

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PLR WORLDWIDE SALES LTD.

Petitioner

v.

FLIP PHONE GAMES INC.

Patent Owner

U.S. Patent No. 8,688,089

Inter Partes Review No. 2024-00133

**PETITION FOR *INTER PARTES* REVIEW
UNDER 35 U.S.C. § 312 AND 37 C.F.R. § 42.104**

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EXHIBIT LIST

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1002	Prosecution history for U.S. Patent No. 8,688,089
1003	Expert Declaration of Dr. José Zagal
1004	International Patent Publication WO 2008/008038 to Ho
1005	International Patent Publication WO 2000/070489 to Jiau <i>et al.</i>
1006	International Patent Publication WO 2006/071246 to Sturman
1007	U.S. Patent No. 8,825,521 to Ellis <i>et al.</i>
1008	U.S. Patent Publication No. 2007/0174490 to Choi <i>et al.</i>
1009	<i>Curriculum Vitae</i> of Dr. José Zagal
1010	Steven Kent, <i>The Ultimate History of Video Games</i> (2001)
1011	Frans Mayra, “Mobile Games,” in <i>the International Encyclopedia of Digital Communications and Society</i> , 1 st ed. (2015)
1012	N. Leavitt, “Will wireless gaming be a winner?” in <i>Computer</i> , Vol. 36, No. 1, pp. 24-27 (Jan. 2003)
1013	Jason Soh & Bernard Tan, “Mobile Gaming,” in <i>Communications of the ACM</i> , Vol. 51, No. 3, pp. 35-39 (Mar. 2008)
1014	Michael Zyda <i>et al.</i> , “Educating the Next Generation of Mobile Game Developers,” in <i>IEEE Computer Graphics and Applications</i> , Vol. 27, No. 2, pp. 92-96 (Mar./Apr. 2007)

No.	Exhibit
1015	Mark Andrejevic, “Productive Play 2.0: The Logic of In-Game Advertising” in <i>Media International Australia</i> , Vol. 130, No. 1, pp. 66-76 (Feb. 2009)
1016	Ilya Vedrashko, <i>Advertising in Computer Games</i> (Doc. No. 123290221) [Master’s Thesis, Mass. Inst. of Technology], DSpace@MIT
1017	Exit Games, <i>In-Game Advertising Goes Mobile</i> [Press Release] (Mar. 21, 2006)
1018	Jussi-Pekka Partanen, <i>Mobile Gaming: A Framework for Evaluating the Industry 2000-2005</i> (2001)
1019	Exemplary infringement charts for U.S. Patent No. 8,688,089 served by Patent Owner in <i>Flip Phone Games Inc. v. PLR Worldwide Sales Ltd.</i> , No. 2:23-cv-139 (E.D. Tex.)

CHALLENGED CLAIMS

Claim 1	
1(a)	A method for providing a hot spot associated with a mobile video game, the mobile video game being operable on a mobile communication device, the method comprising the steps of:
1(b)	storing hot spot information on a computer-readable medium;
1(c)	receiving a communication from a mobile communication device;
1(d)	determining the hot spot information to provide to the mobile device based upon the communication, the hot spot information comprising:
1(d)(i)	a location in-game associated with activating the hot spot, wherein the location in-game is represented by a non-promotional background object; and
1(d)(ii)	hidden promotional content for presenting to the user, within a gaming environment of the mobile video game, when the hot spot is activated; and
1(e)	uploading the hot spot information to the mobile communication device.
Claim 2	
2	The method of claim 1, wherein the location in-game is associated with activating the hot spot within the gaming environment of the mobile video game.
Claim 3	
3	The method of claim 1, wherein the hidden promotional content is pre-selected based on the proximity of the mobile communication device to a physical location related to the hidden promotional content.
Claim 4	
4	The method of claim 1, further comprising the step of tracking the hot spot information that has been downloaded to the mobile communication device.
Claim 5	
5	The method of claim 4, wherein the tracked hot spot information is used for billing a third party associated with the hot spot information.

Claim 6	
6(a)	A system for providing a hot spot associated with a mobile video game, the system comprising:
6(b)	a storage medium for storing hot spot information for use in the mobile video game;
6(c)	a server in communication with the storage medium;
6(d)	an interface coupled to the server and a network, wherein the interface receives a request for hot spot information from the mobile communication device over the network;
6(e)	wherein the server is operative to receive the request through the interface and utilize the request to determine the hot spot information for the mobile video game, and send the hot spot information to the mobile communication device, the hot spot information comprising:
6(e)(i)	a location in-game associated with activating the hot spot, wherein the location in-game is represented by a non-promotional background object; and
6(e)(ii)	hidden promotional content for presenting to the user, within a gaming environment of the mobile video game, when the hot spot is activated.
Claim 7	
7	The method of claim 6, wherein the hidden promotional content is pre-selected based on the proximity of the mobile communication device to a physical location related to the hidden promotional content.
Claim 8	
8	The system of claim 6, wherein the hot spot information is pre-selected by the server based on a model type associated with the communications device, a service subscription associated with the communications device, or a service provider for the service subscription associated with the communications device.
Claim 9	
9	The system of claim 6, wherein the server tracks what hot spot information has been downloaded.

Claim 10	
10	The method of claim 9, wherein the tracked hot spot information is used for billing a third party associated with the hot spot information.

I. INTRODUCTION

Petitioner PLR Worldwide Sales Ltd. requests that the Board institute *inter partes* review (“IPR”) and cancel claims 1-10 of U.S. Patent No. 8,688,089 (the “‘089 Patent”), assigned to Patent Owner Flip Phone Games Inc.

The challenged claims are directed to dynamically updated “hot spots” used in video games on mobile devices. These hot spots are essentially in-game locations that, when activated by a player, cause additional hidden content (*e.g.*, advertisements that may be periodically updated from a server) to be displayed. The ‘089 Patent, however, was filed in June 2007, years after the video game industry had already recognized the importance and value of mobile games and had begun actively partnering with advertising companies to incorporate timely, real-world ads into their virtual worlds. Thus, the claims merely rehash concepts and techniques that were well known and extensively used by the priority date of the ‘089 Patent.

The concept of in-game “hot spots” (as the ‘089 Patent uses that term) is a fundamental game design technique. For example, decades before the priority date of the ‘089 Patent, video game designers were already implementing easter eggs, hidden objects, special features, and other secrets in their games, which would only be displayed when a user performed certain actions at a designated in-game location. Incorporating advertisements and other promotional content into these hot spots merely reflected trends in the industry, beginning as early as the late 1990s and early

2000s, to incorporate advertising into video games. For example, by 2005, multiple advertising companies had developed advertising networks specifically designed for use in video games (including mobile games), which could serve customized, player-specific advertisements in real-time as a player was playing a particular game.

The challenged claims of the '089 Patent describe these same basic features, implemented in the context of a mobile communication device (*e.g.*, phone, PDA, or handheld networked gaming device). The claims merely recite a combination of these well-known techniques, used for their conventional purpose with predictable results. Accordingly, as detailed below, a POSITA would have found the challenged claims obvious based on the teachings of the prior art and basic design choices.

For these reasons—as set forth in detail below—Petitioner requests that the Board institute *inter partes* review and cancel the challenged claims.

II. MANDATORY NOTICES

A. Real Party-In-Interest

Pursuant to 37 C.F.R. §42.8(b)(1), PLR Worldwide Sales Limited is the real party-in-interest.

B. Related Matters

Pursuant to 37 C.F.R. §42.8(b)(2), Patent Owner has asserted the '089 Patent against Petitioner in *Flip Phone Games Inc. v. PLR Worldwide Sales Ltd.*, No. 2:23-cv-139 (E.D. Tex.).

Petitioner is not aware of any other related matters before the Patent Office with respect to the '089 Patent. However, contemporaneous with this Petition, Petitioner is also seeking institution of IPR against four other patents that Patent Owner has asserted in the aforementioned litigation: US9,427,662, US9,731,202, US10,617,958, and US11,117,056.

C. Lead and Backup Counsel and Service Information

Pursuant to 37 C.F.R. §42.8(b)(3) and (4), the designations of counsel and address for service are listed below. Petitioner consents to electronic service at the email addresses below.

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III. STANDING

Petitioner certifies that the ‘089 Patent is available for IPR, and that Petitioner is not barred or estopped from requesting review. Patent Owner filed a complaint alleging infringement of the ‘089 Patent on March 31, 2023, and service was effectuated no sooner than April 4, 2023. Accordingly, this Petition is timely filed pursuant to 35 U.S.C. §315(b).

IV. PAYMENT OF FEES

Petitioner authorizes the office to charge Deposit Account No. 505708 for the Petition fee set forth in 37 C.F.R. §42.15(a), and for any additional fees.

V. IDENTIFICATION OF CHALLENGE AND RELIEF REQUESTED

Petitioner requests cancellation of claims 1-10 of the ‘089 Patent on the following grounds:

Ground 1: Claims 1-3 and 6-8 are obvious based on International Patent Publication No. WO 2008/008038 (“Ho”) in combination with International Patent Publication No. WO 2000/070489 (“Jiau”) and U.S. Patent Publication No. 2007/0174490 (“Choi”).

Ground 2: Claims 4-5 and 9-10 are obvious based on the combination of Ho, Jiau, Choi, and U.S. Patent No. 8,825,521 (“Ellis”).

Ground 3: Claims 1-10 are obvious based on International Patent Publication No. WO 2006/071246 (“Sturman”) in combination with Ho.

The Petition is accompanied by the declaration of Dr. José Zagal, an expert in video game design and development.

VI. TECHNOLOGY BACKGROUND

A. Video Games

Video games date back to at least 1961, when students at MIT programmed a computer to play a game they titled “Spacewar,” which simulated duels between rocket ships in space. Ex. 1003, ¶40; Ex. 1010, 34-35. Video games rose in popularity in the 1970s and 1980s, particularly with the development and release of coin-operated arcade machines and home video game consoles. Ex. 1003, ¶41; Ex. 1010, 42, 124, 140-166, 295, 320. By the end of the 1980s, video games were already a multi-billion dollar business. Ex. 1003, ¶41; Ex. 1010, 429.

B. Mobile Games

Portable video game systems began to launch at roughly the same time as home video game consoles. For example, in the late 1970s, Nintendo released its “Game & Watch” series of watch-shaped portable video games. Ex. 1003, ¶42; Ex. 1010, 296; Ex. 1011, 2. In 1989, Nintendo released the Game Boy, one of the first handheld video game systems that supported multiple games by way of interchangeable cartridges. Ex. 1003, ¶42; Ex. 1010, 430; Ex. 1011, 2.

Video games began appearing on mobile phones in the late 1990s. For example, in 1997 Nokia began pre-installing a mobile version of the game *Snake* on its mobile handsets. Ex. 1003, ¶43; Ex. 1011, 2; Ex. 1012, 2. As mobile phones incorporated increasingly more powerful hardware, demand for mobile games increased and more mobile game developers emerged to meet that demand. Ex. 1003, ¶43; Ex. 1012, 2; Ex. 1013, 2. Following that trend, in 2003, Nokia released a portable gaming device built on a mobile phone, called the N-Gage. Ex. 1003, ¶43; Ex. 1013, 4. By the early 2000s, mobile games were considered to be one of the fastest growing segments in the video game industry, and established video game publishers invested hundreds of millions of dollars to acquire a presence in that market. Ex. 1003, ¶44; Ex. 1014, 1. Indeed, as the ‘089 Patent acknowledges, by its priority date “[m]any mobile communication devices ... [were] capable of

operating video games,” and “gaming on mobile communication devices [had] become a popular mode of entertainment.” Ex. 1001, 1:12-15, 1:25-27.

Although mobile game development posed some unique challenges, hardware manufacturers and software developers quickly adapted to meet these challenges. Ex. 1003, ¶¶44-45. For example, Intel and NVIDIA developed hardware and software to support 3D graphics on mobile phones; handset manufacturers such as Ericsson and Motorola defined software interfaces to support standard functions used in video games; and platform developers such as Oracle and Qualcomm released software development platforms to facilitate programming of mobile games. Ex. 1003, ¶45; Ex. 1012, 3; Ex. 1013, 2-3; Ex. 1014, 1.

C. Dynamic Content and In-Game Ads

Game developers embraced the idea of updateable games even before mobile games became popular. Ex. 1003, ¶48. Many game publishers released expansion packs for popular games that added new levels, characters, or items to keep players interested. *Id.* For example, in 2001, Nokia launched a subscription service that allowed members to download new levels for certain mobile games. *Id.*; Ex. 1018, 52.

Dynamic content updates also allowed advertisers to expand into video games. Ex. 1003, ¶49. By 2006, several advertising companies had launched in-game advertising networks that allowed game developers to incorporate dynamic

ads from third parties into their games, including mobile games. *Id.*; Ex. 1015, 1-2; Ex. 1016, 22-23; Ex. 1017, 1. These in-game ads also included interactive ads, which required a user to interact with an in-game object in order to trigger advertising content to appear. Ex. 1013, ¶49; Ex. 1016, 45. The grounds presented in this petition include prior art originating from several of the in-game advertisement network companies from that era. Ex. 1003, ¶50; *see also, e.g.*, Ex. 1006; Ex. 1007.

D. Easter Eggs and Secret Content

Easter eggs and other secret content have existed since some of the earliest video games. Ex. 1003, ¶¶54-55. For example, the 1979 Atari game *Adventure* included a hidden easter egg room where the developer hid his name. Ex. 1010, 205. To enter the room, players had to retrieve a hidden object, the size of a single pixel (which was itself hidden in the background of a different hard-to-access in-game location) and bring it to a specific, designated room within the game. *Id.*

Later games took *Adventure*'s easter egg idea to the next level, hiding many secret locations and items within a single game. For example, Nintendo's *Super Mario Bros.* (1985) included secret locations that transported players to new levels with hidden worlds, and hid items such as coins and extra lives in invisible blocks that appeared to just be part of the game background. Ex. 1003, ¶55; Ex. 1010, 317. The point-and-click adventure genre of video games, in particular, frequently

incorporated easter eggs triggered when the user interacted with a seemingly non-interactive area in the background of the game. Ex. 1003, ¶¶52-53.

VII. THE ‘089 PATENT

A. Overview

The ‘089 Patent is titled *Methods and Systems for Providing In-Game Hot Spots*. Ex. 1001. The underlying application was filed on June 26, 2007, and does not claim priority to any prior application. *Id.*

B. Specification

The ‘089 Patent is directed to systems and methods that provide hot spots in a mobile game. *Id.*, 1:6-8. The specification acknowledges that “an extremely large number of people worldwide own mobile communication devices,” and that those devices experienced a “recent surge in technical capabilities. *Id.*, 1:42-47. In addition, “[m]ost current mobile communication devices come equipped with one or more games” and “allow users to download and/or purchase new games.” *Id.*, 1:15-18. Thus, “gaming on mobile communication devices” was already “a popular mode of entertainment.” *Id.*, 1:25-27. Accordingly, the ‘089 Patent does not claim to have invented mobile devices or mobile games. Instead, the ‘089 Patent focuses on two concepts relating to the design of a mobile game: (1) how to “hold the user’s interest for a longer period of time,” and (2) how to “provid[e] in-game advertising space in the palm of the user’s hand.” *Id.*, 1:39-41, 1:50-52.

Specifically, the '089 Patent describes using "hot spots of triggered content within the gaming environment of a mobile video game." *Id.*, 1:60-63. "A hot spot is an in-game feature that includes an activation element and a content element that is triggered by the activation element." *Id.*, 2:21-23. "The activation element may comprise an area location or an item, sometimes hidden in the game, that can be triggered by a user or some other in-game element." *Id.*, 2:27-29. The content element is "displayed when the hot spot is activated" and "may include ... a message, and the message may be promotional." *Id.*, 2:33-37. As discussed further below, the '089 Patent's hot spots merely apply well-known principles of video game design using basic software and networking functions on conventional hardware such as mobile phones and computers.

For example, the updates containing new hot spot information for a mobile game are distributed by a server. *Id.*, 3:5-17. A mobile device running the mobile game contacts the server over an available network (*e.g.*, the Internet) and requests updated hot spot information. *Id.*, 9:15-20. In response, the server determines which hot spot information (if any) should be sent to the mobile device, based on readily available information, such as the model type, location, and/or telecommunications service plan or provider of the requesting device; or other user information supplied to the server. *Id.*, 13:19-27. Once the appropriate hot spot information has been determined, the server uploads the hot spot information to the mobile device. *Id.*,

13:56-57. The mobile device then incorporates the new hot spot information into the mobile game, for example, by designating an in-game location that activates the hot spot, and displaying the hot spot content when the hot spot is activated. *Id.*, 11:37-12:27.

C. Prosecution History

The application underlying the '089 Patent was filed on June 26, 2007 with 27 claims. Ex. 1002. On March 10, 2010, the Applicant withdrew claims 1-14 in response to a restriction requirement issued by the Examiner. *Id.*, 269-270.

The claims were rejected multiple times by the Examiner, including in non-final rejections dated May 6, 2010, September 30, 2010, February 2, 2011, and March 13, 2013, and a final rejection dated August 2, 2011, relying on combinations of prior art references U.S. Patent Publication No. 2003/0224855, U.S. Patent Publication No. 2008/0109528, U.S. Patent Publication No. 2008/0102956, U.S. Patent Publication No. 2006/0205510, European Patent No. 1087312, and U.S. Patent Publication No. 2006/0111979. *Id.*, 95-102, 154-164, 184-191, 220-226, 253-259. In response to these rejections, the Applicant amended the claims several times, including to add limitations that (1) required the claimed hot spot to present content “within a gaming environment of the mobile video game”; (2) specified that the hot spot information includes “a location in-game associated with activating the hot spot”; and (3) further specified that the location in-game “is represented by a non-

promotional background object.” *Id.*, 80-83, 117-120, 205-208, 238-241. The recitation of a “background” object was the final amendment prior to allowance. *Id.*, 79-87. The Grounds below apply these limitations consistent with the Applicant’s statements during prosecution.

On November 14, 2013, the Examiner issued a Notice of Allowance, finding all then-pending claims patentable. *Id.*, 67-69. No express Reasons for Allowance were provided by the Examiner, but the Examiner referred to Applicant’s arguments and remarks filed on July 15, 2013, which argued that the prior art of record did not disclose hot spots represented by non-promotional ***background*** objects.

D. Claims

Petitioner challenges claims 1-10. The full text of the challenged claims is reproduced above beginning on page vii.

VIII. LEVEL OF ORDINARY SKILL IN THE ART

A POSITA as of June 26, 2007 would have had an undergraduate degree in game design, computer science, computer engineering, or a related field, with at least two years of experience working with computer gaming systems or software application development. Less work experience may be compensated by a higher level of education or vice versa. Ex. 1003 ¶¶67-72.

IX. CLAIM CONSTRUCTION

Petitioner does not believe any terms require construction to resolve the patentability disputes because the challenged claims are rendered unpatentable by the cited art under any reasonable interpretation of the claims. Petitioner's application of the claims is also consistent with Patent Owner's application thereof in its infringement contentions served in the related district court litigation, examples of which are attached hereto as Exhibit 1019.¹ Petitioner takes no position in this Petition as to whether the claims are indefinite, and no statements herein should be interpreted to mean that the terms are definite.

X. GROUND 1: HO, JIAU, AND CHOI RENDER CLAIMS 1-3 AND 6-8 OBVIOUS

A. International Patent Pub. No. WO 2008/008038 ("Ho")

Ho is titled *An Incentive-Based Video Gaming System*. Ex. 1004. It was filed as a PCT application designating the United States on July 12, 2006 and published January 17, 2008. *Id.* It therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §102(e)(1).

Ho "relates to a video game incorporated with at least one interactive information element." Ex. 1004, 1:5-6. Ho notes that the "successful proliferation

¹ Patent Owner served infringement charts for seven accused products. Petitioner has included two representative examples in Exhibit 1019.

of video games into the mainstream has given rise to a multi-million dollar video game industry,” and that “[m]any companies have embraced opportunities offered by in-game advertising” as a result. *Id.*, 1:15-20. However, because “current forms of advertising in video games” were limited to “non-interactive in-game elements,” there was “no impetus for the player to pay more attention to the static advertisements while playing the video game.” *Id.*, 1:28-31. There were also “no methods available to incorporate interactive and update-able advertisements into existing video games without a major revision of the source code.” *Id.*, 1:35-37.

Ho thus discloses “a video game with at least one interactive information element incorporated within the game.” *Id.*, 2:1-2. The video game and interactive information element may be used on various types of gaming devices, including, *inter alia*, “a mobile telephone.” *Id.*, 2:20-22. The interactive information element may be an icon, character, or item in the game, or similar in-game objects. *Id.*, 2:11-12. When a player engages with the interactive information element, it may “activate[] an action such as, for example, an on-screen presentation.” *Id.*, 2:22-25.

Ho further teaches that the interactive information element “is able to be updated.” *Id.* 2:17-18. For example, the interactive information element may be provided by a “module” that may be “added to the video game” after it is published. *Id.*, 9:27-31. “The module may allow the ... interactive information element to be updated by automatically downloading and replacing relevant sub-modules of the

interactive information elements in the video game.” *Id.*, 9:31-33. The update process may be performed between a “client end device, such as, for example ... a mobile telephone,” and server. *Id.*, 10:2-6. The server receives information from the client, “determines whether the interactive information element(s) needs to be changed/renewed,” and sends new interactive information elements to the client. *Id.*, 10:6-8, 10:14-19.

B. International Patent Pub. No. WO 2000/070489 (“Jiau”)

Jiau is titled *Method and Apparatus for Providing Hotspots in a Shared Virtual World*. Ex. 1005. It was filed as a PCT application designating the United States on May 12, 2000 and published November 23, 2000. *Id.* It therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §102(b).

Jiau relates to “virtual worlds,” such as three-dimensional worlds that may be presented to a player as part of a video game. *Id.*, 1:7-21. Jiau explains that previous “three-dimensional games ... involve[d] a predetermined, predefined virtual world that does not change,” and is instead “defined by the game designer.” *Id.*, 1:22-24. Jiau thus discloses a virtual world that is “divided into a plurality of ‘lots’” that users “can reserve ... to design as they please.” *Id.*, 1:32-2:2.

Each lot in Jiau’s virtual world includes objects that are fetched from a server as the user moves through the virtual world. *Id.*, 3:18-21. The virtual world may also include “hotspots” that are “assign[ed] [to] a part of an existing object”; “when

a user in the virtual world activates the hotspot,” the game “perform[s] a hotspot activity in the virtual world associated with the activated hotspot.” *Id.*, 3:22-26. The hotspot activity may be promotional in nature. “For example, when the user touches or selects an object, a pop-up advertisement may appear.” 16:31-32. A hotspot may also be assigned to portions of the game background—a feature that Jiau calls “hotspaces.” *Id.*, 16:32-17:2.

C. U.S. Patent Pub. No. 2007/0174490 (“Choi”)

Choi is titled *System and Methods for Managing Content in Pre-Existing Mobile Applications*. Ex. 1008. It was filed on January 19, 2007 and published July 26, 2007. It therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §102(e).

Choi relates to techniques for distributing data (such as advertising content) into pre-existing mobile applications. *Id.*, Abstract. Choi notes that there are “many examples of useful functionality that could be added to a mobile application after it has been developed and sent to an application distributor,” and identifies advertising in mobile devices as one particular application to which its teachings may be applied. *Id.*, [0004]-[0006]. Choi discloses that its teachings may be incorporated into mobile games. *Id.*, [0056]-[0057], [0111].

Choi teaches several ways to tailor advertising content both for different types of mobile devices, and different users with varying interests. For example, Choi notes that dynamic advertisements for mobile devices must “take[] into account the

differing capabilities of the devices to which the ad is being served.” *Id.*, [0007]. Thus, Choi selects an advertisement based on characteristics of a user’s mobile device, such as screen size, device model, and location capabilities. *Id.*, [0089], claim 93. Choi also teaches that advertisements may be targeted based on “user demographics and contextual information.” *Id.*, [0083]. For example, the user’s GPS location can be used to provide “location-specific advertising content,” and the user’s mobile carrier or service provider can be used to infer demographic information about the user. *Id.*, [0043], [0096], claims 49, 54.

D. The Ho-Jiau-Choi Combination

In the proposed Ho-Jiau-Choi combination, Ho’s teachings provide the basic features of a mobile video game with dynamically updated elements, including interactive elements that are stored on and retrieved from a server, and that trigger hidden in-game content when activated by a player. Jiau’s teachings optionally supply additional details regarding the use of well-known video game elements, such as hotspots and hotspaces, and more specifically describe the communication of hotspot and hotspace information (*e.g.*, activation locations and associated hidden content) dynamically from the server to the game client. Thus, Jiau in this context provides implementation details for disclosures already present in Ho. Choi’s teachings provide further improvements to Ho’s system by enabling targeted

advertisements that are tailored to individual players. The Ho-Jiau-Choi combination renders claims 1-3 and 6-8 obvious.

1. Motivation to Combine

A POSITA would have been motivated to apply Jiau's and Choi's teachings to Ho's video game, and would have had a reasonable expectation of success in combining the references. Ex. 1003, ¶¶94-103.

As a threshold matter, Ho, Jiau, Choi, and the '089 Patent are all analogous art because the '089 Patent and the prior art references are all in the same field of endeavor, *i.e.*, video games and, in particular, in-game advertising. *Id.*, ¶95. For example, the '089 Patent relates to "hot spots for mobile video games" that that may be received from a server. Ex. 1001, Abstract. The hot spots "may be hidden aspects of the game and promotional in nature." Ex. 1001, Abstract. Ho and Jiau similarly relate to video games with dynamic in-game elements that may be updated and retrieved from a server after the initial installation of the game, and specifically contemplate using dynamic in-game elements to provide promotional content; and Choi is similarly directed to techniques for providing advertising in mobile games.

For example, Ho is directed to "a video game incorporated with at least one interactive information element," including video games that include virtual worlds, such as massively multiplayer online role playing games (MMORPGs). Ex. 1004, 1:5-7, 7:25-38. The "interactive information element" may be an in-game object or

character that the player interacts with, and may be periodically changed or updated by downloading new data from a server. *Id.*, 7:36-38, 8:11-21, 9:10-18, 10:2-25. The information provided by the interactive information element may be “advertisements.” *Id.*, 2:8-9.

Jiau is similarly directed to a “virtual world in a network environment,” such as virtual worlds included in computer and video games. Ex. 1005, 1:7-21, 18:10-12. Jiau’s virtual worlds include customizable “lots” and “objects” that are stored at and retrieved from a server during gameplay. *Id.*, 1:31-2:21, 6:24-7:6, 7:23-25. Objects and background elements may have interactive “hotspots” or “hotspaces” that perform an activity in the virtual world when activated by a player. *Id.*, 3:22-4:11, 15:9-16:2. Activating a hotspot or hotspace may cause an advertisement to appear. *Id.*, 16:29-17:6.

Choi is directed to the “display of advertising content” in “mobile applications.” Ex. 1008, Abstract. Choi expressly contemplates mobile games as one example of mobile applications to which its advertisement system may be applied. *Id.*, [0109], [0111]. In addition, like Ho’s interactive information elements, Choi’s advertisements are updated from a server for incorporation into a pre-existing mobile game. *Id.*, [0008], [0088], [0090].

A POSITA would have thus looked to Ho, Jiau, and Choi when considering how to implement known video games (including virtual worlds in video games)

and how to provide advertising content (included targeted advertising) and improved gameplay experience using well-known techniques. Ex. 1003 ¶76. A POSITA would have further been motivated to combine Ho, Jiau, and Choi for at least the following reasons.

First, Ho, Jiau, and Choi are all directed to the same types of improvements in game design and monetization that the ‘089 Patent purports to provide. *Id.*, ¶96. For example, the ‘089 Patent purports to identify two ways in which hot spots may be used to improve video games: (1) reducing the loss of interest as a player becomes familiar with the game elements, and (2) providing opportunities for advertising. Ex. 1001, 1:28-32, 1:48-52, 1:66-2:2. Ho, Jiau, and Choi identify similar improvements for video games. For example, Ho’s interactive information elements are designed to improve in-game advertising by providing advertisements that “engage the player during the course of gameplay,” and that can be updated “without a major revision of the source code of the video game.” Ex. 1004, 1:26-37. Jiau notes that many games “involve a predetermined, predefined virtual world that does not change,” and thus provides customizable objects and hot spots that allow for new in-game elements that allow the game world to evolve beyond the world provided by the game designer. Ex. 1005, 1:22-24, 2:26-32. And Choi is directed to the same problem of providing dynamic advertising opportunities in mobile games. Ex. 1008, [0004]-[0007].

Second, Jiau teaches specific improvements to the types of games provided by Ho. Ex. 1003, ¶¶97. For example, as noted above, Ho teaches that its invention may be utilized in an MMORPG—a type of game based on a virtual world—to incorporate advertising into in-game elements such as characters and vehicles. Ex. 1004, 7:25-38. Jiau’s hotspots and hotspaces are specific improvements to three-dimensional virtual worlds (such as the game worlds in an MMORPG) that enable customizable content (including advertisements) that may be activated in different ways, tailored to the specific in-game object and/or promotional content. Ex. 1005, 1:22-24, 2:30-2:32, 3:1-3:11, 16:29-17:6. Thus, Jiau’s hotspots and hotspaces represent known techniques that a POSITA would be motivated to apply to Ho’s video game to render it more engaging.

Third, Choi teaches specific techniques for improving in-game advertising in mobile games such as those provided by Ho. Ex. 1003, ¶¶98-100. As noted above, Ho teaches how to make in-game advertisements interactive and updateable, so that they better engage a player during gameplay. Ex. 1004, 1:26-37, 2:1-18. But Ho does not expressly describe how to tailor the advertisements to a particular player’s interests and/or the capabilities of the player’s device. One of the very well-known goals of advertising is to provide content that is of interest to the person viewing the ad. Choi teaches that selecting advertising content based on user data can assist with monetizing games, and that there is a need to customize advertisement delivery

based on the capabilities of a user's device. Ex. 1008, [0005], [0007]. Thus, Choi's advertisement delivery techniques represent known techniques that POSITA would be motivated to apply to Ho's interactive information elements in order to more effectively select advertisements to incorporate into the video game.

Fourth, Ho provides express teachings that would motivate a POSITA to combine the references. Ex. 1003 ¶101. Specifically, Ho teaches that a “major disadvantage” in existing in-game advertisements is that there is “no impetus for the player to pay more attention to the static advertisements while playing the video game,” and that advertisements that “engage the player during the course of gameplay” are needed. Ex. 1004, 1:28-33. Ho's interactive information elements purport to solve this problem, but Ho only provides high-level implementation details and limited examples of how such interactive information elements may be incorporated into a game. *E.g., id.*, 7:25-38 (providing examples with a “hamburger monster” that a player may fight, or a “car” that a player may enter), 9:27-35 (describing implementation of the interactive information element as a “module” with “sub-modules” that may be updated). Thus, a POSITA would look to other references, such as Jiau and Choi, for additional examples of well-known interactive in-game elements and advertisement delivery techniques that may be used within Ho's general framework, and for additional details regarding the implementation of those elements. Jiau and Choi provide such examples and implementation details.

For example, as described above, Jiau discloses various types of objects, hotspots, and hotspaces that may be created, actions that may be configured for interacting with the objects, hotspots, and hotspaces, and details regarding how the objects, hotspots, and hotspaces, and their associated actions and content, are implemented, stored, and communicated between a server and game client. Ex. 1005, 6:22-8:13 (object registration and storage), 11:16-13:7 (player interaction with objects), 13:8-32, 17:16-18:12 (exchanging object data between server and game client), 15:3-16:2, 16:29-17:13 (hotspot and hotspace implementation). Similarly, Choi discloses specific techniques for selecting advertisements based on the capabilities of a user's mobile device, and tailoring advertisements based on information known about a user. Ex. 1008, [0083]-[0091], [0096]-[0097].

In addition, a POSITA would have reasonably expected the proposed combination of Ho, Jiau, and Choi to succeed. Ex. 1003 ¶103. Ho describes a simple improvement to conventional video games (including mobile games) using conventional network communications between a game client and a server, and requiring only well-known software functions that have been used to develop and implement video games for years before the priority date of the '089 Patent, including functions that define and display in-game object and respond to user input. Jiau and Choi similarly require only conventional network communications and well-known software functions to implement hotspots, hotspaces, and user-tailored

advertisements. Further, a POSITA would understand that Jiau's hotspots and hotspaces could be implemented as a specific type of interactive information element as taught by Ho, and that Choi's targeted advertising could be implemented by Ho's server to select advertising content to include in an interactive information element. Accordingly, incorporating Choi's and Jiau's teachings into Ho would be straightforward and well within the capabilities of a POSITA.

2. Claim 1

- a) *Limitation 1(a): "A method for providing a hot spot associated with a mobile video game, the mobile video game being operable on a mobile communication device, the method comprising the steps of"*

To the extent the preamble is limiting, Ho discloses limitation 1(a). Ex. 1003, ¶¶104-107. Ho teaches how to incorporate an "interactive information element [*i.e.*, a hot spot] into a video game." Ex. 1004, Abstract. Ho further teaches that "[t]he video game may be run on a device such as ... a mobile telephone," *i.e.*, a mobile communication device. *Id.*, 2:20-22.

- b) *Limitation 1(b): "storing hot spot information on a computer-readable medium"*

Ho discloses and renders obvious limitation 1(b). Ex. 1003, ¶¶108-111. Ho teaches an "interactive information element" that comprises a hot spot. Ex. 1004, Abstract. The '089 Patent states that a hot spot is "an in-game feature that includes an activation element and a content element that is triggered by the activation

element.” Ex. 1001, 2:21-23. Ho similarly teaches that its interactive information elements can be “engaged in different ways,” all of which entail an action by the player. Ex. 1004, 5:7-14. When the player engages the interactive information element, it may “activate an on-screen presentation.” *Id.*, 5:27-30.

Ho further teaches that a “client end device” such as a “mobile telephone” may “connect[] to a server,” which in turn sends “new interactive information element(s)” to the client end device. *Id.*, 10:3-6, 10:14-17. A POSITA would have understood and it would have been obvious that a server is a computer, or software running on a computer, and thus information at the server (including information about Ho’s interactive information elements (the claimed “hot spot information”)) must be stored on a computer-readable medium. Ex. 1003, ¶110.

To the extent Patent Owner argues that Ho does not disclose or render obvious this limitation, the combined teachings of Ho and Jiau render the limitation obvious. Ex. 1003, ¶111. Jiau teaches “lots” and “objects” in a “virtual world,” *e.g.*, in a video game. Ex. 1005, 1:10-21 (describing virtual worlds), 1:32-2:3 (lots), 2:13-21 (objects). Jiau further discloses a “server system” that has “one or more processors and appropriate data storage, such as memory or mass-storage device.” *Id.*, 7:7-12. The server also includes a “database” that stores information about “objects” in the game world. *Id.*, 7:23-25, 8:7-10. “Hotspot” and “hotspace” information are stored as part of the object definition. *Id.*, 6:4, Fig. 13(b). Jiau’s “hotspots” and

“hotspaces” are both examples of “hot spots” as described by the ‘089 Patent, because they correspond to designated in-game locations (*e.g.*, a location on an object (“hotspot”) or a location surrounding an associated object (“hotspace”)) that “cause actions to occur,” such as displaying “a pop-up advertisement,” when the user interacts with the designated location (*e.g.*, “the user touches or selects the object” or “a user walks within ten virtual feet of a hotspot”). *Id.*, 16:29-17:4.

As detailed in Section X.D.1, a POSITA would have been motivated to apply Jiau’s teachings regarding implementation of the client/server architecture in implementing Ho’s video game. The resulting structure would meet the elements of limitation 1(b).

c) Limitation 1(c): “receiving a communication from a mobile communication device”

Ho discloses limitation 1(c). Ex. 1003, ¶¶112-114. Ho teaches that a “client end device, such as ... a mobile telephone ... may be activated and subsequently connected to a server via a network.” Ex. 1004, 10:2-6. The server “obtain[s] data from the client end device” (*i.e.*, receives a communication from the mobile communication device). *Id.*, 10:6-8.

The combined teachings of Ho and Jiau also render this limitation obvious. Ex. 1003, ¶114. For example, Jiau teaches that its server is “in communication with” a plurality of “client data processing systems” with “world play software” for

“brows[ing] ... the virtual world” (*i.e.*, playing the game). Ex. 1005, 6:22-7:6.

When applied to Ho’s system, Jiau’s server would be in communication with Ho’s client end devices, which include mobile devices.

d) Limitation 1(d): “determining the hot spot information to provide to the mobile device based upon the communication, the hot spot information comprising”

Ho discloses and renders obvious limitation 1(d). Ex. 1003 ¶¶115-118. Ho teaches that responsive to the communication from the mobile device, the server “check[s] information on the client end device relating to the interactive information element(s)” and then “determines whether the interactive information element(s) needs to be changed/renewed.” Ex. 1004, 10:10-15. “If the interactive information element(s) needs to be changed/renewed, then new interactive information element(s) are sent to the client end device.... If change/renewal of the interactive information element(s) is not required, then the interactive information element(s) remains the same in the client end device.” *Id.*, 10:15-19. A POSITA would have understood and it would have been obvious that determining whether or not interactive information elements need to be changed or renewed may be based on the information communicated by the client end device. Ex. 1003, ¶117. The server would thus determine which interactive information element(s) (if any) need to be updated based on a communication received from the mobile device, and would

accordingly determine which changed or renewed interactive information elements (each comprising hot spot information) to provide to the mobile device. *Id.*

To the extent Patent Owner argues that Ho does not disclose or render obvious this limitation, the combined teachings of Ho and Choi render the limitation obvious. Ex. 1003 ¶118. Choi teaches that mobile applications (including mobile games) may “communicate[] periodically with [an] ad server” to retrieve updated advertising information. Ex. 1008, [0078]. The mobile device may communicate “a request for new ad content to the ad server,” which request may include, *inter alia*, “the current mobile device operational environment, such as location.” *Id.* The server then selects and returns ad content to the mobile device. *Id.* Choi further teaches that the server selects targeted advertisements for delivery (*i.e.*, determines an advertisement to provide) based on the information communicated from the mobile device to the server, such as demographic information inferred based on the user’s mobile carrier, or the user’s GPS location. *Id.*, [0043] (“the Ad Manager module can use GPS location information to request location-specific advertising content from the network server”), [0086] (“Identification of a users’ carrier implies a certain demographic.”), claims 48-49 (“receiving data specific to at least one of a group comprising the user or the user’s device ... wherein the data includes at least one of a group comprising the user’s service provider, the user’s location, [or] the user’s device...”). Choi also teaches that information about the user’s mobile device (*e.g.*,

the devices “capabilities” and “model”) may be used to determine an ad from a collection of related advertisements “that is best suited for presentation on the device to which the ad is to be served.” *Id.*, [0089]-[0090].

As detailed in Section X.D.1, a POSITA would have been motivated to apply Choi’s teachings regarding targeted advertising and advertisement selection in implementing Ho’s server that provides interactive information elements for mobile games. The resulting structure would meet the elements of limitation 1(d).

- e) *Limitation 1(d)(i): “a location in-game associated with activating the hot spot, wherein the location in-game is represented by a non-promotional background object; and”*

The combined teachings of Ho and Jiau render limitation 1(d)(i) obvious. Ex. 1003, ¶¶119-124. Ho teaches an interactive information element that comprises a hot spot, such as “a character in the game or an item in the game,” that “may be located at a juncture in the game, such as ... a specific location in the game.” Ex. 1004, 2:11-17; *see also supra* Limitation 1(b). New interactive information elements, comprising new hot spot information, may be sent from the server to the mobile device. Ex. 1004, 10:3-6, 10:14-19; *see also supra* Limitations 1(b), 1(d). In particular, Ho teaches that the video game may include a “module” that enables interactive information elements to be added to the game, including by enabling the location at which the interactive information element appears within the game. Ex.

1004, 9:27-31, 9:33-35. The module allows updating of the interactive information elements by “automatically downloading and replacing relevant sub-modules of the interactive information elements in the video game whenever the player goes online.” *Id.*, 9:31-33. Ho does not expressly teach that the in-game location of the interactive information element is among the “sub-modules” that may be downloaded and replaced; however, it would have been obvious to a POSITA that the location of an interactive information element (*i.e.*, a hot spot) may be one characteristic of the interactive information element that may be updated. Ex. 1003, ¶121. As noted above, Ho’s “module” already includes information about the in-game location of an interactive information element (because the module must enable that location); thus, updating the location information would simply involve the same or substantially the same process as updating any other “sub-module.” *Id.* Further, Jiau expressly teaches that in-game objects and hot spots retrieved by the video game from the server include definitions that specify, *inter alia*, the “location and properties of the object” in the game. Ex. 1008, 8:7-10; *see also id.*, 16:3-28, 17:7-13, Fig. 12 (describing how objects, hotspots, and hotspaces are loaded from server). Accordingly, it would have been obvious either based on Ho alone or Ho in view of Jiau that the location in-game associated with activating Ho’s interactive information elements may be among the updateable information that is downloaded from Ho’s server. Ex. 1003, ¶121.

Ho further teaches that interactive information elements (*i.e.*, hot spots) may be non-promotional background objects at their in-game locations. Ex. 1003, ¶122. The '089 Patent does not define or otherwise describe a “non-promotional background object”; however, during prosecution, the Applicant explained that ““non-promotional background objects’ are not game components,” *i.e.*, “featured objects that a user manipulates in order to play the game,” but are rather “outside of the primary focus of game play” and “are not themselves needed or required in order to play the game.” Ex. 1002, 85. Ho’s interactive information elements are represented by ***non-promotional*** objects, specifically, because they correspond to in-game characters or items, and do not display promotional content until a user has perform a predetermined action. Ex. 1004, 2:11-12 (“Preferably the at least one interactive information element may be, for example, an icon in the game, a character in the game or an item in the game.”), 5:1-7 (examples using a “hamburger monster” and a “car”), 5:27-38 (describing how an “on-screen presentation” such as an advertisement is displayed only “[i]f the player chooses to engage any of the interactive information elements”). Ho’s interactive information elements are further represented by background objects because Ho expressly teaches that “engagement of the at least one interactive information element may not be mandatory for the continuation of gameplay,” (*i.e.*, it is not needed or required in order to play the game), and activating the interactive information element “does not

disrupt gameplay” (*i.e.*, it is outside of the primary focus of gameplay). *Id.*, 4:26-28, 5:30-33, 5:36-38. This is consistent with the Applicant’s description of a “background” object during prosecution.

To the extent Patent Owner argues that Ho does not disclose the claimed hot spots and hot spot information, Jiau’s hotspots and hotspaces also disclose limitation 1(d)(i). Ex. 1003, ¶124. For example, Jiau’s “hotspace” is represented by an in-game location that is “a predetermined space surrounding an object” with which the hotspace is associated. Ex. 1005, 16:29-17:1. Thus, the in-game location of the hotspace is different from the interactive game element with which it is associated. For example, a “hotspace” may cause a pop-up advertisement to unexpectedly appear when a user passes through a background location within a predetermined distance of an associated object. *Id.*, 15:4-8, 17:1-6, Fig. 11(d). In addition, a hotspace “may or may not have an object located therein.” *Id.*, 15:32-16:2. It would have been obvious to a POSITA based on these teachings that a hotspace may define a region that contains one of several types of background objects disclosed by Jiau, such as a “solid object” or an “object with pass-through.” Ex. 1003 ¶124; Ex. 1005, 11:18-20, 11:29-31.

As detailed in Section X.D.1, a POSITA would have been motivated to apply Jiau’s teachings regarding implementation of hotspots and hotspaces in

implementing Ho's interactive information element. The resulting structure would meet the elements of limitation 1(d)(i).

f) Limitation 1(d)(ii): "hidden promotional content for presenting to the user, within a gaming environment of the mobile video game, when the hot spot is activated; and"

Ho discloses limitation 1(d)(ii). Ex. 1003, ¶¶125-127. Ho teaches that when a player "engage[s]" an interactive information element, it "activates an action such as, for example, an on-screen presentation," which may be "within the course of gameplay." Ex. 1004, 2:22-26. The on-screen presentation may be promotional content—*e.g.*, an advertisement provided by an advertiser. *Id.*, 8:11-21 (examples with advertisements for airlines and fast food restaurants). The on-screen presentation is also hidden content because it is not displayed until the user engages the interactive information element, such as by interacting with the in-game object representing the interactive information element. *Id.*, 7:31-40; *see also* Ex. 1002, 86 (Applicant explaining that "hidden promotional content" only appears when a hot spot is activated). Further, as described above, Ho's "on-screen presentation" is provided in the game itself, *i.e.*, within the gaming environment of the mobile video game.

To the extent Patent Owner argues that Ho does not disclose the claimed hot spots and hot spot information, Jiau's hotspots and hotspaces also disclose limitation

1(d)(ii). Ex. 1003 ¶127. Jiau teaches that hotspots and hotspaces have “links” that cause a predetermined action to be performed when a player activates the link. Ex. 1005, 12:1-2 (describing objects “with associated action”), 12:13-13:7 (describing “links that can be associated with objects,” including links with “associated action or animation”), 15:9-10 (explaining that links may be associated with hotspots and hotspaces instead of objects). The predetermined action may be the display of an in-game advertisement, *i.e.*, hidden promotional content. *Id.*, 15:4-8, 17:1-4 (examples of hotspace links that activate a pop-up advertisement when a player enters a predetermined in-game location).

g) *Limitation 1(e): “uploading the hot spot information to the mobile communication device.”*

Ho discloses limitation 1(e). Ex. 1003, ¶128. As described above in Section X.D.2(d), when Ho determines that an interactive information elements “needs to be changed/renewed, then new interactive information element(s) are sent to the client end device” (*i.e.*, uploaded to the mobile communication device). Ex. 1004, 10:15-19.

3. Claim 2: The method of claim 1, wherein the location in-game is associated with activating the hot spot within the gaming environment of the mobile video game.

The Ho-Jiau-Choi combination renders claim 2 obvious. Ex. 1003, ¶¶129-130. As described above in Section X.D.2(e), Ho teaches an engageable module that “enable[s] the location of the at least one interactive information element at a

juncture in the video game.” Ex. 1004, 9:27-31, 9:33-35; *see also id.*, 2:16-17 (The at least one interactive element may be located at a juncture in the game such as ... a specific location in the game.”). When the player “interact[s] with the interactive information element” at its associated in-game location, that may “activate[] an action such as, for example, an on-screen presentation ... within the course of gameplay.” *Id.*, 2:13-16, 2:22-26. In other words, the location in-game of the interactive information element is associated with activating the element within the gaming environment of the video game in order to display the hidden promotional content. Ex. 1003, ¶129.

Alternatively, if Jiau’s hotspots and hotspaces are applied to Ho’s video game (as described above in connection with claim 1), Jiau discloses claim 2. *Id.*, ¶130. As described above in Section X.D.2(e), Jiau’s hotspots and hotspaces are represented by a location on an in-game object (for a hotspot) or a location surrounding an in-game object (for a hotspace) that cause hidden in-game content (such as a pop-up advertisement) to be displayed when activated. Ex. 1005, 15:31-16:2, 16:29-17:4. Thus, the location of the hotspot or hotspace is associated with activating that hotspot/hotspace within the game. Ex. 1003, ¶130.

4. Claim 3: The method of claim 1, wherein the hidden promotional content is pre-selected based on the proximity

**of the mobile communication device to a physical location
related to the hidden promotional content.**

The Ho-Jiau-Choi combination renders claim 2 obvious. Ex. 1003 ¶131. As described above in Section X.D.2(d), Choi discloses selection of targeted advertisements for delivery to a player, including “location-specific advertising content” based on a user’s “GPS location information,” such that advertising content is selected based on whether the user is within the designated location associated with that content (*i.e.*, based on the user’s proximity to the designated physical location related to that advertising content). Ex. 1008, [0043].

5. Claim 6

Claim 6 recites is a system analogous to method claim 1, and is rendered obvious by the Ho-Jiau-Choi combination for same reasons set forth for claim 1. Potential differences between the two claims are addressed below.

- a) Limitations 6(a)-(b): “A system for providing a hot spot associated with a mobile video game, the system comprising: a storage medium for storing hot spot information for use in the mobile video game”*

Limitations 6(a) and 6(b) are substantially the same as limitations 1(a) and 1(b) and are disclosed or rendered obvious for the reasons set forth above. *See* Sections X.D.2(a)-(b).

b) Limitation 6(c): “a server in communication with the storage medium”

Ho discloses and renders obvious limitation 6(c). Ex. 1003, ¶¶134-135. Ho teaches that a “client end device” such as a “mobile telephone” may “connect[] to a server,” which in turn sends “new interactive information element(s)” to the client end device. *Id.*, 10:3-6, 10:14-17. A POSITA would have understood and it would have been obvious that the server must be in communication with the storage medium in order to send the hot spot information stored on the storage medium to the client end device. Ex. 1003, ¶134.

To the extent Patent Owner argues that Ho does not disclose or render obvious this limitation, the combined teachings of Ho and Jiau render the limitation obvious. Ex. 1003, ¶135. Jiau expressly discloses a “server system” that has “one or more processors and appropriate data storage, such as memory or mass-storage device.” Ex. 1005, 7:7-12. The server also includes a “database” which is or is implemented on a computer-readable medium) that stores information about “objects” in the game world. *Id.*, 7:23-25, 8:7-10. Hotspot and hotspace information are stored as part of the object definition. *Id.*, 6:4, Fig. 13(b).

- c) *Limitation 6(d): “an interface coupled to the server and a network, wherein the interface receives a request for hot spot information from the mobile communication device over the network”*

Ho discloses and renders obvious limitation 6(d). Ex. 1003, ¶¶136-138. The ‘089 Patent teaches that the disclosed interface “may be part of [the] server” and “pass[es] a request for hot spot information to [the] server.” Ex. 1001, 5:29-33. Ho discloses that its “client end device” connects to the server “via a network” in order to request updated interactive information elements. Ex. 1004, 10:4-19. It would have been obvious to a POSITA that Ho’s server thus includes an interface that receives requests for updated interactive information elements (*i.e.*, the claimed hot spot information) from mobile devices over the network. Ex. 1003, ¶137.

To the extent Patent Owner argues that Ho does not disclose or render obvious this limitation, the combined teachings of Ho and Jiau render the limitation obvious. Ex. 1003, ¶138. Jiau expressly teaches that its “server system” includes interface software (*i.e.*, “loader/network (NW) communication software”) that “allows a client system to communicate with server system [] in order to load lots and objects from server system.” Ex. 1005, 6:31-7:2. In other words, Jiau’s “loader/network (NW) communication software” is an interface within (coupled to) its server system that receives requests from the client system for hotspot and hotspace information.

- d) *Limitation 6(e): “wherein the server is operative to receive the request through the interface and utilize the request to determine the hot spot information for the mobile video game, and send the hot spot information to the mobile communication device, the hot spot information comprising:”*

The Ho-Jiau-Choi combination renders limitation 6(e) obvious. Ex. 1003, ¶139. As described above for limitation 6(d), both Ho and Jiau teach a server that receives requests from a mobile device via a network interface. *See supra* Section X.D.5(c). In addition, as described above in Sections X.D.2(d) and X.D.2(g), both Ho and Choi disclose that hot spot information to send to the mobile device is determined based on the request from the mobile device, and that the determined hot spot information is then sent to the requesting mobile device.

- e) *Limitations 6(e)(i)-(ii): “a location in-game associated with activating the hot spot, wherein the location in-game is represented by a non-promotional background object; and hidden promotional content for presenting to the user, within a gaming environment of the mobile video game, when the hot spot is activated.”*

Limitations 6(e)(i) and 6(e)(ii) are identical to limitations 1(d)(i) and 1(d)(ii) and are disclosed and/or rendered by Ho and/or Jiau for the reasons set forth above. *See* Sections X.D.2(e)-(f).

6. Claim 7: The method of claim 6, wherein the hidden promotional content is pre-selected based on the proximity

**of the mobile communication device to a physical location
related to the hidden promotional content.**

The additional limitation of claim 7 is identical to the additional limitation of claim 3, and is rendered obvious by the Ho-Jiau-Choi combination for the reasons set forth above with respect to claim 3. *See* Section X.D.4.

7. **Claim 8: The system of claim 6, wherein the hot spot information is pre-selected by the server based on a model type associated with the communications device, a service subscription associated with the communications device, or a service provider for the service subscription associated with the communications device.**

The Ho-Jiau-Choi combination renders claim 8 obvious. Ex. 1003, ¶¶141-142. As described above in Section X.D.2(d), Choi teaches two ways in which user information—including the model type of the user’s mobile device and the service provider associated with the mobile device—may be used to pre-select advertising content to send to a particular user. First, Choi teaches that targeted advertisements may be selected based on demographic information, which may be inferred based on the user’s service provider. Ex. 1008, [0083] (“Ad targeting depends on collection of user demographic and contextual information.”), [0086] (“Identification of a users’ carrier implies a certain demographic.”), claims 48-49 (“receiving data specific to at least one of a group comprising the user or the user’s device ... wherein the data includes at least one of a group comprising the user’s service provider, the user’s location, [or] the user’s device...”). Choi also teaches

that information about the user’s mobile device (*e.g.*, the devices “capabilities” and “model”) may be used to select an ad from a collection of related advertisements “that is best suited for presentation on the device to which the ad is to be served.” *Id.*, [0089]-[0090].

XI. GROUND 2: HO, JIAU, CHOI, AND ELLIS RENDER OBVIOUS CLAIMS 4-5 AND 9-10

A. U.S. Patent No. 8,825,521 (“Ellis”)

Ellis is titled, *Method and system for dynamically incorporating advertising content into multimedia environments*. Ex. 1007. It was filed on August 30, 2006 and issued on September 2, 2014. It therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §102(e).

Ellis relates to techniques for “dynamically incorporating advertising content into multimedia environments, such as games.” *Id.*, Abstract. Ellis explains that “game developers [already] include advertisements in games,” and that ads can be used to “offset[] some of the[] development costs” associated with developing new games. *Id.*, 1:43-53, 2:24-27. However, Ellis notes that many conventional in-game advertising techniques—such as using static ads “burned into” the game code, or providing ads in a separate “ad space” distinct from the game play environment, have disadvantages, such as limiting advertiser control over the presentation of their ads, and interfering with the game play experience. *Id.*, 1:54-2:10.

Ellis thus discloses a dynamic advertisement system that provides “a minimally intrusive mechanism” for “an advertiser to dynamically incorporate content, such as advertisements, into a video game.” *Id.*, 2:31-36. Ellis’s system uses a “dynamic inserter” to deliver ads to a “game client system ... based upon a set of criteria.” *Id.*, 2:42-46. Ads are provided by an ad server, which “selects a particular advertisement from its collection according to a set of criteria” in response to a request from a game client. *Id.*, 4:36-46. The ad server logs information about ad delivery, which can be used to “bill[] the advertiser ... each time an ad is inserted into a video game.” *Id.*, 19:45-60.

B. The Ho-Jiau-Choi-Ellis Combination

In the proposed Ho-Jiau-Choi-Ellis combination, Ho, Jiau, and Choi are combined as in Ground 1. *See* Section X.D. The combined system is further modified in view of Ellis to incorporate tracking of in-game advertisement delivery and billing advertisers based on the tracking information. The Ho-Jiau-Choi-Ellis combination renders obvious claims 4-5 and 9-10.

1. Motivation to Combine

A POSITA would have been motivated to combine the teachings of Ho, Jiau, and Choi for the reasons described in Section X.D.1. A POSITA would also be motivated to further combine Ho, Jiau, and Choi with Ellis, and would have had a

reasonable expectation of success in combining the references. Ex. 1003, ¶¶144-149.

As a threshold matter, Ho, Jiau, Choi, Ellis, and the ‘089 Patent are analogous art because they are in the same field of endeavor, *i.e.*, video games, and, in particular, in-game advertising. Ex. 1003, ¶145. Ho, Jiau, Choi, and the ‘089 Patent are discussed in Section X.D.1 *supra*. Ellis is similarly directed to “dynamically incorporating advertising content into multimedia environments, such as games.” Ex. 1007, Abstract. Ellis discloses a “game client system” in communication with a “game server” and a “dynamic advertising server” over a network. *Id.*, 4:24-34, 4:52-59. The game client system may be a “hand-held communication device[],” such as “a telephone that supports text messaging or other data communication protocols.” *Id.*, 4:63-5:5. When “an advertisement is needed in the game,” the game client sends a request to the advertising server, which “selects a particular advertisement from its collection according to a set of criteria, and sends that advertisement” to the game client, which in turn displays the advertisement in the game. *Id.*, 4:36-47.

A POSITA would have thus looked to Ellis, in addition to Ho, Jiau and Choi, when considering how to implement known video games and how to improve in-game advertising in video games using well-known techniques. Ex. 1003, ¶76. A

POSITA would have further been motivated to combine Ho, Jiau, Choi, and Ellis for at least the following reasons.

First, Ellis is directed to the same types of improvements in game design and monetization that the '089 Patent purports to provide. Ex. 1003, ¶146; Ex. 1001, 1:28-32, 1:48-52, 1:66-2:2. For example, Ellis's dynamic advertisements are designed to improve in-game advertising by incorporating advertisements "into individual behaviors of objects within the game," so that the ads are "non-intrusive"—*i.e.*, they do not "reduc[e] the viewing area of the gaming experience" and do not "forc[e] the user to wait while ads are downloaded before game play begins." Ex. 1007, 1:66-2:3, 2:24-41. Ellis also teaches that its dynamic advertisements avoid problems with conventional in-game ads that are "'burned into' the game code," because the ads can be changed, and can be modified or removed if the advertiser is dissatisfied with their placement or effectiveness. *Id.*, 2:5-10.

Second, Ellis teaches specific improvements for in-game advertisement management that would readily improve Ho's system for delivering and monetizing interactive information elements in video games. Ex. 1003, ¶147. For example, Ho teaches that the "incidence" of engagement with an interactive information element is "countable" and "may be stored ... on a network." Ex. 1004, 2:27-29. Ho also teaches that advertisers may use the incidence count to "ascertain a value for placing

interactive information elements in a particular video game.” *Id.*, 9:3-5. Ellis builds on this concept by describing a more detailed information for tracking ad placement information and using that information to charge advertisers and to determine patterns in advertising activity and user interaction. Ex. 1007, 13:61-14:65. Thus, Ellis’s implementation of ad tracking and advertiser represent known techniques that POSITA would be motivated to apply to Ho’s video game to improve monetization of in-game advertisements.

Third, Ho provides express teachings that would motivate a POSITA to combine the references. Ex. 1003, ¶148. Ho specifically notes that companies “embrace[] opportunities offered by in-game advertising” and “invest substantial sums of money to have their marks, logos, digital representations of their products, and brands included in video games.” Ex. 1004, 1:19-24. Accordingly, a POSITA would have understood that in-game advertising is a means for monetizing video games, and must incorporate a means to charge advertisers for incorporating their ads into a game. Thus, a POSITA would look to other references, such as Ellis, for additional ideas regarding how to monetize in-game advertisements. As described above, Ellis provides a detailed disclosure of how to implement such monetization through ad tracking and advertiser billing.

In addition, a POSITA would have reasonably expected the proposed combination of Ho, Jiau, Choi, and Ellis to succeed. Ex. 1003 ¶149. As described

in Section X.D.1, Ho, Jiau, and Choi only require conventional computers and computer networks, and well-known software functions to implement their techniques. Ellis similarly utilizes standard computers and servers operating on conventional networks (such as the Internet) and employing standard computer functions (*e.g.*, network communications, and storing, selecting, and presenting information). Ex. 1007, 5:24-27 (communication network may be the Internet or any computer network), 15:41-16:29 (describing implementation of client and server systems on general purpose computer). Ellis's advertisement tracking and billing could be implemented on Ho's server and consistent with Ho's incidence counting to monetize in-game advertisements. Accordingly, incorporating Choi's and Jiau's teachings into Ho would be straightforward and well within the capabilities of a POSITA.

2. Claim 4: The method of claim 1, further comprising the step of tracking the hot spot information that has been downloaded to the mobile communication device.

The Ho-Jiau-Choi-Ellis combination renders obvious claim 4. Ex. 1003, ¶¶150-152. As discussed above, Ho, Jiau, and Choi render obvious claim 1. However, while Ho discloses tracking the incidence of interactive information elements (*i.e.*, hot spots with advertisements) so that advertisers can ascertain the value of placing an ad in a particular game, Ho does not expressly disclose tracking the hot spot information that has been downloaded to the mobile device.

Ellis expressly teaches that its advertisement server logs information about “which ads were sent to the game client systems,” which may be used “for billing the advertiser, in that each time an ad is inserted into a video game, it is known by the advertiser that it appeared on the game player’s screen.” Ex. 1008, 19:45-60; *see also id.*, 13:61-67. Ellis teaches that “[a]t a minimum, the data about the ad insertion ... includes an identification of the user” and “the ad that was inserted,” *i.e.*, the hot spot information that was downloaded to a particular mobile device. *Id.*, 14:30-37. Additional information, such as the “duration of the ad insertion” and “the quality of the insertion,” may also be logged in order to provide more details for valuing a particular ad insertion and placement. *Id.*, 14:3-13, 14:37-47.

As detailed in Section XI.B.1, a POSITA would have been motivated to apply Ellis’s teachings regarding advertising tracking and billing in implementing Ho’s server that provides interactive information elements for mobile games. The resulting structure would meet the elements of claim 4.

3. Claim 5: The method of claim 4, wherein the tracked hot spot information is used for billing a third party associated with the hot spot information.

The Ho-Jiau-Choi-Ellis combination renders obvious claim 5. Ex. 1003, ¶153. As discussed above in connection with claim 4, Ellis expressly teaches that tracking information regarding which advertisements (*i.e.*, hot spots) have been

delivered to each user/mobile device is used “for billing the [third-party] advertiser” associated with the advertisement. Ex. 1008, 13:61-67, 19:45-60.

4. Claims 9-10

The additional limitations of claims 9 and 10 are substantially the same as the additional limitations of claims 4 and 5, respectively, and are disclosed by Ellis for the reasons set forth above. *See* Sections XI.B.2-3.

XII. GROUND 3: STURMAN AND HO RENDER OBVIOUS CLAIMS 1-10

A. International Patent Publication No. WO 2006/071246 (“Sturman”)

Sturman is titled *Matching and Scoring of Advertisements for Targeted Delivery into Multiple Video Games, Such as Single and Multiplayer Games*. Ex. 1006. It was filed as a PCT application designating the United States on March 8, 2005 and published July 6, 2006. *Id.* It therefore qualifies as prior art under at least pre-AIA 35 U.S.C. §102(a).

Sturman describes “[a]n advertisement delivery scheme” that “provide[s] targeted advertisements for multiple video games without advertisers having to specify specific game titles in which they would like their advertisements placed.” *Id.*, Abstract. The relevant functionality in Sturman is primarily implemented as part of an advertisement server. *Id.*, [0041]. The advertisement server “deliver[s] advertising to one or more advertising recipient systems” (*e.g.*, a video game that incorporates in-game advertising). *Id.* Advertisements may be targeted for a

particular game player based on various factors, including the player's "location, time of day, [] demographics, game play data, etc." *Id.*, [0031].

The advertisement server delivers ads in response to a request associated with one or more available "ad units." *Id.*, [0044]. An "ad unit" is a designated space within the game for displaying advertisements, "such as billboards, storefront signs, panel trucks, Jumbotron screens in a sports stadium, posters on walls, T-shirts on a game character, items used by game characters ... and so on." *Id.*, [0019]. For each ad unit for which an advertisement is requested, the advertisement server performs a matching process to match the ad unit with an appropriate advertisement. *Id.*, [0052]-[0053].

The advertisement server may also track the information sent to a mobile device. *Id.*, [0042]. Information collected by the advertisement server may be "used in billing" to charge advertisers for displaying their ads. *Id.*, [0026].

B. The Sturman-Ho Combination

In the proposed Sturman-Ho combination, Sturman's teachings provide the basic features of an advertisement delivery system for mobile video games, where a server delivers targeted advertisements in response to requests from mobile devices and each advertisement is matched to a specific in-game location. Ho's teachings relating to interactive information elements are then applied to make Sturman's advertisements interactive, such that they are provided as a hot spot corresponding

to an in-game character or object, with the advertisement appearing only when a player interacts with the hot spot location. The Sturman-Ho combination renders claims 1-10 obvious.

1. Motivation to Combine

A POSITA would have been motivated to apply Ho's teachings to Sturman's advertisement delivery system, and would have had a reasonable expectation of success in combining the references. Ex. 1003, ¶¶156-160.

As a threshold matter, Sturman, Ho, and the '089 Patent are analogous art because the references are in the same field of endeavor, *i.e.*, video games and, in particular, in-game advertising. Ex. 1003, ¶157. Both Ho and Sturman relate to mechanisms for provided dynamic/updateable promotional content in video games, including mobile games.

For example, Ho is directed to video games with dynamic, interactive in-game elements that may display an advertisement when activated. Section X.D.1.

Sturman is similarly directed to an "advertisement delivery scheme" for "provid[ing] targeted advertisements for multiple video games." Ex. 1006, Abstract. Sturman's system can be used to deliver advertisements for games on various different platforms, including mobile phones. *Id.*, [0022]. Advertisements are matched to specific in-game locations for display, and are then sent from an advertisement server to the mobile device. *Id.*, [0019], [0022], [0044].

A POSITA would have thus looked to Sturman and Ho when considering how to implement known in-game advertising techniques for use in video games and mobile games. Ex. 1003, ¶76. A POSITA would have further been motivated to combine Sturman and Ho for at least the following reasons.

First, Sturman and Ho are directed to the same types of improvements in game design and monetization that the ‘089 Patent purports to provide. Ex. 1003, ¶158; *see also* Ex. 1001, 1:28-32, 1:48-52, 1:66-2:2. For example, Sturman focuses on improving the accessibility of in-game advertising to third-party advertisers, thus increasing the opportunities for monetization through promotional contracts, which benefits both advertisers and game developers/game publishers. Ex. 1006, [0004], [0024]. Ho’s interactive information elements are similarly designed to improve in-game advertising by providing advertisements that “engage the player during the course of gameplay,” and that can be updated “without a major revision of the source code of the video game.” Ex. 1004, 1:26-37.

Second, Ho teaches specific improvements that are complementary to Sturman’s teachings and further improve the effectiveness of Sturman’s in-game ads. Ex. 1003, ¶159. For example, many of Sturman’s exemplary in-game advertisement locations are passive/non-interactive elements, such as “billboards, storefront signs, panel trucks, Jumbotron screens ... [and] posters on walls.” Ex. 1006, [0019]. Ho teaches that these types of in-game ads, “restricted to in-game

billboards, in-game signages, in-game product placements and other forms of non-interactive in-game elements,” are commonplace in video games. Ex. 1004, 1:26-28. However, these types of advertisements have a “major disadvantage,” in that “a video game player would probably gloss over all the different types of advertising when the player is engrossed by the proceedings of the game during gameplay.” *Id.*, 1:28-32. Thus, Ho teaches the use of interactive information elements to provide interactive in-game advertisements that are more engaging to players. *Id.*, 2:1-33. Thus, a POSITA would be motivated based on Ho’s teachings to modify Sturman to make use of interactive advertisements, as taught by Ho.

In addition, a POSITA would have reasonably expected the proposed combination of Sturman and Ho to succeed. Ex. 1003, ¶160. Sturman’s advertisement server requires only standard computer components (*e.g.*, a processor, user input device, storage device) and a conventional network using straightforward software programming, and may be used with well-known gaming systems, such a mobile devices and video game consoles. Ex. 1006, [0024], [0038]. As described in Section X.D.1, Ho also describes a simple improvement to conventional mobile games using standard computer and network hardware and well-known software functions. Further, a POSITA would understand that Ho’s interactive information elements could be implemented as a targeted advertisement delivered by Sturman’s advertisement server. Indeed, because Sturman’s advertisement server already

provides the location and content for an in-game ad to the mobile device, modifying Sturman to incorporate *interactive* ads as per Ho only requires a trivial change in the game itself, such that the advertisement is not displayed initially and is only presented when the player interacts with the designated in-game location. *Id.* Indeed, Sturman itself contemplates that some ads may be “interactive within the game context.” Ex. 1006, [0020]. Accordingly, incorporating Ho’s teachings into Sturman would be straightforward and well within the capabilities of a POSITA.

2. Claim 1

a) Limitation 1(a)

To the extent the preamble is limiting, Sturman discloses limitation 1(a). Ex. 1003, ¶¶161-163. Sturman teaches an “advertisement delivery scheme” that “allow[s] advertisers to deliver their campaign messages to specific audiences they wish to target across one or multiple game titles played across multiple platforms.” Ex. 1006, [0018]. Sturman expressly identifies “mobile phone[s]” as one of the platforms supported by its advertisement delivery system. *Id.*, [0018], [0022], [0036]. Sturman discloses an advertisement server that delivers targeted advertisements to one or more locations within the game (referred to by Sturman as an “ad unit” or “inventory element”), such as “billboards, storefront signs, panel trucks, Jumbotron screens in a sports stadium, posters on walls, T-shirts on a game character, items used by game characters ... and so on.” *Id.* [0019], [0022].

To the extent Patent Owner argues that that Sturman's advertisements are not considered to be hot spots (as that term is used in the '089 Patent), the combined teachings of Sturman and Ho disclose this limitation. Ex. 1003 ¶163. Ho teaches providing dynamic content for video games in the form of an "interactive information element" that comprises a hot spot. Ex. 1004, Abstract. When Ho's interactive information element is engaged by the player, it may "activate an on-screen presentation," such as an advertisement. Ex. 1004, 5:27-30.

As detailed in Section XII.B.1, a POSITA would have been motivated to apply Ho's teachings regarding interactive information elements in implementing Sturman's advertisement delivery scheme for video games. The resulting structure would meet the elements of limitation 1(a).

b) Limitation 1(b)

Sturman discloses and renders obvious limitation 1(b). Ex. 1003, ¶¶164-166. For example, Sturman's system includes servers such as an "advertisement server" and a "media server," which store information such as "game inventories" (*i.e.*, in-game locations where ads may be displayed) and media files containing advertisement content. Ex. 1006, [0021], [0029]. Sturman further teaches that its system may employ a standard computer with "data storage devices," which may "include any type of computer-readable media." *Id.*, [0038], [0040].

As discussed in Section XII.B.2(a), to the extent Patent Owner argues that Sturman's advertisements and associated location and content information are not considered to be hot spots and hot spot information, the Sturman-Ho combination renders this limitation obvious based on Ho's teaching of using interactive information elements to provide interactive advertisements comprising hot spots.

c) Limitation 1(c)

Sturman discloses limitation 1(c). Ex. 1003, ¶¶167-168. Sturman teaches that an "advertisement recipient client" (e.g., the mobile device running an ad-supported game) "may request and receive advertisements from the advertisement management service system" (which includes the advertisement server) over a "communication link, such as the Internet." Ex. 1006, [0033], Fig. 1. The advertisement server includes an "advertising request handler" that receives the communication and "enable[s] the matching of advertisement campaigns to various appropriate video game titles." *Id.*, [0041].

d) Limitation 1(d)

Sturman discloses and renders obvious limitation 1(d). Ex. 1003, ¶¶169-172. Sturman teaches that the advertisement server selects an appropriate advertisement to provide in response to a request from a mobile device. For example, the game client may send a request that "contains a data structure that includes a unique identifier to indicate the client type, another unique identifier for the specific game

player, the session ID and the list of available ad units for which advertisements are being requested.” Ex. 1006, [0044]. The advertisement server will “produce[] a set of one or more matched advertisements to be displayed for each available ad unit, specified within the client’s request.” *Id.* In addition, the selected ads can be “further targeted based upon specific demographic characteristics of a game player.” *Id.*, [0047]. The demographic characteristics may be collected based on information associated with the communication from the mobile device, such as the player’s IP address. *Id.* Ads may also be targeted based on the player’s geographic location. *Id.*, [0054].

As discussed in Section XII.B.2(a), to the extent Patent Owner argues that Sturman’s advertisements and associated location and content information are not considered to be hot spots and hot spot information, the Sturman-Ho combination renders this limitation obvious based on Ho’s teaching of using interactive information elements to provide interactive advertisements comprising hot spots.

e) Limitation 1(d)(i)

Sturman discloses and renders obvious limitation 1(d)(i). Ex. 1003, ¶¶173-178. Sturman teaches that dynamic advertisements may be displayed in one or more predetermined in-game locations referred to as “ad units” or “inventory elements.” Ex. 1004, [0019]. Sturman further teaches that the advertisement server “may be used to track and manage large sets of available ad units from multiple game titles,”

and may select ads to deliver for a particular ad unit “[b]ased on information associated with each of the available ad units.” *Id.*, [0022]. An ad unit may be “interactive,” such that the ad unit information will identify an in-game location that may be interacted with/activated. *Id.*, [0020]. Sturman also teaches that ad units may designate in-game locations represented by non-promotional background objects. Ex. 1003, ¶176. For example, Sturman’s ad units may include non-promotional in-game background elements, such as storefront signs, Jumbotron screens, posters, and t-shirts on characters. Ex. 1006, [0019].

To the extent Patent Owner argues that Sturman’s ad units and associated location information and advertisement content are not considered to be hot spots and hot spot information, the Sturman-Ho combination renders this limitation obvious based on Ho’s teaching of interactive information elements. Ex. 1003, ¶177. Ho teaches interactive information elements comprising a hot spot, such as “a character in the game or an item in the game,” that may be presented at “a specific location in the game.” Ex. 1004, 2:11-17; *see also supra* Section X.D.2(b). The game client may download new interactive information elements, comprising new hot spot information, from a server. Ex. 1004, 10:3-6, 10:14-19; *see also supra* Section X.D.2(b), (d). Ho further teaches that interactive information elements may be non-promotional background objects, *i.e.*, in-game characters, icons, or items, that only display an advertisement if the player chooses to engage them. Ex. 1004,

2:11-12, 5:1-7, 5:27-38. Ho also teaches that the interactive information elements are background objects because “engagement of the at least one interactive information element may not be mandatory for the continuation of gameplay,” and activating the interactive information element “does not disrupt gameplay.” *Id.*, 4:26-28, 5:30-33, 5:36-38; *see also supra* Section X.D.2(e).

As detailed in Section XII.B.1, a POSITA would have been motivated to modify Sturman’s advertisement server to store and deliver interactive ads, as disclosed by Ho (*i.e.*, where the ad is represented by a non-promotional background object, and only displays promotional content when activated), at designated ad units within the game. The resulting structure would meet the elements of limitation 1(d)(i).

f) Limitation 1(d)(ii)

The Sturman-Ho combination renders obvious limitation 1(d)(ii). Ex. 1003, ¶¶179-180. As discussed above, Sturman teaches an advertisement server and media server that store information about in-game “ad units” (*i.e.*, locations where advertisements may be displayed) and media content for displaying an advertisement. Ex. 1006, [0019]-[0022], [0029]. However, Sturman does not expressly teach that promotional content is “hidden” and only displayed when a hot spot is activated.

Ho teaches that when a player “engage[s]” an interactive information element, it “activates an action,” which may include the display of hidden promotional content. Ex. 1004, 2:22-26, 7:31-40, 8:11-21; *see also supra* Section X.D.2(f). As detailed in Section XII.B.1, a POSITA would have been motivated to modify Sturman’s advertisement server to store and deliver interactive ads, as disclosed by Ho (*i.e.*, where the ad is represented by a non-promotional background object, and only displays promotional content when activated), at designated ad units within the game. The resulting structure would meet the elements of limitation 1(d)(ii).

g) Limitation 1(e)

Sturman discloses and renders obvious limitation 1(e). Ex. 1003, ¶¶181-182. As described above, in response to a request from the mobile device, Sturman’s advertisement server will “produce[] a set of one or more matched advertisements to be displayed for each available ad unit, specified within the client’s request.” Ex. 1006, [0044]. Each advertisement is matched to a particular ad unit, and the advertisement server sends the mobile device advertisements for each requested ad units. *Id.*, [0030], [0056]. Thus, at a minimum, it would have been obvious to a POSITA that the uploaded hot spot information must include information identifying the ad unit (*i.e.*, in-game location) associated with each matched advertisement, so that the game client will be able to determine where within the game each retrieved hot spot should be presented. Ex. 1003, ¶182.

3. Claim 2

The Sturman-Ho combination renders claim 2 obvious. Ex. 1003, ¶¶183-185. As described above in Section X.B.2(e), Sturman teaches that hot spot information includes an “ad unit” that designated an in-game location for promotional content. Ex. 1004, [0019]. Ad units may be “interactive,” such that the ad unit information will identify an in-game location that may be interacted with/activated. *Id.*, [0020]. Ho further teaches interactive information elements comprising a hot spot, such as “a character in the game or an item in the game,” that may be presented at “a specific location in the game.” Ex. 1004, 2:11-17. The interactive information elements are provided as “a specific location in the game,” such as one of Sturman’s ad units. *Id.*, 2:16-17, 9:27-31, 9:33-35. When the player “interact[s] with the interactive information element” at its associated in-game location, that may “activate[] an action such as, for example, an on-screen presentation ... within the course of gameplay.” *Id.*, 2:13-16, 2:22-26.

4. Claim 3

The Sturman-Ho combination renders claim 3 obvious. Ex. 1003, ¶¶186-187. As described above in Section XII.B.2(d), Sturman teaches that advertising content for delivery to a user may be targeted based on “specific demographic characteristics of a game player,” including the user’s IP address and/or geographic location. *Id.*, [0047], [0054].

5. Claim 4

The Sturman-Ho combination renders claim 4 obvious. Ex. 1003, ¶¶188-189. Sturman teaches that its advertisement server may “track and record all communications and data sent to and received from the advertisement recipient client,” which would include the hot spot information sent to the client. Ex. 1006, [0042]. In particular, an “active session database” within the advertisement management service system may be used to “record[] the advertisements that have been delivered to a session.” *Id.*, [0049].

6. Claim 5

The Sturman-Ho combination renders obvious claim 5. Ex. 1003, ¶¶190-191. Sturman teaches that “information collected by the advertisement server” may be used “in billing” to charge third-party advertisers. Ex. 1006, [0026].

7. Claim 6

Claim 6 recites is a system analogous to method claim 1, and is rendered obvious by the Sturman-Ho combination for same reasons set forth for claim 1. Potential differences between the two claims are addressed below.

a) Limitations 6(a)-6(b)

Limitations 6(a) and 6(b) are substantially the same as limitations 1(a) and 1(b) and are disclosed for the reasons set forth above. *See* Sections XII.B.2(a)-(b).

b) Limitation 6(c)

Sturman discloses and renders obvious limitation 6(c). Ex. 1003, ¶¶194-195. For example, Sturman's "advertisement server" and "media server" are in communication with storage devices that store information such as "game inventories" and media files for advertisements. Ex. 1006, [0021], [0029], [0038], [0040].

As discussed in Section XII.B.2(a), to the extent Patent Owner argues that Sturman's advertisements and associated location and content information are not considered to be hot spots and hot spot information, the Sturman-Ho combination renders this limitation obvious based on Ho's teaching of using interactive information elements to provide interactive advertisements comprising hot spots.

c) Limitation 6(d)

Sturman discloses limitation 6(d). Ex. 1003, ¶¶196-197. Sturman's advertisement server includes an "advertising request handler" that receives requests for advertisements from game clients, such as mobile devices, via a network (such as the Internet). Ex. 1006, [0041], [0044], Fig. 1, Fig. 3.

d) Limitation 6(e)

Sturman discloses limitation 6(e). Ex. 1003, ¶¶198-199. As described above for limitation 6(d), Sturman discloses an "advertising request handler" in its advertisement server that receives requests from a mobile device via a network. *See*

supra Section XII.B.7(c). In addition, as described above in Sections XII.B.2(d) and XII.B.2(e), the Sturman-Ho combination determines hot spot information based on a request from a mobile device and sends the selected hot spot information to the mobile device.

e) Limitations 6(e)(i)-6(e)(ii)

Limitations 6(e)(i) and 6(e)(ii) are identical to limitations 1(d)(i) and 1(d)(ii) and are rendered obvious by the Sturman-Ho combination for the reasons set forth above. *See* Sections XII.B.2(e)-(f).

8. Claim 7

The additional limitation of claim 7 is identical to the additional limitation of claim 3, and is rendered obvious by the Sturman-Ho combination for the reasons set forth above with respect to claim 3. *See* Section XII.B.4

9. Claim 8

The Sturman-Ho combination renders claim 8 obvious. Ex. 1003, ¶¶201-202. For example, Sturman teaches that its matching algorithm for selecting an advertisement in response to a request may take into account “explicit inventory targeting,” such as “SKUs.” Ex. 1006, [0052]. The SKU represents a “client type,” which may be a type of “game console.”² *Id.*, [0044]. Indeed, Sturman teaches that

² Sturman uses the term “game console” to refer to any devices that can be used to play video games, including mobile phones. *Id.*, [0036].

the request from the mobile device includes “a unique identifier to indicate the client type.” *Id.* Sturman further teaches that “[p]layer-specific information” may be used for ad targeting, which includes a player’s “OS or hardware versions.” *Id.*, [0054].

10. Claims 9-10

The additional limitations of claims 9 and 10 are identical to the additional limitations of claims 4 and 5, respectively, and are rendered obvious by the Sturman-Ho combination for the reasons set forth above. *See* Sections XII.B.5-6.

C. Secondary Considerations

Petitioner is not aware of any evidence regarding secondary considerations of non-obviousness, and Patent Owner has not identified any such evidence in the patent specification, prosecution history, or related district court complaints. Ex. 1003, ¶204. To the extent Patent Owner identifies evidence of secondary considerations at a later point in the proceeding, Petitioner reserves the right to address it at that time.

XIII. DISCRETIONARY FACTORS

A. 35 U.S.C. §314

The Board has discretion to deny institution under §314(a). In addition to the strong merits presented herein, Petitioner also hereby provides a *Sotera*-type stipulation and stipulates that if the Board institutes *inter partes* review, Petitioner will not pursue in the district court litigation any ground raised or that could have

reasonably been raised in the petition. This stipulation precludes discretionary denial under §314(a). *See* Director Vidal Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation, at 3-5, 7-8 (June 21, 2022).

Moreover, the six-factor *Fintiv* analysis weighs in favor of the Board declining to exercise discretionary denial. The district court has not indicated it will grant or deny a stay, and so that factor is neutral. Currently, trial is set for November 18, 2024, which will be approximately five to six months before the Board's statutory deadline for a final written decision, which given the proximity weighs slightly against denial or at best is neutral. Moreover, the litigation is at an early stage—the parties have only just served infringement and invalidity contentions, have produced a minimal amount of documents, have not deposed any witnesses, and have not begun claim construction briefing. And because of the above *Sotera*-type stipulation, there will be no overlap of issues. These factors weigh strongly in favor of not denying. Finally, the strong merits presented herein also weigh in favor of not exercising discretionary denial. Together, the factors weigh in favor of the Board declining to exercise its discretion to deny the petition.

B. 35 U.S.C. §325(d)

The Board should decline to deny institution under §325(d) because the PTO has not previously considered the same or substantially the same prior art and

arguments Petitioner presents here, and the Examiner committed error in evaluating the prior art of record. The references relied upon in this Petition, including Ho, Jiau, Choi, Ellis, and Sturman, were neither cited nor considered during prosecution of the '089 Patent. None of the cited references contain a substantially similar disclosure of a mobile game with dynamically updated hot spots represented in-game as non-promotional background objects, as is disclosed in the combinations described in the Grounds presented herein. Thus, the Board should decline to deny institution under the discretionary authority of §325(d).

XIV. CONCLUSION

Petitioner requests institution of an IPR and cancellation of the challenged claims.

Respectfully submitted,

Date: November 6, 2023

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

1. This Petition complies with the type-volume limitation of 14,000 words, comprising 13,994 words, as counted using the Microsoft Word software that was used to prepare this paper, excluding the parts exempted by 37 C.F.R. § 42.24(a).

2. This Petition complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft Word in 14-point Times New Roman.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on November 7, 2023, true and correct copies of the foregoing document and supporting materials were served in its entirety on the Patent Owner at the following address of record as listed on PAIR via Priority Mail Express® or Express Mail:

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