

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PLR WORLDWIDE SALES LIMITED,
Petitioner

v.

FLIP PHONE GAMES INC.
Patent Owner

U.S. Patent No. 9,427,662
Inter Partes Review No. 2024-00209

DECLARATION OF JOSÉ ZAGAL, PH.D.

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EXHIBIT LIST

No.	Exhibit
1001	U.S. Patent No. 9,427,662
1002	Prosecution history for U.S. Patent No. 9,427,662
1003	Expert Declaration of Dr. José Zagal
1004	International Patent Publication WO 2008/008038 to Ho
1005	U.S. Patent Publication No. 2002/0120589
1006	International Patent Publication 2000/070489 to Jiau
1007	U.S. Patent No. 6,928,414 to Kim et al.
1008	International Patent Publication WO 2006/071246 to Sturman
1009	U.S. Patent No. 8,825,521 to Ellis et al.
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. 9,427,662 served by Patent Owner in <i>Flip Phone Games Inc. v. PLR Worldwide Sales Ltd.</i> , No. 2:23-cv-139 (E.D. Tex.)
1020	U.S. Publication No. 2003/0100355 A1 to Hannay
1021	Forest J. Handford, East Coast Games – Game Development Glossary (Feb. 20, 2006), available at https://web.archive.org/web/20060220024505/http://www.eastcoastgames.com/design/glossary.html
1022	U.S. Publication No. 2006/0111979 to Chu
1023	Andre LaMothe, <i>Tricks of the 3D Game Programming Gurus</i> (2003)
1024	Game Hacking Academy, <i>A Beginner’s Guide to Understanding Game Hacking Techniques</i>

I, José P. Zagal, Ph.D., declare as follows:

I. INTRODUCTION

1. I have been retained by Quinn Emanuel Urquhart & Sullivan on behalf of PLR Worldwide Sales Ltd. (“Playrix” or “Petitioner”). I understand that Playrix is the petitioner in an *inter partes* review (“IPR”) of U.S. Patent No. 9,427,662 (the “’662 Patent”) (Ex. 1001) before the Patent Trial and Appeal Board (“PTAB” or “Board”). I understand the ’662 Patent is assigned to Patent Owner Flip Phone Games, Inc. (“Patent Owner”).

2. I have been asked to provide my independent analysis of the ’662 Patent in light of the materials cited in this declaration and my knowledge and experience in the field of video games and game design during the relevant period. I have been asked to consider what a person of ordinary skill in the art as of the priority date of the ’662 Patent would have understood from the teachings of the ’662 Patent, including scientific and technical knowledge related to the ’662 Patent. I have also been asked to consider whether the references relied on by Playrix render obvious claims 1-20 of the ’662 Patent. All the opinions set forth in this declaration are my own.

II. BACKGROUND AND QUALIFICATIONS

3. I earned a Bachelor of Engineering Sciences degree from Pontificia Universidad Catolica de Chile in 1997. I obtained my title of Civil Industrial Engineer with a Computer Science Diploma and my Master's degree in Engineering Science from Pontificia Universidad Catolica de Chile in 1999. I obtained my Ph.D. in Computer Science from Georgia Institute of Technology in 2008.

4. I currently hold the position of Professor (Lecturing) in the Division of Games at the University of Utah. I have been employed by the University of Utah since 2013 and was employed as an Assistant Professor for the College of Computing and Digital Media at DePaul University from 2008 to 2015. I have spent more than two decades teaching, researching, or working in the field of gaming and computer science.

5. My research for more than 20 years has focused generally on gaming, electronic media, and computer science. I have authored four books: *Game Design Snacks* (as editor), *Role-Playing Games Studies: Transmedia Foundations* (as editor, with Dr. Sebastian Deterding), *The Videogames Ethics Reader* (as editor), and *Ludoliteracy: Defining, Understanding, and Supporting Games Education*. I have also authored numerous peer-reviewed articles related to gaming and electronic media, and I regularly speak at both academic and game industry events such as the Game Developers Conference.

6. I have knowledge and experience in the area of mobile games and online games through my academic research, teaching activities, as well as the activities of students here at the University of Utah. My very first academic publication from over 20 years ago proposed a model to support the design of multiplayer games¹ at a time when multiplayer videogames were much rarer than they are nowadays. Since then, among other things, I have examined collaborative gameplay and the ethical considerations surrounding competition in multiplayer games. Mobile games and multiplayer games are also regular areas of discussion and analysis in the game design and ethics in videogame classes I teach at both the undergraduate and graduate levels (e.g. Introduction to Game Design, Mobile Game Design, Ethics in Games, etc.). For example, I designed and teach an undergraduate class on mobile game design that is offered as an elective in the BS in Games degree offered at the University of Utah. Mobile games are covered in most of the other courses I teach on games and game design.

7. Also, I have professional experience in the area of online communities and social websites. From 2000 to 2002, I was the Director of Content and Community Development at Virtualia S.A. Virtualia was a Chilean company that

¹ Zagal, J.P., Nussbaum, M., Rosas, R. (2000) "A Model to Support the Design of Multiplayer Games", Presence, Vol. 9, No. 5, October 2000, 448-462.

created and developed an online community of the same name. The site included many social features including chat, message boards, and more. One of its more unique features was its own virtual currency that users could spend to obtain virtual as well as real-world items. Furthermore, during the summer months from 2005 to 2007, I served as Director of Community Development for Studiocom, a full-service interactive media agency that designed and developed custom online communities for commercial clients such as Coca-Cola (CokeStudios, MyCoke) and Mattel (BarbieGirls.com).

8. My past experience as an expert witness includes in support of the plaintiff in *Segan LLC v Zynga Inc.* (United States District Court for the Northern District of California, Case No. 3:14-cv-01315-CV) concerning U.S. Patent No. 7,954,928, in support of the plaintiff in *Catherine Alexander v. Take Two Interactive Software Inc. et al.* (United States District Court for the Southern District of Illinois, Case No. 3:18-cv-0966-MJR-DGW) concerning copyright infringement, in support of the defendant in *Ragnarok Game, LLC and ESDFOS, LLC v. Nine Realms, Inc. dba Human Head, et al.* (Superior Court for the State of California, County of Los Angeles, Central District, Case No. 19STCV43434), and in support of the plaintiff in *Skillz Platform Inc. v. AviaGames Inc.* (United States District Court for the Northern District of California, Case No. 5:21-cv-02436) concerning U.S. Patent No. 9,649,564. I have also been retained as an expert witness for the defendant in

GREE, Inc. v. Supercell Oy (United States District Court for the Eastern District of Texas, Case Nos. 2:19-cv-00070, -161, -172, -311). I have also submitted expert declarations in support of petitions for post-grant and *inter partes* review in the following cases: *Supercell Oy v. GREE, Inc.*, IPR2020-00893, IPR2020-00513, IPR2020-00310, IPR2020-00215, IPR2020-00993, PGR2021-00041, and PGR-2021-00034.

9. My professional background and technical qualifications also are reflected in my Curriculum Vitae, which is attached as **Appendix A**.

III. COMPENSATION AND RELATIONSHIP WITH PARTIES

10. I am being compensated for my time. This compensation is not contingent upon my performance, the outcome of this matter, or any issues involved in or related to this matter.

11. I have no financial interest in Petitioner or any related parties. I have been informed that Flip Phone Games, Inc. owns the '662 Patent. I have no financial interest in and have no contact with Flip Phone Games, Inc. I similarly have no financial interest in the '662 Patent and have not had any contact with the named inventor.

IV. MATERIALS REVIEWED AND CONSIDERED

12. I have reviewed and considered, in the preparation of this declaration, the '662 Patent (Ex. 1001) and relevant portions of the prosecution file history for

the '662 Patent (Ex. 1002). I have also reviewed and considered the documents listed in the Exhibit List of this declaration, including the prior art I opine on in this declaration. I have also relied upon my education and experience in the relevant field of the art, and have considered the viewpoint of a POSITA as of the priority date of the '662 Patent.

V. UNDERSTANDING OF THE RELEVANT LEGAL STANDARDS

A. The Person of Ordinary Skill in the Art

13. I understand that central to the process of understanding the disclosures in a patent and assessing the validity of a patent is the notion of a person of ordinary skill in the art, sometimes referred to as a “POSITA.”

14. I have been informed that a person having ordinary skill in the art is a hypothetical person who is used to analyze the prior art without the benefit of hindsight. Such a person is presumed to be one who thinks along the lines of conventional wisdom in the art. It is my understanding that factors such as the education level of those working in the field, the sophistication of the technology, the types of problems encountered in the art, the prior art solutions to those problems, and the speed at which innovations are made may help establish the level of skill in the art.

15. I have been informed that the hypothetical person of ordinary skill is presumed to have knowledge of all references that are sufficiently related to one

another and to the pertinent art, and to have knowledge of all arts reasonably pertinent to the particular problem that the claimed invention addresses.

B. Claim Construction

16. I have been informed that “[i]n an *inter partes* review proceeding, a claim of a patent . . . shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b).

17. I understand that there are certain exceptions to the general rule of construing claims in accordance with their ordinary and customary meaning, including lexicography and disavowal, but I have not been asked to analyze those exceptions for the purposes of this declaration.

C. Anticipation

18. I understand that to anticipate a claim, each and every element in the claim must be present in a single item of prior art. I understand that anticipation must be found in a single reference, device, or process. In other words, anticipation does not allow an additional reference to supply a missing claim limitation.

19. In determining whether every one of the elements of the claimed invention is found in the prior art, I understand that one should take into account

what a person of ordinary skill in the art would have understood from his or her examination of the particular prior art.

20. I understand that an element may be inherent within a prior art reference, and therefore disclosed for purposes of anticipation. In order to rely on inherency, however, one must demonstrate that the element is necessarily present in the prior art reference, not merely likely or possibly present.

21. I also understand that the prior art reference alleged to be anticipatory must also enable one of ordinary skill in the art to make the claimed invention without undue experimentation. I understand there is a rebuttable presumption that prior art patents are enabled.

22. I understand that any differences between a prior art reference and a claimed invention invoke the question of obviousness, not anticipation.

D. Obviousness

23. I understand that a patent claim is also unpatentable if the claimed invention would have been obvious to a person of ordinary skill in the field at the time the claimed invention was made. This means that even if all of the requirements of the claim cannot be found in a single prior art reference that would anticipate the claim, a person of ordinary skill in the relevant field who knew about all this prior art would have come up with the claimed invention.

24. I understand an obviousness determination can be based on a single prior art reference or a combination of multiple prior art references and the knowledge of a POSITA.

25. I further understand that the ultimate conclusion of whether a claim is obvious should be based upon several factual determinations. That is, a determination of obviousness requires inquiries into: (1) the level of ordinary skill in the field; (2) the scope and content of the prior art; (3) what difference, if any, existed between the claimed invention and the prior art; and (4) any secondary evidence bearing on obviousness.

26. I further understand that, in determining the scope and content of the prior art, in order to be considered as prior art, a reference must be reasonably related to the claimed invention of the patent. A reference is reasonably related if it is in the same field as the claimed invention or is from another field to which a person of ordinary skill in the field would look to solve a known problem.

27. I understand that a patent claim composed of several elements is not proved obvious merely by demonstrating that each of its elements was independently known in the prior art. In evaluating whether such a claim would have been obvious, I may consider whether there is a reason that would have prompted a person of ordinary skill in the field to combine the elements or concepts from the prior art in the same way as in the claimed invention. I understand the prior art itself may

provide a suggestion, motivation, or reason to combine or modify the teachings of the prior art, or that such a reason may come from other sources, such as the knowledge of a POSITA, common sense, and market forces.

28. I further understand, however, that I must be careful not to determine obviousness using the benefit of hindsight. I should put myself in the position of a person of ordinary skill in the field at the time the claimed invention was made and I should not consider what is known today or what is learned from the teaching of the patent.

29. I further understand that there is no single way to define the line between true inventiveness on the one hand (which is patentable) and the application of common sense and ordinary skill to solve a problem on the other hand (which is not patentable). For example, market forces or other design incentives may be what produced a change, rather than true inventiveness. I may consider whether the change was merely the predictable result of using prior art elements according to their known functions or substituting one known element for another, rather than being the result of true inventiveness. I may also consider whether there is some teaching or suggestion in the prior art to make the modification or combination of elements claimed in the patent. I may consider whether the innovation applies a known technique that had been used to improve a similar device or method in a similar way. I may also consider whether the claimed invention would have been

obvious to try, meaning that the claimed innovation was one of a relatively small number of possible approaches to the problem with a reasonable expectation of success by those skilled in the art.

30. Finally, I understand that any obviousness rationale for modifying or combining prior art must include a showing that a person of ordinary skill would have had a reasonable expectation of success. The expectation of success need only be reasonable; a perfect implementation or commercial embodiment of the invention is not required.

E. Objective Indicia of Non-Obviousness

31. I understand that objective evidence may be considered as an indication that the claimed invention would not have been obvious at the time the claimed invention was made. I understand that the purpose of such objective indicia of non-obviousness, also sometimes referred to as secondary considerations of non-obviousness, is to prevent a hindsight analysis of the obviousness of the claims.

32. I understand that objective indicia of obviousness or non-obviousness may include the commercial success of the invention, industry praise for the invention, skepticism of the invention, licensing of the invention, copying of the invention, any long-felt need that the invention solved, failure of others, and unexpected results of the invention.

33. I further understand that in order for evidence of secondary considerations to be significant, there must be a sufficient nexus between the claimed invention and the evidence of secondary considerations. I understand that this nexus serves to provide a link between the merits of the claimed invention and the evidence of secondary considerations provided.

VI. SUMMARY OF OPINIONS

34. For purposes of this declaration, I have been asked to analyze claims 1-20 of the '662 Patent ("the Challenged Claims") in view of the prior art. In my opinion, the Challenged Claims are obvious based on the following prior art:

35. Claims 1-11, 13-19 are obvious based on International Patent Publication No. WO 2008/008038 ("Ho") in combination with U.S. Patent Publication No. 2002/0120589 ("Aoki").

36. Claims 1-20 are obvious based on International Patent Publication WO 2000/070489 ("Jiau") in combination with Aoki.

37. Claims 1-11 and 13-19 are obvious based on Ho in combination with U.S. Patent No. 6,928,414 ("Kim").

38. Claims 1-20 are obvious based on Jiau in combination with Kim.

39. I provide my detailed reasoning for the above opinions in the sections that follow.

VII. TECHNOLOGY BACKGROUND

40. In this section, I provide an overview of technical concepts and design principles underlying the '662 Patent.

A. Video Games

41. Video games have been available on a variety of different platforms for decades. The earliest video games date back to at least the late 1950s or early 1960s. For example, in 1958, Willy Higinbotham, a scientist at Brookhaven National Laboratory, programmed an oscilloscope to enable people to use it to play an interactive tennis game. Ex. 1010 at 35. In early 1961, one of the first proper computer games was developed by students at MIT, programmed on a computer the University had recently purchased—a computer that cost roughly \$120,000 and was the size of a large vehicle. *Id.* at 34. The first version of the game—called “Spacewar,” and allowing players to engage in simple one-on-one duels between rocket ships—took nearly six months and 200 hours of work to complete. *Id.* at 35.

42. Video games became much more popular and mainstream beginning in the 1970s. A number of different companies began developing and making video games for coin-operated arcade machines in the 1970s, leading to a significant boom in the industry by the end of the decade. *See generally* Ex. 1010 at 140-166 (discussing the “Golden Age” of video games from 1979-1980). The 1970s also saw video games enter the home and personal device market. In 1972, Magnavox

released one of the first home video game consoles, called the Odyssey. Ex. 1010 at 42. In 1977, Atari released the Atari home video game console (originally branded as the Video Computer System or VCS). *Id.* at 124. The system included a controller with dials and a joystick for playing games, and worked with video game cartridges, which players could insert into the system in order to play different games. *Id.* Many foundational games in video game history also find their origins in arcade machines and home console games, including Pong, Space Invaders, and Pac-Man. In the 1980s, video games on personal devices (such as home game consoles) became even more popularized, particularly with Nintendo's release of the "Famicom" in 1983 (later released in the United States as the "Nintendo Entertainment System"), followed shortly thereafter but Sega's "Master System." *Id.* at 295, 320. The growth of the video game market only accelerated with the passing years. For example, by 1989, video game companies such as Nintendo were reporting billions of dollars in sales per year. *Id.* at 429.

B. Mobile Games

43. Video game companies began developing portable video game products as early as some of the earliest home video game consoles. For example, in the 1970s, Nintendo created a portable watch-shaped video game device, named the "Game & Watch." Ex. 1010 at 296; Ex. 1011 at 2. In 1989, Nintendo released the Game Boy, designed by the same team that originally created the Game &

Watch—the first handheld video game system that used interchangeable cartridges, allowing players to play different games on the same device. Ex. 1010 at 430; Ex. 1011 at 2. Wireless network communication capabilities soon also became standard features in handheld video game systems including the Nintendo DS and Sony’s PlayStation Portable (PSP) both released in 2004. Ex. 1011 at 2. Ex. 1013 at 4.

44. Video games did not make a pronounced appearance on mobile **phones**, specifically, until the 1990s. One of the earliest mobile phone games was a mobile version of the arcade game *Snake*, preinstalled on Nokia mobile handsets beginning in 1997. Ex. 1011 at 2; Ex. 1012 at 2. As capabilities of mobile devices improved in the late 1990s and through the early 2000s—for example, bigger screens with color displays, faster processors, and increased memory capacity—demand for mobile games rapidly increased, and both handset manufacturers and game developers began to increasingly devote time and effort to the development of mobile games and mobile game platforms. Ex. 1012 at 2; Ex. 1013 at 2. As one example, in 2002, Nokia introduced the N-Gage, a portable gaming device built on mobile phone hardware and incorporating mobile phone functionality. Ex. 1013 at 4.

45. Designing games for mobile devices did pose some well-recognized challenges: for example, because different phones incorporated different screen sizes, color depths, APIs, and user inputs, developers had to design their games to

support a wide variety of different mobile device hardware. Ex. 1012 at 1; Ex 1014 at 1. Despite these challenges, however, mobile gaming was considered to be one of the fastest growing segments in the video game industry in the mid-2000s. Ex. 1014 at 1. For example, by 2003, experts already predicted that the mobile game market would generate over \$15 billion in annual revenue within several years. Ex. 1012 at 1. Many of the largest video game publishers also recognized the value of mobile games and sought to establish a foothold in that market—for example, in 2006, Electronic Arts acquired mobile game developer Jamdat for \$680 million. Ex. 1014 at 1.

46. Indeed, the challenges in mobile game design were far from insurmountable. By the early 2000s, multiple companies were already working on approaches to facilitate mobile game development. For example, Intel developed a 3D graphics toolkit for its mobile processors, designed to provide support for 3D rendering in mobile devices using fewer processing resources, and NVIDIA released a 3D wireless media processor to support increased improved graphics processing not previously possible on mobile devices. Ex. 1012 at 3; Ex. 1013 at 3. Mobile handset developers such as Ericsson and Motorola were working to define standardized APIs and software development kits to support game development on mobile devices, and, indeed, by 2007 had already published APIs for standard applications used by game developers, such as communications and multimedia. Ex.

1012 at 3; Ex. 1014 at 1. And companies such as Oracle and Qualcomm released mobile software platforms, such as J2ME (Oracle) and BREW (Qualcomm), which allowed game developer to create games that develop their game once and offer it on many different types of mobile devices. *Id.*; Ex. 1013 at 2-3.

47. By June 2007, the priority date of the '662 Patent, mobile devices and mobile games were both widespread and popular. For example, the '662 Patent itself notes in the specification that “[m]any mobile communication devices ... are capable of operating video games,” and “gaming on mobile communication devices has become a popular mode of entertainment.” Ex. 1001, 1:12-15, 1:25-27. Numerous publications and articles in industry journals similarly recognized the significance of mobile games and their expected long-term impact on the video game industry. *See generally, e.g.*, Exs. 1012, 1013, 1014.

C. Dynamic Content and In-Game Advertising

48. Around the time that mobile games were rising in popularity, particularly in the early-to-mid-2000s, video game publishers and advertising companies both began to appreciate the potential value of incorporating dynamic advertisements into video games.

49. The idea of incorporating new content into video games after their initial publication and release had already been popularized long before advertisers entered the picture. Many game developers had already developed expansion packs

for their games that would add new maps or items for released games, allowing players to experience older games in a new way. Similar concepts worked their way into mobile games as well. For example, by 2001, Nokia had launched a subscription service for its customers called “Club Nokia.” Ex. 1018 at 52. Club Nokia members could download game packs that added new levels or other in-game elements for applicable games on their mobile devices. *Id.*

50. By the early-to-mid-2000s, advertisers realized that video games represented an untapped market for reaching consumers and began partnering with video game developers and publishers to incorporate advertisements into video games. These joint efforts soon led to the development of in-game ad networks, utilizing advertising servers to dynamically supply ads for display in a wide variety of video games. For example, by 2006, multiple companies had launched in-game advertising networks, including Double Fusion, Massive Inc. (later acquired by Microsoft), IGA Worldwide, and AdScape (later acquired by Google). Ex. 1015 at 1-2; Ex. 1016 at 22-23. Although in-game ads frequently took the form of images overlaid on billboards, some ads were designed to be interactive within the game. For example, in 2006, Massive partnered with the game *Anarchy Online* to provide interactive billboards advertising the Toyota Yaris. Ex. 1016 at 45. These billboards would display additional information about the car when a player interacted with them. *Id.*

51. Some in-game ad networks were also designed to extend into mobile games as well. For example, in 2006, IGA Worldwide announced a partnership with Exit Games to deliver dynamic in-game advertising for mobile games. Ex. 1017 at 1.

D. Easter Eggs and Other Secret In-Game Content

52. The '662 Patent generally relates to “in-game hot spots,” which the patent describes as “a location or item, sometimes hidden within the game, that triggers additional specialized content when activated by a user or some other in-game element.” Ex. 1001, 1:63-66; *see also id.*, 2:21-23 (“A hot spot is an in-game feature that includes an activation element and a content element that is triggered by the activation element.”).

53. The term “hot spot” has a few different uses in the context of video games. However, the use of the term and the functionality the '662 Patent is referring to represents a fundamental concept in game design that dates back to many early and widely known games. In the 1980s and 1990s, there was a genre of video games called point-and-click adventure games, with popular games such as those in the *King's Quest* series (starting in 1984) and the *Monkey Island* series (starting in 1990). The “point-and-click” part of the genre’s name comes from the primary mode of interaction: players had to use the mouse to control a cursor on the screen (point) to interact with objects on the screen (by clicking the mouse button). In these games,

those areas of the screen that were interactive (i.e., would react when the cursor was placed on them and the mouse button clicked) were called “hot spots.” A simple interaction might involve, for example, clicking on a refrigerator door that is then opened, revealing the contents of the refrigerator. This concept continues to be used to this day in other game genres, beyond point-and-click adventure games.

54. An interesting feature of hot spots, and one that was rapidly adopted and widely used even back in the day, was to designate as hot spots areas of the screen that were not visually distinct (i.e., hidden) such that they would only be found by players “clicking” on parts of the screen for which there was no indication that anything would happen. These invisible hot spots would then reveal some sort of secret—*e.g.*, play a funny sound, play a short animation, display a message—that would be enjoyable, surprising, and interesting to players. For example, a player might click on a random brick on a wall in the background, and a game character might quip, “Nothing happens, what were you expecting, a secret doorway to open?” In videogames, these types of features that are not necessary to the completion of a game are referred to as easter eggs, hidden objects or locations, secrets, or special features.

55. One of the earliest examples of easter eggs in video games is in the Atari game *Adventure*, developed in 1979. Ex. 1010 at 202-206. At the time, Atari had a policy prohibiting individual game developers from receiving any publicity—

which also included a ban on in-game credits identifying the individuals who worked on a particular game. Instead, the sole developer of *Adventure*, Warren Robinett, decided to hide his name in a secret location within the game. To enter the secret room, players had to find and retrieve an object from a different location in the game—an object represented in game as a single gray dot, and itself hidden in a difficult-to-access location within a maze, camouflaged on a wall of the same color as the dot itself. If the player found and picked up the gray dot, and brought it (along with some other in-game objects) to the designated room within the game, it would grant the player access to the secret room, where “Created by Robinett” was displayed in rainbow colors.

56. Although Robinett’s easter egg was purely decorative—in the sense that the player did not receive any in-game advantage for discovering it—easter eggs can be functional as well. Indeed, easter eggs are well recognized as a fundamental element used in game design, and examples can be found in countless games, including many that predate the ’662 Patent. For example, in Nintendo’s *Super Mario Bros.* (1985), hidden coins and power-ups may be contained in blocks—some of which are either invisible or disguised as normal breakable blocks—when the player hits the blocks by jumping into them from below. Players may also find secret in-game locations by attempting to enter pipes (many of which are non-interactive background elements) or by exploring secret paths outside of the bounds of the

normal game level. Similarly, in Nintendo's *The Legend of Zelda* (1986), players could discover secret areas with power-ups by bombing certain in-game walls and burning certain in-game bushes. In many instances, the walls and bushes that hid these secret areas were indistinguishable from walls and bushes that merely represented impassible, non-interactive background elements.

E. Coordinate Information

57. By the time of the '662 patent, games with 2D graphics typically used the well-known cartesian coordinate system (x,y) to define positions on a two-dimensional plane. Ex. 1021, 1 ("2D Game" is "[a] game that only has X and Y coordinates for its objects and characters like Tetris and Pac-Man."); *see also* Ex. 1023, 176 ("When we say a game is 2D, we are referring to the fact that all objects in the game can be located by a coordinate pair. These coordinate pairs contain two values: X (horizontal position) and Y (vertical position)."). Similarly, 3D games also used coordinates (e.g. x, y, z) to define positions in a three-dimensional space. Ex. 1021, 1 ("3D Game" is [a] game whose objects and characters can have an X, Y and Z coordinate... An early 3D game example is the original Quake.").

58. For instance, using the image below as an example, let's imagine we had a point (0, 0) in the bottom-left of the screen and a point (10, 10) in the top-right. The gaming element at the intersection of the two red lines could be represented by coordinates, for example approximately (2, 6):



59. Coordinates systems were fundamental to managing and representing positions of objects, characters and elements within the game world by the time of the '662 patent. Indeed, in addition to the references relied upon in the grounds below, various other prior art references at the time disclose the use of a “two or three-dimensional coordinate system” to define areas in a game and locate in-game elements. *See, e.g.*, Ex. 1022, [0069]; Ex. 1023, 243, 249 (describing 2D and 3D

coordinate systems for games), 498-514 (describing examples of a 3D gaming element whose placement is given by coordinate information).

VIII. THE '662 Patent

60. In this section, I provide an overview of the '662 Patent and a summary of the prosecution history.

61. The '662 Patent is titled "*Methods and Systems for Providing In-Game Hot Spots.*" Ex. 1001. The underlying application was filed on February 14, 2014, as a continuation of U.S. Application No. 11/768,890, filed on June 26, 2007, now U.S. Patent No. 8,688,089. *Id.* I understand that June 26, 2007 is the priority date for purposes of the Petition and have used that date for my opinions herein.

A. Specification

62. The specification of the '662 Patent is directed to "providing hot spots for mobile games on mobile communication devices that receive hot spot information." Ex. 1001, Abstract. The mobile communication devices may be "cellular phones, PDAs, and other handheld devices capable of communicating with a server." *Id.*, 1:15-17. The "hot spots may be hidden aspects of the game and promotional in nature," i.e. containing advertisements. *Id.*

63. As I note above, the patent describes a "hot spot" as "a location or item, sometimes hidden within the game, that triggers additional specialized content when activated by a user or some other in-game element." Ex. 1001, 2:1-3. A "hot spot"

according to the '662 Patent “includes an activation element and a content element that is triggered by the activation element.” *Id.*, 2:25-27. “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.*, 2:31-33. The content element is “displayed when the hot spot is activated” and “may include ... a message, and the message may be promotional.” *Id.*, 2:33:38-41.

64. The '662 Patent explains that a “mobile communication device may contact a server to check for hot spot information to download.” *Id.*, 7:32-44. This includes communicating with the server “over the Internet.” *Id.*, 9:17-20. The server may “determine what hot spot information should be sent to the mobile communication device ... based on the model type of the mobile communication device, the service plan to which the mobile device belongs, the service provider that provides the plan to the mobile device, ... and/or other criteria.” *Id.*, 13:37-47. Once the hot spot information has been determined, “the hot spot information may be sent to the mobile communication device.” *Id.*, 14:8-9.

65. Once the hot spot information is downloaded by the mobile communication device, location information is used “to designate a location in-game for activating the particular hot spot.” *Id.*, 11:41-44. When “activation of a hot spot via user manipulation of the hot spot location” is detected, “content may be presented to the user.” *Id.*, 12:28-42.

B. Prosecution History

66. The application underlying the '662 Patent was filed on February 14, 2014, as a continuation of U.S. Pat. No. 8,688,089, which was filed on June 26, 2007. Ex. 1002.

67. During prosecution of the '662 Patent, the Examiner rejected all claims as obvious over Lauper in view of Chu. *Id.* at 86. Specifically, the Examiner concluded that “Lauper discloses the [subject matter of the '662 Patent] substantially” but relied upon Chu to disclose “placing content in non-promotional locations that lack a nexus to advertisement data.” *Id.*

68. In response, Applicant amended the independent claims to recite that the hot spot information comprises “coordinate information” and that the activation of the hot spot is “based on the coordinate information.” *Id.* at 65.

69. According to the file history, Examiner nonetheless rejected the newly amended claims on the basis that Chu disclosed such “coordinate information.” *Id.* at 47. The Examiner noted that “Chu additionally teaches that locations both for advertisements and non-promotional content are associated with game coordinates.” *Id.* at 48. Chu introduced a term, “defining,” which Chu explained “refers to a unique method of specifying the areas or objects within a game in which advertisements may display.” *Id.* Additionally, “‘areas’ in this context refers to any region mapped to any two or three-dimensional coordinate system bounded by the spatial

dimensions of the described space.” *Id.* Accordingly, the Examiner concluded that the Chu disclosed the newly amended claims. *Id.*

70. The Applicant filed a Request for Continued Examination and then amended the claims to recite “displaying an object at the designated non-promotional location.” *Id.* at 26. The Applicant alleged that this limitation rendered the claims non-obvious over Lauper in view of Chu, as “Chu fails to disclose that any object displayed at a designated location which, when activated, results in the display of the advertising information.” *Id.* at 30.

71. After this amendment, the Examiner issued a Notice of Allowance. *Id.* at 13. I believe that the prosecution history reveals that the point of novelty was “displaying an object at the designated non-promotional location.” *Id.*, 23. In my opinion, the prior art in this petition discloses this alleged point of novelty and renders the challenged claims unpatentable.

C. Claims

72. I understand that Petitioner challenges claims 1-20 of the ’662 Patent, which I reproduce below:

Claim 1	
1[pre]	A method for retrieving and displaying a hot spot associated with a video game operable on a mobile communication device, comprising:

1[a]	contacting a server for hot spot information to download, comprising providing the server with at least one of: a game for which hot spot information is desired, a scene for which hot spot information is desired, an element for which hot spot information is desired, the model type of the mobile communication device, the service plan to which the mobile device belongs, the service provider for the mobile communications device, the base location of the mobile communication device, the current location of the mobile communication device, a version identifier for hot spot information currently on the mobile communication device, user-identification information, preset location, amount of game-play time, game score, and level of play;
1[b]	downloading hot spot information from the server to the mobile communication device, the hot spot information comprising:
1[b][1]	hidden content for presenting to the user when the hot spot is activated; and
1[b][2]	coordinate information;
1[c]	designating a non-promotional location in-game associated with activating the hot spot based on the coordinate information;
1[d]	displaying an object at the designated non-promotional location; and
1[e]	displaying the hidden content when the user activates the hot spot.
Claim 2	
2	The method of claim 1, wherein the hidden content is promotional.
Claim 3	
3	The method of claim 1, wherein the coordinate information comprises time information for placing the hot spot in-game.
Claim 4	
4	The method of claim 1, wherein the coordinate information comprises one or more predefined in-game locations.
Claim 5	
5	The method of claim 1, wherein the hot spot information further comprises an object to be displayed in-game at the non-promotional location.

Claim 6	
6	The method of claim 1, wherein the hot spot information specifies a type of manipulation required to activate the hot spot.
Claim 7	
7	The method of claim 1, further comprising saving on the mobile communication device a version identifier for the downloaded hot spot information.
Claim 8	
8	The method of claim 1, wherein the hidden content comprises one or more objects selected from the group consisting of messages, graphics, animations, and sounds.
Claim 9	
9	The method of claim 8, wherein the hidden content is promotional.
Claim 10	
10	The method of claim 1, wherein the hidden content is displayed in a pop-up window.
Claim 11	
11	The method of claim 1, wherein the hidden content is displayed on the mobile communication device in a website separate from the video game.
Claim 12	
12	The method of claim 1, wherein the hidden content comprises a second hot spot.
Claim 13	
13[pre]	A method for retrieving and displaying a hot spot associated with a video game operable on a mobile communication device, comprising:
13[a]	contacting a server for hot spot information to download, comprising providing the server with user-identification information;
13[b]	downloading hot spot information from the server to the mobile communication device, the hot spot information comprising:
13[b][1]	hidden promotional content for presenting to the user when the hot spot is activated; and

13[b][2]	coordinate information;
13[c]	designating a non-promotional location in-game associated with activating the hot spot based on the coordinate information;
13[d]	displaying an object at the designated non-promotional location; and
13[e]	displaying the hidden promotional content when the user activates the hot spot.
Claim 14	
14	The method of claim 13, wherein the hidden content is promotional.
Claim 15	
15	The method of claim 13, wherein the coordinate information comprises time information for placing the hot spot in-game.
Claim 16	
16	The method of claim 13, wherein the hot spot information further comprises an object to be displayed in-game at the non-promotional location.
Claim 17	
17	The method of claim 13, wherein the hot spot information specifies a type of manipulation required to activate the hot spot.
Claim 18	
18	The method of claim 13, wherein the hidden content comprises one or more objects selected from the group consisting of messages, graphics, animations, and sounds.
Claim 19	
19	The method of claim 13, wherein the hidden content is displayed in a pop-up window.
Claim 20	
20	The method of claim 13, wherein the hidden content comprises a second hot spot.

IX. LEVEL OF ORDINARY SKILL IN THE ART

73. In my opinion, based upon my knowledge and experience in the field of the '662 Patent (*i.e.*, video game design and associated software programming), a POSITA as of June 26, 2007 would have had at least an undergraduate degree in game design or development, computer science, computer engineering, or a related field, and 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. The following reasons support my opinion.

74. First, the typical level of education for persons working in the field would include an undergraduate degree in game design or development, computer science, computer engineering, or a similar field. Video games are essentially a specific type of software application, and developing video games involves developing the software for the game. For example, by 2007, most video games included, at a minimum, software programming to enable (1) computer graphics, such as for displaying a game world, game characters, and game objects on the screen; (2) user input, such as from a keyboard, mouse, joystick, or other controller, to allow the user to control a character or interact with the game world; and (3) logic for progressing through the game and changing the game world or game state in response to the user input. By 2007, many games also included a multiplayer or online component, which additionally required software programming for

communicating with devices of other players in the game or a game server (i.e. networking). I would expect a college graduate with a degree in game design or development, computer science, or computer engineering to be familiar with these aspects of software programming. Indeed, by early 2007, several colleges already offered courses specifically focusing on game design and even mobile game design. Ex. 1014 at 2.

75. Second, two years of experience working with computer gaming systems or software application development would be typical for a person deemed to have ordinary skill in the technology underlying the '662 Patent. This level of experience may provide an engineer with more specialized focus in software development that may be relevant to video games. It may also provide an engineer with an understanding of common video game elements and design principles and how those principles would be implemented in the software of a video game.

76. Third, the objective of game designers and developers in the field typically involved making games more engaging and appealing to players. Various elements could contribute to these objectives, such as improved computer graphics to catch the player's eye, larger game worlds to offer the player more opportunities to explore and interact with the game, more interactive in-game elements to engage the player, improved artificial intelligence for computer-controlled characters (*e.g.*, in-game enemies) to make the game world more realistic, or to better adapt the

challenge of the game to the player's skill level, and dynamic and updateable content to keep the game "fresh" even after the player becomes familiar with the game mechanics. A game developer or software engineer with a game design or computer science/engineering background and at least two years of experience with gaming systems or software development would have been familiar with these problems and programming techniques to implement and address them. For example, an entry level game developer or game programmer would be familiar with basic game elements such as maps, characters, items, and user input, and would have a sufficient understanding of programming techniques to implement those elements in a video game.

77. Fourth, the proposed level of skill is consistent with the sophistication of the technology claimed in the '662 Patent. The patent and claims relate to a typical problem in game design, *i.e.*, how to keep games interesting for longer periods of time, and only require standard programming techniques to implement the alleged invention, such as defining and displaying objects in the game, providing responses to user input, communicating with a server over a network, and making certain decisions based on criteria.

78. I note that I meet and exceed the definition of a POSITA offered above.

X. CLAIM CONSTRUCTION

79. For purposes of this declaration, I have applied the ordinary and customary meaning of the claim terms as they would have been understood to a POSITA as of the priority date of the '662 Patent, June 26, 2007. I have considered that meaning in the context of the patent and its prosecution history.

80. Based upon my review of the '662 Patent, and my based on my own knowledge, expertise, and experience in this field, the claims do not use any specialized terms that would require additional explanation or express definitions, beyond those expressly provided in the specification of the patent (namely, for the term “hot spot”). The ordinary and customary meaning of the claims and the terms used therein, read in the context of the specification, would have been understood by a POSITA.

XI. OVERVIEW OF THE PRIOR ART

81. In this section, I provide an overview of the prior art references that I have relied on to inform my opinions.

82. As I describe in this section, all of the references I rely upon in my obviousness analysis relate to video games, and more specifically, to one or both of (1) the provision and display of advertisements in a video game (and typically, a video game running on a mobile communication device), or (2) the provision and display of dynamic interactive elements in a video game. Thus, all of these

references would be obvious sources that a POSITA would have considered when seeking to improve mobile video games, as they all relate to the same field of endeavor, *i.e.*, systems and methods for delivering dynamic advertisements and interactive elements (including interactive advertisements) to video games.

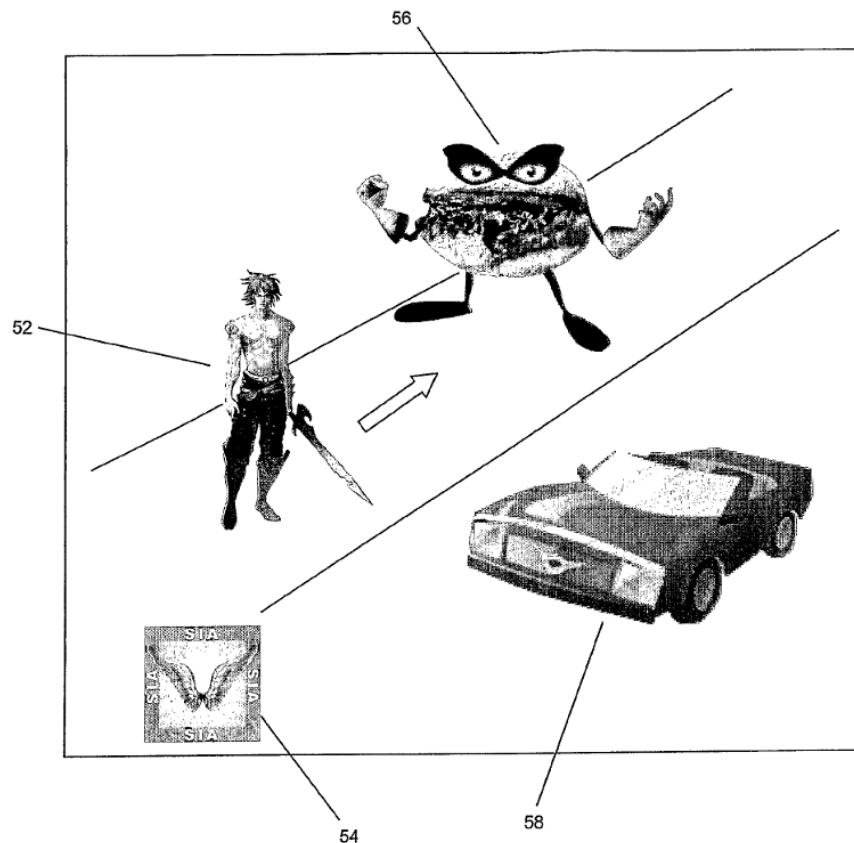
A. International Patent Pub. No. WO 2008/008038 (“Ho”)

83. International Patent Publication No. WO 2008/008038 to Ho is titled *An Incentive-Based Video Gaming System*. Ex. 1004. Ex. 1004. Ho was filed on July 12, 2006.

84. Ho is directed to “a video game incorporated with at least one interactive information element.” Ex. 1004, 1:5-6. In particular, Ho focuses on how to improve advertisements in video games by making them both dynamic and interactive. Specifically, Ho seeks to overcome two problems with then-existing in-game advertisements: that there was “no impetus for the player to pay more attention to the static advertisements while playing the video game,” and that there were “no methods available to incorporate interactive and update-able advertisements into existing video games without a major revision of the source code.” *Id.*, 1:28-31, 1:35-37.

85. Ho describes “a video game with at least one interactive information element incorporated within the game,” which includes games on “a video games console, a mobile telephone, [or] a personal digital assistant.” *Id.*, 2:1-2, 2:20-22.

The interactive information element appears in the game as “an icon in the game, a character in the game or an item in the game.” *Id.*, 2:11-12. For example, in one embodiment, illustrated in Figure 3 (reproduced below), the interactive information elements may be “a ‘wings’ button 54 to enable the character 52 to fly (an example of an icon in the game), a hamburger monster 56 (an example of a character in the game) and a car 58 (an example of an item in the game).”



Id., Fig. 3, 5:1-5. Engaging with the “interactive information element may activate[] an action such as, for example, an on-screen presentation,” which may be “either within the course of gameplay or in a sub-screen in the game.” *Id.*, 2:22-26. The

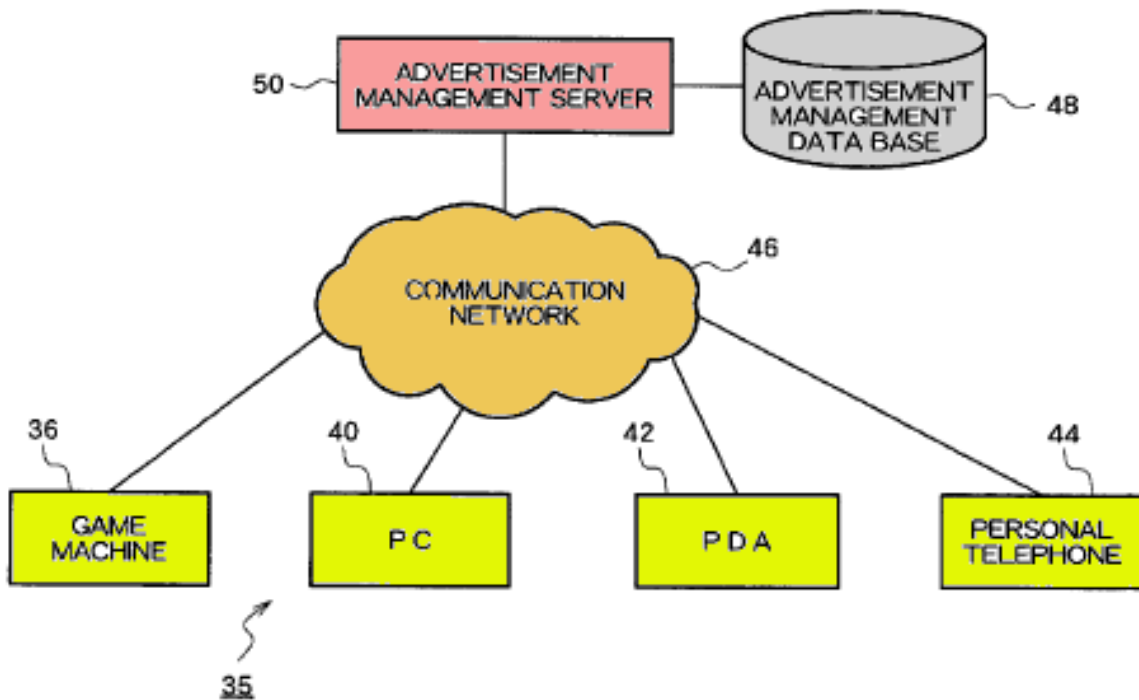
content associated with the interactive information element “may be either advertisements or public announcement services.” *Id.*, 2:9-10.

86. The interactive information element can also “be updated.” *Id.* 2:17-18. In one example, the video game client (*e.g.*, the mobile communication device) may connect to a server and “automatically download[] and replac[e] relevant sub-modules of the interactive information elements in the video game.” *Id.*, 9:31-33, 10:2-6. The server “determines whether the interactive information element(s) needs to be changed/renewed,” and if they do, “then new interactive information element(s) are sent to the client end device.” *Id.*, 10:14-19.

B. U.S. Patent Publication No. 2002/0120589 (“Aoki”)

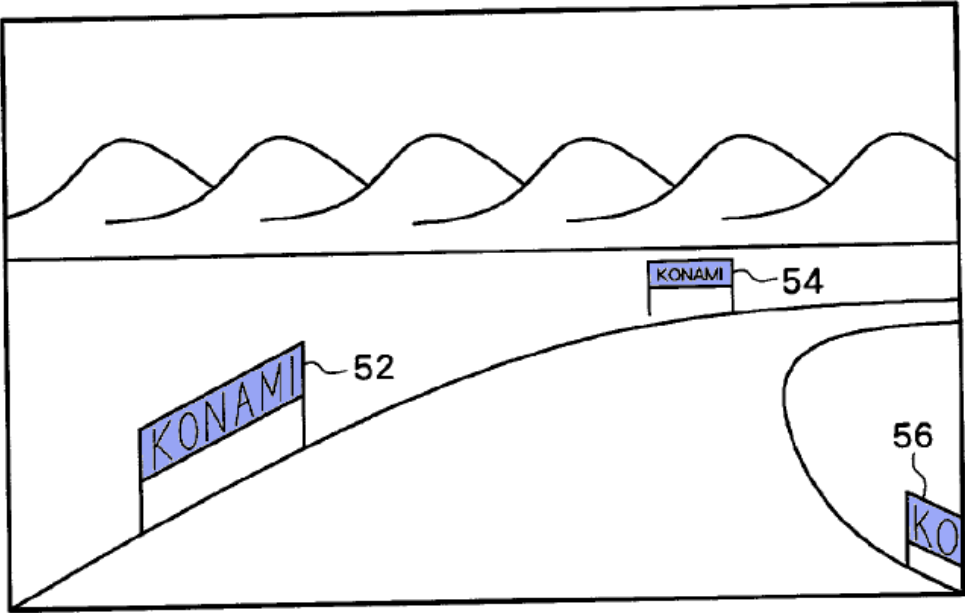
87. U.S. Patent Publication No. 2002/0120589 to Aoki is entitled *Game Advertisement Charge System, Game Advertisement Display System, Game Machine, Game Advertisement Charge Method, Game Advertisement Output Method, Game Machine Control Method and Program*. Ex. 1005. It was filed on February 27, 2002 and was published on August 29, 2002. *Id.*

88. Aoki relates to a “game advertisement charge system” that includes game terminals (yellow) connected over the communication network (orange) to an advertisement management server (red) that comprises an advertisement management database (grey):



Id., Fig. 1, [0060]-[0062]. “A game advertisement may be supplied from various advertisers in the form of a still picture, a motion picture, audio, character data (text data)” and “sent to a game terminal” via the communication network. *Id.*, [0067].

89. For instance, Figure 3 illustrates an example of a game image for a 3D driving game that includes “placard objects 52, 54, 56” (blue) installed on the “road”:

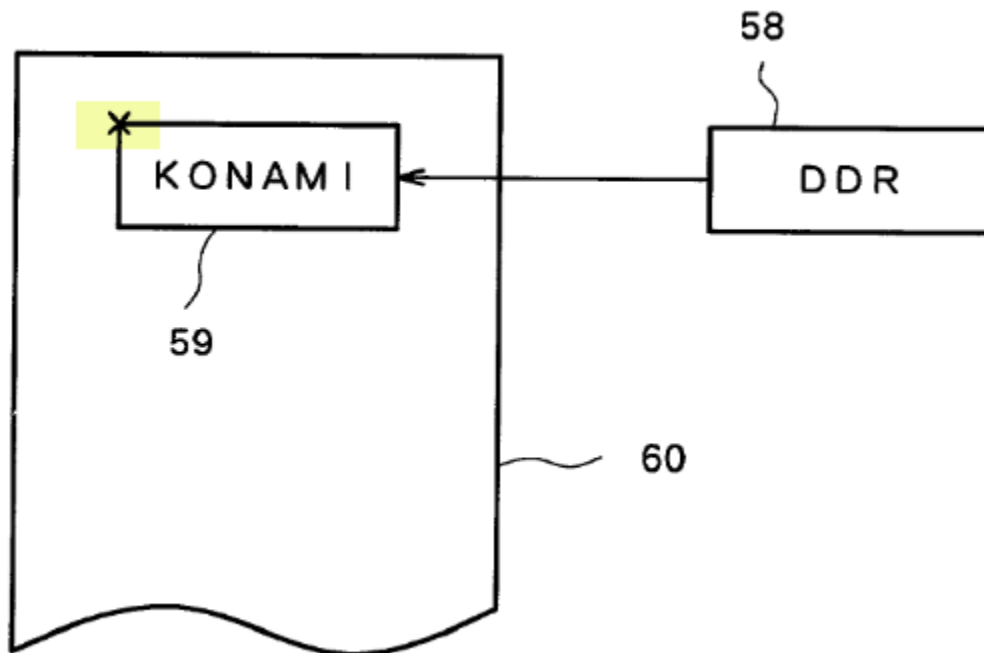


Id., Fig. 3, [0068]. Each of the placard objects has “an advertisement image attached thereon,” which may be a texture image. *Id.* In the case of Figure 3, a “Konami” advertising image is shown. *Id.* Aoki teaches advertisements may be associated with other objects too, “such as a building, a game character object, and a moving object.” *Id.*

90. Figure 5 discloses the contents of the “advertisement management database 48” that comprises “advertisement placement location data”:

ADVERTISEMENT ID	IMAGE PATH	GAME ID	ADVERTISEMENT PLACEMENT LOCATION DATA (ADVERTISEMENT TEXTURE DATA, REPLACING POSITION)	ADVERTISEMENT PERIOD
0 0 1	xxx/xxx.bmp	0 1 2 3	• • • • •	2001/1/1~2001/2/28
0 0 2	xxx/xyy.bmp	0 1 2 3	• • • • •	2001/1/1~2001/9/1

Id., Fig. 5, [0072]. “As shown, ‘advertisement placement location data’ includes ‘texture image ID’ and ‘replacing position.’” *Id.* “‘Texture image ID’ is information identifying a texture image used in the relevant game, and ‘replacing position’ is information, expressed in X and Y coordinates, specifying a position in each texture image, where an advertisement image is to be embedded.” *Id.* When the time arrives to display an advertisement image, the advertisement placement location data is used to embed the advertisement image “into the point designated by the ‘replacing position,’” for example the point “marked X in the image in Fig. 7” below:



Id., Fig. 7, [0074]. Thus, Aoki uses the received X and Y coordinates in the advertisement placement location data to display an advertisement at the appropriate location in-game. *Id.*

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

91. International Patent Publication No. WO 2000/070489 to Jiau is titled *Method and Apparatus for Providing Hotspots in a Shared Virtual World*. Ex. 1005. Jiau was filed on May 12, 2000 and published November 23, 2000. *Id.*

92. Jiau is directed to “shared three-dimensional virtual worlds” such as those provided by many “three-dimensional games.” *Id.*, Abstract, 1:22-24. However, Jiau’s virtual world is divided into “a plurality of ‘lots,’ similar to ‘lots’ of real estate in the real world,” which users “can reserve ... to design as they please.” *Id.*, 1:32-2:2. Each lot may also include “objects ... that have certain behaviors, such as playing an ad or animation when selected.” *Id.*, 2:19-20. Information about lots and objects is stored “in a memory or database of the server,” and the user’s device “fetches objects within lots ... as the user ‘moves’ through the virtual three-dimensional world.” *Id.*, 2:7-9, 3:18-21.

93. Objects in Jiau’s virtual world may have an associated “link,” so that “when a user selects (via a mouse click, etc.) an object that is defined as having an associated link, the client system takes various actions, depending on the type of

link.” *Id.*, 12:13-15. A link can “cause an action ... such as display of an advertisement or an animation.” *Id.*, 12:25-27.

94. Jiau’s objects may also have “hotspots” and “hotspaces” that “cause the performance of a predefined action.” *Id.*, 16:29-30. A “hotspot” may be a region “that causes actions to occur when the user touches or selects the object.” *Id.*, 16:30-31. Similarly, a “hotspace” may be “a predetermined space surrounding an object” that causes an action when the user interacts with the hotspace, for example, “when a user walks within ten virtual feet of a hotspace.” *Id.*, 16:32-17:4.

D. U.S. Patent No. 6,928,414 (“Kim”)

95. U.S. Patent No. 6,928,414 to Kim is titled “Advertisement Method Using Game Program On The Internet And Method For Executing The Game Program Having The Advertisement According To The Advertisement Method.” Ex. 1007. It was filed on August 30, 2000 and issued on August 9, 2005. *Id.*

96. Kim “relates to a method of advertisement which is applied to a game on the internet.” *Id.*, 1:14-17. Kim states that “passive banner advertisements” are not effective, and proposes solving this problem by allowing more “active” advertisements that are inserted in a game program. *Id.*, 1:64-2:25.

97. Kim discloses that “an advertisement item” is incorporated into a game program so that the character of the game can “find or pick it.” *Id.*, 8:46-52. For instance, Kim explains that a monster may appear at a “certain place and certain

time” in the game. *Id.*, 8:60-64. If a user’s character encounters and fights the monster, an “advertisement item relevant to the monster can be shown at the spot where the monster [] dies.” *Id.*, 8:49-52.

98. Kim further discloses that the client and server exchange coordinate information to display gaming elements and advertisements. *Id.*, 8:2-11 (“server system needs to transfer co-ordinates to each client system.”), 8:24-43, Fig. 5. For instance, “[a]ll movement of monsters is controlled by server and the monster appears at a certain time in a certain place by use of generator of column.” *Id.*, 9:7-39. The server transfers packets with coordinate information for the monster and advertisements. *Id.*, 9:14-19..

XII. OBVIOUSNESS ANALYSIS FOR THE CHALLENGED CLAIMS

99. In this section, I provide an analysis of how the prior art renders obvious claims 1-20 of the ’662 Patent. I have organized my analysis into the following grounds:

Grounds	Claims	Statutory Basis	Prior Art
1	1-11 and 13-19	§103	Ho in view Aoki
2	1-20	§103	Jiau in view of Aoki
3	1-11 and 13-19	§103	Ho in view of Kim
4	1-20	§103	Jiau in view of Kim

100. For each ground, I address motivation to combine and reasonable expectation of success, and then analyze the teachings of the prior art on an element-by-element basis.

A. Ground 1: Ho in view of Aoki Renders Obvious Claims 1-11, 13-19

101. In the proposed Ho-Aoki combination, Ho's teachings provide the basic features of a mobile video game with dynamically updated elements, including interactive elements (*i.e.*, hot spots) that are stored on and retrieved from a server, and that trigger hidden in-game content when activated by a player. To the extent not already disclosed by Ho, Aoki's teachings supply additional details regarding the use of coordinate information provided by a server for placement of the interactive elements.

102. For the reasons set forth in detail below, and based on my review of the '662 Patent, file history, and the prior art references cited in my analysis, a POSITA would have readily understood that the teachings of Ho in view of Aoki render obvious all elements of claims 1-11 and 13-19.

1. Rationale to Combine Ho and Aoki

103. In my opinion a POSITA would have been motivated to apply Aoki's teachings to Ho's video game, and would have had a reasonable expectation of success in combining the references.

104. **First**, Ho provides express teachings that would motivate a POSITA to combine the references. Ho states that a “major disadvantage” in existing video games is the inability “to incorporate interactive and update-able advertisements into existing video games without a major revision of the source code.” *Id.*, 1:35-37. Thus, Ho describes a video game that can receive from a server “new” or “changed” interactive information elements which are engageable to display advertisements. Ex. 1004, 10:14-19. A POSITA would have understood that these new or changed elements must be positioned at the appropriate location in-game and that 2D and 3D games use coordinate information to position gaming elements, as I discussed above in the Technology Background. Although Ho in view of the general knowledge of a POSITA renders obvious providing coordinate information for placing new or changed interactive information elements in-game, Ho provides only high-level implementation details. Ex. 1004, 9:33-36 (server may provide the client with a “module” that “enable[s] the at least one interactive information element” and that “may also enable the **location** of the least one interactive information element at a juncture in the video game.”), 7:17-23 (interactive information elements may be “located at a juncture in the game”). Thus, a POSITA would have also been motivated to look to other reference, such as Aoki, for additional implementation details regarding how to locate these elements. Aoki confirms that a server may provide “placement location data” that includes “X and Y coordinates” for

positioning elements received from the server (*e.g.*, advertisements). *Id.*, [0072], [0074], Fig. 7.

105. **Second**, the combination of Ho and Aoki reflects the application of a known technique in my opinion. Indeed, by the time of the '662 Patent, many video games used coordinates extensively to manage and represent the position of objects, characters and elements within the game world, such as the interactive information elements and hidden content in Ho. For instance, in games with 2D graphics, the well-known cartesian coordinate system (x,y) may be used to define positions on a two-dimensional plane. Similarly, 3D games also use coordinates (*e.g.* x, y, z) to define positions in a three-dimensional space. And, it is well-known that games can (and often) use multiple coordinate systems wherein, for example, a position on a specific two-dimensional plane uses the typical cartesian coordinate system, while a different coordinate system is used to locate said two-dimensional plane in a three-dimensional space. In my opinion, a POSITA would have understood that locating Ho's in-game elements based on coordinate information from a server would improve Ho's video game by permitting a game to include new, dynamic elements and advertisements whose positioning information may be provided in real time using X and Y coordinates received from a server.

106. **Third**, in my opinion, Ho and Aoki are all directed to the same types of improvements in game design and monetization that the '662 Patent purports to

provide. For example, the '662 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 and Aoki identify similar improvements for video games. For example, Ho explains that its invention overcomes problems with “current forms of advertising in video games” that “do not engage the player during the course of game play” and do not easily allow for “update-able” gaming content. Ex. 1004, 1:26-38. Similarly, Aoki states that its invention is directed at increasing attention advertisements retrieved from a server may receive. Ex. 1005, [0006]-[0007]. In my opinion, a POSITA would have looked to Ho and Aoki when considering how to implement known video games that provide advertising content.

107. **Finally**, Ho, Aoki, and the '662 patent are all analogous art because the '662 Patent and the prior art references are all in the same field of endeavor, *i.e.*, video games and, in particular, in-game advertising. For example, the '662 Patent relates to “hot spots for mobile video games” that that may be received from a server. Ex. 1001, Abstract. Similarly, Ho is directed at “a video game with at least one interactive information element” that may be engaged to display “advertisements” (Ex. 1004, Abstract), and Aoki is directed techniques for capturing “a player’s attention to a game advertisement” (Ex. 1005, Abstract).

2. Claim 1

- a) 1[Pre]: “A method for retrieving and displaying a hot spot associated with a video game operable on a mobile communication device, comprising:”:

108. To the extent the preamble is limiting, in my opinion, Ho discloses this limitation.

109. For example, Ho teaches how to incorporate an “interactive information element into a video game.” Ex. 1004, Abstract. Ho’s interactive information elements are examples of “hot spots” as described by the ‘662 Patent, because they correspond to designated in-game locations that cause actions to occur, such as displaying an advertisement, when the user engages the element. *Id.*, 5:9-38; *see also* Ex. 1001, 2:25-30 (“A hot spot is an in-game feature that includes an activation element and a content element that is triggered by the activation element.”). Ho further teaches that “[t]he video game may be run on a device such as ... a mobile telephone” or “personal digital assistant.” *Id.*, 2:20-22.

- b) 1[a]: “contacting a server for hot spot information to download, comprising providing the server with at least one of: a game for which hot spot information is desired, a scene for which hot spot information is desired, an element for which hot spot information is desired, the model type of the mobile communication device, the service plan to which the mobile device belongs, the service provider for the mobile communications device, the base location of the mobile communication device, the current location of the mobile communication device, a version identifier for hot spot information currently on the mobile communication device, user-identification information, preset location, amount of game-play time, game score, and level of play;;

110. In my opinion, Ho discloses or renders obvious this limitation.

111. “contacting a server for hot spot information to download”: For example, Ho teaches that a “client end device” such as a “mobile telephone” may “connect[] to a server,” which in turn downloads “new interactive information element(s)” (i.e., **hot spots**) to the client end device. Ex. 1004, 10:3-6, 10:14-17; see also *id.*, 6:28-31 (“For video games that are played in an online mode, the interactive information elements may be updated by automatically downloading and replacing relevant sub-modules controlling the interactive information elements in the video game.”), Figs. 4-5.

112. “comprising providing the server with at least one of...”: Ho teaches that the server “obtain[s] data from the client end device.” Ex. 1004, 10:6-

8. In my opinion, a POSITA would understand that the data provided by the client device may comprise one or more items recited in limitation 1[a].

113. For example, Ho discloses that the interactive information elements may be used to display public announcements services, such as “warnings of hurricanes, tsunamis, earthquakes,” etc. Ex. 1004, 9:7-15. In my opinion, a POSITA would understand this disclosure to teach that the client device provides the server with “the current location of the mobile communication device.” For instance, such information would be important to ensure that a warning about a hurricane in Florida is directed to residents located in Florida and not residents in Oregon.

114. As another example, Ho discloses that engaging a hot spot may reveal hidden content received from the server, such as an advertisement for a “chain of fast food restaurants” that is to be displayed when “character 52 slay[s] the hamburger monster 56.” Ex. 1004, Abstract, 2:6-9, 5:35-39, 8:19-21. In my opinion, a POSITA would understand this disclosure to teach that the client device provides to the server the “scene” or “element” (*i.e.*, the hamburger monster) for which hot spot information is desired so that the server may return the appropriate hot spot information and associated advertisement. In my opinion, a POSITA would also understand this disclosure to teach that the client device provides the server with the “current location of the mobile communication device” so that the advertised fast food chain is one that is within the geographic location of the client device.

115. In another example, a POSITA would have understood Ho to disclose or render obvious providing the server with “the model type of the mobile communication device” in my opinion. For instance, Ho teaches that its game may run on a “mobile telephone” (Ex. 1004, 2:20-22): in my opinion, a POSITA would have understood that mobile phones had different capabilities (*e.g.*, different screen sizes, resolutions, and operating systems). Thus, a POSITA would have understood or found it obvious to provide the server with the model type of the mobile phone so that the server may return hot spot information that is compatible or optimized for the capabilities of the mobile phone.

116. Ho also discloses that when contacted by the client device, the server must “determine[] whether the interactive information element(s) needs to be changed/renewed (108).” Ex. 1004, 10:14-19. “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 (110).” *Id.* In my opinion, a POSITA would have understood this disclosure to teach and render obvious providing the server with “a version identifier” for the interactive information element currently on the mobile communication device so that the server can determine whether or not it needs to be replaced. Absent such an identifier, the server may send a client device an interactive information element that the mobile device already possesses, which would result in wasted bandwidth and system resources communicating the

duplicative information. Moreover, because Ho teaches that its video game may be subject to ongoing development, with updated modules and interactive information elements (*i.e.*, new versions) being published over time (Ex. 1004, 9:25-27), a POSITA would have understood that these new versions should be assigned a version number so that the system can determine whether the mobile phone has the latest version of software. *See* Ex. 1020 (U.S. Pub. No. 2003/0100355), [0019] (“When new levels and/or versions are applied to the game the content provider modifies the games content. Modified games content has an associated identifier tag that identifies the version that has been used in its construction.”).

117. To the extent Ho does not disclose or render obvious this limitation, the combined teachings of Ho and Aoki render the limitation obvious in my opinion. For instance, Aoki discloses that a game terminal (e.g., a “telephone”) that is operable to run a video game provides an advertisement management server “the ID of the player who uses the game terminal” and a “game ID identifying a game” in order to obtain advertisements. Ex. 1005, [0077]. Thus, in my opinion, in the combined Ho-Aoki system the client end device would continue to download from the server interactive information elements and hidden content, and would do so after providing the server the ID of the player (“user-identification information”) and a game ID (“a game for which hot spot information is desired”). A POSITA would be motivated to provide the server a user ID and game ID so that advertisements can

be targeted based on this information. Ex. 1008, [0054]-[0055] (describing various characteristics that may be used for targeting advertisements, including user information and game type).

- c) 1[b] “*downloading hot spot information from the server to the mobile communication device, the hot spot information comprising: (1) hidden content for presenting to the user when the hot spot is activated; and (2) coordinate information*”

118. In my opinion, Ho discloses or renders obvious this limitation.

119. “**downloading hot spot information from the server to the mobile communication device**”: 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.” *Id.*, 10:15-19.

120. “**the hot spot information comprising: (1) hidden content for presenting to the user when the hot spot is activated**”: Ho further teaches that interactive information elements (*i.e.*, hot spots) comprise hidden content for presenting to the user when the hot spot is activated. For example, Ho teaches that its interactive information elements may be represented by non-promotional objects,

such as in-game characters or items. 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, Fig. 3. Ho further explains that activating these interactive elements reveals hidden content for presenting to the user, such as advertisements. *Id.*, 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”), 8:11-21.

121. “**and (2) coordinate information**”: Ho discloses interactive information elements (*i.e.*, hot spots), such as a “wings button 54” (icon), a “hamburger monster 56” (character in a game), or “a car 58” (item) that when engaged displays hidden content (*e.g.*, advertisements). *Id.*, 5:2-16, 5:27-38. Ho further teaches that the interactive information elements and hidden content that is displayed when an interactive information element is activated may be provided by the server and “located at a juncture in the game such as... a specific location in the game.” Ex. 1004, 7:17-23; *see also id.*, 9:33-36 (server may provide the client with a “module” that “enable[s] the at least one interactive information element” and that “may also enable the location of the least one interactive information element at a juncture in the video game.”). In my opinion, a POSITA would have understood Ho’s disclosures to teach providing coordinate information for the in-game location

of the interactive information element and advertisement. Indeed, a POSITA would understand that by the time of Ho many video games used coordinates extensively to manage and represent the position of objects, characters, and elements within the game world. For example, in games with 2D graphics, the well known cartesian coordinate system (x, y) is used to define positions on a two-dimensional plane. Similarly, 3D games also use coordinates to define positions in a three-dimensional space. Thus, a POSITA would have understood that Ho's server would provide coordinate information so that the interactive information element and hidden content can be displayed in the appropriate location in the game and/or on the screen in my opinion.

122. Further, to the extent Ho does not disclose or render obvious this limitation, the limitation was obvious in view of Aoki in my opinion. For example, Aoki discloses that a server may provide a video game operable on a mobile communication device (e.g., a "PDA" or "telephone") with advertisements to be displayed in a video game. Ex. 1005, [0061]-[0062], Fig. 1. In another instance, the server may provide an "advertisement image" along with "advertisement placement location data." *Id.* The advertisement placement location data includes a "replacing position" that specifies the in-game location for the advertisement using "X and Y coordinates." *Id.* Thus, when the time arrives to display an advertisement image, the game can place the advertisement image "into the point designated by the

‘replacing position’” using the X and Y coordinates. *Id.*, [0072], [0074], Fig. 7. In my opinion, this shows that, in the combined Ho-Aoki system, the client end device would continue to download from the server interactive information elements and hidden content, and would also receive location data specifying, using coordinate information, an in-game location where the interactive information elements and advertisements should be displayed.

123. As I have explained above, a POSITA would have been motivated to apply Aoki’s teachings regarding a server providing coordinate information to Ho’s server so that the interactive information elements and hidden content may be positioned at the correct locations in-game.

d) 1[c] *“designating a non-promotional location in-game associated with activating the hot spot based on the coordinate information”*

124. In my opinion, Ho discloses or renders obvious this limitation.

125. **“designating a non-promotional location in-game associated with activating the hot spot”**: Ho discloses that the interactive information elements (i.e., hot spots) that are activated to display hidden content are “located at a juncture in the game such as... a specific location in the game.” Ex. 1004, 7:17-23; *see also id.*, 9:33-36 (server may provide the client with a “module” that “enable[s] the at least one interactive information element” and that “may also enable the location of the least one interactive information element at a juncture in the video game.”). Ho’s

interactive information elements are represented by non-promotional objects 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”). Thus, in my opinion, the designated location of the interactive information element is a “non-promotion location in-game associated with activating the hot spot.”

126. “**based on the coordinate information**”: In my opinion, Ho also discloses that the location of the interactive information elements and hidden content is based on coordinate information provided by the server. For instance, Ho teaches that a server provides the interactive information elements and hidden content, along with the location in-game where they should be displayed. Ex. 1004, 7:17-23; *see also id.*, 9:33-36 (server may provide the client with a “module” that “enable[s] the at least one interactive information element” and that “may also enable the location of the least one interactive information element at a juncture in the video game.”). By the time of Ho, video games used coordinates extensively to manage and represent the position of objects, characters and elements within the game world. *Id.*

In my opinion, a POSITA would thus have understood Ho's disclosures to teach coordinate information is provided by the server to locate the interactive information elements and hidden content at the appropriate locations in-game.

127. In my opinion, to the extent Ho does not disclose or render obvious this limitation, the limitation was obvious in view of Aoki. As I explained in connection with limitation 1[b], Aoki discloses that a server may provide an "advertisement image" along with "advertisement placement location data" that specifies the in-game location for the advertisement using "X and Y coordinates." In my opinion, applying Aoki's teaching to Ho, a POSITA would have found it obvious for the server to provide coordinate information that specifies the location where non-promotional objects associated with activating the hot spot (interactive information elements) should be displayed, as well as coordinate information for the location of any hidden content that is displayed upon activation.

128. As I explained above, a POSITA would have been motivated to apply Aoki's teachings regarding coordinate information for positioning in-game elements to Ho so that the interactive information elements and hidden content may be positioned at the correct locations in-game.

e) 1[d] *"displaying an object at the designated non-promotional location"*

129. In my opinion, Ho discloses or renders obvious limitation 1[d].

130. For example, Ho's interactive information elements are represented by objects, such as in-game characters or items. 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"). I explained above, these objects are displayed at the designated non-promotional location.

f) 1[e] "displaying the hidden content when the user activates the hot spot."

131. In my opinion, Ho discloses or renders obvious limitation 1[e].

132. As I explained previously, Ho teaches that when a user activates an interactive information element (*i.e.*, hot spot) hidden promotional content is displayed on the screen. Ex. 1004, 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").

3. Claim 2: "The method of claim 1, wherein the hidden content is promotional."

133. In my opinion, Ho discloses or renders obvious Claim 2.

134. For example, Ho explains that the hidden content may be a promotional advertisement. Ex. 1004, 5:27-38, 8:11-21.

4. Claim 3: “The method of claim 1, wherein the coordinate information comprises time information for placing the hot spot in-game.”

135. In my opinion, Ho alone or the combination of Ho and Aoki render obvious Claim 3.

136. As I explained above, Ho alone or in view of Aoki renders obvious coordinate information for placing the hot spot in-game. Ho further discloses that the coordinate information may comprise time information. For example, Ho explains that the server may provide the client with a “module” that “enable[s] the location of the least one interactive information element at a juncture in the video game,” wherein the juncture may be “a point along a timeline of the game.” Ex. 1004, 9:33-36, 7:17-23.

137. I note that Aoki also discloses that the server may provide a client device with time information for placing the hot spot in-game. For example, Aoki teaches that the server provides “advertisement period” information that is associated with the “advertisement placement location data” containing coordinate information. Ex. 1005, [0072], Fig. 5. The advertisement period “indicates a period during which the relevant advertisement is being displayed,” for instance Aoki provides an example in which a first advertisement has an “advertisement period” of January 1, 2001 to February 28, 2001. *Id.* Aoki teaches that the client device consults the advertisement period to determine whether or not an advertisement

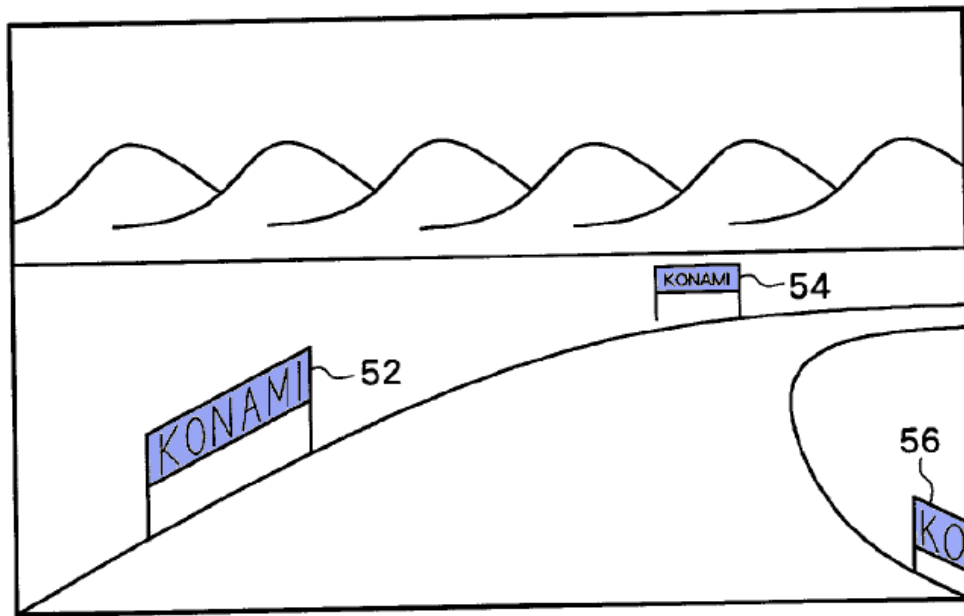
image should be placed in game or deleted. *Id.*, [0073]. POSITA would have understood that using such time information was desirable so that ads are not displayed past their expiration.

5. Claim 4: “The method of claim 1, wherein the coordinate information comprises one or more predefined in-game locations.”

138. In my opinion, Ho discloses and renders obvious Claim 4.

139. For example, Ho discloses that the interactive information elements and hidden content that is displayed when an interactive information element is activated may be provided by the server and “located at a juncture in the game, wherein the juncture is either a specific event in the course of the game or a specific location in the game.” Ex. 1004, 7:17-23; *see also id.*, 9:33-36 (server may provide the client with a “module” that “enable[s] the at least one interactive information element” and that “may also enable the location of the least one interactive information element at a juncture in the video game.”). For instance, the predefined in game location may be a “supplementary box” displayed “during character selection” or an icon displayed on the log-in page. *Id.*, 4:29-31, Fig. 6-8.

140. In addition, Aoki also discloses that the coordinate information comprises one or more predefined in-game locations. For instance, Aoki teaches that the coordinate information may comprise a location on “placard objects 52, 54, 56” that “are installed along the road built in the game space”:



Id., [0068], Figs. 3, 7. In my opinion, a POSITA would recognize that the placard objects are a predefined in-game location.

6. Claim 5: “The method of claim 1, wherein the hot spot information further comprises an object to be displayed in-game at the non-promotional location.”

141. In my opinion, Ho discloses or renders obvious Claim 5.

142. For example, Ho explains that the interactive information elements may be represented by non-promotional objects, such as in-game characters or items. 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, Fig. 3.

7. Claim 6: “The method of claim 1, wherein the hot spot information specifies a type of manipulation required to activate the hot spot.”

143. In my opinion, Ho discloses the additional limitation of claim 6.

144. For example, Ho discloses that an interactive information element may be activated using various manipulations, including “clicking on the interactive information element, highlighting the interactive information element or interacting with the interactive information element.” Ex. 1004, 2:11-19, 7:17-8:9, Claim 4.

8. Claim 7: “The method of claim 1, further comprising saving on the mobile communication device a version identifier for the downloaded hot spot information.”

145. In my opinion, Ho discloses or renders obvious Claim 7.

146. For example, as I explained previously, Ho teaches that its video game may be subject to ongoing development, with updated modules and interactive information elements (*i.e.*, new versions) being published over time. Ex. 1004, 9:25-27. A POSITA would have understood that these new versions would be assigned a version number so that the system can determine whether the mobile phone has the latest version of software. *See* Ex. 1020 (U.S. Pub. No. 2003/0100355), [0019] (“When new levels and/or versions are applied to the game the content provider modifies the games content. Modified games content has an associated identifier tag that identifies the version that has been used in its construction.”).

9. Claim 8: “The method of claim 1, wherein the hidden content comprises one or more objects selected from the

group consisting of messages, graphics, animations, and sounds.”

147. In my opinion, Ho discloses or renders obvious Claim 8.

148. For example, Ho teaches that when a user activates an interactive information element (*i.e.*, hot spot) the hidden promotional content displayed on the screen may comprise messages, graphics, animations and sounds. *Id.*, 8:12-20 (“The on-screen presentation may be, for example, an airliner with a particular airline’s (an advertiser) paint scheme flying across the screen (overlaid on the game environment and does not disrupt gameplay) trailing a catchphrase of the airline like ‘A great way to fly’. In another example, making the character 52 enter the car 58 may activate the generation of a roar of an engine starting and revving recorded from an engine of an actual car depicted by the car 58. Similarly, making the character 52 slay the hamburger monster 56 may generate a sub-screen showing an advertisement of a chain of fast food restaurants.”).

10. Claim 9: “The method of claim 8, wherein the hidden content is promotional.”

149. In my opinion, Ho discloses or renders obvious Claim 9.

150. As I described previously, Ho teaches that the hidden content may be a promotional advertisement.

11. Claim 10: “The method of claim 1, wherein the hidden content is displayed in a pop-up window.”

151. In my opinion, Ho discloses or renders obvious Claim 10.

152. For example, Ho discloses that the hidden content may be displayed in a “sub-screen.” Ex. 1004, 9:19-21 (“making the character 52 slay the hamburger monster 56 would generate a sub-screen showing an advertisement of a chain of fast food restaurants.”), Claim 9 (“the on-screen presentation is either within the course of gameplay or in a sub-screen in the game.”). In my opinion, a POSITA would have understood the sub-screen to teach displaying the advertisement in a “pop-up window.” Ex. 1004, 8:12-20. In my opinion, it was also obvious to implement the “sub-screen” as a pop-up window. By the time of the ’662 patent, it was known that pop-up advertisements were often associated with free-to-play games to permit the developer to generate revenue through advertisements. In my opinion, a POSITA would have readily understood that displaying advertisements within a pop-up window could grab the user’s attention effectively because the pop-up window appears prominently on the screen.

12. Claim 11: “The method of claim 1, wherein the hidden content is displayed on the mobile communication device in a website separate from the video game.”

153. In my opinion, Ho discloses or renders obvious the additional limitation of claim 11.

154. For example, Ho discloses that the hidden content may be displayed in a “sub-screen.” Ex. 1004, 9:19-21 (“making the character 52 slay the hamburger monster 56 would generate a sub-screen showing an advertisement of a chain of fast

food restaurants.”). Ho also discloses that the subscreen may be “overlaid on the game.” *Id.*, 5:38-39. A POSITA would have understood that a sub-screen overlaid on a game may include a website separate from the video game, for instance a website of an advertiser. A POSITA would have also found it obvious for the sub-screen to be a browser that displays a website for the advertiser, for instance a website for the fast food restaurant. Indeed, by the priority date of the ’662 patent mobile devices (e.g., Blackberry phones and Palm Pilots) often included native web browsers that could display a separate website. A POSITA would have understood that implementing the sub-screen as a separate browser window was a straightforward design choice and would be advantageous because it would allow advertisers to easily update the website content and advertising message displayed to the user without revision to the software.

13. Claims 13-19

155. The language of claims 13-19 is nearly identical to that of claims 1-3, 5-6, 8, 10. In any case, it is my opinion that Ho in view of Aoki renders claims 13-19 obvious for the same reasons I discussed above for claims 1-3, 5-6, 8, 10. A mapping of each limitation in claims 13-19 to their corresponding limitation in claims 1-3, 5-6, 8, 10 is shown below.

Claim Limitation	Corresponding Claim Limitation(s)
13[pre]	1[pre]

Claim Limitation	Corresponding Claim Limitation(s)
13[a]	1[a]
13[b][1] and 13[b][2]	1[b][1] and 1[b][2]
13[c]	1[c]
13[d]	1[d]
13[e]	1[e]
14	2
15	3
16	5
17	6
18	8
19	10

B. Ground 2: Jiau in view of Aoki Renders Obvious Claims 1-20

156. In my opinion, Jiau's teachings provide the basic features of a mobile video game with dynamically updated elements, including hotspot and hotspace elements that are stored on and retrieved from a server, and that trigger hidden in-game content when activated by a player. Furthermore, to the extent not already disclosed by Jiau, in my opinion Aoki's teachings supply additional details regarding the use of coordinate information provided by a server for placement of the interactive elements.

157. For the reasons set forth in detail below, and based on my review of the '662 Patent, file history, and the prior art references cited in my analysis, a POSITA would have readily understood that the teachings of Jiau in view of Aoki render obvious all elements of claims 1-20.

1. Rationale to Combine Jiau and Aoki

158. In my opinion, a POSITA would have been motivated to apply Aoki's teachings to Jiau's video game, and would have had a reasonable expectation of success in combining the references.

159. **First**, Jiau provides express teachings that would motivate a POSITA to combine the references. Specifically, Jiau teaches that objects in its gaming world are located in accordance with coordinate systems. Ex. 1006, 11:21-28, 12:17-21, 15:26-28. For instance, Jiau indicates that objects with an interior (*e.g.*, a building) may use a "sub-coordinate system for locations within their exteriors" (*id.*) and discloses server file formats that define an "init[ial] position" using coordinate information (*id.*, Fig. 17) for gaming objects. Thus, a POSITA would have understood Jiau to disclose or at least suggest that the in-game location for objects, including hotspots and hotspaces, is based on coordinate information from a server.

160. Moreover, Jiau's gaming system teaches that objects in the gaming world should be designed so they are "change[able]" and not "predefined." Ex. 1006, 1:22-25. A POSITA would have understood that these changeable and non-

predefined objects must be positioned at the appropriate location in-game and that 2D and 3D games use coordinate information to position gaming elements, as I explained in the Technology Background. A POSITA would have thus looked to other references, such as Aoki, that disclose the simplest and most well-known way of locating new or changed elements in a game, namely using coordinate information from a server. Indeed, Aoki teaches that a server may provide “placement location data” that includes “X and Y coordinates” for positioning elements received from the server (*e.g.*, advertisements). *Id.*, [0072], [0074], Fig. 7. Applying Aoki’s teaching to Jiau would allow changeable and non-predefined elements received from the server to be dynamically placed at an optimal and appropriate location in game.

161. **Second**, in my opinion, Aoki’s disclosure of positioning items in game based on coordinate information is a known technique. Indeed, by the time of the ’662 patent, many video games used coordinates extensively to manage and represent the position of objects, characters and elements within the game world, such as the interactive information elements and hidden content in Jiau. For example, in games with 2D graphics, the well known cartesian coordinate system (x, y) is used to define positions on a two-dimensional plane. Similarly, 3D games also use coordinates to define positions in a three-dimensional space. Thus, in my opinion, a POSITA would have understood that locating Jiau’s in-game objects, including hotspots and hotspaces, based on coordinate information from a server would

improve Jiau's video game by permitting a game to include new, dynamic elements and advertisements whose positioning information may be provided in real time using X and Y coordinates received from a server.

162. **Third**, Jiau and Aoki are all directed to the same types of improvements in game design and monetization that the '662 Patent purports to provide in my opinion. For example, the '662 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. Likewise, Jiau and Aoki identify similar improvements for video games. For example, Jiau is directed at improving prior art video games that involved "predefined virtual worlds that do[] not change," including by providing customizable "lots" and "objects" that are stored at and retrieved from a server during gameplay. Ex. 1006, 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, such as displaying an advertisement. *Id.*, 3:22-4:11, 15:9-16:2, 16:29-17:6. Similarly, Aoki states that its invention is directed at increasing attention advertisements retrieved from a server may receive. Ex. 1005, [0006]-[0007]. In my opinion, a POSITA would have thus looked to Jiau and Aoki when considering how to implement known video games that provide advertising content.

163. **Finally**, Jiau, Aoki, and the '662 patent are all analogous art because the '662 Patent and the prior art references are all in the same field of endeavor, *i.e.*, video games and, in particular, in-game advertising. For example, the '662 Patent relates to “hot spots for mobile video games” that that may be received from a server. Ex. 1001, Abstract. Similarly, I note that Jiau is directed at a “method and apparatus for providing hot spots and hotspaces in a shared three-dimensional virtual world” (Ex. 1006, Abstract) and Aoki is directed techniques for capturing “a player’s attention to a game advertisement” (Ex. 1005, Abstract).

2. Claim 1

- a) 1[Pre]: “A method for retrieving and displaying a hot spot associated with a video game operable on a mobile communication device, comprising:”:

164. To the extent the preamble is limiting, in my opinion, Jiau discloses this limitation.

165. For example, Jiau discloses “[a] method and apparatus for providing hotspots and hotspaces in a shared three-dimensional virtual world,” *e.g.*, a video game. Ex. 1006, Abstract, 3:27-4:11. Jiau’s “hotspots” and “hotspaces” are both examples of “hot spots” as described by the '662 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.

166. Jiau further discloses that the virtual world runs on a “client system,” such as a “computer or similar data processing system having one or more processors and appropriate data storage.” *Id.*, 7:7-10. In my opinion, a POSITA would understand Jiau’s disclosure of a “computer or similar data processing system” to teach “a mobile communication device,” such as smartphones, PDAs and other handheld devices. See Ex. 1001, 1:15-18 (“mobile communication devices” may “include[e] cellular phones, PDAs [Personal Digital Assistants], and other handheld devices capable of communicating with a server”). In my opinion, by the priority date of the ’662 patent, POSITAs understood the term “computer” included personal digital assistants (*e.g.*, the Palm Pilot) and smartphones (*e.g.*, Blackberries), which were sometimes referred to as “handheld computers.” And to the extent these devices are not deemed to be disclosed by Jiau’s disclosure that the video game may be operated on a computer, they would at least be disclosed by Jiau’s disclosure of the video game operating on a “similar data processing system” in my opinion.

167. Further, to the extent Jiau does not disclose or render obvious this limitation, in my opinion the limitation was obvious in view of Aoki. For example, Aoki teaches that the client system may be, for instance, a PDA or mobile telephone. Ex. 1005, [0060]-[0061] (“The personal calculator 40, the PDA 42, and the personal

phone 44, all having known structures, can serve as a game terminal once game software has been installed on them via a communication network 46...”), Fig. 1.

- b) 1[a]: “contacting a server for hot spot information to download, comprising providing the server with at least one of: a game for which hot spot information is desired, a scene for which hot spot information is desired, an element for which hot spot information is desired, the model type of the mobile communication device, the service plan to which the mobile device belongs, the service provider for the mobile communications device, the base location of the mobile communication device, the current location of the mobile communication device, a version identifier for hot spot information currently on the mobile communication device, user-identification information, preset location, amount of game-play time, game score, and level of play;;

168. In my opinion, Jiau discloses or renders obvious limitation 1[a].

169. “**contacting a server for hot spot information to download**”: Jiau further discloses a “server system” that has “one or more processors and appropriate data storage, such as memory or mass-storage device.” Ex. 1006, 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 explains that the “client system” (*i.e.*, mobile communication device) can communicate with the server system “in order to load lots and objects from [the] server system,” including the stored hotspot

information. *Id.*, 6:32-7:2, 10:5-8 (“whenever a lot (or object) is needed, it is loaded from the server if it has not previously been cached”), Figs. 8, 13(a)-(b), 17.

170. **“comprising providing the server with at least one of...”**: _Jiau discloses that the client system provides the server with “lot/object id(s).” Ex. 1006, 17:7-14, Fig. 8. As I explained previously, a “lot” is a portion of the virtual world (*i.e.*, a scene), which may include objects (*i.e.*, elements) that comprise “hot spots.” *Id.*, 1:32-2:3, 8:7-10, Figs. 13(a)-13(b). Thus, in my opinion, a POSITA would have understood that Jiau discloses providing the server with at least an example of a “scene for which hot spot information is desired” (*i.e.*, a lot id) and an “element for which hot spot information is desired” (*i.e.*, an object id). Moreover, Jiau also teaches that lot and objects are associated with a “user id.” Ex. 1006, 17:27-32. Thus, a POSITA would have also understood that the client system provides “user-identification information” (*i.e.* a user id) in order to access and download the lots and objects comprising hot spot information in my opinion.

171. Furthermore, to the extent Jiau does not disclose or render obvious this limitation, in my opinion, the combined teachings of Jiau and Aoki render the limitation obvious. For example, Aoki discloses that a game terminal (e.g., a “telephone”) that is operable to run a video game provides an advertisement management server “the ID of the player who uses the game terminal” and a “game ID identifying a game” in order to obtain advertisements. Ex. 1005, [0077]. Thus,

in my opinion, in the Jiau-Aoki combination, the client end device would continue to download hotspot and hotspace information, and would do so after providing the server the ID of the player (“user-identification information”) and a game ID (“a game for which hot spot information is desired”). A POSITA would be motivated to provide the server a user ID and game ID so that advertisements can be targeted based on this information. Ex. 1008, [0054]-[0055] (describing various characteristics that may be used for targeting advertisements, including user information and game type).

- c) *1[b] “downloading hot spot information from the server to the mobile communication device, the hot spot information comprising: (1) hidden content for presenting to the user when the hot spot is activated; and (2) coordinate information”*

172. In my opinion, Jiau discloses or renders obvious limitation 1[b]

173. **“downloading hot spot information from the server to the mobile communication device”**: Jiau discloses that the “client systems... communicate with server system 108 in order to load lots and objects from server system 108.” Ex. 1006, 6:31-7:2, 10:11-21, 13:7-18, 17:7-13, Fig. 8. Jiau further discloses that the downloaded lots and objects comprise hotspot and hotspace information. *Id.*, 16:30-17:6 (“Objects can have predetermined ‘hotspots’ that cause actions to occur when the user touches or selects the object.”), 17:25-33 (“Fig. 13(b) is an example of a data structure showing properties of a lot stored in server system 108....The

exemplary properties of Fig. 13(b) include... lists of hotspots and hotspaces 1358...”), Figs. 13(b), 17.

174. **“the hot spot information comprising: (1) hidden content for presenting to the user when the hot spot is activated”**: Jiau discloses that the hotspot and hotspace information comprises a link that when activated displays an advertisement or animation. Ex. 1006, Abstract (“Activation of a hotspot or a hotspace link can also cause an action, such as display of an advertisement or an animation.”), 12:22-28 (“When the user clicks on such a link or approaches a hotspot or hotspace having such a link, a web page is fetched and displayed (possibly in a separate window). A link can also cause an action (step 910), such as display of an advertisement or an animation (which may have to be fetched from the server system).”), Fig. 9(a). For example, hotspot information may comprise a link to a pop-up advertisement that is displayed when a user touches or selects the hotspot. *Id.*, 16:29-6. Similarly, hotspace information may comprise a link to a pop-up advertisement that is displayed when a user walks within ten virtual feet of the hotspace. *Id.*

175. **“and (2) coordinate information”**: Jiau discloses that where an object has an interior that is “larger or smaller” than the object exterior a “sub-coordinate system” is used. Ex. 1006, 11:21-28, 12:17-21, 15:26-28. In my opinion, a POSITA would have understood Jiau’s discussion of a “sub” coordinate-system to disclose

that the game uses a main coordinate system to position items that are exterior to the object, such as hotspots and hotspaces. *Id.*

176. Furthermore, Figure 17 of Jiau discloses a file for storing object attributes that may be provided to a client device by a server. Ex. 1006, 19:27-20:3. The object attributes in the file includes coordinate information, such as the “init[ial] position” of a hotspot or hotspot link (fx, fy, fz):

```
typedef struct  
{  
    DWORD dwObjectID;    // source of link  
    LINKEVENT link;    // source of link  
    float fx, fy, fz;    // init position  
    float fdx, fdy, fdz;    // init orintation  
    float fux, fuy, fuz;  
} FOREVER21LINK;
```

Id., 19:27-20:3, Fig. 17. Indeed, Jiau explains that the object attributes defined in Figure 17 may be associated with a hotspot or hotspot. *Id.*, 15:3-12 (“When the user approaches object 320, advertisement 1282 pops up. This activity is part of the attributes of object 320 (see Fig. 13(b)). There is a hotspot link defined around object 320.”), 15:15-18 (“Hotspot 1186 and the activity associated with object 1184 (as well as the appearance of the object, including the advertising text) are defined as attributes of the object 1184 (see Fig 13(b)).”), Fig. 13(b) (attributes include “list of hot spots, hot spaces in the object (links)”).

177. Further, to the extent Jiau does not disclose or render obvious this limitation, the limitation was obvious in view of Aoki in my opinion. Aoki discloses that a server may provide a video game operable on a mobile communication device (e.g., a “PDA” or “personal telephone”) with advertisements to be displayed in a video game. Ex. 1005, [0060]-[0061], Fig. 1. For example, the server may provide an “advertisement image” along with “advertisement placement location data.” *Id.* The advertisement placement location data includes a “replacing position” that specifies the in-game location for the advertisement using “X and Y coordinates.” *Id.* Thus, when the time arrives to display an advertisement image, the game can place the advertisement image “into the point designated by the ‘replacing position’” using the X and Y coordinates. *Id.*, [0072], [0074], Fig. 7. Thus, in my opinion, in the Jiau-Aoki combination, the client end device would continue to download from the server hotspace and hotspot information, and would also receive location data specifying, using coordinate information, an in-game location where the hotspace and hotspot information (and associated advertisements or animations) should be displayed.

d) *1[c] “designating a non-promotional location in-game associated with activating the hot spot based on the coordinate information”*

178. In my opinion, Jiau discloses or renders obvious limitation 1[c].

179. **“designating a non-promotional location in-game associated with activating the hot spot”**: Jiau’s “hotpsot” is a location that causes an action to occur when the user touches or selects an associated object. Ex. 1006, 16:30-32. For example, Figure 11(e) shows “an object 1192 [yellow] having a hot spot link 1194” that may be activated when the user touches or selects the object:

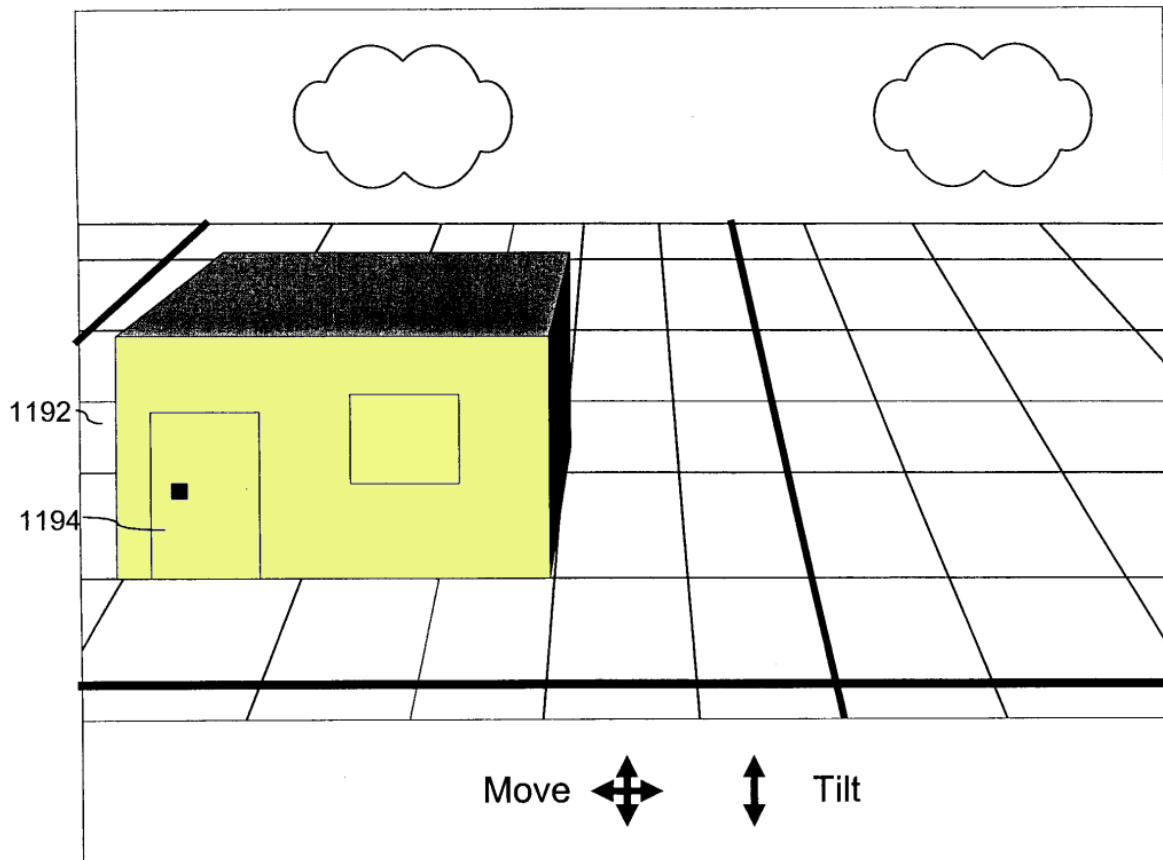


Fig. 11(e)

Id., Fig. 11(e). In my opinion, a POSITA would have readily understood that the location of the object that the user interacts with to activate the hotspot link (*e.g.*,

door 1194) is a non-promotional location in-game associated with activating the hot spot because it does not display any advertising or other promotional message.

180. Similarly, Jiau discloses that a “hotspace” is represented by an in-game location that is “a predetermined space surrounding an object” with which the hotspace is associated. Ex. 1006, 16:29-17:1. 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 my opinion, Jiau discloses that the designated location for the hotspace is a non-promotional location, specifically, because it does not display promotional content until after a user has activated the hotspace.

181. “**based on the coordinate information**”: As I previously explained in connection with limitation 1[b], a POSITA would have understand Jiau’s disclosures to teach coordinate information is provided by the server to locate the hotspot and hotspace information at the appropriate locations in-game. *See also* Ex. 1006, Figs. 17 (disclosing coordinate information for objects), 13(b) (disclosing object attributes, including hotspot and hotspace links), 15:3-1-8 (explaining how hotspot and hotspaces are associated with the defined object attributes).

182. Further, in my opinion, to the extent Jiau does not disclose or render obvious this limitation, the limitation was obvious in view of Aoki. As I explained in connection with limitation 1[b], Aoki discloses that a server may provide an

“advertisement image” along with “advertisement placement location data” that specifies the in-game location for the advertisement using “X and Y coordinates.” In my opinion, applying Aoki’s teaching to Jiau, a POSITA would have found it obvious for the server to provide coordinate information that specifies the location where a non-promotional hotspot or hotspace link should be positioned, as well as coordinate information for the location of any hidden content that is displayed upon activation of the hotspot or hotspace.

e) *1[d] “displaying an object at the designated non-promotional location”*

183. In my opinion, Jiau discloses or renders obvious limitation 1[d].

184. For example, Jiau discloses that a hotspace or hotspot may define a location that contains one of several types of background objects, such as a “solid object,” “object with associated action,” and a “URL object.” Ex. 1005, 11:18-12:12. For instance, Figure 11(e) discloses an exemplary object (yellow):

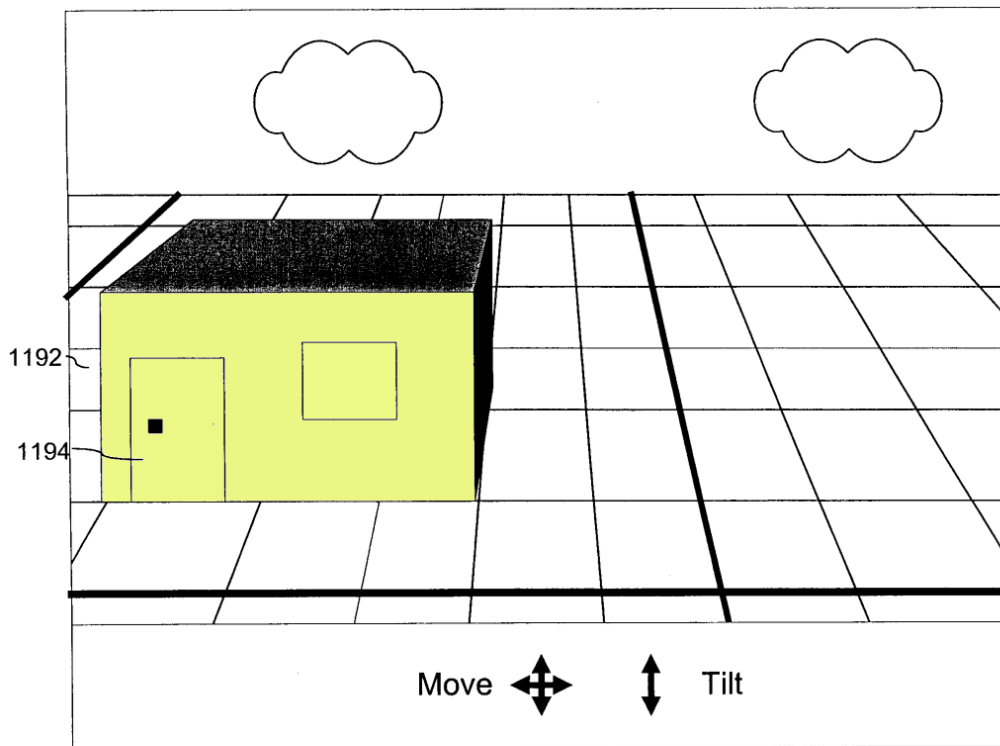


Fig. 11(e)

Id., Fig. 11(e). In my opinion, the displayed objects are non-promotional because they do not display promotional content until a user has performed a predetermined action.

f) *1[e] “displaying the hidden content when the user activates the hot spot.”*

185. In my opinion, Jiau discloses or renders obvious limitation 1[e].

186. For example, Jiau discloses that the hotspot and hotspot information comprises a link that when activated displays an advertisement or animation. Ex. 1006, Abstract (“Activation of a hotspot or a hotspot link can also cause an action, such as display of an advertisement or an animation.”), 12:22-28 (“When the user

clicks on such a link or approaches a hotspot or hotspace having such a link, a web page is fetched and displayed (possibly in a separate window). A link can also cause an action (step 910), such as display of an advertisement or an animation (which may have to be fetched from the server system).”), 16:29-6, Fig. 9(a).

3. Claim 2: “The method of claim 1, wherein the hidden content is promotional.”

187. In my opinion, Jiau discloses or renders obvious Claim 2.

188. For example, Jiau explains that “[a]ctivation of a hotspot or a hotspace link can also cause an action, such as display of an advertisement.” Ex. 1006, Abstract, 12:23-27, 16:29-17:6. An advertisement is “promotional” content.

4. Claim 3: “The method of claim 1, wherein the coordinate information comprises time information for placing the hot spot in-game.”

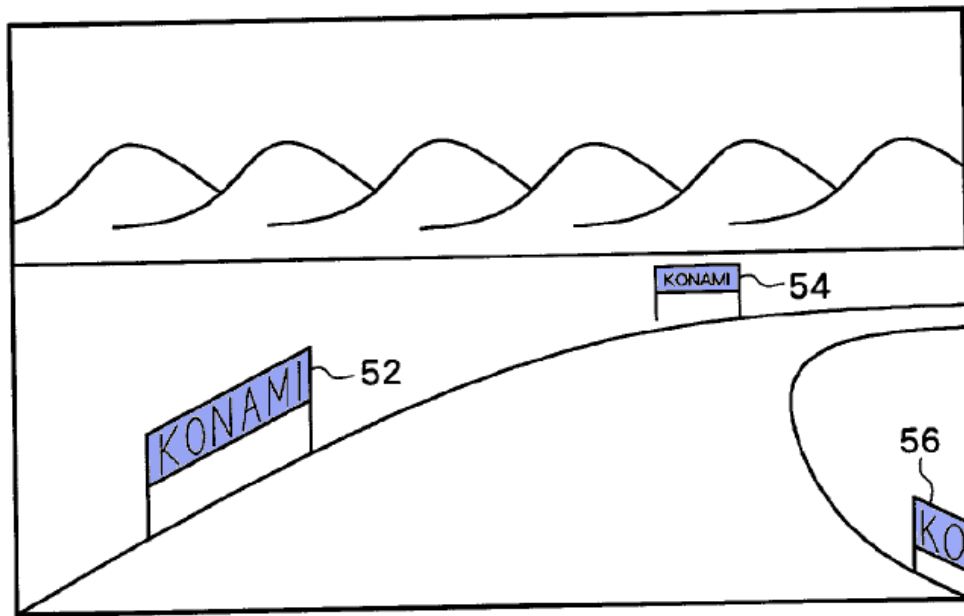
189. In my opinion, Aoki discloses the additional limitation of claim 3. For instance, Aoki discloses that the server may provide a client device with time information for placing the hot spot in-game. Further, Aoki teaches that the server provides “advertisement period” information that is associated with the “advertisement placement location data” containing coordinate information. Ex. 1005, [0072], Fig. 5. The advertisement period “indicates a period during which the relevant advertisement is being displayed,” for instance Aoki provides an example in which a first advertisement has an “advertisement period” of January 1, 2001 to February 28, 2001. *Id.* Aoki teaches that the client device consults the advertisement

period to determine whether or not an advertisement image should be placed in game or deleted. *Id.*, [0073]. A POSITA would have understood that using such time information was desirable so that ads are not displayed past their expiration.

5. Claim 4: “The method of claim 1, wherein the coordinate information comprises one or more predefined in-game locations.”

190. In my opinion, Jiau discloses claim 4. For example, Jiau discloses that the hotspot and hotspace information may be positioned at predefined in-game locations that are specified by coordinates. Ex. 1006, Fig. 17 (showing object with an “init[ial] position” of “fx, fy, fz”). Similarly, Figures 11(d) and 11(e) illustrate objects at pre-defined locations that are associated with hotspot and hotspace information. *Id.*, 15:2-10, 15:17-16:2, Figs. 11(d), 11(e).

191. In my opinion, Aoki also discloses that the coordinate information comprises one or more predefined in-game locations. For instance, Aoki teaches that the coordinate information may comprise a location on “placard objects 52, 54, 56” that “are installed along the road built in the game space”:



Id., [0068], Figs. 3, 7. In my opinion, a POSITA would readily recognize that the placard objects are a predefined in-game location.

6. Claim 5: “The method of claim 1, wherein the hot spot information further comprises an object to be displayed in-game at the non-promotional location.”

192. In my opinion, Jiau discloses or renders obvious Claim 5.

193. For example, Jiau discloses that a hotspot or hotspace may define a location that contains one of several types of background objects, such as a “solid object,” “object with associated action,” and a “URL object.” Ex. 1005, 11:18-12:12. Figure 11(e), for example, illustrates one type of object (building 1192) displayed at a non-promotional location associated with a hotspot. *Id.*, 15:17-16:2, Fig. 11(e).

7. Claim 6: “The method of claim 1, wherein the hot spot information specifies a type of manipulation required to activate the hot spot.”

194. In my opinion, Jiau discloses claim 6.

195. For example, Jiau discloses that a hotspot or hotspace may be defined so that it is activated when a user “clicks on it or walks into it.” Ex. 1006, 2:14-16, 15:13-18.

8. Claim 7: “The method of claim 1, further comprising saving on the mobile communication device a version identifier for the downloaded hot spot information.”

196. In my opinion, Jiau discloses and renders obvious Claim 7.

197. For example, as I discussed above, Jiau discloses maintaining on the client and server “object ids,” wherein an object may have a hot spot or hotspace. Ex. 1006, 17:14-18:9. In my opinion, a POSITA would have readily understood that an object id may be updated when an object is changed or modified, such that the object id would constitute a version identifier. Additionally, Jiau discloses and renders obvious that a file describing a lot or object may have “version” information as part of the header definition. Ex. 1006, Fig. 17 (showing file header of type “FOREVER21HEAD” having variable “short nVersion”), 19:27-20:3 (“Fig. 17 shows an example of a file format describing a lot and the objects therein.... The lot file is preferably sent to the client and stored in the client in the format shown.”).

9. Claim 8: “The method of claim 1, wherein the hidden content comprises one or more objects selected from the

group consisting of messages, graphics, animations, and sounds.”

198. In my opinion, Jiau discloses or renders obvious Claim 8.

199. For example, Jiau teaches that “[a]ctivation of a hotspot or a hotspot link can also cause an action, such as display of an advertisement or an animation.” Ex. 1006, Abstract, 14:9-18 (“When the user clicks or otherwise selects hotspot link 1186 (e.g. by approaching near it), an animation 1188 (represented in the figure by a star) spins, changes color, animates, etc. Hotspot 1186 and the activity associated with object 1184 (as well as the appearance of the object, including the advertising text) are defined as attributes of the object 1184 (see Fig 13(b)).”).

10. Claim 9: “The method of claim 8, wherein the hidden content is promotional.”

200. In my opinion, Jiau discloses or renders obvious Claim 9.

201. As I explained above, Jiau teaches that the hidden content may be a promotional advertisement.

11. Claim 10: “The method of claim 1, wherein the hidden content is displayed in a pop-up window.”

202. In my opinion, Jiau discloses or renders obvious Claim 10. For example, Jiau discloses that a “hot spot” may cause a pop-up advertisement to unexpectedly appear when activated. Ex. 1006, 16:29-17:6 (“Objects can have predetermined ‘hotspots’ that cause actions to occur when the user touches or selects the object. For example, when the user touches or selects an object, a pop-up

advertisement may appear.”). Similarly, Jiau also discloses that a “hot space” 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.* (“For example, when a user walks within ten virtual feet of a hot space, a pop-up advertisement may appear.”), 15:4-8, Fig. 11(d).

12. Claim 11: “The method of claim 1, wherein the hidden content is displayed on the mobile communication device in a website separate from the video game.”

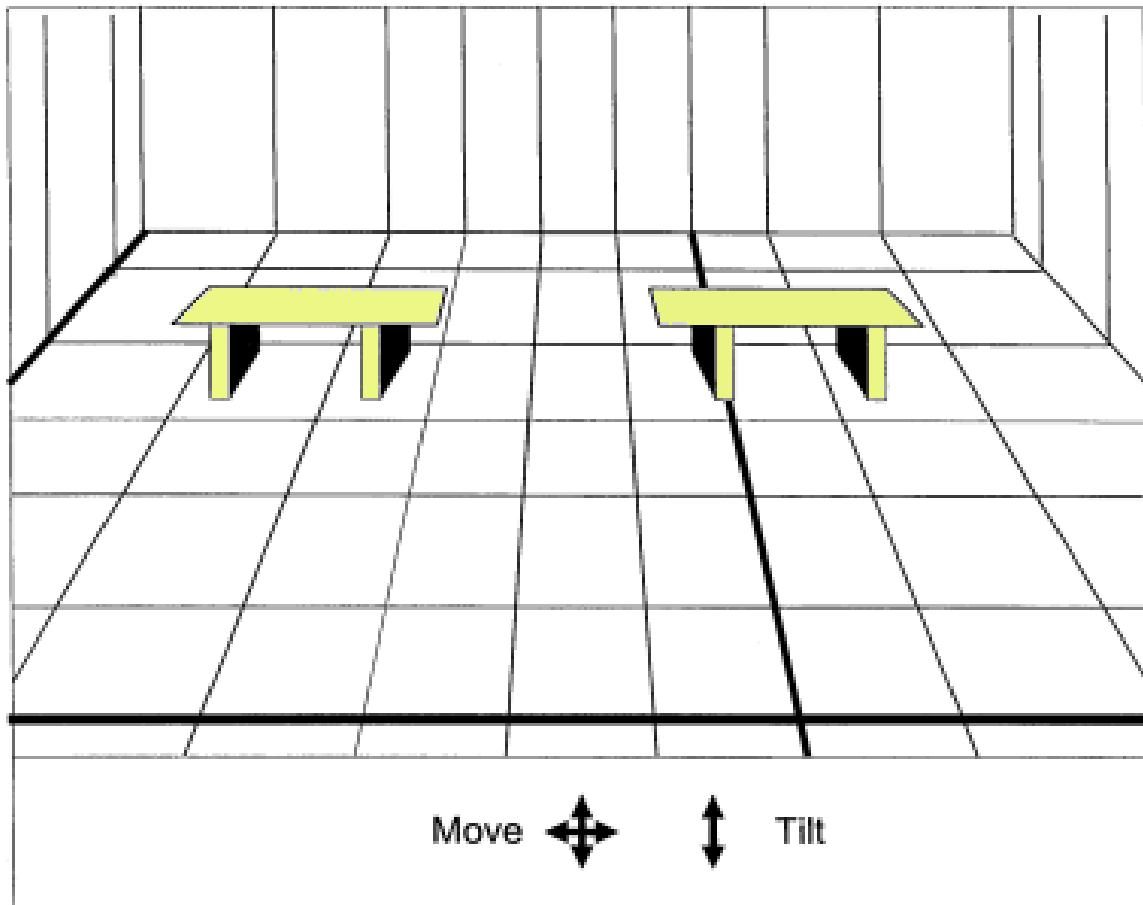
203. In my opinion, Jiau discloses the additional limitation of claim 11.

204. For instance, Jiau discloses that engaging a “hot spot” or “hot space” may cause a pop-up advertisement to appear. Ex. 1006, 16:29-17:6 (“Objects can have predetermined ‘hotspots’ that cause actions to occur when the user touches or selects the object. For example, when the user touches or selects an object, a pop-up advertisement may appear.”). Jiau teaches that the pop-up advertisement may be a URL link to a website for the advertiser. Ex. 1006, 2:20-21 (“Users can also associate objects with the URLs of pages on the world wide web, so that a web page is displayed when the object is approached or activated.”), 12:11-12 (describing “URL object”), Fig. 9(b), Fig. 17. A POSITA would have also understood that mobile devices (e.g., Blackberry phones and Palm Pilots) often included native browsers that were responsible for displaying a website when a URL is selected on the mobile device.

13. Claim 12: “The method of claim 1, wherein the hidden content comprises a second hot spot.”

205. In my opinion, Jiau discloses and renders obvious the additional limitation of claim 12.

206. For example, Jiau teaches that an object may be associated with “a plurality of hot spots” (Ex. 1006, Claim 8) and that each hot spot may be “activated separately” with “different hotspot activities associated therewith” (*id.*, Claims 9-10). For instance, Jiau discloses that “Fig. 11(e) shows an example of an object 1192 have a hotspot link 1194 (e.g., a door-shape).” Ex. 1006, 15:17-31. When a user activates the hotspot, for instance “when he collides with or passes sufficiently close to the hotspot,” hidden content may be displayed, such as the “interior of object 1192” that is shown in Figure 11(f). *Id.* The hidden content, for instance, the furniture in the building interior (yellow) may comprise additional hot spots which are similarly activated when a user “collides with or passes sufficiently close” to them:



Id.

14. Claims 13-20

207. The language of claims 13-20 is nearly identical to that of claims 1-3, 5-6, 8, 10, 12. In any case, it is my opinion that Jiau in view of Aoki renders claims 13-20 obvious for the same reasons I discussed above for claims 1-3, 5-6, 8, 10, 12. A mapping of each limitation in claims 13-20 to their corresponding limitation in claims 1-3, 5-6, 8, 10, 12 is shown below.

Claim Limitation	Corresponding Claim Limitation(s)
13[pre]	1[pre]
13[a]	1[a]
13[b][1] and 13[b][2]	1[b][1] and 1[b][2]
13[c]	1[c]
13[d]	1[d]
13[e]	1[e]
14	2
15	3
16	5
17	6
18	8
19	10
20	12

C. GROUND 3: HO AND KIM RENDER OBVIOUS CLAIMS 1-11, AND 13-19

208. In my opinion, Ho's teachings provide the basic features of a mobile video game with dynamically updated elements, including interactive elements (*i.e.*, hot spots) that are stored on and retrieved from a server, and that trigger hidden in-game content when activated by a player. Further, to the extent not already disclosed by Ho, in my opinion, Kim's teachings supply additional details regarding the use

of coordinate information provided by a server for placement of the interactive elements. Thus, in my opinion, the combination of Ho and Kim renders claims 1-11 and 13-19 obvious.

1. Rationale to Combine Ho and Kim

209. In my opinion, a POSITA would have been motivated to apply Kim's teachings to Ho's video game, and would have had a reasonable expectation of success in combining the references.

210. **First**, Ho provides express teachings that would motivate a POSITA to combine the references in my opinion. For instance, I explained above, Ho only provides high-level implementation details and limited examples of how such interactive information elements may be located in-game. Ex. 1004, 7:17-23 (interactive information elements may be "located at a juncture in the game"). Thus, a POSITA would look to other references, such as Kim, for additional implementation details regarding how to locate these elements in my opinion. Kim discloses locating interactive information elements based on coordinate information from a server. Ex. 1007, 8:2-11 ("server system needs to transfer co-ordinates to each client system."), 8:24-43, Fig. 5. Moreover, Kim discloses interactive information elements that are similar to those disclosed in Ho. *Compare* Ex. 1004, 5:2-10 (disclosing "hamburger monster 56" that a user can slay to display an advertisement) *with* Ex. 1007, 8:49-53 (disclosing a "monster" that a user can defeat

to display an advertisement). For at least these reasons, in my opinion a POSITA would have recognized that Ho's interactive information elements may be located in-game based on coordinate information, as taught in Kim. Applying Kim's teaching to Ho would allow new and changed elements (e.g., new or changed monsters or items in the game) to be dynamically placed at an optimal and appropriate location in game in my opinion.

211. **Second**, in my opinion, Kim's disclosure of positioning items in game based on coordinate information is a known technique. Ex. For instance, as I explained above, a POSITA would have understood that locating Ho's interactive information elements and advertisements based on the known technique of using coordinate information from a server would improve Ho's video game by permitting a game to include new, dynamic elements and advertisements whose positioning information may be provided in real time.

212. **Third**, Ho and Kim are all directed to the same types of improvements in game design and monetization that the '662 Patent purports to provide. A POSITA would have thus looked to Ho and Kim when considering how to implement known video games that provide advertising content.

213. **Finally**, Ho, Kim, and the '662 patent are all analogous art because the '662 Patent and the prior art references are all in the same field of endeavor, *i.e.*, video games and, in particular, in-game advertising. For example, the '662 Patent

and Ho are analogous art for the reasons I discussed above. Similarly, Kim is directed at providing “new advertisement methods” for video games that are “more active[]” and engaging to a user than prior art advertisement methods. Ex. 1007, 1:44-2:25.

2. Claim 1

- a) *1[Pre]: “A method for retrieving and displaying a hot spot associated with a video game operable on a mobile communication device, comprising:”:*

214. To the extent the preamble is limiting, in my opinion, Ho discloses this limitation for the reasons I explained above, which I incorporate by reference.

- b) *1[a]: “contacting a server for hot spot information to download, comprising providing the server with at least one of: a game for which hot spot information is desired, a scene for which hot spot information is desired, an element for which hot spot information is desired, the model type of the mobile communication device, the service plan to which the mobile device belongs, the service provider for the mobile communications device, the base location of the mobile communication device, the current location of the mobile communication device, a version identifier for hot spot information currently on the mobile communication device, user-identification information, preset location, amount of game-play time, game score, and level of play;;*

215. In my opinion, Ho discloses or renders obvious this limitation for the reasons I explained above, which I incorporate by reference.

- c) *1[b] “downloading hot spot information from the server to the mobile communication device, the hot spot information comprising: (1) hidden content for presenting to the user when the hot spot is activated; and (2) coordinate information”*

216. In my opinion, Ho discloses or renders obvious this limitation for the reasons I explained above, which I incorporate by reference.

217. Further, to the extent Ho does not disclose or render obvious the hot spot information comprising “coordinate information,” the limitation was obvious in view of Kim in my opinion. For example, Kim discloses interactive information elements that are similar to those disclosed in Ho. *Compare* Ex. 1004, 5:2-10 (disclosing “hamburger monster 56” that a user can slay to display an advertisement) with Ex. 1007, 8:49-53 (disclosing a “monster” that a user can defeat to display an advertisement). Kim further discloses locating interactive information elements based on coordinate information from a server. Ex. 1007, 8:2-11 (“server system needs to transfer co-ordinates to each client system.”), 8:24-43, Fig. 5; *see also id.*, Claim 2 (“transferring a contents set at a time when co-ordinates and figure are requested by said client system.”).

- d) *1[c] “designating a non-promotional location in-game associated with activating the hot spot based on the coordinate information”*

218. In my opinion, Ho discloses or renders obvious limitation 1[c] for the reasons I explained above, which I incorporate by reference.

219. Further, to the extent Ho does not disclose designating the non-promotional location “based on the coordinate information,” in my opinion that limitation was obvious in view of Kim. As I explained in connection with limitation 1[b], Kim discloses locating interactive information elements based on coordinate information from a server. In my opinion, a POSITA, applying Kim’s teaching to Ho, would have found it obvious for the server to provide coordinate information that specifies the location where non-promotional objects associated with activating the hot spot (interactive information elements) should be displayed, as well as coordinate information for the location of any hidden content that is displayed upon activation.

e) *1[d] “displaying an object at the designated non-promotional location”*

220. In my opinion, Ho discloses or renders obvious limitation 1[d] for the reasons I explained above, which I incorporate by reference.

f) *1[e] “displaying the hidden content when the user activates the hot spot.”*

221. In my opinion, Ho discloses or renders obvious limitation 1[e] for the reasons I explained above, which I incorporate by reference.

3. Claim 2: “The method of claim 1, wherein the hidden content is promotional.”

222. In my opinion, Ho discloses or renders obvious Claim 2 for the reasons I explained above, which I incorporate by reference.

4. Claim 3: “The method of claim 1, wherein the coordinate information comprises time information for placing the hot spot in-game.”

223. In my opinion, Ho discloses and renders obvious Claim 3 for the reasons I explained above, which I incorporate by reference.

224. Further, in my opinion Kim also discloses that the coordinate information may comprise time information for placing the interactive information elements in-game. For example, Kim discloses that a server may provide “time data” and that interactive information elements (e.g., “monsters”) and advertisements may “appear[] at a certain time in a certain place” controlled by the server. Ex. 1007, 9:6-16, 8:60-64, 2:67-3:4 (“transferring said data to a client system by time data of a server system.”); *see also id.*, Claim 6 (“said advertisement items are allocated within said game program randomly by a generator of time column and a generator of co-ordinates column.”).

5. Claim 4: “The method of claim 1, wherein the coordinate information comprises one or more predefined in-game locations.”

225. In my opinion, Ho discloses and renders obvious Claim 4 for the reasons I explained above, which I incorporate by reference.

226. Kim also discloses that an interactive information element may be designed to “consistently appear in a specific area which is required by [the] game.” Ex. 1007, 8:60-64.

6. Claim 5: “The method of claim 1, wherein the hot spot information further comprises an object to be displayed in-game at the non-promotional location.”

227. In my opinion, Ho discloses or renders obvious Claim 5 for the reasons I explained above, which I incorporate by reference.

228. Kim also discloses this limitation. For instance, Kim discloses that “[i]f the character of gamer encounters the monster and wins after confrontation against the monster, the advertisement item relevant to the monster can be shown at the spot where monster the dies” Ex. 1007, 8:49-52. Kim discloses that if the player simply walks past the location of the monster (see *id.*, 8:53-57) the advertisement is not displayed. Thus, a POSITA would have understood the monster and its location on the display are a “non-promotional location.”

7. Claim 6: “The method of claim 1, wherein the hot spot information specifies a type of manipulation required to activate the hot spot.”

229. In my opinion, Ho discloses the additional limitation of Claim 6 for the reasons I explained above, which I incorporate by reference.

230. Kim also discloses this limitation. For instance, Kim discloses a monster that exists “at a certain place and a certain time” and further teaches a type of manipulation (challenging and slaying the monster) that results in activating the hotspot and revealing the advertisement. Ex. 1007, 8:49-63.

8. **Claim 7: “The method of claim 1, further comprising saving on the mobile communication device a version identifier for the downloaded hot spot information.”**

231. In my opinion, Ho discloses or renders obvious Claim 7 for the reasons I explained above, which I incorporate by reference.

9. **Claim 8: “The method of claim 1, wherein the hidden content comprises one or more objects selected from the group consisting of messages, graphics, animations, and sounds.”**

232. In my opinion, Ho discloses or renders obvious Claim 8 for the reasons I explained above, which I incorporate by reference.

10. **Claim 9: “The method of claim 8, wherein the hidden content is promotional.”**

233. In my opinion, Ho discloses or renders obvious Claim 9 for the reasons I explained above, which I incorporate by reference.

11. **Claim 10: “The method of claim 1, wherein the hidden content is displayed in a pop-up window.”**

234. In my opinion, Ho discloses or renders obvious Claim 10 for the reasons I explained above, which I incorporate by reference.

12. **Claim 11: “The method of claim 1, wherein the hidden content is displayed on the mobile communication device in a website separate from the video game.”**

235. In my opinion, Ho discloses or renders obvious the additional limitation of claim 11 for the reasons I explained above, which I incorporate by reference.

13. Claims 13-19

236. The language of claims 13-19 is nearly identical to that of claims 1-3, 5-6, 8, 10. In any case, it is my opinion that Ho in view of Kim renders claims 13-19 obvious for the same reasons I discussed above for claims 1-3, 5-6, 8, 10. A mapping of each limitation in claims 13-19 to their corresponding limitation in claims 1-3, 5-6, 8, 10 is shown below.

Claim Limitation	Corresponding Claim Limitation(s)
13[pre]	1[pre]
13[a]	1[a]
13[b][1] and 13[b][2]	1[b][1] and 1[b][2]
13[c]	1[c]
13[d]	1[d]
13[e]	1[e]
14	2
15	3
16	5
17	6
18	8
19	10

D. GROUND 4: JIAU AND KIM RENDER OBVIOUS CLAIMS 1-20

237. In my opinion, Jiau's teachings provide the basic features of a mobile video game with dynamically updated elements, including interactive elements (*i.e.*, hot spots) that are stored on and retrieved from a server, and that trigger hidden in-game content when activated by a player. Further, to the extent not already disclosed by Jiau, in my opinion, Kim's teachings supply additional details regarding the use of coordinate information provided by a server for placement of the interactive elements.

238. Thus, in my opinion, the combination of Jiau and Kim renders claims 1-20 obvious.

1. Rationale to Combine Jiau and Kim

239. In my opinion, a POSITA would have been motivated to apply Kim's teachings to Jiau's video game, and would have had a reasonable expectation of success in combining the references.

240. **First**, in my opinion, Jiau provides express teachings that would motivate a POSITA to combine the references. For instance, I explained above, Jiau discloses that its game uses coordinate information to define positions of objects, including hotspots and hotspaces. In my opinion, a POSITA would have also looked to other references, such as Kim, for further confirmation and details regarding locating these objects. Kim reinforces Jiau's disclosure by teaching that a server

may provide coordinate information for placing in-game objects. Ex. 1007, 8:2-11 (“server system needs to transfer co-ordinates to each client system.”), 8:24-43, Fig. 5. In my opinion, applying Kim’s teaching to Jiau would allow new and changed hotspot and hotspace objects received from the server to be dynamically placed at an appropriate location in game. In my opinion, Jiau’s gaming system is particularly well-suited for this combination because Jiau teaches that objects in the gaming world should be designed so they are “change[able]” and not “predefined.” Ex. 1006, 1:22-25.

241. **Second**, Kim’s disclosure of positioning items in game based on coordinate information is a known technique in my opinion. For example, as I explained above, a POSITA would have understood that locating Jiau’s hotspots and hotspaces based on the known technique of using coordinate information from a server would improve Jiau’s video game by permitting a game to include new, dynamic elements and advertisements whose positioning information may be provided in real time.

242. **Third**, Jiau, Kim, and the ’662 patent are all analogous art because the ’662 Patent and the prior art references are all in the same field of endeavor, *i.e.*, video games and, in particular, in-game advertising.

243. **Finally**, Jiau, Kim, and the '662 patent are all analogous art because the '662 Patent and the prior art references are all in the same field of endeavor, *i.e.*, video games and, in particular, in-game advertising.

2. Claim 1

- a) 1[Pre]: *“A method for retrieving and displaying a hot spot associated with a video game operable on a mobile communication device, comprising:”*:

244. To the extent the preamble is limiting, in my opinion, Jiau discloses this limitation for the reasons I explained above, which I incorporate by reference.

- b) 1[a]: *“contacting a server for hot spot information to download, comprising providing the server with at least one of: a game for which hot spot information is desired, a scene for which hot spot information is desired, an element for which hot spot information is desired, the model type of the mobile communication device, the service plan to which the mobile device belongs, the service provider for the mobile communications device, the base location of the mobile communication device, the current location of the mobile communication device, a version identifier for hot spot information currently on the mobile communication device, user-identification information, preset location, amount of game-play time, game score, and level of play;;*

245. In my opinion, Jiau discloses and renders obvious limitation 1[a] for the reasons I explained above, which I incorporate by reference.

- c) *1[b] “downloading hot spot information from the server to the mobile communication device, the hot spot information comprising: (1) hidden content for presenting to the user when the hot spot is activated; and (2) coordinate information”*

246. In my opinion, Jiau discloses and renders obvious limitation 1[b] for the reasons I explained above, which I incorporate by reference.

247. Further, in my opinion, to the extent Jiau does not disclose or render obvious the hot spot information comprising “coordinate information,” the limitation was obvious in view of Kim. Kim discloses interactive information elements that are similar to those disclosed in Jiau. *Compare* Ex. 1004, 5:2-10 (disclosing “hamburger monster 56” that a user can slay to display an advertisement) *with* Ex. 1007, 8:49-53 (disclosing a “monster” that a user can defeat to display an advertisement). Kim further discloses locating interactive information elements based on coordinate information from a server. Ex. 1007, 8:2-11 (“server system needs to transfer co-ordinates to each client system.”), 8:24-43, Fig. 5; *see also id.*, Claim 2 (“transferring a contents set at a time when co-ordinates and figure are requested by said client system.”).

- d) *1[c] “designating a non-promotional location in-game associated with activating the hot spot based on the coordinate information”*

248. In my opinion, Jiau discloses and renders obvious limitation 1[c] for the reasons I explained above, which I incorporate by reference.

249. Further, in my opinion, to the extent Jiau does not disclose designating the non-promotional location “based on the coordinate information,” the limitation was obvious in view of Kim. As I explained above in connection with limitation 1[b], Kim discloses locating interactive information elements based on coordinate information from a server. In my opinion, a POSITA applying Kim’s teaching to Jiau would have found it obvious for the server to provide coordinate information that specifies the location of interactive information elements and hidden content that is displayed upon activation.

e) *1[d] “displaying an object at the designated non-promotional location”*

250. In my opinion, Jiau discloses and renders obvious limitation 1[d] for the reasons I explained above, which I incorporate by reference.

f) *1[e] “displaying the hidden content when the user activates the hot spot.”*

251. In my opinion, Jiau discloses and renders obvious limitation 1[e] for the reasons I explained above, which I incorporate by reference.

3. Claim 2: “The method of claim 1, wherein the hidden content is promotional.”

252. In my opinion, Jiau discloses or renders obvious Claim 2 for the reasons I explained above, which I incorporate by reference.

4. Claim 3: “The method of claim 1, wherein the coordinate information comprises time information for placing the hot spot in-game.”

253. In my opinion, Jiau alone (for the reasons I explained above, which I incorporate by reference) and the combination of Jiau and Kim render obvious Claim 3.

254. In my opinion, Kim also discloses that the coordinate information may comprise time information for placing the interactive information elements in-game. For instance, Kim discloses that a server may provide “time data” and that interactive information elements (e.g., “monsters”) and advertisements may “appear[] at a certain time in a certain place” controlled by the server. Ex. 1007, 9:6-16, 8:60-64, 2:67-3:4 (“transferring said data to a client system by time data of a server system.”); *see also id.*, Claim 6 (“said advertisement items are allocated within said game program randomly by a generator of time column and a generator of co-ordinates column.”). In my opinion, a POSITA, applying Kim’s teaching to Ho, would have found it obvious for the server to provide coordinate information that includes time data for interactive information elements and hidden content.

5. Claim 4: “The method of claim 1, wherein the coordinate information comprises one or more predefined in-game locations.”

255. In my opinion, Jiau discloses and renders obvious Claim 4 for the reasons I explained above, which I incorporate by reference.

256. Additionally, in my opinion, Kim also discloses that an interactive information element may be designed to “consistently appear in a specific area which is required by [the] game.” Ex. 1007, 8:60-64.

6. Claim 5: “The method of claim 1, wherein the hot spot information further comprises an object to be displayed in-game at the non-promotional location.”

257. In my opinion, Jiau discloses or renders obvious Claim 5 for the reasons I explained above, which I incorporate by reference.

258. Kim also discloses this limitation. For instance, Kim discloses that “[i]f the character of gamer encounters the monster and wins after confrontation against the monster, the advertisement item relevant to the monster can be shown at the spot where monster the dies” Ex. 1007, 8:49-52. Kim discloses that if the player simply walks past the location of the monster (see *id.*, 8:53-57) the advertisement is not displayed. Thus, a POSITA would have understood the monster and its location on the display are a “non-promotional location.”

7. Claim 6: “The method of claim 1, wherein the hot spot information specifies a type of manipulation required to activate the hot spot.”

259. In my opinion, Jiau discloses the additional limitation of claim 6 for the reasons I explained above, which I incorporate by reference.

260. Kim also discloses this limitation. For instance, Kim discloses a monster that exists “at a certain place and a certain time” and further teaches a type

of manipulation (challenging and slaying the monster) that results in activating the hotspot and revealing the advertisement. Ex. 1007, 8:49-63.

8. Claim 7: “The method of claim 1, further comprising saving on the mobile communication device a version identifier for the downloaded hot spot information.”

261. In my opinion, Jiau discloses or renders obvious Claim 7 for the reasons I explained above, which I incorporate by reference.

9. Claim 8: “The method of claim 1, wherein the hidden content comprises one or more objects selected from the group consisting of messages, graphics, animations, and sounds.”

262. In my opinion, Jiau discloses or renders obvious Claim 8 for the reasons I explained above, which I incorporate by reference.

10. Claim 9: “The method of claim 8, wherein the hidden content is promotional.”

263. In my opinion, Jiau discloses or renders obvious Claim 9 for the reasons I explained above, which I incorporate by reference.

11. Claim 10: “The method of claim 1, wherein the hidden content is displayed in a pop-up window.”

264. In my opinion, Jiau discloses or renders obvious Claim 10 for the reasons I explained above, which I incorporate by reference.

12. Claim 11: “The method of claim 1, wherein the hidden content is displayed on the mobile communication device in a website separate from the video game.”

265. In my opinion, Jiau discloses or renders obvious the additional limitation of claim 11 for the reasons I explained above, which I incorporate by reference.

13. Claim 12: “The method of claim 1, wherein the hidden content comprises a second hot spot.”

266. In my opinion, Jiau discloses and renders obvious the additional limitation of claim 12 for the reasons I explained above, which I incorporate by reference.

14. Claims 13-20

267. The language of claims 13-20 is nearly identical to that of claims 1-3, 5-6, 8, 10, 12. In any case, it is my opinion that Jiau in view of Kim renders claims 13-20 obvious for the same reasons I discussed above for claims 1-3, 5-6, 8, 10, 12. A mapping of each limitation in claims 13-20 to their corresponding limitation in claims 1-3, 5-6, 8, 10, 12 is shown below.

Claim Limitation	Corresponding Claim Limitation(s)
13[pre]	1[pre]
13[a]	1[a]
13[b][1] and 13[b][2]	1[b][1] and 1[b][2]
13[c]	1[c]

Claim Limitation	Corresponding Claim Limitation(s)
13[d]	1[d]
13[e]	1[e]
14	2
15	3
16	5
17	6
18	8
19	10
20	12

E. Secondary Considerations

268. I am 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. To the extent Patent Owner identifies evidence of secondary considerations at a later point in the proceeding, I reserve the right to address it at that time.

XIII. CONCLUSION

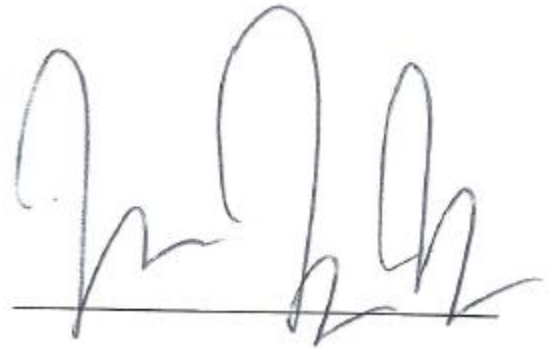
269. For the aforementioned reasons, a POSITA would have recognized that a number of predictable prior art combinations (articulated in the grounds above)

would have achieved all elements of claims 1-20 of the '662 Patent, and that those claims are thus invalid in view of the prior art, for the reasons discussed above.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on the information and belief are believed to be true; I declare under penalty of perjury that the foregoing is true and correct, and understand that willful false statements and the like are punishable by fine or imprisonment, or both pursuant to 18 U.S.C. 1001.

Date: November 17, 2023

Respectfully Submitted,

A handwritten signature in dark ink, consisting of stylized, overlapping loops and strokes, positioned above a horizontal line.

Dr. José Zagal

José P. Zagal

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Education

2008	Ph.D. in Computer Science Georgia Institute of Technology Advisor: Dr. Amy Bruckman
1999	M.S. Engineering Sciences Distinción Máxima (equivalent to Summa Cum Laude or Highest Honors) Pontificia Universidad Católica de Chile Advisor: Dr. Miguel Nussbaum
1999	Civil Industrial Engineer with Computer Science Diploma Distinción Máxima (equivalent to Summa Cum Laude or Highest Honors) Pontificia Universidad Católica de Chile
1997	Bachelor of Engineering Sciences Pontificia Universidad Católica de Chile

Employment History

2019- Present	Professor, Lecturing Entertainment Arts & Engineering Program University of Utah
2016- 2019	Associate Professor, Lecturing Entertainment Arts & Engineering Program University of Utah
2013- 2016	Visiting Assistant Professor Entertainment Arts & Engineering Program University of Utah
2008 - 2015	Assistant Professor College of Computing and Digital Media DePaul University
2005 - 2007 (Summers only)	Director of Community Development Studiocom (www.studiocom.com)
2000 - 2002	Director of Content and Community Development Virtualia S.A.
1999 - 2002	Profesor Instructor Asociado Department of Computer Science, School of Engineering, Pontificia Universidad Católica de Chile.
1997 - 1999	Game Designer and Programmer Eduinnova

Books

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- Earlier version presented at DiGRA 2019 Role-Playing Game Summit

Bateman, C., Zagal J. (2018) **"Game Design Lineages: Minecraft's Inventory"**, *Transactions of the Digital Games Research Association (ToDiGRA)*. Vol 3. No. 3, 13-46.
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Rothwell, E., Johnson, E., Wong, B., Rose, N., Latendresse, G., Altizer, R., Zagal, J., Smid, M., Watson, A., Botkin, J. (2018) **"The use of a Game-Based Decision Aid to educate pregnant couples about prenatal genetic screening: A randomized controlled study"**, *American Journal of Perinatology*. 14 August 2018, eFirst.

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Zagal, J. P., Bruckman, A. (2011) **"Blogging for Facilitating Understanding: A Study of Videogame Education"**, *International Journal of Learning and New Media*. Vol. 3, No. 1, 7-27

Zagal, J.P. & Mateas, M., (2010) **"Time in Videogames: A Survey and Analysis"**, *Simulation & Gaming*. Vol. 41, No. 6, 844-868

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Zagal, J. P., Bruckman, A. (2010) "**Designing Online Environments for Expert/Novice Collaboration: Wikis to Support Legitimate Peripheral Participation**", *Convergence*. Vol. 16, No., 4 451-470

Zagal, J.P., Bruckman, A. (2008) "**Novices, Gamers, and Scholars**", *Game Studies*. Vol. 8, No. 2, December 2008.

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Zagal, J. P., Fernandez-Vara, C., Mateas, M. (2008) "**Rounds, Levels, and Waves: The Early Evolution of Gameplay Segmentation**", *Games & Culture*. Vol. 3. No. 2, 175-198

Zagal, J.P., Rick, J., Hsi, I. (2006) "**Collaborative Games: Lessons Learned from Board Games**", *Simulation & Gaming* Vol. 37, No. 1, 24-40.

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Parts of Books (peer reviewed)

(reprints are listed under original place of publication)

Zagal, J.P. (2021) "**Ethics in Videogames (EAE 3020)**", in Ferdig, R., Baumgartner, E. and Gandolfi, E. (Eds), *Teaching the Game: A Collection of Syllabi for Game Design, Development, and Implementation Vol. 1*, pp. 42-62, ETC Press, <https://press.etc.cmu.edu/books/teaching-game/1>

Zagal, J.P. (In Press) "**When the Abstract Becomes Concrete**", in Randl and Lasansky (Eds), *Playing Place*, MIT Press.

Zagal, J.P. (2020) "**Collaborative Games Redux: New Lessons from the Past 10 Years**", in MacCallum-Stewart, E. and Brown, D. (Eds), *Rerolling Boardgames*, pp 29-47, McFarland Press.

Deterding, S., Zagal, J. P. (2018) "**The Many Faces of RPG Studies**", in Zagal, J. P., Deterding, S. (Eds), *Role-Playing Games Studies: Transmedia Foundations*, pp.1-16, Routledge

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Torres-Toukoumidis, A., Zagal J. P., Pérez-Rodríguez M. A. (2016) "**Juegos, Comunicación y Sociedad: La Comunicación Institucional como Factor de Desarrollo Social**", in L. M. Romero-Rodríguez, R. Mancinas-Chávez (Eds), *Comunicación Institucional y Desarrollo Social*, Editorial Egregius

Putnam, C., Zagal, J. P., Cheng, J., (2016) "**You are Not the Player: Teaching Games User Research to Undergraduate Students**" in Garcia-Ruiz, M. (Ed), *Usability Testing of Video Games: Multidisciplinary Case Studies*, CRC Press/Taylor and Francis [refereed]

Zagal, J. P. (2014) "**Ontology (in games)**" in Ryan, M., Emerson, L., Robertson, B. (Eds), *The Johns Hopkins Guide to the Digital Media*. pp. 378-381., Johns Hopkins University Press, Baltimore, MD [refereed]

Zagal, J.P. (2011) "**Heavy Rain: Morality in Inaction, the Quotidian, and the Ambiguous**", Poels, K. and Malliet, S. (Eds.), *Vice City Virtue: Moral Issues in Digital Game Play*, Acco Academic, Belgium [refereed]

Zagal, J.P. (2011) "**Ethical Reasoning and Reflection as Supported by Videogames**", Schrier, K. & Gibson, D. (Eds), *Designing Games for Ethics: Models, Techniques and Frameworks*, IGI Global: Hershey, PA [refereed]

Parts of Books (non-refereed)

(reprints are listed under original place of publication)

Sidhu, P., Carter, M., Zagal, J.P. (forthcoming, 2024) "**Is this the Golden Age of Dungeons & Dragons?**", in Sidhu, P., Carter, M., Zagal, J.P. (Eds) *Fifty Years of Dungeons & Dragons*, pp. 1-11, MIT Press.

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Altizer, R. and Zagal, J. P. (2017) "**Applying Innovation to Patient Education and Behavior**" in Shipman, J.P. and B.A. Ulmer (eds), *Information and Innovation: A Natural Combination for Health Sciences Libraries*. pp. 77-88Lanham, MD: Rowman & Littlefield

Zagal, J.P. (2017) "**Lord British**" in Mejia, R., Banks, J., and Adams, A. (Eds), *100 Greatest Video Game Characters*, Rowan and Littlefield.

Zagal, J.P. (2012) "**Why a Game Canon for Game Studies Education is Wrong**", Fromme, J. & Unger, A. (Eds), *Computer Games and New Media Cultures: A Handbook of Digital Games Studies*, Springer. pp 665-677.

Zagal, J. P. (2011) "**Heavy Rain: Effective 'Anti-Usability'**" in Novak, J. *Game Development Essentials, Third Edition*, Delmar, Clifton Park NY, pp. 264.

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Zagal, J.P (2010) "**Manhunt: The Dilemma of Play**", Davidson, D. (Ed), *Well Played 2.0: More Perspectives on Video Games, Value and Meaning*, ETC Press: Pittsburgh

Conference Publications (refereed)

Zagal, J. P. (In Press) "**Using Dark Gameplay Design Patterns for Game Ethics Education**", Morality Play Workshop @DiGRA2023, 19-23 June 2023, Sevilla Spain

Zagal, J. P. (2023) "**Considering Large Student Teams in Game Development Education: A Post-Mortem**", Proceedings of the 2023 International Conference of the Digital Games Research Association (DiGRA), 19-23 June, Sevilla, Spain

Cardona-Rivera, R. E., Zagal, J. P., Debus, M.S. (2022) "**Game System Models: Toward Semantic Foundations for Technical Game Analysis, Generation, and Design**", Proceedings of the Eighteenth AAAI Conference on Artificial Intelligence for Interactive Digital Entertainment Conference (AIIDE2022), Pomona, California, October 24-28, 2022. <https://ojs.aaai.org/index.php/AIIDE/article/download/21942/21711>

Cox, M., Zagal J. (2022) "**Sustainability in City-Building Games**", Proceedings of the International Conference of the Digital Games Research Association (DiGRA), July 7-11, Krakow, Poland.

- Cardona-Rivera, R. E., Zagal, J. P., Debus, M.S. (2020) **"GFI: A Formal Approach to Narrative Design and Game Research"**, 13th International Conference on Interactive Digital Storytelling (ICIDS 2020), 3-6 November, Bornemouth, UK. [Runner-up for Best Paper Award]
- Zagal, J. P. (2020) **"An Overview of Institutional Support for Game Students in Higher Education"**, Proceedings of the 2020 DiGRA International Conference, June 2-6, Tampere, Finland [in-person conference was cancelled due to Covid-19]
- Cardona-Rivera, R. E., Zagal, J. P., Debus, M.S. (2020) **"Narrative Goals in Games: A Novel Nexus of Story and Gameplay"**, Foundations of Digital Games (FDG) Conference, September 15-18, Malta. [in-person conference was cancelled due to Covid-19]
- Zagal, J. P., Debus, M.S., Cardona-Rivera, R. E. (2019) **"On the Ultimate Goals of Games: Winning, Finishing, and Prolonging"**, 13th International Philosophy of Computer Games Conference, October 21-24, St Petersburg, Russia.
- Zagal, J.P. (2019) **"An Analysis of 1980s English-Language Commercial TRPG Definitions"**, RPG Summit @ DiGRA 2019, Kyoto Japan, August 6-9.
- Altizer, R., Zagal, J. P., Johnson, E., Wong, B., Anderson, R., Botkin, J., Rothwell, E. (2017) **"Design Box Case Study: Facilitating Interdisciplinary Collaboration and Participatory Design in Game Development"**, CHI PLAY'17 Extended Abstracts, October 15–18, 2017, Amsterdam, Netherlands
- Zagal, J. (2017) **"War Ethics: A Framework for Analysing Videogames"**, DiGRA 2017 Conference, Melbourne Australia, 3-6 July.
- Nay, J., Zagal, J. (2017) **"Meaning without Consequence: Virtue Ethics and Inconsequential Choices in Games"**, Foundations of Digital Games (FDG) Conference, Cape Cod, MA, August 14-17, 2017.
- Nguyen, T., Zagal J. (2016) **"Good Violence, Bad Violence: The Ethics of Competition in Multiplayer Games"**, First Joint International DiGRA FDG Conference, August 1-6, Dundee, Scotland.
- Wozniak, K., Zagal, J.P. (2016) **"Exploring Adult Learners' Metacognition: A Survey of In-Person and Online Adult Learners"**, 2016 Annual Meeting of the American Educational Research Association (AERA), April 8-12, Washington DC.
- Zagal, J.P., Altizer, R. (2015) **"Placeholder Content in Game Development: Benefits and Challenges"**, Proceedings of CHI Play 2015, Oct 3-7, London, UK, pp. 745-750.
- Zagal, J., Lewis, C. (2015) **"Fighting Fantasies: Authoring RPG Gamebooks for Learning Game Writing and Design"**, 2015 RPG Summit at the 2015 Digital Games Research Association (DiGRA) Conference, Lüneburg, Germany. May 14-17, 2015.
- Bills, P., Zagal J., Shipman, J, Moody, S. Larson, E., Bhavsar, S., Jarvis, C., Casucci, T., Rethlefsen, M., Lombardo, N, Altizer, R. (2015) **"Saved Games: Librarians Levelling Up With Games For Health"**, Medical Library Association Annual Meeting and Exhibition (MLA '15), May 15-20, Austin TX
- Kalinger, T., Altizer, R., Zagal, J., Shipman, J., Casucci, T. (2015) **"Librarians as Matchmakers: Using Dating Sites as a Model for Collaboration – University of Utah"**, Medical Library Association Annual Meeting (MLA15), Austin TX, May 15-20, 2015.
- Wozniak, K., Zagal, J. (2015) **"Using Persuasive Design and Social Learning to Support Adult Learners' Metacognitive Development"**, 11th International Conference on Computer Support Collaborative Learning, CSC2015. June 7-11, Gothenburg, Sweden.
- Zagal, J.P., Altizer, R. , Zeng-Treitler, Q., Shipman, J., Lake, E., Aiono, H., Malheiro, M., Christensen, C., (2014) **"Doodle Health: Games as Cultural Probes"**, Workshop on Entertainment in Serious Games and Entertaining Serious Purposes @ 13th International Conference on Entertainment Computing, Sydney, Australia, September 30, 2014. pp 11-12.
- Tomuro, N., Tanaka, S., Zagal, J.P. (2014) **"Developing Soft Skills the Hard Way: International Student**

Game Projects", 2nd International Japan Game Studies Conference, August 21-23, Edmonton Canada.

Altizer, R., Zagal, J. P. (2014) "**Designing Inside the Box or Pitching Practices in Industry and Education**", 2014 Digital Games Research Association Conference, August 3-6, Snowbird, UT

Altizer, R., Zagal, J. P., (2014) "**Pitch Perfect or Exploring Pitching Practices in Industry and Games Education**", 2014 Foundations of Digital Games Conference, April 3-7, 2014, Fort Lauderdale, FL.

Zagal, J. P., Altizer, R. (2014) "**Examining 'RPG Elements': Systems of Character Progression**", 2014 Foundations of Digital Games Conference, April 3-7, 2014, Fort Lauderdale, FL.

Zagal, J. P. (2013) "**Understanding Japanese Games Education**", 2013 Digital Games Research Association Conference, August 26-29. Atlanta, GA.

Zagal, J. P., Tomuro, N. (2013) "**Cultural Differences in Game Appreciation: A Study of Player Game Reviews**", Foundations of Digital Games Conference, FDG 2013, May 14-17, Chania, Greece. (**Winner of Best Paper Award, Global acceptance rate was 30%, only 4 papers were awarded best paper award**)

Zagal, J. P., Bjork, S., Lewis, C. (2013) "**Dark Patterns in the Design of Games**", Foundations of Digital Games Conference, FDG 2013, May 14-17, Chania, Greece. (Acceptance rate was 30%)

Wozniak, K. & Zagal, J. P. (2012) "**Finding Evidence of Metacognition through Content Analysis of an ePortfolio Community: Beyond Text, Across New Media**", 10th International Conference on Computer Supported Collaborative Learning (CSCL), June 15-19, Madison WI.

Raison, K., Tomuro, N., Lytinen, S., Zagal, J. P. (2012) "**Extraction of User Opinions by Adjective-Context Co-clustering for Game Review Texts**", 8th International Conference on Natural Language Processing JapTAL 2012, October 22-24, Kanazawa, Japan.

Zagal, J. & Lertudomtana, P. (2012) "**A Tool for Supporting Game Design Education: Tower Defense Generator**" *Proceedings GLS 8.0 Games+Learning+Society Conference*, 13-15 June, Madison, WI. pp. 533-534.

Wozniak, K. & Zagal, J. (2012) "**Adult Learning and ePortfolio Development: Validation, Empowerment, and Identity**", EdMedia 2012: World Conference on Educational Media and Technology. June 26-29, Denver, CO.

Wozniak, K. & Zagal, J. (2011). "**Enhancing Community-based Learning with ePortfolios.**" International Association for Research on Service Learning and Community Engagement. Chicago, IL.

Wozniak, K. & Zagal, J. (2011). "**ePortfolios, Digital Identity Development, and Communities of Practice.**" Grace Hopper Celebration of Women in Computing Conference, Portland, OR

Zagal, J.P. & Sharp, J. (2011) "**A Survey of Final Project Courses in Game Programs: Considerations for Teaching Capstone**", Digital Interactive Games Research Association Conference (DiGRA 2011), Utrecht, The Netherlands

Murphy, J. & Zagal J. P. (2010) "**Videogames and the Ethics of Care**", Meaningful Play 2010, East Lansing, Michigan, USA. (**Winner of Best Paper Award**)

Zagal, J. P., Tomuro, N. (2010), "**The Aesthetics of Gameplay: A Lexical Approach**", *Proceedings of the 14th International Academic MindTrek Conference*, Tampere, Finland, 9-16.

Zhang, J., Fang, X., Chan, S., Zagal, J. (2010), "**Measuring Flow Experience of Computer Game Players**", *Proceedings of the 16th Americas Conference on Information Systems (AMCIS)*, Lima, Peru.

Zachara, M. & Zagal J.P (2009), "**Challenges for Success in Stereo Gaming: A Virtual Boy Case Study**", *Proceedings of the International Conference on Advances in Computer Entertainment Technology (ACE 2009)*, Athens, Greece. ACM, 99-106. [acceptance rate: 22%]

Thomas, D., Zagal J.P., Bogost, I., Robertson, M., Huber, W. (2009) **"You Played That? Game Criticism meets Game Studies"**, *Proceedings of the Digital Games Research Association Conference (DiGRA 2009)* London, England.

Zagal, J.P. (2009), **"Ethically Notable Videogames: Moral Dilemmas and Gameplay"**, *Proceedings of the Digital Games Research Association Conference (DiGRA 2009)* London, England.

Zagal, J. P., Ladd, A., Johnson, T. (2009), **"Characterizing and Understanding Game Reviews"**, *Proceedings of the 4th International Conference on the Foundations of Digital Games*, Orlando FL, 215-222 [acceptance rate: 28%]

Zagal, J. P. (2008), **"A Framework for Games Literacy and Understanding Games"**, *Proceedings of the ACM Future Play 2008 Conference*, Toronto, Canada. 33-40 [Also presented at the conference]

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Zagal, J. P., Mateas, M. (2007), **"Temporal Frames: A Unifying Framework for the Analysis of Game Temporality"**, *Proceedings of the Digital Interactive Games Research Association Conference (DiGRA 2007)*, Tokyo, Japan, 516-523.

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Zagal, J. P., Bruckman, A. (2007), **"GameLog: Fostering Reflective Gameplay for Learning"**, *Proceedings of the 2007 ACM SIGGRAPH Symposium on Videogames*, San Diego CA, 31-38.

Zagal, J. P., Mateas, M., Fernandez-Vara, C., Hochhalter, B., Lichti, N. (2005) **"Towards an Ontological Language for Game Analysis"**, *Proceedings of the Digital Interactive Games Research Association Conference (DiGRA 2005)*, Vancouver B.C., June, 2005. (Included in the Selected Papers volume).

Reprinted in: Worlds in Play: International Perspectives on Digital Games Research (2007), de Castell, S. and Jenson, J. (Eds), New York, Peter Lang

Fernandez-Vara, C., Zagal, J. P., Mateas, M. (2005). **"Evolution of Spatial Configurations in Videogames"**, *Proceedings of the Digital Interactive Games Research Association Conference (DiGRA 2005)*, Vancouver B.C., June, 2005. (Included in the Selected Papers volume). **(Nominated for Best Paper Award)**

Reprinted in: Worlds in Play: International Perspectives on Digital Games Research (2007), de Castell, S. and Jenson, J. (Eds), New York, Peter Lang

Conference Presentations without Proceedings (refereed)

Deterding, S. Medler, B. Flick C., Drachen, A., van Roessel L., Zagal, J.P. (2018) **"The Coming Sh*t Storm? Game Research and Design Ethics after Facebook"**, *Foundations of Digital Games 2018*, Malmo, Sweden, August 7-10.

Zagal, J. (2018) **“Role-Playing Game Studies: The Big Picture”**, Living Games 2018, Boston MA, May 17-20.

Rothwell, E., Johnson, E., Rose, N., Altizer R., Zagal J., Latendresse G., Botkin J., Wong B. (Under Review) **“Evaluation of a Game-Based Decision Aid for Prenatal Genetic Screening”**, 39th Annual Meeting of the Society for Medical Decision Making (SMDM), Pittsburgh, PA. Oct. 22-25.

Shipman JP, Casucci T, Altizer RA, Zagal JP. (2017) **“Shhh! A Library and an Innovation Center Unite!”** VentureWell 21st Annual Open Conference. Washington DC, March 24-25, 2017.

Casucci, T., Shipman, Jean O., Altizer, R., Zagal J. (2016) **“Shhh! We’re Making Games in the Library and You Can Too”**, First Joint International DiGRA FDG Conference, August 1-6, Dundee, Scotland.

Zagal, J., Deterding, S. (2016) **“What Larp can Learn from Role-Playing Game Studies”**, 2016 Living Games Conference, May 19-22, 2016, Austin TX

Zagal, J., Deterding, S., Dormans, J., Björk, S. (2015) **“On Board Games Played On Tablets, Smartphones, and other Computing Devices”**, 2015 Digital Games Research Association Conference (DiGRA 2015), Lüneburg, Germany. May 14-17, 2015.

Shipman JP, Altizer RA, Zagal J, Casucci T, Kalinger K. (2015) **“Librarians as Matchmakers: Using Dating Sites as a Model for Collaboration”**. Medical Library Association Annual Meeting, May 18, Austin, Texas, 2015.

Zagal, J. P., Putnam, C. (2013) **“Teaching Game User Research”**, CHI 2013 Games User Research Workshop, April 27, Paris, France. (Acceptance rate: 20%)

Deterding, S., Zagal, J. P. (2013) **“Roleplaying Game Studies: A Handbook”**, DiGRA 2013, August 26-29, Atlanta, USA.

Wozniak, K., Zagal, J. (2011) **“Non-Traditional Students’ Attitudes, Social Practices, and Usage Patterns in an ePortfolio System Pilot”**, 9th International ePortfolio & Identity Conference (ePIC), London, UK

Wozniak, K., Zagal, J. (2011) **“Adult Students’ Attitudes, Social Practices, and Usage Patterns in an ePortfolio System Pilot”**, DePaul CDM School of Computing Research Symposium (SOCRS) 2011, Chicago, USA

Zhang, J., Fang, X., Chan, S., Zagal, J. (2011) **“Measuring Flow Experience of Computer Game Players”**, DePaul CDM School of Computing Research Symposium (SOCRS) 2011, Chicago, USA

Zagal, J. P., Tomuro, N., Shepitsen, A. (2010), **“Natural Language Processing for Games Studies Research”**, Games Research Methods Seminar, Tampere, Finland.

Zagal, J. P. (chair), Aarseth, E., Björk, S., Holopainen, J., Mateas, M., (2007) **“Patterns, Typology and Ontology: An Overview and Discussion of the Formal Analysis of Games and Gameplay”**, Panel at Digital Interactive Games Research Association Conference (DiGRA 2007), Tokyo, Japan

Zagal, J. P., (2007) **“GameLog: Supporting Reflective Gameplaying Practices in the Context of Learning Games”** - Games, Learning and Society 3.0 Conference, Madison WI., July 12-13, 2007

Conference Presentations (non-refereed)

José Zagal, Thorkild Hanghøj, Lise Møller, Charlotte Lærke Weitzte, Jari Due Jessen, Miruna Vozaru (organizer) (2022) **“Games in the Classroom”**, Game Analysis Conference, IT University of Copenhagen, April 2-23, 2022.

Salge, C. (organizer), Compton, K., Juul, J., Sullivan, A., Zagal, J. [participants in alphabetical order] (2020)

“Designing Games for Remote Play”, Foundations of Digital Games 2020, Malta, 15-18, Sept, 2020.
(held online due to Covid-19)

Zagal, J. (2019) **“Jams, Clubs, Shows, and More: An Overview of Institutional Support for Game Students”**, Game Developers Conference 2019 – Education Summit, San Francisco, CA, Mar 18-22.

Zagal, J., de Castell, S., Jenson, J., Trammell, A., White, W., Aarseth, E. (2018) **“Publishing in Game Studies: Thoughts and Discussion with the Editors”**, Digital Games Research Association Conference (DiGRA 2018), Torino, Italy, 25-28 July, 2018.

Zagal, J. **“The Game Ontology Project: A Retrospective”**, Game Ontology Workshop, University of California Santa Cruz, Santa Cruz, May 25, 2018

Mosca, I. (organizer), Karhulahti, V. (organizer), Grabarczyk, P., Gualeni, S., Juul, J., Leino, O., Sageng, J., Zagal, J. [participants in alphabetical order] (2015) **“Game and Videogame Ontologies. A Round Table”**, Digital Games Research Association Conference (DIGRA 2015), Lüneburg, Germany. May 14-17, 2015.

Begy, J., Björk, S., Deterding, S., Dormans, J., Zagal, J., [authors in alphabetical order] (2015) **“Tabletop Game Studies Panel”**, 2015 Digital Games Research Association Conference (DIGRA 2015), Lüneburg, Germany. May 14-17, 2015.

Zagal, J.P. (2015) **“Top Tips for Students at GDC”**, Game Developers Conference 2015 – Education Summit, San Francisco, CA, March 2-6,

Zagal, J.P. (2014) **“Design Patterns in Games: Big Questions and Challenges 2014 Edition”**, Workshop on Design Patterns in Games (DPG 2014) @ Foundations of Digital Games 2014, Fort Lauderdale FL, April 3-5, 2014.

Zagal, J. P. & Putnam C. (2014) **“Setting Up and Running a Games User Research Class”**, Game Developers Conference 2014 – Education Summit, San Francisco, CA [Putnam presented at conference]

Zagal, J.P. (2013) **“Dark Patterns in Game Design”**, First International Conference on Gameful Design, Research, and Applications (Gamification 2013), Waterloo, ON Canada, October 2-4.

Zagal, J. P. (2013) **“Game Educators Rant: Why Crappy Games Can Be Good For Class”**, Game Developers Conference 2013 – Education Summit, San Francisco, CA, March 25-29.

Zagal, J.P. (2012) **“Design Patterns in Games: Big Questions and Challenges”**, Workshop on Design Patterns in Games (DPG 2012) @ Foundations of Digital Games 2012, Raleigh NC, May 30 – Jun 1, 2012.

Zagal, J. P. (2011) **“Morality in Heavy Rain”**, Ethical Inquiry through Video Game Play and Design: A Symposium, DePauw University, Indiana, Oct 10-12.

Poels, K. (chair), Hartmann, T. (chair), Zagal J., Young, G., Whitty, M., Malliet, S., (2011) **“Moral Issues in Digital Gameplay”**, Digital Interactive Games Research Association Conference (DiGRA 2011), Utrecht, The Netherlands

Kirman, B. (chair), Zagal J. P. (chair), Bateman, C., Knizia, R., Servaes, A., Sheerin, A., Wallis, J., Wilson, D., (2011) **“Modern Board Games and Why Game Studies Should Care”**, Digital Interactive Games Research Association Conference (DiGRA 2011), Utrecht, The Netherlands

Zagal J. P. (chair), Aarseth, E., de Castel, S., Flanagan, M., Greene, M., Mäyrä, F., (2011) **“The Ivory Tower that Isn’t: A Game Scholar Rant Session”**, Digital Interactive Games Research Association Conference (DiGRA 2011), Utrecht, The Netherlands

Zagal, J.P. & Sharp, J. (2011) **“Massively Multi-Professor Cooperative Capstone Course Design (MMPCCD)”**, Game Developers Conference 2011, CA.

Notes: This talk received an attendee rating of **4.72** on a scale where 5 was the highest possible score (excellent/definite invite back). The highest rated talk received a 4.93.

Zagal, J.P., (2010) **“Devil’s Tuning Fork: Lessons for Managing Student, Faculty and Industry Game Projects”**, Games Education Summit (GES) 2010, CA

Zagal, J.P., (2010) **“Using Videogames for Encouraging Moral and Ethical Reasoning”**, Games Education Summit (GES) 2010, CA

Zagal, J.P., Schrier, K. Sicart, M., Macklin, C. (2010) **“Morally Interesting Choices: Games and their Ethical Potential”**, Foundations of Digital Games (FDG) 2010, CA

Zagal, J.P., Schrier, K. Sicart, M., (2009) **“Ethics in Videogames”**, Workshop at the Digital Interactive Games Research Association Conference (DiGRA 2009), London, UK.

Zagal, J. P., (2007) **“Learning About Videogames: Implications for Learning From Videogames”**, OECD Expert Meeting on Videogames and Learning, Santiago Chile, October 2007

Technical Reports (not peer-reviewed)

Zagal, J.P., Piper, A.M., Bruckman, A. (2006) **“Social and Technical Factors Contributing to Successful 3D Animation Authoring by Kids”**, GVU Tech Report: GIT-GVU-06-14

Patel, S.N., Kientz, J. A., Zagal, J.P. (2004) **“LoCoL: Encouraging Social Interaction and Exploration Through a Distributed, Multi-Media, Location-Based Mobile Game.”**, GVU Tech Report: GIT-GVU-04-17

Zagal, J.P., Piper, A.M., Bruckman, A. (2004) **“Kids Telling Fables Through 3D Animation”**, GVU Tech Report: GIT-GVU-04-23

Other Academic Publications (not peer-reviewed)

Zagal, J.P. (2016) **“Values at Play in Digital Games”**, American Journal of Play, Vol. 8 No. 2, pp. 283-284

Zagal, J. P. (2016) **“On Chairing a Games Research Conference”**, Transactions of the Digital Games Research Association (ToDiGRA), Vol. 2 No. 2. pp. 5-20.

Zagal, J.P., Altizer, R. (2016) **“DiGRA 2014: Celebrating the Diversity of Games Research”**, Transactions of the Digital Games Research Association (ToDiGRA), Vol. 2 No. 2.

Zagal, J.P. (2011) **“Hackers, History, and Game Design: What Racing the Beam Is Not”**, *Game Studies*, Vol. 11, No. 2, May 2011.

Zagal, J.P. (2007) **“Game Studies: Who will continue to blaze the trail?”**, Column for the Digital Games Research Association (DiGRA), August 2007

Keynote Presentations

The Hispanic and Latin American Video Gaming Experience, “Chilean Videogames: 1970s-1980s”, Texas Tech University, Lubbock, Texas, February 25 and 26, 2022

Charlas VRiD: Conocimiento que Transforma, “Videojuegos: Desafíos y Oportunidades del Decimo Arte”, Universidad de Concepción, Concepción, Chile, May 13, 2021

Teaching Game Studies Workshop, “Flying by the seat of your pants: Don’t (Experiences experimenting with games education)”, August 2, 2016, Dundee, Scotland

Workshop on Games, Ethics and War – “If War is Hell, what about Videogames?”, Macquarie University, Sydney, Australia, November 24, 2014

Invited Talks

(conference presentations and invited teaching presentations are listed separately)

Defusing Dark Patterns Conference: Current Technical and Legal Approaches, “Dark Patterns and Game Designers”, November, 2021 (Hosted by: Dark Pattern Detection Project, German Research Institute for Public Administration and the University Heidelberg)

Indiecade Horizons 2021, Live Game Feedback with Experts Part 1, June 12, 2021

University of York “Game Design (it’s always about ethics)”, February 7, 2020, York, Great Britain

FanX 2019, Salt Lake City, UT

- “Good for You Games: In Healthcare, Wellness, and Education”, April 20

DragonCon 2018, Atlanta GA

- “Esports and Education” (Aug 31)
- “Why Go to School for Gaming” (Sep 1)

Gamecraft Club – University of Utah, “Let’s Talk about Game Design”, September 14, 2018.

Pontificia Universidad Católica de Chile, “Estudios de Caso Análisis de Críticas de Videojuegos” June 22, 2018, Santiago Chile

Living Games 2018, Boston MA

- “The Nuts and Bolts of RPG Research” (May 18)
- “Games Academia 101: Primer for Junior Academics” (May 19)

DragonCon 2017, Atlanta, GA

- “Top Ten Reasons Why you Should Gamejam” (September 2)
- “Toys that are Changing the Future of Gaming” (September 3)
- “Unusual Jobs in the Videogame Industry” (September 3)

DragonCon 2016, Atlanta, GA

- “Emerging Technologies and the Future of Gaming” (September 2)
- “Virtual Reality in Video Gaming” (September 3)
- “Unusual Jobs in the Videogame Industry” (September 3)
- “Going to School for Videogames” (September 4)

Uppsala University, “Moral Reflection and Development Through Play”, February 4, 2016, Uppsala Sweden

Royal Institute of Technology (KTH), “Videogame Interfaces and Ethics: Unlikely Partners?”, February 3, 2016, Stockholm Sweden.

University of Utah, School of Medicine – Evening Ethics Seminars, “What Could Go Wrong? Videogames and Healthcare Interventions”, January 13, 2016

Regional Centers of Excellence in ELSI Research Meeting, “Gaming Platforms”, February 23-25, 2015, Seattle, WA. (presented with Roger Altizer)

Level UP – Simulating Economics, Utah Museum of Contemporary Art, October 1, 2014

63rd Annual Frederick W. Reynolds Lecture, “A Grown-Up Conversation About Games: Mind, Body, and Soul”, University of Utah, February 10, 2014

University of Utah - Digital Medical Therapeutics Seminar, “Empathy Apps?”, October 29, 2013

DePaul University, “Should I be Offended? Hispanic Representations in Videogames”, October 17, 2013

Salt Lake Comic Con, “History and Culture of Videogames” (with Altizer, R., Hayes, P. and Hayes, R.), September 7, 2013

University of Ontario Institute of Technology, “Videogames and the Ethical Player”, February 11, 2013

Drexel University, “Understanding Games Through Game Reviews”, April 3, 2013

Michigan State University, “Ethical Games: Challenges and Opportunities”, January 13, 2012

Northeastern Illinois University, “Games as Ethics”, NETT Day 2.0, October 27, 2011

Pontificia Universidad Católica de Chile, “Videojuegos y Reflexión Moral” (Videogames and Moral Reflection), Santiago, Chile, October 29, 2010

University of Illinois at Urbana-Champaign, “Challenges of 3D Stereo Gaming”, HCI Seminar, March 4, 2010

Massachusetts Institute of Technology, “Moral Dilemmas and Games”, Gambit Game Lab, July 6, 2009

DePaul University, “Teaching Videogames: Issues and Challenges”, School of Computer Science, Telecommunications and Information Systems, March 12, 2008

University of Nevada Reno, “Exploring the Issues and Challenges of Learning about Videogames”, Department of Computer Science & Engineering, March 6, 2008

Universidad Adolfo Ibañez, “Ambientes Colaborativos Online para Aprender Sobre Videojuegos” (Collaborative Online Environments for Learning About Videogames), Santiago, Chile, January 15, 2008

University of Illinois at Chicago, “Supporting Learning About Games” – Learning Sciences Research Institute Speaker Series, Chicago, IL, December 11, 2007

Georgia Institute of Technology, “What is a Game?” – Gamescapes Symposium on New Media, Virtual Environments, and Learning, Atlanta, GA, September 29-30, 2006. Disclosure: José Zagal was the organizer of the Gamescapes Symposium

Georgia Institute of Technology, “Games and Learning” – Gamescapes Symposium on New Media, Virtual Environments, and Learning, Atlanta, GA, September 29-30, 2006. Disclosure: José Zagal was the organizer of the Gamescapes Symposium

Theses

Ph.D. 2008 **Supporting Learning About Games**, Georgia Institute of Technology
Advisor: Dr. Amy S. Bruckman

Masters 1999 **A Model to Support the Design of Multiplayer Games**, Pontificia Universidad Catolica de Chile
Advisor: Dr. Miguel Nussbaum

Games

Abstract Hex Dice (2019)

3rd Place in BryceCon V Game Design Competition, Jan 18-21, 2019.

[role: Everything]

Friends and Memories (2018)

Included in the 2018 Golden Cobra Games Anthology

Available: <http://www.goldencobra.org/pdf/2018/Zagal%20--%20Friends%20and%20Memories.pdf>

[role: Everything]

Hollywood Hacker (2018)

[role: Everything]

404Sight (2015)

Awards:

2015 Inter Student Showcase (finalist)

2015 Official Selection of the "Different Games" Festival, April 3-4, 2015

2015 (March) Unreal Dev Grant (\$13,000)

[role: Executive Producer, Faculty advisor]

Cyberheist (2014)

Awards:

2014 IGF student showcase winner

2014 Intel Student Showcase (finalist)

2014 Unity Awards "Best Student Game" (finalist)

2014 Unity Awards "Community Choice" (finalist)

2014 Utah Game Wars (finalist)

2014 Serious Games Showcase & Challenge (Winner – Best Student Developed Serious Game)

2014 Microsoft Imagine Cup Fund (\$10,000 award)

[role: Executive Producer, Faculty advisor]

Vynil (2014)

Awards: E3 Expo College Game Competition Finalist, 2014

[role: Executive Producer, Faculty advisor]

Calorie Crawl Saga: The Candy Kings Cometh (2014), Developed during the 2014 Global Game Jam

<http://globalgamejam.org/2014/games/calorie-crawl-saga-candy-kings-cometh>

[role: everything, co-developed with Roger Altizer]

Pacemaker Panic, Boardgame (2013), Developed during the 2013 Global Game Jam

<http://globalgamejam.org/2013/pacemaker-panic>

[role: everything, co-developed with Allen Turner]

Proppa (iOS, Android)

[role: Playtester, Consultant Game Designer]

Organ Trail, Android/iOS (2012)

[role: Consultant Designer]

Ouroburrets, PC (2012), Developed during the 2012 Global Game Jam

<http://globalgamejam.org/2012/ouroburrets>

[role: everything]

Tree of Life, PC (2011), Developed during the 2011 Global Game Jam

<http://globalgamejam.org/2011/tree-life>

[role: everything]

Channel Sweeper, Nintendo Virtual Boy (2010), Developed during the 2010 Global Game Jam

<http://globalgamejam.org/2010/virtualboy-channel-sweeper>

[role: everything]

- This game was featured as a “Digital Homebrew Highlight” with a full-page spread in Wittenhagen, J. (2019), *The Complete Virtual Boy*, Hagen’s Alley Entertainment, pg 128.

MiniNova, Flash (Web) (2007), Developed for Studiocom (Atlanta, GA)
[role: game designer, tester]

Aerosfera, Adobe Shockwave (Web) (2001), Developed for Virtualia.com (Chile)
http://facsrv.cs.depaul.edu/~jzagal/Aerosfera/aeroesfera_offline.htm
[role: project director, executive producer, lead game designer]

Disco Roller & DJ Mortis, Macromedia Flash (Web) (2001), Developed for Virtualia.com (Chile)
[role: project director, executive producer, lead game designer]

Ruta 5, Macromedia Flash (Web) (2001), Developed for Virtualia.com (Chile)
[role: project director, executive producer, lead game designer]

Roli, Hermes, Magalu and **Tiki-Tiki** for Nintendo GameBoy (1997-1999), Suite of educational videogames developed for FONDEF (Chile)
[role: programmer, game designer, tester]

Grants and Awards

2020 – Inducted as Higher Education Videogame Alliance Fellow (HEVGA)

2016 – Digital Games Research Association Distinguished Scholar

Awards

2019 – 3rd Place BryceCon V Game Design Competition (for “Abstract Hex Dice”)

Daniels Fund Ethics Initiative Leadership in Ethics Education Award (2015-2016)

Fellowships

DePaul Center for Latino Research Faculty Fellow

Proposal: Hispanic Perceptions of Race and its Representation in Videogames
Period: Academic Year 2012-2013

Grants

Representations of Sustainability in City-Building Videogames

Role: PI
Funding Agency: Sustainable Campus Initiative Fund (SCIF)
Amount: \$1,000
Period: Fall 2019 - Spring 2020

“Gene the Gnome” – Newborn Genetic Screening Tool

Role: Co-Principal Investigator (Co-PI) (PI: Erin Rothwell)
Funding Agency: UCEER and College of Nursing Seed Grant
Amount: \$20,000
Period: Fall 2015

Improved Prenatal Genetic Screening Decision Making Through Interactive Technology

Role: Co-Principal Investigator (Co-PI) (PI: Erin Rothwell)
Funding Agency: NIH NHGRI
Amount: \$490,750

Period: April 2015 – March 2017

Vascular Access

Role: Principal Investigator (PI) (with Roger Altizer and Robert Kessler)

Funding Agency: AVA Foundation

Amount: \$20,000

Period: Jan 2015- May 2015

E-Channel

Role: Principal Investigator (PI)

Funding Agency: UU Library

Amount: \$32,700

Period: Aug 16, 2014-Dec 31, 2014

Research Quests

Role: Co-Principal Investigator (Co-PI) (PI: Roger Altizer)

Funding Agency: Natural History Museum of Utah

PI: Roger Altizer, Co PI: Jose Zagal, Ryan Bown

Amount \$61,250

Period: Aug 16, 2014-Dec 31, 2014

Bad Air Day - UCAIR

Role: Co-Principal Investigator (Co-PI) (PI: Roger Altizer)

Funding Agency: UCAIR

Amount: \$34,125

Period: Aug 16, 2014-Dec 31, 2014

Medical Home Portal

Role: Co-Principal Investigator (Co-PI) (PI: Roger Altizer)

Funding Agency: UU General Pediatrics

Amount: \$28,923

Period: Aug 16, 2014-Dec 31, 2014

Miramonte

Role: Principal Investigator (PI)

Funding Agency: Last of Five, LLC

Amount: \$26,588

Period: May 2014 – August 2014

Natural History Museum Games (Canyon Explorer and Explore your Environment)

Role: Co-Principal Investigator (Co-PI) (PI: Roger Altizer)

Funding Agency: Natural History Museum of Utah

Amount: \$50,000

Period: May 16 – August 15, 2014

Image Generation Tech & the Gaming Engine Tech

Role: Co-Principal Investigator (Co-PI) (PI: Mark van Langeveld)

Funding Agency: Rockwell Collins

Amount: \$142,481

Period: Feb 1, 2014-Dec 31, 2014

Doodle Health

Role: Principal Investigator (with Roger Altizer)

Funding Agency: BioInformatics

Amount: \$30,000

Period: Summer 2014

AIPPE Ethics Explorer

Role: Principal Investigator (with Roger Altizer)

Funding Agency: UCEER Ethical Research Center

Amount: \$10,000
Period: Spring 2014

Tower Defense Generator: A Tool for Learning Game Design

Role: Principal Investigator (PI)
Funding Agency: DePaul University Competitive Research Grant
Amount: \$3,500
Period: December 2012 – June 2014

Studying and Understanding Japanese Games Education

Role: Principal Investigator (PI)
Funding Agency: DePaul University Competitive Research Grant
Amount: \$3,500
Period: December 2011 – June 2013

Selected Bibliography and Press

Samsung Display, January 20, 2023 “What’s Happening in Gaming in 2023?”

- Interviewed as expert on gaming for Samsung IT trend column, <https://global.samsungdisplay.com/31083>

Inverse Magazine, March 15, 2023, “Is Joel a Good Person? The Complicated Ethics of Last of Us”

- Online media, entertainment, and culture magazine, <https://www.inverse.com/entertainment/the-last-of-us-ethics-joel-good-person>

ETC Magazine, Nr 38, 23 September 2022, “ALLA VINNER – ELLER ALLA FÖRLORAR”

- Swedish print magazine, article is about collaborative games, also available at <https://www.etc.se/feature/slipp-konflikterna-med-barnen-haer-aer-spelen-daer-alla-aer-vinnare> (paywall)

Epsilon Magazine, August 2022, “L’ENQUETE - Jeux vidéo : le piège se referme”

- Award-winning French popular science print magazine. (“Le magazine d'actualité scientifique qui décrypte le monde et suscite la curiosité”)

Fox13 News, March 27, 2022. Live interview.

Ethics and Videogames Podcast, December 7, 2021. <https://podcasts.apple.com/us/podcast/episode-31-how-should-intellectual-property-apply-to/id1559329856?i=1000544204254> [invited as interviewee] – Title of Episode “Episode 31: How Should Intellectual Property Apply to Video Games? (with Jose Zagal)”

Ethics and Videogames Podcast, August 3, 2021. <https://podcasts.apple.com/us/podcast/teaching-ethics-and-video-games/id1559329856?i=1000530859535> [invited as interviewee] – Title of Episode “Teaching Ethics and Video Games”

BackStory Podcast Episode 67, September 13, 2018. <http://oneshotpodcast.com/podcasts/backstory/67-jose-zagal/> [invited as interviewee]

PBS Digital Studios – “How Can Videogames Make You a Kinder Person?”, Jun 2, 2015 (<https://youtu.be/tYA-TfDUjek>)

OnlySP “Why Write About Games? – Part One”, October 26, 2015 (<http://www.onlysp.com/why-write-about-games-part-one/>)

Australian Broadcasting Corporation, Good Game TV Show (Season 11, Episode 10) “ANZAC Special”, Originally aired April 21 2015, but also viewable at http://www.abc.net.au/tv/goodgame/episodes/date_2015_Tuesday21April2015.htm

Gamestar Magazine (Hungary) "Morális dilemmák a játékokban", May 2014.

News items regarding the 30th Anniversary of Videogame Character Luigi

- **EastBayRI**, "Nobody Loves Luigi, not even on his birthday", Feb 5, 2013
- **GameFront.com**, "Nobody Loves Luigi, Even on His 30th Birthday", Feb 5, 2013
- **Yahoo!News**, "Luigi Celebrates his 30th birthday still in Mario's Shadow", Feb 6, 2013
- **GamePolitics.com**, "Thirty Years Later: Nobody Loves Luigi", Feb 5, 2013
- **GamesBeat.com**, "You forgot Luigi's Birthday (again), but this one's a 30-year milestone", Feb 6 2013
- **RedOrbit**, "Mario Gets All the Love, But Is That Good For Nintendo?", Feb 7, 2013

De Standaard (Belgium), "Gamingwereld kampt met zuurstoftekort" (Gaming world suffers from lack of oxygen), Nov 21, 2012.

Chicago Tribune, "Gaming grows up: A video game revolution", Oct 31, 2012.

BBC News, "Nintendo's mascot: from Donkey Kong to Super Mario Lovers", Jun 3, 2012

News items regarding creation of DePaul Library's Videogame collection at DePaul Library

- **Medill Reports Chicago**, "DePaul's library levels up on video game collection, but not just for fun", Apr 27, 2011
- **Medill Reports Chicago**, "Quit Goofing off and play your videogames!", May 18, 2011
- **Sun-Times**, "DePaul's library amasses collection of video games – for research", May 18, 2011
- **Chicago Sun-Times**, "DePaul stocks video games for research", May 21, 2011

WebTalkRadio.net, "Video Games: Brain Gain or Drain" radio program hosted by Dr. Jayne Gackenback (<http://webtalkradio.net/shows/video-games-brain-gain-or-drain/>), aired on Oct 17. (Interview)

Chicago Tribune, "Women missing from video game development work force", Aug 5 2010

Owni.fr (France), October 2, 2009 (Interview)

Revista Innovacion y Negocios (Chile), August 2009, pp. 4-5. (Interview)

Internet and Gaming (Television documentary produced by Purdue University) to air after Fall 2009 (Interview)

Endorsements/Blurbs Written

- **"Japanese Role-Playing Games: Genre Representation, and Liminality in the JRPG"** edited by Jérémie Pelletier-Gagnon and Rachael Hutchinson, 2022, Published by Lexington Books.
- **"The Elusive Shift: How Role-Playing Games Forged their Identity"** by Jon Peterson, Published in 2020 by MIT Press
- **"Super Power, Spooky Bards, and Silverware: The Super Nintendo Entertainment System"** by Dominic Arsenault, Published in 2017 by MIT Press

Teaching

(only includes teaching activities at University of Utah)

Courses Taught

Course	Title	Term(s)
EAE3020	Ethics in Videogames	Spr 17, Fall 17, Spr 18, Fall 18, Spr 19, Fall 19, Spr 20, Sum 20, Fall 20, Spr 21, Sum 21, Fall 21, Spr 22
EAE6000	Game Design I	Fall 13, Fall 14, Fall 15, Fall 16, Fall 17
EAE6020	Ethics in Games	Spr 14, Spr 15, Spr 16, Spr 19, Spr 21
EAE6030	Experimental Gameplay	Spr 16, Spr 17, Spr 18, Spr 19, Spr 20, Spr 22
EAE 6110	Game Projects I	Spr 14
EAE 6120	Game Projects II	Fall 13, Fall 14, Fall 15
EAE 6130	Game Projects III	Spr 15
EAE 4900	Mobile Game Design	Spr 17
EAE 2100	Introduction to Game Design	Fall 17, Spr 18, Fall 18, Spr 19, Fall 19, Spr 20, Fall 20, Spr 21, Fall 21, Spr 22
EAE4900	Aesthetics and Philosophy of Play	Fall 21

Curricular Development

EAE2100	Introduction to Game Design
EAE2900	Critical Game Design Seminar
EAE3020	Ethics in Videogames
EAE4900	Aesthetics and Philosophy of Play <ul style="list-style-type: none">• Co-developed with Thi Nguyen (Philosophy Dpt, UoU)
EAE6015	Paper Prototyping for Game Design <ul style="list-style-type: none">• Co-developed with Matt Anderson
EAE6020	Ethics in Games
EAE6030	Experimental Gameplay
EAE4900	Mobile Game Design
EAE4900	Hybrid Game Design <ul style="list-style-type: none">• Co-developed with Timothy Fowers
EAE6900	Game Systems Design <ul style="list-style-type: none">• Co-developed with Matt Anderson

Individual Student Guidance

(does not include work done as part of "Independent Study" courses)

PhD Students Supervised – University of Utah

- Nancy Blackburn
 - Role: Thesis Committee Member (Advisor is Rogelio Cardona-Rivera)
 - Graduation Date: Spring 2026 (Expected)
- Peter Christiansen

- Role: Thesis Committee Member (Advisor is Robert Gehl)
- Graduation date: Spring 2020

PhD Students Supervised – DePaul University

- Kathryn Wozniak
 - Role: Advisor
 - Graduation date: May 2015
- Andriy Shepitsen
 - Role: Thesis Committee Member (Advisor is Noriko Tomuro)
 - Graduation date: in progress
- Ali A. Alkhafaji
 - Role: Thesis Committee Member (Advisor is Peter Hastings)
 - Graduation Date: May 2018

PhD Students Supervised – Other Universities

- Cristian Parra
 - Role: PhD Committee Member (external)
 - Dissertation Title: La constricción temporal como factor de ajuste del ritmo de aparición de desafíos en videojuegos
 - Institution: Pontificia Universidad Catolica de Chile (PUC), Chile
- Lucy Sparrow
 - Role: PhD Examiner
 - Dissertation Title: The Ethics of Multiplayer Gameplay and Design
 - Institution: The University of Melbourne, Australia
 - Successfully passed: October, 2022
- Alexander Card
 - Role: PhD Committee Member (External)
 - Dissertation Title: Scaffolding Player-Experience-Centered Game Design for Novice Programmers
 - Institution: North Carolina State University
 - Successfully defended: August 3, 2022
- Miruna Vozaaru
 - Role: PhD Committee Member
 - Dissertation Title: The Game Situation: An object-based game analysis framework
 - Institution: The IT University of Copenhagen, Denmark
 - Successfully defended: April 22, 2022
- Ea Willumsen
 - Role: PhD Examination First Opponent
 - Dissertation Title: The PO-VE Framework: Understanding the Relationships Between Player Objects and Virtual Environments in Digital Games
 - Institution: University of Bergen, Norway
 - Successfully defended: October 29, 2021
- Jon Back
 - Role: PhD Examination Opponent
 - Dissertation Title: Designing Public Play: Playful Engagement, Constructed Activity, and Player Experience
 - Institution: Uppsala University, Sweden
 - Successfully defended: February 5th, 2016
- Timo Nummenmaa
 - Role: External Examiner
 - Dissertation Title: Executable Formal Specifications in Game Development: Design, Validation, and Evolution
 - Institution: University of Tampere, Finland
 - Successfully defended: November 30, 2013
- Karl Bergström
 - Role: Co-Supervisor

- Dissertation Title: Playing for Togetherness - Designing for Interaction Rituals through Gaming
 - Primary Advisor: Dr. Staffan Björk
 - Institution: Gothenburg University, Sweden
 - Successfully Defended Thesis on May 23, 2012
- Fadhil Wong (until end of Spring 2012)
 - Role: Secondary Advisor
 - Dissertation Title: Learning Console Gaming: Case Studies of Young Malaysian Gamers
 - Primary Advisor: Dr. Sigrid Norris
 - Institution: Auckland University of Technology, New Zealand

Undergraduate Honors Theses Supervised

- Morgan Cox (Summer 2020)
 - Thesis Title: Sustainability in City-Building Games

Guest Lectures and Teaching

- Guest Lecturer for University of Utah HIST3100 (Historian's Craft), November 16, 2017.
 - "History and Videogames"
- Guest Lecturer for University of Utah Film 1010 (Introduction to Film and Media for Undergraduates), October 3, 2014
 - "Entertainment Worlds"
- Guest Lecturer for HCI 514 (Global User Research), Oct 4 2012
 - "Videogames in a Global Market: Tales of Terror"
- Guest speaker at DePaul Upsilon Pi Epsilon Honor Society Research Event (Winter 2011), Feb 4 2011
- Guest speaker at DePaul Medical Informatics Experiences in Undergraduate Research (MEDIX REU) Aug 6, 2010
- Guest Lecturer for GAM 224 (Introduction to Game Design)
- Guest Lecturer for ANI 460 (Animation Graduate Seminar), May 20, 2009
 - "Entertainment Worlds"
- Guest Lecturer for IT 398/599 (Topics in Global IT: Computer Gaming and Animation in Japan)

Continuing Education Related to Teaching

- Completed DePaul University's Teaching and Learning Certificate Program
- Ethics Across the Curricula Workshop
 - Attended 3-day workshop devoted to ethics teaching and the integration of ethics into curricula.

Service to University of Utah

Committee Work

- EAE Curriculum Committee: 2021-2023
 - Role: Chair
- University of Utah Research Committee: 2019-2022
- EAE Admissions Committee (Production track): 2017, 2018, 2019
- Auxiliary Faculty Appointment Advisory Committee (AFAAC): 2018-ongoing
 - Drafted review letters for reviewed faculty at the rank of Assistant Professor
- EAE Hiring Committee, 2017, 2018 (chair), 2019 (chair), 2022 (chair)

- Participated in the drafting of the job call, selection and review of applicants for a non-tenure track position in game engineering, served as host and organizer for one of the applicants on-site interview.
- College of Engineering Curriculum Committee, 2015-2017

Other Service

- EAE Visiting Lecture Series: 2016-2023.
 - Organizer and Host of EAE's Visiting Lecture series including recruiting, contacting, coordinating, advertising, scheduling, and hosting the visiting speakers (local and non-). Also includes maintaining the official Lecture Series website at <https://eae-game-lecture-series.tumblr.com/> and coordinating with graphic design for the creation of unique posters for each talk.
- University of Utah Library Videogames Collection: 2016-present
 - Advise University of Utah on videogame purchases for the library collection. This includes collecting and collating preferences and interests from students and requirements and suggestions from faculty.
- Judge (Design Track) – University of Utah Gamecraft Portfolio Competition 2018

Service to Academic Community

Editorial Positions

(All positions are by invitation only)

- **Editor-in-Chief**, Transactions of the Digital Games Research Association (ToDiGRA) (<http://todigra.org>)
- Board of Discussants *First Person Scholar*, 2014 to 2017 (<http://www.firstpersonscholar.com/>)
- Editorial Advisory Board of *Well Played Journal*
- International Editorial Board, *Multimodal Communication*, (2011-2013)
- Academic Advisory Board of *g | a | m | e – Games as Art, Media and Entertainment*, 2010 to present
- Editorial Board of *Games & Culture: A Journal of Interactive Media*, 2010 – present
- Board of Reviewers for *Game Studies: The International Journal of Computer Game Research*, 2010 – present
- Editorial Advisory Board for *Designing Games for Ethics: Models, Techniques and Frameworks* edited by Schrier, K. and Gibson, D.
- Editorial Advisory Board for *Ethics and Game Design: Teaching Values through Play* edited by Schrier, K. and Gibson D.
- Editorial Review Board of *International Journal of Gaming and Computer-Mediated Simulations*, 2008 -2013
- Editorial Board of *Loading: Journal of the Canadian Gaming Studies Organization*, 2007 - present

Conference Committee Activities

- Program Committee – DiGRAES23 – II Congreso DiGRA Spain, 25-28 April, 2023
- **Track Chair** (Games Beyond Entertainment and Game Education) – Foundations of Digital Games (FDG), 2021, Online
- Program Committee – Immersive Learning Research Network (iLRN) 2020, San Luis Obispo, California, June 21-25
- **Track Chair** (Game Education) – Foundations of Digital Games (FDG), 2020, Malta.
- Program Committee - Central and Eastern European Game Studies (CEECS), 2018, 11-13 October, Prague
- Program Committee – Interactive Entertainment Conference, 2019
- Program Committee – Foundations of Digital Games (FDG) 2018, Malmo, Sweden, 7-10 August.

- Program Committee – Immersive Learning Research Network (iLRN) 2017, Coimbra, Portugal, June 26-29
- Program Committee - MP2016 (Morality Play 2016: Workshop on the Design of Games for Moral Engagement)
- Program Committee - CISTI Workshops 2016 - 11th Iberian Conference on Information Systems and Technologies, Gran Canaria, Spain, 15-18 June.
- Program Committee – 2016 Joint International Conference DiGRA and FDG, 1-6 August, 2016
- **Chair** of PLAY (curated game exhibition at CHI Play Conference), Oct 16-19 2016.
- **Conference Chair** – 2015 Foundations of Digital Games (FDG) Conference, June 22-25, Asilomar, CA.
- **Conference Chair** – 2014 Digital Games Research Association (DiGRA) Conference, August 3-6, Snowbird, Utah
- Program Committee – Immersive Learning Research Network Conference (iLRN) 2016, Santa Barbara, CA, USA
- Program Committee - CISTI Workshops 2015 - 10th Iberian Conference on Information Systems and Technologies, Aveiro, Portugal.
- Program Committee - Meaningful Play Conference 2014, East Lansing Michigan
- Program Committee - International Conference on Entertainment Computing (ICEC) 2014, Sydney Australia
- Program Committee - Advances in Computer Entertainment Technology (ACE 2014), Funchal, Madeira.
- Program Committee – 2014 IEEE Games, Entertainment & Media Conference (GEM 2014)
- Program Committee – 2nd Workshop on Games and NLP (GAMNLP-13)
- **Chair** of Organizing Committee - Workshop on Design Patterns in Games 2013, NC, USA
- **Chair** of Games Education Track - Foundations of Digital Games 2013, Chania, Greece
- Program Committee - Foundations of Digital Games 2013, Chania, Greece
- Program Committee Doctoral Consortium - Foundations of Digital Games 2013, Chania, Greece
- Program Committee - Meaningful Play 2012, MI, USA
- **Chair** Games Education Track & Program Committee - Foundations of Digital Games 2012, NC, USA
- Program Committee - Advances in Computer Entertainment Technology (ACE 2011), Lisbon, Portugal.
- Program Committee - DiGRA 2011, Program Committee, also Area Chair for “Teaching game design, analysis, and development”, Hilversum, The Netherlands
- Advisory Board - Games Education Summit Conference North America
- Session Chair - Foundations of Digital Games 2010, CA, USA
- Program Committee - Nordic DiGRA Conference 2010, Stockholm, Sweden
- Program Committee - Meaningful Play 2010, MI, USA
- Program Committee - FuturePlay @ DC Canada 2010 Conference, Canada
- Program Committee - Advances in Computer Entertainment Technology (ACE 2009), Athens, Greece.
- Poster Sessions Chair - IGDA Education SIG Summit, Game Developer's Conference 2009, CA, USA.
- Program Committee - Meaningful Play 2008: Designing Games that Matter, MI, USA, 2008.
- Program Committee - ACM Future Play 2008, Program Committee, Toronto Canada, 2008
- IGDA Education SIG Summit, Game Developer's Conference 2008, Poster Sessions Chair, San Francisco CA, USA, 2008.
- Program Committee - ACM Future Play 2007, Program Committee, Toronto Canada, 2007.
- Gamescapes Symposium on New Media, Virtual Environments, and Learning, Symposium Chair, Atlanta GA, USA, 2006.

Review and Referee Work

- *Journal Reviewer for:*
 - ACM Games: Research and Practice, 2023
 - IEEE Transactions on Games, 2020

- International Journal of Role-Playing, 2018
- Thinking Skills and Creativity, 2015
- International Journal of Role-Playing, 2014
- Ethics and Information Technology, 2014
- Well-Played, 2013, 2019, 2020
- Transactions on Computational Intelligence and AI in Games 2012
- Bulletin of Science, Technology & Society 2012
- Multimodal Communication 2011- present
- Game Studies: International Journal of Computer Game Research 2009 - present
- International Journal of Gaming and Computer-Mediated Simulations, 2009 - present
- Computers and Education, 2009 - present
- Games and Culture, 2007 – present
- Journal of the Learning Sciences, 2007 – present
- Loading: Journal of the Canadian Gaming Studies Organization, 2007 - present
- Learning Inquiry, 2006
- International Journal of Human-Computer Interaction (IJHCI), 2005
- Simulation & Gaming, 2005 – present
- WiderScreen, 2019
- *Conference Reviewer for:*
 - CHIPlay 2023, 10-13 October, Stratford, Canada.
 - Games Lit 2023, May 10-11, Katowice, Poland
 - International Conference of the Digital Games Research Association (DiGRA) 2023, 19-23 June, Sevilla, Spain
 - 5th Workshop on Tabletop Games @ Foundations of Digital Games (FDG) 2023, 11-14 April, Lisbon, Portugal.
 - 4th Workshop on Tabletop Games, September 5-8, 2022, Athens, Greece
 - Game Analysis Perspectives Conference (GAP), April 20-23, 2022, Copenhagen, Denmark
 - International Conference of the Digital Games Research Association (DiGRA) (2022), July 7-11, Kraków, Poland
 - Sociedad Chilena de las Ciencias de la Computacion (SCCC) 2021 (40th International Conference of the Chilean Computer Society), 15-19th November
 - Designing Interactive Systems (DIS) 2021, June 28-July 2.
 - CHI Play 2020, Nov 2-4, Ottawa, Canada
 - Workshop on Table Top Games (TG@FDG2020) at Foundations of Digital Games 2020, 15-18 Sept, Malta.
 - Australasian Computer Science Week (ACSW), 3-7 Feb, 2020, Melbourne, Australia.
 - Teach Games, Pedagogical Approaches (TGPA) Workshop (@DiGRA2019), August 6, Kyoto Japan.
 - 2nd Workshop on Tabletop Games (@FDG2019), August 26-30, San Luis Obispo, CA, USA
 - ACSW 2019 (Australian Computer Science Week), 29-31 January, Sydney, Australia
 - CHI Play 2018, 28-31 October, Melbourne, Australia
 - GamiFIN 2018, 21-23 May, Pori, Finland.
 - CHI Play 2017, 15-18 October, Amsterdam.
 - Extending Play 3, Sept 30-Oct 1, 2016
 - Immersive Learning Research Network (iLRN) 2016
 - Academic Mindtrek 2015, 2016, 2018, 2019
 - CISTI Workshops 2015 - 10th Iberian Conference on Information Systems and Technologies
 - International Conference on Entertainment Computing (ICEC) 2014
 - Gamification 2013
 - Meaningful Play 2012, 2022
 - MexIHC 2012: Mexican Conference on Human-Computer Interaction
 - Games+Learning+Society 8.0 (GLS 8.0)
 - Brazilian Symposium on Human Factors in Computing & Latin American Conference on Human Computer Interaction (IHC – CLIHC 2011)
 - International Conference on Ubiquitous Computing (UBICOMP) (2011)
 - Game Education Summit (GES) North America (2011)
 - Foundations of Digital Games (FDG) (2011, 2012, 2017, 2018, 2019, 2020)

- Computer Supported Collaborative Work (CSCW) (2011)
- Nordic DiGRA Conference (2010, 2012)
- 16th Americas Conference on Information Systems AMCIS 2010
- Digital Games Research Association Conference (DiGRA) (2009, 2011, 2013, 2015, 2019, 2020)
 - Doctoral Consortium (2020)
- ACM SIGGRAPH (2009, 2011)
- International Conference on Advances in Computer Entertainment (ACE) (2008, 2009, 2010, 2011, 2014)
- Computer-Human Interaction (CHI) (2006, 2010, 2014, 2016)
- Computer Supported Collaborative Learning (CSCL) (2005)
- Future Play Conference (2007, 2008, 2010)
- Conference of the International Communication Association (ICA09) – Game Studies Track, (2009)
- International Conference of the Learning Sciences (ICLS) (2004, 2006, 2008)
- International Conference for Interaction Design and Children (IDC) (2004, 2005)
- Meaningful Play Conference (2008, 2010)
- ACM SIGGRAPH Sandbox Symposium (2008)
- International Conference on Web Information Systems and Technologies (WEBIST) (2008)
- Research Project Reviewer
 - **Social Sciences and Humanities Research Council of Canada**, 2023
 - **FONDECYT** (National Fund for Scientific and Technological Development – Chile), 2011, 2018
 - Canada Research Chairs Program, 2017
 - Fundação para a Ciência e a Tecnologia (FCT) (Portuguese Foundation for Science and Technology), 2012
 - **British Academy**, 2011, 2013
 - **National Science Foundation (NSF)** Cyberlearning: Transforming Education Program, 2011, 2012
- Other Review Work
 - UNESCO MGIEP (Mahatma Gandhi Institute of Education for Peace and Sustainable Development) – Working Paper Series Reviewer, 2017

Juror

- Juror – Gotland Game Conference 2023
- Juror - Independent Games Festival (IGF), 2020, 2021, 2022, 2023
- CHIPlay Student Game Competition, 2015
- IndieCade – International Festival of Independent Games 2013, 2014, 2015, 2016, 2017, 2023
- Member – ICAN (International Choice Awards Network) – 2013 - present
 - Voter – Game Developer's Choice Awards
 - ICAN is an invitation-only group comprised of leading game creators from all parts of the video game industry
- Judge – 2011 PlayExpo games competition
- Judge – 2010 PlayExpo games competition
- Judge – 2009 PlayExpo games competition
- Judge – Undergraduate Research Symposium, College of Computing Georgia Institute of Technology
- Judge – Peñalogame Videogame Design Competition

Other

- Mentor – Intel Opportunity Scholars Program (2004-2008)
- Consultant – Introduction to Game Development at the Art Institute of Atlanta (2005, 2006)

Memberships and Activities in Professional Societies

- Digital Games Research Association (DiGRA)
 - Vice President (2013 - 2015)
 - Member of Executive Board (2006 – 2015)

- International Game Developers Association (IGDA)