

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DK CROWN HOLDINGS INC.,
Petitioner

v.

DIOGENES LIMITED,
Patent Owner

IPR2023-00267

U.S. Patent No. 10,997,822 B2

**DECLARATION OF OLAF VANCURA, PH.D. IN SUPPORT OF
PATENT OWNER'S MOTION TO AMEND**

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I. INTRODUCTION

I, Olaf Vancura, Ph.D. declare as follows:

1. My name is Olaf Vancura. I have been retained as an expert in this proceeding on behalf of Patent Owner Diogenes Limited (“PO”), and its counsel, DLA Piper LLP (US). I am personally knowledgeable about the matters stated herein, and am competent to make this declaration.

2. I understand that DK Crown Holdings Inc. (“Petitioner”) filed a Petition for *Inter Partes* Review (“Petition”) of US 10,997,822 B2 (“the ’822 patent”) (EX[1001]).

3. I am being compensated for my work in this matter at my standard hourly rate. I am also being reimbursed for reasonable and customary expenses associated with my work and testimony in this matter. My compensation is not based on the outcome of this matter or on the outcome of my opinions.

4. I have been asked to provide my conclusions and bases thereof regarding several aspects of the issues in dispute. Based on my investigation in this matter, and as discussed in further detail in this declaration, it is my opinion that the substitute claims set forth in Patent Owner’s Motion to Amend have support in the original filed disclosure of application No. 17/109,616 (the ’616 application) (EX2002) and the earlier filed disclosure of priority application No. 13/605,813

('813 application) (EX2001). It is also my opinion that the substitute claims are valid over the prior art cited in the Petition as well as other prior art cited in related IPR petitions.

5. My analysis and conclusions regarding these subjects are presented in more detail below.

II. BACKGROUND AND QUALIFICATIONS

6. I have extensive experience in gaming and gambling software.

7. My professional experience and expertise is described in my current CV (EX2004).

8. I completed my Bachelor of Science in Electrical Engineering, with a minor in Mathematics, from Santa Clara University in 1987. I completed my Master of Arts in Physics from Johns Hopkins University in 1989. I completed my Ph.D. in Physics from Johns Hopkins University in 1992. Thereafter, I joined Harvard University as a Post-Doctoral Fellow, and subsequent to that, I joined the Harvard-Smithsonian Center for Astrophysics as an Astrophysicist.

9. Circa 1995, I began working in the gaming space as a consultant, author and inventor. For several years, I created and taught the mathematics of gambling curriculum at nearby Tufts University. The class was very popular, oversubscribed by some 3 times available spaces, and nominated for "Best Course at Tufts."

10. In late 1997, I transitioned to the gaming industry full-time by joining Mikohn Gaming in order to initiate and lead their venture into gaming content. At Mikohn, I was promoted several times and ultimately headed their games division, leaving in 2006 as Chief Creative Officer.

11. In 2010, I joined American Gaming Systems as Vice President of Game Development, heading up an R&D team of 65 people, and was responsible for all hardware, software, game design, licensing and content.

12. I have designed (as chief architect, creatively responsible for concept, functional specification of game play and all underlying math) dozens of casino games (including slot machines with physical and/or video reels, video pokers and table games). In the design process, I typically code (program) the game “from scratch” and analyze game properties, evaluating and experimenting with various game play methods and math models before converging to a specification.

13. As a consultant, I have also coded, optimized and analyzed many casino games that are not my own, providing mathematical analysis and reports for gaming regulators. I am familiar with the mathematical and algorithmic underpinnings of electronic bingo-based (Class II), traditional Las Vegas-style (Class III) and pool/pull-tab-style slot machines. I am familiar with gaming regulations and have worked extensively with regulations and/or regulators covering multiple jurisdictions throughout the United States.

14. I (as sole or co-inventor) have been awarded over 80 United States patents related to gaming, including a number of patents directed to the implementation of wagering events on gaming machines and systems. I have provided a list of some of these patents, which I believe to be most relevant to this action, as EX2005.

15. I have designed games that earned multiple awards from the industry and players including, e.g., the #1 and #3 “Most Innovative” game by Strictly Slots magazine readers in the same year. An estimated \$8 billion has been wagered upon my games.

16. I am an author of multiple books on gaming/games. *Smart Casino Gambling* takes an applied mathematics approach to gaming and discusses ways of gaining an advantage, or at least minimizing the disadvantage, against the house. *Knock-Out Blackjack* describes a novel card-counting system I co-invented which was named one of the “Top 100 Events in Gaming” for the 20th century by *Casino Player* magazine. *Advantage Yahtzee* describes my computer-derived optimal solution to maximize expected score in the popular Yahtzee home game, a game of fantastic complexity with over 10^{100} possible paths. A neural network I created and coded, which learned to play Blackjack at an expert level, was described in my paper “A Computer Teaches Itself to Play Blackjack” as found in *Finding the Edge*, a compendium of academic gambling studies for which I served as lead editor.

17. I have been invited to give talks for the Dartmouth Chance Lecture series, University of Nevada Las Vegas Excellence in Gaming series, Cornell World Class Masters, University of Nevada Reno Executive Development Conference, Mensa Annual Gathering and the National Institute of Standards and Technology, among others.

III. DOCUMENTS AND OTHER MATERIALS RELIED UPON

18. In forming the opinions set forth in this declaration, I have reviewed the documents in the following table:

Document	Description
Petition	Petition for <i>Inter Partes</i> Review (“Petition”) of US 10,997,822
’822 Institution Decision	IPR2023-00262, paper 8 (“’822 Institution Decision”)
’439 Institution 10,997,822 Decision	IPR2023-00261, paper 8 (“’439 Institution Decision”)
’516 Institution Decision	IPR2023-00263, paper 8 (“’516 Institution Decision”)
’716 Institution Decision	IPR2023-00264, paper 9 (“’716 Institution Decision”)

Document	Description
'338 Institution Decision	IPR2023-00265, paper 9 (“’338 Institution Decision”)
'779 Institution Decision	IPR2023-00268, paper 9 (“’779 Institution Decision”)
EX[1001]	U.S. Patent No. 10,997,822 (the “’822 patent”)
EX[1002]	Prosecution File History of the ’822 patent
EX[1004]	U.S. Patent Application Publication No. 2008/0113765 A1 (“DeWaal”)
EX[1005]	U.S. Patent Application Publication No. 2008/0311981 A1 (“Schugar”)
EX[1006]	U.S. Patent Application Publication No. 2012/0309489 A1 (“Scott”)
EX[1007]	Declaration of Dwight Crevelt
EX2001	U.S. application No. 13/605,813 (the ’813 application)
EX2002	U.S. application No. 17/109,616 (the ’616 application)
EX2004	CV of Olaf Vancura, Ph.D.
EX2005	List of Relevant Patents with Olaf Vancura as Inventor/Co-Inventor
EX2007	U.S. Patent No. 6,726,562
EX2008	U.S. Patent No. 6,173,955
EX2009	U.S. Patent No. 8,795,055
EX2010	U.S. Patent No. 8,105,149
EX2011	Exhibit A30 of DraftKings’ First Amended Invalidity Contentions

Document	Description
EX2012	Exhibit A14 of DraftKings' Initial Invalidity Contentions

19. Additionally, I have utilized my own experience and expertise, including regarding the knowledge and capabilities of a person of ordinary skill in the relevant art in the timeframe of the claimed priority date of the '822 patent.

IV. INSTITUTED GROUNDS

20. The PTAB Panel in this IPR has instituted trial based on the following grounds presented by Petitioner:

Ground	Claims	Basis	Reference(s)
1	1, 7, 15 and 21	§102	Scott
2	7, 15 and 21	§103	Scott and Schugar
3	1, 7, 15 and 21	§102	DeWaal
4	1, 7, 15 and 21	§103	DeWaal and general knowledge of a POSITA
5	7, 15 and 21	§103	DeWaal and Schugar

21. I have not been asked to review these grounds based on the original claims 1, 7, 15 and 21 challenged by the Petitioner. I have only been asked to review these grounds and other prior art in view of PO's substitute claims 30-33.

V. RELEVANT PATENT LAW AND LEGAL STANDARDS

A. Date of Invention

22. I have been asked to use the date of the filing of the earliest application to which priority is claimed (*i.e.*, September 6, 2012) as the date of invention for purposes of my analysis.

B. Anticipation

23. I am informed and understand that a patent claim is invalid under 35 U.S.C. §102 if a prior art disclosure teaches every element required by the claim, either expressly or inherently. The identical invention must be shown in as complete detail as is contained in the claim. When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art.

C. Obviousness

24. I am informed and understand that a patent claim is invalid under 35 U.S.C. § 103 if the differences between the invention and the prior art are such that the subject matter as a whole would have been obvious at the time of the invention to a person having ordinary skill in the art to which the subject matter pertains. Obviousness, as has been explained to me, is based on (i) the scope and content of the prior art, (ii) the differences between the prior art and the claim, (iii) the level of ordinary skill in the art, and (iv) any secondary indicia of non-obviousness (*e.g.*,

“secondary considerations” such as commercial success in the market place of the claimed invention), to the extent that they exist.

25. I further understand that obviousness may be demonstrated by showing that it would have been obvious to combine the teachings of more than one item of prior art. In determining whether a piece of prior art could have been combined with other prior art or with other information within the knowledge of a person having ordinary skill in the art, the following are examples of approaches and rationales that may be considered:

- Combining prior art elements according to known methods to yield predictable results;
- Simple substitution of one known element for another to obtain predictable results;
- Use of a known technique to improve similar devices (methods, or products) in the same way;
- Applying a known technique to a known device (method or product) ready for improvement to yield predictable results;
- Applying a technique or approach that would have been obvious to try (choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success);

- Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to a person having ordinary skill in the art; and
- Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

26. I further understand that an invention may be obvious if one of ordinary skill in the art, facing a wide range of needs created by developments in the field, would have seen an obvious benefit to the solutions tried by the applicant. When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, it may be obvious to a person of ordinary skill to try the known options. If a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique would have been obvious.

27. I further understand that a person of ordinary skill in the art is a hypothetical person who is presumed to be aware of all of the relevant art at the time of the invention. The person of ordinary skill may be able to fit together the teachings of multiple patents and/or printed publications employing ordinary

creativity and the common sense that familiar items may have uses in another context or beyond their primary purposes.

28. I also understand that when considering the obviousness of a patent claim, one should consider whether a teaching, suggestion, or motivation to combine the references exists so as to avoid impermissibly applying hindsight when combining or modifying the prior art. I understand this test should not be applied rigidly, but that the test can be important to avoid such hindsight.

29. I also understand that one of ordinary skill in the art must have a reasonable expectation of success in combining or modifying prior art references.

30. I also understand that all elements of a claim must be considered in an obviousness analysis.

D. Standard of Proof

31. I understand that the standard to prove unpatentability in an *Inter Partes* Review proceeding is by a preponderance of the evidence, which means more likely than not.

VI. LEVEL OF ORDINARY SKILL IN THE ART

32. I have considered the level of ordinary skill in the art relevant to the '822 patent. I understand that factors such as the education level of those working in the field, the sophistication of the technology, the types of problems encountered

in the art, the prior art solutions to those problems, and the speed at which innovations are made may help establish the level of skill in the art.

33. After reviewing the '822 patent, the relevant portions of the prosecution history of the '822 patent, and cited references, it is my opinion that the relevant art of the '822 patent is in the field of electronic gaming.

34. Based upon my knowledge of this field, I conclude that a POSITA at the time of the earliest filing date of the '822 patent (September 6, 2012), and for that matter, at all subsequent times through the present, would have had a Bachelor's degree in electrical engineering, computer science, or a similar field; and at least two years of experience in the wager-based gaming industry. Additional work or research experience can substitute for less or different education, and vice-versa.

35. This skill level is substantially the same as the level set out in the '822 Institution Decision set forth below and my opinions are the same regardless of which definition is used:

Petitioner asserts that a person of ordinary skill in the art “would have a bachelor's degree in electrical engineering, computer science, or a similar field; and at least two years of experience in the wager based gaming industry. A person with less education but more relevant practical experience may also meet this standard.”

'822 Institution Decision, p. 9.

36. I am and was at the time of the earliest filing date at least a person of skill in the relevant art, of a level at least as high as or more than ordinarily skilled persons, and I am able to provide insight and opinions into the understandings of such persons at all relevant times by virtue of my education, training and experience.

VII. THE '822 PATENT

37. I have reviewed the '822 patent, together with its file wrapper and the file wrapper of related applications.

38. Having recognized a need for new products to generate and maintain interest in online betting platforms, which was a problem unique to this technology space and not a concern of in-person betting establishments, the '822 patent describes a novel solution to this problem. For example, the '822 patent states:

In one embodiment, at any desired time after initiation of an event (such as at any time after a “ticket” is purchased until completion of an event, after each leg has been completed, between legs, including potentially as a leg is “in-play”, and/or during a designated span of time before, during and/or after any of the legs), any desired number of players who remain eligible for a prize (and potentially those still eligible for bonus and/or consolation prizes) or to win or have correct (win) predictions for each of the events or legs that are completed, may be offered a “buy-out” or an opportunity to sell their tickets (in whole or alternatively may be in part (i.e., a fractional amount) to the game operator or through the game operator (or alternatively directly) to a third party (e.g., one or more system operator(s), business entity or entities such as a

merchant(s), one or more other persons, other player(s), etc.). Thus, for example, the game operator (or any other entity) may offer the player a fractional amount of the potential Jackpot Pool to buy the ticket for the still pending game(s) and thereby provide the player the opportunity to cash in and avoid the risk of being eliminated on a later leg or the final event. In other examples, a ticket held by players may be comprised of one or more divisions, and the buy-out offer or sale may involve just certain divisions of the ticket, so that those divisions are sold but the player retains ownership of the remaining divisions of the ticket. In yet another example, a ticket held by a player may include an accumulator or parlay wager, in which case the player may receive (or initiate) a buy-out offer or sale for a fractional amount of a prize (e.g., a jackpot), and which may occur at any time, such as before, during and/or after any of the legs specified by the wager have been completed.

EX[1001], 35:8-39.

39. A buy-out offer can strike a balance between the interests of bettors and the sportsbook operator (or the “house”) during the life of a wager. A multi-leg wager (for example, an accumulator or “parlay” wager) allows a bettor to make one wager upon the outcome of multiple events, such as the result of three football games. In a parlay, all of the wagered outcomes are required to win; the winnings from one event are staked on the next event in a series until either the bettor loses or the series completes successfully. In multi-leg wagering, prior to the start of all of the sporting events wagered upon, a bettor purchases one ticket having each of the bettor’s predicted outcomes of the games or “legs” of the event contained thereon.

A successful bet or ticket, in a parlay embodiment, is worth a predetermined value based on the application of each game's (or leg's) payback to each of the successive events. A successful bet is more difficult because it is contingent on multiple successful outcomes, and can also be very profitable to the bettor given the progressive increase in stake between successful legs.

40. For example, a bettor having a four-fold parlay, or a bet involving four sporting events, having won the first two of the four relevant bets on their ticket, stands a better chance to win the overall wager than what existed prior to the completion of those first two events. Conversely, the house stands a more significant risk of losing the bet. A buy-out allows a bettor to sell its wager back to the house for a profit that is less than the maximum amount of the possible winnings, to the potential benefit of both parties.

41. Accurate, timely and consistent buy-out offers improve bettor confidence. It is desirable for an online wagering system to operate accurately and with stability across a plurality of players. The '822 patent provides the capability to provide a buy-out offer to a plurality of players based on the criteria described in the '822 patent, and to do so consistently across similarly situated tickets, independent of bettors' geography. Thus according to the patented methods, a bettor receives a partial or full buy-out offer reflecting a value derived from real-time information from potentially a multitude of sources.

42. These technological advancements potentially foster additional bettor engagement and platform profits. Combined with buy-out offers' improved real-time accuracy, these improvements, in my opinion, are apt to drive bettor engagement by increasing popularity of placed bets, amounts wagered (since wagers may be cashed-in for partial value to avoid "all or nothing" scenarios) and placement of new bets, which in turn increases revenue.

43. Increased bettor enjoyment should result in keeping customers at an online betting site, i.e., better site "stickability," than an online wagering system lacking these features.

44. The calculations/processing required by a method, system, or device to generate buy-out offers continuously and in real time during play based on time-sensitive internal game changes that affect odds (e.g., for sporting events: the current score, which team currently has possession, how much time remains, players' status (injuries, ejections, foul trouble, etc.) with instant updates (e.g., upon a turnover, a made/missed shot, a goal, a penalty, a rebound, a strikeout, an error, etc.), i.e. collectively utilizing in-play metrics to generate real time buy-out offers, are very complex. This complexity is vastly greater than a single-outcome bet made prior to a game and resolved at the end of a game, and the complexity may increase further with additional legs, the inclusion of proposition bets, in-play betting, and/or varied bet types.

45. The buy-out functionality is technical and time-sensitive in nature. System-wide, potentially a large volume of information from various sources may be collected and analyzed, “instantly,” for a real-time valuation. For any particular wager, this information includes the maximum payout for the bettor’s bet and the probability of a successful outcome. The probability calculation can take into account many types of real-time information from a sportsbook operator, such as odds changes (e.g., in-game/in-play, before or between games), the maximum payout for the multi-outcome event bet, the probability of a successful outcome on the remaining leg or legs, and in parimutuel betting how many tickets have been sold holding the same ticketed outcome, as well as the value and composition of the pool, including for example whether any consolation prizes are offered for near miss tickets. The probability of success calculation for an in-leg, single leg or multi-leg wagering event may take into account external data from a multitude of sources.

46. The system described in the ’822 patent contemplates continuous activities that take place in real time to allow the capability of continuous cash-out for players during live play.

47. The reception of real time information related to the wagering event, along with the recalculation of these data, and information regarding the wager itself, allows the server system to evaluate and make a buy-out offer, including during live play. This is described in various places in ’822. For example, “The server system

12 then makes the determination of what the appropriate value would be for a ticket in order to make an offer to buy-out to one or more players.” EX[1001], 15:6-9. “...the ability to receive additional data via the input device 26” which “may impact the attributed value calculated for any given ticket” wherein attributed value is the mathematical expected value. EX[1001] 174:20-35. “...the value or price of the buy-out offer can... be based on any objective and/or subjective standards, such as... an independent third party/parties or resource(s)...” Furthermore, the “ticket holders could be offered “cash in” values at any time, such as from as soon as is acceptable and viable” EX[1001] 17:56-58, including “at any time, including at any point after a ticket is obtained or an event is initiated up through completion of the event, after each stage of the game being resolved, or at any other desired time.” EX[1001] 33:38-42. “It is further contemplated that the ability to trade or sell tickets back to the system operator may be continuous, and also in these circumstances, the bid may be extremely time sensitive.” EX[1001] 23:9-12.

48. The system of the '822 patent allows for “cash-in buy back [to] also operate during live play and offer continuous cash-in ability as soon as it is technically possible.” EX[1001], 22:41-45.

49. In accordance with the buy-out option, “[w]hen the player decides to end the game play, he can select the cash out button at which time the player may receive cash or other payout mechanisms such as tickets or credit slips redeemable

by a cashier (or other suitable redemption system) or funding to the player's electronically recordable identification card or the player's online account.” EX[1001], 27:16-21. In one embodiment, “the player may be offered the option of cashing out a percentage of the potential Jackpot Pool, for example by depressing the cash out button the players sells 10% or 25% of the potential Jackpot Pool for the amount offered on the display.” EX[1001], 27:5-9. An “authorized player or manager may then elect to cash out the ticket by selecting the ‘cash out’ icon” that is displayed. EX[1001], 43:44-46.

50. The collection and processing of this volume of information from a multitude of sources — continuously, accurately, and in real time — is not possible outside of the technological environment of an online sports wagering system. For example, in the context of multi-leg wagers with continuous buy-out capability, the probability of success must be re-calculated between legs of a multi-leg wager, or continuously while any particular leg event is in progress, e.g., based upon on a variety of in-play internal statistics, (e.g., game score, metrics, positions, etc.) and their fluctuations, some examples of which are noted earlier, and/or in-play external statistics (e.g., updated odds).

51. Further, the system identifies all similarly situated bettors to whom a particular buy-out offer will be made, regardless of geography (e.g., “at a plurality of locations” which may be distributed throughout a variety of wagering venues

including race tracks, off-track betting facilities...”, etc. EX[1001] 18:58-66), and facilitates real-time communications to and from that plurality of bettors.

52. This buy-out feature provides additional decisions for the player, which creates added excitement and engagement during the wagering event — thus fulfilling the need in the gaming industry “for new products to generate and maintain consumer interest.” EX[1001], 1:67-2:2.

53. The ’822 patent, including the substitute claims as amended, provides a unique, ordered combination of elements that, taken together, improve prior art in online wagering systems. Such methods, systems and devices, to my knowledge, were neither typical nor accomplished previously in the prior art.

VIII. THE SUBSTITUTE CLAIMS

54. In the table below, I reproduce the substitute claims from the PO’s Motion to Amend. Newly added language is shown in underlined text, deleted language is shown by strikethrough or bracketed text:

Limitation	Language
30[a]	A system for processing a payment for a wager in connection with a wagering event, the system comprising:
30[b]	a communications interface;
30[c]	a processor operatively coupled to the communications interface; and

Limitation	Language
30[d]	a memory having programming instructions stored thereon, which, when executed by the processor, performs one or more operations, comprising:
30[d-1]	<u>continuously receiving data in real time related to the wagering event,</u>
30[d-2]	<u>recalculating, in real time and based on the continuously received data, wager information for the wager,</u>
30[d-3]	<u>continuously evaluating the recalculated wager information to determine an amount of a system cash out offer,</u>
30[e]	~~transmitting receiving~~ , over the communications interface, ~~a designated~~ <u>the amount of the system cash out offer to</u> ~~for a value of the wager on the wagering event from~~ a first input device,
30[f]	~~soliciting receiving~~ , over the communications interface, a <u>solicited</u> cash out offer from a second input device,
30[g]	identifying an acceptance of the <u>solicited</u> cash out offer from the first input device prior to the end of the wagering event,
30[h]	processing the <u>solicited</u> cash out offer, and
30[i]	transmitting, over the communications interface, a value of the <u>solicited</u> cash out offer to the first input device.
31.	The system of claim [[1]] 30, wherein the one or more operations further comprise: adjusting the ~~designated amount of the system cash out offer for the value of the wager on the wagering event after the initial designated amount is received.~~
32[a]	A non-transitory computer readable medium having instructions stored thereon, which, when executed by a

Limitation	Language
	processor, performs one or more operations, comprising:
32[a-1]	<u>continuously receiving data in real time related to a wagering event;</u>
32[a-2]	<u>recalculating, in real time and based on the continuously received data, wager information for a wager;</u>
32[a-3]	<u>continuously evaluating the recalculated wager information to determine an amount of a system buy-out offer;</u>
32[b]	causing a central server system to ~~transmit~~ <u>receive</u> a ~~designated~~ <u>the amount of the system buy-out offer to</u> ~~for~~ a ~~value of the wager on the wagering event from~~ a first input device;
32[c]	causing the central server system to <u>solicit</u> ~~receive~~ one or more of a <u>solicited</u> buy-out offer ~~comprising the value of the wager~~ or a <u>solicited</u> partial buy-out offer ~~comprising a portion the value of the wager~~ from a second input device;
32[d]	causing the central server system to identify an acceptance of the one or more of the <u>solicited</u> buy-out offer or the <u>solicited</u> partial buy-out offer from the first input device prior to the end of the wagering event;
32[e]	causing the central server system to process the one or more of the <u>solicited</u> buy-out offer or the <u>solicited</u> partial buy-out offer; and
32[f]	causing the central server system to transmit <u>a value of the one or more of the solicited buy-out offer or the solicited partial buy-out offer</u> ~~at least a portion of the one or more of the value and the portion of the value~~ to the first input device.

Limitation	Language
33.	The non-transitory computer readable medium of claim [[15]] 32, causing the central server system to adjust the ~~designated amount of the system buy-out offer for the value of the wager on the wagering event after the initial designated amount is received.~~

55. The amendments shown above for substitute claims 30 and 32 add further limitations to, and narrow the scope of, original claims 1 and 15, respectively.

56. Specifically, substitute claim 30 narrows the scope of claim 1 by adding three “real time and continuous” limitations 30[d-1] to [d-3]: “continuously receiving data in real time related to the wagering event; recalculating, in real time and based on the continuously received data, wager information for the wager; [and] continuously evaluating the recalculated wager information to determine an amount of a system cash out offer.”

57. Substitute claim 32 narrows the scope of claim 15 by adding three similar “real time and continuous” limitations 32[a-1] to [a-3], which have support in the specification as discussed in more detail below.

IX. CLAIM CONSTRUCTION

58. In the '779 Institution Decision, a slightly different PTAB Panel determined that “‘continuously’ performing a task ... exclude[s] performing that task at discrete time points.” IPR2023-00268, paper 9, p. 10.

59. This construction was made with respect to “continuously” limitations in the '779 patent: “continuously retrieve, by the system controller, data in real time related to a progress of the wagering event” and “continuously evaluate, by the system controller, the recalculated wager information.” IPR2023-00268, paper 9, p. 12.

60. I agree with this construction for at least the reasons set out in the '779 Institution Decision and in my opinion it applies to limitation 30[d-1], “continuously receiving data in real time related to the wagering event,” limitation 30[d-3], “continuously evaluating the recalculated wager information to determine an amount of a system cash out offer,” limitation 32[a-1], “continuously receiving data in real time related to the wagering event,” and limitation 32[a-3], “continuously evaluating the recalculated wager information to determine an amount of the system buy-out offer,” which mirror the “continuously” limitations of claim 1 of the '779 patent.

61. I have used this construction in my analysis set forth herein.

62. In the '822 Institution Decision, this Board “encourage[d] further briefing on the construction of [“causing the central server system to receive one or

more of a buy-out offer comprising the value of the wager or a partial buy-out offer comprising a portion the value of the wager”] during trial.” Institution Decision, 9-10.

63. In my opinion, the construction of “causing the central server system to receive one or more of a buy-out offer comprising the value of the wager or a partial buy-out offer comprising a portion the value of the wager” is not needed to render a decision in this proceeding as the amended claims have multiple other limitations not present in the prior art as discussed below and as noted by the ’779 PTAB Panel in the ’779 Institution Decision. IPR2023-00268, paper 9, 12-20.

64. However, for at least the following reasons, it is my opinion that the correct claim construction of “causing the central server system to receive one or more of a buy-out offer comprising the value of the wager or a partial buy-out offer comprising a portion the value of the wager” is its plain and ordinary meaning.

65. In my opinion, a POSITA would have understood the term to mean receiving a buy-out offer, a partial buy-out offer or both a buy-out offer and a partial buy-out offer. This is what a POSITA would have understood to be the plain and ordinary meaning of “one or more of” as recited in the claim language.

66. Petitioner’s proposed construction, on the other hand, limits the term to receiving “*either* a buy-out offer ... *or* a partial buy-out offer,” which is both

inconsistent with the “one or more of” claim language and unduly narrows it to purportedly mean “one of”.

67. All other claim terms were given their plain and ordinary meaning as understood by a POSITA.

X. THE SUBSTITUTE CLAIMS DO NOT ADD NEW MATTER AND ARE SUPPORTED BY THE ORIGINAL DISCLOSURE AND PRIORITY APPLICATION

68. I have been asked to opine on whether the application that issued as the '822 patent, application No. 17/109,616 ('616 application) (EX2002), and the earlier priority application, application No. 13/605,813 ('813 application) (EX2001), support the substitute claims. It is my understanding that there must be support for the original claim language as well as the amended claim language.

69. The '822 patent issued from the '616 application (EX2002), which claims priority through a series of continuation and continuation-in-part applications to application No. 13/605,813 ('813 application) (EX2001), filed on Sep. 6, 2012, now Pat. No. 8,602,884. These applications share substantially the same disclosure with respect to the relevant claim limitations discussed herein.

70. It is my opinion, based on my review of the substitute claims and the above listed applications that each of those applications provides written description support for substitute claims 30-33. I understand from counsel that the test to

determine if the substitute claims, like any claim, is supported by the written description of a patent specification requires an objective inquiry into the four corners of the specification from the perspective of a POSITA. Based on that inquiry, the specification must describe an invention (i.e., what is claimed) understandable to that skilled artisan as of the filing date or in this case the priority date. In view of this standard, and as discussed further below, it is my opinion that support for each of the substitute claims and/or the additional elements of the substitute claims is provided below with reference to both the original filed disclosure of the '616 application (EX2002) and the earlier filed disclosure of the priority '813 application (EX2001).

71. In the below table, I have provided exemplary support for each of the substitute claims, including the original and additional elements of the substitute claims with reference to the original filed disclosure of the '616 application (EX2002) and the earlier filed disclosure of the priority '813 application (EX2001):

Claim Limitation	Support in the '616 and '813 applications
30[a] A system for processing a payment for a wager in connection with a wagering event, the system comprising:	FIG. 1 is a schematic of an exemplary wagering system hardware and network that will be used herein to describe and illustrate one implementation of the present invention. The system includes a network, based on a central server system 12 being interconnected through the internet 10 to a plurality of wager input devices such as wagering stations 14, wagering terminals 16, and internet connected computing systems 18, smart phones 20, tablet computers 22 and televisions 24 each of which

Claim Limitation	Support in the '616 and '813 applications
	is representative of a plurality of each type of wager input device (e.g. wagering stations 14 A-N). As will also be discussed below, the concepts herein may also be applied to gaming machines, so gaming machine 26 is depicted as an additional input device to the central server system 12 in FIG. 1. EX2001, 4:2-11; <i>see also</i> 4:12-15, 7:5-8, 12:13-16, FIG. 1. FIG. 1 is a schematic of an exemplary wagering system hardware and network that will be used herein to describe and illustrate one implementation of the present disclosure. The system includes a network, including a system controller, for example, such as based on a central server system 12 being interconnected through the internet 10 to a plurality of wager input devices such as wagering stations 14 , wagering terminals (including self-service wagering terminals) 16, and internet connected computing systems 18, smart phones 20, tablet computers 22 and televisions 24 each of which is representative of a plurality of each type of wager input device (e.g. wagering stations 14 A-N). As should be understood the term “system controller” should be broadly construed to comprise any hardware device or devices that includes at least one central processing unit (CPU) or other processing device and associated memory. EX2002, [0043]; <i>see also</i> [0044], [0051], FIG. 1.
30[b] a communications interface;	FIG. 1 is a schematic of an exemplary wagering system hardware and network that will be used herein to describe and illustrate one implementation of the present invention. The system includes a network, based on a central server system 12 being interconnected through the internet 10 to a plurality of wager input devices such as wagering stations 14, wagering terminals 16, and internet connected computing systems 18, smart phones 20, tablet computers 22 and televisions 24 each of which is representative of a plurality of each type of wager input device (e.g. wagering stations 14 A-N). As will also be discussed below, the concepts herein may also

Claim Limitation	Support in the '616 and '813 applications
	be applied to gaming machines, so gaming machine 26 is depicted as an additional input device to the central server system 12 in FIG. 1. EX2001, 4:2-11; <i>see also</i> FIG. 1. FIG. 1 is a schematic of an exemplary wagering system hardware and network that will be used herein to describe and illustrate one implementation of the present disclosure. The system includes a network, including a system controller, for example, such as based on a central server system 12 being interconnected through the internet 10 to a plurality of wager input devices such as wagering stations 14, wagering terminals (including self-service wagering terminals) 16, and internet connected computing systems 18, smart phones 20, tablet computers 22 and televisions 24 each of which is representative of a plurality of each type of wager input device (e.g. wagering stations 14 A-N). As should be understood the term “system controller” should be broadly construed to comprise any hardware device or devices that includes at least one central processing unit (CPU) or other processing device and associated memory. EX2002, [0043]; <i>see also</i> FIG. 1.
30[c] a processor operatively coupled to the communications interface; and	FIG. 2 is a more detailed schematic representation of the wagering system hardware of the central server system 12 that controls the operation of the system of FIG. 1. The central server system 12 may include one or more rack mounted server computers 120 each with at least one central processing unit (CPU) or other processing device and associated memory. As an example only, the rack mounted server computers 120 of FIG. 2 may be PowerEdge R420 Rack Chassis devices having a 300 GB hard drive, one or two Intel Xeon E5-2450 processors, 24 GB memories with RAID connectivity using a RAID controller card. One or more of the computers 120 may also include an input device, an output device and a driver for a display device. The computers 120 within the central server system 12 are shown as being hardwired to each other and to the

Claim Limitation	Support in the '616 and '813 applications
	internet, but the respective computers or portions of the network may include either wired or wireless connectivity to the internet, to an intranet or an alternative networked communication system. EX2001, 5:29-6:10; <i>see also</i> EX2001, 4:2-11. FIG. 2 is a more detailed schematic representation of the wagering system hardware of the central server system 12 that controls the operation of the system of FIG. 1. The central server system 12 may include one or more rack mounted server computers 120 each with at least one central processing unit (CPU) or other processing device and associated memory. As an example only, the rack mounted server computers 120 of FIG. 2 may be PowerEdge R420 Rack Chassis devices having a 300 GB hard drive, one or two Intel Xeon E5-2450 processors, 24 GB memories with RAID connectivity using a RAID controller card. One or more of the computers 120 may also include an input device, an output device and a driver for a display device. The computers 120 within the central server system 12 are shown as being hardwired to each other and to the internet, but the respective computers or portions of the network may include either wired and/or wireless connectivity to the internet, to an intranet or an alternative networked communication system, such as, for example and without limitation, a cloud-based system, an autonomic system, a client-server based system, a grid based system, a mainframe based system, a utility based system, a peer-to-peer based system, a cloud gaming based system, or any other suitable types of system architectures, topographies or configurations. EX2002, [0047]; <i>see also</i> EX2002, [0043].
30[d] a memory having programming instructions stored thereon, which, when executed by the	The wager stations 14 and wagering terminals 16 preferably include at least one processor, such as a microprocessor, a microcontroller-based platform, a suitable integrated circuit or one or more application-specific integrated circuits (ASIC's). The processor is in

Claim Limitation	Support in the '616 and '813 applications
processor, performs one or more operations, comprising:	communication with or operable to access or to exchange signals with at least one data storage or memory device. The processor and the memory device reside within the cabinet. The memory device stores program code and instructions, executable by the processor, to control the wager stations 14 and wagering terminals 16 and communicate with the central server system 12. The memory device also stores other data such as image data, event data, user input data, ticket tracking assignment generators, pay-table data or information and applicable rules that relate to the operation of the wager stations 14 and wagering terminals 16 and the particular type of buy-out method and process described herein. EX2001, 4:29-5:9; <i>see also</i> 5:29-6:10. The wager stations 14 and wagering terminals 16 preferably include at least one processor, such as a microprocessor, a microcontroller-based platform, a suitable integrated circuit or one or more application-specific integrated circuits (ASIC's). The processor is in communication with or operable to access or to exchange signals with at least one data storage or memory device. The processor and the memory device reside within the cabinet. The memory device stores program code and instructions, executable by the processor, to control the wager stations 14 and wagering terminals 16 and communicate with the central server system 12. The memory device also stores other data such as image data, event data, user input data, ticket tracking assignment generators, pay-table data or information and applicable rules that relate to the operation of the wager stations 14 and wagering terminals 16 and the particular type of buy-out method and process described herein. EX2002, [0045].
30[d-1] <u>continuously receiving data in real</u>	It is also contemplated that the server system 12 will have the ability to receive additional data via the input device 26, for example various odds on respective

Claim Limitation	Support in the '616 and '813 applications
<u>time related to the wagering event,</u>	wagers concerning the sporting match or event, that may impact the attributed value calculated for any given ticket. That additional information could be used to calculate with greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool. EX2001, 15:13-18. It is also envisioned that cash-in buy back may also operate during live play and offer continuous cash-in ability as soon as it is technically possible, for example at the half-time of a match or during the running of a match when possible. EX2001, 22:13-15. It is further contemplated that the ability to trade or sell your tickets back to the system operator will be continuous and in these circumstances, the bid will be extremely time sensitive. Additionally, as discussed above the player or ticket holder will have the option to sell a fraction of his ticket to the system operator. EX2001, 22:29-23:2. It is also contemplated that the server system 12 will have the ability to receive additional data via the input device 26, for example various odds on respective wagers concerning the sporting match or event, that may impact the attributed value calculated for any given ticket. That additional information could be used to calculate with greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool. EX2002, [0078]. It is also envisioned that cash-in buy back may also operate during live play and offer continuous cash-in ability as soon as it is technically possible, for example at the half-time of a match or during the running of a match when possible. EX2002, [0102]. It is further contemplated that the ability to trade or sell tickets back to the system operator may be continuous,

Claim Limitation	Support in the '616 and '813 applications
	and also in these circumstances, the bid may be extremely time sensitive. Additionally, as discussed above, the player or ticket holder may have the option to sell a fraction of their ticket to the system operator or other third party. EX2002, [0103].
30[d-2] <u>recalculating, in real time and based on the continuously received data, wager information for the wager,</u>	It is also contemplated that the server system 12 will have the ability to receive additional data via the input device 26, for example various odds on respective wagers concerning the sporting match or event, that may impact the attributed value calculated for any given ticket. That additional information could be used to calculate with greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool. EX2001, 15:13-18. It is also envisioned that cash-in buy back may also operate during live play and offer continuous cash-in ability as soon as it is technically possible, for example at the half-time of a match or during the running of a match when possible. EX2001, 22:13-15. It is further contemplated that the ability to trade or sell your tickets back to the system operator will be continuous and in these circumstances, the bid will be extremely time sensitive. Additionally, as discussed above the player or ticket holder will have the option to sell a fraction of his ticket to the system operator. EX2001, 22:29-23:2. It is also contemplated that the server system 12 will have the ability to receive additional data via the input device 26, for example various odds on respective wagers concerning the sporting match or event, that may impact the attributed value calculated for any given ticket. That additional information could be used to calculate with greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool. EX2002, [0078].

Claim Limitation	Support in the '616 and '813 applications
	It is also envisioned that cash-in buy back may also operate during live play and offer continuous cash-in ability as soon as it is technically possible, for example at the half-time of a match or during the running of a match when possible. EX2002, [0102]. It is further contemplated that the ability to trade or sell tickets back to the system operator may be continuous, and also in these circumstances, the bid may be extremely time sensitive. Additionally, as discussed above, the player or ticket holder may have the option to sell a fraction of their ticket to the system operator or other third party. EX2002, [0103].
30[d-3] <u>continuously evaluating the recalculated wager information to determine an amount of a system cash out offer,</u>	It is also contemplated that the server system 12 will have the ability to receive additional data via the input device 26, for example various odds on respective wagers concerning the sporting match or event, that may impact the attributed value calculated for any given ticket. That additional information could be used to calculate with greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool. EX2001, 15:13-18. It is also envisioned that cash-in buy back may also operate during live play and offer continuous cash-in ability as soon as it is technically possible, for example at the half-time of a match or during the running of a match when possible. EX2001, 22:13-15. It is further contemplated that the ability to trade or sell your tickets back to the system operator will be continuous and in these circumstances, the bid will be extremely time sensitive. Additionally, as discussed above the player or ticket holder will have the option to sell a fraction of his ticket to the system operator. EX2001, 22:29-23:2. It is also contemplated that the server system 12 will have the ability to receive additional data via the input

Claim Limitation	Support in the '616 and '813 applications
	device 26, for example various odds on respective wagers concerning the sporting match or event, that may impact the attributed value calculated for any given ticket. That additional information could be used to calculate with greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool. EX2002, [0078]. It is also envisioned that cash-in buy back may also operate during live play and offer continuous cash-in ability as soon as it is technically possible, for example at the half-time of a match or during the running of a match when possible. EX2002, [0102]. It is further contemplated that the ability to trade or sell tickets back to the system operator may be continuous, and also in these circumstances, the bid may be extremely time sensitive. Additionally, as discussed above, the player or ticket holder may have the option to sell a fraction of their ticket to the system operator or other third party. EX2002, [0103].
30[e] <u>transmitting</u> ~~receiving~~, over the communications interface, a ~~designated~~ <u>the amount of the</u> <u>system cash out offer</u> <u>to for a value of the</u> ~~wager on the wagering~~ ~~event from~~ a first input device,	The wagering stations 14 may be configured so that users can be the party placing a wager, while the wagering terminals 16 may be configured for an operator at a commercial location such as a store or betting facility. EX2001, 4:15-18; <i>see also</i> 12:4-7. The Mid Tier program 402, as shown in FIG. 3, includes most critically the Cash-In 422 program, which itself may include the Offers Generation 452 routine, the Offers 454 routine and the Tickets 456 routine. The Cash-In 422 program is responsible for determining when an offer to buy-out a ticket holder will be made, and the price that will be offered. Within the Cash-In 422 program, the Offers Generation 452 routine is the trading engine that, when triggered, will generate a set of offers over all of the tickets that are still potential winners and then publish the offers and receive/process

Claim Limitation	Support in the '616 and '813 applications
	the acceptance of these offers via the Merchant API 420. EX2001, 8:23-28. In a first implementation it is anticipated that only the system operator will be able to offer the buy-out option to the active tickets holders using the central server system 12 to communicate the offers. EX2001, 23:22-24. After some percentage, usually a majority, of the sporting events have occurred, the server system 12 will be configured to identify the remaining potential winning ticket or tickets for the Jackpot Pool, i.e. those tickets that have correctly selected each of the results of the events of the completed legs. Upon determining the number of remaining potential winners of the Jackpot Pool, the system will determine the likelihood of each ticket winning the Jackpot Pool, and on that basis make a determination as to the attributed value of the ticket based on its respective probability of winning the Jackpot Pool. The server system 12 then makes the determination of what the appropriate amount would be for an offer to buy-out all, or potentially a portion of, each or all of the remaining potentially winning tickets. EX2001, 14:7-16; <i>see also</i> 14:17-26. By way of example, upon presentation of the ticket to one of the wager stations 14 or wager terminals 16, the ticket will be verified and the system will present the offer to purchase the whole ticket will be displayed on the display devices, and the player will have the option to accept or reject the offer via an input to the wager station 14 or wager terminal 16. The player can also be presented with the option to sell any fraction of a ticket he/she wishes to sell through the wager station 14 or wager terminal 16. EX2001, 14:17-22. The wagering stations 14 may be configured so that users can be the party placing a wager, while the

Claim Limitation	Support in the '616 and '813 applications
	wagering terminals 16 may be configured for an operator at a commercial location such as a store or betting facility. EX2002, [0044]; <i>see also</i> [0068]. The Mid Tier program 402, as shown in FIG. 3, includes most critically the Cash-In 422 program, which itself may include the Offers Generation 452 routine, the Offers 454 routine and the Tickets 456 routine. The Cash-In 422 program is responsible for determining when an offer to buy-out a ticket holder will be made, and the price that will be offered. Within the CashIn 422 program, the Offers Generation 452 routine is the trading engine that, when triggered, will generate a set of offers over all of the tickets that are still potential winners and then publish the offers and receive/process the acceptance of these offers via the Merchant API 420. EX2002, [0029]. In a first implementation it is anticipated that only the system operator will be able to offer the buy-out option to the active tickets holders using the central server system 12 to communicate the offers. EX2002, [0106]. After some percentage, such as a majority, of the sporting events have occurred, the server system 12 may be configured to identify the remaining potential winning ticket or tickets for the Jackpot Pool, i.e., those tickets that have correctly selected each of the results (win or consolation) of the events of the completed legs, or remain eligible for the consolation prize for selecting a certain percentage of the actual winners (i.e., 6 of the 8 winners). Upon determining the number of remaining potential winners of the Jackpot Pool, the system will determine the likelihood of each ticket winning the Jackpot Pool (alone or shared with other players, which may be known or modeled), and on that basis make a determination as to the attributed value of the ticket based on its respective probability of winning the Jackpot Pool (and the prize if split multiple ways). The

Claim Limitation	Support in the '616 and '813 applications
	server system 12 then makes the determination of what the appropriate value would be for a ticket in order to make an offer to buy-out to one or more players (as disclosed herein, in other examples one or more other sources may also be used in addition to, or as an alternative to, the server system 12 for determining the appropriate value). EX2002, [0046]; <i>see also</i> [0048]. By way of example, upon presentation of the ticket to one of the wager stations 14 or wager terminals 16, the ticket will be verified and the system will present the offer to purchase the whole ticket will be displayed on the display devices, and the player will have the option to accept or reject the offer via an input to the wager station 14 or wager terminal 16. The player can also respond, or alternatively be presented with the option, to sell any fraction of a ticket he/she wishes to sell through the wager station 14 or wager terminal 16. EX2002, [0076].
30[f] <u>soliciting</u> ~~receiving~~, over the communications interface, a <u>solicited</u> cash out offer from a second input device,	In a first implementation it is anticipated that only the system operator will be able to offer the buy-out option to the active tickets holders using the central server system 12 to communicate the offers. However, it is also contemplated that the system operator may use the central server system 12 to solicit offers from third parties that would be communicated to the active ticket holder. In this embodiment, the central server system 12 could communicate the details of the outstanding active tickets through all or a select number of wagering terminals 16 and allow bids for the outstanding active tickets to be submitted via the wagering terminals 16. As another alternative embodiment, it is contemplated that the system operator could facilitate the ability of members of the public to buy and sell active tickets in a Betfair type exchange. Thus, it is also contemplated that the central server system 12 could allow the posting of available buy back options so that the public could place buy-back offers for example though the wagering

Claim Limitation	Support in the '616 and '813 applications
	terminals 14 and the ticket holder could select the buy-back bid of his or her choosing. EX2001, 23:22-24:4. It is also envisioned that cash-in buy back may also operate during live play and offer continuous cash-in ability as soon as it is technically possible, for example at the half-time of a match or during the running of a match when possible. EX2001, 22;13-15. It is further contemplated that the ability to trade or sell your tickets back to the system operator will be continuous and in these circumstances, the bid will be extremely time sensitive. Additionally, as discussed above the player or ticket holder will have the option to sell a fraction of his ticket to the system operator. EX2001, 22:29-23:2. In a first implementation it is anticipated that only the system operator will be able to offer the buy-out option to the active tickets holders using the central server system 12 to communicate the offers. However, it is also contemplated that the system operator may use the central server system 12 to solicit offers from third parties that would be communicated to the active ticket holder. In this embodiment, the central server system 12 could communicate the details of the outstanding active tickets through all or a select number of wagering terminals 16 and allow bids for the outstanding active tickets to be submitted via the wagering terminals 16. As another alternative embodiment, it is contemplated that the system operator could facilitate the ability of members of the public to buy and sell active tickets like in the manner of a person to person betting exchange, such as, without limitation, of the type offered by Betfair. Thus, it is also contemplated that the central server system 12 could allow the posting of available buy-back options so that the public could place buy-back offers for example through the wagering terminals 14 and

Claim Limitation	Support in the '616 and '813 applications
	the ticket holder could select the buy-back bid of his or her choosing. EX2002, [0106]. It is also envisioned that cash-in buy back may also operate during live play and offer continuous cash-in ability as soon as it is technically possible, for example at the half-time of a match or during the running of a match when possible. EX2002, [0102]. It is further contemplated that the ability to trade or sell tickets back to the system operator may be continuous, and also in these circumstances, the bid may be extremely time sensitive. Additionally, as discussed above, the player or ticket holder may have the option to sell a fraction of their ticket to the system operator or other third party. EX2002, [0103].
30[g] identifying an acceptance of the <u>solicited</u> cash out offer from the first input device prior to the end of the wagering event,	Within the Cash-In 422 program, the Offers Generation 452 routine is the trading engine that, when triggered, will generate a set of offers over all of the tickets that are still potential winners and then publish the offers and receive/process the acceptance of these offers via the Merchant API 420. The Offers 454 routine stores all the offer made, accepted and declined. EX2001, 8:25-29; <i>see also</i> 19:22-24, 20:4-10, 25:23-29. In a first implementation it is anticipated that only the system operator will be able to offer the buy-out option to the active tickets holders using the central server system 12 to communicate the offers. However, it is also contemplated that the system operator may use the central server system 12 to solicit offers from third parties that would be communicated to the active ticket holder. In this embodiment, the central server system 12 could communicate the details of the outstanding active tickets through all or a select number of wagering terminals 16 and allow bids for the outstanding active tickets to be submitted via the wagering terminals 16. As another alternative embodiment, it is contemplated that the system operator could facilitate the ability of

Claim Limitation	Support in the '616 and '813 applications
	members of the public to buy and sell active tickets in a Betfair type exchange. Thus, it is also contemplated that the central server system 12 could allow the posting of available buy back options so that the public could place buy-back offers for example through the wagering terminals 14 and the ticket holder could select the buy-back bid of his or her choosing. EX2001, 23:22-24:4. If the ticket holder decides to cash in the ticket in response to the offer, the ticket holder may communicate the acceptance via the computing system 18, smart phone 20, or tablet computer 22, to the central server system 12. Alternatively, the ticket holder would present the ticket to one of the wagering stations 14 or wagering terminals 16 which in turn communicate the acceptance to the central server system 12, and upon verification, provide the ticket bearer with a payout in the form of cash, a voucher or check. EX2001, 20:4-10. Within the Cash-In 422 program, the Offers Generation 452 routine is the trading engine that, when triggered, will generate a set of offers over all of the tickets that are still potential winners and then publish the offers and receive/process the acceptance of these offers via the Merchant API 420. The Offers 454 routine stores all the offer made, accepted and declined. EX2002, [0056]; <i>see also</i> [0096], [0111]. In a first implementation it is anticipated that only the system operator will be able to offer the buy-out option to the active tickets holders using the central server system 12 to communicate the offers. However, it is also contemplated that the system operator may use the central server system 12 to solicit offers from third parties that would be communicated to the active ticket holder. In this embodiment, the central server system 12 could communicate the details of the outstanding active tickets through all or a select number of wagering terminals 16 and allow bids for the outstanding active

Claim Limitation	Support in the '616 and '813 applications
	tickets to be submitted via the wagering terminals 16. As another alternative embodiment, it is contemplated that the system operator could facilitate the ability of members of the public to buy and sell active tickets like in the manner of a person to person betting exchange, such as, without limitation, of the type offered by Betfair. Thus, it is also contemplated that the central server system 12 could allow the posting of available buy-back options so that the public could place buy-back offers for example through the wagering terminals 14 and the ticket holder could select the buy-back bid of his or her choosing. EX2002, [0106]. If the ticket holder decides to cash in the ticket in response to the offer, the ticket holder may communicate the acceptance via the computing system 18, smart phone 20, or tablet computer 22, to the central server system 12. Alternatively, the ticket holder would present the ticket to one of the wagering stations 14 or wagering terminals 16 which in turn communicate the acceptance to the central server system 12, and upon verification, provide the ticket bearer with a payout in the form of cash, a voucher or check. EX2002, [0096].
30[h] processing the <u>solicited</u> cash out offer, and	If the ticket holder decides to cash in the ticket in response to the offer, the ticket holder may communicate the acceptance via the computing system 18, smart phone 20, or tablet computer 22, to the central server system 12. Alternatively, the ticket holder would present the ticket to one of the wagering stations 14 or wagering terminals 16 which in turn communicate the acceptance to the central server system 12, and upon verification, provide the ticket bearer with a payout in the form of cash, a voucher or check. EX2001, 20:4-10. If the ticket holder decides to cash in the ticket in response to the offer, the ticket holder may communicate the acceptance via the computing system 18, smart phone 20, or tablet computer 22, to the central server system 12. Alternatively, the ticket holder would present

Claim Limitation	Support in the '616 and '813 applications
	the ticket to one of the wagering stations 14 or wagering terminals 16 which in turn communicate the acceptance to the central server system 12, and upon verification, provide the ticket bearer with a payout in the form of cash, a voucher or check. EX2002, [0096].
30[i] transmitting, over the communications interface, a value of the <u>solicited</u> cash out offer to the first input device.	The wagering stations 14 and wagering terminals 16 may further include a ticket and/or voucher printer to print wager receipts and potentially vouchers representing cash-out values and successful play awards or negotiable instruments such as checks. The wagering stations 14 and wagering terminals 16 may also include a ticket or voucher reader and/or a cash dispenser. Preferably, the bill collector, ticket or voucher reader and cash dispenser would be integrated into a single sub-unit. '816 application, 4:22-28. The wagering stations 14 and wagering terminals 16 may further include one or more of a display, a card reader/writer and/or a ticket and/or voucher printer to visually display, store on a card and/or a player account(s), and/or print wager receipts and potentially vouchers representing cash-out values and successful play awards (e.g., an “award” or “awards” as defined herein shall be broadly construed and shall include, without limitation, a designated currency, virtual currency, tokens, credits, coupons, services, personal or real property, virtual property, assets, investments, negotiable instruments (such as checks), commodities, food, lodging, entertainment, alleviation of obligations, recognition (such as being named on a leaderboard on a website or other), gaming opportunities, wager enhancement and/or any other benefit(s) or portions thereof that may be provided or otherwise offered to a player). The wagering stations 14 and wagering terminals 16 may also include a ticket or voucher reader and/or a dispenser for dispensing a monetary amount, such as, without limitation, cash, virtual currency and/or tokens, etc. For example, the ticket or voucher reader

Claim Limitation	Support in the '616 and '813 applications
	may be adapted to read and allocate credits or other value associated with a ticket or voucher to one or more players and/or player accounts. The bill collector, ticket or voucher reader and dispenser may be separate or integrated into a single sub-unit. EX2002, [0044].
31. The system of claim ~~[[1]]~~ <u>30</u>, wherein the one or more operations further comprise: adjusting the <u>designated amount of the system cash out offer</u> ~~for the value of the wager on the wagering event after the initial designated amount is received.~~	It is also contemplated that the server system 12 will have the ability to receive additional data via the input device 26, for example various odds on respective wagers concerning the sporting match or event, that may impact the attributed value calculated for any given ticket. That additional information could be used to calculate to a greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool. Thus, in the example above, if one of the remaining 3 potentially winning tickets has predicted the final score of the final soccer match as 2-1, while another has selected the final score as being 1-10, then the more likely score of 2-1 will have a higher attributed value than the ticket having selected 1-10. In that event, the ticket holder of the 2-1 score match may be offered more, as that ticket's attributed value (or expected value in mathematical probability terms) will be higher. EX2001, 15:13-23; <i>see also</i> 14:7-16, 14:27-15:12, 15:13-23, 15:24-16:4, 16:5-13. The ticket buy back process may include an interactive process that bids the ticket holder in a sequence of events for the ticket. For example, the system operator might originally offer the client \$100,000 for a ticket that has 5 correct scores, if the client declines to sell the ticket, the system operator might revert to offer \$105,000. EX2001, 22:22-25. It is also contemplated that the server system 12 will have the ability to receive additional data via the input device 26, for example various odds on respective wagers concerning the sporting match or event, that may

Claim Limitation	Support in the '616 and '813 applications
	impact the attributed value calculated for any given ticket. That additional information could be used to calculate with greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool. Thus, in the example above, if one of the remaining 3 potentially winning tickets has predicted the final score of the final soccer match as 2-1, while another has selected the final score as being 1-10, then the more likely score of 2-1 will have a higher attributed value than the ticket having selected 1-10. In that event, the ticket holder of the 2-1 score match may be offered more, as that ticket's attributed value (or expected value in mathematical probability terms) will be higher. EX2002, [0078]; <i>see also</i> [0074], [0079]-[0084]. The ticket buy back process may include an interactive process that bids the ticket holder in a sequence of events for the ticket. For example, the system operator might originally offer the client \$100,000 for a ticket that has 5 correct scores, if the client declines to sell the ticket, the system operator might revert to offer \$105,000. EX2002, [0103].
32[a] A non-transitory computer readable medium having instructions stored thereon, which, when executed by a processor, performs one or more operations, comprising:	The wager stations 14 and wagering terminals 16 preferably include at least one processor, such as a microprocessor, a microcontroller-based platform, a suitable integrated circuit or one or more application-specific integrated circuits (ASIC's). The processor is in communication with or operable to access or to exchange signals with at least one data storage or memory device. The processor and the memory device reside within the cabinet. The memory device stores program code and instructions, executable by the processor, to control the wager stations 14 and wagering terminals 16 and communicate with the central server system 12. The memory device also stores other data such as image data, event data, user input data, ticket

Claim Limitation	Support in the '616 and '813 applications
	tracking assignment generators, pay-table data or information and applicable rules that relate to the operation of the wager stations 14 and wagering terminals 16 and the particular type of buy-out method and process described herein. EX2001, 4:29-5:9; <i>see also</i> 7:5-14, 11:25-12:3. The wager stations 14 and wagering terminals 16 preferably include at least one processor, such as a microprocessor, a microcontroller-based platform, a suitable integrated circuit or one or more application-specific integrated circuits (ASIC's). The processor is in communication with or operable to access or to exchange signals with at least one data storage or memory device. The processor and the memory device reside within the cabinet. The memory device stores program code and instructions, executable by the processor, to control the wager stations 14 and wagering terminals 16 and communicate with the central server system 12. The memory device also stores other data such as image data, event data, user input data, ticket tracking assignment generators, pay-table data or information and applicable rules that relate to the operation of the wager stations 14 and wagering terminals 16 and the particular type of buy-out method and process described herein. EX2002, [0045]; <i>see also</i> [0051], [0067]. <i>See also</i> EX2010 (U.S. Pat. No. 8,105,149), 10:33-58 (incorporated by reference at EX2001, 25:3-14 and EX2002, [0110]).
32[a-1] <u>continuously receiving data in real time related to a wagering event;</u>	See element 30[d-1].
32[a-2] <u>recalculating, in real time and based on the continuously</u>	See element 30[d-2].

Claim Limitation	Support in the '616 and '813 applications
<u>received data, wager information for a wager;</u>	
32[a-3] <u>continuously evaluating the recalculated wager information to determine an amount of a system buy-out offer;</u>	See element 30[d-3].
32[b] causing a central server system to <u>transmit</u> ~~receive a designated the~~ amount of the system buy-out offer to ~~for a value of the wager on the wagering event from a~~ first input device;	See element 30[e].
32[c] causing the central server system to <u>solicit</u> ~~receive one or more of a solicited~~ buy-out offer ~~comprising the value of the wager or a solicited~~ partial buy-out offer ~~comprising a portion the value of the wager~~ from a second input device;	See element 30[f]. See also: After some percentage, usually a majority, of the sporting events have occurred, the server system 12 will be configured to identify the remaining potential winning ticket or tickets for the Jackpot Pool, i.e. those tickets that have correctly selected each of the results of the events of the completed legs. Upon determining the number of remaining potential winners of the Jackpot Pool, the system will determine the likelihood of each ticket winning the Jackpot Pool, and on that basis make a determination as to the attributed value of the ticket based on its respective probability of winning the Jackpot Pool. The server system 12 then makes the determination of what the appropriate amount would be for an offer to buy—out all, or potentially a portion of, each or all of the remaining potentially winning tickets. EX2001, 14:7-16.

Claim Limitation	Support in the '616 and '813 applications
	The offer could be for a partial portion of the ticket, for example an equal fifty percent share, at \$40,000. EX2001, 15:8-9. g) communicate the offer price to the active ticket holder for all or a portion of the active ticket; EX2001, 24: 17-18. Between legs, and preferably after several of the games or matches have been completed, but potentially also during the course of an event for example at the half-time of a match or event, players with "live" tickets will be offered the option of selling all or a portion of their tickets back to the system operator or hang on to their tickets and see whether their correct score predictions will unfold for the remaining games. EX2001, 19:22-26. After some percentage, such as a majority, of the sporting events have occurred, the server system 12 may be configured to identify the remaining potential winning ticket or tickets for the Jackpot Pool, i.e., those tickets that have correctly selected each of the results (win or consolation) of the events of the completed legs, or remain eligible for the consolation prize for selecting a certain percentage of the actual winners (i.e., 6 of the 8 winners). Upon determining the number of remaining potential winners of the Jackpot Pool, the system will determine the likelihood of each ticket winning the Jackpot Pool (alone or shared with other players, which may be known or modeled), and on that basis make a determination as to the attributed value of the ticket based on its respective probability of winning the Jackpot Pool (and the prize if split multiple ways). The server system 12 then makes the determination of what the appropriate value would be for a ticket in order to make an offer to buy—out to one or more players (as disclosed herein, in other examples one or more other sources may also be used in addition to, or as an

Claim Limitation	Support in the '616 and '813 applications
	alternative to, the server system 12 for determining the appropriate value). EX2002, [0074]. The offer may be for 100% of the ticket, or alternatively could be for a partial portion of the ticket, for example an equal fifty percent share, at \$40,000. EX2002, [0077]. g) communicate the offer price to the active ticket holder for all or a portion of the active ticket; EX2002, [0107]. Between legs, and preferably after several of the games or matches have been completed, but potentially also during the course of an event for example at the half-time of a match or event, players with "live" tickets may be offered the option of selling all or a portion of their tickets back to the system operator (or alternatively, directly or indirectly through the system operator, or directly to, any designated third party, such as, without limitation, one or more third party operator(s), business entity or entities such as a merchant(s), one or more other persons, etc.) or to retain their tickets and see whether their correct score predictions will unfold for the remaining games. EX2002, [0096].
32[d] causing the central server system to identify an acceptance of the one or more of the <u>solicited</u> buy-out offer or the <u>solicited</u> partial buy-out offer from the first input device prior to the end of the wagering event;	See element 30[g].
32[e] causing the central server system to process the one or more of the <u>solicited</u> buy-out offer or the	See element 30[h].

Claim Limitation	Support in the '616 and '813 applications
<u>solicited</u> partial buy-out offer; and	
32[f] causing the central server system to transmit a value of the <u>one or more of the solicited buy-out offer or the solicited partial buy-out offer at least a portion of the one or more of the value and the portion of the value</u> to the first input device.	See element 30[i].
33. The non-transitory computer readable medium of claim [[15]] <u>32</u> , causing the central server system to adjust the ~~designated~~ amount of the system buy-out <u>offer for the value of the wager on the wagering event after the initial designated amount is received.</u>	See claim 31.

72. In '822, input device 26 is used for wagering, e.g., a slot machine, Internet connected computer, etc. but also for operator input and additional data. See '822 6:39-47, "The system includes a network, including a system controller, for example, such as based on a central server system 12 being interconnected through

the internet 10 to a plurality of wager input devices such as wagering stations 14, wagering terminals (including self-service wagering terminals) 16, and internet connected computing systems 18, smart phones 20, tablet computers 22 and televisions 24 each of which is representative of a plurality of each type of wager input device (e.g. wagering stations 14A-N).” See also EX2001, 4:2-9, EX2002, [0043]. ‘822 6:51-55: “gaming machine 26 is depicted as an additional input device to the central server system 12 in FIG. 1.” See also EX2001, 9-11, EX2002, [0043]. ‘822 14:46-50 “the server has an input device 26 allowing an operator to enter the results of the sporting events”. See also EX2001, 13:29-14:1, EX2002, [0073]. ‘822 17:20-27 “It is also contemplated that the server system 12 will have the ability to receive additional data via the input device 26, for example various odds on respective wagers concerning the sporting match or event, that may impact the attributed value calculated for any given ticket. That additional information could be used to calculate with greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool.” See also EX2001, 15:13-18, EX2002, [0078].

73. In ‘822 14:46-54 the specification states, "As this first embodiment of a pool bet system is premised on betting of sporting events, the server has an input device 26 allowing an operator to enter the results of the sporting events, the winners of the matches or games, the final scores and/or other parameters such as the total

score of the game or the point differential. It is contemplated that this information will be entered reasonably promptly following the completion, and if required certification, of the sporting event.” See also EX2001, 13:29-14:3, EX2002, [0073]. This description seems to imply human input of results for this embodiment premised on final scores of sports matches.

74. However, the ‘822 50:40-48 specification states, “any of the concepts and features described in connection with any example, embodiment or variation herein may also apply and be utilized in connection with any other example, embodiment or variation described herein alone or in combination. In addition, any of the concepts and features disclosed herein may be provided by appropriate hardware, software and/or combination of both hardware and software where desired and deemed appropriate.” See also EX2002, [0220].

75. The ’822 specification itself describes a system interconnected through the Internet. It also incorporates by reference the 8,105,149 patent (to DeWaal) (EX2010) in column 25, lines 66-67. See also EX2001, 25:3-14, EX2002, [0110]. The ‘149 patent additionally describes a server system interconnected through the Internet.

76. In my opinion, a POSITA would have understood, in ‘822, that the data received by the server system (e.g., the aforementioned event results, additional data such as various odds on respective wagers) could be received in an automated

manner through the Internet (e.g., through an API or scraper/parser to one or more websites having this information). E.g., as one of the “independent third party/parties or resource(s)” upon which to base “the value or price of the buy-out offer.” ‘822 28:29-40; see also EX2002, [0121]. This would have advantages related to automated data retrieval and/or receipt (vs. human data entry) including speed of acquisition, timeliness of updates, data fidelity, etc. ‘822 also states that per the invention, “wagering activity and evaluation thereof may provide automatic and immediate performance feedback (individual and team performance, ... contest time remaining, ... etc.)” to participants, e.g., via the Internet. ‘822 18:58 – 19:12; EX2001, 17:24-28; EX2002, [0089]. Also, an output device may be coupled to the central server system computers to display, at a remote venue, “streaming data concerning for example the number of tickets that remain in the pool, alerts when a goal is scored that eliminates tickets from the pool, and potentially the offers to buy outstanding tickets.” EX2001, 16:21 – 17:1; EX2002, [0086].

77. Further, a POSITA would have understood and been motivated, in light of the ‘822 specification’s contemplated purchase/sale/cash-in of tickets to be “continuous...”, “extremely time-sensitive...” and “during live play...” to gather the requisite data in an automated manner, e.g. via streaming, through the Internet, in order to carry out the cash-in as contemplated.

78. A POSITA would also have understood from the ‘822 disclosure that, in order for a system controller to complete a cash-in, e.g. by the system operator, for a ticket, a price must be determined. And to carry this out, several steps are reasonably required (although the precise demarcations are a design choice). For example, (1) data related to the wagering event must be obtained, (2) calculations must be performed upon said data, and (3) an evaluation (or determination) of said calculations must take place. The output of these steps yields the “attributed value” (see ‘822 17:20-35, EX2001, 15:21-24, EX2002, [0078]) also known as “expected value” (see ‘822 17:32-35, see also EX2001, 15: 25-30, EX2002, [0079]) for a ticket, which in turn leads to the offer price.

79. (1) With respect to data obtained, this is referenced in ‘822 in multiple places. For example, for pool wagering, “The Micro Tote 408 routine may thus include a Gateway 520 program, a Memory Grid 522 program, a Central Repository 524 program... The Gateway 520 program includes a routine posting the wagering card 530, summing all of the wagering 532, providing updates 534, and calculating each potential payout 536. The Gateway 520 program also includes a routine for pooling and all of the Gateway Tickets 538, which is the master routine for each bet that has been placed and accepted in the pool.” ‘822 12:22-32, see also EX2001, 10:28-11:4, EX2002, [0063]. “The Pool Collations 540 routine calculates and continuously recalculates the odds as each bet is placed and accepted, and as each

event result occurs within the pool, so as to determine the odds with respect to each remaining active ticket within the pool bet.” ‘822 12:34-39; see also EX2001, 11:6-9, EX2002, [0064]. “As this first embodiment of a pool bet system is premised on betting of sporting events, the server has an input device 26 allowing an operator to enter the results of the sporting events, the winners of the matches or games, the final scores and/or other parameters such as the total score of the game or the point differential.” ‘822 14:46-51; see also EX2001, 13:29-14:1, EX2002, [0073]. “It is also contemplated that the server system 12 will have the ability to receive additional data via the input device 26, for example various odds on respective wagers concerning the sporting match or event, that may impact the attributed value calculated for any given ticket. That additional information could be used to calculate with greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool.” ‘822 17:20-27; see also EX2001, 15:13-18, EX2002, [0078]. The data related to the wagering event may thus include data related to wagers upon the event or game (e.g., # of bettors vs. the picks made), internal metrics related to the event or game (e.g., final score, other parameters) and external metrics related to the event or game (e.g., various odds on respective wagers concerning the event).

80. (2) With respect to the calculations that must be performed, this is also referenced in ‘822 in multiple places. For example, with respect to pool wagering,

“The Pool Collations 540 routine calculates and continuously recalculates the odds as each bet is placed and accepted, and as each event result occurs within the pool, so as to determine the odds with respect to each remaining active ticket within the pool bet.” ‘822 12:34-39; see also EX2001, 11:6-9, EX2002, [0064]. “With the results of the sporting events for a first sequence of events, the system will make a determination as to whether any individual wagers recorded in the system have correctly selected the winners (or point spread etc.) of the sporting events. After some percentage, such as a majority, of the sporting events have occurred, the server system 12 may be configured to identify the remaining potential winning ticket or tickets for the Jackpot Pool, i.e., those tickets that have correctly selected each of the results (win or consolation) of the events of the completed legs, or remain eligible for the consolation 12 prize for selecting a certain percentage of the actual winners (i.e., 6 of the 8 winners). Upon determining the number of remaining potential winners of the Jackpot Pool, the system will determine the likelihood of each ticket winning the Jackpot Pool (alone or shared with other players, which may be known or modeled)...” ‘822 14:59-15:3; see also EX2001, 14:3-16, EX2002, [0074]. “That additional information could be used to calculate with greater precision the potential odds, and attributed value, of the remaining tickets after each round or leg of the pool. Thus, in the example above, if one of the remaining 3 potentially winning tickets has predicted the final score of the final soccer match as 2-1, while another

has selected the final score as being 1-10, then the more likely score of 2-1 will have a higher attributed value than the ticket having selected 1-10. In that event, the ticket holder of the 2-1 score match may be offered more, as that ticket's attributed value (or expected value in mathematical probability terms) will be higher. To further explain the example, the outcome probability factor (OPF) and the Expected Value (EV) of two respective tickets with the following score predictions may be set as: 2-1 price (OPF?)=10.0, and 1-10 price (OPF?)=1000 (as it is an unrealistic score but useful for this example)..." '822 17:24-41; see also EX2001, 15:16-29, EX2002, [0078]-[0081]. "Calculate the odds specifically, allow market forces to determine a sale price, use other particular subjective and/or objective factors, and/or use any desired combination of the foregoing." '822 34:11-14; see also EX2001, 28:1-2, EX2002, [0128].

81. (3) With respect to evaluating, in concert with the calculations performed, the '822 specification states, "...and on that basis make a determination as to the attributed value of the ticket based on its respective probability of winning the Jackpot Pool (and the prize if split multiple ways). The server system 12 then makes the determination of what the appropriate value would be for a ticket in order to make an offer to buy-out to one or more players (as disclosed herein, in other examples one or more other sources may also be used in addition to, or as an alternative to, the server system 12 for determining the appropriate value)." '822

15:3-12; see also EX2001, 14:10-16, EX2002, [0074]. “...with $EV=1,000,000$ (POOL)/Price of outcome/number of tickets holding that outcome. Therefore, the ticket with the score of the final leg being 2-1 will have an estimated value in a \$1,000,000 pool calculated as $1000000/10/1=\$100,000$ while the ticket with the score of the final leg being 1-10 will have an estimated value in a \$1,000,000 pool calculated as $1000000/1000/1=\$1000$. Therefore the person having the ticket predicting the 2-1 outcome will be offered in the region of 100 times more for his ticket as his ticket is 100 times more likely (than the ticket with the 1-10 score) to win the \$1,000,000 jackpot.” ‘822 17:42-53; see also EX2001, 15:29-16:4, EX2002, [0082]-[0083]. “The value or price of the buy-out offer and/or ticket sold may be variable as may be desired. For instance, the value or price of the buy-out offer can be set by various sources, and be based on any objective and/or subjective standards, such as an auction, a calculated probability (e.g., of winning one or more legs of a multi-outcome wagering event), random-number generated probabilities, a lottery system similar to server system 12 discussed above, a party or parties initiating the buy-out offer, an independent third party/parties or resource(s), such as the system operator, the seller of the ticket, and/or it may be the byproduct of negotiations or a barter between the buyer and seller to arrive at an acceptable price, etc.” ‘822 28:28-40; see also EX2002, [0121]. “Upon application of a risk factor and/or margin discount, the server system 12 would establish an attributed value and then

communicate an offer to purchase the respective tickets to each of the ticket holders, at a price of for example \$80,000 for each ticket, representing a 20% margin for the purchaser.” ‘822 17:3-8; see also EX2001, 15:2-5, EX2002, [0077]. “The Mid Tier program 402, as shown in FIG. 3, includes most critically the Cash-In 422 program, which itself may include the Offers Generation 452 routine, the Offers 454 routine and the Tickets 456 routine. The Cash-In 422 program is responsible for determining when an offer to buy-out a ticket holder will be made, and the price that will be offered. Within the Cash-In 422 program, the Offers Generation 452 routine is the trading engine that, when triggered, will generate a set of offers over all of the tickets that are still potential winners and then publish the offers and receive/process the acceptance of these offers via the Merchant API 420. The Offers 454 routine stores all the offer made, accepted and declined. The Tickets 456 routine stores all the tickets for a pool and who the rightful owner is.” ‘822 10:50-63; see also EX2001, 8:22-30, EX2002, [0056]. See also Fig. 5 for pricing determination steps.

82. The PTAB Panel in the ‘779 Institution Decision stated, with respect to slightly different claim language, “We note that continuously retrieving wagering event data, recalculating wager information, and evaluating the recalculated wager information as recited in the challenged independent claims would be necessary for certain wagers disclosed by the ‘779 patent, such as the score and point differential

of teams competing in a live sporting event.” IPR2023-00268, paper 9, p. 16. I agree with this conclusion (noting “receiving” may be substituted for “retrieving”).

83. Too, a POSITA would have recognized and understood that to provide the “continuous” ability to cash-in tickets (and under an “extremely time sensitive” in-game paradigm) the precise method utilized is a design choice. The steps of “receiving” and “evaluating” lend themselves to be done continuously with real-time data. For, if the data is not contemporaneous with the current game situation, or has temporal gaps, the resultant real-time calculations may not accurately reflect instantaneous actual probabilities/odds of an outcome. This, in turn, may lead to mispricing the offer. Similarly, and in concert, a continuous evaluation, contemporaneous with the calculation output, preserves accuracy and eliminates temporal gaps.

84. As to an example of the use of additional data, e.g. from third parties or resources (‘822 28:36-37; EX2002, [0121]; see also EX 2001, 15:13-18, EX2002, [0078].), a POSITA might utilize the use of in-game (i.e., in-play, in-leg) wagering in order to help determine the odds, and pricing, of cash-in offers. EX 1018 p. 2 notes in-play wagering has existed since the 1990s. An example of in-game wagering which occurred in 2005 is found in EX 1020 pp. 2-3. Betfair, which is a betting exchange, runs 24 hours a day, 365 days a year continuously (EX 1023 p. 3), and may be used as a third-party independent metric of real-time odds (e.g., EX 1023

p. 6, EX 1026 p. 6, EX 1030 p. 3). Bet Angel offers a Betfair API with connection indicator and automated trading (EX 1028). So, using the figure of EX 1026 p. 6 as an example, the current payoff (odds for 1) of the Patriots to win the Superbowl may be received, and estimated as 2.77 (the arithmetic mean of 2.76 and 2.78). That is, the Patriots have a $1/2.77 = 36.1\%$ calculated chance of winning. This calculated value may now be evaluated, say for a \$100 multi-leg wager originally placed at 7 to 1 odds on the Patriots at the start of the playoffs, to determine an expected value of $36.1\% \times (+\$700) + (1 - 36.1\%) \times (-\$100) = \$188.80$. With a 20% fee, the offer to purchase 100% of the ticket may be priced at \$151.04, or 50% of the ticket may be priced at \$75.52, for example.

85. Accordingly, in my opinion, the substitute claims are supported by the written description of the applications contained in EX2001 and EX2002 because those specifications describe an invention (i.e., what is claimed) understandable to a skilled artisan (i.e., POSITA) as of the priority date of the '822 patent.

XI. THE SUBSTITUTE CLAIMS ARE PATENTABLE

86. In my opinion, the substitute claims further limit original claim 1 as challenged in the Petition by reciting newly added “real time and continuous” processing steps. In my opinion, none of the prior art of record or otherwise known to the PO disclose, teach or suggest the amended limitations, even if combined.

A. Scott

87. In my opinion, the substitute claims are allowable over Scott. In particular, as noted by one PTAB Panel already, the “real time and continuous” limitations are not disclosed by Scott even when viewed in light of knowledge of a POSITA. IPR2023-00268, paper 9, 12-20.

88. Scott is directed to “a gaming machine configured to provide value for partial or incomplete game outcomes.” EX[1006], ¶[0002].

89. Scott explicitly references a gaming machine configured to present “various styles or configurations of games.” EX[1006], ¶[0044]. These games may be broadly classified as card games (e.g., video poker, blackjack, and other card games), numbers games (e.g., keno, video lottery, bingo, bingo-based), dice games, and slot games. *See id.* In my opinion, these games are included in Scott because they each occur in known stages. Absent entirely from Scott is any mention of wagering upon sporting events.

90. Scott discloses “a value engine for a gaming machine” that “generally determines a cash value for player cards, symbols, or other gaming indicia even though the indicia does not form a winning outcome.” EX[1006], Abstract. Thus, Scott is stating that applicable situations generally include in-progress games with “indicia” such as card rank/suit, numeric values, die faces, and slot symbols. For example, Scott states that “[i]t is contemplated that the value engine may be used

with any wagering game where game symbols or indicia (e.g., player card symbols, slot symbols, keno numbers, bingo numbers, etc...) are revealed in subsequent stages or steps of a game.” EX[1006], ¶[0035].

91. Scott thus equates stages with steps of a game. A POSITA would understand that in the development and implementation of slot machines, these are sometimes referred as “states.” The device may be considered a “state machine” in that regulations require (e.g., upon power recovery after a power failure) that the game resume play at the same state it was in when it lost power.

92. Scott references its applicability with respect to games having “stages” or “steps” in multiple places. *See e.g.*, EX[1006], Abstract (“The value engine may determine the cash value for the indicia at various times or stages during a game.”), ¶[0033] (“In general, the value engine herein is configured to evaluate game outcomes at various stages of a game.”), ¶[0035] (“It is contemplated that the value engine may be used with any wagering game where game symbols or indicia (e.g., player card symbols, slot symbols, keno numbers, bingo numbers, etc...) are revealed in subsequent stages or steps of a game.”), ¶[0067] (“It is contemplated that the current cash value may be presented at stages of the game.”), ¶[0091] (“As stated, the determination of a current cash value for a player’s symbols may occur at various stages of a game.”).

93. In my opinion, Scott is directed to a game, utilizing indicia in determining outcome, that occurs in stages (or steps, or states) that may occur at various times.

94. Scott describes specific examples of stages of various games at which the value engine operates (e.g., in video poker at the stage after the initial deal and prior to the player drawing replacement cards). More specifically, Scott discloses that:

In the poker example of FIG. 3A, the value engine has evaluated the player's cards 304 in light of the payable 308 and determined a current cash value for the cards of 30 credits. This amount is higher than the player's wager of 10 credits and so is enticing to the player. However, the current cash value of 30 credits is less than the 100 credits the player could win if he or she obtains the one card 304 needed to complete a royal flush.

EX[1006], ¶[0062].

95. Further, “[t]o illustrate, in FIG. 3A the player has four cards to a royal flush and thus is close to achieving the royal flush... In FIG. 3B, the player requires two cards to achieve a royal flush.” EX[1006], ¶[0065]. “Because of the lower odds that a winning outcome will be achieved, the value engine has determined a lower current cash value of 15 credits for this set of cards 304.” EX[1006], ¶[0066].

96. The “current cash value may be determined and presented after each card or other game symbol is dealt to a player.” EX[1006], ¶[0067]. For example, “as each individual playing card or slot symbol is revealed, a new current cash value may be calculated.” EX[1006], ¶[0067]. Alternatively, “current cash value may be determined and presented at the end of each dealing stage of a game... For example, in a video poker game, current cash value may be presented after the initial deal, after one or more cards are held, or after one or more replacement cards are dealt.” EX[1006], ¶[0067].

97. Scott discloses that “[a]t a step 408, one or more game symbols or indicia may be presented...” to the player. EX[1006], ¶[0071]. For slots, “one or more slot symbols may be presented such as by spinning and stopping one or more reels.” *Id.* Further, “in a slot type game, current cash value may be calculated for newly revealed slot symbols, held symbols, and/or replacement symbols...” EX[1006], ¶[0068]. In a hold and respin slot, “a player may attempt to obtain a winning outcome while retaining or holding one or more of his or her current slot symbols.” *Id.* This is similar to Scott’s video poker embodiment.

98. “FIG. 3C illustrates an embodiment where the player is close to achieving a 777 jackpot of 1000 credits.” EX[1006], ¶[0069]. The player is offered a current cash value at this stage based on this closeness.

99. Scott states that “in a keno type game, the value engine may generate a cash value for a player's keno card based on the numbers the player currently has marked.” EX[1006], ¶[0035]. The value engine “may reevaluate the keno card as additional numbers are marked to determine a cash value as each keno number is revealed and/or as individual numbers are marked on the keno card.” EX[1006], ¶[0035]. “In a keno embodiment, one or more numbers may be presented so that those that match the player's keno card may be identified.” EX[1006], ¶[0071]. Further, “In a keno (or bingo) embodiment, the numbers marked and their position relative to one another may be considered for purposes of determining current cash value. EX[1006], ¶[0073]. Alternatively, “the unmarked numbers needed to win the keno game and their positions may be considered.” EX[1006], ¶[0073].

100. Scott also teaches the use of triggers that align with the stages or steps of the game. More specifically, “...determination of a current cash value can be triggered by various events.” EX[1006], ¶[0036]. Scott states that “[t]his is advantageous in that some events that occur during a wagering game may change the odds or other characteristics of a game without changing the game symbols or indicia.” EX[1006], ¶[0036]. Examples of these triggers, corresponding to step 408 in FIG.4, include each subsequent numbered keno ball (whether resulting in a hit for the player or not, since each ball drawn affects the odds of winning), EX[1006],

¶[0036], “newly presented cards” for video poker, EX[1006], ¶[0080], or “one or more new slot symbols” in a slot type game, EX[1006], ¶[0080].

101. The gaming machine includes a “value engine... configured to evaluate game outcomes at various stages of a game.” EX[1006], ¶[0033]. The value engine can then “determine a monetary or cash value for the current game outcome and present this value to a player.” EX[1006], ¶[0033]. The value engine “can be used to enhance traditional games, such as to encourage new players to play or to entice existing players to continue playing.” EX[1006], ¶[0037]. The value engine “may evaluate game information to determine a current cash value.” EX[1006], ¶[0058]. For example, the value engine “may receive game information identifying the game symbols or indicia the player currently has, the odds the player will win (or lose), the amount the player has wagered, or various combinations thereof.” EX[1006], ¶[0058]. “If the player accepts the current cash value for his or her game symbols... the current cash value may be paid to the player.” EX[1006], ¶[0076].

102. The current cash value is “based on the current situation of the game being played.” EX[1006], ¶[0065]. To illustrate this, Scott points to FIG. 3A where “the player has four cards to a royal flush and thus is close to achieving the royal flush.” EX[1006], ¶[0065]. As such, “the value engine has determined a current cash value for this set of cards 304 as 30 credits.” EX[1006], ¶[0065].

103. Once the current cash value of 30 credits is determined, the value engine presents the value to the player. The player may then accept or decline the current cash value.

104. Alternatively, Scott contemplates that a player may sell his or her wager in a marketplace. EX[1006], ¶[0096]. To do so, a player “may engage a ‘sell’ button or the like to suspend the current game and solicit wagers or credits from other players who may purchase the symbols from the player.” EX[1006], ¶[0096]. “The player’s symbols may then enter an electronic marketplace for sets of symbols.” EX[1006], ¶[0096]. While the player’s symbols are in the marketplace, the current game is suspended, so “[t]he player may play a new game at this point, while awaiting the sale of the symbols ... [or] the player could simply wait for the symbols to be sold before playing again.” EX[1006], ¶[0096].

105. The ’779 Institution Decision determined that Scott did not disclose the “real time and continuous” limitations of the ’779 patent. IPR2023-00268, paper 9, 12-20. Specifically, the PTAB Panel held that “Scott’s retrieval of game information occurs at discrete time points.” IPR2023-00268, paper 9, 16.

106. Significantly, the ’779 Institution Decision determined that “Petitioner’s contentions acknowledge such triggering events in Scott. See Pet. 39 (arguing that Scott’s value engine retrieves data “as each individual playing card or

slot symbol is revealed” or “with newly presented game symbols” (emphasis omitted)).” IPR2023-00268, paper 9, 16.

107. Moreover, the ’779 Institution Decision disagreed with Mr. Crevelt’s opinion on this matter and specifically determined that “[a]t the disclosure relied upon by Mr. Crevelt, Scott merely discusses presenting current cash values at various discrete times, namely “after each card or other game symbol is dealt to a player” or, “[a]lternatively, . . . at the end of each dealing stage of a game,” such as “after the initial deal, after one or more cards are held, or after one or more replacement cards are dealt” in a video poker game.” IPR2023-00268, paper 9, 16 (citing EX[1006], ¶ 67).

108. The ’779 Institution Decision also indicated that Scott, among other things, was not suitable for live events and/or the real time and continuous processing required for wagers on a live event. IPR2023-00268, paper 9, 16-17 (“continuous data retrieval is not needed for actions, such as retrieving data related to a progress of the wagering event, in real time for Scott’s system because such data is retrieved at discrete time points coinciding with presentation of new data”).

109. I agree with these determinations. As mentioned previously, the “real time and continuous” limitations of the substitute claims are substantially similar to

the “real time and continuous” limitations of the ’779 patent. As such, in my opinion, the prior determination is applicable to the substitute claims in this proceeding.

110. By failing to disclose, teach or suggest many of the limitations of the substitute claims, Scott cannot anticipate or render obvious the substitute claims, even if combined with other prior art such as DeWaal or Schugar.

B. Schugar or Scott in view of Schugar

111. In my opinion, the Ground 2 combination of Scott in view of Schugar does not render the substitute claims obvious as discussed below in more detail. It is also my opinion that Schugar itself or in combination with Scott, DeWaal (discussed below) or the knowledge of a POSITA (as alleged in the Petition in Ground 4) does not disclose, teach or suggest the substitute claims either.

112. Schugar’s disclosure is solely directed to a primary game in which at least one wager is directly at-risk.

113. Schugar “allows a player to borrow money against the player's position in a game already in progress.” EX[1005], ¶[0020]. Schugar notes that when a player “is playing a game in which the player can be ‘winning’ before the game is over, the player may wish to have a way to cash in on the winning state before completing the game.” EX[1005], ¶[0077]. That player “may find it attractive to be able to accumulate (or ‘bank’) a portion of a positive expectation situation for later redemption.” EX[1005], ¶[0077]. In this manner, “even if the player ultimately loses

his or her wager, the player has not lost everything because the banking has been performed.” EX[1005], ¶[0077]. The expected profit banked may be redeemed for cash at a later time or redeemed for cash instantly. EX[1005], ¶[0083].

114. Most embodiments described in Schugar involve a situation in which the player has a positive expectation in the current state of the game. The teaching of paragraphs [0070 - 0071] considers a “winning” position in craps in which the player receives a surrender value to end the game “based on equity in his position.” For example, the entire teaching of paras. [0077]-[0105] of Schugar is in respect to positions with an expected profit (i.e., the player is “winning” and wishes to bank some portion of the expected profit).

115. Mathematically, a positive expectation occurs when the player has the advantage, (i.e. the player’s expected return is over 100%). EX[1005], ¶[0020]. Schugar points out that a loan, in order to place an additional wager upon the game in progress, can be made “based on this positive expectation.” EX[1005], ¶[0023]. This ensures that the player “is guaranteed to make a profit regardless of an outcome of the game.” EX[1005], ¶[0024].

116. Schugar notes that a player having “a positive expectation based on his or her wagers and the game state” is in an “equity state” within the game. EX[1005], ¶[0042]. The term “equity” is defined as when “the player's expected profit is greater

than 0, or if the player's expected winnings is greater than the initial wager.” EX[1005], ¶[0124].

117. For example, Schugar teaches that “a player can use equity in a current wager in order to place an additional wager.” EX[1005], ¶[0120]. The wager “has equity in that the bettor may not be guaranteed to win but he or she has a positive expectation in the wager based on the current game state.” EX[1005], ¶[0120].

118. Schugar does keep open the possibility that “the player need not be in a positive expectation situation in order to utilize the method of cashing in value for a current wager in progress in order to place a second wager,” but notes that “a bettor in a positive expectation situation may be more eager to make further bets when he or she is winning their current wagers.” EX[1005], ¶[0120]. However, Schugar teaches that “even if the player is in a negative expectation situation, the player can still utilize the method described herein of cashing out a portion of a current bet in progress in order to pay for an additional wager.” EX[1005], ¶[0127]. A method of “using equity in a first wager in progress in order to fund a second wager” is shown in FIG. 6. EX[1005], ¶[0127].

119. In my opinion, the primary goal of Schugar is to get a player to “bank” (i.e., cash in for future use or immediate cash) or “borrow” to additionally wager on the game borrowed-against (said “bank” or “borrow” when in a positive expectation situation), and perform what Schugar calls “cash in to additionally wager” (when in

a negative expectation situation) all or a portion of the expected value of the player's current bet, only insofar as it pays for an additional wager. Schugar only discloses the ability to "bank" a positive expectation in a primary game. While Schugar does mention a bonus game, there is no disclosure or contemplation of a bonus game including this banking feature.

120. Schugar teaches that the system may present a player with an "offer" to bank his or her positive expectation. The offer takes the form of "an automatic pop up window which allows the player to choose whether he wishes to bank some or all of his recent gains in expectation for later redemption (with a return of the game state to the prior or other position with lesser expected value than the current state)." EX[1005], ¶[0092].

121. In each instance that this pop up window is described, it is tied to a player having a positive expectation and either suggests a wager with which the player is guaranteed not to lose (EX[1005], ¶[0048]) or requires that the player agree to revert the game to a previous state in exchange for acceptance of the offer. *See e.g.*, EX[1005], ¶¶[0084], [0092], [0098]. No other "offer" is disclosed.

122. In my opinion, Scott in view of Schugar does not disclose or render obvious the "real time and continuous" limitations of the substitute claims. Petitioner is expected to argue that Schugar cures Scott's deficiencies because it allegedly discloses that "After each game in the series (and even during particular games),

payout odds for each team winning the series can change to reflect the current conditions (as described herein and/or known in the art) and players can make wagers during the series.” EX1012, 182-184. However, Schugar, earlier in the same paragraph, describes betting on sporting events, “either at intervals on individual games or series of games.” EX[1005], Par 0072. Schugar’s use of “interval” is synonymous with either a “game state” (EX[1005], Par 0020) or an associated period of time at or in between such states (EX[1005], Par 0075). Furthermore, the only examples cited for cash-out (and additional wager) during sporting events in progress (similar to that disclosed for other wager types/games, e.g., the puck game, Craps) are upon a game state (i.e., position) with a logical interval in play (e.g., for sports, “after the 5th inning” EX[1005], Par 0120; “at halftime” EX[1005], Par 0126). As such, in my opinion Schugar does not contemplate the need for continuous cashing-out. EX2011, 191; EX2012, 182-184. Importantly, “continuous” is defined by Schugar differently than the ‘822; Schugar renders “continuous” as advancing automatically through a series of game states until “the player takes an affirmative action to freeze the current game state and take action” EX[1005], Par 0087. In a sporting event, the current game state can never be frozen in time by a player’s affirmative action. As such, Schugar’s definition of continuous appears incompatible with “continuously” as properly construed. Schugar’s definition of continuous does not appear to be possible in the context of a sporting event.

123. Too, recording a series of “event states” (EX[1005], Par. 110) which occur within a game at discrete points in time is not the same as monitoring the game continuously. Recording (e.g., a movie or a sporting event) can take place without monitoring. Indeed, Schugar in Fig. 5 logically has the event conclude before utilizing the recording for a pre-condition determination, and Schugar notes explicitly that the operations of Fig. 5 can be performed in any order (EX[1005], Fig. 5, Par. 0116). Thus, Schugar does not advocate for “continuously” or real time. Recording game states at discrete points of time, for a later determination that occurs after an event has concluded, fails to disclose the “continuously” limitations as properly construed.

124. In my opinion, by failing to disclose, teach or suggest several of the limitations of the substitute claims, Schugar cannot cure the deficiencies of Scott, nor can it anticipate or render obvious the substitute claims by itself or in combination with other art such as Scott, DeWaal (discussed in the next section), or the knowledge of the POSITA according to Ground 4 of the Petition (discussed further below).

C. DeWaal

125. In my opinion, DeWaal does not anticipate the substitute claims, nor does it render the substitute claims obvious, even if combined with additional prior art (e.g., Schugar, Scott) as discussed below in more detail.

126. DeWaal is titled “Gaming System and Method Providing Venue Wide Simultaneous Player Participation Based Bonus Game” and published on May 15, 2008.

127. DeWaal is generally directed to “a multi-round bonus event to a plurality of players wherein each players' input(s) determine, at least in part, an award, if any, provided to that player for the bonus event.” EX[1004], ¶[0009]. DeWaal describes the bonus as a “secondary game” that occurs separately from a “primary” or base game and offers different incentives to players.

128. DeWaal describes attributes of a typical bonus game in the following manner:

Secondary or bonus games are also known in gaming machines. The secondary or bonus games usually provide an additional award to the player. Secondary or bonus games usually do not require an additional wager by the player to be activated. Secondary or bonus games are generally activated or triggered upon an occurrence of a designated triggering symbol or triggering symbol combination in the primary or base game. For instance, a bonus symbol occurring on the payline on the third reel of a three reel slot machine may trigger the secondary bonus game. Part of the enjoyment and excitement of playing certain gaming machines is the occurrence or triggering of the secondary or bonus game (even before the player knows how much the bonus award will be). In other words, obtaining a bonus event and a bonus award in the bonus event is part of the enjoyment and excitement for players.

EX[1004], ¶[0004].

129. A bonus game, such as the one disclosed by DeWaal, is an additional game mathematically layered onto (or into) the primary game. A bonus game typically results in a win for the player and is constructed such that a range of win amounts (including, as a design choice, zero) is possible. The reason this can be done is that there is no wager typically associated strictly with the bonus game; instead there is a wager for the game as a whole.

130. It is known that bonus games: may be triggered in a variety of ways; typically have gameplay different than that of the base game; usually require no additional wager, so that bonus game is an opportunity for the player to earn an additional award risk-free; may be offered as an option to a game payoff, so that the game payoff becomes the wager for the bonus game. *See e.g.*, U.S. Patent No. 6,726,562 (EX-2007), 1:32-42; U.S. Patent No. 6,173,955 (EX-2008), 10:59-67.

131. The bonus game in DeWaal is initiated by a central controller upon one or more triggering methods (the phrase “triggering event” is used interchangeably with “qualifying condition”). As disclosed:

In one embodiment, the central controller determines to provide a bonus event upon an occurrence of a triggering event or qualifying condition. In one embodiment, the triggering event or qualifying condition occurs based on a play of a game at one of the gaming machines in the gaming system. For example, the triggering event or qualifying condition is a

symbol-driven event, such as a generated symbol or symbol combination in a primary game of one of the gaming machines in the gaming system. In another embodiment, the triggering event or qualifying condition occurs by exceeding a certain amount of game play (number of games, number of credits, amount of time) or reaching a specified number of points earned during game play. In an alternative embodiment, the triggering event or qualifying condition occurs randomly and independent of game play. In different embodiments, the triggering event or qualifying condition is predetermined, randomly determined, determined or weighted based on the player's wager, determined or weighted based on the status of one or more players (such as determined through a player tracking system), determined based on time, or determined based on any other suitable parameter or function.

EX[1004], ¶[0014]

132. Upon an occurrence of a suitable triggering event, the central controller of DeWaal identifies at least one player and preferably a plurality of players who are “eligible” to play the bonus event. EX[1004], ¶[0109]. In other words, at such time as the triggering event occurs (that is, the qualifying condition occurs), eligible players may be provided the bonus game.

133. The triggering event (i.e., qualifying condition) and eligibility are two different concepts in DeWaal that work in a complementary fashion such that for a player to play the DeWaal bonus game, both must be true (a triggering event / qualifying condition must have occurred AND the player must be eligible).

134. DeWaal discloses an embodiment, suitable for the gaming device (EX[1004], ¶[0079], in which a “player must make a separate side-wager on the bonus game or wager a designated amount in the primary game to qualify for the secondary game.” EX[1004], ¶[0083]. Here, I believe DeWaal discloses what is now commonly referred to as an “ante” wager, or extra or side or “buy-a-pay” wager, which must be placed in order to make the player eligible for (i.e., “unlock”) certain pays, features and/or a bonus game. For example, in U.S. Patent 8,795,055 (EX-2009): “The buy-a-pay feature is an arrangement whereby a subset of payoffs must be “bought” in order to be active. Historically used on mechanical slots, for example, a first coin would buy a set of “Cherry” pays, the second a set of “Bar” pays, and the third a set of “7” pays. For example, a player playing one coin and hitting 7-7-7 would not get paid on such a machine. The “buy-a-pay” formats are used on video slots now as well, in order to offer access to payoffs, features or bonus games that otherwise would not take place.” DeWaal then states, seemingly to avoid any confusion, that in this embodiment, the “triggering event must occur and the side-wager (or designated primary game wager amount) must have been placed to trigger the secondary game.” EX[1004] ¶[0083]. In other words, both a triggering event in the base game and an addition side-wager are necessary. As such, the side-wager by itself is not sufficient to trigger the bonus game but is separate from and acts in concert with the triggering condition.

135. DeWaal also discloses another embodiment in which “qualification of the bonus or secondary game is accomplished through a simple ‘buy in’ by the player, for example, if the player has been unsuccessful at qualifying through other specified activities.” EX[1004] ¶[0083].

136. DeWaal discloses yet another embodiment, in reference to the “Multi-Round Bonus Event,” in which “players who logged into a suitable player tracking system (e.g., either with a player tracking card or in another manner) and players who buy into the bonus event by placing a separate wager are eligible for the bonus event.” EX[1004], ¶[0118].

137. Considering these embodiments, it is not clear to me that there is any wager directly associated with the bonus game. The “buy in” of para. [0083] implies qualification (and, seemingly also eligibility), whereas the “buy into” of para. [0118] references eligibility alone. Per the teachings of DeWaal, it is not clear to me whether this “buy into” eligibility occurs before or after the qualification condition has been met. It is also not clear to me whether the “buy into” is a one-time occurrence or occurs repeatedly while awaiting a qualification condition.

138. Furthermore, what is meant by “separate wager” in para. [0118] that “enables a player to participate in the bonus event” is not clear in light of its definition of “comprises a side-wager or entry fee.” EX[1004], ¶[0118]. A side-wager refers to eligibility per para. [0083], comes before a qualifying condition, and

a separate qualification condition must occur for the bonus game to take place. It is not clear to me how a side-wager enables the bonus game.

139. Throughout the history of slot machines, multiple reels with various indicia thereupon have (almost ubiquitously) been utilized as the base game. Propelled by popular mechanical slot machines in the 1990s and exploding thereafter with video slots, bonus games have become popular because they typically require no additional wager, offer different gameplay and have a positive expected value for the player.

140. In my opinion, at the time of invention, it was well known that base games generally do not make good bonus games, and vice-versa. Indeed, DeWaal itself recognizes the differences between primary and bonus games and that the two types offer different advantages and incentives.

141. Once the bonus game of DeWaal is triggered, the bonus game “includes a plurality of rounds” in which “each of the eligible players makes inputs from a plurality of outcomes in each round.” EX[1004], ¶[0012].

142. If the player picks a designated selection in one of the rounds, “the central controller offers that player to either quit the bonus event and keep the total award accumulated in the bonus event or continue the bonus event and play a subsequent round.” EX[1004], ¶[0018]. The offers to quit are offered between rounds of the bonus event. *See* EX[1004], ¶[0158]. If the player chooses to quit, “the

central controller provides (or causes that player to be provided) with the accumulated award.” EX[1004], ¶[0158].

143. In DeWaal, if an award offer to quit is accepted, because it is a bonus game, the current award offered is given to the player and the game is simply over for the player. The player is not encouraged to, and in fact cannot, continue playing.

144. Furthermore, in DeWaal, the award is based upon a player’s previous correct choices (all of which are made after any purported originating wager, of any kind, has been made) within the bonus game itself. Multiple award offer to quit embodiments are presented, with the award scheme and values a design choice; it is not required that a player should be offered the expected value of the game or something based on this expected value. Only players actually “winning” in DeWaal, (i.e., having made all of the right picks of only designated selections to that point in the game) will ever be offered an award to quit the game. It is only offered if the player has some form of positive equity (that is, all picks have been “winning” outcomes). The player must be “winning” to quit.

145. In DeWaal, the award to quit the game is only offered after a round takes place and only if a winning pick occurred during that just-completed round. In DeWaal, a potential award is not offered while the player is presented with selections but prior to picking from among those selections. In DeWaal, a potential award is not offered prior to initiating play.

146. In my opinion, DeWaal does not disclose the “real time and continuous” limitations of the substitute claims. Specifically, all of DeWaal’s offers occur at discrete points in time (i.e., after a winning selection occurs within a designated round and prior to the next round) which does not satisfy the construction of “continuously” discussed above.

147. Petitioner is expected to argue that DeWaal discloses these limitations because, in one embodiment, “each individual gaming device randomly generates the game outcomes” and a central server or controller exists “for monitoring purposes only.” EX2011, 190-192. But any such monitoring of DeWaal’s discrete activity (e.g., after each round, responsive to player input, etc.) fails to disclose or render obvious the “continuously” limitations as properly construed. See, e.g., EX[1004], ¶[0123].

148. In my opinion, by failing to disclose, teach or suggest several of the limitations of the substitute claims, DeWaal cannot anticipate or render obvious the substitute claims.

D. DeWaal in view of general knowledge of the POSITA

149. In my opinion, the Ground 4 combination of DeWaal in view of the general knowledge of a POSITA (as set forth in the Petition or as evidenced by Scott and Schugar) does not render the substitute claims obvious.

150. DeWaal has specific failings with respect to the “real time and continuous” limitations as noted above. As also mentioned above, Scott and Schugar have the same deficiencies.

151. In my opinion, neither DeWaal, Schugar or Scott, based on the examples cited therein, disclose or contemplate a need for the “real time and continuous” limitations as found in the substitute claims.

152. In my opinion, by failing to disclose, teach or suggest several of the limitations of the substitute claims, the combinations of DeWaal with the general knowledge of the POSITA (as set forth in Ground 4 of the Petition), Scott and/or Schugar cannot render obvious the substitute claims.

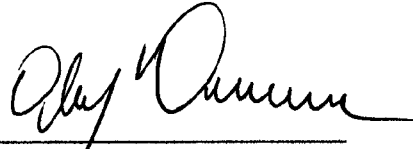
E. DeWaal in view of Schugar

153. In my opinion, the Ground 5 combination of DeWaal in view of Schugar does not render obvious the substitute claims, for the same reasons discussed above, in view of the general knowledge of the POSITA.

I declare that all statements made herein of my own knowledge are true and that all statements made on 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.

9/29/23

Date

A handwritten signature in black ink, appearing to read 'Olaf Vancura', written over a horizontal line.

Olaf Vancura, Ph.D.