

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

DIOGENES LIMITED, COLOSSUS (IOM) LIMITED,  
Patent Owner

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Case IPR2023-00266

Patent 10,970,969

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**PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE**

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### **EXHIBIT LIST**

| <b>EX[No.]</b> | <b>Description</b>                                                                                                                                                                                                                             |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1001</b>    | U.S. Patent No. 10,970,969 (“’969 Patent”)                                                                                                                                                                                                     |
| <b>1002</b>    | File History for U.S. Patent ’969 Patent                                                                                                                                                                                                       |
| <b>1003</b>    | File History for U.S. Patent No. 9,117,341                                                                                                                                                                                                     |
| <b>1004</b>    | U.S. Patent Application Publication No. 2008/0113765 A1 (“DeWaal”)                                                                                                                                                                             |
| <b>1005</b>    | U.S. Patent Application Publication No. 2008/0311981 A1 (“Schugar”)                                                                                                                                                                            |
| <b>1006</b>    | U.S. Patent Application Publication No. 2012/0309503 A1 (“Scott”)                                                                                                                                                                              |
| <b>1007</b>    | Declaration of Dwight Crevelt                                                                                                                                                                                                                  |
| <b>1008</b>    | <i>Curriculum Vitae</i> of Dwight Crevelt                                                                                                                                                                                                      |
| <b>1009</b>    | Vishal Jain & Jyoti Moy Chatterjee, <i>Machine Learning with Health Care Perspective</i> (Springer 2020)                                                                                                                                       |
| <b>1010</b>    | Christiani Hugonii, <i>The Value of all Chances in Games of Fortune; Cards, Dice, Wagers, Lotteries, &amp;C. Mathematically Demonstrated</i> (printed 1741)                                                                                    |
| <b>1011</b>    | C.C. Heyde & E. Seneta, <i>Statisticians of the Centuries</i> (Springer 2001)                                                                                                                                                                  |
| <b>1012</b>    | Jui-Pin Cheng, <i>The Origin of Probability and The Problem of Points</i> (2000),<br><a href="https://sites.math.rutgers.edu/~cherlin/History/Papers2000/cheng.html">https://sites.math.rutgers.edu/~cherlin/History/Papers2000/cheng.html</a> |
| <b>1013</b>    | Nicholas Hammond, <i>The Cambridge Companion to Pascal</i> (Cambridge University Press 2003)                                                                                                                                                   |
| <b>1014</b>    | Prakash Gorroochurn, <i>Thirteen Correct Solutions to the “Problem of Points” and Their Histories</i> , THE MATHEMATICAL INTELLIGENCER                                                                                                         |

|             |                                                                                                                                                                                                                                                   |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | (Springer 2014)                                                                                                                                                                                                                                   |
| <b>1015</b> | Keith Devlin, <i>The Unfinished Game: Pascal, Fermat, and the Seventeenth-Century Letter that Made the World Modern</i> (Basic Books 2008)                                                                                                        |
| <b>1016</b> | Anders Hald, <i>A History of Probability and Statistics and Their Applications before 1750</i> (John Wiley & Sons 2003)                                                                                                                           |
| <b>1017</b> | Adam Prügel-Bennett, <i>The Probability Companion for Engineering and Computer Science</i> (Cambridge University Press 2019)                                                                                                                      |
| <b>1018</b> | Elizabeth A. Killick & Mark D. Griffiths, <i>In-Play Sports Betting: a Scoping Study</i> , 17 INT J MENT HEALTH ADDICTION 1456 (Apr. 16, 2018)                                                                                                    |
| <b>1019</b> | <i>What is In-Play Betting: Live Betting Explained by William Hill</i> , WILLIAMHILL.COM (Apr. 20, 2021), <a href="https://news.williamhill.com/betting-guides/in-play-betting/">https://news.williamhill.com/betting-guides/in-play-betting/</a> |
| <b>1020</b> | Mark O’Haire, <i>The History of Betting</i> , TheSetPieces (2021), <a href="https://thesetpieces.com/latest-posts/the-history-of-betting/">https://thesetpieces.com/latest-posts/the-history-of-betting/</a>                                      |
| <b>1021</b> | U.S. Patent No. 9,117,341 (“the ’341 Patent”)                                                                                                                                                                                                     |
| <b>1022</b> | Chris Summers, <i>How Does a Betting Exchange Work?</i> , BBC News (Dec. 7, 2007)                                                                                                                                                                 |
| <b>1023</b> | Landi, Gianluca, <i>Betting Exchange: The Sports Trading Revolution</i> (StreetLib 2017)                                                                                                                                                          |
| <b>1024</b> | Declaration of Bernard J. Marantelli, Australian Patent Application No. 2013333573 (Jun. 18, 2016)                                                                                                                                                |
| <b>1025</b> | Vaughan Williams & Donald S. Siegal, <i>The Oxford Handbook of the Economics of Gambling</i> (Oxford University Press 2013)                                                                                                                       |
| <b>1026</b> | Mark Davies <i>et al.</i> , <i>Betfair.com: Five Technology Forces Revolutionize Worldwide Wagering</i> , 23 EUROPEAN MANAGEMENT JOURNAL 533 (Oct. 2005)                                                                                          |

|             |                                                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>1027</b> | U.S. Patent No. 7,909,694 (“Schugar ’694”)                                                                                  |
| <b>1028</b> | Betfair Trading Software, <i>About Bet Angel Software</i> (via The Wayback Machine dated Dec. 26, 2007)                     |
| <b>1029</b> | Green All Over Blog (Dec. 7, 2008)                                                                                          |
| <b>1030</b> | Dan Thomas, <i>Betfair’s ‘Cash Out’ Trading Tool Used for the Millionth Time</i> , BETFAIR (Sept. 13, 2011)                 |
| <b>1031</b> | Betfair Financial Statement (Jun. 29, 2011)                                                                                 |
| <b>1032</b> | Dan Thomas, <i>Cash Out Comes to Betfair Mobile</i> , Betfair (Dec. 19, 2011)                                               |
| <b>1033</b> | Michael Taylor, <i>Cash In My Bet with William Hill</i> , WILLIAMHILL.COM (Dec. 18, 2012)                                   |
| <b>1034</b> | Tal Grant <i>et al.</i> , <i>UK Gaming</i> , Credit Suisse (Aug. 14, 2017)                                                  |
| <b>1035</b> | James Conrey McMath, <i>Speculation and Gambling in Options, Futures and Stocks in Illinois</i> (Hawkins & Loomis 1921)     |
| <b>1036</b> | LeRoy Gross, <i>The Conservative Investor’s Guide to Trading Options</i> (Wiley 1999)                                       |
| <b>1037</b> | Stuart Banner, <i>Speculation: A History of the Fine Line Between Gambling and Investing</i> (Oxford University Press 2017) |
| <b>1038</b> | E.V. Smalley, <i>Northern Pacific Railroad Book of Reference</i> (E. Wells Sackett & Rankin 1883)                           |
| <b>1039</b> | Wesley A. Sturges <i>et al.</i> , <i>Stock Option and Stock Purchase Plans</i> (U.S. Gov’t Printing Office 1952)            |
| <b>1040</b> | Michael C. Thomsett, <i>Getting Started in Options</i> (Wiley 2007)                                                         |
| <b>1041</b> | Lawrence G. McMillan, <i>McMillan on Options</i> (Wiley 2011)                                                               |
| <b>1042</b> | The Sports Trader, <i>The Diary of a Betdaq Trader</i> (Dec. 5, 2007)                                                       |
| <b>1043</b> | Betfair Community, <i>Football Forum</i> (Dec. 11, 2009),                                                                   |

|             |                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <a href="https://community.betfair.com/football/go/thread/view/94070/23545078/i-didnt-think-you-got-your-green-until-after-events-were-finished?post_id=421340998#421340998#flvWelcomeHeader">https://community.betfair.com/football/go/thread/view/94070/23545078/i-didnt-think-you-got-your-green-until-after-events-were-finished?post_id=421340998#421340998#flvWelcomeHeader</a> |
| <b>1044</b> | Betfair Community, <i>Golf Forum</i> at 1 (Apr. 9, 2010), <a href="https://community.betfair.com/golf/go/thread/view/94086/23563950/masters-day-2---in-running?liveView=0&amp;pg=53">https://community.betfair.com/golf/go/thread/view/94086/23563950/masters-day-2---in-running?liveView=0&amp;pg=53</a>                                                                             |
| <b>1045</b> | Betfair Community, <i>General Betting Forum</i> (Dec. 10, 2010)                                                                                                                                                                                                                                                                                                                       |
| <b>1046</b> | Betfair Community, <i>General Betting Forum</i> at 3 (Jun. 8, 2011)                                                                                                                                                                                                                                                                                                                   |
| <b>1047</b> | U.S. Patent Application Publication No. 2001/0136566 A1 (“Acres”)                                                                                                                                                                                                                                                                                                                     |
| <b>1048</b> | Exhibit 338.A to Plaintiffs’ Initial Infringement Contentions, <i>Diogenes Limited v. DraftKings, Inc.</i> , C.A. No. 21-1695-MN-CJB                                                                                                                                                                                                                                                  |
| <b>1049</b> | Exhibit 341.A to Plaintiffs’ Initial Infringement Contentions, <i>Diogenes Limited v. DraftKings, Inc.</i> , C.A. No. 21-1695-MN-CJB                                                                                                                                                                                                                                                  |
| <b>1050</b> | Exhibit 439.A to Plaintiffs’ Initial Infringement Contentions, <i>Diogenes Limited v. DraftKings, Inc.</i> , C.A. No. 21-1695-MN-CJB                                                                                                                                                                                                                                                  |
| <b>1051</b> | Exhibit 516.A to Plaintiffs’ Initial Infringement Contentions, <i>Diogenes Limited v. DraftKings, Inc.</i> , C.A. No. 21-1695-MN-CJB                                                                                                                                                                                                                                                  |
| <b>1052</b> | Exhibit 716.A to Plaintiffs’ Initial Infringement Contentions, <i>Diogenes Limited v. DraftKings, Inc.</i> , C.A. No. 21-1695-MN-CJB                                                                                                                                                                                                                                                  |
| <b>1053</b> | Exhibit 779.A to Plaintiffs’ Initial Infringement Contentions, <i>Diogenes Limited v. DraftKings, Inc.</i> , C.A. No. 21-1695-MN-CJB                                                                                                                                                                                                                                                  |
| <b>1054</b> | Exhibit 822.A to Plaintiffs’ Initial Infringement Contentions, <i>Diogenes Limited v. DraftKings, Inc.</i> , C.A. No. 21-1695-MN-CJB                                                                                                                                                                                                                                                  |
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| <b>1056</b> | Sotera Stipulation                                                                                                                                                                                                                                                                                                                                                                    |
| <b>1057</b> | Deposition Transcript of Expert Dr. Olaf Vancura, Vol. I (Nov. 13, 2023)                                                                                                                                                                                                                                                                                                              |

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|-------------|----------------------------------------------------------------------------------------|
| <b>1058</b> | Deposition Transcript of Expert Dr. Olaf Vancura, Vol. II (Nov. 17, 2023)              |
| <b>1059</b> | Reserved                                                                               |
| <b>1060</b> | Reserved                                                                               |
| <b>1061</b> | Reserved                                                                               |
| <b>1062</b> | Reserved                                                                               |
| <b>1063</b> | Reserved                                                                               |
| <b>1064</b> | Reserved                                                                               |
| <b>1065</b> | Reserved                                                                               |
| <b>1066</b> | Reserved                                                                               |
| <b>1067</b> | Reserved                                                                               |
| <b>1068</b> | Reserved                                                                               |
| <b>1069</b> | Exhibit E to Deposition Transcript of Expert Dr. Olaf Vancura, Vol. II (Nov. 17, 2023) |

## I. INTRODUCTION

As demonstrated in the Petition (Paper 1), Claims 1-2, 8-9, 13-16, 20-27, 29, and 30 of U.S. Patent No. 10,970,969 (the “’969 Patent”) are rendered obvious by Schugar (EX1005) in view of DeWaal (EX1004). The Patent Owner Response to the Petition (Paper 13, “POR”) sets forth three fatally flawed arguments.

**First**, PO argues that Schugar fails to disclose the claimed “cash out offer” because Schugar does not disclose issuing cash out offers to “all” players and disbursing “discretionary” funds (*i.e.*, with no “limitations on the cashed-out funds”). POR at 21-28. PO’s arguments here are flawed at least because they are premised on adoption of PO’s own contrived construction, which lacks any support in the ’969 Patent and was derived solely from a single mis-quoted comment from Petitioner’s expert. The flaws in PO’s construction are so apparent that PO’s own expert disavowed his prior support for it—striking through his declaration support for PO’s construction live during cross-examination. EX1058 at 3. Regardless, Schugar expressly discloses both the plain and ordinary meaning of the term “cash out,” as well as PO’s unsupported construction, because Schugar discloses offering cash out offers to all players in **any** game state, including “even if the player is in a negative expectation situation,” and issuing “cash” funds for accepting a cash out offer. EX1005, ¶127. PO’s “cash out” arguments fail.

**Second**, PO argues that the combination of DeWaal and Schugar fails to disclose monitoring an “**external**” sporting event at a “**central**” server. POR, 28-37. But this argument overlooks Schugar’s express teachings to maintain a “current game state” for (*i.e.*, by monitoring) sporting events (Pet. 34-36), as well as Petitioner’s expert testimony, which touts the well-recognized benefits of performing such monitoring at the “central server” of DeWaal (*i.e.*, reducing and preventing errors and volatility that could arise in a system with distributed monitoring and facilitating real time collection and distribution of information like awards, odds, and winners.) Pet., 25-26, citing EX[1007] ¶¶78-81. PO improperly examines the references in isolation and has no answer for the common-sense **combination** proposed by Petitioner.

**Third**, PO argues that a POSITA would not have been motivated to combine DeWaal and Schugar, despite the Board’s preliminary rejection of the very same argument. Paper 9 (“ID”), 19-21. Incredibly, PO **still** fails to “address the rationale for combining the reference teachings as set forth in the Petition,” as the Board found with regard to PO’s preliminary arguments. *Id.*, 19. Instead, the evidence shows that a person of ordinary skill in the art (“POSITA”) would have been motivated to combine Schugar and DeWaal with a reasonable expectation of success.

PO’s response arguments should therefore be rejected, and the Board should cancel Claims 1-2, 8-9, 13-16, 20-27, 29, and 30 of the ’969 Patent.

## II. PETITIONER DEMONSTRATED THAT THE CLAIMS ARE UNPATENTABLE

### A. Schugar Teaches a “Cash Out” and a “Cash Out Offer” (Claims 1, 8, 15 and 21)

PO argues that Schugar fails to teach a “cash out” and a “cash out offer” recited in claims 1, 8, 15 and 21 (*i.e.*, the “cash out” limitation). PO’s arguments fail because they (1) are premised on an improper and wholly unsupported claim construction, (2) mischaracterize Schugar, and (3) ignore whole sections of the Petition and the supporting portions of the Crevelt declaration which demonstrate why Schugar teaches this limitation. PO’s arguments should be rejected.

#### 1. PO’s Construction of “cash out” Is Flawed

PO proposes the term “cash out” as recited in the Challenged Claims be construed to “require[] providing, without any conditions or requirements that the player be in a particular game state, funds to the player for his discretionary use in exchange for ending a wager early.” POR, 22. PO’s construction should be rejected because it improperly imports at least two requirements that are not disclosed anywhere in the intrinsic record.

First, PO contends that a “cash out” must provide “**discretionary**” funds to the user (*i.e.*, without “any [] conditions or limitations on the cashed-out funds.”) POR, 22. PO’s sole support for this aspect of its construction is the allegation that “Petitioner’s expert [Mr. Crevelt] stated during his deposition that the **definition** of

‘cash out’ [requires] providing funds to the player for his discretionary use.” POR, 21. But PO misquotes Mr. Crevelt, who did not provide any such “definition” in the cited testimony, or anywhere else.

Instead, the transcript reflects that Mr. Crevelt merely stated that cashed out funds can include both funds *for another wager* and funds earmarked for *something else*.

**Question:** What about if the credit could only be used to make another wager, would that be considered a cash out?

**Mr. Crevelt:** If you’re providing funds to the player for his discretionary use, *whether its for another wager or something else, yes, that would be a cash out.*

Ex.2017, 13:20-14:5. PO seizes on the word “discretionary” in Mr. Crevelt’s response to extrapolate a requirement that cashed out funds must be provided without any limitations on how they can be used. *Id.* But Mr. Crevelt merely answered in the affirmative (“**yes**”) when asked “if the credit *could only be used to make another wager*, would that be considered a cash out?” *Id.* Far from providing a limiting “definition,” Mr. Crevelt was instead explaining that cashed out funds should not be limited and can instead be used in a variety of ways.

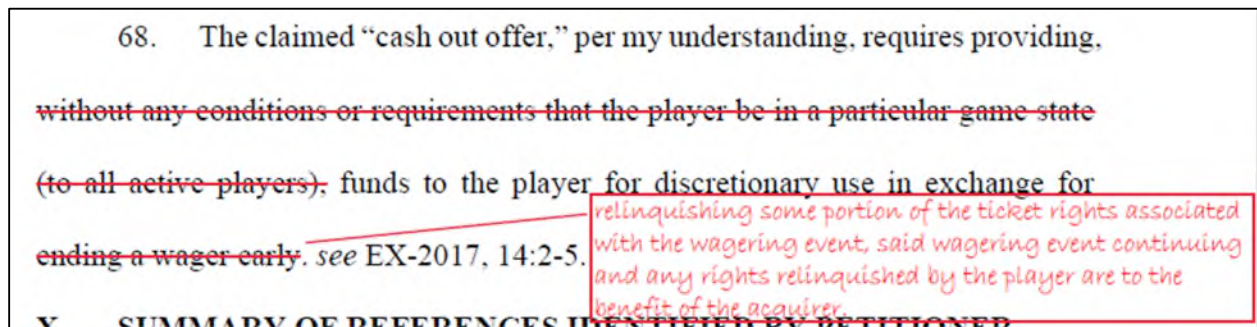
Indeed, Mr. Crevelt’s use of the term “discretionary” to describe “cash out” funds in other portions of his testimony confirms his broad understanding of the term. *See, e.g.,* Ex.2017, 17:20-18:4 (**Question:** “What if the player did not take the

cash out of this – out of the game and is always required to reuse whatever he cashed out to play another game, would you consider that cash out?” **Mr. Crevelt:** “**Yes, I would because the funds are discretionary.**”), 29:3-9 (**Question:** “Are credits that are only to be used in order to pay for an additional wager discretionary funds?” **Mr. Crevelt:** “**They are discretionary because the player would have the option of what kind of wager he would like to make.**”). Indeed, PO’s expert conceded that Mr. Crevelt repeatedly used the term “discretionary” to refer to “the situation where the funds were restricted to only allow the user to place additional wagers.” Ex.1058, 330:2-8. Mr. Crevelt’s testimony contradicts, and does not support, PO’s construction.

Second, PO contends that a “cash out” must “generate an offer to all tickets that are still potential winners” (*i.e.*, “without any conditions or requirements that the player be in a particular game state”). POR, 22 (emphasis original). PO’s construction here is contradicted by the claim language, which expressly recites only “**a** [single] cash out offer.” To be sure, while the term “a” has been interpreted to refer to “one or more,” there is no support or rationale here for imposing a **requirement** that the cash out offer be generated for “**all tickets**,” or players, as PO advocates, especially when the claim only recites generating a cash out offer for “**a player** of the **one or more players**.” Dependent Claims 6 and 7’s recitation of a

“second player” with no corresponding “second cash out offer” further belies PO’s contention that cash outs must be generated for “all players.”

In disavowing prior testimony submitted in support of PO’s construction, PO’s expert, Dr. Vancura, testified at deposition that the ’969 Patent does not include any “requirement” to issue a cash out offer to **all players**. See e.g., Ex.1058 at 298:20-313:5, 354:23-357:2, 357:11-360:23. Dr. Vancura’s revised declaration, as edited live during cross-examination, is shown below:



Ex.1069, 3. Critically, Dr. Vancura altered his proposed construction to remove the requirement that a “cash out offer” be provided “to all active players”, and that a cash out offer be made “without any conditions or requirements that the player be in a particular game state.”

Dr. Vancura repeatedly reiterated, during both cross and redirect, that these aspects of PO’s construction were improper. See Ex.1058 at 300:1-5 (“in rereading the patent last week, prior to this, getting ready for this deposition, I realized that [] frankly, rereading this [] ***I realized that it's also taught that it doesn't need to be done to all people***”), 302:6-9 (“My opinion is it’s capable of providing it to all the

players, but there’s specific teaching in ’969 that it doesn’t need to be [] ***it doesn’t need to be provided to all***”), 370:13-373:13 (doubling down on disavowal of PO’s construction on redirect).

The fact that the ’969 Patent discloses an embodiment where the system “will generate a set of offers over ***all of the tickets*** that are still potential winners” (POR, 21 (citing Ex.1001, 10:56-61)), does not support PO’s limiting construction because the claims themselves are not so limited. *TalexMedical, LLC v. Becon Med. Ltd.*, 2022 WL 2898934, at \*6 (Fed. Cir. July 22, 2022) (reversing PTAB construction that imported limitation from embodiment: “Absent limiting language, we do not import aspects from the written description into the claims.”) Petitioner and PO’s expert agree—PO’s construction of “cash out” lacks support and should be rejected.

## **2. The Petition Demonstrates that Schugar Teaches the Plain and Ordinary Meaning of “Cash Out”**

As demonstrated in the Petition, Schugar teaches allowing players of multi-leg sports wagering games to leverage equity concepts by “cash[ing] in on [a] winning state before completing the game.” Pet. at 16 (citing Ex.1005[¶0077]). To implement such functionality, a player is presented with an “automatic pop up window which allows the player to choose whether he wishes to ***bank some or all***” of the equity or value of their wager. *Id.* at 16 (citing Ex.1005[¶0092]). The player is presented with the option of partially (“some”) or fully (“all”) “***cashing out...a***

*current bet in progress.*” *Id.* (citing Ex.1005[¶0127]). If the player chooses to “cash[] out **a portion** of a current bet in progress,” the player is awarded the cashed out portion, and the portion of the bet that was not cashed out “remain[s].” *Id.* (citing Ex.1005[¶¶0120, 0127]). Thus, Schugar discloses both full and partial “cash out offers” and under the plain and ordinary meaning.

### 3. Schugar Teaches PO’s Improper Construction of “Cash Out”

PO’s arguments rely exclusively on its improper construction of “cash out.” POR, 23-28. Those arguments can be summarily dismissed if the Board rejects PO’s construction. Nevertheless, Schugar discloses both prongs of PO’s improper construction of “cash out,” including (1) providing “discretionary” funds without any use limitation and (2) providing cash out offers to all active tickets.

First, PO argues that “Schugar discloses restrictions on its ability to ‘bank,’ while ‘cash out’ and ‘cash out offer’ as claimed are unrestricted.” POR at 23; *see generally* POR (mischaracterizing Schugar as being directed to “restrictive banking” as opposed to “unrestricted cashing out” allegedly claimed in the ’969 Patent). To the contrary, Schugar teaches that the banked value “can be used in a variety of ways,” including as “**cash**,” which has **no** use restrictions. Ex.1005[¶0083]. Schugar elaborates on the concept of mid-game “cash” redemption of wager “value” in disclosing game state value “can be **redeemed by the player for cash**,” “[t]he

value can [] be *redeemed for cash instantly, and the redeemed cash can be immediately returned to the player's current credit meter;*” or “[t]he value stored for later use can also be *redeemed for cash at a later time.*” *Id.* That is, Schugar contemplates that the banked value can be distributed to the player for his discretionary use (*i.e.*, unrestricted use of the banked value). In fact, a player need not even redeem banked game value for cash at all—Schugar also discloses applying “banked” game value for other items of value: “[a] value stored for later use can [] be *applied towards room, food and beverage bills*, etc.” *Id.* Such use is entirely “discretionary” under PO’s interpretation because it can be applied for use for various activities at the player’s discretion.

Second, Schugar teaches that “even if the player is in *a negative expectation situation,*” *i.e.*, the potential “cash out” value is less than the initial wager, “the player can still utilize the method described herein of cashing out a portion of a current bet in progress.” Pet., 32-33 (citing Ex.1005[¶0127]). Schugar thus discloses offering a “cash out” to all active tickets and regardless of the position of the underlying wager (*i.e.*, for both positive and negative wager “expectation” states). *Id.*

PO argues that “Petitioner fails to explain how a player ‘bank[s]’ his or her ‘recent gains’ in ‘positive equity’ in a negative expectation situation” because “there is nothing for a player to bank” in a negative expectation situation. POR at 24. PO

misstates Schugar. Instead, Schugar expressly teaches that “the player can still utilize the method described herein of *cashing out a portion of a current bet in progress*,” “*in a negative expectation situation*.” Ex.1005[¶0127]. In fact, Mr. Crevelt explains that Schugar’s cash out offers are calculated according to the following formula, which is not limited by any requirement that the player be in a particular game state (*i.e.*, a positive or negative expectation state):

For all outcomes,  $\Sigma(\text{probability of outcome} * \text{reward for the outcome})$ .

Ex.1007, ¶100 (citing Ex.1005, [¶0090]). Schugar thus teaches *reducing*—not eliminating—the cash out offer as the “probability of outcome” (*i.e.*, probability of winning the wager) becomes more remote.

PO also argues that Schugar “places a restriction on how the funds that are ‘banked’ may be used – making it non-discretionary” because Schugar discloses one embodiment where cashed out funds are used to pay for an “additional wager.” POR, 25 (citing Ex.1005, [¶0127]). But PO ignores Schugar’s other embodiments that are not so limited. For example, Schugar’s disclosure of redeeming wager value “for cash instantly” is an unrestricted form of funding that is not limited to any particular use. Pet., 59 (citing Ex.1005[¶0083]). PO fails to address this disclosure of Schugar or explain why instant *cash* redemption is not “discretionary.”

In sum, Schugar expressly teaches that the player can cash out a portion of a current bet in progress in both positive and negative expectation situations, and Schugar's disclosed methods of calculating cash out offers do not otherwise limit application of Schugar's cash outs to particular tickets or players. Schugar therefore teaches PO's construction of "cash out."

#### **4. Dr. Vancura's Testimony Confirms that PO's Arguments Are Flawed**

PO's expert, Dr. Vancura's, new testimony on the construction of a "cash out offer" directly contradicts PO's arguments. For example, PO argues the following:

- "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***" (POR at 22) (citing Ex.2016[¶¶65, 66]);
- "the claimed 'cash out' requires providing, ***without any conditions or requirements*** that the player be in a particular game state, funds to the player" (POR at 22) (citing Ex.2016[¶69]; Ex.2017[14:2-5]);
- "[a]s such, in contrast to Schugar, the claimed 'cash out offer' may be made to '***all of the tickets that are still potential winners***' and the funds received from cashing out are provided 'to the player for his discretionary use'" (POR at 26) (citing Ex.1001[10:56-61]; Ex.2017[14:2-5]); and

- “[w]hen 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***’” (POR at 26) (citing Ex.1001[10:56-61]).

As discussed above, Dr. Vancura testified that the ’969 Patent’s “cash out offers” are not made to “all tickets” and “without any conditions or requirements that the player be in a particular game state.” *See supra* §II.A.1. PO’s arguments here thus lack any support and are contradicted by its own expert’s testimony.

**B. Schugar and DeWaal Render the Claimed Central Server Limitation Obvious**

**1. The Combination of Schugar and Dewaal Renders Obvious a Central Server that Monitors Sporting Events.**

Schugar discloses the use of “a central server” and “local [gaming] machines” that provide sports wagering opportunities, and recognizes that the necessary hardware and software for implementing its methods in such a server-client system “already exist in the prior art.” Pet. at 22 (citing Ex.1007[¶¶71, 74]; Ex.1005[¶0001]; Ex.1027[10:48-55]). Schugar also discloses that a sports wagering event has “multiple game states” that are “continuous” such that “the game automatically advances.” Pet., 34 (citing Ex.1005[¶¶0087, 0110]). Schugar further discloses that monitored progress of the sporting event comprises “***at least a current status***” because it identifies, from among the “plurality of game states,” which is the “***current game state.***” *Id.* at 35 (citing Ex.1005[¶0054]).

While Schugar does not expressly describe the allocation of control/responsibility for executing the methods among the server and the client, it instead directs a POSITA to look to the hardware, software and configurations that were known in the prior art to implement its functionalities. *Id.* (citing Ex.1007[¶¶71, 74]; Ex.1005[¶0001]; Ex.1027[10:48-55]). A POSITA would have looked to DeWaal, which was one such 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.* DeWaal teaches a central server that performs the function of providing/initiating the wagering event. Pet. at 29 (citing Ex.1004[¶0010 (“***the central controller*** simultaneously...provides the bonus or secondary event or game...to the identified eligible players.”), ¶0123 (“the process 100 is embodied in computerized instructions executed by ***a central controller or remote host***”), and FIG. 3 (depicting process 100 including step of “provide a multi-round bonus game to eligible players”))).

PO contends that neither Schugar nor DeWaal “contemplates a system with a central server having the ability to monitor an ‘external ‘sporting event,’ like ‘***horse racing***’ or ‘***football.***’” POR at 29-30 (citing Ex.1007[¶78]; Ex.2016[¶¶110-13]). Schugar, however, discloses that its embodiments can be used “to bet on sporting events, either at intervals on individual games or series of games,” including “***live sporting events.***” Pet. at 28 (citing Ex.1005[¶¶0072, 0106]). Examples of the

sporting event may include “**horse racing, football**, etc., simulated by machine **or real**.” *Id.* at 28-29 (citing Ex.1005[¶0109]). “**The event states can be recorded on a digital media**, on video capture, etc.” Ex.1005[¶0110]; *see also* Pet. at 34 (citing Ex.1005[¶¶0087, 0110]). Contrary to PO’s argument, Schugar expressly discloses a wagering system having the ability to monitor “real,” “live” sport event like horse racing or football.

## 2. PO Improperly Argues Limitations that Are Not Claimed

PO takes issue with the alleged lack of express disclosure of “data connections to components that are **external** to their respective systems,” which are allegedly required for “monitoring progress of a sporting event” as claimed. POR, 28, 31 (emphasis original). Similarly, PO argues that “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.” *Id.* at 33. PO’s arguments here are improper because the Challenged Claims do not recite or require any “external data connections.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1570-71 (Fed. Cir. 1988) (“[t]he limitations on which the appellant relies [] are not stated in the claims...[a] reading of the specification provides no evidence to indicate that these limitations must be imported into the claims to give meaning to disputed terms”).

But even if the Challenged Claims were to include such a requirement, it is unclear why Schugar's disclosed monitoring of "real," "live," sporting events would fail to satisfy monitoring of "external" events or data. Both PO and its expert fail to allege that Schugar's "real" sporting events would be conducted entirely *within* (or *internal to*) Schugar's gaming machines or server. There is simply no logical basis to conclude that live football games are anything but "external" to Schugar's system.

As the Board preliminarily recognized, DeWaal discloses that its central server "*monitors*" progress of wagering events. Pet. at 35-36 (citing Ex.1004[¶0094]); Paper 9 ("Decision") at 24 (citing Ex.1004[¶0094]). And Mr. Crevelt explained that "a POSITA would have recognized that centrally controlled wagering systems are particularly useful and efficient for multiplayer wagering on a common *external* 'sporting event,' like '*horse racing*' or '*football*.'" Ex.1007[¶78] (citing Ex.1005[¶0109]). It is thus the combination of DeWaal's centralized monitoring, with Schugar's disclosed monitoring of external sporting events that meets this limitation.<sup>1</sup>

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<sup>1</sup> A POSITA would have understood that Schugar was similar to betting API's available at the time, such as Betfair, which were known to monitor and interact with numerous external data sources to calculate cash out offers. Ex.1007, [¶¶40-42]. This further supports that that monitoring "external" sporting events would have been within a POSITA's general knowledge in view of Schugar.

### 3. PO Mischaracterizes DeWaal

PO alleges, referring to Fig. 2B of DeWaal, that “DeWaal **only** contemplates [a] **closed ‘intra-net’ like system**” that does not monitor any external sources. POR at 31 (citing Ex.2016[¶117]). PO mischaracterizes DeWaal. As the Petition explains, DeWaal’s gaming system comprises “one or more gaming devices 10...in communication with...at least one central server, central controller or remote host 56 through a data network or remote communication link 58’ such as the ‘**internet.**’” Pet. 46 (citing Ex.1004[Fig. 2B, ¶¶0084, 0098]); *see also* Ex.1004[¶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***...The expansion in the number of computers and number and speed of ***internet*** connections in recent years increases opportunities for players to play from an ever-increasing number of remote sites.”). Thus, PO’s argument should be rejected because DeWaal’s central server is disclosed as accessing external devices and is therefore capable of external data source monitoring under the combination proposed in the Petition. Pet., 34-36.

**C. PO's Arguments Challenging Petitioner's Motivation to Combine References Fail**

PO presents the same motivation to combine argument that the Board rejected in the institution decision. Decision at 20 ("Petitioner provides compelling reason to combine the teachings of the asserted references...."). Like its preliminary arguments, PO's Response arguments also fail because the evidence shows that a POSITA would have had ample motivation to combine Schugar and DeWaal.

**1. A POSITA Would Be Motivated to Combine Schugar and DeWaal with a Reasonable Expectation of Success**

The Petition demonstrated that a POSITA would be motivated to combine Schugar and DeWaal. Pet. at 20-26. First, Schugar and DeWaal are analogous art because both are directed to cashing out a wager before the completion of a multi-leg wagering event using a networked electronic betting system. *Id.* at 20-21. Schugar teaches a cash-out process and electronic betting system to wager on a series of game events, such as a four-quarter football game. *Id.* at 21 (citing Ex.1005[¶0126]). DeWaal teaches a cash-out process and electronic betting system that are used to wager on multi-round bonus events, such as a "multi-round selection game [that] includes four rounds and ten outcomes per round." *Id.* (citing Ex.1004[¶0119]).

Second, Schugar expressly directs the POSITA to look to the hardware, software and configurations that were known in the prior art to implement its

functionalities. *Id.* at 22 (citing Ex.1007[¶74]). Schugar teaches a POSITA 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.” *Id.* at 18 (citing Ex.1027[10:48-55]); Ex.1005[¶0001] (“This application is also a continuation in part of application Ser. No. 11/158,919, now pending, which is incorporated by reference herein in its entirety.<sup>2</sup>”).

Third, DeWaal explains that server control is advantageous for several reasons, which would have motivated a POSITA to implement Schugar’s methods using DeWaal’s central server implementation. Pet. at 24-26. For example, DeWaal explains that because the computational load on the gaming devices is reduced in a thin-client architecture of DeWaal, players can access the wagering platform using nearly any device with an Internet connection from anywhere (*id.* at 24 (citing Ex.1004[¶0098])); due to the “enhanced bandwidth” and “[h]igher data transmission

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<sup>2</sup> The Board even stated, in the institution decision, that “Petitioner provides compelling reason to combine the teachings of the asserted references *apart from Schugar’s incorporation of the ’694 patent.*” Decision at 20.

speeds” that such client-server systems are built upon, the “sophistication and response of the display and interaction with the player” can be “enhance[ed]” to the player’s enjoyment (*id.* at 24-25 (citing Ex.1007[¶69])); and DeWaal’s centrally controlled system provides many operator-level benefits because “[c]entral production or control can assist a gaming establishment...in maintaining appropriate records, controlling gaming, reducing and preventing cheating or electronic or other errors, reducing or eliminating win-loss volatility and the like” (*id.* at 25 (citing Ex.1004[¶0088])).

Moreover, a POSITA would have had a reasonable expectation of success in implementing Schugar’s methods on DeWaal’s system because Schugar states that “the embodiments described herein can be applied to any type of gaming machine” (*id.* at 23-24 (citing Ex.1027[10:4-55]; Ex.1007[¶81])), and a POSITA would have known which of Schugar’s functions would be performed by the central server in the combination because DeWaal expressly teaches how to allocate wagering game operations between a central server and gaming machine client (*id.* at 24 (citing Ex.1004[¶0042])).

## **2. The Combination of Schugar and DeWaal Is Supported by Express Motivations to Combine**

PO argues that “[t]he Petition does not explain why a POSITA would know about, or care about, any of these purported motivations.” POR 42. PO’s arguments,

however, ignore the motivations to combine expressly set forth in the Petition and analysis from Petitioner's expert.

For example, PO only generally addresses the Petition arguments in claiming that “they are ***nothing more than conclusory statements*** supported by generic reasoning.” POR, 39-40 (citing Pet., 24). To the contrary, the Petition set forth specific advantages of DeWaal's central server over the three pages of argument. Pet., 24-26. For example, the “thin-client architecture” of the combined system results in reduced computational load on the gaming devices, which enables players to access the wagering platform using nearly any device with an Internet connection from anywhere. Pet., 24 (citing Ex.1004[¶0098])). In addition, the sophistication and response of the display and interaction with the player can be “enhanced to the player's enjoyment.” Pet., 24-25 (citing Ex.1007[¶69]). The combined system would also assist a gaming establishment...in maintaining appropriate records, controlling gaming, reducing and preventing cheating or electronic or other errors, reducing or eliminating win-loss volatility and the like. *Id.*, 25 (citing Ex.1004[¶0088]). These are far from “conclusory” or “generic” statements—they are specific improvements a POSITA would recognize the combination to achieve.

PO also alleges that “Schugar does not disclose any need for a system that can implement parimutuel wagering.” POR at 42 (citing Ex.2016[¶0132]). But the Petition demonstrated that Schugar's teachings contemplate ‘***pool***’ and ‘***parimutuel***’

sports betting. Pet. at 25-26 (citing Ex.1007, ¶¶79, 95). Indeed, Mr. Crevelt testified that “with respect to Schugar’s teachings regarding sports betting ‘pools’ and ‘parimutuel’ wagering, where all bets on such a sporting event may be pooled together and potential payouts depend on the status of the common pool, a POSITA would have recognized that a centrally-controlled system would be the most practical and efficient implementation [] because such pools/parimutuel wagering require providing and sharing information amongst the plurality of bettors participating in the pool to determine awards, odds, winners, and the like.” Ex.1007[¶79].

Schugar also discloses that “[a]t the halfway point, odds can be determined for the outcomes,” and that “[t]his can be done on a pure mathematical basis (if the event is determined purely by chance), **on a pari-mutuel basis**, using a handicapper, or any other method” known in the prior art.<sup>3</sup> Ex.1007[¶154] (citing Ex.1005[¶0118]). PO ignores the arguments and evidence supporting the proposed combination.

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<sup>3</sup> PO fails to address the Board’s preliminary recognition that “Schugar [] discloses use of its system in pari-mutuel betting” (Decision at 19 (citing Ex.1005[¶0126], and rejection of Dr. Vancura’s assertion that he does not view Schugar’s teachings as requiring a central server that supports a pari-mutuel pool (Decision at 20 (citing Ex. 2001[¶ 102])).

### 3. PO's Other Arguments Fail

PO next contends that “essential functions of a gaming operator, such as ‘[] controlling gaming, reducing and preventing cheating or electronic or other errors, reducing or eliminating win-loss volatility and the like’” are “only functions required by DeWaal, which are *not relevant to Schugar’s system whatsoever.*” POR at 44-45. But gaming operators would be motivated to prevent cheating and reduce win-loss volatility regardless of whether the gaming operator adopts a central server system or not. Ex.2017 at 77:2-8 (“reducing or preventing cheating or electronic or other errors” “is a desirable feature that any person of skill in the art would want in their system”<sup>4</sup>). And PO fails to explain why the combined system, which is rooted in DeWaal’s client/server architecture, would not benefit from these functions.

PO also argues that the Petition fails to explain how DeWaal would “interface with a third-par[t]y system providing data associated with a sporting event.” POR at 46. But, as discussed above, the claims do not require “interfaces” to any “third-party systems.” *See supra* §II.B.2. Regardless, the Petition proposed implementing Schugar’s disclosed monitoring of sporting events within DeWaal’s central server

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<sup>4</sup> PO fails to address the Board’s preliminary finding “persuasive the evidence showing that using a centralized server is the most practical way to conduct such betting arrangements and reduce the risk of cheating.” Decision at 19-20.

to mitigate the well-known risks of data error and inconsistency from distributed sports wagering systems and thereby reduce and prevent errors. Pet., 25 (citing Ex.1007, ¶78). Schugar states that “the embodiments described herein” including the sports wagering embodiments, “can be applied to ***any type of gaming machine***” (EX[1027] 10:4-55), and a POSITA would have known which of Schugar’s functions would be performed by the central server in the combination because DeWaal expressly teaches how to allocate wagering game operations between a central server and gaming machine client. Pet., 24 (citing Ex.1004 ¶[0042]). As contemplated by the references themselves, the combination would have been within the level of skill in the art and a POSITA would have had a reasonable expectation of success in making the combination.

### III. CONCLUSION

Petitioner respectfully requests that the Board cancel Claims 1-2, 8-9, 13-16, 20-27, 29, and 30 of the ’969 Patent as unpatentable.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies on this 10th day of January 2024, that true and correct copies of the foregoing **PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE and Exhibits 1057, 1058, and 1069** were served in their entirety on the following parties via electronic mail:

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

1. This Petitioner's Reply to Patent Owner's Response complies with the type-volume limitation of 5,600 words, comprising 5,036 words, excluding the parts exempted by 37 C.F.R. § 42.24(c).

2. This Petitioner's Reply to Patent Owner's Response complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft® Word 2016 in 14-point Times New Roman.

Respectfully submitted,

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