IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INTERACTIVE COMMUNICATIONS INTERNATIONAL, INC.,
Petitioner,

v.

BLACKHAWK NETWORK INC.,
Patent Owner.

_____

Case No. IPR2023-01235

U.S. Patent No. 9,865,135

_____

DECLARATION OF JEFFREY MILLER, PH.D.

BLACKHAWK EXHIBIT 2038.0001
Incomm v. Blackhawk, IPR2023-01235

I, Jeffrey Miller, declare as follows:

I. INTRODUCTION

1. I have been retained by Patent Owner, Blackhawk Network Inc. ("Patent Owner" or "Blackhawk"), to investigate and opine on certain issues relating to Interactive Communications International, Inc.'s ("Petitioner") Petition For *Inter Partes* Review of U.S. Patent No. 9,865,135 B2, Case No. IPR2023-01235 (the "Petition"), which challenges validity of claims 1-6 (the "Challenged Claims") of U.S. Patent No. 9,865,135 ("the '135 patent"). I also have been asked to review certain opinions provided by Michael Hutton in a declaration (EX1003) provided in support of the Petition.

2. I am being compensated at my usual consulting rate of $600 per hour for my technical analysis in this matter. My compensation is not contingent upon the results of my work.

A. Qualifications

3. I am currently the Dean of Engineering and Computational Sciences and a Professor of Computer Science at Southern Utah University (SUU). I have served in this position since July 2022. In this role, I oversee the departments of Computer Science and Cybersecurity (with programs in Computer Science, Software Development, Information Technology, and Cybersecurity), Engineering and

Technology (with programs in Civil Engineering, Mechanical Engineering, Construction Management, and Engineering Technology), Mathematics (with programs in Theoretical Mathematics, Actuarial Mathematics, and Mathematics Education), and Aviation (Fixed-Wing Pilot, Rotor Pilot, Aviation Maintenance Technician, and Aviation Administration and Leadership).

4. I teach courses in the Computer Science and Cybersecurity department, specifically on software engineering and software development. My current research also focuses on the software and network architectures and algorithms used in mobile and wireless communication, ethics in intelligent applications, and science, technology, engineering, and mathematics (STEM) education in K12 and higher education.

5. I was previously the Department Chair of the Information Technology Department and a Professor of Computer Science and Information Technology Practice at the University of Southern California ("USC"). In this role, I oversaw programs in Applied Analytics, Artificial Intelligence, Blockchain, Cloud Computing, Computer Programming, Connected Devices, Cybersecurity, Digital Forensics, Digital Entrepreneur, Mobile App Development, Technical Game Art, Video Game Production, Video Game Programming, and Web Development. I was

employed by USC since August 2013. I taught courses in computer programming, software development, algorithms, and software engineering.

6. As further explained in my CV, from February 2002 through August 2007, I was an Adjunct Professor in the Computer Science department at California State University, Los Angeles (CSULA). From August 2007 through August 2013, I was an Assistant Professor, and later Associate Professor, of Computer Engineering at the University of Alaska Anchorage (UAA). And from December 2009 through August 2013, I served as an Online Adjunct Professor in the Information Technology Program at American Public University System/American Military University System, where I facilitated online education for mostly active or retired military students around the world in the areas of software engineering, computer programming, enterprise development, and networking.

7. In 2005, I founded a company called Imaginary Technology, LLC. As part of my work, I created handheld and standalone point-of-sale systems. The point-of-sale systems allowed customers to order items without an employee, sending the order to the backend system and completing payment unassisted. The system accepted credit/debit card and gift cards, and cash transactions could be completed with the assistance of an employee. During development of the point-of-sale systems, I worked with business owners and potential clients to determine the requirements of

the system, I managed a team of five software engineers to implement and install the systems, and I was responsible for, among other things, procuring hardware and working with customers to improve the system.

8. From January 2001 through June 2001, I developed an e-commerce site that allowed distributors and retailers to automate the ordering of their products. The web site allowed people in the entertainment industry to view, purchase, and download stock footage in real-time without the need for a physical medium to be shipped to them.

9. I graduated from USC, *cum laude*, with a Bachelor of Science degree in Computer Engineering and Computer Science in May 2002. I hold a Master of Science degree in Computer Science from USC (December 2002) with an emphasis in systems and software engineering. In May 2007, I earned a Ph.D. in Computer Science from USC.

10. I am an inventor on U.S. Patent No. 9,715,369, "Vehicle accessory engagement tracking," related to data collection from snowplows for use in intelligent transportation applications.

11. I have secured over $8,500,000 for projects concerning distributed networks and applications, and science, technology, engineering, and mathematics (STEM) education at the K12, undergraduate, and graduate levels.

12. I have been a member of the Institute of Electrical and Electronics Engineers (IEEE) since 2002 and became a senior member in 2015. "IEEE, an organization dedicated to advancing innovation and technological excellence for the benefit of humanity, is the world's largest technical professional society."[1] I have been a member of the IEEE Education Society, the IEEE Communications Society, the IEEE Computer Society, the IEEE Intelligent Transportation Systems Society, and the IEEE Vehicular Technology Society.

13. I have been a member of the Association of Computing Machinery (ACM) since 2002, and I became a senior member in 2017. "ACM brings together computing educators, researchers, and professionals to inspire dialogue, share resources, and address the field's challenges. As the world's largest computing society, ACM strengthens the profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence."[2] I have been a member of the ACM Special Interest Group on Computer Science Education.

14. I have authored or co-authored 75 technical publications and a lab manual accompanying a textbook on computer security.

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[1] https://www.ieee.org/about/ieee-history.html

[2] https://www.acm.org/about-acm/about-the-acm-organization

15. My curriculum vitae, which is EX2039, contains a more detailed description of my background.

B. Scope of Review

16. As indicated, I have been tasked to review a petition for *inter partes* review filed by Petitioner relating to the Challenged Claims of the '135 Patent. I understand that the parties are involved in litigation involving lottery ticket systems. I have not undertaken a review of materials from that litigation.

17. I understand that, in this *inter partes* review, Petitioner asserts that the Challenged Claims are invalid over prior art on the following Grounds:

Ground 1:	Claims 1-6 are challenged as obvious over Szrek, U.S. Patent No. 7,627,497 ("Szrek").
Ground 2:	Claims 1-6 are challenged as obvious over Llach, U.S. Patent Publ'n. No. 2013/0441768 ("Llach") in view of Szrek.

See Petition, paper 2 at 2 (herein "Pet."). As explained herein, it is my opinion that the Challenged Claims are not obvious on the Grounds presented.

C. Materials Considered

I considered the materials referenced in this declaration when developing my opinions, including the following:

- Incomm's Petition for *Inter Partes* Review of U.S. Patent No. 9,865,135, IPR2023-01235, paper 1, and exhibits thereto;

- Decision Granting Institution of Inter Partes Review, IPR2023-01235, paper 11;
- U.S. Patent No. 6,322,446 (EX2041); and
- The Deposition of Michael Hutton, conducted May 2, 2024 (EX2044).

II. THE APPLICABLE LAW

18. I am not an attorney, and I am not providing any expert opinions on the law. However, I have been advised of certain basic legal principles applicable to my analysis in this report, and I have applied those principles in forming my opinions. Those principles are provided below:

A. General Patent Law

19. I understand that determining the validity of a patent requires a two-step analysis. First, the meaning and scope of the patent claims are construed, and second, the construed claims are compared to the prior art.

20. I understand that, in the context of an *inter partes* review, the prior art may comprise patents or printed publications. I also understand that a "printed publication" is a publication sufficiently accessible to the public interested in the art and depends upon dissemination and accessibility.

B. Level of Ordinary Skill in the Art

21. I understand there is a concept in patent law known as the "person having ordinary skill in the art" ("POSITA," for short). I understand that this concept refers

to a person who is trained in the relevant technical field of a patent without possessing extraordinary or otherwise exceptional skill. I further understand that factors such as the educational level of those working in the field, the sophistication of the technology, the types of problems encountered in the art, prior art solutions to those problems, and the speed at which innovations are made may help establish the level of skill in the art. I understand the level of skill of the person of ordinary skill is to be assessed at the time of the claimed invention.

C. Principles of Claim Construction

22. I understand that, to construe the meaning of a claim term, a court will first look to the claim language itself and its usage in context with other claim terms. I understand that courts will defer to the ordinary and customary meaning that the terms would have to a POSITA at the time of the invention.

23. I also understand that a court will look to intrinsic evidence if the meaning of the term to a person having ordinary skill in the art at the time of the invention is unclear. I have been informed that this intrinsic evidence includes the context of the words in the claim, the specification of the patent, and the prosecution history of the patent.

24. I understand that claim terms are interpreted within the context of other terms from the claim. For example, when a claim lists elements separately from each other,

the claim language provides a clear implication that those elements are distinct components of the patented invention.

25. I understand that the specification is considered the single best guide to the meaning of a disputed term. I understand that, while the specification is to be used to interpret terms presented in a claim, it is impermissible to import limitations from the specification into a claim.

26. I understand that the prosecution history is an important source of intrinsic evidence and generally relevant to the proper interpretation of a claim. I understand that the prosecution history can provide additional context that, in addition to the written description, is helpful in interpreting the claims. Further, I have been informed that prosecution history is useful in determining what the patentee believed they originally were claiming, and whether the patentee has narrowed a potential claim construction in an amendment or argument to distinguish the claims over the prior art. Thus, I understand prosecution history is relevant in claim construction.

27. Also, I have been informed that a patentee can become their own "lexicographer" by defining terms within the patent however they wish, as long as they do so explicitly. If the inventor acts as their own lexicographer to give a claim term a special definition, that definition must be set forth with reasonable clarity,

deliberateness, and precision. I understand that such special definitions can be provided within the patent's specification or in the patent's prosecution history.

28. Moreover, I understand that a patent applicant can disavow claim scope by making clear statements that the claimed invention does or does not include a particular feature. I understand that, as an example, a disavowal may occur when a patent applicant makes statements during prosecution that would cause a competitor to reasonably conclude that the applicant clearly and unmistakably limited the scope of its claims.

29. If the meaning of a term is clear from the claim language and the intrinsic evidence, I understand that the claim construction must stop there. I have been informed that only if the meaning of the asserted claims cannot be determined after assessing the intrinsic evidence, may extrinsic evidence be considered. I have been informed that such extrinsic evidence may include expert testimony, dictionaries, and well-known treatises. Even if extrinsic evidence is considered, the claim construction may not be inconsistent with the construction mandated by the intrinsic evidence.

30. I understand that, when a dependent claim recites elements that are comprised by an element of an independent claim, the element that appears in the independent claim has a scope broad enough to encompass the elements of the dependent claim.

D. Obviousness

31. It is my understanding that, to prove that a claim is invalid for obviousness under 35 U.S.C. § 103, the challenger of its validity must prove that, for example, two or more prior art references in combination disclose, expressly or inherently, every claim limitation and also that the claim, as a whole, would have been obvious to a person of ordinary skill in the art at the time the invention was made.

32. It is my understanding that the relevant standard for obviousness under 35 U.S.C. § 103 is as follows:

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

33. In determining whether or not a patented invention would have been obvious, I understand that the following so-called "*Graham"* factual inquiries must be made: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art at the time the invention was made; and (4) any secondary considerations, including commercial success, long felt but unsolved needs, failure of others, etc.

34. I understand that a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was independently known in the prior art. Most, if not all, inventions rely on building blocks of prior art. The challenger of a patent's validity must prove that, at the time of the claimed invention, there was a reason that would have prompted a person having ordinary skill in the field of the invention to combine the known elements in a way the claimed invention does, taking into account such factors as:

a. whether the claimed invention was merely the predictable result of using prior art elements according to their known function(s);

b. whether the claimed invention amounted to nothing more than using a known technique to improve similar devices or methods in the same way;

c. whether the claimed invention provides an obvious solution to a known problem in the relevant field;

d. whether the prior art teaches or suggests the desirability of combining elements claimed in the invention;

e. whether the prior art teaches away from combining elements in the claimed invention;

f. whether it would have been obvious to try the combinations of elements, such as when there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions; and

g. whether the change resulted more from design incentives or other market forces.

35. To find the invention obvious in light of a prior art combination, the prior art combination must have provided a reasonable expectation of success.

36. I further understand that it is not permissible to use hindsight in assessing whether a claimed invention is obvious. Rather, I understand that, to assess obviousness, one places oneself in the shoes of a person having ordinary skill in the relevant field of technology at the time the invention was made who is trying to address the issues or solve the problems faced by the inventor, considering only what was known at the time of the invention and ignoring current knowledge of the inventions.

37. Regarding the fourth step in the four-step process for assessing obviousness (the so-called *Graham* inquiries), specifically the step involving "objective considerations," I have been told that some of the factors that may be considered are those of copying, a long felt but unsolved need, failure of others, commercial success, unexpected results created by the claimed invention, unexpected properties

of the claimed invention, licenses showing industry respect for the invention, and skepticism of skilled artisans before the invention was made.

III. THE '135 PATENT

A. The Challenged Claims

38. The text of the Challenged Claims is presented below. Claim recitations are annotated with brackets to simplify discussion of the claims' recitations in my analysis:

Claim 1: A method of providing a lottery ticket for a random draw comprising:

[a] scanning at a point-of-sale (POS) terminal a pre-printed lottery ticket to obtain [1] unique identification information and [2] product information from the pre-printed lottery ticket;

[b] transmitting the [1] unique identification information and [2] product information from the POS terminal to a lottery administration system;

[c] receiving at the POS terminal payment confirmation;

[d] transmitting payment confirmation from the POS terminal to the lottery administration system;

[e] receiving at the POS terminal from the lottery administration system draw details associated with the pre-printed lottery ticket; and

[f] printing the draw details on a receipt.

Claim 2: A method of providing a lottery ticket, for a random draw comprising:

[a] scanning at a point-of-sale (POS) terminal a pre-printed lottery ticket to obtain [1] unique identification information and [2] product information from the pre-printed lottery ticket;

[b] transmitting the [1] unique identification information and [2] product information from the POS terminal to a transaction processor;

[c] transmitting the [1] unique identification information and [2] product information from the transaction processor to a lottery administration system;

[d] receiving at the POS terminal payment confirmation;

[e] transmitting payment confirmation from the POS terminal to the transaction processor;

[f] transmitting payment confirmation from the transaction processor to the lottery administration system;

[g] receiving by the transaction processor from the lottery administration system draw details associated with the pre-printed lottery ticket;

[h] receiving at the POS terminal from the transaction processor draw details associated with the pre-printed lottery ticket; and

[i] printing the draw details on a receipt.

Claim 3: The method of claim 1 or 2, further comprising transmitting the draw details by the lottery administration system, wherein transmitting the draw details generating at the lottery administration system an image or data package containing at least the draw details.

Claim 4: A lottery administration system comprising:

[a] at least one communication interface for communicating with other computing systems;

[b] at least one processing unit for executing instructions; and

[c] at least one memory unit for storing instructions, which when executed by the at least one processing unit configure the lottery administration system to provide a method of generating a lottery ticket for a random draw, wherein the method of generating a lottery ticket for a random draw comprises

[1] receiving at the lottery administration system unique identification information from a pre-printed lottery ticket,

[2] determining at the lottery administration system draw information for a subsequent draw being held,

[3] associating at the lottery administration system the determined draw information with the unique identification information,

[4] receiving at the lottery administration system payment confirmation; and

[5] transmitting from the lottery administration draw details.

Claim 5: A point-of-sale (POS) terminal comprising:

[a] at least one communication interface for communicating with other computing systems;

[b] at least one scanning component;

[c] at least one processing unit for executing instructions; and

[d] at least one memory unit for storing instructions, which when executed by the at least one processing unit configure the POS terminal to provide a method of providing a lottery ticket for a random draw, wherein the method of providing a lottery ticket for a random draw comprises

[1] scanning at the POS terminal a pre-printed lottery ticket to obtain [i] unique identification information and [ii] product information from the pre-printed lottery ticket,

[2] transmitting the [i] unique identification information and [ii] product information from the POS terminal to a lottery administration system,

[3] receiving at the POS terminal payment confirmation,

[4] transmitting payment confirmation from the POS terminal to the lottery administration system,

[5] receiving at the POS terminal from the lottery administration system draw details associated with the pre-printed lottery ticket, and

[6] printing the draw details on a receipt.

Claim 6: transaction processor comprising:

[a] at least one communication interface for communicating with other computing systems;

[b] at least one processing unit for executing instructions; and

[c] at least one memory unit for storing instructions, which when executed by the at least one processing unit configure the transaction processor to provide a method of providing a lottery ticket for a random draw, wherein the method of providing a lottery ticket for a random draw comprises

[1] scanning at a point-of-sale (POS) terminal pre-printed lottery ticket to obtain [i] unique identification information and [ii] product information from the pre-printed lottery ticket,

[2] transmitting the [i] unique identification information and [ii] product information from the POS terminal to the transaction processor,

[3] transmitting the [i] unique identification information and [ii] product information from the transaction processor to the lottery administration system,

[4] receiving at the POS terminal payment confirmation,

[5] transmitting payment confirmation from the POS terminal to the transaction processor,

[6] transmitting payment confirmation from the transaction processor to the lottery administration system,

[7] receiving by the transaction processor from the lottery administration system draw details associated with the pre-printed lottery ticket,

[8] receiving at the POS terminal from the transaction processor draw details associated with the pre-printed lottery ticket, and

[9] printing the draw details on a receipt.

See EX1001.0015-16.

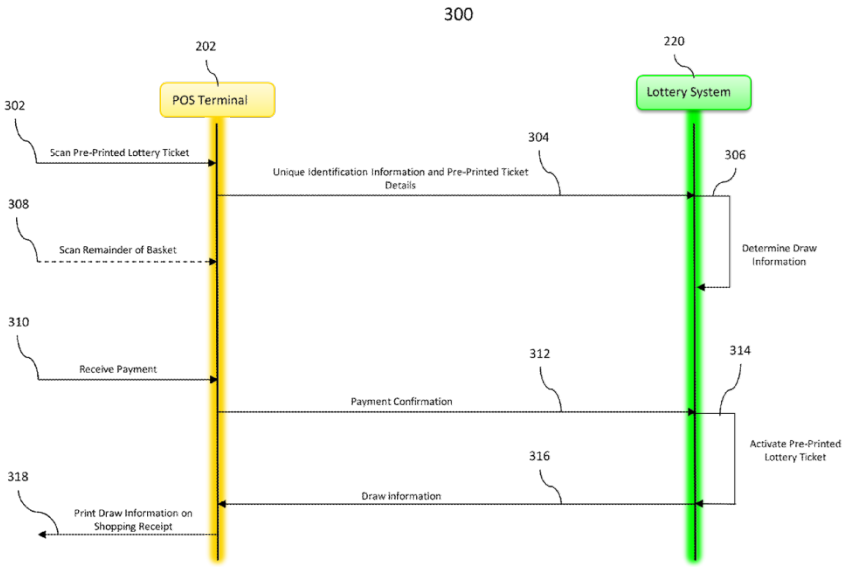
B. Summary of the '135 Patent's Specification Disclosure

39. The '135 Patent is directed "to lottery systems and in particular to the sale and activation of pre-printed draw based lottery tickets through the retailers Point of Sale without the need for additional lottery hardware." EX1001.0011 (col. 1:13-16). At the time of the invention, "[t]ickets for draw based lotteries [were] typically printed at the time of purchase on special ticket paper by a printing device approved by the lottery administering body." *Id.* (col. 1:37-39). These issues created barriers to use of lottery systems at multi-lane retail environments due to capital expense and the requirement of operator training. *Id*. (col. 1:59-67). Use of existing retailer Point of Sale ("POS") equipment also was regarded as ineffective because the retailers' low quality receipt paper deteriorates prematurely. *Id*. (col. 2:1-4).

40. The '135 Patent discloses techniques "that provide[] the ability to include online lottery tickets that can be placed in a customer's shopping cart and paid for during the normal checkout process without the use of specialized hardware such as lottery terminals, ticket printers or customized devices at the point of purchase for the purpose of producing the lottery ticket." *Id*. (col. 2:44-52). "The online lottery ticket is manufactured and distributed as pre-printed lottery tickets that do not have a draw date or wager (i.e. lottery numbers) assigned or associated to the pre-printed ticket." EX1001.0011-12 (cols. 2:65-3:1). The pre-printed tickets each would have a unique bar code that identifies the particular pre-printed ticket and would also have

a Universal Product Code bar code that identifies the lottery product. EX1001.0012 (col. 3:1-4). "Once scanned by the retailer's POS and paid for by the customer, the lottery system will generate wagers for the pre-printed ticket and assign the next available draw date." *Id*. (col. 3:11-14). "The generated numbers, the draw date and unique ticket identifier is printed on the customers shopping receipt." *Id*. (col. 3:14-16).

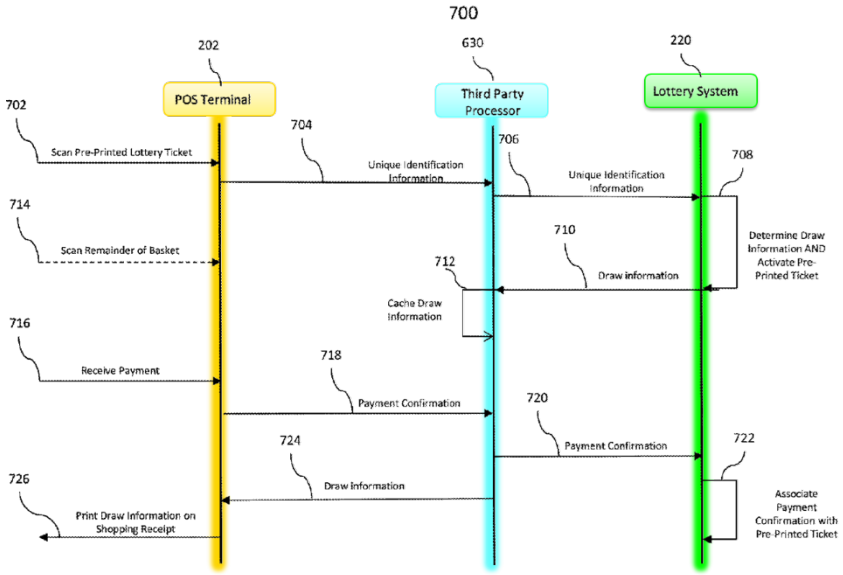
41. The independent claims recite methods and apparatuses for activating a lottery ticket at a point of sale terminal. The '135 Patent discloses two basic implementations. In a first implementation, a POS terminal 202 (**gold**) communicates directly with a lottery system 220 (**green**) to activate the lottery ticket:



***'135 Patent* (EX1001), FIG. 3 (annotated)**

See also EX1001.0013-14 (col. 6:61-7:65), FIGS. 4-5. In a second implementation, the POS terminal 202 (**gold**) communicates with a third party transaction processor

630 (*blue*), and the transaction processor communicates with a lottery system 220 (*green*):



***'135 Patent* (EX1001), FIG. 7 (annotated)**

See also EX1001.0014-15 (col. 7:66-9:55), FIGS. 6, 8.

42. In both implementations, a POS terminal scans a pre-printed lottery ticket. EX1001.0013 (col. 6:62-65), EX1001.0014-15 (col. 8:66-9:3). The scan captures information from a bar code that "identifies the particular pre-printed ticket" and from a "Universal Product Code bar code that would identify the lottery product." EX1001.0012 (col. 3:1-4); *see also* EX1001.0013 (col. 5:59-61) ("Barcode information will contain the Ticket Unique Identifier, Universal Product Code and may contain price information."). In the FIG. 3 implementation, the POS terminal 202 communicates the unique identification information and details of the pre-printed ticket to the lottery system 220. EX1001.0013 (col. 6:64-67). In the FIG. 7

implementation, the POS terminal 202 communicates the "unique identification information and details of the pre-printed ticket … to the transaction processor 630 who in turn communicates (706) the unique identifier and pre-printed ticket details to a lottery system 220." EX1001.0014-15 (col. 8:66-9:4).

43. In both implementations, the lottery system 220 verifies the ticket information, and determines draw and wager information. EX1001.0013-14 (col. 6:67-7:1); EX1001.0015 (col. 9:4-6). The lottery system 220 activates the ticket and communicates draw and wager information to the POS terminal in a process that varies by implementation. In the FIG. 3 implementation, the lottery system 220 activates the ticket after receiving payment confirmation, and it communicates the draw and wager information directly to the POS terminal. EX1001.0014 (col. 7:6-12). In the FIG. 7 implementation, the lottery system 220 activates the lottery ticket even before receiving payment confirmation, and it sends draw and wager information to the transaction processor 630. EX1001.0015 (col. 9:2-10). The transaction processor 630 caches the draw and wager details, and it sends these details to the POS terminal 202 only after it receives confirmation from the POS terminal that payment has been received. *Id*. (col. 9:8-21). FIGS. 4-6 and 8 describe other variations of ticket activation processes.

C. The Prosecution History

44. As part of my review, I reviewed the prosecution history of the '135 Patent. EX1002. Below, I summarize the portions of the prosecution history that are important to my review of the Challenged Claims.

45. The '135 Patent granted from application s.n. 14/679,028 (the "'028 application"), which was filed April 6, 2015. EX1002.0178. The '028 application claims priority to a provisional application filed in January 2015. *Id*. The '028 application was filed with twenty-two claims. EX1002.0214-0219.

46. In January 2017, the Patent Office rejected all claims from the '028 application on prior art grounds. Specifically, it rejected all claims as either anticipated by Yacenda, U.S. Patent No. 6,322,446 ("Yacenda") (EX2041) or obvious over Yacenda in view of another reference, McBride, U.S. Patent Publ'n. No. 2009/0227320 ("McBride"):

> Claims 1-9 & 20 are rejected under 35 U.S.C. 102(a)(1) as being anticipated by Yacenda (US Patent 6,322,446).
>
> Claims 15-16 & 19 are rejected under 35 U.S.C. 103 as being unpatentable over Yacenda as applied to claims above, and further in view of McBride (US Patent Pub. 20090227320).

EX1002.0148-49.

47. Patent Owner responded to the Patent Office's rejection in April 2017. With respect to Yacenda, Patent Owner argued that the rejected claims are patentable over Yacenda because Yacenda's system allows the customer to select the numbers it wishes to play and, therefore, Yacenda's system does not disclose a pre-printed lottery ticket:

> *Yacenda* does not disclose a pre-printed lottery ticket comprising unique identification information. *See Yacenda* at col. 3, l. 23 – col. 4, l. 50. Instead of disclosing a pre-printed lottery ticket, *Yacenda* discloses that its system allows the customer to select the numbers it wishes to play – i.e., not a pre-printed lottery ticket. *Yacenda* explains this important difference as follows:

EX1002.0075-76.

48. Patent Owner defined the term "pre-printed lottery ticket" as used in the rejected claims:

> *See Yacenda* at col. 6, l. 44 – col. 7, l. 13 (emphasis added). Based on the foregoing, *Yacenda*'s system is directly opposite of the instant claims, as the instant claims require a "pre-printed lottery ticket" which has no lottery numbers associated with it at the time of customer purchase. The instant Specification defines the "pre-printed lottery ticket" as follows:
>
> > The online lottery ticket is manufactured and distributed as pre-printed lottery tickets that do not have a draw date or wager (i.e. lottery numbers) assigned or associated to the pre-printed ticket.
>
> *See* Application at p. 5, ll. 18-20. The Application goes on to disclose:

EX1002.0076-77.

49. The Patent Office withdrew the rejections based on Yacenda in the next office action, which it issued in June 2017. EX1002.0048 (mail date). In that office action, the Patent Office allowed claims 15-20:

> ***Allowable Subject Matter***
>
> Claims 15-20 are allowed.

EX1002.0059. It rejected claims 1-14 on 35 U.S.C. § 101 grounds based on the claims' subject matter:

> Based upon consideration of all the relevant factors with respect to the claims as a whole, claims 1-14 are rejected under 35 U.S.C. 101 as being directed to ineligible subject matter.

EX1002.0051. The Patent Office also rejected claim 21 based on McBride:

> ***Claim Rejections - 35 USC § 102***
>
> Claim 21 is rejected under 35 U.S.C. 102(a)(1) as being anticipated by McBride (US Patent Pub. 20090227320).

EX1002.0056. The Patent Office, however, did not reject any claim over Yacenda. *See* EX1002.0048-60.

IV. LEVEL OF ORDINARY SKILL IN THE ART

50. I understand that Petitioner defined the ordinary level of skill in the art as follows:

> 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.

Pet. at 2-3. I have adopted Petitioner's definition as the level of ordinary skill in my analysis.

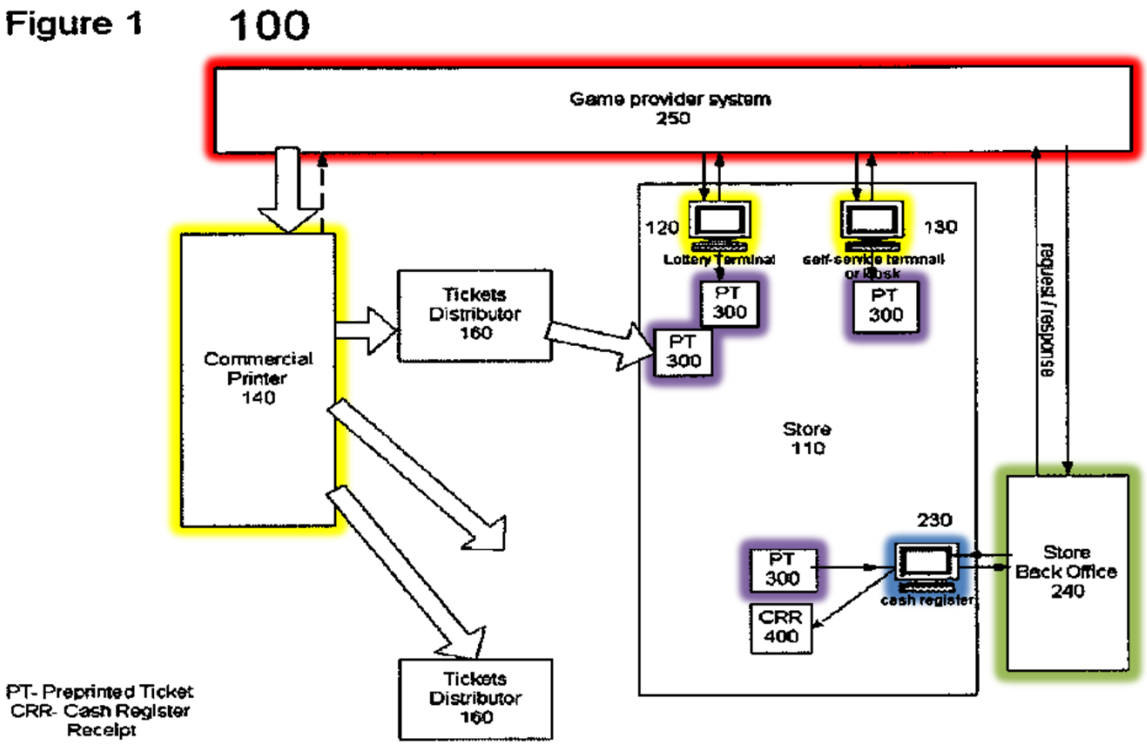
51. My own level of skill exceeds this level of ordinary skill. As discussed above (§ I.A), I have a Bachelor of Science degree in Computer Engineering and Computer Science, a Master of Science degree in Computer Science, and a Ph.D. in Computer Science all from the University of Southern California. I have over twenty years of experience working in computer science fields, and I have taught computer science in various roles since 2002. I have a working knowledge of both POS activation systems and lottery systems.

V. OVERVIEW OF THE PRIOR ART

A. Szrek, U.S. Patent No. 7,627,497

52. Szrek is a U.S. patent, entitled "Method for Selling Lottery Tickets from a POS Terminal." EX1005.0001 (Title). Szrek discloses that "[a]n actual game ticket may be preprinted by the commercial printer, printed in the in-store kiosk, self-service terminal or on the standard gaming terminal." *Id*. Abstract. "These preprinted tickets are not eligible to win prizes unless activated at the cash register." *Id*. Szrek discloses that "[t]his approach allows for the sale of customer and computer generated lottery game selections at a cash register without any additional equipment in the lane or custom software in the cash register, with additional benefits of age control and integrated accounting." *Id*.

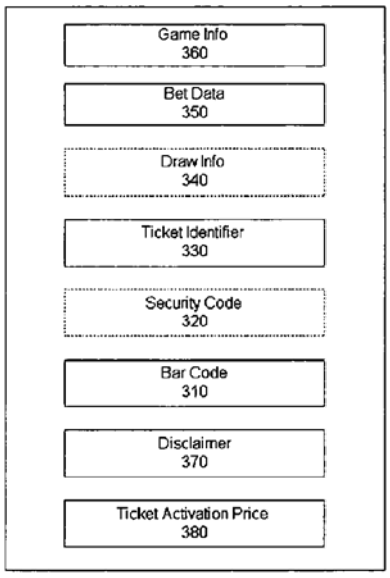
53. Szrek identifies FIG. 1 as "a diagrammatic view of the logical process of selling lottery tickets according to [their] invention." EX1005.0007 (col. 5:42-43). FIG. 1 illustrates a system that includes a game provider system 250 (***red***), a commercial printer 140 (***yellow***), store 110 components including a lottery terminal 120 (also ***yellow***), a self-service terminal 130 (again, ***yellow***), and a cash register 230 (***blue***), and a store back office computer 240 (***green***):



***Szrek* (EX1005), FIG. 1 (annotated)**

The system generates preprinted tickets 300 (***purple***) and activates them, as discussed below.

54. Szrek FIG. 3 discloses a diagrammatic representation of the lottery ticket 300:



***Szrek* (EX1005), FIG. 3**

"The preprinted ticket 300 contains many elements of a traditional lottery ticket, including bet selections 350, unique ticket identifier 330, barcode 310 that includes ticket identifier 330, duration for number of eligible draws (if activated) 340, ticket price or ticket activation price 380 (as opposed to ticket price on regular ticket)." EX1005.0007 (col. 5:65-6:3). The ticket also has "a disclaimer 370 printed such as ticket 300 will not be eligible in the draws until activated or the like." *Id*. (col. 5:63-65).

55. The ticket's barcode 310 has information "identifying this barcode as lottery ticket 300 and uniquely identifying the ticket 330." EX1005.0007 (col. 6:8-10). A

"fixed part of the barcode should indicate the product type; the variable part of the barcode should contain ticket identifier 330." *Id*. (col. 6:11-13). The ticket identifier provides the basis by which to activate the lottery ticket: "[T]he game provider system merely recognizes from the ticket identifier what transaction is activated (e.g. lotto, 6 specific boards known to the system and the player)." EX1005.0006 (col. 3:47-49).

56. The preprinted ticket 300 also contains bet selections 350. EX1005.0007 (col. 5:65-67). The bet selections 350 represent the ticket's lottery numbers. Bet selections may be either computer-generated or customer-selected selections. EX1005, Abstract. For example, the player's bet selection may represent the player's favorite bet. EX1005.0006 (col. 3:29-31) ("The ticket can be preprinted according to player's selection, his favorite bet, …"). Computer-generated selections represent a quick pick. *Id*. ("The ticket can be preprinted … as a computer generated selections (quick pick)."). In either case, the bet selections are preprinted on the lottery ticket "ahead of the ticket sale." *Id*. (col. 3:22-28); *see also* EX1005.0007 (col. 6:24-27) ("A lottery player may choose his own selection and have it printed at the kiosk 130 or self-service terminal 130, or he may pick up a ticket 300 printed by the commercial printer 140.").

57. Szrek discloses that preprinted tickets 300 can be generated by the commercial printer 140, the lottery terminal 120, and a self-service terminal 130. EX1005.0007 (col. 5:57-60). In FIG. 1 (above), Szrek illustrates the commercial printer 140, the lottery terminal 120, and the self-service terminal 130 in communication with the game provider 250, which allows these elements to register lottery tickets with the game provider when they are printed. *See* EX1005.0006 (col. 3:46) (All tickets are "preloaded" in the game provider's system."), *id*. (col 3:63-66) ("Preprinted tickets from self-service terminals, kiosks, or on the regular lottery terminals are created by the transactions initiated from these devices, logged and processed on the game provider system and then printed on these devices.").

58. Szrek discloses that, when the preprinted tickets 300 are generated by a commercial printer 140, the tickets 300 are preprinted with computer-generated bet selections:

> In accordance with the novel method of the present invention, instead of printing the lottery ticket, from a legitimate and authorized game provider, on the cash register, the ticket is preprinted (printed ahead of the ticket sale by a commercial printer capable of printing lottery tickets or on a wagering terminal, self-service lottery terminal, or at a lottery kiosk). …
>
> From the player's point of view, the commercial printer's tickets are computer generated selections.

EX1005.0006 (col. 3:22-34).

59. The game provider 250 either provides bet selections to the commercial printer 140 directly, or it agrees with the commercial printer 140 on a method for generating the bet selections:

> Preprinted tickets from a commercial printer are also coming indirectly from the game provider. The game provider will either provide bets information to the commercial printer or agree on the method of generation of selections.

EX1005.0006 (col. 3:67-4:6).

60. In Szrek's system, no matter whether the lottery tickets are printed by the commercial printer 140, the lottery terminal 120, or the self-service terminal 130, the Szrek system preloads lottery ticket information in the game provider:

> All tickets are "preloaded" in the game provider's system, and during ticket activation, the game provider system merely recognizes from the ticket identifier what transaction is activated (e.g. lotto, 6 specific boards known to the system and the player). …
>
> Preprinted tickets from self-service terminals, kiosks, or on the regular lottery terminals are created by the transactions initiated from these devices, logged and processed on the game provider system and then printed on these devices.

EX1005.0006 (col. 3:46-66).

61. Szrek also discloses an exception to his general statement that "[a]ll tickets are 'preloaded' in the game provider's system." EX1005.0006 (col. 3:46). At col. 7:18-31, Szrek discloses a technique that "allows printing customer selected wagers on tickets 300 on self-service terminals 130 and in kiosks 130 without game provider 250 connectivity." EX1005.0008 (col. 7:32-35). In this embodiment, a ticket identifier 330 may include information that identifies the lottery numbers selected by a customer at the self-service terminal or kiosk. Szrek states:

> In some embodiments of this invention, the preprinted ticket identifier 330 on the self-service terminal 130 or kiosk 130 could be constructed in a way that part of ticket identifier 330 could correspond to the bet combination 350 chosen by the players.
>
> For example, in a lotto game 6 of 49, each combination corresponds to one of the numbers from 1 to 13,983,816, e.g. combination 1, 2, 3, 4, 5, 6 could correspond to 1 and 1, 2, 3, 4, 5, 7 to 2 etc. In this case, the game provider system may learn bet combination from the ticket identifier and authorize this bet. Another part of ticket identifier could contain some element making this ticket unique, such as issued tickets sequence counter on said self-service terminal 130 or kiosk 130.

EX1005.0008 (col. 7:18-31).

62. Szrek describes ticket activation as follows:

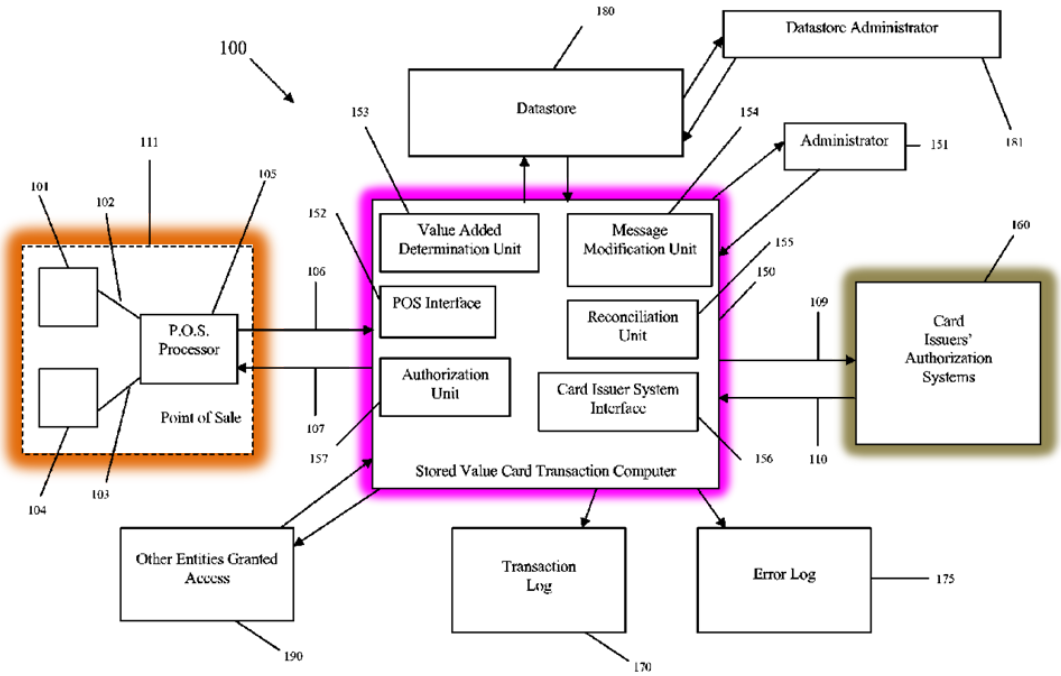
> In accordance with the method of the present invention, the logical process 200 of activation of lottery ticket 300 via a cash register 230 is

shown in FIG. 2. The store clerk scans ticket 300 like any other product. Normally when a barcode 310 is scanned for any merchandise, the checkout register 230 application looks up the merchandise price in database or checks the price by using some algorithmic interface. In case of the ticket 300 of the present invention, this request will be transformed into transactional request to the game provider 250 who verifies if this Checkout Play 300 was already activated. If not, it will activate this ticket by marking a status or state of corresponding identifier or record in the computer memory or on the computer disk or it may even create a record with the corresponding identifier. If the ticket 300 was already activated and ticket 300 did not participate yet in the lottery drawing, the transaction would be denied.

EX1005.0007 (col. 6:28-43); *see also* EX1005.0006 (col. 4:20-22) ("This activation could be done on the cash register by scanning ticket bar code or entering the ticket identifier manually.").

B. Llach, U.S. Publ'n. No. 2013/0041768

63. Llach discloses a system for processing, activating and redeeming value-added prepaid cards. EX1006.0001 (Title). The system includes a point of sale component 111 (***orange***), a stored value card transaction computer 150 (***pink***), and a card issuers' authorization system 160 (***brown***):



***Llach* (EX1006), FIG. 1 (annotated)**

64. The system manages transactions involving stored value cards, such as "gift cards, prepaid telephone cards, loyalty cards, membership cards, ticket cards, entertainment cards, sports cards, prepaid cards, and the like." EX1006 [0012]. Llach is directed to managing transactions in which value may be added to a stored value card over and above the card's face value. In one example, a card with a $25 face value is activated for $30 when purchased. *Id*. [0016]. In another, a $15 gift card to a coffee house may have an electronic redemption coupon for a free shot of syrup to be added to coffee. *Id*.

65. The point of sale component 111 "typically [is] located at a vendor and/or redeeming merchant" premises. *Id*. [0019]; *see also id*. [0020]-[0022]. The point of sale component 111 sends activation requests and redemption requests to activate

and redeem stored value cards. *Id*. [0034]. The point of sale component 111 also receives response messages when those requests are processed. *Id*. [0050], [0052].

66. The transaction processor 150 receives requests from the point of sale component 111 and processes them. *Id*. [0023], [0046]. As part of its operation, it determines whether the card to which requests apply is "eligible for value differentiation." *Id*. If so, the transaction processor 150 modifies a received request to add value before sending the request to a card issuers' authorization system 160. *Id*. [0048], [0051]. The card issuers' authorization system 160 activates, deactivates, and redeems value from stored value cards. *Id*. [0023].

67. Llach has no disclosure related to lottery tickets or to activation protocols for lottery tickets.

VI. CLAIM CONSTRUCTION

A. "Pre-Printed Lottery Ticket"

68. I construe the term "pre-printed lottery ticket" as "a lottery ticket which has no lottery numbers associated with it at the time of customer purchase" because Patent Owner provided this construction expressly during prosecution of the '135 Patent and because Patent Owner's argument represents a disavowal of claim scope.

69. As explained (¶¶ 47-48), during prosecution of the '028 Application, when the Patent Office raised a prior art rejection to the claims based on the Yacenda

reference, Patent Owner explained that the term "pre-printed lottery ticket" refers to a lottery ticket that has no lottery numbers associated with it at the time of purchase:

> *See Yacenda* at col. 6, l. 44 – col. 7, l. 13 (emphasis added). Based on the foregoing, *Yacenda*'s system is directly opposite of the instant claims, as the instant claims require a "pre-printed lottery ticket" which has no lottery numbers associated with it at the time of customer purchase. The instant Specification defines the "pre-printed lottery ticket" as follows:
>
> > The online lottery ticket is manufactured and distributed as pre-printed lottery tickets that do not have a draw date or wager (i.e. lottery numbers) assigned or associated to the pre-printed ticket.
>
> *See* Application at p. 5, ll. 18-20. The Application goes on to disclose:

EX1002.0076-77. This is a clear statement that defines the term "pre-printed lottery ticket." Moreover, it disavows, from the term, lottery tickets that have lottery numbers associated with it at the time of customer purchase because it states clearly that the Challenged Claims do not include lottery tickets that have such a feature. I have applied this disavowal in my analysis of the Challenged Claims.

70. I note that the specification discloses other embodiments in which lottery tickets have lottery numbers associated with them. For example, the '135 Patent states:

> Pre-printed lottery ticket 912 is depicted as being for a single product and wager. However, unlike the other pre-printed lottery tickets described above, the pre-printed lottery ticket 912 is already associated with wager information 914 which may be printed on the ticket to allow selection of preferred numbers by a consumer. Accordingly, the pre-printed ticket 912 includes a purchase amount indication 916 and

> product or game information, as well as the wager information, which is depicted as being the numbers of the draw 914. When the bar-code 918 of the pre-printed ticket is scanned, the unique ID information may be used to activate the pre-printed ticket with the subsequent draw. The wager information does not need to be generated since it is already generated and associated with the pre-printed lottery ticket in the lottery system, for example at the time of manufacture or printing.

EX1001.0015 (col. 10:5-20). While I recognize that this specification disclosure might support a different interpretation of the term "pre-printed lottery ticket," Patent Owner's arguments made in the April 2017 response (¶ 69) clearly establish that the term "pre-printed lottery ticket," as used in the Challenged Claims, does not encompass this embodiment.

B. "Product Information"

71. I construe the term "product information" as information that identifies a product but is separate and distinct from a lottery ticket's lottery numbers and unique identification information. This construction flows from the way the term "product information" is used in the claims and the context provided by other claim terms.

72. As explained above (§ VI.A), a "pre-printed lottery ticket," as used in the Challenged Claims, has no lottery numbers associated with it at the time of customer purchase. The Challenged Claims 1-3 and 5-6 recite that "product information" is obtained from a pre-printed lottery ticket when it is scanned at a POS terminal:

Claim 1: [a] scanning at a point-of-sale (POS) terminal a pre-printed lottery ticket to obtain … [2] product information from the pre-printed lottery ticket;

Claim 2: [a] scanning at a point-of-sale (POS) terminal a pre-printed lottery ticket to obtain … [2] product information from the pre-printed lottery ticket;

Claim 5: [1] scanning at the POS terminal a pre-printed lottery ticket to obtain … [ii] product information from the pre-printed lottery ticket,

Claim 6: [1] scanning at a point-of-sale (POS) terminal pre-printed lottery ticket to obtain … [ii] product information from the pre-printed lottery ticket,

See EX1001.0015-16. Dependent claim 3 depends from claims 1 and 2 and, therefore, includes either of those claims' scanning recitations, which are identical. Because Challenged Claims 1-3 and 5-6 recite that the product information is obtained from a scan of the pre-printed lottery ticket and because the pre-printed lottery ticket has no lottery numbers associated with it at the time of customer purchase, a POSITA would recognize that "product information" does not include information about a ticket's lottery numbers.

73. The specification supports this understanding. It explains that pre-printed lottery tickets may "have a Universal Product Code bar code that would identify the lottery product." EX1001.0012 (col. 3:1-4). The lottery tickets also may "include[] … purchase information, such as the cost of the pre-printed ticket 108 and the product the pre-printed ticket is for." EX1001.0013 (col. 5:53-56); *see also id*. (col.

5:59-61) (price information). A POSITA would recognize these informational elements as product information.

74. Moreover, the specification explains that "pre-printed lottery tickets [] do not have a draw date or wager (i.e. lottery numbers) assigned or associated to the pre-printed ticket" (EX1001.0011-12 (col. 2:65-3:1)), which shows that the product information does not include lottery numbers. *See also id*. (col. 3:11-14) ("Once scanned by the retailer's POS and paid for by the customer, the lottery system will generate wagers for the pre-printed ticket and assign the next available draw date."). And, as I have explained (¶ 70), while the specification describes embodiments in which a lottery ticket already is associated with wager information which may be printed on the ticket, the prosecution history contains clear statements that, as used in the Challenged Claims, the term "pre-printed lottery ticket" does not include tickets that have lottery numbers associated with them at the time of customer purchase. Therefore, I have adopted a construction of "product information" that aligns with the Patent Owner's prosecution construction of "pre-printed lottery ticket" and its associated disavowal.

75. Challenged Claims 1-3 and 5-6 also make clear that product information is separate and distinct from the ticket's unique identification information. These claims recite "product information" and "unique identification information"

separately from each other, which indicates that these two information items are separate and distinct. The Challenged Claims 1-3 and 5-6 recite these features as follows:

Claim 1: [a] scanning at a point-of-sale (POS) terminal a pre-printed lottery ticket to obtain [1] unique identification information and [2] product information from the pre-printed lottery ticket;

[b] transmitting the [1] unique identification information and [2] product information from the POS terminal to a lottery administration system;

Claim 2: [a] scanning at a point-of-sale (POS) terminal a pre-printed lottery ticket to obtain [1] unique identification information and [2] product information from the pre-printed lottery ticket;

[b] transmitting the [1] unique identification information and [2] product information from the POS terminal to a transaction processor;

[c] transmitting the [1] unique identification information and [2] product information from the transaction processor to a lottery administration system;

Claim 5: [d] at least one memory unit for storing instructions, which when executed by the at least one processing unit configure the POS terminal to provide a method of providing a lottery ticket for a random draw, wherein the method of providing a lottery ticket for a random draw comprises

[1] scanning at the POS terminal a pre-printed lottery ticket to obtain [i] unique identification information and [ii] product information from the pre-printed lottery ticket,

[2] transmitting the [i] unique identification information and [ii] product information from the POS terminal to a lottery administration system,

Claim 6: [c] at least one memory unit for storing instructions, which when executed by the at least one processing unit configure the transaction processor to provide a method of providing a lottery ticket for a random draw, wherein the method of providing a lottery ticket for a random draw comprises

[1] scanning at a point-of-sale (POS) terminal pre-printed lottery ticket to obtain [i] unique identification information and [ii] product information from the pre-printed lottery ticket,

[2] transmitting the [i] unique identification information and [ii] product information from the POS terminal to the transaction processor,

[3] transmitting the [i] unique identification information and [ii] product information from the transaction processor to the lottery administration system,

See EX1001.0015-16. By reciting "product information" separately from "unique identification information," these claims indicate that these two information items are separate and distinct from each other.

76. By contrast, claim 4 refers to unique identification information, but it does not recite "product information:"

> wherein the method of generating a lottery ticket for a random draw comprises receiving at the lottery administration system ***unique identification information*** from a pre-printed lottery ticket, … associating at the lottery administration system the determined draw information ***with the unique identification information,*** …

EX1001.0016. This difference between claim 4 and claims 1-3 and 5-6 also suggests that "product information" is distinct from "unique identification information."

77. The specification supports this understanding as well. The specification explains that a "pre-printed lottery ticket is scanned (402) at a POS terminal 202 and unique identification information along with product information of the preprinted ticket is cached at the POS terminal (404)." EX1001.0014 (col. 7:18-21). The product information may or may not be transmitted from a POS terminal when the POS terminal transmits unique identification information:

> The retailer's POS will communicate the transaction type, such as purchase or cancel, and the pre-printed ticket details, such as product information ***and/or*** a unique identifier, to the lottery system.

EX1001.0012 (col. 4:25-28) (emphasis added); *see also* EX1001.0013 (col. 5:34-38) (A retailer's POS will communicate "product information and/or a unique identifier" to the lottery system).

VII. ANALYSIS OF PETITION'S INVALIDITY GROUNDS

78. I understand that the Petition alleges, and Mr. Hutton concludes, that the Challenged Claims of the '135 Patent are invalid on two grounds. Pet. at 2. First, the Challenged Claims allegedly are obvious over Szrek. *Id*. Second, the Challenged Claims allegedly are obvious over Llach in view of Szrek. *Id*. As explained below, it is my opinion that the Challenged Claims are not obvious over Szrek or Llach in view of Szrek.

A. Ground 1

79. With respect to Ground 1, obviousness of the Challenged Claims over Szrek, it is my opinion that the proposed Ground fails for several reasons. First, Szrek fails to disclose a system that processes a "pre-printed lottery ticket," as claimed, one that does ***not*** have lottery numbers associated with it at the time of customer purchase. Second, Szrek fails to disclose a system in which "product information" is transmitted to a lottery administration system, as claimed. Below, I explain the bases for my opinions.

1. Szrek does not teach or suggest a "pre-printed lottery ticket."

80. As explained above (§ VI.A), I have interpreted the term "pre-printed lottery ticket" to refer to "a lottery ticket which has no lottery numbers associated with it at the time of customer purchase" because Patent Owner applied this definition during prosecution of the '135 Patent using arguments making clear that the term does not include a lottery ticket that has lottery numbers associated with it at the time of customer purchase.

81. All Challenged Claims recite a pre-printed lottery ticket:

a. In claim 1, the feature is recited as:

> [a] scanning at a point-of-sale (POS) terminal ***a pre-printed lottery ticket*** to obtain [1] unique identification information and [2] product information from ***the pre-printed lottery ticket;*** …

[e] receiving at the POS terminal from the lottery administration system draw details associated with ***the pre-printed lottery ticket***;

EX1001.0015 (col. 10:27-39) (emphasis added).

b. In claim 2, the feature is recited as:

[a] scanning at a point-of-sale (POS) terminal ***a pre-printed lottery ticket*** to obtain [1] unique identification information and [2] product information from ***the pre-printed lottery ticket;*** …

[g] receiving by the transaction processor from the lottery administration system draw details associated with ***the pre-printed lottery ticket***;

[h] receiving at the POS terminal from the transaction processor draw details associated with ***the pre-printed lottery ticket***;

EX1001.0015 (col. 10:43-63) (emphasis added).

c. In claim 4, the feature is recited as:

wherein the method of generating a lottery ticket for a random draw comprises

[1] receiving at the lottery administration system unique identification information from ***a pre-printed lottery ticket,***

EX1001.0016 (col. 11:11-14) (emphasis added).

d. In claim 5, the feature is recited as:

wherein the method of providing a lottery ticket for a random draw comprises

[1] scanning at the POS terminal ***a pre-printed lottery ticket*** to obtain [i] unique identification information and [ii] product information from ***the pre-printed lottery ticket,*** …

[5] receiving at the POS terminal from the lottery administration system draw details associated with ***the pre-printed lottery ticket***,

EX1001.0016 (cols. 11:30-12:6) (emphasis added).

e. In claim 6, the feature is recited as:

wherein the method of providing a lottery ticket for a random draw comprises

[1] scanning at a point-of-sale (POS) terminal ***pre-printed lottery ticket*** to obtain [i] unique identification information and [ii] product information from ***the pre-printed lottery ticket,*** …

[7] receiving by the transaction processor from the lottery administration system draw details associated with ***the pre-printed lottery ticket,***

[8] receiving at the POS terminal from the transaction processor draw details associated with ***the pre-printed lottery ticket,***

EX1001.0016 (col. 12:15-34) (emphasis added).

82. Claim 3 is a dependent claim that depends from claims 1 and 2 (EX1001.0015-16 (cols. 10:65-11:2)). I understand that, when a dependent claim refers to two parent claims, it includes the recitations of one parent claim or the other. Here, because claims 1 and 2 both refer to a "pre-printed lottery ticket," the term applies to claim 3 as well.

83. Szrek discloses a system that, in every embodiment, has lottery numbers assigned to the lottery ticket at the time of purchase. Szrek calls the lottery numbers "bet selections" or, sometimes, "selections." Szrek describes the bet selections in this manner:

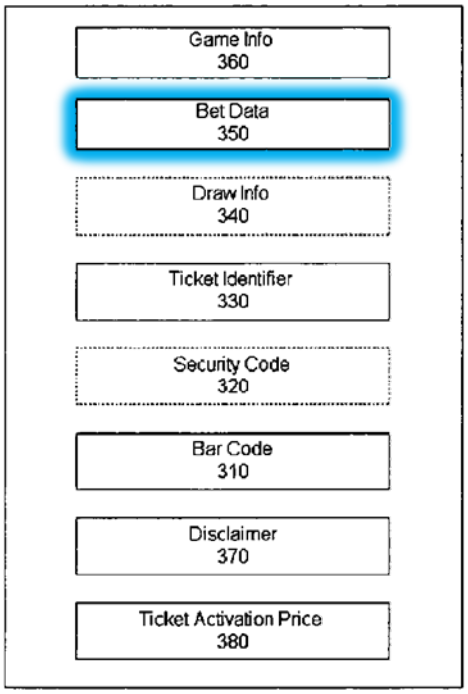
> The ticket can be preprinted according to player's selection, his favorite bet, or as a computer generated selections (quick pick). … From the player's point of view, the commercial printer's tickets are computer generated selections.

EX1005.0006 (col. 3:29-34).

> A lottery player may choose his own selection and have it printed at the kiosk 130 or self-service terminal 130, or he may pick up a ticket 300 printed by the commercial printer 140.

EX1005.0007 (col. 6:24-27). A POSITA would understand that Szrek's bet selections represent the lottery numbers that are associated with each lottery ticket.

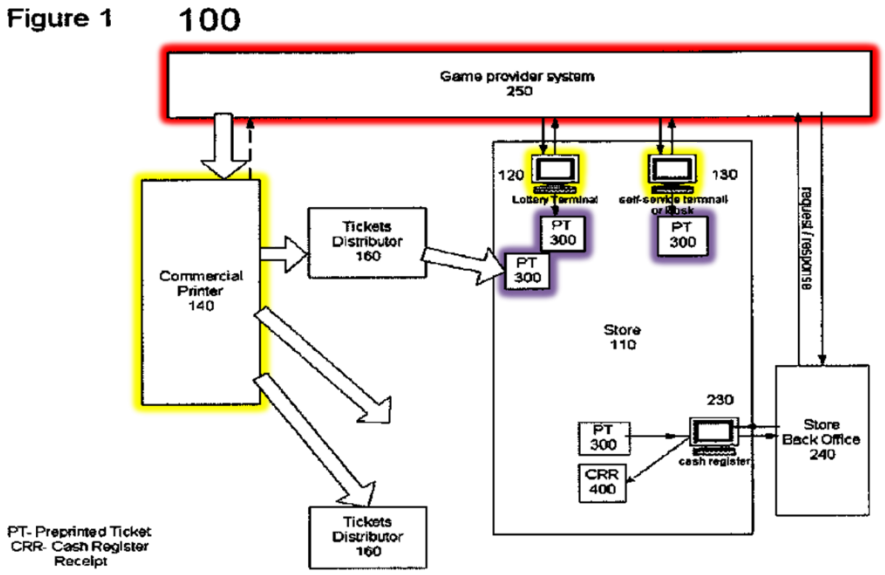
84. Szrek discloses that the lottery numbers (i.e., the bet selections) are associated with the lottery ticket before the time of customer purchase. EX1005.0005 (col. 3:22-34) ("[t]he ticket is preprinted (***printed ahead of the ticket sale*** by a commercial printer capable of printing lottery tickets or on a wagering terminal, self-service lottery terminal, or at a lottery kiosk).") (emphasis added). Szrek discloses that, in his system, the lottery ticket is preprinted with the lottery numbers on the ticket:



***Szrek* (EX1005), FIG. 3 (annotated)**

The bet data 350 (***bright blue***) corresponds to the bet selections. *See* EX1005.0007 (col. 5:65-67) ("The preprinted ticket 300 contains many elements of a traditional lottery ticket, including bet selections 350, …").

85. Szrek discloses that the preprinted lottery ticket 300 is generated by a commercial printer 140, a lottery terminal 120, or a self-service kiosk 130 (all ***yellow***) before the time of purchase:



***Szrek* (EX1005), FIG. 1 (annotated)**

See, *for example*, EX1005, Abstract ("An actual game ticket may be preprinted by the commercial printer, printed in the in-store kiosk, self-service terminal or on the standard gaming terminal.").

86. Szrek describes generation of the preprinted lottery ticket and the bet selections that are printed on them, in some depth, which I summarize below:

87. With respect to tickets generated by the commercial printer 140, Szrek states:

> In accordance with the novel method of the present invention, instead of printing the lottery ticket, from a legitimate and authorized game provider, on the cash register, the ticket is preprinted (printed ahead of the ticket sale by a commercial printer capable of printing lottery tickets or on a wagering terminal, self-service lottery terminal, or at a lottery kiosk).

> The ticket can be preprinted … as a computer generated selections (quick pick). … From the player's point of view, the commercial printer's tickets are computer generated selections.

EX1005.0005 (col. 3:22-34).

> Preprinted tickets from a commercial printer are also coming indirectly from the game provider. The game provider will either provide bets information to the commercial printer or agree on the method of generation of selections. This would be in form of data (file, data base, network, disk, tape or any other means) or in form of the algorithmic method of generation of the bets.

Id. (col. 3:67-4:6).

> Preprinted tickets (PT) 300 is preferably preprinted by a commercial printer 140 or in the lottery kiosk 130, self service terminal 130 or regular lottery terminals 120.

EX1005.0007 (col. 5:57-60).

> In the preferred embodiment, the preprinted ticket identifier 330 is known to the game provider 250. The game provider 250 either issues a processing request for preprinted ticket 300 or it agrees with commercial printer 140 on methods of its assignment and relation between ticket identifier 330 and data bet on the ticket 350 (via algorithm or some database or file information).

EX1005.0008 (col. 7:12-18).

88. A POSITA would understand from the foregoing description that, in Szrek's system, the lottery tickets that are prepared by the commercial printer 140 already have lottery numbers associated with them because Szrek discloses them in this way. Szrek explains that, in one embodiment, the game provider "provide[s] bets information to the commercial printer" (EX1005.0005 (col. 4:1-3)), which demonstrates that the lottery numbers have been chosen by the game provider and provided to the commercial printer before the lottery tickets are printed. Szrek explains that in another embodiment, the game provider 250 "agrees with commercial printer 140 on methods of its assignment and relation between ticket identifier 330 and data bet on the ticket 350" (EX1005.0008 (col. 7:15-18)), which demonstrates that both the game provider 250 and the commercial printer 140 assign lottery numbers to the tickets before they are printed using a common methodology. In both cases, because the lottery numbers are assigned to the tickets before the lottery tickets are printed, the lottery numbers are associated with the lottery tickets before the time of customer purchase.

89. Szrek describes that, as an alternative to printing by a commercial printer 140, lottery tickets may be preprinted by lottery terminals 120, 130 on the store premises 110. *See* EX1005.0005 (col. 3:22-34) (the preprinted tickets are "printed ahead of the ticket sale by a commercial printer capable of printing lottery tickets or on a wagering terminal, self-service lottery terminal, or at a lottery kiosk"); EX1005.0007

(col. 5:57-60) ("Preprinted tickets (PT) 300 is preferably preprinted by a commercial printer 140 or in the lottery kiosk 130, self-service terminal 130 or regular lottery terminals 120.").

90. Szrek describes that printing the preprinted lottery tickets at the self-service terminal 130 allows the customer to select the lottery numbers that will be assigned to the lottery ticket:

> A lottery player may choose his own selection and have it printed at the kiosk 130 or self-service terminal 130, …

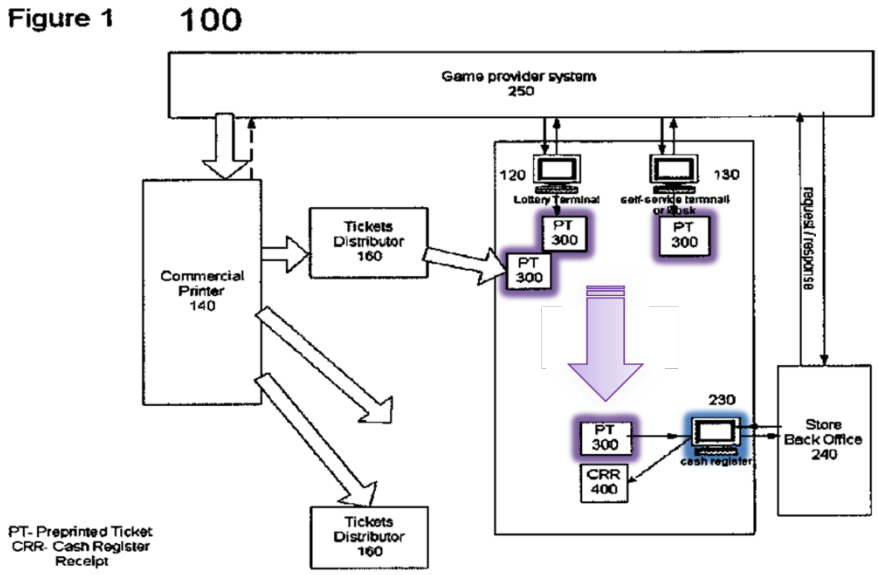
EX1005.0007 (col. 6:24-27).

> In some embodiments of this invention, the preprinted ticket identifier 330 on the self-service terminal 130 or kiosk 130 could be constructed in a way that part of ticket identifier 330 could correspond to the bet combination 350 chosen by the players.

EX1005.0008 (col. 7:18-22).

91. This disclosure confirms that, in all of these embodiments, the preprinted tickets 300 have lottery numbers assigned to them before the time of customer purchase.

92. No matter where the lottery ticket 300 is preprinted, Szrek's lottery ticket 300 (***purple***) is taken to a cash register 230 (***blue***) to be purchased and activated:



***Szrek* (EX1005), FIG. 1 (annotated)**

EX1005, Abstract ("These preprinted tickets are not eligible to win prizes unless activated at the cash register. … The ticket is read at the cash register and activated."); EX1005.0005 (col. 1:66-2:3) ("[I]n order to pursue lottery sales at cash registers, it is necessary to address the secure ticket sales and printing problem. The present invention enables such locations to be used to sell such lottery tickets.").

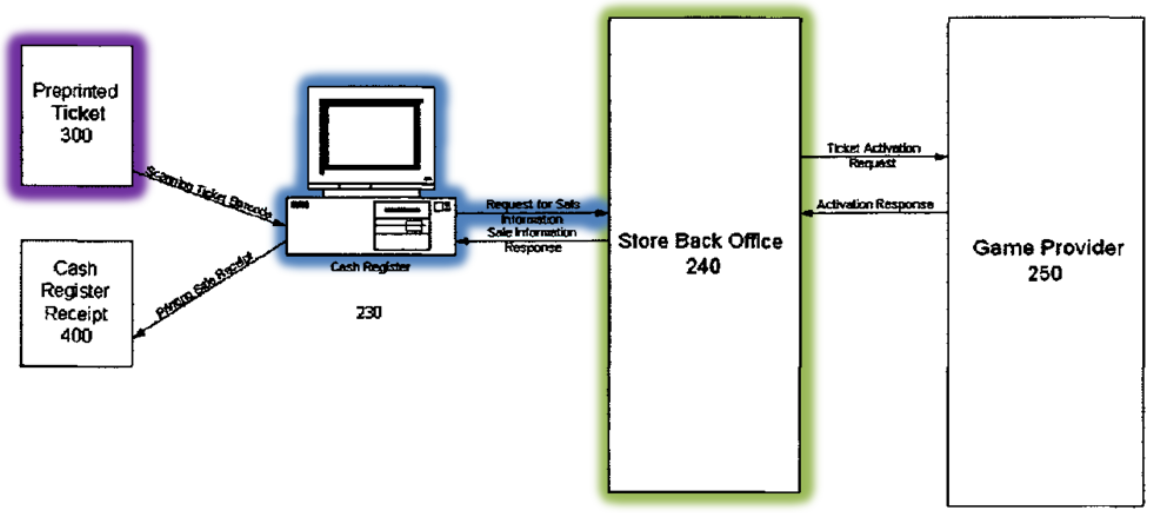
93. Szrek describes the process of activating the preprinted lottery ticket 300 as follows:

> In accordance with the method of the present invention, the logical process 200 of activation of lottery ticket 300 via a cash register 230 is shown in FIG. 2. The store clerk scans ticket 300 like any other product. Normally when a barcode 310 is scanned for any merchandise, the checkout register 230 application looks up the merchandise price in database or checks the price by using some algorithmic interface. In

> case of the ticket 300 of the present invention, this request will be transformed into transactional request to the game provider 250 who verifies if this Checkout Play 300 was already activated. …
>
> Once the ticket 300 is activated, product type 410 (sale of lottery ticket, or a sale of ticket for the specific game or game event), the original preprinted ticket identifier 330, activation identifier 430, security codes 440, an activation price 450 and valid draw identifier 460, such as draw number or draw time, are printed on cash register receipt. In some embodiments, the game provider 250 time could be printed on the cash receipt 400.

EX1005.0007 (col. 6:28-61).

94. A POSITA would understand that the preprinted lottery ticket is purchased at the cash register 230 because Szrek describes the ticket activation as part of a product purchase. As shown in the excerpt above, the preprinted lottery ticket 300 is presented to a store clerk, who "scans the ticket 300 like any other product." *Id*. The cash register looks up scanned merchandise, whether the preprinted lottery ticket 300 or any other merchandise, in a database. *Id*. In FIG. 2, Szrek discloses that the cash register 230 (***blue***) issues a request for sales information (also ***blue***) to a store back office computer 240 (***green***):



***Szrek* (EX1005), FIG. 2 (annotated)**

A POSITA would understand that the preprinted lottery ticket is being activated as part of a customer purchase transaction being conducted at the cash register. And, because Szrek discloses that ticket activation ultimately results in ticket activation information being printed on a cash register receipt, a POSITA would understand that the cash register receipt shows that a customer sale involving the ticket 300 has been completed.

95. Mr. Hutton seems to agree that, in Szrek's system, lottery numbers are assigned to lottery tickets prior to the time of customer sale. Mr. Hutton states that selections corresponds to the lottery numbers for a lottery ticket in a random draw game:

> A POSITA would understand that "quick pick" refers to a random draw lottery game, because within the field of lottery systems and consistent with Szrek's disclosure of "computer generated selections," "quick

> pick" is understood to mean an option for a customer to allow the computer to randomly pick ***the numbers for a lottery ticket*** for a random draw lottery game.

EX1003 ¶ 106; *see also id*. ¶ 64 (In a random draw lottery, a player can either select his or her own draw numbers or the draw numbers can be randomly selected by the system; the numbers on the player's ticket are compared to randomly selected numbers during the draw event to determine if the ticket is a winning ticket.), EX2044 at 16:16-22 (The bet combination 350 on the ticket illustrated in Szrek, FIG. 3 refers to the lottery numbers associated with that ticket.).

96. Mr. Hutton also seems to agree that the lottery tickets are purchased at the cash register. *See* EX1003 ¶ 66 ("Szrek describes a 'method and system for selling game of chance tickets at a point of sale cash register.'") (citing EX1005, Abstract).

97. In preparing my opinions on the issue of whether Szrek is related to a "preprinted lottery ticket," as claimed, I considered Mr. Hutton's declaration and the materials he cites. There are several inadequacies in Mr. Hutton's review, for example:

a. Mr. Hutton's review of the '135 Patent's prosecution history does not acknowledge the definition that Patent Owner ascribed to the term "pre-printed lottery ticket" when it distinguished the Yacenda prior art reference that the Patent

Office applied in its rejection. With respect to the prosecution history, Mr. Hutton merely states:

> **D. *Prosecution History of the '135 patent***
>
> 81. The '135 patent was filed April 6, 2015 as Application No. US14/679,028. Ex. 1001. The applicant successfully argued that the prior art cited by the examiner failed to disclose a "pre-printed lottery ticket." Ex. 1002, 75-76. As a result, the claims of the '135 patent were allowed. *Id*., 59.

As discussed (§ VI.A above), Patent Owner stated clearly that a "pre-printed lottery ticket" does not include a lottery ticket that has lottery numbers associated with it at the time of customer purchase. Mr. Hutton's analysis does not acknowledge the definition that Patent Owner applied to the Challenged Claims during prosecution.

b. Mr. Hutton's claim construction analysis (EX1003 § IV) provides no analysis of the term "pre-printed lottery ticket." His claim construction analysis provides constructions of only two terms: "transaction processor" (*id*. § IV.A) and "data package" (*id*. § IV.B).

In my opinion, because Mr. Hutton overlooked the definition (and the disavowal) that Patent Owner made during prosecution of the '135 Patent, Mr. Hutton failed to construe the term "pre-printed lottery ticket" in his analysis.

98. In his analysis of claim 1, when explaining his opinion that Szrek discloses a pre-printed lottery ticket, Mr. Hutton states:

> ***109. For the term "scanning at a point-of-sale (POS) terminal a pre-printed ticket to obtain unique information ... from the pre-printed lottery ticket,"*** Szrek discloses ***"Preprinted tickets (PT) 300,"*** where "[e]ach ticket 300 preferably has a barcode 310 that could be ***scanned*** on the cash register [i.e. ***POS terminal***], with information allowing identifying this ***barcode as lottery ticket 300 and uniquely identifying*** the ticket 330," element 330 being the "***unique ticket identifier*** 330." Ex. 1005, 5:57, 5:67, 6:7-10. Thus, Szrek discloses that a pre-printed lottery ticket contains a ***barcode*** which ***uniquely identifies*** the ticket when ***scanned at a POS terminal***.
>
> 110. I note that the Board in PGR2020-00084 similarly held, and Patent Owner did not dispute, that Szrek discloses "provid[ing] unique identification information from a pre-printed lottery ticket" because "Szrek describes using preprinted ticket 300 that has a unique ticket identifier 330 and a barcode 310 that includes the unique ticket identifier." Ex. 1008, 33. The Board in PGR2020-00084 further held that, for the '894 patent claim 3's "scan of the pre-printed lottery ticket," "Petitioner provides arguments and evidence identifying where the recited subject matter ... is taught or suggested by Szrek" and that "Patent Owner does not dispute that Szrek discloses or suggests" claim 3's limitation. Id., 46. I agree with the Board that Szrek discloses these limitations from the '894 patent which are nearly identical to the '135 patent's limitations.

EX1003 ¶¶ 109-110. As this excerpt shows, Mr. Hutton's declaration does not discuss whether Szrek's lottery tickets 300 do or do not have lottery numbers associated with them at the time of customer purchase. Other parts of his declaration, however, demonstrate that Mr. Hutton acknowledged that, in Szrek's system, lottery numbers are associated with the lottery tickets prior to the time of customer purchase, in contravention of the definition that Patent Owner applied during prosecution. *See* ¶ 95 above (discussing Mr. Hutton's declaration (EX1003) at ¶¶ 64, 106).

99. At his deposition, however, Mr. Hutton testified that tickets have lottery numbers preprinted on them when they are printed:

> Q. Do you see Figure 3 in the screen share?
>
> A. I do.
>
> Q. Figure 3 illustrates the preprinted ticket in Szrek's system; is that correct?
>
> A. Correct.
>
> Q. How many of the elements that are illustrated here in Figure 3 are preprinted on the lottery ticket in Szrek's system?
>
> A. All of them, in that picture.
>
> Q. Say again, please.
>
> A. All of them in that picture.

EX2044 at 11:11-22.

> Q. And so there are -- there are a couple elements shown on Figure 3 that are discussed in this passage. I see the ticket identifier and also the bet combination.
>
> Do you see that in the excerpt on column 7?

A. Yes, I do.

Q. And so we were talking about the Bet Combination 350 when we were reviewing Figure 3, and now am I correct that the Bet Combination refers it -- sorry, the Bet Data 350 on the ticket refers to the lottery numbers that are associated with that ticket?

A. Yes.

EX2044 at 16:9-22.

100. Mr. Hutton testified that, when tickets are printed by a commercial printer 140, lottery numbers are selected by a computer. EX2044 at 35-20:37:2. Mr. Hutton also testified that, when tickets are printed by a lottery terminal or a kiosk, the tickets also are preprinted with lottery numbers assigned to them that may be selected by the players. *See id*. 34:20-25, 37:4-21, 40:1-8, 45:5-17.

101. I agree with Mr. Hutton that, in the Szrek system, the lottery tickets 300 have lottery numbers assigned to them when they are printed, which is before the time of customer purchase. Lottery numbers are assigned to these lottery tickets prior to the time of customer purchase no matter whether the preprinted lottery tickets are printed by a commercial printer 140, a lottery terminal 120, or a self-service terminal 130. *See* EX1005, FIG. 1, .0007 (col. 6:34-27). And, with respect to lottery tickets printed at a self-service terminal 130, the tickets have lottery numbers assigned to them at the time of printing no matter whether the terminal 130 has connectivity with the game provider system 250 (EX1005.0006 (col. 3:61-66)) or not. (EX1005.0008 (col. 7:18-35)). And, although the preprinted lottery tickets have lottery numbers

assigned to them, they have no value until the lottery tickets are scanned and activated at the cash register 230. Thus, the lottery tickets disclosed in Szrek are not "pre-printed lottery tickets," as that term is used in the Challenged Claims, because, in Szrek, the lottery tickets have lottery numbers associated with them at the time of customer purchase.

102. For the foregoing reasons, it is my opinion that Szrek fails to teach or suggest a "pre-printed lottery ticket" under the Challenged Claims. Therefore, it is my opinion that the Petition's invalidity challenge under Ground 1 is incorrect.

2. Szrek does not teach or suggest transmitting product information to a lottery administration system, as claimed.

103. As explained above (§ VI.B), I have interpreted the term "product information" to refer to information that identifies a lottery ticket product but is separate and distinct from a lottery ticket's lottery numbers and unique identification information.

104. Claims 1-3 and 5-6 recite that product information is transmitted to a lottery administration system. They recite:

Claim 1: [b] transmitting the … [2] product information from the POS terminal to a lottery administration system;

Claim 2: [c] transmitting the … [2] product information from the transaction processor to a lottery administration system;

Claim 5: [2] transmitting the … [ii] product information from the POS terminal to a lottery administration system,

Claim 6: [3] transmitting the … [ii] product information from the transaction processor to the lottery administration system,

It is my opinion that Szrek does not teach or suggest this subject matter.

105. Szrek discloses that, in his system, tickets are activated on the basis of the tickets' identifiers:

> All tickets are "preloaded" in the game provider's system, and during ticket activation, the game provider system merely recognizes ***from the ticket identifier*** what transaction is activated (e.g. lotto, 6 specific boards known to the system and the player).

EX1005.0006 (col. 3:46-50) (emphasis added).

106. The tickets possess not only unique identifiers 330 but also other barcode information that identifies the tickets as a lottery ticket:

> Each ticket 300 preferably has a barcode 310 that could be scanned on the cash register, with information allowing identifying this barcode as lottery ticket 300 and uniquely identifying the ticket 330.

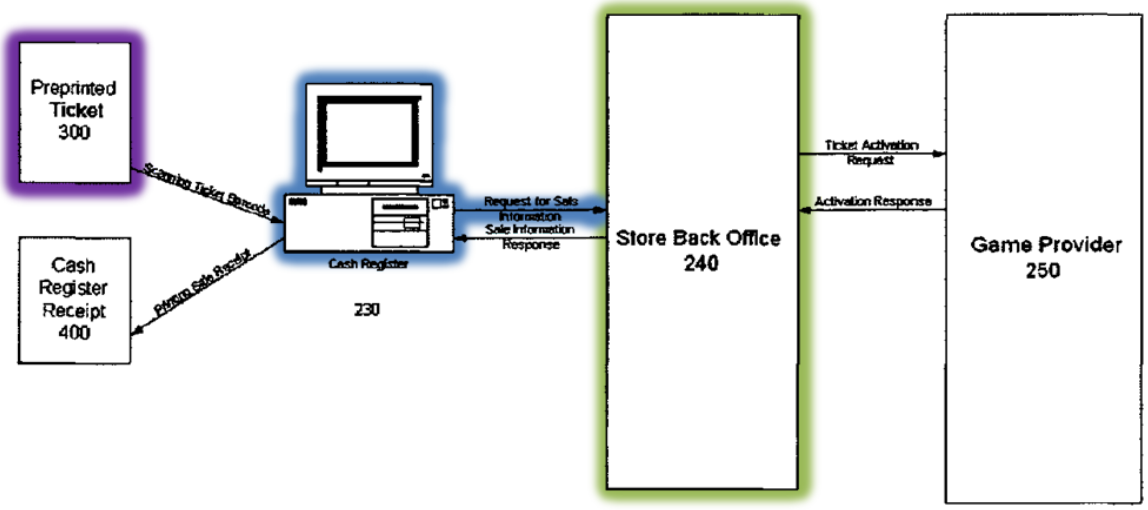
EX1005.0007 (col. 6:7-10).

107. Szrek discloses that, when the ticket is scanned at a cash register 230, the cash register interfaces with the store back office 240 to look up the ticket:

> In accordance with the method of the present invention, the logical process 200 of activation of lottery ticket 300 via a cash register 230 is shown in FIG. 2. The store clerk scans ticket 300 like any other product. Normally when a barcode 310 is scanned for any merchandise, the checkout register 230 application looks up the merchandise price in database or checks the price by using some algorithmic interface.

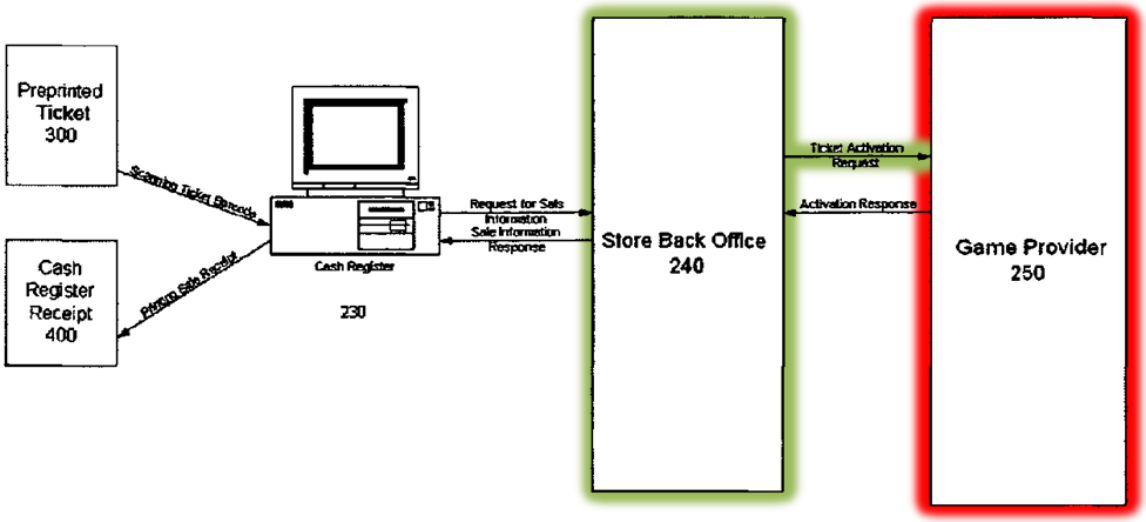
Id. (col. 6:28-34).

108. This process is illustrated in FIG. 2, where the cash register 230 (***blue***) communicates a request for sales information (also ***blue***) to the store back office 240 (***green***):



***Szrek* (EX1005), FIG. 2 (annotated)**

109. Szrek discloses that the store back office 240 (***green***) issues a ticket activation request (also ***green***) to the game provider 250 (***red***) that is different from the request it receives from the cash register:



***Szrek* (EX1005), FIG. 2 (annotated)**

Specifically, Szrek discloses that the store back office transforms the request that is sent to the game provider:

> After the barcode information has been scanned, cash register originates a transaction to the game provider requesting ticket activation. This is usually done by requesting the product type and price. This request is usually transformed into an activation request by the store back office software. The request is then sent to the game provider, who authorizes the activation and sends back lottery product description, price, and activation receipt identifier, usually with some security code.

EX1005.0006 (col. 4:56-64); *see also* EX1005.0007 (col. 6:34-37) ("In case of the ticket 300 of the present invention, this request will be transformed into transactional request to the game provider 250 …").

110. Although Szrek does not detail the types of information that is sent in an activation request from the store back office 240 to the game provider 250, a POSITA would understand from the foregoing description that the activation request merely includes the scanned ticket's ticket identifier 330 (Szrek, FIG. 3). Szrek discloses that the game provider "merely recognizes ***from the ticket identifier*** what transaction is activated," suggesting that the system transmits only the ticket identifier to the game provider to activate a ticket. EX1005.0006 (col. 3:46). A POSITA, therefore, would understand that the cash register 230 sends a request to the store back office 240 requesting a product type and price that corresponds to the barcode 310 from a scanned lottery ticket, and the store back office 240 transforms this request into an activation request to the game provider 250 that includes the ticket identifier 330 contained within the scanned barcode 310.

111. Moreover, Szrek discloses that "[a]ll tickets are "preloaded" in the game provider's system" (EX1005.0006 (col. 3:46-48)) and, when the game provider 250 responds to an activation request, the game provider "sends back lottery product description, price, and activation receipt identifier, usually with some security code" (*id*. (col. 4:62-64)). This disclosure also would indicate to POSITA that Szrek's system transmits only the ticket's ticket identifier to a game provider 250 to activate a ticket. A POSITA would find no teaching from Szrek's disclosure that the store back office 240 transmits product information to the game provider 250.

112. On this element, Mr. Hutton concludes that Szrek discloses transmitting product information to a lottery administrator because Szrek's system transmits a "bet combination" or a "sequence counter" to a game provider. Specifically, Mr. Hutton states:

> For the term "transmitting ... the product information," as discussed above, Szrek also 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," i.e. product information. Ex. 1005, 7:21-31. Szrek discloses that the ticket identifier 330 is sent by the cash register (i.e. POS terminal) to the game provider (i.e. lottery administration system) via a transaction request. Ex. 1005, 3:47-50; 6:36-39. Thus, since the ticket identifier 330 also includes ***product information such as bet combination or sequence counter,*** a POSITA would understand product information is sent to the game provider from the POS terminal because the ticket identifier (which contains the product information) is sent with the activation request.

EX1003 ¶ 118 (emphasis added, original emphasis omitted). I disagree with Mr. Hutton's conclusion that the transmitting step can be met by transmission of either bet combination or sequence counter information.

113. As shown in this excerpt, Mr. Hutton cites to Szrek at col. 7:21-31 for discussion of the bet combination 350 and the sequence counter that he concludes is transmitted product information. There, Szrek states:

> In some embodiments of this invention, the preprinted ticket identifier 330 on the self-service terminal 130 or kiosk 130 could be constructed in a way that part of ticket identifier 330 could correspond to the bet combination 350 chosen by the players.
>
> For example, in a lotto game 6 of 49, each combination corresponds to one of the numbers from 1 to 13,983,816, e.g. combination 1, 2, 3, 4, 5, 6 could correspond to 1 and 1, 2, 3, 4, 5, 7 to 2 etc. In this case, the game provider system may learn bet combination from the ticket identifier and authorize this bet. Another part of ticket identifier could contain some element making this ticket unique, such as issued tickets sequence counter on said self-service terminal 130 or kiosk 130. Such an approach may introduce some limitations i.e. limit number of bets played on a single preprinted ticket 300, but in exchange offer some advantages. E.g. this type of ticket identifier assignment allows printing customer selected wagers on tickets 300 on self-service terminals 130 and in kiosks 130 without game provider 250 connectivity.

EX1005.0008 (col. 7:18-35). I address these two types of information, bet combination and sequence counter, in turn.

114. Szrek's bet combination information cannot be "product information" because it represents a lottery ticket's lottery numbers. As the excerpt at col. 7:21-31 shows, Szrek's bet combination information reflects a player-chosen combination of lottery numbers, which is integrated into the ticket's unique identifier 330. As explained above (§ VI.B), I construed the term "product information" as information

that identifies a lottery ticket product but is separate and distinct from a lottery ticket's lottery numbers and unique identification information.

115. Szrek provides two examples of bet combinations. A bet combination of "1" corresponds to the following combination of lottery numbers: 1, 2, 3, 4, 5, and 6. EX1005.0008 (col. 7:23-26). A bet combination information of "2" corresponds to the following combination of lottery numbers: 1, 2, 3, 4, 5, and 7. *Id*. A POSITA would understand that the lottery ticket's bet combination 350 (EX1005, FIG. 3) must accommodate at least 13,983,816 unique values for each of the 13,983,816 unique combinations of lottery tickets. Because Szrek teaches that the bet combination information reflects a lottery ticket's lottery numbers, it is not "product information," under the claims. *See* § VI.B (construing "product information").

116. At his deposition, Mr. Hutton confirmed that Szrek's "bet combination," discussed in col. 7:20-22 (EX1005.0008) of Szrek, refers to the ticket's lottery numbers. *See* EX2044 at 14:23-16:22, 44:16-45:17. Because the Szrek's bet combination reflects the ticket's lottery numbers, Szrek's bet combination does qualify as "product information" under the claims. *See* § VI.B.

117. Moreover, Szrek discloses that the bet combination is ***part*** of the ticket identifier 330. EX1005.0008 (col. 7:19-22) ("the preprinted ticket identifier 330 … could be constructed in a way that part of ticket identifier 330 could correspond to

the bet combination 350 chosen by the players."). As explained (§ VI.B), "product information" is separate and distinct from a lottery ticket's unique identification information. Because Szrek discloses that the bet combination is ***part of*** the ticket's unique identification information (EX1005.0008 (col. 7:28-31)), not separate and distinct from it, Szrek's bet combination does qualify as "product information" under the claims.

118. Szrek's sequence counter cannot be "product information" because the sequence counter is part of the ticket identifier, which, in Mr. Hutton's analysis, corresponds to the claims' "unique identification information." *See* EX1003 ¶ 109 ("'[E]ach ticket 300 preferably has a barcode 310 that could be scanned on the cash register [i.e. POS terminal], with information allowing identifying this barcode as lottery ticket 300 and uniquely identifying the ticket 330,' ***element 330 being the 'unique ticket identifier 330."***") (emphasis added, original emphasis removed); *see also* EX1005.0008 (col. 7:28-31) ("Another part of ticket identifier could contain some element making this ticket unique, such as issued tickets sequence counter on said self-service terminal 130 or kiosk 130."). Here, again, the claims' "product information" is separate and distinct from a lottery ticket's unique identification information. § VI.B. Because Szrek discloses that the sequence counter is ***part of*** the ticket's unique identification information (EX1005.0008 (col. 7:28-31)), not

separate and distinct from it, the sequence counter does not teach or suggest the claim's product information.

119. At Mr. Hutton's deposition, he testified that Szrek's sequence information uniquely identifies a ticket. He testified:

> Does the sentence that begins with "E.g." have anything to do with the discussion of the sequence counter?
>
> MR. LU: Objection, vague.
>
> THE WITNESS: Yes, in that ***a person of ordinary skill here would understand that in order for this to work without the ticket identifier being previously known to the game provider system, there would be -- it would be very desirable to have some way of making that ticket identifier a unique identifier for the -- making that particular physical indicia being printed out at the kiosk lottery terminal as a unique indicia so he could identify that exact ticket that was printed on the lottery terminal.***
>
> ***So in other words, it would be essentially a serial number for that particular ticket, but it would be generated at the kiosk.*** But it doesn't necessarily require that the second part of it is -- it doesn't necessarily mean that that is what you need to do to allow the player's numbers to be embedded in the ticket identifier. That player's numbers could be embedded in the ticket identifier, whether or not you use a sequence counter to make the ticket unique.

> Although it would be highly desirable when a person of ordinary skill would require the need to have some way to make that ticket unique, since the ticket is not pre-known to the lottery administration system.

EX2044 at 51:7-52:16. I agree with Mr. Hutton on this issue, namely, that the sequence counter is a unique identifier of a ticket. But, under the claims, "product information" is separate and distinct from a ticket's unique identification information. A POSITA would not agree that Szrek's sequence counter is "product information" under the Challenged Claims.

120. I note that, when analyzing element 1[a], which refers to scanning product information, Mr. Hutton identifies various other data elements, namely, a product type, a product code and ticket price, that he considers "product information" along with bet combination and sequence counter. Mr. Hutton states:

> 111. For the term scanning ... to obtain ... product information from the pre-printed lottery ticket, Szrek further discloses that the "fixed part of the [pre-printed lottery ticket's] barcode should indicate the ***product type***," i.e. product information. 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," i.e. product information. *Id*., 4:44-46. Szrek also discloses that the ticket identifier scanned from the barcode contains product information in addition to the identification information. 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," i.e. product information. Ex. 1005, 7:21-31. ***A POSITA would understand that product type, product code, ticket price, bet combination, or sequence counter are product information*** because they are information about the product that was purchased, i.e. the lottery ticket.

EX1003 ¶ 111. Mr. Hutton does not allege that Szrek teaches or suggests transmitting the product type, product code, or ticket price information to the game provider.

121. For the foregoing reasons, it is my opinion that Szrek fails to teach or suggest "transmitting … product information from the POS terminal to a lottery administration system" as recited in Claims 1-3 and 5-6. Therefore, it is my opinion that the Petition's invalidity challenge to these claims under Ground 1 is incorrect.

B. Ground 2

122. On Ground 2, Mr. Hutton proposes a combination in which Llach's system is modified to send and receive data as disclosed in Szrek. *See, generally*, EX1003 ¶¶ 210-218. For example, Mr. Hutton states:

> A POSITA would be motivated to combine Llach's system with Szrek's system for activating pre-printed lottery tickets by modifying Llach's system to send and receive the data disclosed in Szrek for activating lottery tickets, as well as modifying Llach's authorization system to perform the same functions as Szrek's game provider. By

> doing this, the modified Llach system would support the sale and activation of pre-printed lottery tickets as well as gift cards, which would have provided a number of known benefits. For example, a retailer's POS terminals would be able to allow transactions for both gift cards and lottery tickets, which is cheaper, operationally simpler, and more efficient than having two different types of POS terminals. Moreover, the sale of lottery tickets gives retailers an additional source of revenue, which is obviously desirable. Customers also would not be required to use different terminals to activate gift cards and lottery tickets, thereby reducing the time of transaction and increasing customer satisfaction, all of which are desirable to a retailer.

Id. ¶ 212.

> Because of these compatibilities, a POSITA would understand that the proposed combination would simply be the application of Szrek's known techniques for activating lottery tickets to Llach's known system.

Id. ¶ 215. I evaluated the prior art according to the modification that Mr. Hutton proposes, and, for the reasons explained below, I have concluded that it does not yield a system that meets all elements of the Challenged Claims.

1. Llach and Szrek, even when considered in combination, do not teach or suggest a "pre-printed lottery ticket."

123. As explained above (§ VI.A), I have interpreted the term "pre-printed lottery ticket" to refer to "a lottery ticket which has no lottery numbers associated with it at the time of customer purchase" because Patent Owner applied this definition during

prosecution of the '135 Patent using arguments making clear that the term does not include a lottery ticket that has lottery numbers associated with it at the time of customer purchase. It is my opinion that Llach, when modified by Szrek as proposed in the Petition, fails to teach or suggest a "pre-printed lottery ticket," under the Challenged Claims.

124. All Challenged Claims recite a pre-printed lottery ticket:

a. In claim 1, the feature is recited as:

> [a] scanning at a point-of-sale (POS) terminal ***a pre-printed lottery ticket*** to obtain [1] unique identification information and [2] product information from ***the pre-printed lottery ticket;*** …
>
> [e] receiving at the POS terminal from the lottery administration system draw details associated with ***the pre-printed lottery ticket***;

EX1001.0015 (col. 10:27-39) (emphasis added).

b. In claim 2, the feature is recited as:

> [a] scanning at a point-of-sale (POS) terminal ***a pre-printed lottery ticket*** to obtain [1] unique identification information and [2] product information from ***the pre-printed lottery ticket;*** …
>
> [g] receiving by the transaction processor from the lottery administration system draw details associated with ***the pre-printed lottery ticket***;
>
> [h] receiving at the POS terminal from the transaction processor draw details associated with ***the pre-printed lottery ticket***;

EX1001.0015 (col. 10:43-63) (emphasis added).

c. In claim 4, the feature is recited as:

> wherein the method of generating a lottery ticket for a random draw comprises
>
> [1] receiving at the lottery administration system unique identification information from ***a pre-printed lottery ticket,***

EX1001.0016 (col. 11:11-14) (emphasis added).

d. In claim 5, the feature is recited as:

> wherein the method of providing a lottery ticket for a random draw comprises
>
> [1] scanning at the POS terminal ***a pre-printed lottery ticket*** to obtain [i] unique identification information and [ii] product information from ***the pre-printed lottery ticket,*** …
>
> [5] receiving at the POS terminal from the lottery administration system draw details associated with ***the pre-printed lottery ticket***,

EX1001.0016 (cols. 11:30-12:6) (emphasis added).

e. In claim 6, the feature is recited as:

> wherein the method of providing a lottery ticket for a random draw comprises
>
> [1] scanning at a point-of-sale (POS) terminal ***pre-printed lottery ticket*** to obtain [i] unique identification information and [ii] product information from ***the pre-printed lottery ticket,*** …
>
> [7] receiving by the transaction processor from the lottery administration system draw details associated with ***the pre-printed lottery ticket,***
>
> [8] receiving at the POS terminal from the transaction processor draw details associated with ***the pre-printed lottery ticket,***

EX1001.0016 (col. 12:15-34) (emphasis added).

125. Claim 3 is a dependent claim that depends from claims 1 and 2 (EX1001.0015-16 (cols. 10:65-11:2)). I understand that, when a dependent claim refers to two parent claims, it includes the recitations of one parent claim or the other. Here, because claims 1 and 2 both refer to a "pre-printed lottery ticket," the term applies to claim 3 as well.

126. As explained above (§ VII.A.1), Szrek does not teach or suggest a "pre-printed lottery ticket" because, in Szrek, lottery tickets already have lottery numbers associated with them at the time of customer purchase.

127. Llach has no teaching directed to lottery tickets. Mr. Hutton acknowledges the same. EX1003 ¶ 209 ("Llach does not expressly disclose activating a pre-printed lottery ticket"); *see also* EX2044 at 85:19-86:3 (Llach does not discuss lottery tickets at all.). Instead, Llach is directed to stored value cards. EX1006, Abstract; *see also* EX1003 ¶ 209 ("Llach discloses a system for activating "stored value cards" where a POS terminal scans a barcode printed on the stored value card, sends the information (and payment confirmation) to a transaction computer, which sends it to a card issuers' authorization system for activation."). Llach, therefore, does not teach or suggest application to any "lottery ticket that has no lottery numbers associated with it at the time of customer purchase." § VII.A.1.

128. Because Szrek does not teach or suggest a "pre-printed lottery ticket," as claimed, and, because Llach does not do so, either, the combination of Llach and Szrek fails to teach or suggest a preprinted lottery ticket.

129. For Ground 2, Mr. Hutton presents his analysis of the "pre-printed lottery ticket" feature in ¶ 222 of his declaration:

> As I discussed above in Ground 1 for limitation 1[a], Szrek discloses a pre-printed lottery ticket containing a bar code from which unique identification information and product information (such as bet combination or sequence counter) are obtained when the bar code is scanned. *See* Ex. 1005, 5:57, 5:67, 6:7-12, 7:21-31. Szrek also discloses that "[t]he barcode on the preprinted ticket should be compatible with barcode technology commonly used at the cash registers [such as] EAN-128." *Id*., 4:42. Since both Llach and Szrek disclose support for EAN-128 barcodes, the Llach-Szrek combination results in Llach's POS terminal scanning the barcode of Szrek's pre-printed lottery ticket to obtain unique identification and product information from the ticket.

EX1003 ¶ 222. I disagree that the cited disclosure teaches or suggests a "pre-printed lottery ticket," as recited in the Challenged Claims. As explained above (§ VII.A.1), in every embodiment disclosed by Szrek, Szrek's lottery tickets 300 have lottery numbers assigned to them prior to the time of customer purchase. Therefore, Szrek fails to teach or suggest a "pre-printed lottery ticket," as claimed.

130. None of the passages cited in ¶ 222 of Mr. Hutton's declaration suggest a lottery ticket that does not have lottery numbers assigned to them prior to the time of customer purchase. I review them briefly below:

a. The cite to col. 5:57 references a larger passage that states:

> Preprinted tickets (PT) 300 is preferably preprinted by a commercial printer 140 or in the lottery kiosk 130, self service terminal 130 or regular lottery terminals 120.

See EX1005.0007 (col. 5:57-59). This passage identifies the elements of FIG. 1 that may print a lottery ticket, but it does not disclose whether the lottery tickets, when printed, do or do not have lottery numbers associated with them. As discussed elsewhere (¶¶ 99-100), Mr. Hutton acknowledged at his deposition that the lottery tickets have lottery numbers associated with them when they are printed, which is prior to the time of customer purchase.

b. The cite to col. 5:67 references a larger passage that states:

> The preprinted ticket 300 contains many elements of a traditional lottery ticket, including bet selections 350, unique ticket identifier 330, barcode 310 that includes ticket identifier 330, duration for number of eligible draws (if activated) 340, ticket price or ticket activation price 380 (as opposed to ticket price on regular ticket).

See EX1005.0007 (col. 5:65-6:3). This passage refers to the elements that are preprinted on the lottery ticket shown in Szrek, FIG. 3. This passage demonstrates

that Szrek's lottery ticket is not a "pre-printed lottery ticket," as recited in the Challenged Claims, because Szrek's lottery ticket is printed with bet selections 350, which represent the ticket's lottery numbers. *See* EX2044 at 16:16-22 (The bet combination 350 on the ticket illustrated in Szrek, FIG. 3 refers to the lottery numbers associated with that ticket.). This passage, therefore, demonstrates that Szrek's lottery ticket has lottery numbers assigned to it prior to the time of customer purchase, and, therefore, Szrek does not disclose a "pre-printed lottery ticket," under the Challenged Claims.

c. The cite to col. 6:7-12, Szrek states:

> Each ticket 300 preferably has a barcode 310 that could be scanned on the cash register, with information allowing identifying this barcode as lottery ticket 300 and uniquely identifying the ticket 330. In a preferred embodiment, barcode 310 is one of the supported standard barcodes. The fixed part of the barcode should indicate the product type; the variable part of the barcode should contain ticket identifier 330.

EX1005.0007 (col. 6:7-12). This passage refers to elements of a lottery ticket, specifically, the barcode 310 and the ticket identifier 330, and a relationship between them. This passage, however, does not disclose whether the lottery tickets do or do not have lottery numbers associated with them at the time of customer purchase.

d. At col. 7:21-31 references a larger passage that states:

> In some embodiments of this invention, the preprinted ticket identifier 330 on the self-service terminal 130 or kiosk 130 could be constructed in a way that part of ticket identifier 330 could correspond to the bet combination 350 chosen by the players.
>
> For example, in a lotto game 6 of 49, each combination corresponds to one of the numbers from 1 to 13,983,816, e.g. combination 1, 2, 3, 4, 5, 6 could correspond to 1 and 1, 2, 3, 25 4, 5, 7 to 2 etc. In this case, the game provider system may learn bet combination from the ticket identifier and authorize this bet. Another part of ticket identifier could contain some element making this ticket unique, such as issued tickets sequence counter on said self-service terminal 130 or kiosk 130.

See EX1005.0008 (col. 7:18-31). This passage from Szrek refers to an embodiment in which tickets 300 are preprinted at a self-service terminal or kiosk 130 in a way that the ticket identifier 330 contains information representing the bet combination 350 (i.e. the lottery numbers) chosen by the player. This passage, therefore, demonstrates that Szrek's lottery tickets are not "pre-printed lottery tickets," under the Challenged Claims, because they have lottery numbers associated with them at the time they are printed, which is prior to the time of customer purchase.

131. Llach and Szrek, even when combined as Mr. Hutton proposes, fails to teach or suggest a "pre-printed lottery ticket," as recited in the Challenged Claims. Therefore, it is my opinion that the Challenged Claims are not invalid for the reasons identified in Ground 2.

2. Llach and Szrek, even when considered in combination, do not teach or suggest transmitting product information to a lottery administration system, as claimed.

132. As explained above (§ VI.B), I have interpreted the term "product information" to refer to information that identifies a lottery ticket product but is separate and distinct from a lottery ticket's lottery numbers or unique identification information.

133. Claims 1-3 and 5-6 recite that product information is transmitted to a lottery administration system. They recite:

Claim 1: [b] transmitting the … [2] product information from the POS terminal to a lottery administration system;

Claim 2: [c] transmitting the … [2] product information from the transaction processor to a lottery administration system;

Claim 5: [2] transmitting the … [ii] product information from the POS terminal to a lottery administration system,

Claim 6: [3] transmitting the … [ii] product information from the transaction processor to the lottery administration system,

It is my opinion that Llach and Szrek, even when combined as proposed by Mr. Hutton (*see* ¶ 122 above), does not teach or suggest this subject matter.

134. As explained above (§ VII.A.2), Szrek does not teach or suggest "transmitting the … [2] product information … to a lottery administration system," as claimed, because Szrek teaches that lottery tickets are activated based on the ticket's ticket

identifier 330. Moreover, a POSITA would not agree that the types of information to which Mr. Hutton cites, namely, a bet combination and a sequence counter, are "product information," under Challenged Claims 1-3 and 5-6.

135. Llach has no teaching directed to lottery tickets. Mr. Hutton acknowledges the same. EX1003 ¶ 209 ("Llach does not expressly disclose activating a pre-printed lottery ticket"); *see also* EX2044 at 85:19-86:3 (Llach does not discuss lottery tickets at all.). Instead, Llach is directed to stored value cards. EX1006, Abstract; *see also* EX1003 ¶ 209 ("Llach discloses a system for activating "stored value cards" where a POS terminal scans a barcode printed on the stored value card, sends the information (and payment confirmation) to a transaction computer, which sends it to a card issuers' authorization system for activation."). Llach, therefore, does not teach or suggest transmitting product information of a lottery ticket as claimed.

136. Because Szrek does not teach or suggest "transmitting the … [2] product information … to a lottery administration system," as recited in elements 1[b], 2[c], 5[c][2], and 6[d][3], and, because Llach does not do so, either, the combination of Llach and Szrek fails to teach or suggest Challenged Claims 1-3 and 5-6.

137. For Ground 2, Mr. Hutton presents his analysis of the "transmitting the … [2] product information … to a lottery administration system" element in ¶¶ 227-228 of his declaration:

> For the term ***"transmitting ... information from the transaction processor to a lottery administration system,"*** Llach further teaches that, from the transaction computer 150 (i.e. ***transaction processor***), the activation request "is then forwarded as message 109 to the appropriate card issuers' authorization system 160 for authorizing the activation request." *Id*., [0037].
>
> In the Llach-Szrek combination, Llach's card issuers' authorization system 160 is modified to perform the same functions as Szrek's gaming provider. These include, as I discussed in Ground 1, receiving unique identification information for Szrek's pre-printed lottery ticket, activating the lottery ticket, authorizing winner payment, sending activation receipt info. Thus, the card issuers' authorization system as modified by Szrek is a ***lottery administration system***.

EX1003 ¶¶ 227-228 (emphases in original). I disagree that the cited disclosure teaches or suggests "transmitting the … [2] product information … to a lottery administration system," as recited in the Challenged Claims 1-3 and 5-6. Szrek fails to teach or suggest "transmitting … [2] product information … to a lottery administration system," for the reasons explained above (§ VII.A.2) and Llach has no disclosure relating to lottery tickets.

138. For the foregoing reasons, it is my opinion that Llach and Szrek, even when combined as proposed by Mr. Hutton, fails to teach or suggest "transmitting … product information from the POS terminal to a lottery administration system" as

recited in Claims 1-3 and 5-6. Therefore, it is my opinion that the Petition's invalidity challenge to these claims under Ground 2 is incorrect.

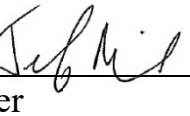
VIII. CONCLUSION

139. For the reasons set forth above, it is my opinion that the Challenged Claims are not invalid under Grounds 1 or 2.

140. In signing this declaration, I recognize that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

141. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on the information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Date: May 15, 2024



Jeffrey Miller