. 1029; Ex. 1003, ¶71. A lottery system controller 12 receives the data from the scan and sends an activation request to the lottery system. The lottery system 28 confirms the lottery numbers are recorded, and the controller 12 provides confirmation to the POS system.

V. THE ’451 PATENT

A. Overview

The ’451 patent is directed to “selling pre-printed lottery tickets for random draw lotteries through the retailers POS without the use of additional lottery hardware.” Ex. 1001, Abstract; Ex. 1003, ¶80. As claimed, a consumer retrieves a pre-printed lottery ticket which is activated at a retailer’s POS system. The POS system sends an activation request to a third-party transaction processor, which forwards the request to a lottery administration system.

B. PGR2020-00084

The ’451 patent is a continuation of application No. 15/833,566, which issued as the ’894 patent.

On September 12, 2020, Petitioner filed a PGR petition against the '894 patent. Ex. 1007. Petitioner argued that Szrek or Llach/Szrek rendered obvious the claims of the '894 patent. The Board instituted and, on March 15, 2022, issued a FWD finding all challenged claims obvious. Ex. 1008. The Federal Circuit upheld the Board's decision. Ex. 1009.

The '451 patent's claims recite limitations similar to the '894 patent, which the Board found to be disclosed or rendered obvious by Szrek. Ex. 1003, ¶¶81-87.

One difference between the patents is that the '451 claims expressly recites “third-party transaction processor.” During PGR2020-00084, PO proposed construing the term “transaction processor” from the '894 patent as a third-party transaction processor, which the Board declined to adopt.

C. Prosecution History of the '451 Patent

The applicant made no mention of the PGR proceeding or the art cited during the PGR proceeding (including Szrek and Llach) until after the office provided an issue notification. Ex. 1003, ¶¶88-89. This is despite that the final decision in the PGR issued on March 15, 2022, over four months before the '451 patent's first issue notification.

On March 24, 2022, applicant amended the '451's claims to require a “third-party” transaction processor. Ex. 1002, 205. Applicant again failed to inform the examiner of the FWD or the PGR art. Ex. 1003, ¶89. After an obviousness-type

double-patenting rejection, the applicant filed a terminal disclaimer and, on July 1, 2022, the examiner issued a notice of allowance, and then an issue notification on July 27, 2022. *Id.*, 114, 120-21, 180-82.

On August 2, 2022, nearly two years after the PGR was filed and five months after the PGR's final decision, applicant filed a Petition to Withdraw From Issue, finally informing the examiner that the '451 patent's parent application "was involved [in] proceedings ... before the [PTAB]," but without any substantive discussion, including that the '894 patent was invalidated. *Id.*, 106-07. The Petition was accompanied by a Request for Continued Examination and an IDS finally identifying Szrek and Llach. Ex. 1003, ¶90. The Petition was granted, and on August 31, 2022, the examiner issued another notice of allowance. *Id.*, 24. The Notice of Allowance did not mention the PGR, Szrek or Llach. *Id.*, 25-26; Ex. 1003, ¶91.

VI. OVERVIEW OF THE PRIOR ART

A. Irwin (Ex. 1030)

Irwin discloses a system for "portable lottery ticket sales and redemptions by mobile vendors is provided wherein the vendor have an existing credit or debit card processing interchange." Ex. 1030, Abstract; Ex. 1003, ¶¶72-73. In Irwin's system, a customer activates pre-printed lottery tickets for various lottery games, including on-line games (such as Powerball or Mega Millions) and passive games. Ex. 1030,

9:41-65. These lottery tickets are activated by a merchant's POS system sending a request to a **lottery central site 160** using a pre-existing credit or debit card processing interchange. In most embodiments, the processing interchange constitutes various third-party processors, including an **acquiring processor 110**, an **interchange 120**, and an **issuing processor 125**. *Id.*, 9:66-10:1. The established network can process requests from brick and mortar merchants as well as street vendors. Fig. 11, Fig. 19.

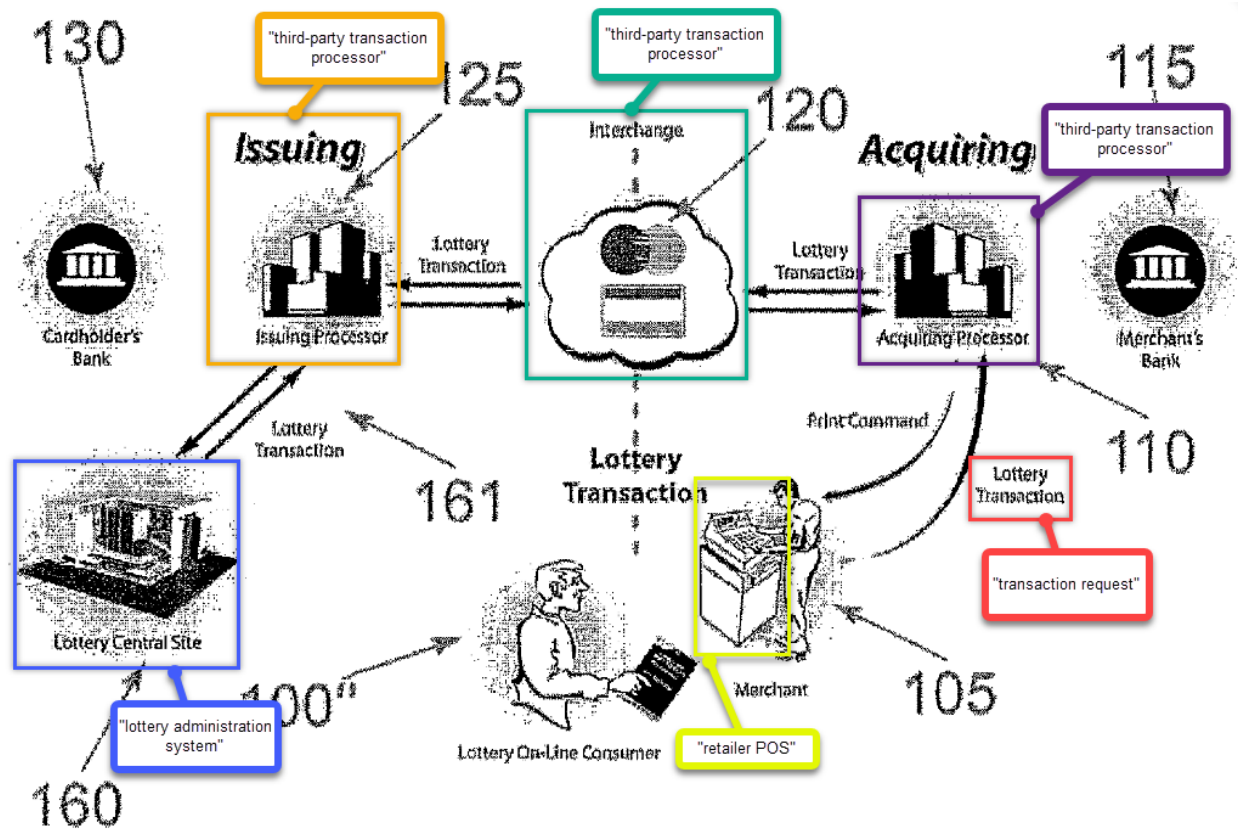


FIG 11

In other embodiments, the acquiring and issuing processors are combined into an **issuing/acquiring processor 110'**, providing a more direct path between the POS terminal and the **lottery central site 160**. Fig. 22; Ex. 1003, ¶74.

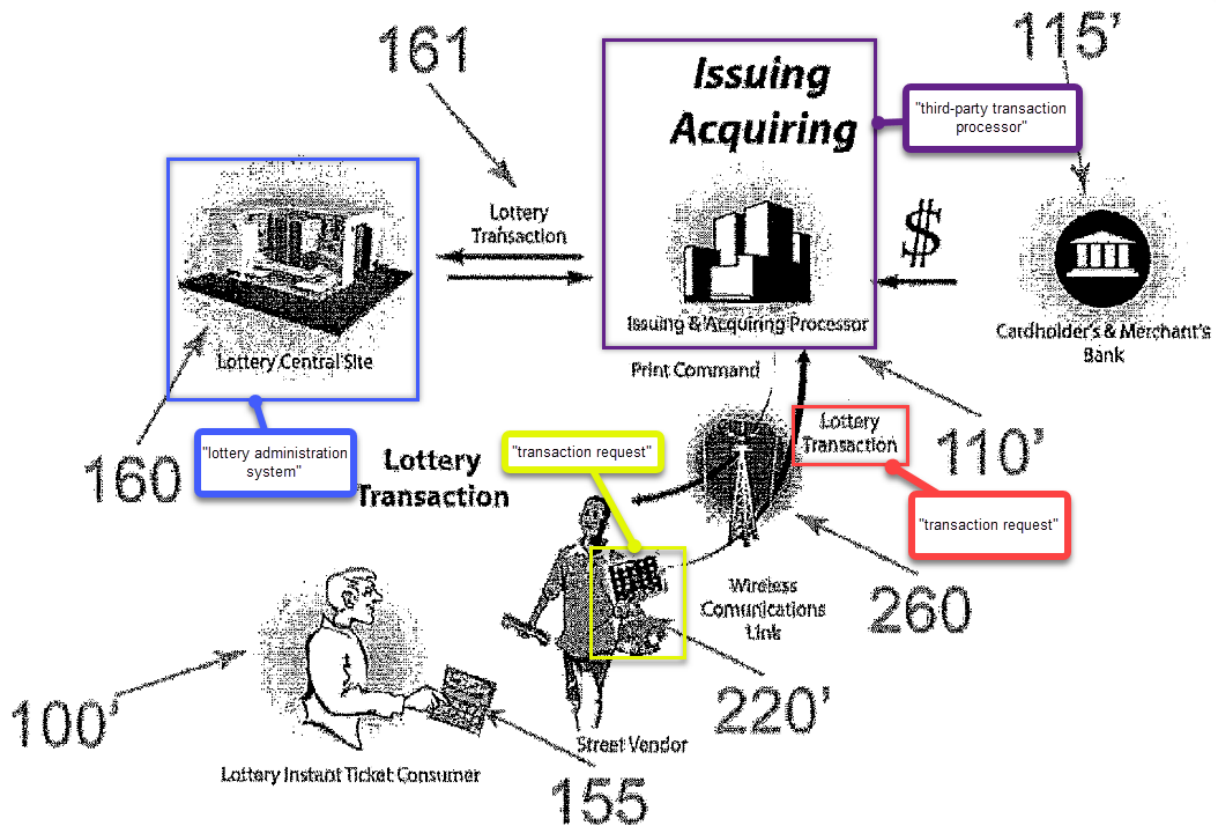


FIG 22

B. Szrek (Ex. 1005)

Szrek discloses a system for selling and activating preprinted lottery tickets. Ex. 1005, Abstract; Ex. 1003, ¶¶75-76. Each ticket “has a barcode 310 that could be scanned on the cash register, with information identifying this barcode as lottery ticket 300 and uniquely identifying the ticket 330.” *Id.*, 6:7-10. The barcode could also include product information like the chosen bet combination or the sequence

counter. *Id.*, 7:21-31. This information is used by a backend game provider to activate a lottery ticket. *Id.*, 6:32-37, 6:44-47. The game provider sends to the POS terminal details about the lottery draw, “such as draw number or draw time, [which is] printed on cash register receipt.” *Id.*, 6:54-59.

C. Llach (Ex. 1006)

Llach discloses a system for activating stored value cards (*i.e.* pre-printed gift cards) at a retailer’s POS. Ex. 1003, ¶¶77-79. Llach discloses that the POS communicates with a third-party transaction computer.

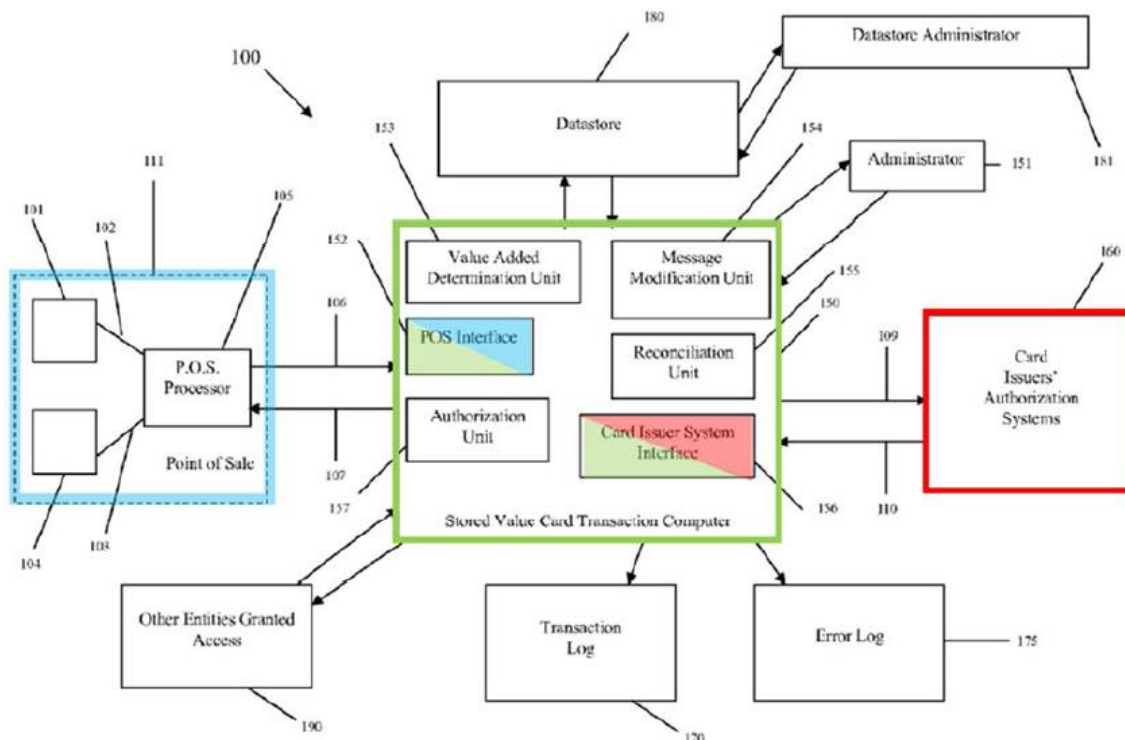


Figure 1

VII. CLAIM CONSTRUCTION

Petitioner applies the ordinary meaning of the terms. Ex. 1003, ¶92.

Petitioner proposes that the plain meaning of “transaction processor” is as the Board construed it in PGR2020-00084: “a processor that processes transactions between two devices,” *See* Ex. 1008, 13-24; Ex. 1003, ¶¶93-94.

The claims and specification are clear that the transaction processor is a separate device from the POS terminal and the lottery administration system. Ex. 1003, ¶¶95-96. With respect to the claims, claim 6 recites a “transaction processor comprising: at least one communication interface for communicating with *other computing systems*” and a “processing unit configure[d]” to “transmit[]” and “receiv[e]” information from a POS terminal or lottery administration system. The claims treat the transaction processor, POS terminal, and lottery administration system as separate components. Ex. 1003, ¶92. The Board in PGR2022-00084 reached a similar conclusion. Ex. 1008, 17-20.

The specification of the ’451 patent further supports that these components are separate, which the Board in PGR2020-00084 agreed. Ex. 1008, 20-22; Ex. 1001, 8:8-15 (“point of sale terminal ..., a lottery system ... and a transaction processor”); 8:59-62 (“transaction processor system ... communicat[es] with devices external to the transaction processor system”); Ex. 1003, ¶96.

In PGR2020-00084, PO argued that “transaction processor” should be construed as a third-party transaction processor. However, the Board declined to adopt that construction. Ex. 1008, 16-17. Because PO amended the claims of the

'451 patent to expressly require a third-party transaction processor, it not necessary to further construe "transaction processor." Ex. 1003, ¶97.

VIII. DETAILED EXPLANATION OF INVALIDITY GROUNDS

A. Ground 1: Claims 1-9 and 11-24 are Rendered Obvious in View of Irwin

Irwin alone renders obvious claims 1-9 and 11-24. Ex. 1003, ¶¶98-172.

1. Claim 1

(a) 1[pre]

Irwin discloses this limitation. *Id.*, ¶¶99-101. Irwin is directed to "Logistics methods for portable, mobile processing of lottery and contest tickets." Ex. 1030, Abstract. Irwin further discloses an embodiment where, "[f]or quick-pick ... purchases of **on-line tickets**," a merchant displays "a plastic hanging card 200" that is manufactured and pre-printed "with a quick-pick coded interchange compatible barcode 201" for customer selection. *Id.*, 9:50-56. These cards are tickets for a **random draw lottery** that supports "quick-pick (i.e., numbers automatically selected for the consumer)," such as "Pick 3, Pick 4, Powerball, Mega Millions," which are random draw lotteries. *Id.* Figure 12 depicts these **manufactured, pre-printed, random draw lottery cards**. Ex. 1003, ¶100.



FIG 12

Irwin also discloses “preprinted passive tickets 224’... sold through street vendors” that are “registered as sold on the central site.” *Id.*, 16:65-17:2. Figure 21 depicts an example of “a preprinted passive ticket,” which is a ***manufactured, preprinted, random draw lottery ticket***. Ex. 1003, ¶101.

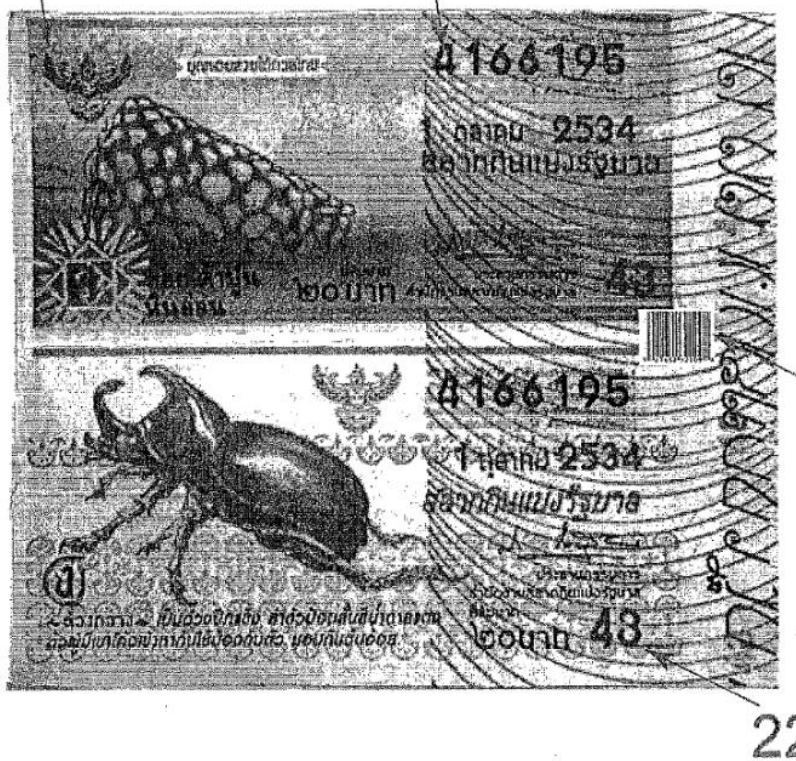
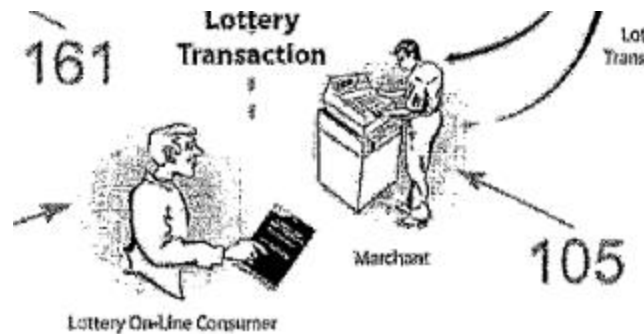


FIG 21

(b) 1[a]

[W]herein the manufactured, pre-printed, random draw lottery ticket is selected by a customer prior to initiation of a check-out process and is presented by the customer for activation during the check-out process: Irwin discloses that “the consumer ... take[s] a plastic hanging card 200 [i.e. **lottery ticket**]... to the merchant,” who will “take the hanging card ... and scan the UPC barcode for the quick-pick sale (202) followed by the interchange compatible barcode 201 to trigger a quick-pick request,” i.e. **a check-out process**. Ex. 1030, 9:51-60; Ex. 1003, ¶¶102-103. Figure 11 depicts a “Lottery On-Line Consumer” **presenting** a hanging card to a “Merchant” at a POS terminal **for activation**.



“Street vendors” also sell pre-printed lottery cards, which are also activated by a **check-out process**. *Id.*, 9:57-58, 12:44-46, 13:40-42, 15:65-16:19. Irwin also discloses that “preprinted passive tickets” are “sold through street vendors,” and a POSITA would understand that such tickets are **selected by a customer** and **presented to the street vendor for activation**. *Id.*, 16:65-17:1. A POSITA would also find it obvious that the street vendor could allow a customer to select and present the preprinted passive tickets because that would allow the customer to choose which ticket to purchase, especially when the vendor may have different types of lottery tickets for sale. Ex. 1003, ¶104.

[R]eceiving... a transaction request from a retailer point of sale (POS) to activate the manufactured, pre-printed, random draw lottery ticket: The merchant scans, using “**POS equipment 105**,” the hanging card’s “barcode 201 to trigger a quick-pick request” (**transaction request**). Ex. 1030, 6:31-35, 9:51-60; Figure 11 (depicting a “Merchant” at a POS terminal 105). This “quick-pick request” is also referred to as a “quick-pick transaction” or, in Figure 11, a “**Lottery transaction**”

and is “forwarded to the **acquiring processor 110** (FIG. 11), routed through the **interchange 120**, to the **issuing processor 125**.” *Id.*, 9:66-10:1; Ex. 1003, ¶105.

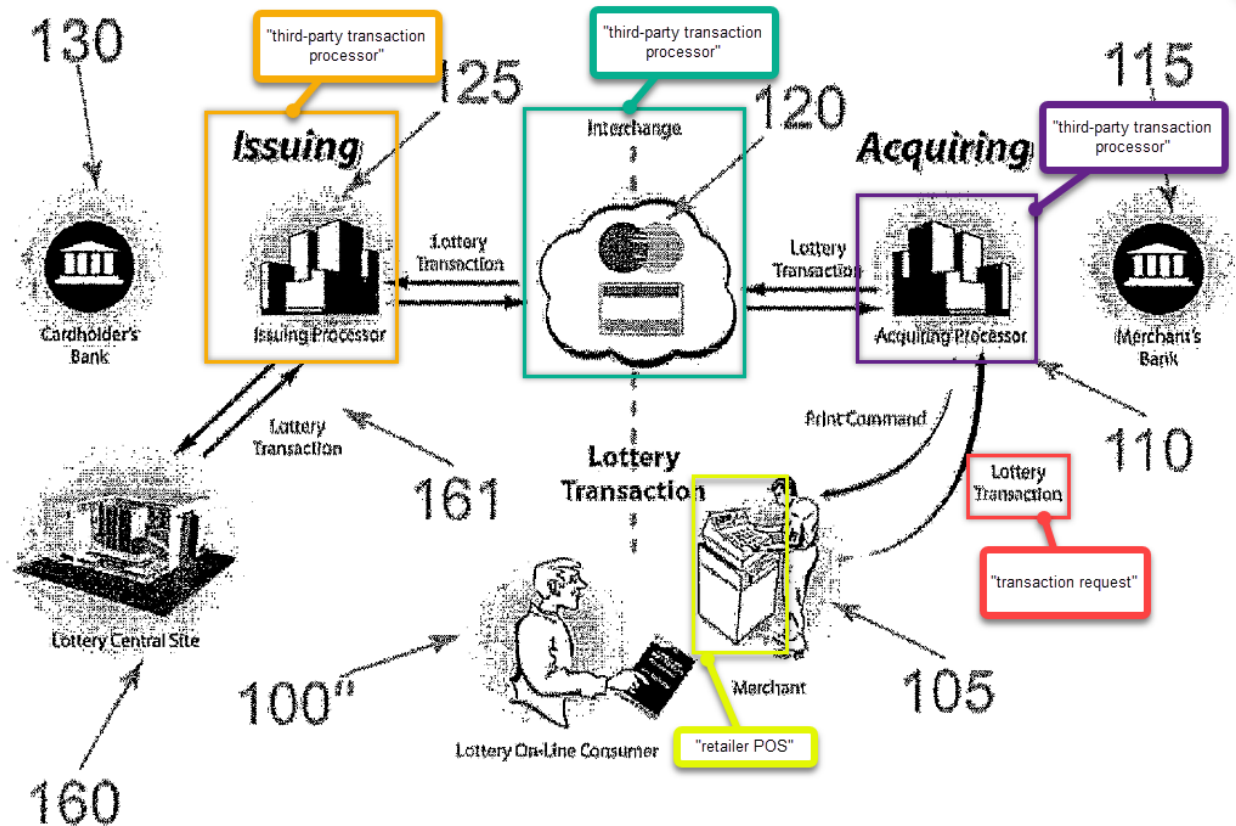


FIG 11

This request results in “[t]he lottery’s central site” activating the ticket by “generat[ing] a pseudorandom quick-pick” and “log[ing] the quick-pick transaction with a generated serial number on its database.” *Id.*, 10:5-9; *see also* 9:43-45 (“on-line ... sales and **validation**”); 7:33-35 (“[T]he utilizing of the merchant’s POS 105 register to log each ticket sold enables each instant ticket to be activated on an individual basis.”); Ex. 1003, ¶106. Thus the quick-pick request is a ***a transaction request to activate the lottery ticket.***

Similarly, when a street vendor sells the pre-printed ticket, he uses a “tablet ... (e.g., Apple iPad)” to validate tickets. *Id.*, 13:19-21, 13:40-42. The tablet is a **POS**. *Id.*, 13:50-14:9. The street vendor’s tablet uses the same network (including the same **Lottery transaction request**, **acquiring processor 110**, **interchange 120**, and **issuing processor 125**) and process as the merchant’s POS terminal to purchase and validate lottery tickets. *See id.*, 16:30-36, Fig. 19; Ex. 1003, ¶107.

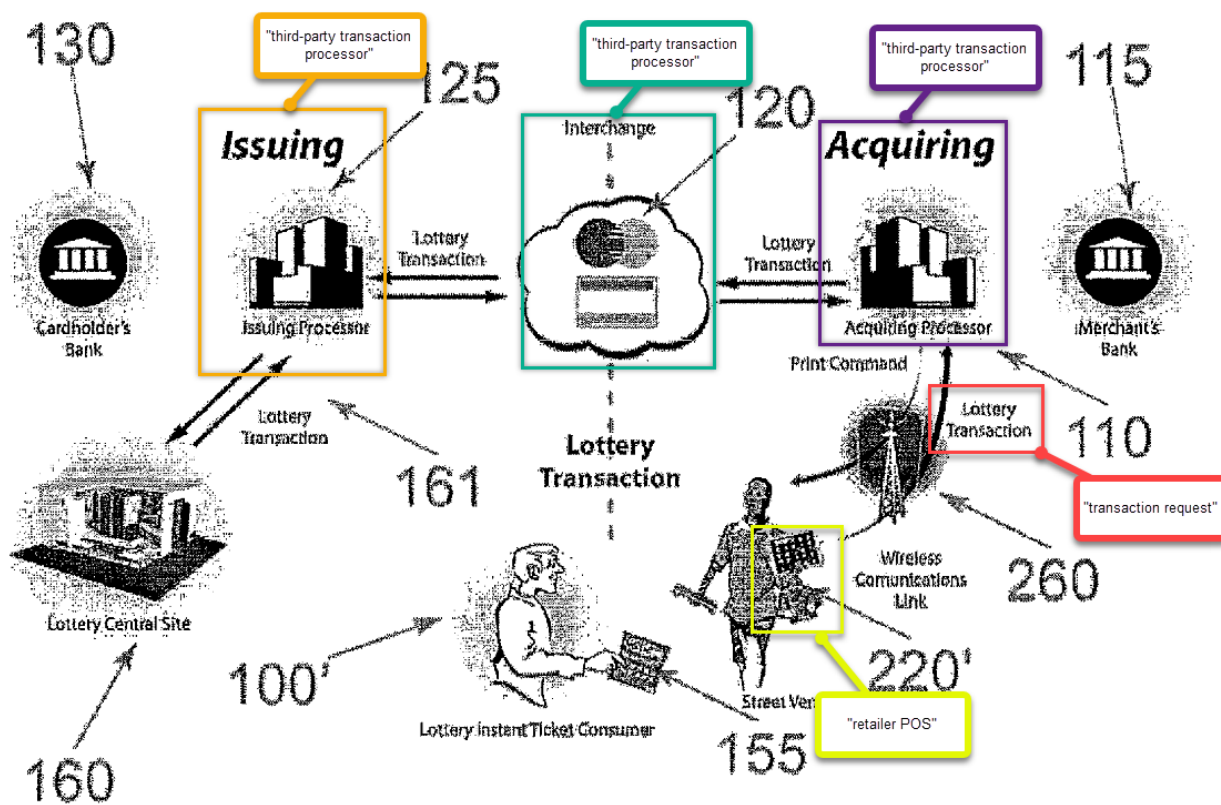


FIG 19

[R]eceiving, by a third-party transaction processor, a transaction request from a retailer point of sale (POS): Irwin discloses a number of *third-party transaction processors* that receive the *transaction request* from the merchant's

POS terminal or tablet, including (1) the “acquiring processor 110,” (2) the “interchange 120,” (3) the “issuing processor 125,” and (4) in some embodiments, the “issuing/acquiring processor.” Ex. 1003, ¶108.

The “acquiring processor 110” is a ***third-party transaction processor*** that receives the ***transaction request*** from the POS terminal. *Id.*, 9:66-10:1, Fig. 11, Fig. 19. Acquiring processor is “the institution that has contracted with the merchant to exclusively conduct his or her debit or credit card transactions.” *Id.*, 4:24-26. Acquiring processor is a ***third-party*** processor because it is a different party than the merchant or the customer. Ex. 1003, ¶109. Acquiring processor is a ***transaction processor***, *i.e.* “a processor that processes transactions between two devices,” because it processes transactions between the merchant’s POS or tablet and the interchange by forwarding the activation request, which it “garner[s] a fee for his or her troubles.” *Id.*, 4:27-29; Ex. 1003, ¶109.

Interchange is a “credit or debit card interchange” that “is actually comprised of multiple operators (e.g., Visa, MasterCard, Discover, etc.).” Ex. 1030, 4:29-31. It is a ***third-party*** processor. Ex. 1003, ¶110. Interchange is a ***transaction processor*** because it processes transactions between acquiring processor and issuing processor by “forward[ing] the transaction information to the Issuing processor 125 of the card.” Ex. 1030, 4:36-38. The “interchange 120” ***receives the activation request from the POS terminal*** via the acquiring processor 110. *Id.*, 9:66-10:1, Fig. 11, Fig.

19. This is consistent with the '451 patent's teaching that "point of sale terminal 202" and "transaction processor 630" are "connected to one other through one or more communication networks 218," which includes exchanging data indirectly using the processors of one or more network access points, such as routers or interconnection hubs. Ex. 1001, 8:9-16; Ex. 1003, ¶110.

The "issuing processor 125" is the issuer of the "debit or credit card account number 106," *e.g.* the customer's bank. *Id.*, 4:39-42. The interchange routes transaction data to a particular issuing processor "based on the Bank Identification Number embedded in debit or credit account number 106." *Id.*, 4:33-38. It is therefore a **third-party** processor because it is a debit/credit-card-issuing bank. Ex. 1003, ¶111. Issuing processor is a **transaction processor** because it processes transactions between interchange and lottery central site by, for example, "detect[ing] either a lottery BIN or a special 'lottery quick-pick BIN' and route the pending transaction ... to the lottery's central site 160." Ex. 1030, 10:1-5. The "issuing processor 125" **receives the activation request from the POS terminal** via the acquiring processor 110 and interchange 120. *Id.*, 9:66-10:1, Fig. 11, Fig. 19; Ex. 1003, ¶111.

In an embodiment depicted in Figure 22, "the issuing and acquiring processors 110' are the same entity" and "there is no need for an interchange." *Id.*, 17:21-23, Fig. 22. This "**issuing/acquiring processor**" receives the **transaction request**

directly from a street vendor's tablet. See Fig. 22. For the same reasons discussed above, the “issuing/acquiring processor” is also a *third-party transaction processor*.

Ex. 1003, ¶112.

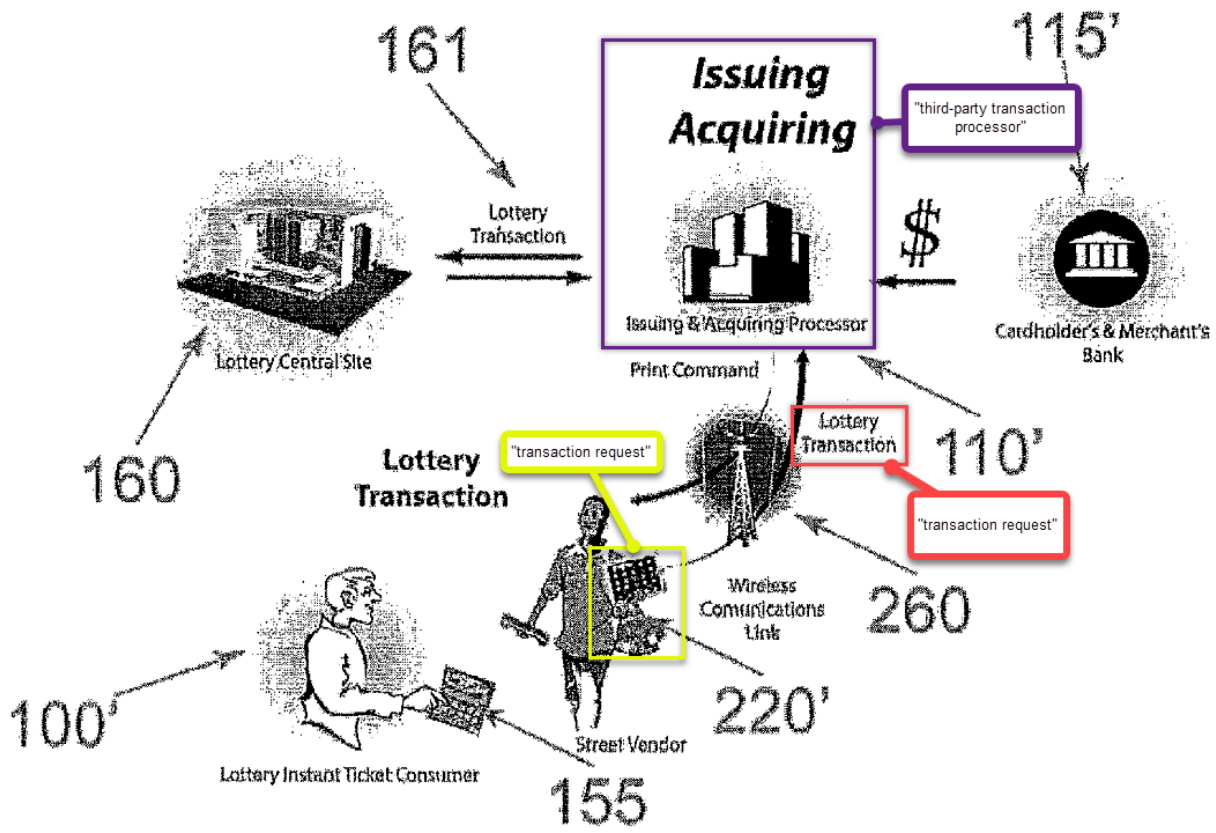


FIG 22

Irwin discloses that the network used for selling and activating lottery tickets has been “readily modified to have the advantage of the street vendor 220’ using the card issuing processor as also the acquiring processor 110’.” Ex. 1030, 17:18-21. A POSITA would therefore understand that the combined issuing/acquiring processor is used for activating lottery tickets. Ex. 1003, ¶113.

However, to the extent PO argues that Irwin does not expressly disclose that the Figure 22 network is used for activating lottery tickets (whether by brick and mortar merchant or street vendor), a POSITA would have found it obvious to use the combined issuing/acquiring processor depicted in Figure 22 for activating lottery tickets. *Id.*, ¶114. A POSITA would have been motivated to do this because “there is no need for an interchange, since the issuing and acquiring processors 110’ are the same entity” and “[t]his elimination of the interchange as well as a separate acquiring processor also removes the associated interchange and acquiring processor fees, thus reducing the communication related costs of the transaction.” Ex. 1030, 17:21-26. A POSITA would have reasonably expected this modification to succeed because the acquiring processor, interchange, issuing processor of Figures 11 and 19 have simply been combined into one processor and the activation process otherwise remains the same (and largely the responsibility of the unchanged lottery central site). Ex. 1003, ¶114.

(c) 1[b]

Irwin discloses that the *transaction processors* “acquiring processor 110,” “interchange 120” and “issuing processor 125” *receive transaction requests from different retailers*. Ex. 1003, ¶¶115-20.

Irwin describes that the “acquiring processor 110” *receives requests from different retailers* because it is “the institution that has contracted with the merchant

to exclusively conduct his or her debit or credit card transactions,” for which it “garner[s] a fee.” Ex. 1030, 4:24-26. In 2015, a POSITA would understand that such institutions were typically large institutions that had contracts with multiple merchants (hundreds, if not thousands) to conduct their transactions on their behalf. Ex. 1003, ¶116. A POSITA would know that such institutions included large banks such as Wells Fargo, JP Morgan Chase, and Bank of America, as well as technology companies such as Square. See, e.g., <https://nilsonreport.com/newsletters/1046/>; *Id.*

Moreover, this acquiring processor is part of “the existing credit/debit interchange network” that is used process different transactions with different merchants. Ex. 1030, 4:15-19. Thus, the “same interchange network” is used for “gift/debit card activation” (*id.*, 4:17-19), activation of “instant (scratch-off) lottery ticket[s]” (*id.*, 6:24-29), and activation of “quick-pick ... purchases of on-line tickets” (*id.*, 9:50-65). Moreover, the same network handles requests from multiple “brick and mortar merchant locations” as well as multiple “street vendors.” *Id.*, 12:44-46. Irwin further describes that “for this system to work, **each merchant** would have to be assigned an unique inventory report card 175 (FIG. 7) with the merchant’s identity encoded on the card ...,” further indicating that the acquiring processor handles requests from multiple retailers. *Id.*, 7:10-14; see also 11:1-3 (“the issuing processor 125 ... would assign separate cryptographic keys to **each participating merchant 105**”); Ex. 1003, ¶117.

Similarly, Irwin describes the “interchange 120” *receives requests from different retailers* because it is “comprised of multiple operators (e.g., Visa, MasterCard, Discover, etc.),” which a POSITA would understand are large credit card companies that handle transactions from numerous retailers. *Id.*, ¶118. As with the acquiring processor, the interchange is also part of “the existing gift/debit interchange network” that is used to handle lottery ticket activation requests from multiple merchants. *Id.*

Similarly, Irwin describes the “issuing processor 125” *receives requests from different retailers* as the issuer of the “debit or credit card account number 106,” e.g. the customer’s bank. *Id.*, 4:39-42. A POSITA would understand that such banks handle transactions from numerous retailers which their customers may visit. Ex. 1003, ¶119. As with the acquiring processor and interchange, the issuing processor is also part of “the existing gift/debit interchange network” that is used to handle lottery ticket activation requests from multiple merchants. *Id.*

For similar reasons, the combined acquiring/issuing processor in Figure 22 also handles requests from multiple merchants and street vendors. *Id.*, ¶120.

(d) 1[c]

[P]roviding... by the third-party transaction processor, to a lottery administration system: Irwin discloses that each of the above *third-party transaction processors* (acquiring processor, interchange, issuing processor,

acquiring/issuing processor) provide, either directly or indirectly, the **activation request** to a “**lottery central site 160**” (*i.e. lottery administration system*) for activation of the lottery ticket. Ex. 1030, 10:1-4, Fig. 11, Fig. 19, Fig. 22; Ex. 1003, ¶¶121-22.

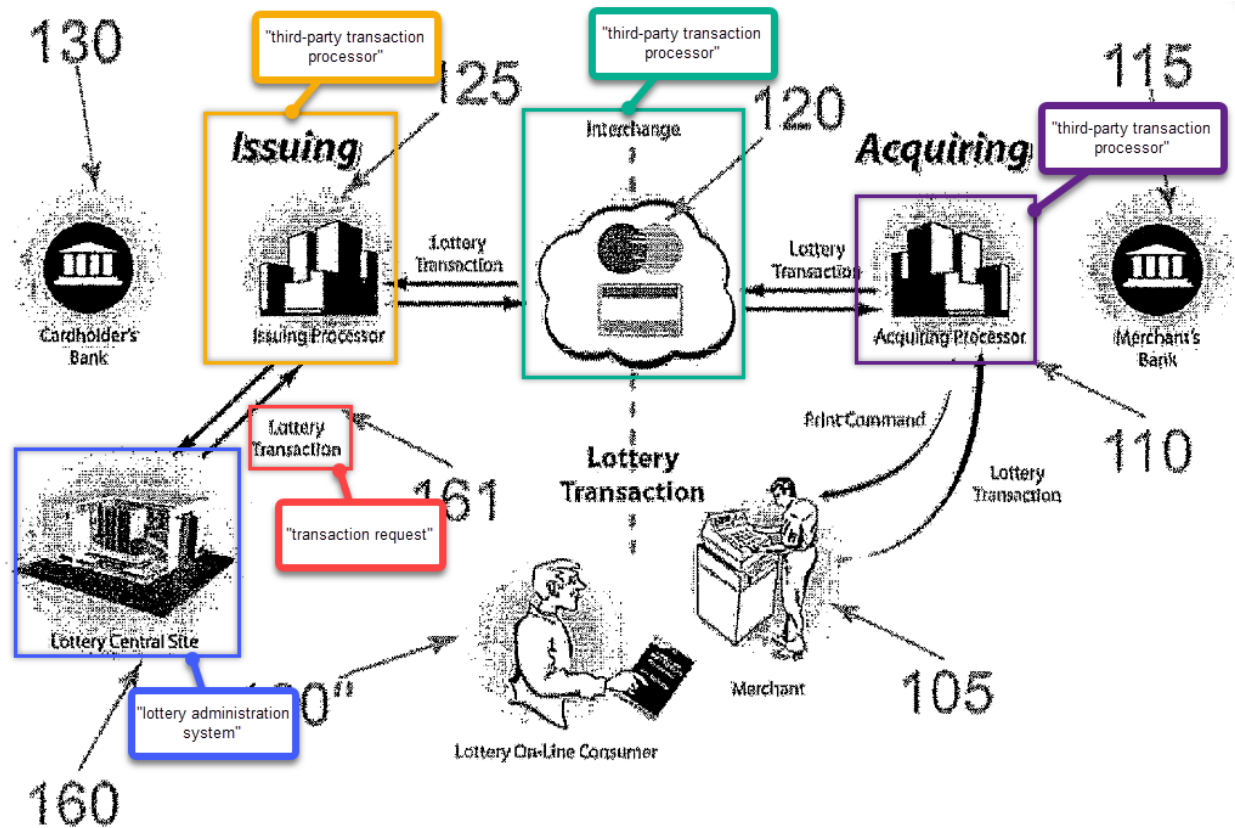


FIG 11

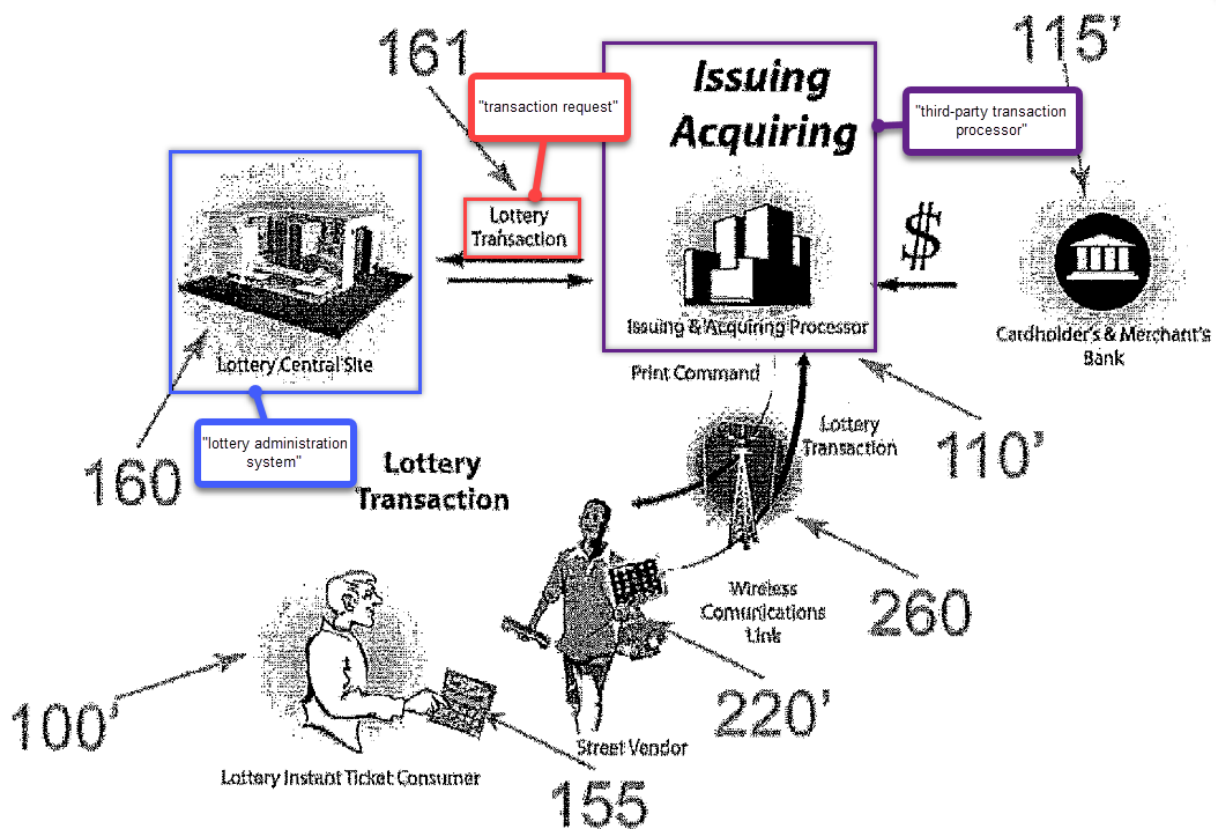


FIG 22

[V]ia a first secured communication: Irwin discloses that the request sent to the lottery central site 160 is a **secured communication**. Ex. 1003, ¶123. Specifically, Irwin discloses that the “interface 161” used to send the request to the lottery central site 160 is “secure to data manipulation or monitoring” and preferably employs “a Virtual Private Network (VPN) ... to ensure that the interface 161 was authenticated and encrypted, with its unique Internet Protocol (IP) addresses secured from monitoring.” Ex. 1030, 6:39-49.

[U]nique identification information associated with pre-printed lottery ticket information received from the retailer POS: The third-party transaction

processors provide to the lottery central system 160 ***unique identification information*** associated with the lottery ticket and received from the POS. Ex. 1003, ¶¶124-27.

Specifically, for preprinted quick-pick cards, the merchant or street vendor POS extracts “a lottery BIN 206” and a “quick-pick coded interchange compatible barcode 201” from the card that are “concatenated to a data blob (207) containing the quick-pick request data,” which is sent to the lottery central site. Ex. 1030, 9:50-65. The lottery BIN is “unique to lottery tickets” and “associated with a lottery data blob also provided on the lottery ticket,” *i.e.* ***unique identification information associated with the lottery ticket***. *Id.*, cl. 1. The interchange compatible barcode likewise “contain[s] the [unique] BIN.” *Id.*, cl. 7. Moreover, since the interchange compatible barcode is “quick-pick coded,” it is likewise ***unique identification information associated with the lottery ticket***; Ex. 1003, ¶125.

For pre-printed passive tickets, they are “printed in advance with unique identifiers.” Ex. 1030, 16:42-44. Figures 20 and 21 depict pre-printed tickets with “unique identifiers 227” and “unique serial number 225.” *Id.*, 16:60-61. The “ticket’s serial number 225’ and 226’ (barcode embodiment of serial number) [are] scanned [using the vendor’s POS tablet] and recorded in a central site database at the time of sale.” *Id.*, 16:67-17:2; Ex. 1003, ¶126.

[R]eceived from the retailer POS without the use of lottery hardware: Irwin discloses that its system “eliminat[es] the need for special vending hardware,” *i.e.* “custom hardware ... installed at the retailer’s place of business.” Ex. 1030, 7:43-49; *see also* 2:56-57 (“eliminate the logistical need for any custom hardware at a retailer POS”). For street vendors, “no special lottery equipment is carried by the street vendor.” *Id.*, 13:24-25; Ex. 1003, ¶127.

(e) 1[d]

[R]eceiving... by the third-party transaction processor, from the lottery administration system, indication that draw information has been associated with the lottery ticket: Irwin discloses that after a pre-printed quick-pick card or pre-printed passive lottery ticket is activated, the lottery central site (*i.e.* ***lottery administration system***) provides draw details for the activated ticket (*i.e.* ***draw information***) to the above third-party transaction processors. Ex. 1003, ¶¶128-31.

For activation of a pre-printed quick-pick card, the lottery central cite “decode[s] the quick-pick request, use[s] a random number generator to generate a pseudorandom quick-pick, log[s] the quick-pick transaction with a generated serial number on its database, and transmit[s] a print command documenting the quick-pick and the assigned serial number to be printed on the merchant’s printer.” *Id.*, 10:5-12. The provision of such draw details, particularly the pseudorandom quick-

pick numbers and the serial number, and the print command are ***indications that draw information has been associated with the lottery ticket***. Ex. 1003, ¶129.

For activation of a pre-printed passive lottery ticket, the ticket will be “registered as sold on the central site,” which involves “tying the ticket to a particular drawing.” *Id.*, 17:3-13. Once registered, the street vendor can “print out a receipt specifying the associated preprinted passive game ticket’s serial number with the drawing’s date and time,” *i.e.* ***draw information associated with the lottery ticket***. *Id.*, 17:13-16. Since it is the lottery central site which associates a ticket to a particular drawing, such draw information was sent by the lottery central site to the street vendor, which is an indication that said draw information was associated with the lottery ticket. Ex. 1003, ¶130.

[V]ia a second secured communication: As depicted in Figures 11, 19, and 22, the draw details from the lottery central site are sent through channel 161, which as described above is a secure channel. Thus, the draw details sent by the lottery central site are a ***secured communication***. Ex. 1003, ¶131.

2. Claim 2

As discussed above for limitation 1[c], for pre-printed quick-pick cards, Irwin discloses that the POS sends a unique “lottery BIN” and a “quick-pick coded interchange compatible barcode 201” with the transaction request. Ex. 1030, 10:1-5, cls. 1, 7. Either of these are ***unique production information associated with the***

lottery ticket because they are information specific to quick-pick and lottery ticket products. Ex. 1003, ¶¶132-36. Irwin also discloses that the “unique lottery BIN” is “associated with a lottery data blob provided on the lottery ticket.” Ex. 1003, Abstract. The term “data blob” is a IT industry term of art commonly used to refer to a portion of a data transmission that contains encoded information that has meaning to the receiving party (in this case the lottery administration system), and contains unique product information, including the game type (*e.g.* quick-pick or passive lottery). Ex. 1003, ¶133.

For pre-printed passive lottery tickets, the POS sends “unique identifiers” and “unique serial numbers. *Id.*, 16:60-61. Either of these are **unique production information associated with the lottery ticket** because they are information specific to pre-printed passive lottery ticket products. Ex. 1003, ¶134.

Irwin also discloses that the “issuing processor ... forward[s] ... the retailer identification code to the lottery's central site 160.” Ex. 1030, 6:54-56. The retailer identification code is also **unique product information** because it is information specific about the location the product was sold. Ex. 1003, ¶135.

While Irwin does not explicitly disclose that this information is sent by the POS terminal to the third-party transaction processor using a **secure communication channel**, as discussed above for limitation 1[c], Irwin does describe that the channel 161 between the issuing processor and the lottery central site is a **secure**

communication channel, such as through the use of a VPN. *Id.*, 6:39-49. A POSITA would have found it obvious to use a similar secure communication channel between the POS terminal and the third-party transaction processors, such as by connecting the POS terminal to a VPN. Ex. 1003, ¶136. A POSITA would be motivated to do this because, as Irwin explains, the use of a VPN “ensure[s] that the interface ... was authenticated and encrypted [and] secured from monitoring.” Ex. 1030, 6:39-49 (“secure to data manipulation and monitoring”). Indeed, since channel 161 between the issuing processor and the lottery central site is secured, a POSITA would find it desirable to secure all of the channels between the POS terminal and the lottery central site to ensure the data is not subject to “manipulation and monitoring” on any of the other channels. Ex. 1003, ¶136. A POSITA would have reasonably expected such a modification to succeed because by the time of the ’451 patent, VPNs were conventional and ubiquitous and well within the capabilities of a POSITA to implement on a network connection. Ex. 1003, ¶136.

3. Claim 3

[W]herein draw information is made available on a printed receipt: As discussed above for limitation 1[d], the process for activating a pre-printed quick-pick card or a pre-printed passive lottery ticket both involve printing a receipt that contains draw information. Ex. 1003, ¶¶137-38.

[B]y scanning a code on the manufactured, pre-printed, random draw lottery ticket: For pre-printed quick-pick cards, activation begins by “scan[ing] the UPC barcode ... followed by the interchange compatible barcode” on the card. Ex. 1030, 9:50-60. For pre-printed passive tickets, the “ticket’s serial number 225’ and 226’ (barcode embodiment of serial number) [are] scanned and recorded in a central site database at the time of sale.” *Id.*, 16:67-17:2; Ex. 1003, ¶139.

4. Claim 4

[F]urther comprising receiving unique product information associated with the manufactured, pre-printed, random draw lottery ticket: See claim 2; Ex. 1003, ¶¶140-41.

[W]herein the third-party transaction processor provides the transaction requests from plurality of different retailers to a single lottery system: As discussed above for limitation 1[b], the “same interchange network” (including the third-party transaction processors and the lottery central site) is used to activate different types of lottery tickets (*e.g.* quick-pick, passive) from different types of merchants (*e.g.*, brick and mortar merchants, street vendors). Moreover, the “lottery central site” is a “single lottery system” because it is central. Ex. 1003, ¶142.

5. Claim 5

As discussed above for claim 2, the product information includes information specific to quick-pick and passive lottery ticket products. Quick-pick and passive

lotteries are different types of lotteries. Ex. 1003, ¶143. Thus, the production information is sufficient to determine the ***game type associated with the lottery ticket***.

6. Claim 6

The “received product information” has no antecedent basis in claim 1, but Petitioner assumes that it includes the “unique identification information” that is sent from the POS terminal to the transaction processor. Ex. 1003, ¶144.

For pre-printed passive lottery tickets, Irwin discloses that “the ticket’s serial number 225’ and 226’ (barcoded embodiment of serial number) [is] scanned and ***recorded in a central site database*** at the time of sale.” 16:67-17:2. As discussed above for limitation 1[c], such information is unique identification information. Since these serial numbers are scanned from the ticket, they must have been sent with the activation request (*i.e. received production information*) and must have been retrieved by the central site in order to record them in the database (*i.e. retrieving unique information*). Ex. 1003, ¶145.

7. Claim 7

Irwin discloses that the activation request is validated by “detect[ing] either a lottery BIN or a special ‘lottery quick-pick BIN’ and rout[ing] the pending transaction through the designated channel 161 to the lottery’s central site 160.” Ex. 1030, 10:1-5. The presence of the “special lottery BIN” indicates that the request

“contained lottery information and to subject the packet to special processing.” *Id.*, 6:13-15. Thus, by detecting and using the lottery BIN to route it to the lottery central site, the system has validated that the request has the required lottery BIN. Ex. 1003, ¶¶146-47.

Irwin further discloses an entire process for “[v]alidations of on-line game tickets (e.g., Pick 3, Pick 4, Powerball, Mega Millions, etc.),” specifically “a perceived winning on-line ticket.” *Id.*, 11:20-12:2. The validation involves the lottery central site “comparing the received serial number to a drawing database to determine if the scanned ticket’s serial number is a winner.” *Id.*, 11:60-62. This validates the transaction request because a ticket cannot be a valid, winning ticket unless the transaction request was successful in activating that ticket. Ex. 1003, ¶148.

Irwin further discloses that the transaction request can be validated by a merchant requesting a merchant-specific “inventory report” from the lottery central site, which “logs every instant ticket sale.” *Id.*, 6:62-7:10. Such inventory reports validate a request by confirming that the request successfully completed. Although Irwin only discloses such inventory reports in the context of “instant tickets” (e.g. scratch-off tickets), a POSITA would have found it obvious to allow for requests for inventory reports for pre-printed quick-pick and passive tickets as well. Ex. 1003, ¶149. A POSITA would have been motivated to do this because, as Irwin explains,

inventory reports provide “inventory control” and resolve “the problem of maintaining a centralized inventory control for ... ticket sales.” Ex. 1030, 6:63-67.

A POSITA would have reasonably expected this to succeed because Irwin already discloses that the central site records quick-pick and passive ticket sales and thus it would be trivial to extend the inventory reports to support those sales. Ex. 1003, ¶149.

8. Claim 8

Irwin discloses that, for validating a quick-pick ticket winner, the acquiring processor “detect[s] the lottery BIN [*i.e.* **product information**]” in order to “forward the data packet ... to the lottery central site 160.” *Id.*, 11:54-58. The central site “extract[s] the on-line ticket validation request, comparing the received serial number [*i.e.* **identification information**] to a drawing database to determine if the scanned ticket's serial number is a winner.” *Id.*, 11:60-62. Determining that a ticket is a winner is verification that the lottery BIN corresponds to the serial number, because the serial number cannot be checked unless the correct lottery BIN is provided. Ex. 1003, ¶¶150-51.

9. Claim 9

Irwin discloses that, for sending an inventory report request, “each merchant would have to be assigned an unique inventory report card 175 (FIG. 7) with the merchant's identity encoded on the card both as human readable 176 as well as

embedded in the proxy barcode 177.” *Id.*, 7:11-14. The unique “proxy barcode” is included in the inventory report request, and the lottery central site verifies the merchant by “identifying data unique to the merchant issuing the request.” *Id.*, 7:14-24; Ex. 1003, ¶152.

10. Claim 11

Irwin discloses that, when pre-printed quick-pick cards are activated, the lottery central site “use[s] a random number generator to generate a pseudorandom quick-pick,” *i.e.* ***randomly determined lottery numbers***. *Id.*, 10:7-8. As explained by Petitioner’s expert, a POSITA would understand that the numbers are generated ***at the time*** of purchase because a POSITA would understand that the time it takes for the activation request to reach the lottery central site and the time it takes to generate random numbers would typically take a few seconds, and possibly less than a second. Ex. 1003, ¶153. A POSITA would understand that the plain meaning of “at the time” does not require simultaneity, because that is physically impossible to achieve with computer systems. *Id.* A POSITA would understand that a few seconds of delay is within the plain meaning of “at the time.” *Id.*

To the extent PO argues that the limitation “at the time” requires that the numbers are generated at the retailer POS, it would have been obvious to a POSITA to generate the numbers on the retailer POS instead of the lottery central site. A POSITA would be motivated to do this because it would distribute the task of

number generation to the numerous retailer POS systems instead of using precious computing resources at the central site. *Id.*, ¶54. Moreover, generating the numbers at the retailer POS would allow for a customer to confirm the randomly-generated numbers, or ask the system to provide a different set of randomly-generated numbers, thereby increasing customer satisfaction. *Id.* Finally, because on-line lotteries allow for customers to choose their own lottery numbers, such lotteries can have multiple winners—there is no need for the retailer POS systems to worry about providing duplicate lottery numbers. *Id.* A POSITA would have reasonably expected this to succeed because using a random number generator to generate pseudorandom numbers was conventional and ubiquitous at the time of the '451 patent, and could be done using the limited processing power of a POS system. *Id.*

11. Claim 12

Irwin discloses that pre-printed passive lottery tickets have “unique identifiers” that are pre-printed on the tickets (*e.g.* element 227’ of Figure 21), *i.e.* ***determined prior to purchase***, and “[d]rawings are subsequently held picking the identifiers that correspond to specific prizes,” *i.e.* the identifiers are ***lottery numbers***. *Id.*, 16:41-45. These identifiers are ***randomly determined*** because the number which a particular customer gets is random. Ex. 1003, ¶¶155-56.

It also would have been obvious to use Irwin’s teaching of a random number generator (*see* Ex. 1030, 10:7-8) to generate lottery numbers for the pre-printed

passive lottery tickets. Ex. 1003, ¶156. A POSITA would have been motivated to do this as it would decrease the possibility of counterfeit lottery tickets, since the counterfeiter would be significantly less likely to know in advance which lottery numbers were valid. *Id.* A POSITA would have reasonably expected this to succeed because using a random number generator to generate pseudorandom numbers was conventional and ubiquitous at the time of the '451 patent. *Id.*

With respect to quick pick tickets, Irwin does not expressly disclose preprinted lottery cards with the quick pick random selections generated and printed at the time of manufacturing of the cards. However, Irwin does disclose an analogous use case involving pre-printed passive lottery tickets, “preprinted passive tickets 224 (FIG. 20) could still be sold through street vendors with the tickets serial number 225' and 226' (barcoded embodiment of serial number) scanned and recorded in a central site database at the time of sale.” *Id.*, 16:65-17:15. A POSITA would have understood that a similar technique could be applied to preprinted lottery quick pick numbers. Ex. 1003, ¶157.

12. Claim 13

As discussed above for limitation 1[c], the merchant and street vendor POS systems do not use any special lottery hardware. Ex. 1003, ¶158.

13. Claim 14

As discussed above for limitation 1[a], the pre-printed quick-pick cards have a UPC barcode and interchange compatible barcode, and the pre-printed passive lottery tickets have a “barcoded embodiment of serial number.” *Id.*, 16:67-17:2; Ex. 1003, ¶159.

14. Claim 15

Irwin discloses that the pre-printed quick-pick cards have a UPC barcode and interchange compatible barcode. The UPC barcode is ***first party information*** because, being a “Universal Product Code,” it is information about the particular quick-pick card, including the lottery that distributes them. Ex. 1003, ¶160. The interchange compatible barcode is ***second party information*** because it is “compatible with the proxy data normally passed over the debit or credit interchange,” *i.e.* it is information about the interchange operator “(e.g., Visa, MasterCard, Discover, etc.).” Ex. 1030, 9:60-63, 4:29-31.

15. Claim 16

As discussed above for limitation 1[a], Irwin discloses that the pre-printed quick-pick cards have a UPC barcode. A POSITA would also understand that the UPC is ***pre-printed lottery ticket information*** because it is information about the particular lottery ticket (*i.e.* the particular quick-pick card) that is being purchased. Ex. 1003, ¶161. The pre-printed quick-pick cards also have an interchange compatible barcode, which is also ***pre-printed lottery ticket information*** because it

is “quick-pick coded,” *i.e.* it is information that the ticket is a quick-pick ticket. Ex. 1030, 9:51-53.

16. Claim 17

As discussed above for limitation 1[a], the pre-printed quick-pick cards have an interchange compatible barcode, and the pre-printed passive lottery tickets have a serial number barcode. Ex. 1003, ¶162. As discussed above for limitations 1[a] and 1[c], this information is included in the activation request and used to activate the lottery ticket. *Id.* Therefore, the information is ***used to redeem a winning prize*** because a winning prize cannot be redeemed unless the ticket is activated first.

17. Claim 18

Irwin discloses that “[w]hen selling on-line tickets the street vendor 220 would ... type ... the specific wager,” which is “logged on the central site database,” *i.e. the lottery administration system*. *Id.*, 16:1-10. Irwin also states that for “brick and mortar retailer POS equipment,” the “consumer’s smart telephone 275 (FIG. 25) application 276’ would accomplish the lottery network wager registration process by automatically changing its display to a barcode 281 that is formatted to be compatible with the proxy data packet 205 (FIG. 13) normally passed over the debit or credit interchange.” *Id.*, 19:47-55. As a result, the wager is “register[ed] ... with the lottery network.” *Id.*, 19:11-12; Ex. 1003, ¶163.

The lottery central site registers the wagers, *i.e. generates wagers for the lottery ticket*. *Id.*, ¶164. Irwin discloses that the wagers are *assigned to a draw date*, specifically that preprinted lottery tickets are “registered ... for a future drawing,” which a POSITA would understand would have a draw date. Ex. 1030, cl. 5. Moreover, Figure 14, which depicts a receipt of an on-line lottery ticket, includes the draw date of September 13, 2012, which would have been received from the lottery central site.

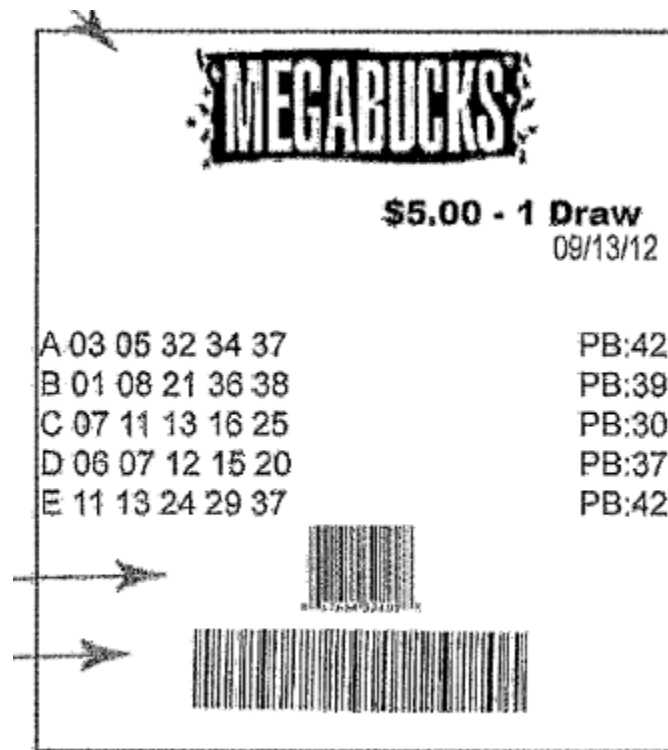


FIG 14

Irwin also describes that for preprinted passive lottery tickets, the ticket’s serial number is associated “with the drawing’s date and time,” which is printed on a receipt. *Id.*, 17:14-17. A POSITA would have considered it obvious to also

associate a quick-pick ticket's wagers with the drawing's date and time, and to have that date and time printed on the receipt. Ex. 1003, ¶165. A POSITA would be motivated to do this because it would "eliminate confusion and/or false claims." *Id.*; Ex. 1030, 17:16-17. A POSITA would have reasonably expected this to succeed because it would have been within the capabilities of a POSITA to modify the lottery central site's database to include the drawing date and time for the quick-pick ticket, which is a trivial change. Ex. 1003, ¶165.

18. Claim 19

Irwin discloses that, for pre-printed quick-pick cards, the lottery central site "use[s] a random number generator to generate a pseudorandom quick-pick," a quick-pick being lottery "numbers automatically selected for the consumer." Ex. 1030, 10:7-8, 9:50-51. These numbers are "log[ged] ... with a generated serial number on [the central site's] database" and "printed on the merchant's printer." *Id.*, 10:8-12; Fig. 14. The quick-pick ticket is "for a given on-line game (e.g., Pick 3, Pick 4, Powerball, Mega Millions, etc.)," *i.e.* the lottery numbers ***are entered in a draw***, such as the Powerball or Mega Millions. *Id.*, 9:54-56; Ex. 1003, ¶166.

19. Claim 20

As discussed above for limitation 1[c] and 1[d], the first and second secured communication use use interface 161 which is a "VPN" that is "encrypted." *Id.*, 6:39-49; Ex. 1003, ¶167.

20. Claim 21

Irwin discloses that retailers can have a ***plurality of retailer locations***, and that each location have a ***plurality of retailer points of sale***. Irwin discloses that a retailer has “stores” and that each store has “POS (Point of Sale) systems.” *Id.*, 2:1. Irwin further discloses that retailers include the “vast majority of big box and drug stores” which sell “gift/debit card[s].” *Id.* A POSITA would understand that “big box and drug stores,” such as Walmart, Target or CVS, typically have multiple locations around the country. Ex. 1003, ¶168.

21. Claim 22

As discussed above for claim 1, Irwin discloses that activation requests include requests for different quick-pick on-line games (such as Powerball or Mega Millions), as well as passive lottery games. Irwin also discloses activation of instant lottery tickets (e.g. scratch-off tickets). Ex. 1030, 6:39-7:24. These are all ***different types of lottery games***. Ex. 1003, ¶169.

22. Claim 23

As discussed above for claim 7, Irwin discloses that an activation request is validated by “detect[ing] either a lottery BIN or a special ‘lottery quick-pick BIN’ and rout[ing] the pending transaction through the designated channel 161 to the lottery’s central site 160.” Ex. 1030, 10:1-5. Such validation is performed by the third-party transaction processors (*i.e.* acquiring processor, interchange, issuing processor, acquiring/issuing processor). Ex. 1003, ¶170.

23. Claim 24

As discussed above for claim 8, Irwin discloses ***validating the transaction information includes verifying that a product is validly distributed by a retailer of the plurality of different retailers***, specifically that the unique inventory report card's proxy barcode is verified during an inventory report request. When the product is verified, the inventory report request is processed by the lottery central site by "generat[ing] the requested inventory report and send a series of print commands back through the same interchange path to cause the merchant's POS printer to print a hardcopy of the report at the merchant's location 105." Ex. 1030, 7:6-10. Thus, the lottery system (including the lottery central site) is provided the inventory report request. Ex. 1003, ¶171.

To the extent Petitioner argues that the claim requires that the validation occurs before the request is sent to the lottery central site, a POSITA would have found it obvious to instead perform the above merchant validation at the third-party transaction processors prior before it is sent to the lottery central site. Ex. 1003, ¶172. A POSITA would have been motivated to do this because performing the verification earlier would reduce the number of network transactions if the merchant cannot be verified, saving time and computing resources. *Id.* Moreover, because the acquiring processor is "the institution that has contracted with the merchant to exclusively conduct his or her debit or credit card transactions" (Ex. 1030, 4:24-26),

a POSITA would find it desirable for the acquiring processor to validate the merchant before performing any debit or credit card transactions. Ex. 1003, ¶172. A POSITA would also have reasonably expected such a modification to succeed, because it would simply involve the minor change of having the acquiring processor (or any of the other third-party transaction processors) perform the merchant validation instead of the lottery central site, which was well within the capabilities of a POSITA at the time of the '451 patent. *Id.*

B. Ground 2: Claim 10 is Rendered Obvious Over Irwin and Szrek

Claim 10 recites “The method of claim 7, wherein the validation comprises age validation.” Ex. 1003, ¶¶173-78.

While Irwin does not expressly disclose age validation, Szrek discloses “verifying a player’s age prior to activating the first ticket to participate in the game event.” Ex. 1005, cl. 19. Szrek discloses that the activation of the ticket occurs after a “point of sale terminal” sends an activation request. *Id.*, cl. 1.

A POSITA would have found it obvious to incorporate Szrek’s age validation into Irwin’s system. Ex. 1003, ¶¶175-78.

As an initial matter, both Szrek and Irwin are analogous art to the '451 patent because all three are directed to systems for selling lottery tickets. Ex. 1001, Abstract (“A system and method of selling pre-printed lottery tickets for random draw lotteries through the retailers POS”), Ex. 1030, Abstract (“A method for

portable lottery ticket sales and redemptions by mobile vendors is provided”), Ex. 1005, Abstract (“The present invention is a method and system for selling game of chance tickets at a point of sale cash register.”); Ex. 1003, ¶176.

A POSITA would have been motivated to combine Irwin’s system with Szrek’s age validation by incorporating Szrek’s teaching of “verifying a player’s age prior to activating” (Ex. 1005, cl. 7) a lottery ticket at the lottery central site as disclosed in Irwin. Ex. 1003, ¶177. A POSITA would understand that this combination would provide the known benefits of age verification, including the ability to enforce age restrictions required by law. *Id.* Moreover, a POSITA would understand that an automated process (or even partially automated process) for age verification would be faster and more reliable than a purely manual process performed by a merchant. *Id.* For example, a POSITA would understand that age could be verified by scanning a government-provided ID card, such as a driver’s license or a passport. *Id.* A POSITA would also understand that the face on the ID card could be matched with the face of the customer either manually or using any face recognition algorithm known at the time. *See, e.g.*, Exs. 1031, 1034.

A POSITA would have reasonably expected the combination to succeed. Manually or automatically verifying a customer’s age by checking their ID card would have been a minor change to Irwin’s system, well-within the skill of a POSITA. Ex. 1003, ¶178.

C. Ground 3: Claims 1-10 and 12-24 are Unpatentable Over Szrek and Llach

As the Board in PGR2020-00084 held, Szrek discloses or renders obvious POS terminals that send transaction requests to a lottery administration system via a transaction processor. Ex. 1008, 30-65. While Szrek does not expressly disclose a third-party transaction processor, Llach discloses a third-party transaction processor and it would have been obvious to modify Szrek to include Llach's third-party transaction processor. Ex. 1003, ¶¶179-254.

1. Rationale to Combine Szrek and Llach

A POSITA would have found it obvious to modify Szrek's system for activating lottery tickets to incorporate Llach's teachings of an intermediary transaction computer between Szrek's cash register and game provider system, as well as Llach's encryption and use of VPN for communications to and from the transaction computer. Ex. 1003, ¶¶180-87.

A POSITA would be motivated to do this because it would expand Szrek's system, allowing it to have a centralized system for activating lottery tickets from different retailers and different locations. This would allow the system to be easily and cheaply extended. Ex. 1003, ¶181. Moreover, a centralized intermediary allows for support for different game providers, such as different lottery companies. This would reduce implementation costs. In addition, Llach discloses a number of features that its transaction computer can perform that would be desirable to a

POSITA, including (1) the ability to communicate “with individual card issuers’ authorization systems 160 to effectuate activation or deactivation of the transaction cards” (Ex. 1006, [0030]), (2) the ability to communicate with “other entities” that may provide useful services, such as “third party payment management systems, third party audit systems, card issuer, affiliated entities, card vendor affiliated entities, redeeming merchants or redeeming merchant affiliated entities, financial institutions, such as banks and credit unions, or any other entity provided access by the stored value card transaction computer administrator.” *Id.*, [0032].

A POSITA would also be motivated to combine the Llach’s teachings into Szrek because Szrek expressly teaches their compatibility. Ex. 1003, ¶182. In particular, Szrek teaches that its process for activating pre-printed lottery tickets “is similar to a model following selling phone cards at the cash register.” Ex. 1006, 2:36-46. According to Szrek, “phone cards do not work unless they are sold and activated through the cash register in the store” and “[i]n this case the sale of the card would be registered and authorization request, including phone card identifier, would be sent to the card issuer or his agent for the phone card activation.” *Id.* This broadly describes the same system disclosed by Llach. Ex. 1003, ¶182. Szrek also discloses that communications between POS terminals and the game provider system can be done “indirectly,” such as through an intermediary like that disclosed in Llach. Ex. 1005, 3:15-17.

Indeed, the well-known application of gift card activation systems for lottery ticket activation is how PO entered the lottery ticket activation business. Ex. 1003, ¶183. PO describes itself as “the largest distribution network of gift cards in the United States and in Canada.” Ex. 1035, ¶14. In Blackhawk’s gift card activation system, “a gift card is purchased at the point-of-sale at a retail partner, an activation request is sent to Blackhawk” which “serves as a central hub, receiving those activation requests from thousands of retail partner stores and routing those transactions to card processors.” *Id.* In mid-2018, Blackhawk took the obvious and well-known step of “use of its network to help sell lottery products, ... where consumers could buy a pre-printed lottery ticket ... and have the lottery ticket activated at the ‘point-of-sale’ and entered into a lottery drawing.” *Id.*, ¶16. PO itself expressly stated that in this system, “lottery tickets could be sold throughout the store and activated at any checkout counter, *just like a gift card.*” *Id.*

Because of these compatibilities between gift card activation systems and lottery ticket activation, a POSITA would understand that the proposed combination would simply be the application of Llach’s known techniques for using a transaction computer to activate substrates to Szrek’s known system. Ex. 1003, ¶184.

A POSITA would have combined Szrek and Llach as proposed with a reasonable expectation of success. Ex. 1003, ¶185. As discussed, Szrek and Llach disclose that their systems are compatible with one another. Incorporating Llach’s

transaction computer with Szrek's system would also be well within the capabilities of a POSITA, because such modification would be minimal and trivial to implement. Indeed, Llach provides numerous implementation details for implementing the functionalities of its transaction computer as well as communications to and from the transaction computer.

Moreover, the combination of Szrek and Llach would have yielded predictable results. A POSITA would have readily understood that combining Szrek with Llach would predictably results in Szrek's system modified to use Llach's transaction computer as an intermediary between the POS terminal and game provider system. Ex. 1003, ¶186.

Like Llach and Szrek, the '451 patent is directed to the field of activating pre-printed cards. Ex. 1001, 1:13-16. All three references, therefore, are directed to the same field of endeavor, and are analogous art. Ex. 1003, ¶187.

2. Claim 1

(a) 1[pre]

Szrek discloses *a method for providing a manufactured, pre-printed, random draw lottery ticket*. *Id.*, ¶¶188-89. Szrek is directed to a “method and system for *selling game of chance tickets* at a point of sale cash register.” Ex. 1005, Abstract. Szrek discloses that these tickets include a “*draw* identifier 460, such as *draw number* or *draw time*.” *Id.*, 6:58. Szrek further discloses that “[t]he ticket can

be ***preprinted*** ... as a computer generated selections (quick pick),” with “quick pick” referring to a random draw. *Id.*, 3:28-31; Ex. 1003, ¶188. The preprinted ticket is ***manufactured*** because it is preprinted “by a commercial printer,” can be “enveloped or covered by latex,” and contain a “manufacturer’s ID.” Ex. 1005, 3:26-27, 3:31-32, 4:46-48.

In PGR2020-00084, the Board concluded that Szrek discloses a similar limitation of “a method of providing a lottery ticket for a random draw.” Ex. 1008, 30; Ex. 1007, 53-54. The Board also concluded that Szrek discloses “a pre-printed lottery ticket.” Ex. 1008, 33; Ex. 1003, ¶189.

(b) 1[a]

[W]herein the manufactured, pre-printed, random draw lottery ticket is selected by a customer prior to initiation of a check-out process and is presented by the customer for activation during the check-out process: Szrek discloses that “[a] lottery player may choose his own selection and ... he may pick up a ticket 300 printed by the commercial printer 140.” Ex. 1005, 6:24-27. The ticket is then “activat[ed] ... via a cash register 230” by a “store clerk.” *Id.*, 6:28-37. Picking up a ticket to be activated by a store clerk requires presenting said ticket to the clerk for activation. Ex. 1003, ¶¶190-91.

[R]eceiving ... a transaction request from a retailer point of sale (POS) to activate the manufactured, pre-printed, random draw lottery ticket: In order to

“activat[e] the lottery ticket 300 via a cash register 230,” “[t]he store clerk scans ticket 300 like any other product,” which results in a “transactional request to the game provider 250.” Ex. 1005, 6:28-37; Ex. 1003, ¶192.

In PGR2020-00084, the Board found it was “undisputed” that “Szrek describes preprinted ticket 300 with unique ticket identifier 330 that, when scanned at the POS terminal (cash register 230), is communicated in a transaction request to a transaction processor (store back office 240) that then provides the transaction request to a lottery administration system (game provider 250).” Ex. 1008, 42; Ex. 1003, ¶193.

[T]hird-party transaction processor: Szrek discloses that the “cash register 230” sends a “transactional request to the game provider 250.” Ex. 1005, 6:28-37. Szrek further discloses that “the cash register is capable of communicating with the game provider system” either “directly or indirectly.” *Id.*, 3:14-17. Szrek, however, does not explicitly disclose that indirect communications with the game provider are routed through a “third-party transaction processor.” Ex. 1003, ¶194.

Llach teaches transmitting an activation request from a POS terminal to a “stored value card transaction computer 150,” *i.e.* **a third-party transaction processor**. Ex. 1006, [0033]. Llach’s transaction computer is a **transaction processor** because it is **a processor that processes transactions between two devices**. Ex. 1003, ¶195. Llach discloses that the transaction computer 150 “may be

implemented on any general-purpose computer with sufficient processing power,” and “includes a **processor** 582.” *Id.*, [0074]. The transaction computer processes transactions between the POS terminal and the card issuers’ authorization system. Ex. 1003, ¶195. The transaction computer processes activation requests from the POS terminal by forwarding them to the card issuer’s authorization system. *Id.*

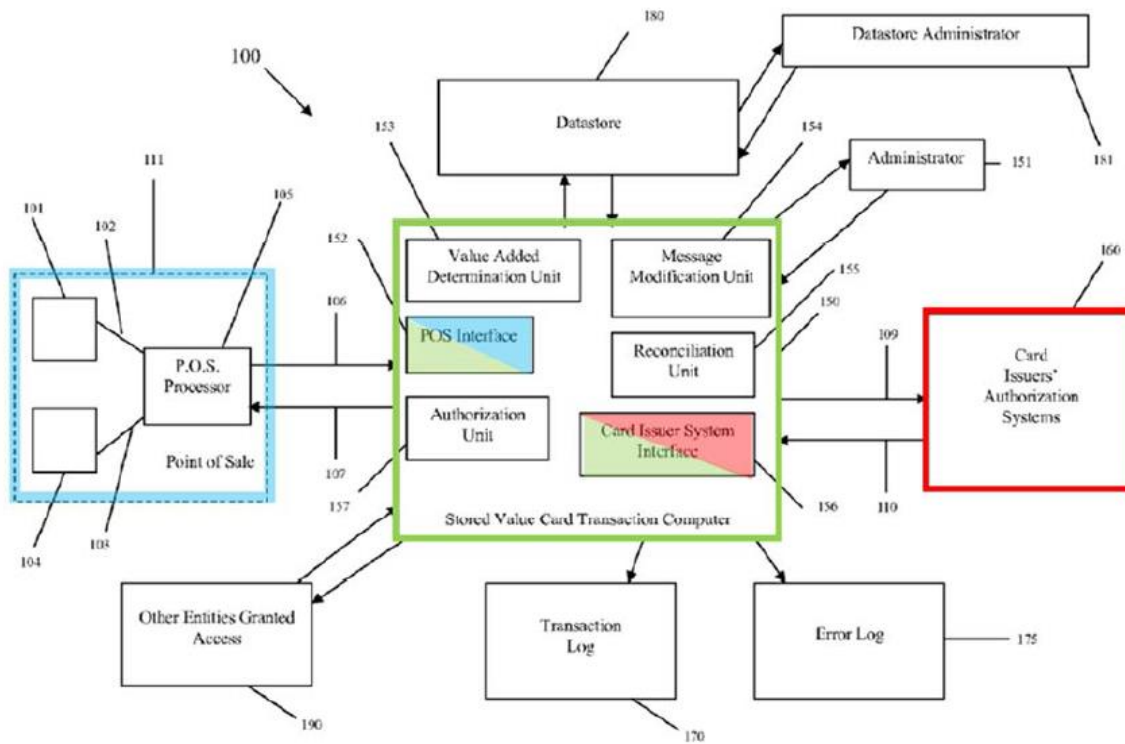


Figure 1

Llach discloses at least four “different” parties: “a card vendor, a redeeming merchant, and a card issuer,” as well as a “consumer.” Ex. 1006, [0013]. Llach also discloses that “in some embodiments,” the “transaction computer” is “part of the same entity” as “the card issuer” and “the authorizing system,” making the

transaction computer a ***third-party transaction processor***. *Id.*, [0040]; Ex. 1003, ¶196.

As discussed above, a POSITA would have found it obvious to incorporate Llach's transaction computer in Szrek as an intermediary processor between the cash register and game provider. Ex. 1003, ¶197.

(c) 1[b]

Llach discloses that “[t]he point of sale where stored value cards are purchased and activated may be referred to as the card vendor or simply vendor” and that “cards may be sold at the same or different card vendor.” Ex. 1006, [0014]. Llach further discloses that the “transaction computer 150” will “communicat[e] with card ***vendors***,” *i.e. a plurality of different retailers*. *Id.*, [0024]. Llach also discloses that the activation request contains the “identification of the activating vendor” and their “location.” *Id.*, [0034]. Llach also discloses that cards from one vendor “may be issued by Store X, by Store Z.” *Id.*, [0014]. Thus, Llach discloses that stored value cards can be purchased at multiple retailers, that the transaction computer communicates with multiple retailers, and that the transaction request identifies which of multiple retailers sent the request. Ex. 1003, ¶¶198-99. A POSITA would understand from these disclosures that Llach's transaction computer receives transaction requests from multiple retailers. *Id.*

As discussed above, a POSITA would have found it obvious to incorporate Llach's transaction computer in Szrek as an intermediary processor between the cash register and game provider. Ex. 1003, ¶200.

(d) 1[c]

[P]roviding... by the third-party transaction processor, to a lottery administration system unique identification information associated with pre-printed lottery ticket information received from the retailer POS without the use of lottery hardware: Szrek discloses that the transaction request sent to the game provider (via the third-party transaction processor in the Szrek-Llach combination) includes the ticket identifier (*i.e. unique identification information*) obtained from the lottery ticket's barcode. Ex. 1003, ¶¶201-202. Szrek states that, "during ticket activation, the game provider ... recognizes *from the ticket identifier* what transaction is activated (e.g. lotto, 6 specific boards known to the system and the player)," which means the game provider must have received the ticket identifier. Ex. 1005, 3:47-50; *see also id.*, 6:36-39 ("game provider ... will activate this ticket by marking a status or state of *corresponding identifier*."). Since the ticket identifier originates from scanning the ticket at the POS terminal, a POSITA would understand based on this disclosure that the POS terminal also sent the ticket identifier to the transaction processor within the transaction request, which was then sent to the game

provider, in order to provide the game provider the necessary information to activate the correct ticket. Ex. 1003, ¶202.

A POSITA would have also considered it obvious for the POS terminal to transmit the ticket identifier to the game provider via the transaction processor (in the Szrek-Llach combination) because the game provider “recognizes ***from the ticket identifier*** what transaction is activated,” and thus transmitting the ticket identifier beneficially allows the game provider to know which ticket to activate and to perform the recited function of activating the ticket. Ex. 1003, ¶203. It would have also been beneficial to transmit the ticket identifier with the transaction request because sending them separately would be slower, less efficient, and more difficult to implement than sending them in a single transaction. Sending them separately would require some mechanism for the game provider to map requests with ticket identifiers—whereas sending them together would allow the game provider to handle the activation request in its entirety. A POSITA would have reasonably expected transmitting the ticket identifier with the transaction request to succeed since transmitting information was a conventional computer process and implementation was within the capabilities of a POSITA, and indeed would be trivial.

Szrek also describes that the cash register scans the ticket ***without the use of lottery hardware***. Specifically, Szrek describes “[t]he goal of the present invention

is to enable the secure sale of lottery tickets at general retail point of sale (POS) checkout points, such as standard cash registers, and other similar devices” rather than utilizing “relatively high cost in-lane lottery terminals.” Ex. 1005, 1:16-32; Ex. 1003, ¶204.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that “Szrek describes preprinted ticket 300 with unique identifier 330 that, when scanned at the POS terminal (cash register 230), is communicated in a transaction request to a transaction processor ... that then provides the transaction request to a lottery administration system (game provider 250)” and that the POS terminal is “without the use of lottery hardware.” Ex. 1008, 42; Ex. 1003, ¶205.

[V]ia a first secured communication: Llach discloses that communications into and out of the transaction computer “may be encrypted for added security and/or may utilize a virtual private network (VPN).” Ex. 1006, [0018]; Ex. 1003, ¶206.

(e) 1[d]

[R]eceiving... by the third-party transaction processor, from the lottery administration system, indication that draw information has been associated with the manufactured, pre-printed, random draw lottery ticket: Szrek discloses that after the game provider (*i.e. lottery administration system*) activates a ticket, it “sends activation receipt info to the cash register” (*i.e. POS terminal*) and that “***only*** an activation receipt for the transaction is printed at cash register.” Ex. 1005, 3:53-

56. In the proposed Szrek-Llach combination, Llach’s “transaction computer” is an intermediary between the game provider and cash register and therefore receives the activation receipt information. Ex. 1003, ¶¶207-208.

The activation receipt is ***an indication that draw information has been associated with the lottery ticket***. Specifically, Szrek discloses that “[o]nce the ticket 300 is activated... the ***original preprinted ticket identifier 330***, ... and valid ***draw identifier 460, such as draw number or draw time***, are printed on cash register receipt.” Ex. 1005, 6:54-59. Because the draw information are included with the “original preprinted ticket identifier,” they are ***associated with the lottery ticket***. Ex. 1003, ¶209.

In PGR2020-00084, for similar reasons, the Board found that Szrek discloses the ’894 patent’s limitation of “receiving, by the transaction processor or retailer, from the lottery administration system, indication that draw information has been associated with the pre-printed ticket,” because there was no dispute that Szrek discloses that the transaction process “receives activation receipt information (determined draw information) associated with the unique identification information in the form of an “Activation Response” from the lottery administration system (game provider 250).” Ex. 1008, 42; Ex. 1003, ¶210.

[V]ia a second secured communication: Llach discloses that communications into and out of the transaction computer “may be encrypted for

added security and/or may utilize a virtual private network (VPN).” Ex. 1006, [0018]. This includes the network communications in the proposed Szrek-Llach combination between the transaction processor and the game provider. Ex. 1003, ¶211.

3. Claim 2

Szrek provides a number of teachings that the scanned barcode contains unique product information, *i.e.* unique information about the lottery ticket product. Ex. 1003, ¶212. Szrek discloses that the “fixed part of the [pre-printed lottery ticket’s] barcode should **indicate the product type**.” Ex. 1005, 6:11-12. Szrek also discloses that “the information in the barcode ... may contain other information such as **lottery product code, ticket price or other data**.” *Id.*, 4:44-46. Szrek also discloses that the ticket identifier itself (which as discussed above is scanned from the barcode) also contains **unique product information**. Ex. 1003, ¶212. For example, Szrek discloses that “part of ticket identifier 330 could correspond to **the bet combination** 350 chosen by the players [or] some element making this ticket unique, such as issued tickets **sequence counter** on said self-service terminal 130 or kiosk 130.” Ex. 1005, 7:21-31. A POSITA would understand that product type, product code, ticket price, bet combination, or sequence counter are all examples of **unique product information** because they are unique information about the product that was purchased, *i.e.* the lottery ticket. Ex. 1003, ¶212.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that “we are persuaded that [Szrek’s] ‘transaction request’ received by the transaction processor from a point of sale (POS) system includes ‘unique product information associated with the pre-printed lottery ticket,’” a limitation from claim 11 of the ’894 patent. Ex. 1008, 56; Ex. 1003, ¶213.

[O]ver a secure communication channel from the retailer POS: See limitation 1[d]. Ex. 1003, ¶214.

4. Claim 3

[W]herein draw information is made available on a printed receipt: See limitation 1[d]. Ex. 1003, ¶¶215-16.

[B]y scanning a code on the manufactured, pre-printed, random draw lottery ticket: Szrek discloses that in order to “activat[e] the lottery ticket 300 via a cash register 230,” “[t]he store clerk scans ticket 300 like any other product,” which results in a “transactional request to the game provider 250.” Ex. 1005, 6:28-37; Ex. 1003, ¶217.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 12 of the ’894 patent, “Petitioner has established that Szrek teaches” claim 12, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶218.

5. Claim 4

[F]urther comprising receiving unique product information associated with the manufactured, pre-printed, random draw lottery ticket: See claim 2; Ex. 1003, ¶¶219-20.

[W]herein the third-party transaction processor provides the transaction requests from plurality of different retailers to a single lottery system: As discussed above for limitation 1[b], a single “Transaction Computer” and “game provider system” is used to activate lottery tickets from a plurality of vendors. Ex. 1003, ¶221.

6. Claim 5

As illustrated in Figure 3 of Szrek, the product information associated with the preprinted lottery ticket includes the game type (bet selections 350, which shows the selected game), wager amount (ticket activation price 380, which shows the amount wagered), and number of wagers (draw info 340, which shows the number of wagers). Ex. 1005, 5:62-6:3; Ex. 1003, ¶222.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 15 of the ’894 patent, “Petitioner has established that Szrek teaches” claim 15, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶223.

7. Claim 6

As discussed above for limitation 1[c], Szrek discloses that the lottery ticket contains a “unique ticket identifier 330” that is scanned and sent as part of the transaction request. Ex. 1003, ¶224.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 15 of the ’894 patent, “Petitioner has established that Szrek teaches” claim 15, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶225.

8. Claim 7

Szrek discloses that “during ticket activation, the game provider system ... verifies if this was a ‘legal’ transaction.” Ex. 1005, 3:46-57. Szrek also discloses that the pre-printed lottery ticket may include “extra security codes so the ticket authenticity may be independently verified” by the lottery administration system. *Id.*, 4:9-18; Ex. 1003, ¶226.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 16 of the ’894 patent, “Petitioner has established that Szrek teaches” claim 16, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶227.

9. Claim 8

Szrek discloses that the game provider “verifies if this was a ‘legal’ transaction” by using the “ticket identifier” which “may indicate, in an algorithmic fashion, what transaction was being activated.” Ex. 1005, 3:46-57; Ex. 1003, ¶228.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 17 of the ’894 patent, “Petitioner has established that Szrek teaches” claim 17, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶229.

10. Claim 9

Llach discloses that its “transaction computer 150 ... determine[s] whether the stored value card to be activated is eligible for a value added award,” by “compar[ing] one or more of the card identification, the terminal identification, vendor identification, and the time and date of the activation request.” Ex. 1006, [0029]; Ex. 1003, ¶230.

Szrek does not explicitly disclose (nor does the patent) a method of associating the pre-printed tickets with a specific retailer such that the identity of retailer activating the ticket could be verified at the POS. However, methods for accomplishing this are well understood and would be obvious to a POSITA if such verification was required. Ex. 1003, ¶231. A POSITA would understand that lottery administrators would require some verification that the submitting retailer was

authorized to sell the tickets. *Id.* Retailers would have undergone a rigorous application process to obtain a Retailer ID in order to participate in lottery sales. *Id.* Therefore it would have been obvious to a POSITA to modify Szrek to include verification that the retailer submitting the request is authorized to distribute lottery tickets. *Id.*

In PGR2020-00084, Petitioner provided a similar obviousness argument for a nearly identical limitation in claim 18 of the '894 patent. The Board “f[ou]nd that persuasive evidence supports Petitioner’s obviousness contention that, at the time of the invention, a skilled artisan would have known Szrek’s validating step ‘includes verifying that the product is validly distributed by the retailer.’” Ex. 1008, 59; Ex. 1003, ¶232.

11. Claim 10

See Ground 2, *supra*; Ex. 1003, ¶233.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 19 of the '894 patent, “Petitioner has established that Szrek teaches” claim 19, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶234.

12. Claim 12

Szrek discloses that, at the time the ticket is purchased, “[t]he preprinted ticket 300 contains ... bet selections 350” and that “[t]he ticket can be preprinted according

to ... a computer generated selections (quick pick),” which a POSITA would understand is a randomly determined lottery number. Ex. 1005, 5:65-6:3, 3:29-31. Szrek discloses that the transaction request includes the bet selections to the game provider. *Id.*, 6:28-38. Szrek also discloses that “the game provider system may learn [a] bet combination from the ticket identifier and authorize this bet.” *Id.*, 7:26–28; Ex. 1003, ¶235.

In PGR2020-00084, with respect to an identical limitation in claim 20 of the ’894 patent, the Board concluded that “at the time of the invention, a skilled artisan would have known the transaction processor may provide information to the lottery administration system of randomly determined lottery numbers associated with a pre-printed lottery ticket prior to the time the ticket is purchased at the POS.” Ex. 1008, 62-63; Ex. 1003, ¶236.

13. Claim 13

See limitation 1[c]. Ex. 1003, ¶237.

14. Claim 14

Szrek discloses that the preprinted lottery ticket includes “security codes” and a “barcode.” Ex. 1005, 4:9-11, 4:39-47; Ex. 1003, ¶238.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 23 of the ’894 patent, “Petitioner has

established that Szrek teaches” claim 23, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶239.

15. Claim 15

Szrek discloses that the “barcode” may contain a “manufacturer’s ID” (first party information) and a “lottery product code” or “product ID” associated with a game provider (second party information). Ex. 1005, 4:40-48; Ex. 1003, ¶240.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 24 of the ’894 patent, “Petitioner has established that Szrek teaches” claim 24, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶241.

16. Claim 16

Szrek discloses that the “barcode” may include an “UPC” (*universal product code*), a “ticket identifier”, and “lottery product code.” Ex. 1005, 4:40-48; Ex. 1003, ¶242.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 25 of the ’894 patent, “Petitioner has established that Szrek teaches” claim 25, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶243.

17. Claim 17

Szrek discloses that the “game provider system could check if the ticket 300 is a winner” and “could say the ticket is a winner and authorize winner payment”

using information on the ticket sent in the authorization request. Ex. 1005, 4:45-50; Ex. 1003, ¶244.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 26 of the '894 patent, “Petitioner has established that Szrek teaches” claim 26, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶245.

18. Claim 18

Szrek discloses that the game provider (*i.e. lottery administration system*) will “provide bets information [*i.e. wagers*] to the commercial printer.” Ex. 1005, 4:1-6. Szrek also discloses that the game provider assigns a “draw number or draw time” to the ticket. *Id.*, 6:54-61. Thus, the game provider generates wagers for the ticket, and a draw date is assigned to the wagers. Ex. 1003, ¶246.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 27 of the '894 patent, “Petitioner has established that Szrek teaches” claim 27, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶247.

19. Claim 19

Szrek discloses the game provider assigns a “draw number or draw time” to the ticket. *Id.*, 6:54-61; Ex. 1003, ¶248.

The Board in PGR2020-00084 similarly held, and PO did not dispute, that with respect to an identical limitation in claim 28 of the '894 patent, “Petitioner has established that Szrek teaches” claim 28, and “that a preponderance of evidence shows that those claims would have been obvious.” Ex. 1008, 46; Ex. 1003, ¶249.

20. Claim 20

Llach discloses that communications to and from the transaction computer are “encrypted for added security and/or may utilize a ... (VPN).” Ex. 1006, [0018]; Ex. 1003, ¶250.

21. Claim 21

Llach discloses that its system contains “at least one point of sale component 111,” which indicates that the transaction computer receives requests from at least one point of sale for a retailer. Ex. 1006, [0018]. Szrek discloses that “[t]he present invention enables” “common POS locations” “to be used to sell such lottery tickets,” *i.e.* Szrek supports sending transaction requests from multiple locations of a retailer. Ex. 1005, 1:63-66; Ex. 1003, ¶251.

22. Claim 22

Szrek discloses that the activation request includes requests for “lotto, 6 specific boards” which are different lottery games. Ex. 1005, 3:47-50. For example, “lotto game 6 of 49” means a lottery game involving picking 6 numbers from 1-49. Ex. 1005, 7:23-24; Ex. 1003, ¶252.

23. Claim 23

See Claim 8; Ex. 1003, ¶253.

24. Claim 24

See Claim 9; Ex. 1003, ¶254.

D. Ground 4: Claim 11 is Unpatentable Over Szrek and Llach in Further View of Gilmore

Claim 11 recites “The method of claim 1, wherein the information provided to the lottery administration system includes one or more randomly determined lottery numbers generated at the time the manufactured, pre-printed, random draw lottery ticket is purchased at the retailer POS.” As discussed above with respect to claim 12, Szrek discloses randomly determining lottery numbers before the ticket is printed, but does not explicitly disclose randomly determining the lottery numbers at the time the ticket is purchased. Ex. 1003, ¶255.

Gilmore discloses this limitation. Ex. 1003, ¶256. Gilmore discloses that “the process proceeds to step 64 which generates a quick-pick transaction and sends the transaction data to a request to the off-site lottery computer 28.” Ex. 1029, [0063].

It was obvious for a POSITA to incorporate into the Szrek-Llach combination Gilmore’s generating of “quick picks” at the cash register, and include the numbers in the activation request to the game provider, such that the numbers would be associated with the ticket as taught by Gilmore. Ex. 1003, ¶257. A POSITA would have been motivated to make the modification in order to distribute the generation

of numbers away from the central office as taught by Gilmore; further reduce the need for a kiosk to print quick-picks; minimize the in-lane wait time associated with the lottery administrator generating the numbers; and provide each quick-pick customer access to all the possible combinations of the current draw, a feature not possible when the random draw is already associated with the pre-printed tickets. *Id.*

A POSITA would have had a high likelihood of success given the generation of random numbers was ubiquitous in processors and relied upon well-known technologies. Ex. 1003, ¶258.

In PGR2020-00084, under similar reasoning, the Board agreed that “Szrek and Gilmore satisfy the elements recited in claims 20 and 43” which have the identical limitation as this claim, “and that a skilled artisan would have had a reason to combine the references’ teachings.” Ex. 1008, 67. The Board adopted the same arguments presented here. Ex. 1003, ¶259.

IX. DISCRETIONARY DENIAL

The Board should not exercise discretion to deny under §325(d).

Grounds 1 and 2 rely on Irwin as the primary reference, which was not cited by the examiner. While Ground 2 relies on Szrek as a secondary reference, the examiner was not presented with the Irwin-Szrek combination as proposed in Ground 2. Moreover, Szrek is used for its disclosure of age verification, which the applicant never disputed was disclosed by the prior art. *See* IPR2019-00975, Paper

15 at 18-19 (precedential) (declining to deny under 325(d) when petition uses uncited base reference).

Grounds 3 and 4 rely on a combination of Szrek with Llach, which was not presented before the examiner. Applicant never disclosed these references to the examiner until after it issued, months after the Board had issued a Final Written Decision invalidating all claims of the parent '894 patent. Applicant included Szrek and Llach with dozens of background references and never informed the examiner of the significance of Szrek and Llach. In its second notice of allowance, the examiner never mentioned Szrek or Llach. It is therefore unlikely that the examiner was aware of the importance of Szrek and Llach, or the arguments that were presented in the PGR2020-00084 Petition.

In addition, the examiner erred in not discussing Szrek and Llach, especially in view of the Board's FWD in PGR2020-00084 relying on Szrek. As demonstrated above, the '894 patent and the '451 patent are remarkably similar, save for the fact that the '894 patent recites a third-party transaction processor. Given the Board's decision invalidating the '894 patent, the examiner needed to merely combine Szrek with any reference that disclosed a third-party transaction processor that handled requests from multiple retailers, such as Llach. It was therefore error for the examiner to not discuss Szrek and Llach. See IPR2015-00486, Paper 10 at 15

(declining to deny under Section 325(d) when references disclosed in an IDS were not discussed by the examiner).

X. MANDATORY NOTICES AND FEES

A. Related Matters

1. Related Patent Office Proceedings

PGR2020-00084 and PGR2020-00085 were proceedings brought by Petitioner against U.S. Pat. No. 10,769,894, which issued from a parent application of the '451 patent. In PGR2020-00084, institution was granted and the Board has issued a Final Written Decision finding all challenged claims unpatentable. In PGR2020-00085, institution was denied.

IPR2023-01235 is a pending IPR proceeding brought by Petitioner against U.S. Pat. No. 9,865,135, which issued from a parent application of the '894 patent.

2. Related Litigation

Blackhawk Network, Inc. v. Interactive Communications International, Inc., No. 2022-1650 (Fed. Cir.) is the appeal from PGR2020-00084. On June 7, 2023, the Federal Circuit issued a non-precedential opinion affirming the Board's Final Written Decision.

Blackhawk Network, Inc. v. SL Card Company Inc., No. 2:21-cv-00813-PHX-MTL (Superior Court of Ariz.) (the "Arizona Litigation") is a lawsuit brought by PO in the Superior Court of Arizona asserting a breach of contract claim against SL Card, a company that an affiliate of Petitioner acquired on March

12, 2019. In the Arizona Litigation, PO alleges that SL Card breached a Product Distribution Agreement after SL Card's then-parent company, Linq3 Technologies LLC, filed patent applications purportedly directed to and Petitioner marketed a product purportedly derived from lottery products Blackhawk claims to be Blackhawk "Intellectual Property" by virtue of its ownership of the '135 patent and its **applications** for the, '894 and '451 patents, among other things, *e.g.*, trade secrets, patent applications, and "other intellectual property." PO does not allege in the Arizona Litigation infringement of any patent.

B. Real Party-In-Interest

The real party-in-interest for Petitioner is Interactive Communications International, Inc.

Patent Owner has asserted in IPR2023-01235 that SL Card Company Inc. ("SL Card") is a real party-in-interest based on allegations it has made in the Arizona litigation. IPR2023-01235, Paper 6 at 32. Petitioner disagrees, though notes that SL Card has **not** been accused of infringing the '451 patent, is **not** time-barred under 35 U.S.C. § 315(b) and does not otherwise lack standing to challenge the '451 patent.

As an initial matter, SL Card is **not** a real party-in-interest. SL Card has no operations, no employees, no customers, no products, few assets, and had no involvement in the drafting of this Petition. In IPR2023-01235, Patent Owner

asserts SL Card is a real party-in-interest because, in the Arizona Litigation, SL Card has denied that Blackhawk has “Intellectual Property” rights in the lottery products at issue, and because SL Card has unclean hands. But the disposition of this proceeding will have no effect on the Arizona litigation, as Blackhawk claims that the lottery products at issue constitute Blackhawk Intellectual Property not based on the claims of the ’451 patent, but based on its ownership of the application that issued as the ’451 patent regardless of the outcome of this proceeding. Also, Patent Owner’s assertion of unclean hands against SL Card is with respect to conduct that other parties, not SL Card, engaged in, *e.g.* SL Card’s now-defunct parent company filing and prosecuting of patent applications and Petitioner’s marketing of lottery products. Moreover, because 35 U.S.C. § 312(a) is not a jurisdictional requirement, there is no need for the Board to resolve this issue. *See Unified Patents, LLC v. Voice Tech Corp.*, IPR2020-01018, Paper 35, at 2-3 (Aug. 10, 2021). To the extent required, Petitioner will seek permission to address any specific arguments PO makes in this proceeding regarding the real party-in-interest issue in a separate pre-institution brief.

C. Counsel and Service Information

Petitioner provides the following counsel and service information.

Petitioner consents to electronic service the email addresses listed in the table

below. Pursuant to 37 C.F.R. § 42.10(b), a Power of Attorney accompanies this
Petition.

LEAD COUNSEL	BACK-UP COUNSEL
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D. Payment of Fees

The undersigned authorizes the Office to charge the fee required for this
Petition for *Inter Partes* Review to Deposit Account No. 50-5708. Any additional
fees that might be due are also authorized.

XI. CONCLUSION

Petitioner requests cancellation of the Challenged Claims.

Date: January 17, 2024

Respectfully submitted,

By: /s/ James M. Glass
James M. Glass

Counsel for Petitioner

**CERTIFICATE OF COMPLIANCE WITH
TYPE-VOLUME LIMITATION, TYPEFACE REQUIREMENTS,
AND TYPE STYLE REQUIREMENTS**

1. This Petition complies with the type-volume limitation of 14,000 words, comprising 13,854 words, as counted using the Microsoft Word software that was used to prepare this paper, excluding the parts exempted by 37 C.F.R. § 42.24(a).

2. This Petition complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft® Word 2016 in 14-point Times New Roman.

Date: January 17, 2024

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on January 17, 2024, true and correct copies of the foregoing document and supporting materials were served in its entirety on the PO at the following address of record as listed on PAIR via Priority Mail Express® or Express Mail:

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