

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GENIUS SPORTS LTD.,  
Petitioner

v.

SPORTSCASTR INC.,  
(D/B/A PANDA INTERACTIVE),  
Patent Owner.

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IPR2024-01310  
U.S. Patent No. 11,039,218

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

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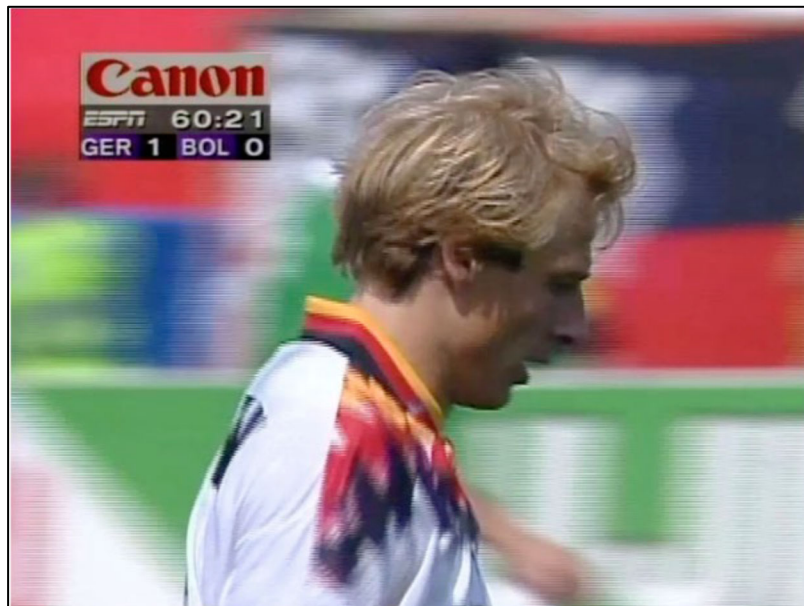
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Genius Sports, Ltd. ("Petitioner") submits this Reply to SportsCastr Inc.'s (d/b/a PANDA Interactive) ("Patent Owner" or "PANDA") Response to the Petition seeking *inter partes* review of U.S. Patent No. 11,039,218 ("218").

## I. INTRODUCTION

The '218 claims a replay of a traditional broadcasting system, using previously disclosed server components in a known way, to achieve a previously accomplished goal. Ex.1001 ¶¶63-71. The purported invention enables broadcasters to "overlay streams with real time enhancements," a feature that existed since at least 1994:



Ex.1045; Patent Owner Response, Paper 16 ("POR"), 69-70.

The '218 creates its score information overlay by using the known concept of providing two or more different channels of content to user devices using known internet communication protocols. *Id.* A point PANDA's expert, Dr. Rubin, does

not dispute. Ex.1063, 97:3-6 (“Ellis renders video and data feed as overlays on the user device”).

In its Reply, Petitioner first explains why Spivey's topic queues constitute the claimed “event sockets” as that issue applies to all Grounds, and then Petitioner addresses PANDA's arguments unique to each Ground. With respect to an issue particular to the '218 patent IPRs, Petitioner explains why an “orchestrator-type” webserver architecture proposed in the Petition (in which the webserver facilitates connections among devices and servers) is not a radical deviation from a “relay-type” architecture (in which data flows through servers in series)—as suggested by PANDA.

## II. SPIVEY DISCLOSES THE CLAIMED EVENT SOCKETS

Claim 1 of the '218 recites “at least one socket server communicatively coupled to the control server to:”

transmit at least some of the first event information ... to at least a first viewer client device of the plurality of viewer client devices via a first event information Internet communication channel between *a first event socket* of the at least one socket server and the first viewer client device.

PANDA argues that Spivey does not teach the claimed “a first event socket” for multiple reasons. Those arguments are addressed below.

**A. Spivey Discloses an MQSD-Client Connection**

PANDA argues that Spivey does not disclose or suggest that its Message Queue Server (“MQSD”) / topic queues are capable of handling communication to individual client devices because Spivey’s user interfaces “all pertain to accessing the [live data access server].” POR, 3. That is incorrect. Spivey does not require the live data access server (“LDAS”) to serve as an intermediary between the MQSD and client devices. Petitioner, and their expert Dr. Wicker, previously explained why in Spivey the MQSD may be “accessible to clients over the network directly.” See Paper 1 (“Petition”), 29 n.7 (citing Ex.1001 ¶562 and noting other reasons).

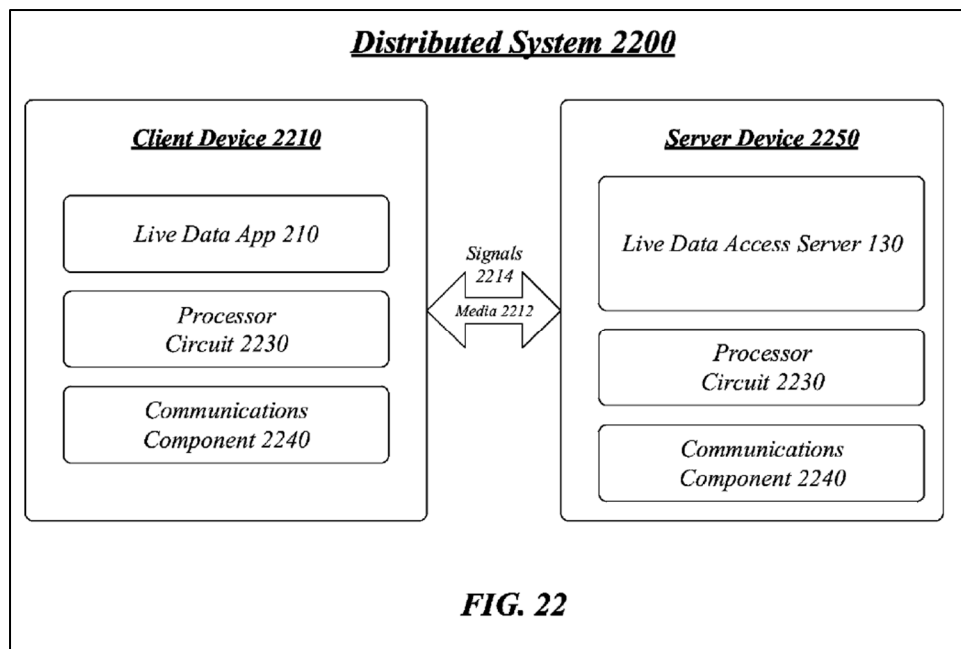
Moreover, Spivey states that the “MQS communication component 308 may also receive requests to subscribe to topics in a topic set 330, and *may push data from topic queues 332-1, 332-n to the subscribers* [i.e., client devices] of the topics corresponding to those topic queues” (Ex.1017 ¶46), indicating that the MQSD can deliver data directly to clients without the necessity of an LDAS. Furthermore, Spivey clarifies that the system “*may* include a[n] [LDAS]” (Ex.1017 ¶38), not that it must, underscoring the optional nature of the LDAS. Further, as discussed below regarding Figure 22 of Spivey, the functionality of the LDAS can be provided by a server functioning as both the MQSD and the LDAS. Ex.1064 ¶¶4-10.

Patent Owner’s expert, Dr. Rubin, reaches a different conclusion. He does not understand the term “may” as indicating that the LDAS is optional. Instead, his

approach is to assess, on a case-by-case basis, whether Spivey's system would logically function without the LDAS. Ex.1063, 61:2-62:13. But Dr. Rubin's approach is unwieldy and lacks clear, objective criteria, as it relies on a subjective, case-by-case assessment that risks inconsistency and ambiguity. During his deposition, Dr. Rubin contended that "there are examples in Spivey using the language ["may"] where there is no logical way to understand it if it did not include it," but he did not offer a concrete rule for determining when "may" indicates whether a component is optional versus mandatory. *Id.*, 62:8-13.

Dr. Rubin's approach effectively requires a POSA to make a subjective determination based on whether Spivey's system would "make any sense" without the component, rather than relying on the express disclosure itself. As a result, his approach leads to uncertainty regarding the scope of the literal disclosure versus what a POSA who wishes to ignore the literal teaching in favor of his or her own judgment would understand "makes sense."

The flexibility of Spivey's architecture is reinforced in the distributed system embodiment (Ex.1017, Fig. 22), where "the server device 2250 may be the same or similar to *live data access server 130*, 1430, *message queue server 120*, 1420, *and/or* aggregator host server 1450." *See id.* ¶158. The Figure 22 architecture allows a single server to implement the functionality of the LDAS and MQSD in a single server, facilitating direct client-MQSD communication. Ex.1064 ¶6.



Dr. Rubin acknowledged this in his deposition, stating that “the functionality of the message queue server can be implemented in the server device 2250,” and that “the client device makes a direct communication to the server device 2250.” He further admitted that “the server device 2250 may implement that functionality, but that’s not being shown in Figure 22,” confirming that the architecture permits, but does not require, an LDAS intermediary. Ex.1063, 72:22-73:3, 82:3-83:1.

PANDA disagrees and argues that “Spivey’s teachings, *when considered as a whole*, require the LDAS,” and that without the LDAS, Spivey would not operate. POR, 5 (emphasis in original). PANDA argues that only the LDAS contains a subscription component or interface component and without such components, Spivey’s architecture would not “operate to deliver data to the user equipment shown

on Petitioner's make-believe diagram.”<sup>2</sup> *Id.*; *see also id.*, 26 (discussing “necessary components”), 32 (same). However, Dr. Wicker testified under cross-examination that a POSA would have understood that the MQSD's communication component would act as an interface and subscription component allowing for MQSD-Client connections. Ex.2039, 34:21-35:2, 52:5-12; *see also* Ex.1064 ¶¶7-8. This is because the MQSD's communication component “may [] receive requests to subscribe to topics” where the data is pushed “from topic queues ... to the subscribers of the topics.” Ex.1017 ¶¶46, 49; *see also id.* ¶43 (“[C]lient communication component 208 may request and participate in a websocket connection.”); Petition, n.7 and 59-60.

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<sup>2</sup> Petitioner's diagram is not make-believe. As explained in the Petition, it is a proposed combination that renders PANDA's claims obvious. Petition, 21-22. Moreover, PANDA argues that communication channels 152-1, 152-n are “entirely of Petitioner's and [Dr. Wicker's] own making.” POR, 5. Not true. First, Ellis teaches that communication path 152 provides “sports-related information ... to user equipment 102 as a *plurality of real-time data feeds*,” meaning more than one, corresponding to 152-1 through 152-n. Petition, 14. Second, as discussed below, Spivey discloses incorporating the MQSD as a RabbitMQ server, and thus discloses multiple connections to a single device. *See* §II.C, *infra*.

Furthermore, Spivey's claims confirm that Spivey contemplated direct MQSD-Client connections. For example, Spivey's method claim 7 requires a message queue server and client device, but not an LDAS. *Id.*, Cl. 7. And claim 7 recites a "connection" between the "requested topic at a [MQSD]" and the "client device." *Id.*; Ex.1064 ¶9; *see also* Cl. 8 (claiming an MQSD-Client "websocket connection"); Cl. 1 (requiring a subscription component); Cls. 7-12 (not claiming a subscription component or interface component but still receiving subscriptions and making connections).

Overall, PANDA's arguments improperly impose an unduly narrow reading of Spivey, effectively requiring that Spivey's architecture be incorporated into Ellis in its entirety and without modification. This approach is inconsistent with the proper obviousness analysis, which asks what the combined teachings of the references would have reasonably suggested to a POSA. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981) ("The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference"). Instead of considering how the fundamental concepts and mechanisms disclosed in Spivey—such as real-time data distribution using message queue servers—would have been adapted or integrated within the context of Ellis, PANDA focuses exclusively on whether Spivey's LDAS is a mandatory or optional

component. This narrow focus overlooks the broader inquiry of how a POSA would have understood and combined the teachings of both references. Ex.1064 ¶10.

**B. Spivey's Topic Queues Are Uniquely Addressable Communication Endpoints that Transmit Event Information**

PANDA further argues that Spivey's topic queues "lack an address through which they can communicate" and thus cannot establish MQSD-Client connections. POR, 2; *see also id.*, 25. As the Petition and Dr. Wicker's first declaration explained, Spivey's topic queues are uniquely addressable via URLs that include topic labels as part of the publicly addressable URLs, and thus are communication endpoints for multiple client devices. Petition, 37-40 (citing Ex.1001 ¶¶352, 354, 355, 357, 358).

Dr. Wicker explains that a topic label may be, for example, a text string such as "gamecenter.nfl.ravenssteelers," and client devices use these topic label text strings to connect and subscribe to the MQSD's topic queues. *Id.* ¶¶353-354. In Spivey, the address for connecting to a topic queue may resemble a URL, and client devices can select from a list of available topics and subscribe to those queues, after which the MQSD pushes the relevant data payloads to the subscribed devices. Ex.1017 ¶¶82-84, 134.

Dr. Rubin, in his deposition, acknowledged that Spivey's topic queues can be dedicated to specific events, such as a Ravens-Steelers game, and that topic labels like "ravenssteelers.stats" and "ravenssteelers.plays" can be used to organize information hierarchically. He agrees that "data related to those topics are placed in

their respective topic queues” and that “a topic queue could be, for example, related to a specific Ravens-Steeler game.” Ex.1063, 77:1-78:7. Dr. Rubin conceded, when asked if an event socket is a uniquely addressable communication endpoint, “[t]he URL is sufficient for that” according to the ’218 specification. *Id.*, 48:6-8. Spivey itself states, “[a] topic label may be, for example, a text string such as gamecenter.nfl.ravenssteelers” (Ex.1017 ¶¶66), and that client devices “request a live data connection” by selecting or entering the address or connection information which “may resemble a uniform resource locator (URL).” *Id.* ¶82. This confirms Spivey’s topic queues are not only logically but also actually implemented as uniquely addressable communication endpoints. Ex.1064 ¶¶11-14.

Spivey further discloses that the topic queue connections are bidirectional, websocket connections that transmit event information. *See* Petition, 21 and 25 (citing Ex.1017 ¶¶43, 61); *see also* Ex.1017, Cl. 8 (“[T]he connection is a websocket connection”), Cl. 11 (transmitting a “play, a score, ... a statistic,” etc.). Thus, Spivey’s topic queues are uniquely addressable communication endpoints that transmit event information to a client device. Petition, 26-27; Ex.1064 ¶15.

**C. Spivey’s Disclosure that the MQSD Can Be Implemented as a RabbitMQ Confirms that Spivey’s LDAS Is Optionally a Separate Component**

Next, PANDA undermines its own position. POR, 33. PANDA’s admission that Spivey’s MQSD may be implemented as a RabbitMQ—an architecture which

permits direct connections between clients and an MQSD—effectively confirms that Spivey discloses such direct connections. *See id.* (“Spivey discloses the MQSD may be implemented as a ‘RabbitMQ.’”). Nevertheless, PANDA attempts to avoid the implications of this admission by again arguing that Spivey requires an LDAS. *Id.* However, as explained above, Spivey does not require an LDAS. *See* §II.A, *supra*.

Spivey explains that “RABBITMQ™ facilitates *topic queues* that *receive* published messages and *push* the messages *to clients* that have subscribed to the topic queues.” Ex.1017 ¶58. RabbitMQ, prior to the relevant time period here, had an architecture including an MQSD-Client connection between topic queues and clients. Ex.1065; Ex.1066, 1.<sup>3</sup> RabbitMQ was a known message broker that accepted and immediately pushed messages to client devices, just like the MQSD. Ex.1065. RabbitMQ’s messages flow through queues, just like Spivey’s topic queues. *Id.* Moreover, according to RabbitMQ, multiple client devices can “receive data from one queue.” *Id.* (noting that RabbitMQ discloses a one-to-many structure). These clients “receive messages from the queue” by connecting to the RabbitMQ

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<sup>3</sup> Exhibit 1066 is a printout of Exhibit 1065 from the Wayback Machine Internet Archive. The toolbar at the top of the page reflects that Exhibit 1065 was publicly available by June 12, 2016.

server using a `connection.channel` function, which connects the receiver to the Topic Queue:

Full `receive.py` code:

```
1  #!/usr/bin/env python
2  import pika
3
4  connection = pika.BlockingConnection(pika.ConnectionParameters(
5      host='localhost'))
6  channel = connection.channel()
7
8  channel.queue_declare(queue='hello')
```

*Id.* (explaining that the ‘localhost’ could be an IP address). *See* Ex.1064 ¶16; Ex.1017. PANDA does not dispute this, rather, they blindly maintain that Spivey does not disclose direct MQSD-client connections. However, as explained above, Spivey does provide this disclosure. §II.A, *supra*.

Dr. Rubin admitted during his deposition that he was unfamiliar with RabbitMQ, stating, “I’ve heard of it,” but when asked if he had ever used or studied it, he responded, “No. I believe that appears in some documents that I read in this case. It’s recognizable to me but I have not worked with it.” Ex.1063, 57:1-10. Despite this lack of experience, Rubin stated in his supplemental declaration, Ex.2041 ¶24, that “Spivey discusses a certain ‘RABBITMQ’ as one implementation of the MQSD. (EX-1017, ¶58.) It is my opinion that the RABBITMQ discussed in Spivey ¶58 would function according to the principles set forth in relation to Spivey FIGS. 1 and 4....” During his deposition, he attempted to back off his position,

stating “[m]y opinion is not dependent on the actual functionality of the RabbitMQ product. It has to do with the functionality of a message queue server and how Spivey describes a message queue server interacts with clients through the data access server.” Ex.1063, 88:2-10. Dr. Rubin’s testimony is inconsistent with the Spivey disclosure, which contemplates the optional use of an LDAS, and the RabbitMQ architecture.

**D. Spivey Discloses Bi-Directional Chat Communication—  
Dependent Claim 15**

PANDA argues that the prior art applied in Ground 1A and Ground 2B does not render obvious claim 15’s “first real-time information comprises: at least one chat message” limitation because “Spivey’s topic queues are incapable of at least ‘receiving first chat information.’” POR, 50. PANDA is incorrect for several reasons. First, Ellis discloses the functionality of chat rooms related to the first or second live stream of digital content. Petition, 33-34. Second, Spivey also discloses the functionality of chat rooms because it discloses using RabbitMQ as an MQSD, which was routinely used for chat room implementations during the relevant time period. Ex.1064 ¶¶17-18. Third, Spivey discloses a dedicated chat/system event socket by providing for multiple event sockets per live event, organized with hierarchical topics. Ex.1017 ¶¶52, 114. Fourth, PANDA’s argument that Spivey cannot receive chat information is incorrect. Spivey discloses bidirectional websocket connections between the topic queues and client devices, which support

communications to and from the event sockets. *Id.*; Ex.2001 ¶135 (citing Ex.1017 ¶61) (“The websocket connection ... may be ‘a two-way connection between two entities, where each of the two entities can send and receive data simultaneously.’”); Ex.1064 ¶19 (noting that topic queues would be capable of receiving chat information).<sup>4</sup> Thus, Grounds 1A and 2B both render obvious the transmission and receipt of chat information.

### **III. GROUND 1A: ELLIS-SPIVEY RENDERS THE CHALLENGED CLAIMS OBVIOUS BY A PREPONDERANCE OF THE EVIDENCE**

PANDA argues that a POSA would not have been motivated to combine Ellis with Spivey. As explained below, this argument is largely based on PANDA's incomplete analysis of Spivey, which fails to recognize that Spivey discloses a direct connection between the MQSD and at least one client device.

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<sup>4</sup> The district court's conclusion that an “event socket” is “a socket dedicated to a particular event” supports Petitioner's argument that Spivey's topic queue constitutes an event socket. Spivey's topic queues are each dedicated to specific topics or events, such as a particular sports game, and are uniquely addressable by client devices through topic label/URL identifiers. This matches the district court's requirement that an event socket be dedicated to a particular event, as Spivey's architecture allows each topic queue to serve as a communication endpoint for distributing event-specific information to a client. See Ex.1069, 11-15.

**A. A POSA Would Have Been Motivated to Combine Ellis-Spivey**

Dr. Wicker and the Petition provide a comprehensive and well-reasoned explanation of why a POSA would have been motivated to combine the content distribution systems disclosed in Ellis and Spivey, including the reduction in latency in Ellis's supplemental content distribution system. Petition, 19-24; EX.1001 ¶¶106-115. In response, PANDA contends that Dr. Wicker failed (i) to demonstrate that Ellis and Spivey are compatible and (ii) to articulate "why a POSITA would have been motivated to make the necessary modifications." PANDA further asserts that there are critical differences in Ellis and Spivey. POR, 40-41, 43 (arguing inoperability and a lack of *any flow of data* due to Ellis-Spivey not incorporating an "intervening LDAS"), 43 ("Petitioner's Ellis/Spivey diagram does not include the LDAS"), 45-46 (arguing latency would not be reduced because the combination is inoperable). Once again, PANDA incorrectly relies on its contention that Spivey does not disclose direct MQSD-client connections between topic queues and at least one client device. *Id.*, 41 (asserting inoperability due to the lack of an LDAS). These arguments fail because Spivey does, in fact, teach a system with direct MQSD-client connections between topic queues and multiple client devices that transmit event information via websocket connections. §II, *supra*; Ex.1064 ¶¶20-22.

PANDA further contends that Spivey does not contain a database, and therefore a POSA would not have been motivated to combine Ellis-Spivey. POR,

42-43. This assertion is incorrect. As Dr. Wicker explained, Spivey discloses a database within the MQSD, like the database in Ellis's Supplemental Content Source. Ex.1001 ¶¶360-362. In any event, the presence of a database is not required in Ellis. *See* Ex.1016 ¶42; Ex.1064 ¶23.

PANDA contends that removing an LDAS from Spivey's architecture (*i.e.*, operating environment 400) would not have decreased latency, as Dr. Wicker opined. POR, 45-46. For context, Ellis indicates that its goal is to take "full advantage of today's high-end user equipment devices." Ex.1016 ¶5. As Dr. Wicker explained, a POSA would have been motivated to combine Spivey with Ellis because Spivey discusses "providing a significant advantage over the conventional practices" of data distribution. Ex.1017 ¶28; Ex.1001 ¶109 (citing Ex.1017 ¶28); Petition, 16 (citing Ex.1017 ¶28). A POSA would have understood that, by incorporating any of Spivey's embodiments, including operating environment 400 (Fig. 4) or distributed system 2200 (Fig. 22), the latency in a traditional distribution system such as Ellis's would have been improved. Ex.1064 ¶¶24-26.

PANDA further contends that Spivey's push provisions are not compatible with Ellis but does not provide any reasons to support this assertion. POR, 46. As Dr. Wicker explained, Ellis's video delivery and Spivey's push provisions are compatible because both disclose compatible hardware and software components that act as sources for event information to be transmitted to users. Ex.1001 ¶114.

To the extent PANDA argues that event data must be synchronized with the video feed, neither Ellis nor the challenged claims require this form of synchronization.<sup>5</sup> Ex.1016 ¶41 (providing a plurality of *real-time* data feeds); Ex.1064 ¶27 (noting providing event data ahead of video data is helpful in a system such as Ellis that contemplates gambling); *see e.g.*, Ex.1004, Cl. 1 (requiring a first digital content feed and related online gaming information, not that the two are synchronized to one another).

Additionally, Dr. Rubin asserted that adding Spivey's operating system 400 would leave "the system without a source of supplemental content." Ex.2001 ¶208. This is incorrect, because the supplemental content (event information) is received by Spivey's LDS at the LDS Communication Component. Ex.1001 ¶¶109, 346-47. Furthermore, Ellis does not require that the Supplemental Content Source *generates* the content, it only needs to function as an "intermediate content provider"

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<sup>5</sup> Ellis also discloses a system where no video feed is distributed, mooted PANDA's argument. Ex.1016 ¶41 ("[S]upplemental content source 120 may include information relating to sporting events not available for viewing in media system 100. For example, a non-televised game may nevertheless have associated sports-related information available on supplemental content source 120.").

that is “configured to provide real-time sports scores.” Ex.1016 ¶¶41-42; Ex.1064 ¶¶28-29.

Lastly, PANDA contends that Petitioner did not offer any “clearly articulated reason[s] to combine” Ellis and Spivey, and therefore must have relied on hindsight bias. POR, 47-48. However, as discussed above, Petitioner provided clearly articulated reasons to combine Ellis and Spivey, and PANDA's arguments against those motivations are unpersuasive. A clearly articulated motivation to combine is the best defense against allegations of hindsight.

#### **IV. GROUND 1B: ELLIS-SPIVEY-HERZOG RENDERS THE CHALLENGED CLAIMS OBVIOUS BY A PREPONDERNCE OF THE EVIDENCE**

PANDA argues that, “because Ground 1A fails, Ground 1B fails for the same reasons.” POR, 51. As discussed above, claims 12-15 are rendered obvious by Ellis-Spivey and thus unpatentable. Claims 1-11 are unpatentable for the same reasons as discussed in §§II-III, *supra* and in §VIII.B of the Petition.

#### **V. GROUND 2A: HERZOG-SPIVEY RENDERS THE CHALLENGED CLAIMS OBVIOUS BY A PREPONDERENCE OF THE EVIDENCE**

PANDA argues that the prior art asserted in Ground 2A fails to render claims 1-9 and 12-14 obvious because the prior art does not disclose an “event socket,” relying on the same arguments PANDA made for Ground 1A. POR, 51-52. For the reasons discussed above, however, Spivey does teach the claimed event socket and thus Herzog–Spivey renders claims 1-9 and 12-14 obvious. §§II-III, *supra*.

**A. Herzog Renders the Claimed “Webserver” Obvious**

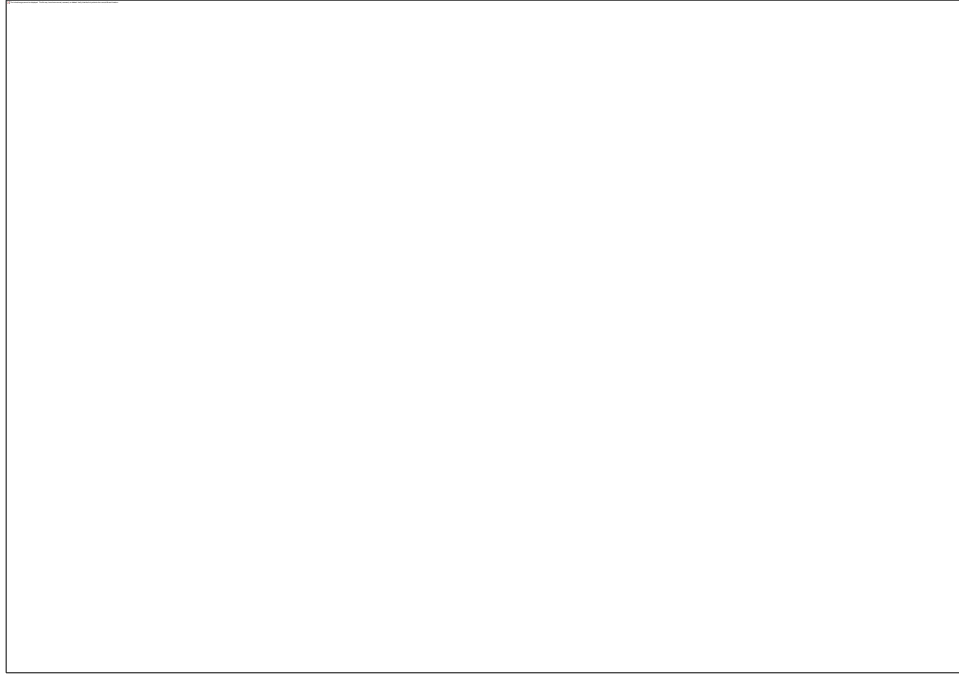
Patent Owner contends that Petitioner's proposed “orchestrator-type webserver is a radical deviation from [a] relay-type architecture” and that “a POSITA would not have understood Petitioner's Ellis/Spivey combination to inherently include such orchestrator-type webserver.” POR, 56. This is incorrect. The Petition's proposed architecture is not a radical deviation from a relay-type architecture. Dr. Rubin acknowledged as much during cross-examination, explaining that:

the difference is that a relay will receive and send all of the content between clients and some source, whereas an orchestrator will point the client directly to the source and then the media will transfer without going through the webserver.

Ex.1063, 37:18-22. However, Dr. Rubin contends this introduces “latency issues.”

Ex.2014 ¶36.

As discussed by Wicker in his first declaration (Ex.1001 ¶118), placing Herzog's application server in the location shown below would enable it to facilitate communication by “receiving the request” from the user equipment (*i.e.*, a client device) and sending back synchronized, time-stamped meta-data via the MQSD, thereby addressing “latency issues.”



Such a configuration was well-known and widely used. This is confirmed by the textbook “Multimedia Communications and Networking,” Marques da Silva, M., Ex.1024 (“Marques da Silva”). Marques da Silva explains that a web service can be provided using a hierarchical structure where an application server acts as an orchestrator, routing requests and responses between clients and various backend services. Ex.1067 ¶4.

Given that Herzog already describes the application server 53 as an intermediary that receives client requests and interacts with the ERP server to obtain meta-data, a POSA would have recognized that allowing the client to communicate (directly or via controlled channels) with backend components was a predictable and routine variation—not a radical departure—leveraging established web service

hierarchies to improve system flexibility and performance without departing from the core teachings of Herzog. Ex.1067 ¶5.

There is no radical difference between a web server architecture where the web server functions as a relay-type web server and one where it functions as an orchestrator-type web server because, at their core, both architectures rely on the web server as a central point for client interaction and resource delivery. In both architectures, the web server is the first point of contact for the client. Whether acting as a relay or orchestrator, the web server receives requests from clients (typically via HTTP) and responds with the necessary resources, such as web pages, scripts, or metafiles. Ex.1067 ¶6.

A POSA would have understood that—by integrating Herzog's application server into the system disclosed by Ellis and Spivey—the resulting system would benefit from combining the “two types of data so that they display appropriately on a mobile device in correct time synchronization.” Ex.1015 ¶64. If, after receiving a request from a client application, Herzog's application server facilitated delivery of metadata (i.e., supplemental content) directly to the client—rather than relaying the supplemental content through itself—such an arrangement would not have introduced additional processing or transmission delays that would undermine Herzog's synchronization techniques. Ex.1067 ¶¶7-9.

According to this orchestrator-type architecture, Herzog's application server would "satisf[y] time synchronization requirements between a client application residing in mobile device 45 and the solution integrator 44" (*id.* ¶51), but would not itself process or buffer the metadata stream. Instead, the supplemental content would be timestamped and transmitted in parallel with the video stream, and "both types of data [] assembled in the mobile device 45 via the client application software that resides within the mobile device, for appropriate presentation on the device's display." *Id.* ¶58.

Under this approach, the application server's involvement would be limited to coordinating the initial request and providing the necessary addressing or instructions, after which the supplemental content would flow directly to the client. As a result, there would be no additional processing or transmission step that would introduce delay and Herzog's synchronization would be preserved, and the client device would remain responsible for matching the timestamps and presenting synchronized content. Thus, direct delivery of metadata after orchestration by the application server would align with Herzog's design without undermining its synchronization techniques. Ex.1067 ¶11.

**B. A POSA Would Have Been Motivated to Combine Herzog and Spivey**

Petitioner and Dr. Wicker articulated a well-reasoned analysis of why a POSA would have been motivated to combine Herzog and Spivey. Petition, 50-55.

PANDA's primary issue with the rationale appears to stem from a misunderstanding. PANDA argues that Herzog requires latency to function, and thus a POSA would not have been motivated to reduce Herzog's data-delivery latency. POR, 60-61. A POSA would have known that reducing the data-distribution latency would have improved the system's capabilities and thus a POSA would have been motivated to combine Herzog and Spivey. Petition, 53-55; Ex.1064 ¶¶30. As admitted by PANDA, the latency period between the video feed and the data feed is an intended *feature* of Herzog, not a bug. POR, 63.

For Herzog, a greater latency difference between the live video stream and data stream is preferable. Ex.1015 ¶¶70-77. Accordingly, reducing the data delivery period while maintaining the video latency period provides the system more time to process multiple requests and reduce demand on its components. Herzog employs a "pull-based" architecture, which can increase load on server components by adding many requests to the server. In contrast, Spivey's "push-based" architecture delivers data as soon as it is added to a queue. Ex.1064 ¶¶31-32; *see also* Ex.2001 ¶186. Thus, a POSA would have been motivated to decrease the data-delivery latency period while maintaining "Herzog's video content delivery system." Petition, 53.

PANDA contends that reducing latency in the data delivery "could only possibly result in such data waiting longer for the video/audio stream to arrive." POR, 63. This argument reflects PANDA's misunderstanding of Herzog. Herzog

does not send the data to the client device where it waits for the video; rather, Herzog time stamps the metadata and then distributes it accordingly. Ex.1015 ¶¶70-77. As discussed above, this data-distribution approach would benefit from implementing Spivey's socket connection architecture, which would have been an upgrade from Herzog's HTTP polling technology. *See* Ex.2001 ¶186; Petition, 52.

PANDA also contends that the “unfettered provision of Spivey data payloads” to mobile devices would render Herzog inoperable. POR, 64. This is incorrect. Providing event information as taught by Spivey would not have rendered Herzog inoperable because Spivey is simply transmitting data from one server to a client device—something Herzog, Ellis, and Spivey were all designed to do. Ex.1064 ¶33. Furthermore, PANDA's “unfettered provision” argument is a strawman. Neither Petitioner nor Dr. Wicker suggested any such “unfettered provision” of data. Rather, the same amount of data would be time stamped and delivered with low latency to mobile devices, without requiring the mobile device to make additional requests. *Id.* ¶34; *see* Ex.1001 ¶500.

Generally, PANDA's attacks on Petitioner's motivation to combine are misplaced. For example, PANDA argues that the combined system would suffer from video latency. POR, 65. Petitioner does not disagree. As discussed above, video latency is an intended feature, not a bug, which allows Herzog to “synchronize

the broadcasting of contextual-matched event information and digital content streams to multiple viewers.” POR, 63; Petition, 53.

PANDA makes another strawman argument that Spivey's websockets are incapable of streaming audio/video. That is incorrect. As discussed in the Petition, Herzog would maintain its video-content delivery system to implement the streaming. Petition, 53. In any event, sockets were capable of transmitting video/audio streams. Ex.1064 ¶35.

Lastly, PANDA concludes that Petitioner's combination relies “exclusively on impermissible hindsight bias” because Petitioner allegedly did not provide a “clearly articulated reason to combine” Herzog and Spivey. POR, 59. Petitioner disagrees. The Petition provides clearly articulated reasons why a POSA would have been motivated to combine Herzog and Spivey, including the fact that a POSA would have wanted to add the increased functionalities of websocket communications to Herzog. Petition, 50-55; Ex.1001 ¶127 (citing ¶110 via §IX.A.1).

## **VI. GROUND 2B: HERZOG-SPIVEY-ELLIS RENDERS CLAIMS 10, 11, AND 15 OBVIOUS BY A PREPONDERANCE OF THE EVIDENCE**

Patent Owner does not separately argue why claims 10, 11, and 15 are patentable. See POR, 66 and 67. Petitioner maintains that those claims are unpatentable for the reasons presented in Grounds 1A, 1B, and 2A in the Petition as well as for the reasons presented herein responsive to Patent Owner's Response.

## VII. SECONDARY CONSIDERATIONS

In its Institution Decision, the Board gave “little to no weight” to Patent Owner’s evidence of secondary considerations of nonobviousness. Paper 10 (“ID”), 32-35. In its POR, PANDA essentially copied and pasted the *same* secondary considerations of nonobviousness from its Preliminary Response. *Compare* Paper 7, 61-71 *with* POR, 67. Thus, PANDA’s arguments contain the same deficiencies as identified by the Board in its ID. The Board should again accord PANDA’s evidence “little to no weight.” In any event, Petitioner still addresses certain arguments below.

### A. PANDA Does Not Show Any Long-Felt Need

PANDA argues that their alleged invention satisfied a long-felt need because “prior to the claimed invention, conventional video streaming systems hard-embedded event information.” POR, 64. PANDA’s arguments fail because first, PANDA did not contest Petitioner’s argument that Ellis is a video streaming system that provided event information over a separate channel, which is not hard embedded in the video stream. *See, e.g.*, POR, 14 (discussing Ellis’s “two-track architecture”). Second, representative claim 1 simply requires a media source to receive the video stream and distribute the video stream. Ex.1004, 1 (limitations 1.1-1.4). In no way does that claim language relate to any synchronized, low-latency, scalable, flexible, or new and improved video streaming technique. *See*

POR, 11. PANDA concludes that its inventors “improve[d] network functionality, enabling scalable, low-latency viewing of live events and commentary” without citing any evidence. *Id.*, 68.

**B. PANDA Does Not Show Any Relevant Industry Praise**

PANDA attempts to show industry praise by pointing to three accolades that “Patent Owner has earned,” without explaining how those awards relate to any embodying product, much less any relation between the award and the ’218’s claims. POR, 69. For example, PANDA notes that it was a finalist for “Best App,” but that does not explain how that award is related to the claimed “inventive server and memory storage architecture.” Ex.2008, 2, 3; Ex.1003, 3:16-20; *see also* POR, 69; Ex.2008 (same); Ex.2009 (same). Moreover, the mere fact that the late David Stern was an investor in PANDA in no way provides evidence of *industry* praise. POR, 69; Ex.2006.

**C. PANDA Does Not Show Any Copying**

Petitioner vehemently denies PANDA’s unsubstantiated accusations that Petitioner copied its products or was aware of its patents. PANDA argues that Petitioner has “been aware of and praised Patent Owner’s patented products and technology since 2018” or “had access to the patented product.” Ex.2001 ¶311; POR, 70-71. PANDA supports its claim with two emails that show Petitioner, at most, saw PANDA’s basic features and spoke politely over email correspondence.

*Id.* To take those two emails and argue that Petitioner had any access to, or awareness of, PANDA's patents or allegedly "inventive server and memory storage architecture" (backend implementation details) is preposterous. If anyone at PANDA had evidence of actual awareness and copying of PANDA's patents or patented inventions by Genius, PANDA should have filed an affidavit from the individual with the requisite evidence to prove up such a serious allegation, rather than hiding behind two nondescript emails.

**D. PANDA Does Not Show Substantial Commercial Success**

A patentee demonstrates commercial success by showing significant sales of the patented product in a relevant market and nexus between the patented invention and the commercial success. *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1311-12 (Fed. Cir. 2006). PANDA does not discuss or cite any sales information of any patented product in any market. POR, 71-73. PANDA does not explain how there is a nexus between nonexistent sales and the patented invention's claims. *Id.*, 69-71. If anything, PANDA advertised its "custom-tailor[ing] for the unique needs of sports publishers" and "new ways to increase engagement" as selling points, not any patented, allegedly "inventive server and memory storage architecture." *Id.* (quoting Ex.2011).

## **VIII. CONCLUSION**

For the foregoing reasons, Petitioner respectfully requests that the Board cancel the Challenged Claims.

Date: August 29, 2025

Respectfully submitted,

*/s/ W. Todd Baker*

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W. Todd Baker (Reg. No. 45,265)  
todd.baker@kirkland.com  
Kirkland & Ellis LLP  
1301 Pennsylvania Ave., N.W.  
Washington, D.C. 20004  
(202) 389-5000

Jeanne M. Heffernan (*pro hac vice*  
admission to be requested)  
jheffernan@kirkland.com  
KIRKLAND & ELLIS LLP  
401 Congress Avenue  
Austin, TX 78701  
Telephone: (512) 678-9123  
Facsimile: (512) 678-9101

*Attorneys for Petitioner Genius Sports  
Ltd.*

**CERTIFICATE OF COMPLIANCE**

This paper complies with the type-volume limitations of 37 C.F.R. §42.24. This paper contains 5,550 words, excluding the portions of the paper exempted by §42.24(a). This paper also complies with the typeface requirements of 37 C.F.R. §42.6(a)(ii) and the type style requirements of §42.6(a) (iii) and (iv).

/s/ W. Todd Baker

W. Todd Baker

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a copy of the foregoing document was served on August 29, 2025, via electronic mail directed to counsel of record for the Patent Owner as follows:

Andrew J. Cochran (Reg. No.69,620)  
CAHILL GORDON & REINDEL LLP  
32 Old Slip  
New York, NY 10005  
Tel: (212) 701-3000  
Fax: (212) 269-5420  
acochran@cahill.com

Colleen Tracy James (Reg. No. 52,295)  
CAHILL GORDON & REINDEL LLP  
32 Old Slip  
New York, NY 10005  
Tel: (212) 701-3000  
Fax: (212) 269-5420  
ctracyjames@cahill.com

/s/ W. Todd Baker

W. Todd Baker