

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DK CROWN HOLDINGS INC. (FORMERLY DRAFTKINGS INC.), A
DELAWARE CORPORATION,
Petitioner

v.

DIOGENES LIMITED,
Patent Owner

IPR2023-00266

U.S. Patent No. 10,970,969

DECLARATION OF OLAF VANCURA, PH.D. IN SUPPORT OF
PATENT OWNER'S RESPONSE

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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. (f/k/a DraftKings, Inc.) (“Petitioner”) filed a Petition for *Inter Partes* Review (“Petition”) of US 10,970,969 (“the ’969 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, I conclude that the games described in U.S. Patent Application Publication No. 2008/0113765 (“DeWaal”, EX-1004) and U.S. Patent Application Publication No. 2008/0311981 (“Schugar”, EX-1005) do not “naturally align” as alleged by Petitioner and that a person of ordinary skill in the art (“POSITA”) would not have been motivated to combine DeWaal and Schugar.

5. My analysis and conclusions regarding both 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 (EX-2013).

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 base games in conjunction with bonus games. I have provided a

list of some of these patents, which I believe to be most relevant to this action, as EX-2014.

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:

Exhibit No.	Description
EX-1001	U.S. Patent No. 10,970,969 (the “’969 patent”)
EX-1002	Prosecution File History of the ’969 patent
EX-1003	File History for U.S. Patent No. 9,117,341
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-1007	Declaration of Dwight Crevelt
EX-2013	CV of Olaf Vancura, Ph.D.
EX-2014	List of Relevant Patents with Olaf Vancura as Inventor/Co-Inventor
EX-2014	List of Relevant Patents with Olaf Vancura as Inventor/Co-Inventor
EX-2015	File History for Schugar
EX-2017	Deposition Transcript of Dwight E. Crevelt
EX-2018	How to Address Customer Loyalty in Online Betting Using Personalization, https://www.coveo.com/blog/address-customer-loyalty-with-personalization-in-online-betting/

Exhibit No.	Description
EX-2019	Online Sportsbook: A shift in player retention? https://gamingamerica.com/magazine/7296/online-sportsbook-a-shift-in-player-retention
EX-2020	How to increase customer retention in your online casino or sports betting site? https://medium.com/@thisisstevencruise/how-to-increase-customer-retention-in-your-online-casino-or-sports-betting-site-fl61fdf2ce8
EX-2021	The Effectiveness of Casino Loyalty Programs - Their Influence on Satisfaction, Emotional Connections, Loyalty and Price Sensitivity https://repository.usfca.edu/cgi/viewcontent.cgi?article=1004&context=ml
EX-2022	Leveraging Loyalty Programs for Success in the Casino Space https://www.laneterralever.com/blog/casino-marketing-loyalty-programs#gref
EX-2023	An Exploratory Study of Casino Study of Casino Customer Loyalty Programs https://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=2097&context=thesesdissertations ;
EX-2024	Loyalty programs have existed for decades, but they're starting to look different https://www.reviewjournal.com/business/casinos-gaming/loyalty-programs-have-existed-for-decades-but-theyre-starting-to-look-different-2595211/
EX-2025	BENEFITS OF AND CONSIDERATIONS IN IMPLEMENTING A CASINO LOYALTY PROGRAM FOR FOODSERVICE AND BEYOND https://tacitcorporation.com/benefits-of-and-considerations-in-implementing-a-casino-loyalty-program-for-foodservice-and-beyond/
EX-2026	Casino Players Club Programs Evolving into True Loyalty Programs https://loyalty360.org/content-gallery/daily-news/casino-players-club-programs-evolving-into-true-loyalty-programs
EX-2028	How To Hedge A Sports Bet https://www.thelines.com/betting/hedge/

Exhibit No.	Description
EX-2029	Betting Terminology https://sportsbook.draftkings.com/help/glossary/betting-terminology
EX-2030	Guide To Sportsbook Cash Out Bets https://sportshandle.com/cash-out/#:~:text=A%20Cash%20Out%2C%20otherwise%20known,win%20%E2%80%94%20before%20the%20competition%20ends.
EX-2031	User retention strategies for better mobile betting app engagement https://crustlab.com/blog/user-retention-strategies-better-mobile-betting-app-engagement/
EX-2032	How does DraftKings treat late stat changes and live scoring delays? (US) https://help.draftkings.com/hc/en-us/articles/4405224006931-How-does-DraftKings-treat-late-stat-changes-and-live-scoring-delays-US
EX-2033	https://en.wikipedia.org/wiki/Problem_of_points
EX-2034	Prevent Churn in Online Sports, https://www.datarobot.com/use-cases/prevent-churn-in-online-sports/

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 '969 patent.

IV. TECHNOLOGY BACKGROUND

20. One of the biggest challenges in online betting is customer loyalty. EX-2018. On average, sportsbooks only succeed in persuading approximately half of their customers to make more than two deposits. *Id.* Some 3% of customers stay loyal to a company for more than a year, and 79% of customers switch betting companies at some point. *Id.* Online gaming services also generally experience a

high churn rate (around 40% churn) in the first week of their deposits or just after submitting a registration form, i.e., even before placing their first bet. EX-2034. These are the customers who only make one bet and never come back. Players in the US are known to shop around for the best promotional offer rather than remaining loyal to a specific sportsbook, and player retention is crucial for online sportsbooks. EX-2019 (“Player retention is a crucial measure for an online sports betting platform — the higher the retention rate, the higher the revenue. According to recent research, a 5% increase in player retention can result in a 25% profit increase.”).

21. While customer retention is a concern for any business, the problem is amplified and particularly unique in the context of the Internet where a user can change sportsbooks or become otherwise districted with a few mouse clicks. EX-2020 (“With hundreds of online casinos to choose from, the gambler is spoiled with choice. Customer retention rate is one of the single most important metrics for a gaming company.”). Customer retention is a major issue within online sports betting. EX-2034. Since sports and games are unvarying across the various platforms, online sportsbooks struggle to differentiate themselves and offer a unique customer experience. *Id.* Conversely, brick-and-mortar casinos offer a wide variety of unique customer experiences, such as extensive theming, unique attractions, associated shows, restaurants, luxury hotels, lounges, live music, events, non-gaming entertainment, and more.

22. Additionally, strategies to address customer retention in a brick-and-mortar casino are less effective or nullified in the online sportsbook context. Typically, when a customer makes a trip to Las Vegas or Atlantic City to visit a casino, that customer is likely to purchase a few nights stay at a hotel associated with one of the casinos. Thereafter, a customer is incentivized to play at that casino due to convenience and casino loyalty programs. The loyalty programs additionally provide an incentive for customers to return to that specific casino on their next trip by offering future hotel discounts, free show tickets, etc. Loyalty programs may provide a membership card that is swiped at all transactions, e.g. casino games, restaurants, stores and hotel stays. EX-2021. The programs then use this transactional data to offer discounts, incentives and rewards. *Id.* In online sportsbooks, however, casino restaurants, stores and hotels don't exist. As such, online sportsbooks lose the stickability of having customers stay at the casino's hotel. Additionally, online sportsbooks lose the flexibility of offering a variety of complimentary rewards to high-roller customers, including "complimentary rewards such as meals, private jets, extravagant suites, and exclusive cruises." EX-2023. While online sportsbooks can still offer free play through loyalty programs, this option may be limited in attracting customers that prefer discounted room rates or other rewards. EX-2022. Indeed, the casino industry has shifted to loyalty programs that primarily offer non-gaming rewards because those rewards offer other forms of

entertainment to customers. EX-2025 (“the real value lies in integrating all customer service offerings under one rewards program.”); EX-2026 (“casino patrons also place a high priority on free self-parking, complimentary access to casino events, early check-in/late check-out, and special bonuses and promotions based on tier levels achieved. When asked to rate the value of Players Club program partners, the establishments that came out on top are restaurants, hotels, gas stations, grocery stores, and other casinos.”).

23. To solve the problem of consumer engagement and stickability in the online gaming industry, “there is a need for new products to generate and maintain consumer interest.” EX-1001, 1:51-52.

A. Cash Out

24. Cash out is one such innovation that drives consumer engagement and works toward solving the stickability issue in the online sportsbook industry. As discussed below, the claimed “cash out” can be distinguished from other wagering strategies, such as hedging.

1. Hedging a Wager

25. In finance, hedging has been generalized to mean anything that “can protect, or hedge, against the risk of price changes.” *Bilski v. Kappos*, 561 U.S. 593, 599 (2010).

26. However, in the context of wagering, particularly wagering on a sporting event, hedging is a specific strategy used by sports bettors to either reduce the risk of a wager or guarantee a profit of some kind from a wager. EX-2028. Hedging is a strategy that involves “placing wagers on the opposite side of your original bet.” *Id.* More specifically, “[h]edging a bet is a strategy in which a bettor will place a second wager against the original bet when they’re unsure that the outcome of a wager will be a win.” *Id.*

27. For example, a bettor can use hedging to minimize their losses if they think their wager may lose. Alternatively, “if a bettor thinks they might win, they could decide to hedge a bet just to be safe and guarantee that they walk away as a winner.” *Id.* In this case, “the win will not be as large, but the additional wager is a way to create some kind of insurance if the original wager loses.” *Id.*

28. As Petitioner’s own website succinctly defines it, hedging is “[t]he act of betting on the opposite side of a current wager in order to minimize losses or guarantee a small profit.” EX-2029. Schugar paragraph [0126], among others, illustrates a perfect example of hedging because it puts the player into “a no-lose situation” by allowing the player to take part of the wager placed on the Patriots (to win over the Giants) and place a bet on the Giants (to win over the Patriots). EX-1005, ¶[0126]; EX-2017, 30:10-31:17.

29. The rise of “in-play” betting, due in part to advances in the Internet and computing, has led to the proliferation of online betting exchanges. EX-1007, ¶¶36-38. A betting exchange is a marketplace that offers hedging opportunities by allowing bettors to “back” (*i.e.*, bet that an outcome will occur) and ‘lay’ (*i.e.*, bet that an outcome will not occur) a wager on the outcome of an event.” *Id.* at ¶38.

2. Cashing Out Early

30. Prior examples of ending a bet early fail to capture the process and mechanism of “cash out” as claimed in the ’969 patent. Aside from the broad notion of ending a bet early, the problem of points has little to do with cash out of a sporting event. Modern betting does not merely have players equally contribute to a pot and does not involve only two players. Moreover, cash out does not involve a question of how to split a pot. Rather, in the ’969 patent, cash out involves making an offer to a player to end the sporting event bet early.

31. A “cash out” may allow a player to collect more than the original bet. EX-2017, 14:6-9. It also may allow a player to collect less than the original bet. Indeed, “cash out” is a feature that allows sports bettors the ability to settle a bet — and accept a payout less than the full potential win — before the competition ends. The “cash out” amount may be more than, less than, or equal to the original bet. The upside is that if the player takes the “cash” out offer, the player is locking up some monetary value to keep, regardless of how the score/event ultimately plays out.

32. Hedging a wager is not the same as “cashing out” of a wager. While hedging can help a player mitigate risk or lock in a profit, it requires that the player place an *additional* wager “on the opposite side of a current wager” in order to do so. EX-2029. This additional wager requires an additional investment, either directly from the player’s funds or via a loan/credit from the operator. Hedging furthermore requires that both the original wager and the additional wager *go to completion* to be resolved.

33. As discussed below, “cash out” can be distinguished from each of these risk mitigation strategies. For example, “cash out” allows a player to (1) lock up winnings without having to endure the risk that comes with letting a bet play out until the end of the competition and/or (2) cut losses if things are going bad. EX-2017, 14:15-15:3. Both features are essential to cash out because it is these features together that drive stickability and consumer engagement. A bettor using cash out will feel more in control of his or her bet. As such, the bettor is likely to make more bets and bet more on his or her wager.

B. Multiplayer Collaboration on Wagers

34. Another innovation of the ’969 patent that works toward solving the stickability issue by driving consumer engagement are the claims directed toward multiplayer collaboration on wagers. In fact, interactivity between players may be a driver of engagement by users. EX-2031. The ’969 patent recognizes this:

For example, there is a need for new products that may allow groups of players to collaborate on wagers. Indeed, groups of players such as colleagues, friends, and families may wish to participate in a wager and wagering event together as a collaborative, team-building exercise, to pool resources, or for fun. Furthermore, players may have an interest in participating in a wagering event, but may find the prerequisites for joining the pool to be prohibitive. For example, a player may be reluctant to participate in a wagering event if the initial wager is too expensive (cost-prohibitive) or if the player believes that managing the wager throughout the wagering event would require too much time (time-prohibitive) or if the wager is too complex (resource-prohibitive). Accordingly, there is a need for new products to generate and maintain customer interest amongst participants who wish to collaborate on a wager.

V. PETITIONER'S GROUND FOR CHALLENGE

35. In this declaration, I offer opinions on the following ground presented by Petitioner:

Claims	Basis	Reference(s)
1, 2, 8, 9, 13-16, 20-27, 29, 30	§103	Schugar in view of DeWaal

VI. RELEVANT PATENT LAW AND LEGAL STANDARDS

A. Date of Invention

36. 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

37. 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

38. 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.

39. 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.

40. 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.

41. 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.

42. 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.

43. 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.

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

D. Standard of Proof

45. 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.

VII. LEVEL OF ORDINARY SKILL IN THE ART

46. I have considered the level of ordinary skill in the art relevant to the '969 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.

47. After reviewing the '969 patent, the relevant portions of the prosecution history of the '969 patent, and cited references, it is my opinion that the relevant art of the '969 patent is in the field of electronic gaming.

48. Based upon my knowledge of this field, I conclude that a person of ordinary skill in the art ("POSITA") at the time of the earliest filing date of the '969 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.

49. 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.

VIII. THE '969 PATENT

50. I have reviewed the '969 patent, together with its file wrapper and the file wrapper of related applications.

51. 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 '969 patent describes a novel solution to this problem. For example, the '969 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.

52. 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 requiring the successful outcome of multiple events, such as the result of three football games. 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.

53. 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.

54. 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 '969 patent provides the capability to provide a buy-out offer to a plurality of players based on the criteria described in the '969 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.

55. 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.

56. 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.

57. The complexity of the required method, system, or device required to generate buy-out offers in real time with, for example, real time odds changes during play that may depend on time-sensitive internal game changes that may affect the odds, e.g. for sporting events, upon which team currently is leading, the score, who has possession, time remaining in the game, etc. and change instantly upon a score, change of possession, turnover, made/missed shot, rebound, strikeout, error, etc., is greatly increased vis-à-vis a single-outcome bet resolution at the end of a game, and increases further with additional legs, or complexity of in-play betting or bet types like single-game parlays parimutuel pools.

58. 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 the sportsbook operator, such as

odds changes, the maximum payout for the multi-leg 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 also take into account external data from a multitude of sources.

59. The collection and processing of this volume of information from a multitude of sources, 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 continuously re-calculated between legs of a multi-leg wager, or before or while any particular leg event is in progress, based upon on a variety of mid-game statistical fluctuations, some examples of which are noted earlier.

60. Further, the system identifies all similarly situated bettors to whom a particular buy-out offer will be made, regardless of geography, and facilitates real-time communications to and from that plurality of bettors.

61. This buy-out feature provides additional decisions for the player, which creates added excitement and engagement during the legs—thus fulfilling the need

in the gaming industry “for new products to generate and maintain consumer interest.” EX-1001, 1:51-52.

62. The '969 patent 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.

IX. CLAIM CONSTRUCTION

63. Petitioner’s expert stated during his deposition that the definition of “cash out” that he used in his declaration’s analysis was “providing funds to the player for his discretionary use.” EX-2017, 14:2-5. This construction is consistent with the teachings of the '969 Patent.

64. Specifically, the '969 patent discloses that within a “Cash-In 422 program,” which “is responsible for determining when an offer to buy-out a ticket holder will be made, and the price that will be offered,” an “Offers Generation 452 routine... will generate a set of offers over *all of the tickets that are still potential winners*.” EX-1001, 10:56-61.

65. As acknowledged by Petitioner’s expert, potential winners include the players having a negative expectation at a current time, but who could still win as the event progresses. EX-2017, 24:10-25:4. Potential winners could also include those who have neutral expectations — those who are not expected to win or lose.

66. Tickets that are likely to lose are still potential winners. EX-2017, 24:10-25:4. Thus, regardless of whether an active player's expectation is currently winning, neutral or losing, this player is still a potential winner, and the cash out system will generate an offer to all tickets that are still potential winners.

67. Petitioner's expert could not recall the '969 patent placing any kind of restriction on cashing out in a losing situation, having a requirement to return to a prior game state, or any other conditions or limitations on the cashed-out funds. EX-2017, 15:16-16:7, 23:7-8, 30:7-9. This is because there are none.

68. The claimed "cash out offer," per my understanding, requires providing, without any conditions or requirements that the player be in a particular game state (to all active players), funds to the player for discretionary use in exchange for ending a wager early. *see* EX-2017, 14:2-5.

X. SUMMARY OF REFERENCES IDENTIFIED BY PETITIONER

69. Petitioner relies on two references, Schugar and DeWaal, particularly the modification of Schugar based on disclosure from DeWaal. A brief discussion of each reference is provided below.

A. Schugar

70. Schugar is titled "Wagering Game That Allows Player to Alter Payouts Based on Equity Position" and published on December 18, 2008.

71. The invention of Schugar “relates to casino games with a feature allowing a player to borrow money from the house.” EX-1005, ¶[0019]. More specifically, Schugar is directed to a wagering game that “allows a player to borrow money against the player's position in a game already in progress.” EX-1005, ¶[0020].

72. Most embodiments described in Schugar involve a situation in which the player has a positive expectation in the current state of the game.

73. Mathematically, a positive expectation occurs when the player has the advantage, (i.e. the player's expected return is over 100%). *See id.* at [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.” *Id.* at [0023]. This ensures that the player “is guaranteed to make a profit regardless of an outcome of the game.” *Id.* at [0024].

74. 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.” *Id.* at [0077]. Schugar describes a “winning state” as an “equity state” in which “a player has a positive expectation based on his or her wagers and the game state.” *Id.* at ¶[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.” *Id.* at [0124]. Schugar teaches

that the “player can ‘borrow’ against this state in order to make further wagers on the game with this borrowed money.” *Id.* at ¶[0042].

75. Schugar teaches that the player “may find it attractive to be able to accumulate (or ‘bank’) a portion of a positive expectation situation for later redemption,” such that “even if the player ultimately loses his or her wager, the player has not lost everything because the banking has been performed.” *Id.* at ¶[0077].

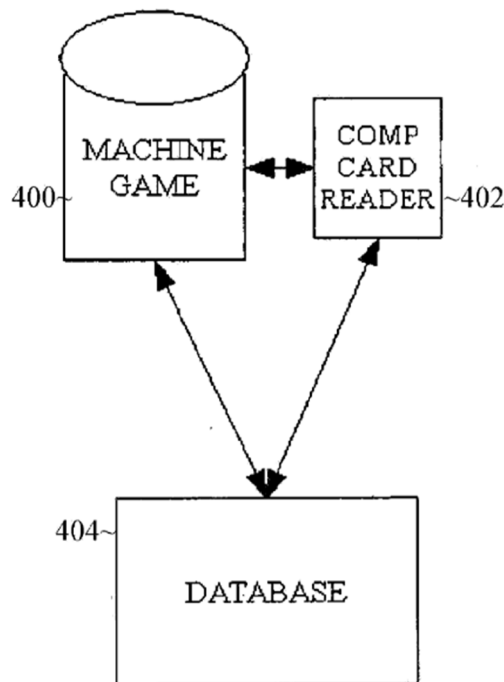
76. If a current game state has a positive expectation (or positive expected profit) for the player, the player can choose to bank his or her positive expectation. *Id.* at ¶[0092]. “This can be prompted by an automatic pop up window which allows the player to choose whether he wishes to bank some or 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).” *Id.*

77. Petitioner equates this automatic pop-up window with an “offer” to bank his or her positive expectation. 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 (*Id.* at [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., Id.* at [0084], [0092], [0098]. No other “offer” is disclosed.

78. The expected profit from a positive expectation that is banked for later use can be used in a variety of ways. *Id.* at ¶[0083]. In one example, it can be redeemed by the player for cash. *Id.* In another example, it may be used to purchase positive game states at a later time. *Id.* For example, a player can bank his or her positive expectation “for later retrieval when the player is playing a same or different game at a later point in time.” *Id.* at ¶[0093].

79. Schugar primarily focuses on banking a positive expectation, but 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.” *Id.* at ¶[0120]. However, Schugar places limitations on what a player can do when cashing out of a wager with a negative expectation. The only disclosure of cashing out when a player has a negative expectation requires that it be done “in order to place a second wager.” *Id.* More specifically, Schugar discloses 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.” *Id.* at ¶[0127]; EX-2017, 26:16-28:6.

80. Schugar teaches that its “banking process” as being implemented via a “machine game 400” associated with “comp card reader 402” and a “database 400” as depicted below:



Id. at ¶¶[0104]-[0105], FIG. 4.

81. The machine game 400 “can be any wagering machine game, such as a slot machine, video poker machine, or machine game which plays any game which can have multiple states (e.g. games which a player can wager on a progression).”

Id. at ¶[0104]. The comp card reader 402 allows a player to “use his or her comp card to identify the player.” *Id.* The database 404 “can be used to store values banked for later use” and “can be accessible by all games in an individual casino or a group of casinos.” *Id.* at ¶[0105].

82. 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). Schugar also discloses “cashing in” value for a current wager in progress in order to place a second 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.

B. DeWaal

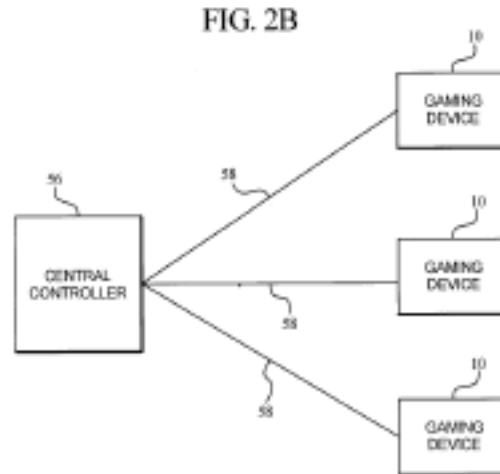
83. DeWaal is titled “Gaming System and Method Providing Venue Wide Simultaneous Player Participation Based Bonus Game” and published on May 15, 2008.

84. 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].

85. Petitioner relies on DeWaal primarily for its disclosure of a “central server [that] remotely controls any games... and the gaming device is utilized to display such games... and receive one or more inputs or commands from a player.” Petition, p. 20 (quoting EX-1004, ¶[0042]); *see* EX-2017, 91:17-92:11.

86. DeWaal discloses that in the “thin client” embodiment, “the central server remotely controls any games (or other suitable interfaces) and the gaming device is utilized to display such games (or suitable interfaces) and receive one or more inputs or commands from a player.” EX-1004, ¶[0042].

87. Figure 2B of DeWaal, depicted below, shows the general architecture of such system, which includes a plurality of gaming terminals in communication with a central controller.”



Id. at ¶[0032], FIG. 2B.

88. As illustrated in FIG. 2B, “one or more of the gaming devices 10 are in communication with each other and/or at least one central server, central controller or remote host 56 through a data network or remote communication link 58.” *Id.* at ¶[0084].

89. The processor of each gaming device is designed to “transmit and receive events, messages, commands or any other suitable data or signal between the individual gaming device and the central server.” *Id.*

90. The processor of the central server is designed to “transmit and receive events, messages, commands or any other suitable data or signal between the central server and each of the individual gaming devices.” *Id.*

91. Other than the “data network or remote communication link 58” between each of the gaming devices 10 and the central controller 56, FIG. 2B of DeWaal does not show any other interfaces or any other type of communication link (e.g., with third party systems). EX-2017, 82:6-11.

XI. SCHUGAR FAILS TO DISCLOSE “CASH OUT OFFER” AS CLAIMED WHEN PROPERLY CONSTRUED

92. My understanding is the claimed “cash out offer” is generated and made to “*all of the tickets that are still potential winners*” and the funds received from cashing are provided “to the player for his discretionary use.” EX-1001, 10:56-61; EX-2017, 14:2-5.

93. Petitioner relies solely on Schugar for “cash out” and argues that Schugar discloses generating a cash out offer by providing a player the “ability to ‘bank some or all’ of the player’s equity in the wager,” which Schugar “expressly refers to... as ‘cashing out ... a current bet in progress.’” Petition, 32-33 (quoting EX-1005 ¶[0127]). However, regardless of what Schugar calls its “banking” process, Schugar does not disclose “cash out offer” as taught in the ’969 patent and properly construed, namely an offer generated for all potential winners and payment in discretionary funds. Each example of a payout disclosed by Schugar (e.g., “banking,” “cashing in,” and “cashing out”) discloses a restriction, such as requiring a player to be in a winning state or by only contemplating non-discretionary use of the “banked”

funds. *See e.g.*, EX-1005, ¶¶[0024], [0038]-[0042], [0047]-[0048], [0050]-[0053], [0058], [0060]-[0069], [0079], [0118], [0120]-[0127].

94. In my opinion, a POSITA would understand “discretionary use” in the betting context to mean that no restrictions or limitations are tied to the cashed-out funds. Full and unrestricted cash out as claimed is vital to the innovation of the ’969 patent because it increases engagement and stickability.

95. The “cash out offer” of the ’969 patent offers the player to cash out regardless of whether the player has a positive or negative expectation (i.e., whether the player is expected to win or lose). The ’969 patent discloses that the Cash-In program 422 determines when to offer to buy-out a ticket holder. EX-1001, 10:53-56. When triggered by the offers generation 452 routine, the trading engine “generate[s] a set of offers over all of the tickets that are still potential winners.” *Id.*, 10:56-61.

96. As acknowledged by Petitioner’s expert, potential winners include the players having a negative expectation at a current time, but who could still win as the event progresses. EX-2017, 24:10-25:4. Such players could also include those who have neutral expectations—those who are not expected to win or lose. Tickets that are likely to lose are still potential winners. EX-2017, 24:10-25:4.

97. Thus, regardless of whether the player is currently expected to win or lose, the cash out system will generate an offer to all tickets that are still potential

winners (all active tickets that still have some chance of winning something). *See* EX-1001, 17:53-56 (“This mathematical calculation of EV for fair value can be extended to the entire range of tickets that exist and extended backwards to the tickets remaining after the very first leg if appropriate.”). Offering an early cash out allows the player to cut his or her losses early without losing the full wager, which increases player engagement. *See* Section II.A.

98. Accordingly, in my opinion, the ’969 patent does not place any limitation or restriction on what type of wagering interest the player must have in order to receive the “cash out” compensation, other than the player “remain(s) eligible for prize” to receive compensation in exchange for said interest. A player remains eligible for a prize regardless of whether they are in a positive expectation state, a negative expectation state, or a neutral state. *See* EX-2017, 24:10-25:4.

99. In addition, the ’969 patent does not place any conditions on what the player has to exchange for the “cash out” compensation other than the relinquishing of an amount of his/her wagering interest. A player does not have to revert to a prior game state in order to receive a cash out.

100. Further, the ’969 patent does not put any limitations and/or restrictions on what a player must do with his/her “cash out” compensation once received. *See* Section V. The compensation received by the player may be cash, other payout mechanisms such as tickets or credit slips redeemable by a cashier, or a funding of

a player's account that he/she can use for another wager or withdraw at any point in time. A player is not required to place an additional wager with the system with the proceeds of his/her cash out.

101. The main embodiments of Schugar describe how the invention “relates to casino games with a feature allowing a player to *borrow* money from the house.” EX-1005, ¶[0019] (emphasis added). More specifically, the invention of Schugar “allows a player to *borrow* money against the player's position in a game already in progress.” *Id.* at ¶[0020] (emphasis added). The player “may *borrow* money from the house if the player is in a positive expectation position and the player makes particular bets wherein the player ensures that he or she is guaranteed to make a profit regardless of an outcome of the game.” *Id.* at ¶[0024]. (emphasis added).

102. A “winning state” is an “equity state” in which “a player has a positive expectation based on his or her wagers and the game state.” *Id.* at ¶[0042]. The “player can ‘*borrow*’ against this state in order to make further wagers on the game with this borrowed money.” *Id.* (emphasis added).

103. In other words, Schugar's “borrowing” is just a manner of hedging a first wager by borrowing against his/her positive expectation in order to place a new wager to ensure he/she receives some sort of profit regardless of outcome. This is the classic example of hedging a bet, as discussed in Section(II)(A)(2) above. Petitioner's expert confirmed as much in his deposition. When asked what he would

consider a player “giving up 10 percent of his wage -- or \$10 worth of his wager so that he can wager on something else,” Plaintiff’s expert stated that “I would call that hedging your bet.” EX-2017, 35:12-18.

104. Schugar provides a number of examples in which a player “banks” all or a portion of a wager on a sporting event by hedging with an additional wager. *See* EX-1005, ¶¶[0118], [0120], [0126]. For example, in a race between horse A and horse B, Schugar discloses that “\$10 can now be removed from the original wager amount of \$100 on horse A to result in a \$90 on horse A, and this frees up \$87 ($10/100$)*870 to place an additional wager.” *Id.* at ¶[0118]. In a baseball game between the Yankees and the Braves, “\$1.52 can be subtracted from the \$100 original wager to result in a \$98.48 wager remaining on the Yankees” and “[n]ow \$1 is freed up for a second wager.” EX-1005, ¶[0120]; EX-2017, 37:1-8 (Confirming “that 1.52 has been freed up so they can place another bet,” which can be called “hedging.”). In a football game between the Patriots and the Giants, “[t]he bettor can now surrender \$10 of his original wager which is effectively worth \$81,” and “this \$81 can now be wagered on the Giants which would result in a \$810 win if the Giants win.” EX-1005, ¶[0126]; EX-2017, 35:22-36:2 (Confirming that “[i]n this example, he's placing another bet” when asked if it is true that “the bettor is not receiving the \$10,” but is “placing another bet.”). In this scenario, “the player is in a no-lose situation and can relax and enjoy the game without worry.” EX-1005, ¶[0126]; EX-

2017, 36:5-8 (Confirming that “now he’s in a position where no matter which team wins, he’s going to get paid,” which is “called ‘hedging your bet.’”).

105. Petitioner attempts to equate Schugar’s disclosure of “banking” to the claimed “cash out,” arguing that “Schugar expressly refers to this ability to “bank some or all” of the player’s equity in the wager as “*cashing out ... a current bet in progress.*” Petition, p. 33 (quoting EX-1005, ¶[0127]). However, Petitioner misquotes this portion of Schugar, which explicitly states that a player having a negative expectation in the game can only 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]; EX-2017, 28:1-6 (“This section is referring to the player’s ability to, in a losing situation, withdraw some of his bet to re-wager and hedge his bet, as the example quoted here, so that he can regain a positive expectation or an opportunity to win.”). Any requirement to pay for an additional wager makes the purported cashed-out funds non-discretionary.

106. Petitioner also refers to Schugar’s disclosure 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” to say that Schugar discloses the generation of a cash out offer. Petition, p. 32 (quoting EX-1005, ¶[0092]). Petitioner again misquotes Schugar, which explicitly recites that the automatic pop up window only gives the player the option 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].

107. In other words, the only “cash out offer” presented by the pop-up window that Petitioner points to requires the player *revert to a prior game state or other position with lesser expected value*. As described above, this type of conditional exchange is not the same as “cash out” as claimed or defined by Petitioner’s expert. It follows the automatic pop up window cannot be considered a “cash out offer” as claimed either.

108. This distinction between the ’969 patent and Schugar’s banking—*i.e.*, allowing the player full discretion and control when cashing out if the player is winning or losing—is vital to the innovation of cash out in the ’969 patent because it provides players increased excitement and enjoyment over prior art systems that only allow a player to end a wager early through previous methods or hedge. *See* Sections II.A.1-3.

109. Petitioner does not rely on DeWaal to cure the deficiencies of Schugar. Accordingly, the record shows that Schugar, even if combined with DeWaal, fails to disclose “cash out offer” as claimed when properly construed and no claim of the ’969 patent can be found invalid.

XII. THE COMBINATION OF SCHUGAR AND DEWAAL FAILS TO DISCLOSE A CENTRAL SERVER SYSTEM CAPABLE OF

**MONITORING A CURRENT STATUS OF A SPORTING EVENT TO
GENERATE A CASH OUT OFFER**

110. In my opinion, Schugar and DeWaal fails to disclose a central server system capable of monitoring a current status of a sporting event to generate a cash out offer.

111. Limitations 1[d]-1[e] of Claim 1 recite “causing the central server system to generate a cash out offer for the player based on the wager and progress of the sporting event, by: monitoring progress of the sporting event, wherein the progress of the sporting event may comprise at least a current status.” EX-1001, [cite]. Limitations 8[f]-8[g] of Claim 8, limitations 15[d]-15[e] of Claim 15, and limitations 21[e]-21[f] recite similar limitations. EX-1001, [cite]. Neither Schugar nor DeWaal contemplate any sort of data connections to components (except possibly for DeWaal’s disclosure of a player tracking system typical in casinos) that are *external* to each of their respective systems with an interface/connection capable of receiving any information from third-party providers to allow for the monitoring the progress of a sporting event in order to generate a cash out offer. Accordingly, neither reference, alone or in combination, discloses, teaches or suggest, at least, limitations 1[d], 1[e], 8[f], 8[g], 15[d], 15[e], 21[e], and 21[f].

112. Petitioner acknowledges that “Schugar does not expressly describe the allocation of control/responsibility for executing the methods among the server and the client,” and points to DeWaal to cure these deficiencies. Petition, p. 22. Petitioner

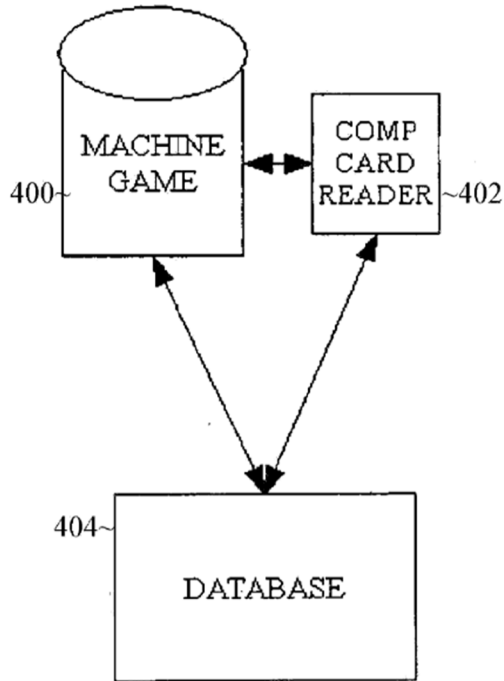
alleges that “a POSITA would have looked to DeWaal, which was such a prior art wagering system, to discover implementation details of a system that was ready for improvement by the addition of Schugar’s wagering game and cash out techniques.”

Id.

113. Petitioner relies on the particular arrangement of hardware in DeWaal (i.e., a “thin-client configuration”) to argue that a POSITA “could have implemented Schugar’s method of conducting a sport wagering event on DeWaal’s system hardware and thin-client configuration such that DeWaal’s central server executes the computerized instructions for controlling Schugar’s wagering event and receives inputs or commands from a player via the gaming device clients.” Petition, pp. 22-23; *see* EX-1007, ¶[0080] and EX-1004, ¶[0042]. However, when looking at the hardware of both Schugar and DeWaal, it is clear that neither contemplates a system with a central server having the ability to monitor an “*external* ‘sporting event,’ like ‘horse racing’ or ‘football.’” EX-1007, ¶78 (quoting EX-1005 ¶[0109])(emphasis added).

114. Schugar discloses that “[t]he embodiments described herein can also be used to bet on sporting events, either at intervals on individual games or series of games,” but does not explain how this could be implemented by a central server system. EX-1005, ¶[0072]; *see* Petition, 22 (“Schugar does not expressly describe the allocation of control/responsibility for executing the methods among the server

and the client.”) FIG. 4 of Schugar is a “block diagram illustrating an exemplary set of components in order to implement...” its banking process:



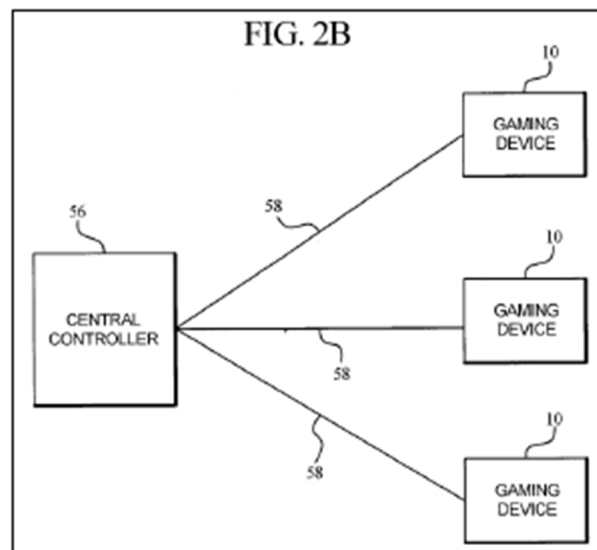
Id. at ¶[0103], FIG. 4. The system shown in FIG. 4 has three components: a “machine game 400” associated with “comp card reader 402” and a “database 400.” *Id.* at ¶¶[0103]-[0105].

115. The machine game 400 “can be any wagering machine game, such as a slot machine, video poker machine, or machine game which plays any game which can have multiple states (e.g. games which a player can wager on a progression).” *Id.* at ¶[0104]. The comp card reader 402 allows a player to “use his or her comp card to identify the player.” *Id.* The database 404 “can be used to store values banked

for later use” and “can be accessible by all games in an individual casino or a group of casinos.” *Id.* at ¶[0105].

116. Aside from the connections between these three components, which are not described or defined, Schugar does not disclose, teach or suggest any other interfaces or any other type of communication with third party systems.

117. Similarly, DeWaal only contemplates this type of “closed” system, because DeWaal’s teaching is about a bonus game as applied most readily to slot machines. FIG. 2B of DeWaal is identified by Petitioner’s expert as “illustrat[ing] a primary embodiment of the general architecture” of DeWaal. EX-1007, ¶66. “FIG. 2B is a schematic block diagram illustrating a plurality of gaming terminals in communication with a central controller.”



118. EX-1004, ¶[0032], FIG. 2B. As shown in FIG. 2B, the primary embodiment of DeWaal includes three distinct components, “one or more of the

gaming devices 10 [that] are in communication with each other and/or at least one central server, central controller or remote host 56 through a data network or remote communication link 58.” *Id.* at ¶[0084].

119. “In... a ‘thin client’ embodiment, the central server remotely controls any games (or other suitable interfaces) and the gaming device is utilized to display such games (or suitable interfaces) and receive one or more inputs or commands from a player.” *Id.* at ¶[0042]. The processor of each gaming device is designed to “transmit and receive events, messages, commands or any other suitable data or signal between the individual gaming device and the central server.” *Id.* at ¶[0084]. The processor of the central server is designed to “transmit and receive events, messages, commands or any other suitable data or signal between the central server and each of the individual gaming devices.” *Id.*

120. In other words, DeWaal only contemplates communications to and from the central controller 56 and the plurality of gaming devices 10 (and possibly, the player tracking system). EX-2017, 81:16-82:11. Even communications between different gaming devices 10 is routed through the central controller 56 via the data network or remote communication link 58. Aside from the data network or remote communication links 58 between the gaming devices 10 and the central controller 56, DeWaal does not suggest, teach, or disclose that the system depicted in FIG. 2B includes any other interfaces or any other type of communication with third party

systems. EX-2017, 82:6-11 (Answering “In this one embodiment, no” when asked, “Other than the data network or the links 58 between the devices and central controller, Figure 2B of DeWaal does not show any other interfaces, communications with third-party systems, does it?”).

121. DeWaal does disclose that “the data network” that connects the plurality of gaming devices “is an internet or intranet” and that “the operation of the gaming device can be viewed at the gaming device with at least one internet browser.” *Id.* at ¶[0098]. In this embodiment, “operation of the gaming device and accumulation of credits may be accomplished with only a connection to the central server or controller (the internet/intranet server) through a conventional phone or other data transmission line, digital subscriber line (DSL), T-1 line, coaxial cable, fiber optic cable, or other suitable connection.” *Id.* DeWaal describes the advantages of this configuration, noting that “players may access an internet game page from any location where an internet connection and computer, or other internet facilitator is available.” *Id.*

122. While this type of remote access through a network connection such as the internet that a thin-client configuration can provide is certainly advantageous, it still only contemplates a data connection between the gaming devices (wherever they are located) and the central server or controller (whether it be on-site or off-site) as depicted in FIG. 2B. Accordingly, even in a networked embodiment of the

disclosed thin-client configuration, DeWaal does not disclose, teach or suggest any other interfaces or any other type of communication with third party systems.

123. A POSITA would have understood and continue to understand that for a central server system to monitor the progress of a sporting event, which Petitioner's expert has acknowledged is "external" to the system, to generate a cash out offer for the player based on the wager and progress of the sporting event, the central controller must be configured to receive information about the sporting event. *See* EX-1007, ¶78. As explained by Petitioner's expert, "[t]hat data must come from somewhere, and the only way you can get it is to input it, monitor it, record it from somewhere." EX-2017, 99:9-12. Typically, operators receive information about sporting events from third party providers. For example, Petitioner's own website states that it uses "live scoring information provided by trusted third-party stat providers." EX-2032.

124. In my opinion, neither Schugar nor DeWaal contemplate any of this. The systems of Schugar and DeWaal only contemplate data connections between components that are *internal* to each of the respective systems. The central server systems of each have no interface/connection capable of receiving any information from third-party providers and are therefore not capable of monitoring progress of the sporting event.

125. Schugar's incorporation by reference of US. Patent No. 7,909,694 ("Schugar '694") (EX-1027), of which Schugar is a continuation-in-part does not cure these deficiencies. Petitioner alleges that through this incorporation by reference of Schugar '694 in its entity, "Schugar teaches that 'any description of a component or embodiment herein also includes hardware, software, and configurations which already exist in the prior art and may be necessary to the operation of such component(s) or embodiment(s),' that 'the embodiments described herein can be applied to any type of gaming machine,' and that functionalities may be performed 'at a central server and served to local machines.'" Petition, 18 (quoting EX-1027, 10:48-55; EX-1005, ¶[0001]).

126. This section of Schugar '694 states that "any description of a component or embodiment herein also includes hardware, software, and configurations which already exist in the prior art and may be necessary to the operation of such component(s) or embodiment(s)." EX-1027, 10:48-51. The embodiments described herein "can be applied to any type of gaming machine (e.g. class II, class III, etc.)" *Id.* at 10:51-53. "Random numbers can be generated instantly at the local level, or generated and stored at a central server and served to local machines." *Id.* at 10:53-55.

127. In other words, the "functionalities" mentioned in Schugar '694 is the generation of random numbers from a random number generator ("RNG") that can

either be at the local level or at a central server and distributed to local machines. *See* EX-2017, 95:22-96:5 (“A POSITA would understand that this reference is referring to the -- Schugar could be implemented on any of the existing technologies that's out there and could be used to serve random number generators, if that environment allowed such activities.”). Like the hardware described in Schugar, this does not relate to any type of communications with a third party system.

128. Accordingly, Schugar and DeWaal both fail to disclose a central server system that is configured to generate a cash out offer for the player based on the wager and progress of the sporting event, by monitoring progress of the sporting event, wherein the progress of the sporting event may comprise at least a current status. As such, Schugar combined with DeWaal fails to disclose at least, limitations 1[d], 1[e], 8[f], 8[g], 15[d], 15[e], 21[e], and 21[f] and no claim of the ‘969 patent can be found invalid.

XIII. A POSITA WOULD NOT HAVE BEEN MOTIVATED TO COMBINE SCHUGAR AND DEWAAL

129. In my opinion, a POSITA would not have been motivated to combine Schugar and DeWaal as suggested by the Petition.

130. In my opinion, a POSITA would not have been motivated to combine Schugar and DeWaal and Petitioner’s motivation to combine allegations are insufficient. As discussed above, claims 1, 8, 15, and 21 of the ‘969 patent require a central server system capable of monitoring a current status of a sporting event to

generate a cash out offer. Since both Schugar and DeWaal fail to disclose, teach, or suggest hardware capable of performing this function, Petitioner has failed to present any evidence (expert or otherwise) that prove that “a skilled artisan would have been motivated to combine prior art references” to arrive at the claims.

131. Further, the mere disclosure of the use of “pari-mutuel” odds in Schugar would not lead a POSITA to look to DeWaal to arrive at a system with a central server system that is configured to generate a cash out offer for the player based on the wager and progress of the sporting event by monitoring progress of the sporting event as presently claimed.

132. First, Schugar does not disclose any need for a system that can *implement* parimutuel wagering. Rather, Schugar merely discloses that payout odds can be determined, for example at halftime or after the event has ended, using parimutuel odds. *See* EX-1005, ¶¶[0115], [0118], [0120], [0126], [0128].

133. Wagering systems can obtain odds, no matter how they are determined, from any number of sources, none of which require the design of an entirely new system. There is no motivation in either Schugar or DeWaal to develop a new system outside of what is disclosed in each reference.

134. Because of these deficiencies, a POSITA would not be motivated to combine Schugar with DeWaal to arrive at the claimed invention and Petitioner has failed to provide any explanation of how a POSITA would do so.

135. Petitioner's motivation to combine is inadequate because it bears no relation to the specific combination of prior art elements and it also fails to explain why a person of ordinary skill in the art would have combined elements from these specific references to carry out claimed invention.

136. Furthermore, Petitioner's expert also asserts that "[t]he prior art would have expressly motivated a POSITA to implement Schugar's wagering games/events in a centrally controlled server system as disclosed in DeWaal for several reasons." EX-1007, ¶76. More specifically, Petitioner's expert argues that because "DeWaal explicitly teaches that '[c]entral production or control can assist a gaming establishment or other entity in' performing several essential functions of a gaming operator, such as 'maintaining appropriate records, controlling gaming, reducing and preventing cheating or electronic or other errors, reducing or eliminating win-loss volatility and the like'" that a POSITA "would have been motivated to obtain these several expressly described benefits of centralized control in a wagering system in implementing Schugar's wagering events." EX-1007, ¶76 (quoting EX-1004, ¶ [0088]).

137. However, when asked about these "essential functions" of a gaming operator, Petitioner's expert acknowledged that aside from a need to maintain appropriate records, the remaining items are "directed to issues with having a centrally-controlled wagering system," which Schugar does not disclose. EX-2017,

77:21-22. Indeed, these are functions required by DeWaal, which are not relevant to Schugar's disclosed system. Accordingly, because these benefits are associated with a system configuration that is not disclosed by Schugar, a POSITA would not look to DeWaal to implement Schugar's wagering events.

138. Finally, Petitioner relies on the particular arrangement of hardware in DeWaal (i.e., a "thin-client configuration") to argue that Schugar can be combined with DeWaal to arrive at a system that includes a central server system configured to "generate a cash out offer for the player based on the wager and progress of the sporting event, by: monitoring progress of the sporting event, wherein the progress of the sporting event may comprise at least a current status" as recited in claim 1 and similarly claimed in claims 8, 15, and 21. EX-1001, 50:62-67, 51:49-53, 52:29-35, 53:20-22.

139. However, as described above, DeWaal, does not disclose, teach, or even suggest a system with a central server having the ability to monitor an "external 'sporting event,' like 'horse racing' or 'football'" or even any type of data interface with a third-party system (with the possible exception of a slot tracking system). EX-1007, ¶78 (quoting EX-1005 ¶[0109])(emphasis added).

140. As acknowledged by Petitioner's expert, the data associated with a sporting event "must come from somewhere, and the only way you can get it is to input it, monitor it, record it from somewhere." Id. at 94:14-18. Petitioner does not

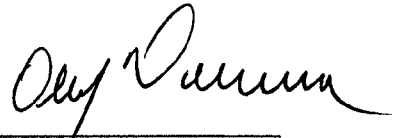
explain the gap from a system with a central control that has no other connections other than to gaming devices (that the central controller itself controls) to a system that is configured to 1) interface with a third-party system providing data associated with a sporting event, 2) monitoring that data, and 3) generate a cash out offer based on calculations associated with the monitored data. Accordingly, since DeWaal does not even contemplate a key feature of claims 1, 8, 15, and 21 of the '969 patent, a POSITA would not be motivated to combine Schugar with DeWaal to arrive at the claimed invention.

141. In summary, in light of the specifics associated with generating a buy-out offer associated with sports wagering, the Petition has failed to identify the “reason why a POSITA would have been motivated to combine” various elements of Schugar and DeWaal to arrive at the claimed invention.

142. For the reasons cited, I don’t find it obvious that a POSITA would have “implemented Schugar’s method of conducting a sport wagering event on DeWaal’s system hardware and thin-client configuration” as alleged in the Petition.

143. 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


Olaf Vancura, Ph.D.