

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DK CROWN HOLDINGS INC.,
Petitioner

v.

DIOGENES LIMITED,
Patent Owner

Case No. IPR2023-00268
U.S. Patent No. 11,200,779

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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EXHIBIT LIST

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Ex.1002	File History for U.S. Patent ’779 Patent
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Ex.1005	U.S. Patent Application Publication No. 2008/0311981 A1 (“Schugar”)
Ex.1006	U.S. Patent Application Publication No. 2012/0309489 A1 (“Scott ’489”)
Ex.1007	Declaration of Dwight Crevelt
Ex.1008	<i>Curriculum Vitae</i> of Dwight Crevelt
Ex.1009	Vishal Jain & Jyoti Moy Chatterjee, <i>Machine Learning with Health Care Perspective</i> (Springer 2020)
Ex.1010	Christiani Hugonii, <i>The Value of all Chances in Games of Fortune; Cards, Dice, Wagers, Lotteries, &C. Mathematically Demonstrated</i> (printed 1741)
Ex.1011	C.C. Heyde & E. Seneta, <i>Statisticians of the Centuries</i> (Springer 2001)
Ex.1012	Jui-Pin Cheng, <i>The Origin of Probability and The Problem of Points</i> (2000), https://sites.math.rutgers.edu/~cherlin/History/Papers2000/cheng.html
Ex.1013	Nicholas Hammond, <i>The Cambridge Companion to Pascal</i> (Cambridge University Press 2003)
Ex.1014	Prakash Gorroochurn, <i>Thirteen Correct Solutions to the “Problem of Points” and Their Histories</i> , THE MATHEMATICAL INTELLIGENCER (Springer 2014)
Ex.1015	Keith Devlin, <i>The Unfinished Game: Pascal, Fermat, and the Seventeenth-Century Letter that Made the World Modern</i> (Basic Books 2008)
Ex.1016	Anders Hald, <i>A History of Probability and Statistics and Their Applications before 1750</i> (John Wiley & Sons 2003)

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Ex.1017	Adam Prügel-Bennett, <i>The Probability Companion for Engineering and Computer Science</i> (Cambridge University Press 2019)
Ex.1018	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)
Ex.1019	<i>What is In-Play Betting: Live Betting Explained by William Hill</i> , WILLIAMHILL.COM (Apr. 20, 2021), https://news.williamhill.com/betting-guides/in-play-betting/
Ex.1020	Mark O’Haire, <i>The History of Betting</i> , TheSetPieces (2021), https://thesetpieces.com/latest-posts/the-history-of-betting/
Ex.1021	U.S. Patent No. 9,117,341 (“the ’341 Patent”)
Ex.1022	Chris Summers, <i>How Does a Betting Exchange Work?</i> , BBC News (Dec. 7, 2007)
Ex.1023	Landi, Gianluca, <i>Betting Exchange: The Sports Trading Revolution</i> (StreetLib 2017)
Ex.1024	Declaration of Bernard J. Marantelli, Australian Patent Application No. 2013333573 (Jun. 18, 2016)
Ex.1025	Vaughan Williams & Donald S. Siegal, <i>The Oxford Handbook of the Economics of Gambling</i> (Oxford University Press 2013)
Ex.1026	Mark Davies <i>et al.</i> , <i>Betfair.com: Five Technology Forces Revolutionize Worldwide Wagering</i> , 23 EUROPEAN MANAGEMENT JOURNAL 533 (Oct. 2005)
Ex.1027	U.S. Patent No. 7,909,694 (“Schugar ’694”)
Ex.1028	Betfair Trading Software, <i>About Bet Angel Software</i> (via The Wayback Machine dated Dec. 26, 2007)
Ex.1029	Green All Over Blog (Dec. 7, 2008)
Ex.1030	Dan Thomas, <i>Betfair’s ‘Cash Out’ Trading Tool Used for the Millionth Time</i> , BETTFAIR (Sept. 13, 2011)

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Ex.1031	Betfair Financial Statement (Jun. 29, 2011)
Ex.1032	Dan Thomas, <i>Cash Out Comes to Betfair Mobile</i> , Betfair (Dec. 19, 2011)
Ex.1033	Michael Taylor, <i>Cash In My Bet with William Hill</i> , WILLIAMHILL.COM (Dec. 18, 2012)
Ex.1034	Tal Grant <i>et al.</i> , <i>UK Gaming</i> , Credit Suisse (Aug. 14, 2017)
Ex.1035	James Conrey McMath, <i>Speculation and Gambling in Options, Futures and Stocks in Illinois</i> (Hawkins & Loomis 1921)
Ex.1036	LeRoy Gross, <i>The Conservative Investor's Guide to Trading Options</i> (Wiley 1999)
Ex.1037	Stuart Banner, <i>Speculation: A History of the Fine Line Between Gambling and Investing</i> (Oxford University Press 2017)
Ex.1038	E.V. Smalley, <i>Northern Pacific Railroad Book of Reference</i> (E. Wells Sackett & Rankin 1883)
Ex.1039	Wesley A. Sturges <i>et al.</i> , <i>Stock Option and Stock Purchase Plans</i> (U.S. Gov't Printing Office 1952)
Ex.1040	Michael C. Thomsett, <i>Getting Started in Options</i> (Wiley 2007)
Ex.1041	Lawrence G. McMillan, <i>McMillan on Options</i> (Wiley 2011)
Ex.1042	The Sports Trader, <i>The Diary of a Betdaq Trader</i> (Dec. 5, 2007)
Ex.1043	Betfair Community, <i>Football Forum</i> (Dec. 11, 2009), 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
Ex.1044	Betfair Community, <i>Golf Forum</i> at 1 (Apr. 9, 2010), https://community.betfair.com/golf/go/thread/view/94086/23563950/masters-day-2---in-running?liveView=0&pg=53

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Ex.1045	Betfair Community, <i>General Betting Forum</i> (Dec. 10, 2010)
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Ex 1049	Exhibit 341.A to Plaintiffs’ Initial Infringement Contentions, <i>Diogenes Limited v. DraftKings, Inc.</i> , C.A. No. 21-1695-MN-CJB
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Ex.1056	Exhibit 779.A to Plaintiffs’ First Supplemental Initial Infringement Contentions, <i>Diogenes Limited v. DraftKings, Inc.</i> , C.A. No. 21-1695-MN-CJB
Ex.1057	Sotera Stipulation
Ex.1058	Jim Offord, <i>An Unsafe Bet? The Dangerous Rise of Gambling and the Debate We Should Be Having</i> , (Wiley-Blackwell 2011).

Exhibit No.	Description
Ex. 1059	Deposition Transcript of Dr. Olaf Vancura (October 23, 2024)
Ex. 1060	U.S. Patent Application Publication No. US20120052935A1 (“Vancura”)
Ex. 1061	U.S. Patent 6,186,892 B1 (“Frank”)
Ex. 1062	Gaming Labs Certified GLI-11: Gaming Devices Version 3.0, (September 21, 2016)
Ex. 1063	U. S. Patent 8,070,585 (“Herrmann”)
Ex. 1064	U.S. Patent Application Publication No. 2006/0121977 A1 (“Odom”)

I. INTRODUCTION

As demonstrated in the Petition (Paper 1), Claims 1-3, 5-10, 16-18, and 21-25 of U.S. Patent No. 11,200,779 are anticipated and/or rendered obvious over Scott in view of the general knowledge of a POSITA.

PO raises three arguments that should each be rejected. *First*, PO contends that the limitation “continuously retrieve ... in real time” should be construed to exclude “discrete” operation and require “repeated, regular polling.” POR, 20. But the Delegated Review Panel (DRP) has already squarely rejected this argument. PO’s argument here contravenes the DRP’s binding precedent and claim construction law from the Federal Circuit, which prohibits importing undisclosed limitations into the claims. As the DRP and Board properly found, Scott discloses the limitation when correctly construed.

Second, PO contends that Claim 16 requires “multiple bettors ... to place wagers on *the same wagering event*.” POR, 37. PO’s argument here should be rejected as contrary to canons of claim construction and express requirements of dependent claims, which require Claim 16 to include wagers on “one or *more [than one]*” wagering event. Nevertheless, Scott also discloses these limitations under PO’s improper interpretation.

Third, PO contends that the term “fixed odds” refers to games with a fixed “payout”—not fixed “odds.” POR, 45-49. But Petitioner’s common-sense

interpretation is sounder because it is grounded in the '779 Patent specification and PO's expert's own admissions. Nevertheless, Scott renders the claims obvious even under PO's incorrect construction.

II. ARGUMENT

A. Scott Discloses “Continuously Retrieve ... Data in Real Time” (Limitations 1[e]/16[i])

1. The Petition Demonstrates That Scott Retrieves Data “Continuously ... in Real Time”

Each challenged independent claim recites a system where data related to a progress of the wagering event is “continuously retrieve[d] ... in real time.” The Petition demonstrates how Scott's “value engine” discloses these limitations because it promptly retrieves “game information” that identifies “game symbols or indicia the player currently has, the odds the player will win (or lose), the amount the player has wagered,” as well as “cards or symbols remaining to be dealt, credits remaining, and other information related to a wagering game” during game play. Pet., 38-39 (citing EX1006, ¶¶[0058], [0083]). The Petition further explains that Scott's retrieved game information is used in determining a “cash value” of the wager, which is presented as an option that allows the user to “end a wagering game” early in exchange for a reduced payout. Pet., 56 (citing EX1006, ¶¶[0014], [0020], [0076]).

Scott also discloses that data retrieval is performed “continuously ... in real time” as claimed because the value engine recalculates the “current cash value” in response to events that “may change the odds ... of a game.” EX1006, ¶[0036]; *see* Pet., 47 (citing EX1006, ¶[0035]); Paper 20 (ID), 22-23 (citing EX1006, ¶¶[0058], [0071], [0080-81]). Using keno as an example, Scott states that “the odds of a player winning may be altered when each subsequent number is revealed, even though each number is not marked on the player’s keno card (*i.e.*, the player’s keno card remains unchanged).” *Id.* Scott’s value engine therefore continuously retrieves game data ***as each event occurs*** that could possibly impact wagering odds. Thus, as the Board found, “Scott discloses that, as the game progresses, its value engine receives and evaluates game symbols or indicia presented to the player in a repeating cycle [and therefore] Scott’s value engine continuously retrieves data, in real time....” Paper 20 (ID), 22-23.

2. The DRP Decision Forecloses PO’s Construction

PO contends that Scott does not “continuously retrieve ... data in real time” because “Scott’s gaming machine only implements games that unfold in ***discrete steps*** (or stages), and any retrieval of data is exclusively tied to ***discrete points*** of those games.” POR, 30.¹ PO contends that this limitation “requires retrieving data

¹ Emphasis added unless otherwise noted.

by a repeated, regular *polling* operation, at regular intervals, that is sufficiently frequent to promptly capture relevant developments in the wagering event as they occur.” POR, 24. According to PO, Scott’s value engine does not satisfy this construction because it retrieves data at “discrete” points and “only if triggered.” POR, 33. Thus, PO proposes a construction that requires “polling” and distinguishes based on Scott’s allegedly discrete operation. *Id.* PO’s arguments are foreclosed by the DRP’s binding precedent.

In responding to the majority’s initial² construction of this same limitation, the DRP³ rejected the notion that Scott’s data retrieval is anything other than “continuous.” The DRP found that the evidence “supports the determination that

² The majority “interpret[ed] ‘continuously’ performing a task ... to exclude performing that task at *discrete time points*.” Paper 9 at 10. Like PO’s Reply arguments, the majority advanced that “Scott’s retrieval of game information occurs [only] at *discrete time points*,” or only during certain “triggering events.” Paper 9 at 15-16. Thus, the majority initially denied institution because Scott’s electronic game types retrieve data at “discrete” game stages. Paper 9 at 15-17, 21.

³ Petitioner sought rehearing via Director Review of the majority’s construction (Paper 10), which the Director delegated to the Delegated Review Panel (DRP) (Paper 11). The DRP granted rehearing, construed the “continuously” limitations, vacated the majority’s institution denial, and remanded. Paper 14 (DRP Decision) at 2.

Scott’s evaluations ... involve ‘continuous’ determinations.” DRP Decision, 17. The DRP also explained that it “disagree[d] with the construction of ‘continuously’ performing a task, which ‘exclude[s] performing that task at discrete time points.” DRP Decision, 15. Instead, the DRP construed the “continuous ... in real time” limitation as follows:

Term	DRP Construction
“continuously retrieve ... data ... related to a progress of the wagering event”	“encompass[es] ‘repeatedly retrieving data related to the progress of the wagering event as developments occur that may affect the odds of the wager’” - DRP Decision, 14
“retrieving data and recalculating wager information ‘in real time’”	“encompass[es] retrieving or recalculating while the wagering event is occurring, and with sufficient frequency to promptly capture developments that may affect the odds of the event” - DRP Decision, 21

Thus, the DRP (1) rejected a construction of “continuous ... in real time” that excludes discrete operation, (2) set forth a construction that encompasses promptly retrieving information that may affect the odds of the wager, and (3) found that the evidence supports a finding that Scott’s value engine satisfied this limitation.⁴

⁴ On remand, the Board’s ID adopted the DRP’s construction of the term “continuously ... in real time” and found that the “preliminary record” demonstrates Scott’s disclosure of it. Paper 20 (ID), 22-23 (“Scott’s value engine continuously retrieves data, in real time, related to the progress of the wagering event per the constructions provided [by the DRP].”).

PO raises a new construction and arguments which directly contradict the DRP's holdings. PO's construction "require[s] data retrieval by a repeated, regular polling operation." POR, 20. This is contrary to the DRP's construction, which does not include any periodic "polling" requirement. DRP Decision, 14, 21. The DRP's construction is binding here.⁵ PO's contradictory construction is therefore foreclosed.

PO's arguments regarding "discrete" operation have also been rejected by the DRP and Board. PO references Scott's allegedly "discrete" process nearly 30 times in alleging that Scott is distinguishable from the "continuous[] ... real time" operation of the challenged claims. *See* POR, 3-4, 17-19, 30-32 (referencing "discrete" operation of Scott). But the DRP already found that a "construction ... which excludes performing that task at discrete time points" is *improper*. DRP Decision, 15 (internal quotations omitted).

PO fails to identify any legal basis to support its departure from the DRP and Board findings. At best, PO's expert took issue with the clarity of the DRP's constructions. EX1059 (Vancura Tr.), 51:18-19 (explaining that the DRP's

⁵ *See* 35 U.S.C. § 314 (conveying to Director power to institute IPR); *U.S. v. Arthrex*, 594 U.S. 1 (2021) (IPRs constitutional only if the Director has final authority over PTAB decisions); Paper 11 (delegating the Director's authority to the DRP in this case).

construction “could have been clearer.”). But neither PO nor its expert identify any factual or procedural errors in the DRP’s construction. Nor do they explain what about it was supposedly “unclear.” PO merely disagrees with the DRP’s binding decision.

3. PO’s Construction is Flawed

PO admits that the wagering systems disclosed by the ’779 Patent are “highly versatile” and apply to “any type of actual or virtual sporting event or any type of game.” POR, 21 (citing EX1001, 4:2-3). Yet, PO proposes a construction of the term “continuously retrieve ... data in real time” based on the alleged requirements of a single embodiment directed to “live sports.” The claims are not so limited. By proposing a construction that imports undisclosed implementation details allegedly required to support a particular embodiment, PO advances a construction that is contrary to core tenets of patent law and the DRP’s construction.

a. The Challenged Claims Do Not Require “Live Sports”

The challenged claims are not limited to “live sports” wagering, as PO’s expert admits. EX1059 (Vancura Tr.), 65:21-66:16. The claimed “wagering events” include poker, roulette, blackjack, keno, bingo, and other casino games disclosed by Scott. *See id.*; *see also* DRP Decision, 20 (listing alternative “wagering events” including “slot machines, keno, [and] poker” included within the scope of the challenged claims). The primary dispute is whether the construction of

“continuously retrieve ... data in real time” as claimed “***must account for*** ... live sporting events,” as PO contends, even though the claims are not ***limited to*** “live sporting events.” POR, 21. In other words, PO contends that the challenged claims must be interpreted to include unclaimed elements that allegedly support one alternative limitation (*i.e.*, wagering on live sporting events), even though those unclaimed elements are not necessary to support other alternatives (*i.e.*, casino games). *Id.* PO is wrong.

The Federal Circuit has held that claims should not be construed to be limited to a single embodiment, to the exclusion of other disclosed embodiments, “when the claim language is broader than the embodiment.” *Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004); *see also* MPEP 2111.01 II. Moreover, invalidity may be shown by disclosure of any single implementation within the scope of the claims. *In re Theresa*, 720 F. App’x 634, 637 (Fed. Cir. 2018) (“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.”).

Petitioner has met its burden to show invalidity here by demonstrating “continuous ... real time” data retrieval for one type of game within the scope of the challenged claims. *See supra* §II.A.1. At least “slot machines, keno, poker, [and other] video games” are within the scope of the challenged claims. DRP Decision,

20 (finding the alternative game types disclosed in Claim 3 within the scope of Claim 1). The Petition demonstrates “continuous[] ... real time” data retrieval with regard to Scott’s disclosures of these games. Pet., 31-36. Petitioner was not required to show implementation in the prior art of other “structures or compositions within the scope of the claim,” like sports wagering. *See In re Theresa* at 637.

b. PO’s Construction Is Devoid of Support

PO’s construction “require[s] data retrieval by a repeated, regular polling operation” POR, 20. But the ’779 Patent does not support or disclose such a requirement—never using the term “polling” to describe retrieving data about the progress of an event. *See generally* EX1001. And although PO cites exclusively to its expert to support its construction, PO’s expert admitted that PO’s construction is not actually “required” under the DRP’s construction. EX1059, 61:1-62:3 (explaining PO’s construction is “at least one implementation”).

Lacking any support for its construction in the evidentiary record, PO relies on “considerations” that allegedly necessitate “polling” in order to implement “continuous[] ... real time” data retrieval for a “‘wagering event’ that includes a sporting event.” POR at 22-23. Notably, PO never argues that such “polling” is the only way to achieve “continuous ... real time” data retrieval for sporting events; Dr. Vancura only says that “polling” “is *suitable*” for such an implementation. EX1007, ¶73 (emphasis added). Moreover, these alleged “considerations” that make polling

“suitable” fail to support PO’s construction as noted above (§II.A.3.a). Namely, none of the claims are *limited to* “sporting events,” which is merely one of over 40 alternative types of “wagering events” listed in claims 3 and 18. Thus, “considerations” allegedly relevant to “sporting events” have no bearing on non-sports games (*i.e.*, Scott’s casino games), which independently render the claims unpatentable.

PO contends that the claimed “system is adapted for wagering events ... like a soccer match [which] is not running on or generated by the claimed system.” POR, 22. PO also contends that the system must retrieve data pertaining to “time-sensitive, often fluid, game developments” like “weather conditions, how much time remains, [and] in-game momentum.” POR, 23. But PO cannot show these “considerations” are *required* under the claims. Indeed, nothing in the claims or specification require the “wagering event” be “external” or “fluid” as described by Patent Owner. These “considerations” therefore also have no bearing on Petitioner’s invalidity arguments. And PO’s comparison of Scott to these undisclosed and hypothetical implementations is similarly irrelevant.

c. The DRP’s Construction of “in real time” Does Not Exclude “Discrete” Operation

PO contends that the DRP “carves out ... any actions undertaken only at discrete points of an event.” POR, 27 (emphasis in original) (citing DRP Decision at

19). But PO misinterprets the DRP's construction. As discussed above, the DRP directly contradicted PO's interpretation when it stated "[w]e disagree with the construction of 'continuously' performing a task, which 'exclude[s] performing that task at discrete time points.'" DRP Decision, 15.

PO implicitly contends that this portion of the DRP Decision was limited to the term "continuously" and that the "in real time" term modifies the DRP's construction of the overall limitation. POR, 27. This is wrong. The DRP addressed the entire limitation "continuously retrieve ... data in real time related to a progress of the wagering event" when providing its construction that expressly includes "discrete" operation. DRP Decision, 13 (quoting entire limitation); *see also id.*, 14-18 (supporting construction of full limitation).

To be sure, the DRP also addresses the "in real time" term under a separate heading. DRP Decision, 18. But that section merely addresses "[t]he issue of whether claim 1 is limited to 'live' wagering events" under the "in real time" heading. *Id.* In finding that the challenged claims applied to both "live" and "pre-recorded events," the DRP determined that retrieval "in real time encompass[es] ... a wagering event that is pre-recorded and later broadcast," so long as developments that may affect the odds of the event are "promptly" captured "during the broadcast." DRP Decision, 21. But nothing in the DRP's analysis of "pre-recorded events" excludes "discrete" events or requires "polling," as PO contends.

d. PO's Interpretation of Scott Is Flawed

Even if the Board were to apply PO's flawed construction, the claims are unpatentable because PO's argument that Scott only discloses data retrieval at "predetermined discrete points" is factually incorrect. POR 32. Like the '779 Patent specification, Scott discloses that its system may have discrete or continuous operation, or both. POR, 30-33; EX1006, ¶[0067]; EX1001, 17:52-57. Specifically, Scott states that a cash value may be presented after "each card or other game symbol is dealt to a player" or "[a]lternatively, current cash value may be determined and presented at the end of each dealing stage of the game." EX1006, ¶[0067]. Indeed, the DRP cites Petitioner's expert's explanation highlighting the parallels between the '779 Patent specification and Scott on the juxtaposition of discrete and continuous, real-time operation. DRP Decision, 17 (*citing* EX1001, 17:52-57, EX1006, ¶[0067], EX1007, ¶¶122, 137. Thus, Scott discloses the same approach as the '779 Patent.

PO contends that Scott's data retrieval is entirely contingent on discrete triggering events, like "additional numbers being marked in a game of keno." POR, 32 (quotations omitted). But nothing in the DRP's construction excludes "triggering events" from satisfying its construction, so long as those triggers "repeatedly" and "promptly" capture developments that "may affect odds." DRP Decision, 14-15, 21. Scott expressly discloses such a configuration. EX1006, ¶¶[0035-36] (retrieving data

in response to “events that occur during a wagering game [that] *may change the odds or other characteristics of a game* without changing the game symbols.”).

PO alleges that the steps that form the “continuous loop” of Scott’s Figures 4 and 5 are somehow “not necessarily continuous.” POR, 33. This is inconsistent with Scott’s teachings. Figures 4 and 5 of Scott show general “flow diagram[s]” illustrating operation of a “value engine” and “determination of *current cash value*.” Pet., 40 (loop depicted in red); EX1006, ¶[0071]-[0077]; Paper 20 (ID), 22-23. And Scott expressly discloses that the “current cash value” is updated in real time by the value engine as new developments occur that may affect the odds of the game. Pet., 40 Figure 4; EX1006, ¶[0071], [0073]. Scott therefore “continuously” retrieves data related to the wagering event “in real time” because the process in Figures 4 and 5 promptly updates the cash value for *each new* event that effects the cash value. Pet., 40-41; EX1006, Fig. 4 ¶[0073]; DRP Decision, 17.

PO also alleges that Scott’s disclosure of presenting a cash value “in real time” does not disclose retrieving data “in real time.” POR, 35-36. But PO overlooks that Scott’s cash value must be “*current*” (*i.e.*, it must account for all “events that ... may change the odds” up to that point in time). Thus, Scott necessarily retrieves data in “real time” to inform its real time generation of a “current” cash value. Pet., 39-42.

B. “Plurality” Elements (Claim 16)

PO contends that Claim 16 recites a system that requires “multiple bettors ... to place wagers on *the same wagering event*.” POR, 37. But this is neither recited nor required by the claims. Indeed, the dependent claims require interpreting Claim 16 to include wagers from a plurality of bettors on “one *or more*” wagering events.⁶ The Petition demonstrates that Scott discloses the configuration of Claim 16 under the correct interpretation. Nevertheless, Scott also discloses the “plurality” elements under PO’s interpretation.

1. Scott Discloses the “Plurality” Elements Under the Correct Interpretation

The “use of ‘a’ or ‘an’ before a noun naming an object requires that the phrase be construed to mean ‘one or more’ unless the context sufficiently indicates otherwise.” *ABS Glob., Inc. v. Cytonome/St, LLC*, 84 F.4th 1034, 1040 (Fed. Cir. 2023) (internal citations and quotations omitted) (citing *Lite-Netics, LLC v. Nu Tsai Cap. LLC*, 60 F.4th 1335, 1345 (Fed. Cir. 2023)). Claim 16 recites “a wagering event” and “a trading engine module.” By default, these terms should be interpreted to mean “one or more” of each. *Id.*

⁶ PO frames the issue as a dispute over the “plurality” elements, but this flips the issues. Instead, PO actually challenges whether the Petition showed a *single* “wagering event” and/or a *single* “trading engine module.”

PO ignores this controlling law and fails to identify any “context” requiring a different interpretation. While PO is correct that the terms “refer on their face to a singular wagering event” and “trading engine module” (POR, 38), that merely supports application of the default “plural-allowing meaning.” *ABS* at 1040. That the claim also recites a “plurality of input devices” and that “Petitioner’s expert agreed” that the claim recites “a wagering event” (POR, 38) also are not sufficient to depart from the default rule, because nothing in the context of the claim requires a “single” wagering event or prohibits the “plurality of input devices” from wagering on “one or more” wagering events.

In fact, the context of these terms requires rejecting PO’s interpretation. Claim 18, which depends from Claim 16, recites that “*the* wagering event comprises one *or more* of an entire event, ... *multiple independent events* occurring sequentially or concurrently, ... including one *or more* ... slot machines, keno, poker, video games, racing, [and] lotteries.” Consistent with the rules of construction, the dependent claims require that “the wagering event” must include “one or more” games or events.

That is precisely what Scott discloses. The Petition identifies Scott’s configuration involving multiple players (*i.e.*, “a player ... selling [a] hand to *another player*”) in keno, bingo, poker, card, and slot games, where “one or more trading engine modules collectively receive a plurality of wagers,” as meeting the

“plurality” elements. EX1006, ¶¶0096]; Pet., 29-38, 79-82. Moreover, the Petition and Mr. Crevelt⁷ demonstrate that accommodating multiple players in Scott’s system also would have been obvious as a matter of common sense given Scott’s disclosure of multiplayer wagering games like keno, bingo, and lotteries, and Scott’s express disclosure of networked, central determinant, multiplayer gaming systems. Pet., 85-86; EX1007, ¶¶81, 158, 160, 182-184. Thus, Scott discloses or suggests receiving, by “one or more” trading engine modules, a plurality of wagers on “one or more” wagering events from a plurality of input devices.

2. Scott Discloses a Multiplayer Configuration with a Singular Trading Engine Module

Scott also discloses a *singular* trading engine module receiving wagers from a plurality of input devices on a *single* wagering event under PO’s flawed interpretation of Claim 16. As noted in the Petition, “Scott discloses one or more ‘gaming machines,’ ‘one or more controllers or processors for controlling the gaming machine,’ ‘gaming servers,’ and a ‘value engine.’” Pet. at 24 (*citing* EX1006, ¶¶[0008]-[0010], [0040]-[0043], [0048], [0055]). The Petition further states the gaming machines in Scott may be configured as a client in a client/server

⁷ The Petition includes a clerical error in citing to Scott (EX1006) on pages 85-86, when it should cite to Mr. Crevelt’s supporting opinions in EX1007 at parallel paragraph numbers.

architecture, where multiple gaming machines communicate with a central trading engine module at a server. Pet. at 29 (*citing* EX1006, ¶[0055]). Indeed, a POSITA would understand or find it obvious that the multiple gaming machines of Scott's system would communicate with the same central controller, including a single value engine, to engage in the same underlying game instance of "keno," "bingo," and other multiplayer games disclosed by Scott. EX1007, ¶[0084] (*citing* EX1006, ¶[0055]).

Scott also discloses a client/server configuration for "central determinant" games, which allow for multiple players to play the same type of game and/or the same single instance of a wagering game. EX1006 ¶[0055]; EX1007, ¶[0076]-[0085]. PO's expert, Dr. Vancura, confirmed that "central determinant" games involve "a central server that's drawing [] balls, and then each player's machine will have a card, a bingo card, and the outcome of *the bingo game* is mapped onto what appears to be slot reels." EX1059, 17:3-15. Thus, Scott discloses centrally administered games which receive wagers on the same singular wagering event from a plurality of connected input devices.

Scott also discloses a "marketplace" where a centrally located "value engine (i.e., "trading engine module") receives non-final sets of indicia (i.e., "wagers") from a plurality of input devices. Pet., 77 (*citing* EX1006, ¶[0096]). Scott's "marketplace" embodiment also discloses PO's interpretation of Claim 16.

PO alleges that Scott’s “marketplace” is directed to “trading” rather than “multiple participants wager[ing] on the same wagering event” as allegedly required by Claim 16. POR, 42-43. But the ’779 specification discloses the parallel concept of a “betting exchange” where players sell their wagers to other players. EX1001, 20:65-21:7, 23:43-45, 24:40-44 (“person to person betting exchange”), 35:50-57. PO provides no reason that Scott’s parallel disclosures of a “marketplace” should be excluded from Claim 16. Indeed, the “trading engine module” of Claim 16 and does nothing more than receive “wagers”—Claim 16 does not recite or require “multiple participants wager[ing] on the same wagering event” as PO alleges. The “betting exchange” contemplated by the ’779 patent also necessarily receives wagers for trading as claimed. The Petition’s mapping of Scott’s “marketplace” is wholly consistent with Claim 16’s “trading engine module” as read in light of the ’779 Patent’s “exchanges.”

PO also contends that “Petitioner has not even attempted to meet its burden regarding” showing a “singular” trading engine module. POR, 39. But the Petition clearly identifies Scott’s disclosure of “*one or more* trading engine modules,” as opposed to just the “multiple (plural) ‘trading engine modules’” as misquoted by PO. *Compare* POR, 39 *with* Petition at 82. The Petition thus plainly alleges that Scott discloses an embodiment of the wagering system that contains only *one* trading engine module. The Petition also shows that “Scott’s disclosure of *the* ‘value

engine’ corresponds exactly to the ’779 Patent’s description of a ‘trading engine’” (Pet., 32), and that Scott “discloses ‘value engine 122,’ which is *a* software module.” *Id.* (emphasis added). Contrary to PO’s arguments, the Petition demonstrates that Scott discloses an embodiment of the claimed invention that contains one singular trading engine module.

C. Scott Discloses “Fixed Odds Singles” (Claims 5, 7, and 23)

1. Scott Discloses “Single” Games with “Fixed Odds”

Claims 5, 7, and 23 each recite a wager comprising a “fixed odds single.” Petitioner’s expert, Mr. Crevelt—a thirty-year veteran of the gaming industry—testified that a POSITA would understand the term “fixed odds single” to refer to a game where “the odds of winning are fixed, and the wager is on a single outcome.” EX1007, ¶106. The Petition identified Scott’s disclosure of bingo and various casino games, like poker and slot games, where the odds of winning are “fixed,” or known prior to gameplay, as meeting this limitation because each of these games would be required to exhibit fixed, known odds in order to obtain a winning outcome, as prescribed by regulations for electronic gaming devices at the relevant time. Pet., 68; EX1007, ¶160; *see also* EX1062 (GLI Standards for Gaming Devices), 58 (mandating fixed or “constant” odds/probabilities for operation of electronic gaming machine versions of live and random event casino games); EX1064 [0063]-[0066] (an example single-player bingo game with fixed and constant odds/probabilities for

the player to win or lose); EX1061 4:39-49, 6:33-45 (multi player bingo with predetermined “true mathematical probabilities” so each winning player wins a preset, fixed amount).

PO contends that Petitioner’s interpretation of “fixed odds” is wrong because “fixed odds” is a term of art in the sports wagering context that refers to games where the “payout,” not the odds, are fixed. POR, 45. But PO’s construction is wrong as it is inconsistent with the ’779 Patent’s specification, which discloses “*fixed-odds* betting terminals.” EX1001, 12:36. Fixed-odds terminals supported “fixed odds singles” wagers on “casino games,” like bingo and other games disclosed by Scott. EX1059 (Vancura Tr.), 89:1-90:7; EX1058, 28 (stating that fixed odds betting machines “are machines on which can be played *fixed odds* and betting games” including “casino games,” “*bingo*,” and “roulette”). PO fails to explain why the term “fixed odds” would exclude bingo when the ’779 Patent’s *fixed-odds* terminals provided that game. Moreover, as discussed above, the challenged claims are not limited to sports wagering and instead include casino games (*supra* §II.A.3.a), so there is no basis in the intrinsic record to depart from the meaning of the term ascribed by Mr. Crevelt.

PO’s expert contends that “he had never heard anyone refer to a wager on a bingo game as a ‘fixed odds single.’” POR, 50 (citing EX2007, ¶[132]). But Dr. Vancura provides no explanation for why the ’779 Patent would use the term “fixed

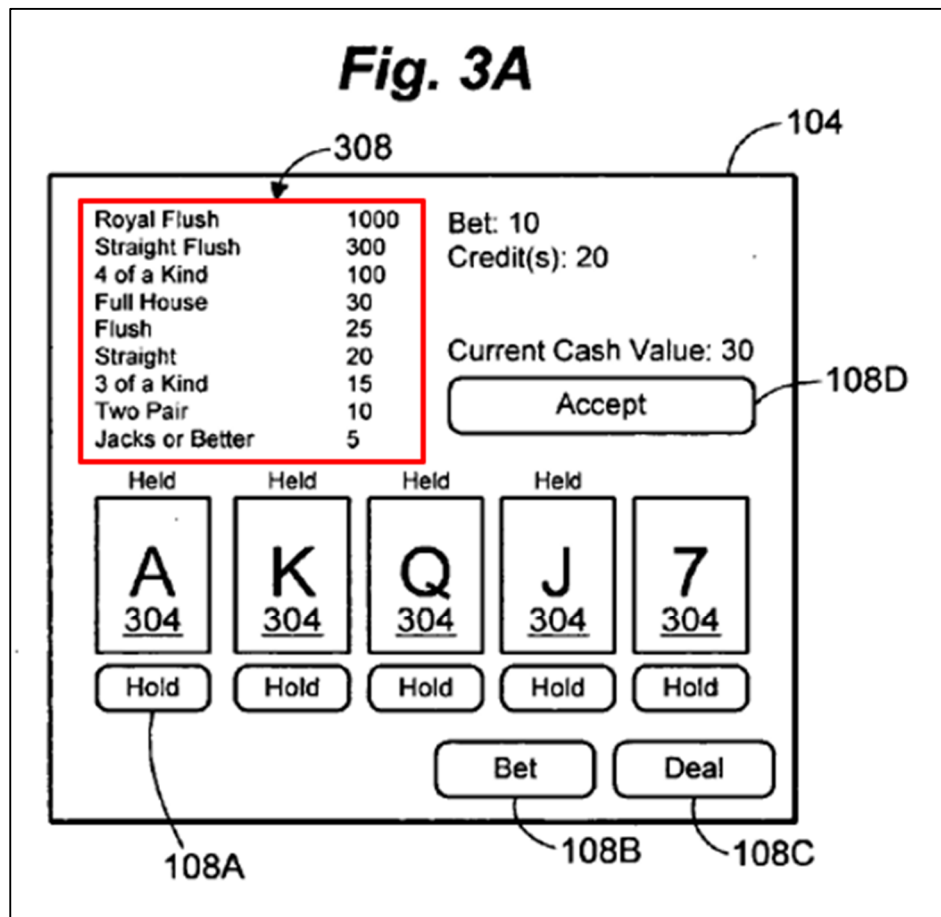
odds” when describing terminals for playing bingo. EX1058, 28. Dr. Vancura also personally used the term “fixed odds” to describe the very same casino games offered by Scott (including “bingo”). EX1060, ¶¶[0025], [0037] (patent application filed by Dr. Vancura describing an embodiment where “slots, poker, blackjack, *bingo*, etc.” offer “fixed odds prizes”).

While PO’s extrinsic evidence supports that “fixed odds” was also used in the context of sports wagering events, it fails to demonstrate that Mr. Crevelt’s interpretation as grounded in the ’779 specification and the context of casino games within the scope of each challenged claim is wrong. Nevertheless, even if PO’s construction were correct, Scott discloses it.

2. Scott Discloses PO’s Construction of “Fixed Odds Single”

PO contends that a “fixed odds single” is a game “where a bettor is offered a *fixed multiplier* for wagering on a given outcome, and the multiplier (and therefore the potential payout) is fixed *at the time the bettor places the wager.*” POR, 46. In other words, PO contends that a “fixed odds single” is any game with a fixed pay table. Scott discloses numerous games that meet this definition.

For example, Scott’s Figure 3A (annotated below) shows a “poker-type game” with a fixed “paytable 308” (red below), which shows the amount to be won in relation to the amount bet.



EX1006, FIG 3A, ¶[0061]. Scott also discloses the same type of fixed “paytable” for slot games. *Id.*, ¶[0010].⁸

Dr. Vancura admitted he was aware of numerous casino games like these where the payout is based on a multiplier of the underlying wager, including blackjack, slot machines, and roulette games (EX1059, 32:1-34:4), that a POSITA

⁸ Gaming regulations required “line games,” like Scott’s “slot-type games”, to display the “bet multiplier” and “[w]inning paylines,” similar to Scott’s display of a “poker” pay table in Figure 3A. EX1062, 53.

would “refer to the pay table [for these games] as ‘multipliers’ typically” (*id.*, 34:8-11), and that such a configuration “***could be considered fixed odds*** to the extent that, you know, a pay table is fixed and the odds are the multiplier of the wager” (*id.* 34:12-15).⁹ The table below lists Scott’s disclosed games and identifies where Dr. Vancura admitted that each game is covered under his construction of “fixed odds single.”

⁹ And, as discussed above in §II.C.1, Dr. Vancura also personally filed a patent application on slots, poker, blackjack, and bingo games with “fixed odds prizes.”

Game	Disclosure in Scott	Corresponding Admission from Dr. Vancura That Game is “Fixed Odds” Under His Construction
Blackjack	EX1006, ¶[0044]	EX1059, 33:1-2 (admitting “blackjack” would have “payout [] based on a multiplier of the underlying wager”), 33:18-24 (same); EX1060, ¶¶[0025], [0037] (describing “fixed odds prizes” for base games including “blackjack”)
Slots	EX1006, ¶[0035]	EX1059, 32:2-9 (admitting “slot machines” have “payout [] based on a multiplier of the underlying wager”); EX1060, ¶¶[0025], [0037] (describing “fixed odds prizes” for base games including “slots”)
Bingo	EX1006, ¶[0035].	EX1060, ¶¶[0025], [0037] (describing “fixed odds prizes” for base games including “bingo”)
Poker	EX1006, ¶[0010].	EX1060, ¶¶[0025], [0037] (describing “fixed odds prizes” for base games including “poker”)
Class III Games (e.g., roulette)	EX1006, ¶[0044]	EX1059, 32:16-33:6 (admitting “roulette” would have a “payout [] based on a multiplier of the underlying wager”); 35:20-21 (“if I’m betting on a single number in roulette, that would be fixed odds, 35 to 1”); 65:21-66:16.

Numerous games in Scott therefore satisfy Dr. Vancura’s construction.

III. CONCLUSION

Petitioner respectfully requests that the Board find Claims 1-3, 5-10, 16-18, and 21-25 are invalid as either anticipated by Scott or rendered obvious by Scott in view of a POSITA's general knowledge.

Dated: November 8, 2024

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CERTIFICATE OF SERVICE

The undersigned hereby certifies on this 08th day of November 2024, that true and correct copies of the foregoing **PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE and Exhibits 1058-1064** 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 5,137 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.

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