

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

IPR No. IPR2024-00171
Patent No. 10,617,958

IPR No. IPR2024-00200
Patent No. 11,117,056

**DECLARATION OF DR. ROBERT AKL, D.SC.
IN SUPPORT OF PATENT OWNER'S RESPONSE**

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I, Robert Akl, declare and state as follows:

I. Introduction

1. I am over the age of 18 and am competent to make this Declaration. I have personal knowledge, or have developed knowledge, of the matters set forth herein based upon my education, training, and/or experience. If called upon to do so, I would testify competently thereto.

2. I have been retained by counsel for Patent Owner Flip Phone Games Inc. (“Patent Owner” or “FPG”) as an expert witness in the above matter. I am submitting this Declaration to address the validity of claims 1-14 in U.S. Patent No. 10,617,958 (“the ’958 Patent”) and claims 1-16 of U.S. Patent No. 11,117,056 (“the ’056 Patent”). For the purposes of this Declaration, I have not been asked to opine on any other issues not addressed below.

3. My opinions are based on my years of education, research and experience, as well as my investigation and study of relevant materials, including those identified in this Declaration. I may rely upon these materials, my knowledge and experience, and/or additional materials in forming any necessary opinions. Further, I may also consider additional documents and information to rebut arguments raised by the Petitioner PLR Worldwide Sales Limited (“Petitioner” or “Playrix”). I reserve any right that I may have to supplement this Declaration if further information becomes available or if I am asked to consider additional

information. Furthermore, I reserve any right that I may have to consider and comment on any additional expert statements or testimony of Playrix's expert(s) in this matter.

4. My analysis of the materials produced in this investigation is ongoing and I will continue to review any new material as it is provided. This Declaration represents only those opinions I have formed to date. I reserve the right to revise, supplement, and/or amend my opinions stated herein based on new information and on my continuing analysis of the materials already provided.

II. Background and Qualifications

5. I have studied, taught, played, and researched video games, including mobile games, through my studies and academic career in technologies used in games, both from the client-server and networking end, and related to game design and game play. I also have knowledge and experience in the fields of mobile communication systems, client-server systems, and mobile gaming systems for around 30 years. I have summarized in this section my educational background, work experience, and other relevant qualifications. A true and accurate copy of my curriculum vitae is attached as Ex. 2005.

6. I earned my Bachelor of Science degrees in Electrical Engineering and Computer Science summa cum laude with a grade point average of 4.0/4.0 and a ranking of first in my undergraduate class from Washington University in St. Louis

in 1994. In 1996, I earned my Master of Science degree in Electrical Engineering from Washington University in St. Louis with a grade point average of 4.0/4.0. I earned my Doctor of Science in Electrical Engineering from Washington University in St. Louis in 2000, again with a grade point average of 4.0/4.0, with my dissertation being on “Cell Design to Maximize Capacity in Cellular Code Division Multiple Access (CDMA) Networks.”

7. After obtaining my Doctor of Science degree, I worked as a Senior Systems Engineer at Comspace Corporation from October of 2000 to December of 2001. At Comspace, I designed and developed advanced data coding and modulation methods for improving the reliability and increasing the available data rates for cellular communications. I coded and simulated different encoding schemes (including Turbo coding, Viterbi decoding, trellis coded modulation, and Reed-Muller codes) and modulation techniques using amplitude and phase characteristics and multi-level star constellations.

8. In January of 2002, I joined the faculty of the University of New Orleans in Louisiana as an Assistant Professor in the Department of Electrical Engineering. While in this position, I designed and taught two new courses called “Computer Systems Design I and II.” I also developed a Computer Engineering Curriculum with a strong hardware-design emphasis, formed a wireless research group, and advised graduate and undergraduate students.

9. In September of 2002, I received an appointment as an Assistant Professor in the Department of Computer Science and Engineering at the University of North Texas (UNT), in Denton, Texas. In May of 2008, I became a tenured Associate Professor in the Department of Computer Science and Engineering. Between January 2015 and August 2022, I was appointed to Associate Chair of Graduate Studies in the Department of Computer Science and Engineering. In May of 2023, I was promoted to the rank of Professor.

10. I am also the director of the Wireless Sensor Lab (“WiSL”) at UNT. I am a member of the Center for Information and Cyber Security (CICS). It is the only program in the U.S. to be federally certified by the National Security Agency as a Center of Academic Excellence in Information Assurance Education and Research and Cyber Defense Research. Several of my research projects are funded by industry and the National Science Foundation and published in IEEE conference proceedings and journals.

11. In addition to advising and mentoring students at UNT, I was asked to join the faculty of the University of Arkansas in Little Rock as an Adjunct Assistant Professor from 2004 to 2008 in order to supervise the research of two Ph.D. graduate students who were doing research in wireless communications. At UNT, I have advised and supervised more than 250 undergraduate and graduate students, several of whom received a master’s or doctorate degree under my guidance.

12. Starting in 2005, I began to research and programming robotics and games at UNT. Between 2005 and 2017, I received over a million dollars in funding from the State of Texas, Texas Higher Education Coordination Board, the National Science Foundation, and industry to design and conduct robotics and video game (e.g., Xbox, PC, mobile games) programming summer camps for middle and high school students at UNT. By using gaming as the backdrop, I have taught participants coding and programming principles and an understanding of the role of physics and mathematics in video game design. For this work, I received the IEEE Professionalism Award and the Tech Titan of the Future award. As another example, I have taught video game design and programming to former students who later designed and worked on the Call of Duty video game franchise, which is a very successful video game franchise across multiple platforms including PC, Xbox, and mobile devices. As another example, I have published articles related to video game design and programming and the challenges of attracting underrepresented minorities to that field. As another example, I have developed courses in video game programming and design which I have taught at UNT and in my summer camp program. I have also been a “gamer” for most of my life.

13. In addition to my academic work, I have remained active in the communication industry through my consulting work. In 2002, I consulted for Input/Output Inc. and designed and implemented algorithms for optimizing the

frequency selection process used by sonar for scanning the bottom of the ocean. In 2004, I worked with Allegiant Integrated Solutions in Ft. Worth, Texas to design and develop an integrated set of tools for fast deployment of wireless networks, using the 802.11 standard. Among other features, these tools optimize the placement of Access Points and determine their respective channel allocations to minimize interference and maximize capacity. I also assisted the Collin County Sheriff's Office (Texas) in a double homicide investigation, analyzing cellular record data to determine user location.

14. I have authored and co-authored over 100 journal publications, conference proceedings, technical papers, book chapters, and technical presentations in a broad array of communications-related technologies, including networking, wireless communication, and video games. I have also developed and taught over 100 courses related to communications and computer systems, including several courses on signals and systems, LTE, OFDM, VoIP, Wi-Fi (802.11), 802.15.4, Zigbee, wireless communication, communications systems, communication interfaces and standards, sensor networks, source coding and compression, network security, computer systems design, game and app design, and computer architecture. These courses have included introductory courses on communication networks and signals and systems, as well as more advanced courses on wireless communications.

A complete list of my publications and the courses I have developed and/or taught is also contained in my curriculum vitae.

15. My professional affiliations include services in various professional organizations and serving as a reviewer for a number of technical publications, journals, and conferences. I have also received a number of awards and recognitions, including the IEEE Professionalism Award (2008), UNT College of Engineering Outstanding Teacher Award (2008), and Tech Titan of the Future (2010) among others, which are listed in my curriculum vitae.

16. I have also served as an expert in certain legal proceedings. A list of cases in which I have testified at trial, hearing, or by deposition (including those during the past five years) is provided in my curriculum vitae. Over the years, I have been retained by both plaintiffs as well as defendants.

17. I am being compensated for my work in this case at my standard rate of \$895 per hour (plus reimbursement for expenses) in connection with my preparation of this declaration, as well as for each hour spent providing deposition or testimony. This compensation is not contingent upon my performance, the outcome of this case, or any issues involved in or related to this case. I have no financial interest in this matter.

III. Documents and Materials Considered

18. In preparing my opinions, I have reviewed the '958 and '056 Patents (Exs. 1001, respectively), their prosecution history (Exs. 1002, respectively), the declaration of Dr. Jose Zagal in each proceeding (Exs. 1003, respectively) and have also reviewed the other documents and materials cited herein and the materials listed below. When citing from these references, all emphasis is added unless otherwise noted.

Ex.	Description
1005	US 2008/0102947 to Hays (“Hays”)
1006	US 2007/0174490 to Choi (“Choi”)
1007	US 7,698,178 to Chu (“Chu”)
1008	US 2007/0088801 to Levkovitz (“Levkovitz”)
1009	US 9,129,301 to van Datta (“van Datta”)
1015	Mark Andrejevic, “Productive Play 2.0: The Logic of In-Game Advertising” in Media International Australia, Vol. 130, No. 1, pp. 66-76 (Feb. 2009)
1016	Ilya Vedrashko, Advertising in Computer Games (Doc. No. 123290221) [Master’s Thesis, Mass. Inst. of Technology], DSpace@MIT
1017	Exit Games, In-Game Advertising Goes Mobile [Press Release] (Mar. 21, 2006)
1018	Jussi-Pekka Partanen, Mobile Gaming: A Framework for Evaluating the Industry 2000-2005 (2001)

19. My opinions are also based upon my education, training, research, knowledge, and personal and professional experience. I reserve the right to supplement or amend this Declaration in the event that I hereafter become aware of additional relevant information.

IV. Understanding of Legal Standards

20. I am not an attorney and have not been asked to offer an opinion on the law. I understand, however, that certain aspects of the law are relevant to my evaluation and opinions set forth herein. I have therefore been informed of and asked to apply the legal principles summarized below.

A. Priority Date

21. I understand that the “priority date” of a patent is the date on which it is filed. I further understand that a patent may be entitled to the filing date of an earlier-filed application or foreign patent filing. In this case, I understand the patent to which the '958 and '056 Patents claim priority was filed on June 26, 2007.

B. Burden of Proof

22. I understand that Playrix as the Petitioner bears the burden of proof in this proceeding and that that burden is to establish by a preponderance of the evidence that the claims are invalid.

C. Claim Construction

23. I understand that the words of a claim are generally given their ordinary and customary meaning, which I understand is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application. I understand the person of ordinary skill in the art is deemed to read the claim term not only in the context of

the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification and prosecution history. Additionally, I understand other extrinsic evidence external to the patent and prosecution history, such as dictionaries and treatises, may also be useful in determining the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention. I understand that such extrinsic evidence, however, is generally afforded less weight than intrinsic evidence in determining the meaning of claim terms, and overall is unlikely to result in a reliable interpretation of a patent claim scope unless considered in the context of the intrinsic evidence.

D. Obviousness Under 35 U.S.C. § 103

24. I understand that a claim is invalid if the invention recited in the claim would have been obvious to one of ordinary skill in the art at the time the invention was made. I understand this means that even if all 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 field of the invention knowledgeable of the prior art would have come up with the claimed invention. In considering whether a claim is obvious, I have been asked to consider (a) the level of skill in the art at the time of the claimed invention, (b) the scope and content of the prior art, (c) any differences between the prior art and the claims of the patent-in-suit, and (d) any “secondary factors” tending to show non-obviousness of the claimed invention, including

commercial success, long-felt but unresolved need, failure of others, copying, praise by others, unexpected results, and simultaneous invention by others.

25. I understand that a claim composed of several elements is not proved obvious merely by demonstrating that each of its elements was independently known in the prior art. I also understand that obviousness should not be analyzed using the benefit of hindsight. Instead, it must be analyzed from the standpoint of what was known and understood by a POSITA at the time of the claimed invention. I further understand demonstrating that a modification to a reference or the combination of multiple references is obvious requires providing a reason for why a POSITA would modify a reference or combine multiple references and that reason must be supported with some rationale underpinning. Merely pointing out that two references are similar or in the same field of endeavor is not sufficient.

E. Secondary Considerations of Non-Obviousness

26. I understand that in determining whether the claims are obvious I must also consider certain factors that may help determine that a particular concept was not obvious. These include practical factors relating the concept, including (1) commercial success, (2) a long-felt need for a solution to the problem facing the inventors, (3) whether others tried and failed to solve the problem, (4) whether others copied the claimed invention, (5) whether the invention achieved unexpected results,

- (6) whether the prior art teaches away from combining certain known elements, and
- (7) whether others in the field praised the invention.

V. Level of Ordinary Skill

27. I understand there is a concept in patent law known as a person having ordinary skill in the art (POSITA). I understand that this concept refers to a person who is trained in the relevant technical field of a patent without possessing extraordinary or otherwise exceptional skill. I further understand 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, prior art solutions to those problems, and the speed at which innovations are made may help establish the level of skill in the art.

28. Taking these factors into consideration, in my opinion, with regard to the '958 and '056 Patents, a person of ordinary skill in the art would have a bachelor's degree in electrical engineering, computer engineering, computer science, or a similar field, along with one to two years of experience developing or programming video games or video game systems, or similar types of computer systems. Additional education might substitute for some of the experience, and additional substantial experience might substitute for some of the educational background.

29. I understand that Petitioner asserts that a person of ordinary skill in the art would have “an undergraduate degree in game design or development, computer science, computer engineering, or a related field, with at least two years of experience working with computer gaming systems or software application development.” Petition at 2.

30. Based at least on my educational and work experience, I was at least a person of ordinary skill in the art as of the effective filing date of the '958 and '056 Patents (June 26, 2007) under either party's proposal. And while I note that my qualifications and experience exceed this definition of a person of ordinary skill of the art, in arriving at the conclusions in this Declaration, I have considered the issues from the perspective of a person of ordinary skill of the art at the relevant time.

31. Unless otherwise stated, I have applied this level of ordinary skill in the art for the purposes of this Declaration.

VI. Overview of the '958 Patent and '056 Patent

32. The '958 Patent is entitled “Methods and systems for updating in-game content,” issued on April 14, 2020, and names Joshua Hartwell and Paul Bolten as co-inventors.

33. The '056 Patent is entitled “Methods and systems for updating in-game content,” issued on September 14, 2021, and names Joshua Hartwell and Paul Bolten

as co-inventors. The '056 Patent is a continuation of the '958 Patent, and thus, shares a common specification.¹

34. The '958 Patent and '056 Patent describe systems and methods for updating content of a video game played on a mobile device and addresses shortcomings in the prior art. *See* '958 Patent at Abstract. More specifically, the '958 Patent and '056 Patent describe a way of “updating in-game content on a mobile communication device” based on specified criteria, which “may prolong user interest in a game for a mobile communication device.” '958 Patent, 2:11–15.

35. The '958 Patent and '056 Patent explain that, at the time the patents were filed “[m]any mobile communication devices (including cellular phones, PDAs, and other handheld devices capable of communicating with a server) [we]re capable of operating video games,” and, further, that “most [then-]current mobile communication devices c[a]me equipped with one or more games at the time of purchase, and most [then-]modern mobile communication devices also allow[ed] users to download and/or purchase new games.” '958 Patent at 1:16–22. “As a result, gaming on mobile communication devices has become a popular mode of entertainment in a mobile environment.” *Id.* at 1:29–31.

¹ For ease of reference, I cite to the specification of the '958 Patent in this section, but the same support is found in the specification of the '056 Patent.

36. And, at the time the patent application that led to the '958 Patent and '056 Patent was filed, video games on mobile phones had a limited life cycle. Game developers addressed loss of user interest by releasing new mobile games rather than updating existing mobile games. The '958 Patent and '056 Patent even recognize that “[a]s game elements become increasingly familiar to players, the game may hold less surprises and/or no longer present a challenge to the user, at which point the user may stop playing that particular game in favor of others.” *Id.* at 1:33–36.

37. The '958 Patent and '056 Patent provide novel solutions to this problem: updating mobile game content based on specific factors associated with a mobile device such that, for example, “a particular scene within the game may be rearranged so that the user has something new to look at or explore” or that “the updated content may comprise a new level within the game.” '958 Patent at 4:34–48. The '958 Patent and '056 Patent explain that these updates “may prolong user interest in a game for a mobile communication device ...” (*id.* at 2:11–15) or allow a game to “sustain its popularity and be more profitable for the game creator than existing mobile communication device games.” *Id.* at 4:34–48.

38. The technology described and claimed by the '958 Patent and '056 Patent allowed carriers to update content and promotions presented to customers by tailored gaming updates in lieu of replacing applications as a whole and hence, decreasing the bandwidth required by the phone.

VII. Background of the Technology

39. As of the priority date of the '958 and '056 Patents (June 26, 2007), the claimed invention described above was novel and non-obvious.

A. Mobile Game Development and Distribution Was Very Different in June 2007.

40. As of the June 26, 2007 priority date of the '958 and '056 Patents, mobile phones and mobile gaming faced numerous limitations. Mobile phones of that era had limited storage capacity, limited processing capability, and much slower network connectivity. For example, the first-generation iPhone would not be released until June 29, 2007—after the priority date of the '958 and '056 Patents and after the application that led to the '958 and '056 Patents was filed. And that first generation iPhone did not have a wireless broadband connection, and came with just 4, 8, or 16GB of data storage, much of which was used by the iOS operating system. Download speeds were also limited to 3 Mbps (Mega bits per second) via 3G. Due in part to these limitations, the first generation of the Apple Appstore would not be released for another year.

41. Thus, at the time of the priority date, mobile games existed in a very different form than we think of today. As of the June 26, 2007 priority date, mobile games were generally designed for only specific devices (e.g., specific models of phones) and were made available on specific game decks or offerings available through mobile device carriers. At the time, no systems existed to update mobile

games via the data connection on the phone. Thus, once a game was released and installed on a mobile device, the developers did not develop new features or new game levels for that existing game. Rather a developer may develop a new version of the game, which would be installed on later sold versions of the mobile device.

42. Because each wireless provider managed their own games and mobile games were not standardized, only a limited number of mobile games were available. And the available games had a much shorter lifecycle as old games were removed to make space for new games given storage and capacity limitations.

B. Hardware Limitations in Mobile Devices as of June 2007 Limited the Applicability of Any Developments in Console Games.

43. Video games in non-mobile contexts, e.g., on consoles, did not face these same limitations. At the time of invention of the '958 and '056 Patents, console games such as the Microsoft Xbox or the Sony PlayStation included large storage, fast processing, and wired broadband data connections. These games could be updated relatively easily and game engines were available that provided architecture for loading new executable software that was absent from the mobile device industry. Thus, consoles or PCs offered more extensive gaming experiences while mobile phones were able to access limited browser-based games or purchase applications offered by a service provider. As explained further herein, these browser-based games, such as those described in Hays (Ex. 1005) and Levkovitz

(Ex. 1008) operated in a distinct manner from the claims of the '958 and '056 Patents and required different development and programming considerations.

44. In contrast, due to the much more limited processing, storage, and data bandwidth capabilities of mobile devices, the only option available for mobile games, at that time, was to download an entire new game. But downloading even a second copy of an entire game was not practical. Downloads for the games were large, data storage space on the mobile devices was extremely limited, and available bandwidth was too low to efficiently download a full game across the 3G mobile network.

45. These limitations in mobile technology at the time, combined with the short lifecycle of games, encouraged game developers to create new game titles rather than creating updates to a game itself, like the claimed invention of the '958 and '056 Patents. Instead, games were purchased only once and at a higher price point than they are offered at today, ranging in price from \$4.99 to \$9.99.

C. The Claimed Inventions of the '958 and '056 Patents Provide Updated Content to a Mobile Communication Device for Use In a Mobile Video Game

46. The claimed inventions of the '958 and '056 Patents solve the problems above by providing updated content to a mobile communication device for use in a mobile video game. The inventions of the '958 and '056 Patents allow game programmers and developers to provide updates to games—i.e., updated content that

is usable when the video game operates on the communications device based on one of the factors recited in the claims. Moreover, the claimed invention allows this to be done without re-downloading the entire contents of the game. This technology was not offered by service providers or device manufacturers at the time of invention.

D. Ad-Servers Available in the Mid-2000s Did Not Provide Updates to Game Functionality or Levels.

47. In June 2007, ad servers were available to provide in-game advertising to PC and console games. These ad servers provided what were essentially pop-up ads within games but did not provide updated content for game play. Nor did such advertising update the functionality or features of a game. Rather, in-game advertising allowed game developers the ability to monetize views by game players.

48. In June 2007, ad servers were available for console and desktop games, and took advantage of the high-speed bandwidth available to those gaming platforms to transmit advertising. However, ad servers were not available for use in mobile games, because these devices still had limited bandwidth available through cellular data connections, which did not offer mobile broadband at that time. Indeed, as the name suggests, browser-based games that utilize Wireless Application Protocol (WAP) operated via a mobile web browser. These games were not installed on or downloaded to the mobile phone itself, and only accessed games via cellular data. In contrast, applications were downloaded to a specific mobile device and were

developed for a given type of phone to perform a specific function or set of functions. This download presented a barrier given the processing, storage, and network constraints of mobile devices at the time.

49. Given that WAP and web-based games are not downloaded and instead accessed via the web, mobile game developers could more easily develop or share content. Ad servers, like each of the prior art references Petitioner relies on, were used in the WAP context.

50. But these ad server systems could not work with mobile devices in mid-2007 due to the limitations of mobile networks at the time. These technology limitations of applications prevented ad servers (and any web-based application) from being implemented on then existing mobile devices. These were two distinct avenues for developing mobile games at the time of invention.

51. The claimed inventions of the '958 and '056 Patents solved this problem by allowing updated content to be sent to a mobile gaming application, without re-downloading the entire game.

VIII. Non-Obviousness of the '958 Patent

A. Hays does not render claims 1-14 obvious.

1) Claim 1

a) Hays does not teach or suggest “pre-selected in-game advertising”

52. Claim 1 requires “a storage medium for storing pre-selected in-game advertising for use in a video game.” Petitioner and Dr. Zagal assert that Hays discloses this element because Hays describes “sub-channels” for advertisement campaigns. Petition at 13-14; Ex. 1003, ¶¶87-89. I disagree.

53. Hays discloses an ad server that may “include one or more database components that contain data regarding game inventories, media files, impression statistics, reporting, etc.” Ex. 1005, [0020]. Hays also discloses that the client or “game application may pull media data from the advertisement server and pass them on to the game code, so that specific advertisements may be presented in the appropriate available ad units at the appropriate time during game play.” Ex. 1005, [0021]. Thus, Hays describes basic functionality of an ad server which includes the capability to store advertisements. Hays, however, does not disclose that the advertisements are pre-selected.

54. Indeed, Hays’s ad server selects advertisements according to a “advertisement matching and weighting system.” Ex. 1005, [0043]. This “advertisement matching and weighting system” of Hays “calculate[s] the weight of each advertisement based on several factors including campaign goal and completion data from the advertisement serving database 122 and information regarding the specific client type from the advertisement recipient database 120.” *Id.* This system of Hays accordingly selects advertisements “from the weighted

advertisement set, where the probability of an advertisement being selected is directly derived from the advertisements assigned weight, relative to other advertisements in the set.” *Id.* A POSITA would understand that Hays, thus, discloses selecting advertisements according to the advertisements assigned weight and relative to other assignments in the set, not that the advertisements are “pre-selected.”

55. Hays discloses “sub-channels” which Petitioner and Dr. Zagal specifically assert disclose the “pre-selected” limitation. Petition at 14. Hays discloses that “advertisers can target the delivery of their advertisement campaign specifically to a sub-channel as that sub-channel relates to their campaign or may subtarget by time of day (e.g., deliver advertising to all gaming devices playing at 8 p.m. on Thursday) or by game play date (e.g., once the game has been played for 45 minutes—air the Domino's ad campaign, or in the fourth inning of the sports title, air the XYZ campaign). This targeting may include the game devices of game players involved in multiplayer games (who may all see the same advertisement simultaneously).” Ex. 1005, [0022]. This disclosure, however, is distinct from an ad being “pre-selected.”

56. Hays only discloses a narrower set of advertisements to send through sub-channels. This is the same “advertisement matching and weighting system” described above which simply targets advertisements according to their assigned

weight. Indeed, a POSITA would understand that the sub-channels limit what advertisements can be sent, but the sub-channels do not select a specific ad to send.

57. The same is true for Hays's description of serving an ad at a specific time or date. Hays describes that "the advertisement server may then (through matching and optimization) distribute and deliver targeted advertisements to players' gaming devices, where the advertisements may be integrated into the relevant game areas in real time." Ex. 1005, [0022]. In this scenario, the server is still selecting from a set of advertisements. And the selection is done in "real time." *Id.* A POSITA would understand that an ad is not "pre-selected" if it is selected in "real time" as pre-selection must occur beforehand.

58. The remaining disclosures in paragraph [0022] (and the remaining disclosures in Hays) also do not describe any advertisements that are "pre-selected." Instead, Hays, again, discloses how its system may select advertisements in real time. Specifically, Hays's system may "target the delivery of their advertisement campaign specifically to a sub-channel as that sub-channel relates to [the advertising] campaign." Ex. 1005, [0022]. Hays describes the sub-channels as "available advertisement spaces," in groups of games, which "can be divided by genre such as sports titles (and even further by specific sport), children's titles, racing titles, etc." Ex. 1005, [0022].

59. These sub-channels are narrowing a set of advertisements for a particular placement, such as in a particular game or at a particular time or on a particular day. A POSITA would understand that this is simply a manner for targeting advertisements. Indeed, Hays provides that “[t]his targeting may include the game devices of game players involved in multiplayer games (who may all see the same advertisement simultaneously).” Ex. 1005, [0022]. But this does not indicate that an advertisement is “pre-selected.” Only that the advertisement is selected. Petitioner and Dr. Zagal erroneously conflate selecting an advertisement in Hays’s advertisement matching and weighting system with the claimed step of an advertisement that has been “pre-selected” and, accordingly, fail to account for the recited “pre-selected” limitation.

60. Thus, Hays does not render claim 1 obvious.

b) Hays does not teach or suggest “advertising for use in a video game”

61. Claim 1 also requires that the in-game advertising is “for use” in a video game. Hays, however, does not describe advertising that is “for use in a video game” as required by this limitation of claim 1. And Petitioner and Dr. Zagal do not even attempt to allege that this element is met. However, if Petitioner and Dr. Zagal had addressed this element, they could not show that Hays renders obvious this limitation of claim 1.

62. Hays describes “[a]n advertisement delivery scheme and associated facility provide targeted advertisements for multiple video games without advertisers having to specify specific game titles in which they would like their advertisements placed.” Ex. 1005, Abstract. The invention of Hays purports to improve upon prior systems in which “advertisers who wished to advertise in video games were limited to selecting specific individual game titles for presenting their advertisements.” Ex. 1005, [0017]; *see also id.* (“ . . . allow advertisers to deliver their campaign messages to specific audiences they wish to target across one or multiple game titles played across multiple platforms (e.g., PC, console, mobile, etc.) without being limited to delivering their campaign to only a single specific game title.”).

63. Hays does so by serving advertisements as “commercial-like intermissions” or “as texture maps or other graphical displays (e.g., animations, video, etc.) on pre-designated geometry within the game.” Ex. 1005, [0018] (“the advertisement delivery scheme and associated facility present advertisements as texture maps or other graphical displays (e.g., animations, video, etc.) on pre-designated geometry within the game, such as billboards, storefront signs, panel trucks, Jumbotron screens in a sports stadium, posters on walls, T-shirts on a game character, items used by game characters (e.g., a brand name soft drink or energy bar), and so on.”).

64. A POSITA would understand that these advertisements are not “for use” in the mobile video game and are instead agnostic to the game environment and for use on external sites or by external ad providers. The advertisements are merely graphical “skins” that are rendered on content or items that are already present and shipped with the game, not updated content. The advertisements do not relate to any specific interactions or uses in the game. And the advertisements are not related to any in-game purchases. Indeed, Hays explicitly provides that the advertisements are “not limited to a single specific game title” and instead are presented “across one or multiple game titles played across multiple platforms.” Ex. 1005, [0017]; *see also id.*, Abstract. A POSITA would not understand these disclosures as teaching advertisements being used in the game. Hays teaches the opposite.

65. Additionally, I have reviewed the prosecution history of the ’958 Patent and its predecessors. It is my opinion that a POSITA would find Hays analogous to prior art that the applicant argued over and overcame during prosecution based on the claim language concerning for use in the video game.

66. More specifically, the applicant overcame a rejection based on U.S. Pub. No. 2004/0127279 to Gatto (“Gatto”). The applicant distinguished the claimed invention and Gatto’s items available for download via a hyperlink because Gatto’s items were not usable in the game. Ex. 2002 at 188 (“There is no indication that these promotional items are ‘usable in the video game.’ Indeed, it would not make

sense for an email to provide hyperlinks for content that is usable in the email itself.”), 189 (“the Examiner fails to address the remaining claim language of this element-namely, whether this content is ‘usable in the video game that already exists on the mobile communication device.’ A close reading of Gatto reveals that the ‘hyperlinks to download promotional items’ are, in fact, not usable in the so-called video game.”).

67. During prosecution, the Applicant clearly distinguished the “hyperlink” in Gatto from the claimed “updated video-game content” and “content that would be ‘usable in’ the email ticket or a ‘video game’ itself, as opposed to a separate application program.” *Id.* at 166. The Applicant explained that Gatto “does not teach or suggest any updated content that is ‘useable in’ a video game,” (*id.* at 142) and, instead, “[t]he available hyperlink ... causes the download of an entirely separate program or Internet page.” *Id.* The examiner agreed and withdrew that portion of the rejection based upon these arguments.

68. A POSITA would understand that hyperlinks are akin to data provided by an advertisement server and distinct from advertisements for use in a mobile video game that already exists on the mobile communication device. This is consistent with my description of the state of the art as described above. Indeed, a POSITA would have understood the technical distinctions between browser-based

games and advertisements provided via a server and gaming applications that are downloaded on a mobile device.

69. Hays describes that “[w]hen a game is played at a player’s gaming device (e.g., computer or game console) that is connected to an advertisement server (e.g., *via the Internet or another connection*), the client library functions associated with the game application may pull media data from the advertisement server and pass them on to the game code, so that specific advertisements may be presented in the appropriate available ad units at the appropriate time during game play.” Ex. 1005, [0021]; *see also id.* at [0032] (“The advertisement recipient client 104 may include a game playing device 126 (e.g., a console, computer, portable game device, etc.) on which a game application 128 executes. The game playing device 126 may request and receive advertisements from the advertisement management service system 108 and may be configured to establish communication via a *communication link, such as the Internet 129*.”). And Hays confirms that “representative computer displays or web pages” that “may be implemented in C++ or as web pages under XML (Extensible Markup Language), HTML (HyperTextMarkup Language) or any other Scripts or methods of creating displayable data, such as the Wireless Access Protocol (“WAP”).” *Id.* at [0103].

70. Thus, a POSITA reading Hays would understand that Hays discloses a browser-based ad server, which operates similar to the hyperlink system provided

by Gatto in that it provides a link between an “ad unit” and a network address at which display data for that ad unit is stored. Similarly, the hyperlink system of Gatto provided a link to data stored remotely and the Applicant distinguished Gatto on that basis during prosecution.

71. The additional paragraphs of Hays do not change this understanding. *See* Ex. 1005, [0019] (“available ad units may be interactive within the game (e.g., a game character eating a brand name energy bar to boost her power in the game, a brand-related “mini game” presented between levels, a click-through advertisement, etc.) and may bring aspects of the real world into the game (e.g., a player can enter a code from a product to provide advantages in the game).”), [0021] (“the client library functions associated with the game application may pull media data from the advertisement server and pass them on to the game code, so that specific advertisements may be presented in the appropriate available ad units at the appropriate time during game play”), [0079] (“In some embodiments, the advertisement management service system may send bots or electronic agents into the game as advertising units or real characters in the game, which advertise or promote a product (e.g., a game character may move around a screen holding a can of Pepsi and ask player if they would like a drink).”). A POSITA would understand that these are just ways in which the advertisements can be displayed or presented, e.g., the can acts as a skin on which “Pepsi” is displayed. Hays describes the can as

an ad unit, which is “pre-designated geometry within the game” (Ex. 1005, [0018]) on which the skin of the branded Pepsi is displayed. Hays never describes altering the functionality of the game based on anything displayed on an ad unit. For example, the games described in Hays will function in the same way regardless of whether the ad unit is blank or if an advertisement is displayed on the ad unit.

72. Moreover, as shown in the excerpts of Hays above, the ad itself is not for use in the video game – only the ad unit or object. In the example above, the can may be used in the game, but not the skin on the can that displays the Pepsi brand. Thus, a POSITA would understand that the advertisements are served in the same manner and that the advertisements themselves (e.g., the Pepsi brand) are not “for use” in the video game, rather it is the “ad unit” (e.g., the can) on which the advertisement is displayed that is usable, but the ad unit itself is agnostic as to the advertisement displayed, if any. In other words, the game operates in the same way whether the can is blank or says Pepsi, and similarly, the user does not experience any differences in the game based on the Pepsi skin being applied to the can. The soda can—the item itself—may be usable regardless of the logo or graphic rendered, but the ad (the Pepsi logo) is not used or usable in the game.

73. Neither Petitioner nor its expert provides any analysis or explanation of how Hays might be modified under the knowledge of one of skill in the art to show how the ads could be “for use” in the game, nor how browser-based advertisement

server method could be applied to an application that exists on the mobile communication device. Nor could they, as Hays has claimed to solve a distinct problem in which its ads are agnostic to the gaming environment, instead of being designed “for use” in the game. A POSITA would, thus, not be motivated to modify Hays’s ad server as Hays provides a different solution that teaches away from serving ads or any other content to be used in the video game.

74. Hays does not render claim 1 obvious, and thus, for the same reasons, does not render claims 2-7 obvious. Claims 3, 5, and 7 are also not obvious for additional reasons described below.

2) Claim 3

a) Hays does not teach or suggest that “the server sends information to the mobile communication device regarding the in-game placement location of the content, the information being part of the updated content.”

75. Hays’s ad server describes providing advertisements via “available ad units.” *See, e.g.*, Ex. 1005, [0073]. Hays describes the “ad units” as “spaces” or “pre-designated geometry within the game, such as billboards, storefront signs, panel trucks, Jumbotron screens in a sports stadium, posters on walls, T-shirts on a game character, items used by game characters (e.g., a brand name soft drink or energy bar), and so on.” Ex. 1005, [0018].

76. Petitioner and Dr. Zagal assert that these “available ad units” are “in-game placement location[s].” I disagree. In doing so, Petitioner and Dr. Zagal ignore

the remaining language specifically, “the server sends information to the mobile communication device regarding the in-game placement location of the content, the *information being part of the updated content.*” Hays does not disclose this aspect of the claim.

77. Rather, Hays describes that “the advertisement recipient client 104 requests advertisements for delivery to one or more available ad units within the client software application.” Ex. 1005, [0040]. And the system of Hays “may include handling initial connections, providing requested lists of advertisements for specific available ad units, serving media, etc.” *Id.* at [0029]. Hays describes ad units that are specifically available or “standardized”; the advertisements may be offered at ad units “regardless of [the ad unit’s] location.” *Id.* at [0073].

78. From a plain reading of Hays, a POSITA would understand that these ad units are “standardized” and provided “regardless of [their] location.” *Id.* at [0073]. A POSITA would, thus, understand that the advertisements placed on ad units do not have any location information. Further, Hays does not describe that “the server sends information to the mobile communication device regarding the in-game placement location of the content, the information being part of the updated content.”

79. Dr. Zagal asserts “that a POSITA would have also found it obvious to send the specific ad unit (i.e., the claimed ‘in-game placement location of the content’) with the advertisement sent to the mobile communication device, because

a POSITA would be motivated to provide a mechanism to inform the game running on the device where to place the advertisement, as that would fulfill the contractual obligations to the advertiser.” Ex. 1003, ¶106. However, I disagree because Hays teaches against such a modification.

80. Hays describes serving advertisements via ad units in a way to reach the broadest audience with standardized placements of the ad units in predesignated locations. Because the ad units are predesignated, a POSITA would understand that Hays does not send location information with the ads. Nor would a POSITA modify Hays to include such functionality since Hays expressly states that its advertisements are broadly distributed to standard locations, i.e., “ad units.” Further, a POSITA could implement Hays in a way that allows for a request for new ads for multiple “ad units” without the server implicitly needing to send back “ad unit” identifiers. These ways include (A) the server sends back the ads in the same order as the ad units were listed in a request from the recipient device, or (B) the server sends back the ads in an order that is deterministic based on the requested ad units, such as alphabetical. Thus, a POSITA would not have been motivated to do so nor expected a such a combination to succeed.

3) Claim 5

a) Hays does not teach or suggest that “message is pre-selected by the server based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication

device, or a service provider for the service subscription associated with the mobile communication device.”

81. As I explained with claim 1, Hays fails to describe, teach, or suggest “storing *pre-selected* in-game advertising.” Claim 5 also requires that a “message is *pre-selected* by the server based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device.” For the same reasons as described above for claim 1, Hays also fails to describe, teach, or suggest that “a message is *pre-selected* by the server....”

82. Indeed, Petitioner and Dr. Zagal assert that Hays discloses a list of advertisements to send (or data related to the advertisements) and thus the ads are pre-selected. Petition at 25-26. I disagree.

83. As described above, Hays only describes a list of advertisements (Ex. 1005, [0029], [0040]), but a POSITA would have understood that a list is distinct from pre-selecting a specific advertisement or message.

84. Further, Petitioner and Dr. Zagal assert that Hays’s ad server receives a “request” that “contains a data structure that includes a unique identifier to indicate the client type” which can “effectively be a SKU, which includes a type of game console, game, language, etc.” Ex. 1005, [0040]; Petition at 26; Ex. 1003, ¶114. Petitioner and Dr. Zagal assert that this is used to select advertisements. But in

making this assertion, Petitioner and Dr. Zagal ignore the context of Hays's disclosure.

85. Hays discloses that this information is received from the client—the client sends a specific request for the advertisement in Hays. In contrast, claim 5 requires that the “server,” not the client, pre-select the message.

86. Further, Hays does not disclose that the message is pre-selected based on one of the claimed factors of “a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device.” Hays describes that the ads are matched and weighted based on the campaign goal and competition data. Hays further describes that “[t]he advertising matching and weighting system 220 then selects one or more advertisements from the weighted advertisement set, where the probability of an advertisement being selected is directly derived from the advertisements assigned weight, relative to other advertisements in the set.” Ex. 1005, [0043]. A POSITA would, thus, understand that, in this advertisement matching and weighting system of Hays, advertisements are selected or checked based on the advertisement itself as opposed to any information about the mobile device, client device, or service provider. A POSITA would find this distinct from the factors recited in claim 5 which only relate to the mobile device, client device, or service provider.

87. Moreover, a POSITA would understand that a weighting system is distinct from the recited “pre-selected” step. A POSITA would understand that this “pre-selected” step is a compatibility determination. In contrast, the weighting scheme of Hays is prioritizing which ad to send, not pre-selecting an ad based on compatibility of the client mobile device to determine which ad is capable of being sent.

88. This is confirmed by the description in paragraphs [0044] and [0045] of Hays, which describe ad targeting. Hays describes serving ads that are targeted based on “demographic information.” Ex. 1005, [0044] (“[A]dvertising can be further targeted based on specific demographic characteristics of a game player,” “demographic information about a game player collected via the use of an IP address”).

89. I disagree with Dr. Zagal that, merely since it may be the case that “[d]ifferent service providers have different ranges of IP address,” this teaches the step of claim 5, which requires selection based on specific factors, none of which are a range of IP addresses. Even if Hays collects information about IP addresses, Hays does not describe “pre-select[ing]” an ad to be sent to the client device on this basis. A POSITA would understand that Hays’s system weighs the advertisements and assigns a priority to the advertisements, which is distinct from the “pre-select[ion]” step as claimed in the ’958 Patent.

90. Dr. Zagal also asserts that “it would have been obvious for a POSITA to combine Hays’s teachings of weighing advertisements based on the type of game console ([Ex. 1005], ¶43) and Hays’s teachings of the various mobile communication devices that constitute game consoles (*id.*, ¶51).” Ex. 1003, ¶118. I disagree. A POSITA at the time of the invention would have understood that games on mobile devices operated differently than game consoles at least because of the technical limitations of mobile devices in June 2007, which I summarize above. And a POSITA would have understood that mobile devices at the time each had different software platforms. A POSITA would not have been motivated to apply weighting of advertisements to the distinct platforms that were specific to the mobile device and mobile provider.

91. Instead, a POSITA would have understood that each mobile device and mobile provider had different platforms for content. A POSITA would not have sought to send the same content and assign a weight across various devices or providers. Rather, a step would need to be performed to confirm compatibility, as claimed in the ’958 Patent. But this is absent from Hays. The operations of the “advertisement matching and weighting system” are distinct from the claimed step of pre-selecting the message. And a POSITA would not have been motivated to substitute the weighting system of Hays into mobile communications devices, because such a substitution was not technically feasible. Indeed, contrary to Dr.

Zagal's statements (Ex. 1003, ¶118), a POSITA would not have had a reasonable expectation of success in combining these teachings of Hays as the mobile device platforms were each distinct at the time.

92. Instead, a POSITA would have understood that the updated content had to be specifically designed for each mobile device type and each service provider. Thus, a POSITA would not have been motivated to modify the weighting system of Hays to implement the system in mobile devices at this time.

4) Claim 7

a) Hays does not teach or suggest that “the server tracks the distribution of updated content.”

93. Hays discloses that “the advertisement recipient client 104 begins by establishing or joining a session with the advertisement server 114.” Ex. 1005, [0038]. Hays explains that “[e]stablishing this session may create a record in the active session database 124, which registers the game player as the first member of the new session and is used to track and record all communications and data sent to and received from the advertisement recipient client 104.” *Id.* Paragraph 45 reiterates that “[t]he data in the active session database 124 records the advertisements that have been delivered to a session.” Ex. 1005, [0045]. Hays's tracking and recording is based on a session and not the content that has been distributed to the mobile communications device, which may not be used and thus not tracked in a single session.

94. A POSITA would understand Hays's disclosure of sessions is consistent with the technical limitations of a browser-based ad server. Hays's ad server would not be able to track the distribution of updated content to the mobile device because it is not application based. Rather, Hays's ad server only sends or caches data in a particular session; it is not downloaded or uploaded to the mobile communication device. Hays, thus, tracks only what data has been seen by a user in a session rather than what data was distributed to a device.

95. Additional paragraphs of Hays do not cure this deficiency. Paragraph 25, for example, describes tracking tied to an advertisement. Ex. 1005, [0025] ("services that track and audit the quality of presentation of the in-game advertisements," including "advertisement impressions (which quantify the presentation qualities—e.g., viewing angle, percent screen size, time on screen, etc.—of an advertisement as presented in any given instance)"). But a POSITA would understand that tracking a specific advertisement is distinct from tracking what has been distributed to a device as I explained above.

96. The claimed "tracking" step is specific to content that was distributed to a mobile communications device for use in a video game. *See* '958 Patent, claim 7 ("wherein the server tracks the distribution of updated content."). In contrast, Hays's browser-based tracking of a user's session (rather than tracking the distribution of updated content) does not meet the claim.

97. Further, a POSITA at the time of the invention would not have sought to apply Hays's browser based tracking a mobile application for the reasons provided above with respect to claim 1.

5) Claim 8

a) Hays does not teach or suggest “pre-selected in-game advertising” or “advertising for use in a video game”

98. Claim 8 of the '958 Patent recites a method comprising “utilizing the request to: identify what pre-selected in-game advertising to send and send the pre-selected in-game advertising stored on the storage medium to the mobile communication device as the updated content for the mobile video game.” '958 Patent, claim 8. Claim 8 is nearly identical to claim 1, with respect to these limitations. I understand that Petitioner contends that Hays renders this limitation obvious for the same reason as with respect to the “pre-selected” and “for use” limitations in claim 1. Petition at 31. I disagree with Petitioner's contention for the reasons discussed above with respect to the “pre-selected” and “for use” limitations in claim 1. Hays, thus, does not render claim 8 obvious for the same reasons I discussed above for claim 1.

99. Hays does not render claim 8 obvious, and thus, for the same reasons, does not render claims 9-14 obvious. Claims 10, 12, and 14 are also not obvious for additional reasons described below.

6) Claim 10

- a) Hays does not teach or suggest that “sending information to the mobile communication device regarding the in-game placement location of the content, the information being part of the updated content.”***

100. Claim 10 of the '958 Patent recites “sending information from the server to the mobile communication device regarding the in-game placement location of the content, the information being part of the updated content.” '958 Patent, claim 10. Claim 10 is nearly identical to claim 3. I understand that Petitioner contends that Hays renders this limitation obvious for the same reason as with respect to the “sends information . . .” limitation in claim 3. Petition at 31. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “sends information . . .” limitation in claim 3. It is, thus, my opinion that Hays does not render claim 10 obvious for the same reasons I discussed above for claim 3.

7) Claim 12

- a) Hays does not teach or suggest that “message is pre-selected by the server based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device.”***

101. Claim 12 of the '958 Patent recites that “message is pre-selected by the server based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication

device.” ’958 Patent, claim 12. Claim 12 is nearly identical to claim 5. I understand that Petitioner contends that Hays renders this limitation obvious for the same reason as with respect to the “pre-selected” limitation in claim 5. Petition at 31. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “pre-selected” limitation in claim 5. It is my opinion that Hays does not render claim 12 obvious for the same reasons I discussed above for claim 5.

8) Claim 14

a) Hays does not teach or suggest that “tracking the distribution of updated content.”

102. Claim 14 of the ’958 Patent recites that “tracking the distribution of updated content at the server.” ’958 Patent, claim 14. Claim 14 is nearly identical to claim 7. I understand that Petitioner contends that Hays renders this limitation obvious for the same reason as with respect to the “track[ing]” limitation in claim 7. Petition at 31. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “pre-track[ing]” limitation in claim 7. It is my opinion that Hays does not render claim 14 obvious for the same reasons I discussed above for claim 7.

B. Hays in view of Chu does not render claims 3 and 10 obvious.

1) Claim 3 and 10

a) Hays does not teach or suggest that “[the server sends/sending] information to the mobile communication device regarding the in-game placement location of the

content, the information being part of the updated content.”

103. Petitioner and Dr. Zagal assert that Hays in combination with Chu render claim 3 obvious. I disagree.

104. More specifically, Petitioner and Dr. Zagal assert that Chu discloses “providing an in-game placement location” via Chu’s “location object[s].” I disagree.

105. Chu relates to an online gaming advertising system. Ex. 1007, Abstract. Chu describes a process in which clients request advertisements and provides that “[w]hen requesting advertising metadata and schedules, game clients must pass the server information such as but not limited to the location identifiers that uniquely identify an ad within a game and any game specific environment variables such as object and character positioning and actions and game player profiles and skill set and experience level.” Ex. 1007, 14:30-35.

106. Claim 3 requires sending information from a server to a client. ’958 Patent, claim 3 (“wherein *the server sends information to the mobile communication device* regarding the in-game placement location of the content, the information being part of the updated content.”). However, a POSITA would understand that Chu only describes a method for providing information (the request) from the client to the server. See Ex. 1007, 14:31-33 (“*game clients must pass the server information* such as but not limited to *the location identifiers* that uniquely identify an ad within

a game”); *id.*, 14:50-54 (“After an online game running on a game console or user computer (*client*) requests advertising metadata and determines an ad campaign's display rules, schedule, and locations, it requests the advertising assets that represent the advertisement.”). This is distinct from and opposite to providing the client information from the server, as required by claim 3. And neither Petitioner nor Dr. Zagal explains how Chu’s system would be modified or implemented into Hays’s system, which a POSITA would not have been motivated to do, as explained below.

107. Claim 10 of the ’958 Patent recites “sending information from the server to the mobile communication device regarding the in-game placement location of the content, the information being part of the updated content.” ’958 Patent, claim 10. Claim 10 is nearly identical to claim 3. I understand that Petitioner contends that Hays in view of Chu renders this limitation obvious for the same reason as with respect to the “sends information . . .” limitation in claim 3. Petition at 34-35. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “sends information . . .” limitation in claim 3. Thus, it is my opinion that Hays in view of Chu does not render claim 10 obvious for the same reasons I discussed above for claim 3.

2) No Motivation to Modify or Combine with Chu

108. A POSITA would not have found it obvious to modify Hays's system in light of the teachings of Chu.

109. In my opinion, a POSITA would not have been motivated to modify Hays to include Chu's teaching of a video game requesting "advertising metadata and schedules that determine what advertisements are to display in specified locations within the game," and in turn receiving advertisements that include "[a] location object (530, 630) [that] represents the location within a game at which advertisements are to appear." Petition at 33 (quoting Ex. 1007, 14:20-15:5); Ex. 1003, ¶135 (same).

110. First, a POSITA would not have been motivated to modify Hays to use Chu's teachings because the two references teach away from each other. Hays discloses items including ad units without specifying a location of the item. *See, e.g.*, Ex. 1005, at [0073], ("In some embodiments, advertisement opportunities may be offered to advertisers based on standardized available ad units, which may include, for example signs (e.g., a billboard, poster, or other form of static sign ***regardless of its location***)"); *see also id.* at [0074]-[0080]. Hays does not describe specific placements of advertisements in a game.

111. Even assuming Chu describes in-game placement location (it does not), a POSITA, looking at Hays which is agnostic as to the location of the

advertisements, would not have sought to place an advertisement at a particular in-game location, as allegedly described in Chu. *Contra* Ex. 1003, ¶¶132, 135-136. Hays is directed to an ad server with broad applicability in which the ad server can be applied across multiple gaming contexts, regardless of the game itself. Chu's disclosure would have a very narrow applicability in Hays's system as Chu's ads are designed to be placed at particular locations. Hays teaches against such a narrow application. Thus, a POSITA would not have sought to modify Hays's advertising system to transmit placement information.

112. Further, a POSITA would not have been motivated to modify Hays's system in light of Chu's disclosures. *Contra* Ex. 1003, ¶128. Hays teaches a method of placing unspecified ad units in a game. Indeed, Hays criticizes designing ads for only a specific game placement (e.g., Ex. 1005, [0005]) and instead relates to broadcasting advertisements to many games. *See* Ex. 1005, Abstract ("An advertisement delivery scheme and associated facility provide targeted advertisements for multiple video games without advertisers having to specify specific game titles in which they would like their advertisements placed."). In contrast, Chu only relates to requests from the client, not communications from the server. Hays's system for delivering advertisements, regardless of the game and client system, operates in an opposite manner from the client-centric method disclosed in Chu.

113. As just noted, Hays and Chu operate in opposite manners. Hays describes a method for serving advertisements that are placed on ad units within a game while Chu only describes requests from the client. A POSITA would have understood that these systems operate based on how the content is sent or whether the content is pushed or pulled. Based on these technical differences, a POSITA would not have been motivated to modify Hays's systems in light of Chu's disclosures at the time of the invention. Further, a POSITA could implement Hays in a way that allows for a request for new ads for multiple "ad units" without the server implicitly needing to send back "ad unit" identifiers. These ways include (A) the server sends back the ads in the same order as the ad units were listed in a request from the recipient device, or (B) the server sends back the ads in an order that is deterministic based on the requested ad units, such as alphabetical.

114. A POSITA would not have been motivated to combine Hays with Chu, nor reasonably expected this proposed combination to succeed.

C. Levkovitz does not render claims 1-2, 4-9, and 11-14 obvious.

1) Claim 1

a) Levkovitz does not teach or suggest "pre-selected in-game advertising"

115. Claim 1 requires "a storage medium for storing pre-selected in-game advertising for use in a video game." Levkovitz discloses providing "contextual and/or noncontextual placement of content, e.g., advertisements or banners." Ex.

1008, [0005]. Levkovitz also discloses that “the server may include a memory unit to store a plurality of content items from which the content item is selected.” Ex. 1008, [0012]. Petitioner and Dr. Zagal allege that “selected” is the same as “pre-selected” required by the claim, but I disagree.

116. Levkovitz only teaches that content items are stored in a repository but not that they are pre-selected. Ex. 1008, [0126] (“ad server 150 may obtain a content request from the queue 150, and may search a content items repository 118 within ad server 110 for one or more content items which match the requirements of the content request.”), [0142]. Indeed, numerous ads or content items are stored in the “content items repository” or may be loaded to the memory in advance. But a POSITA would understand that these are not necessarily pre-selected. Instead, this would eliminate the meaning of the “*pre-selection*” if the items are simply selected as Levkovitz describes.

117. Indeed, Levkovitz provides that “[a]d server 110 may selectively provide to communicator 150 one or more content items, e.g., advertisements, *in response to a content request* from communicator 150.” Ex. 1008, [0152]. Levkovitz, thus, makes clear that the advertisements are selected in response to a request. The advertisements are not “pre-selected.”

118. This is confirmed by additional paragraphs of Levkovitz, one of which provides that the “ad server 110 may selectively determine which content items,

which may be previously stored in the content items repository 118, match the content request being processed” Ex. 1008, [0126]. Here, Levkovitz explains a separate selection step in which the server determines which content is a match from the content items stored in the repository. This simply describes selecting stored content in response to a request, again, not that the advertisement is “pre-selected.” This shows that the content is not pre-selected when it is stored in the repository or loaded to any memory in advance. Indeed, pre-selected content must have been previously selected, not only stored.

119. Paragraph [0127] similarly fails to describe any pre-selection step. Levkovitz describes that “ad servers 150 may include multiple servers which may be shared among multiple campaigns or may be dedicated for a specific campaign or type of operation.” Ex. 1008, [0127]. These ad servers are further described as “a first ad server 150 [which] may serve content items directed for presentation using a first application 176 (e.g., a chess game), [and] a second ad server 150 [which] may serve content items directed for presentation using a second application 176 (e.g., a racing game).” *Id.* This describes how the servers in Levkovitz may source different advertisements, but again does not show that an advertisement is “pre-selected.”

120. Levkovitz also describes releasing advertisements at a particular time. Ex. 1005, [0047]. Levkovitz provides that “ad server(s) 110” may “serve content

items at their intended serving time, even if temporarily the ad server(s) 110 may not be able to access the control server 120 at that time or closely prior to that time.” *Id.* A POSITA would understand that this is describing delaying the service of content, including until the launch of a “‘live’ campaign period,” but this does not affect how that content is selected. And as described above, Levkovitz does not describe that an advertisement is “pre-selected.”

121. Thus, Levkovitz fails to render obvious claim 1.

b) Levkovitz does not teach or suggest “advertising for use in a video game”

122. Claim 1 requires “advertising *for use* in a video game.” Levkovitz describes an ad server for placement of banner ads, and does not describe “advertising *for use* in a mobile video game” as required by claim 1. *See, e.g.,* Ex. 1008, [0005] (“ . . . contextual and/or non-contextual placement of content, e.g., advertisements or banners, within an application executed by a cellular phone, a mobile phone, or other wireless communication device.”), [0090] (“ . . . said advertisement may include a banner advertisement included in said WAP-page.”). Indeed, Petitioner and Dr. Zagal do not even attempt to allege that Levkovitz discloses this limitation.

123. Levkovitz discloses “Devices, systems and methods of presentation of delivering targeted advertisements using Wireless Application Protocol,” (“WAP,” *i.e.,* a browser on a mobile device). Ex. 1008, Abstract. The invention of Levkovitz

purports to improve prior systems “in which content is downloaded to or uploaded from the wireless device, [which] may consume system resources and bandwidth resources, and may require a user to pay a fee to cover the cost of using such resources.” Ex. 1008, [0003]; *see also id.* at [0002] (providing those prior systems “allow a wireless communication device to download and use games and applications”). Levkovitz sought to solve this problem using WAP, in which “[t]he content client may periodically connect to a content server or ad server and request content. The ad server may selectively serve content items to the content client, based on parameters related to the mobile phone.” *Id.* at [0006].

124. A POSITA would understand the advertisements described in Levkovitz are not “for use” in the mobile video game and are instead agnostic to the game environment. Levkovitz explicitly describes “serv[ing] content items directed for presentation” Ex. 1008, [0127]; *see also id.* at [0363] (“In some embodiments, advertisements delivered using WAP to device 1501 may include, for example, textual content, audio content, graphic content, video content, informational items, coupons, promotion items, banner, banner ads, or the like.”). A POSITA would understand that this simply teaches the placement or presentation of content such as banner ads within the game, which are not “for use” in the mobile video game as the claim requires.

125. Additionally, I have reviewed the prosecution history of the '958 Patent and its predecessors. It is my opinion that a POSITA would find Hays analogous to prior art that the applicant argued over and overcame during prosecution.

126. More specifically, and as discussed above, the applicant overcame a rejection based on Gatto when prosecuting a predecessor patent and did so by distinguishing Gatto's items available for download via a hyperlink because Gatto's items were not usable in the game. Ex. 2002 at 188 ("There is no indication that these promotional items are 'usable in the video game.' Indeed, it would not make sense for an email to provide hyperlinks for content that is usable in the email itself."), 189 ("the Examiner fails to address the remaining claim language of this element-namely, whether this content is 'usable in the video game that already exists on the mobile communication device.' A close reading of Gatto reveals that the 'hyperlinks to download promotional items' are, in fact, not usable in the so-called video game.").

127. During prosecution, the Applicant clearly distinguished the "hyperlink" in Gatto from the claimed "updated video-game content" and "content that would be 'usable in' the email ticket or a 'video game' itself, as opposed to a separate application program." *Id.* at 166. The Applicant explained that Gatto "does not teach or suggest any updated content that is 'useable in' a video game," (*id.* at 142) and,

instead, “[t]he available hyperlink ... causes the download of an entirely separate program or Internet page.” *Id.* As noted, the examiner withdrew this portion of the rejection in response.

128. A POSITA would understand that hyperlinks are akin to data provided by an advertisement server via WAP and distinct from advertisements in a mobile video game that already exists and has been downloaded on the mobile communication device. This is consistent with my description of the state of the art as described above. Indeed, a POSITA would have understood the technical distinctions between browser-based games and advertisements provided via a server and gaming applications that are downloaded on a mobile device.

129. A POSITA would understand that Levkovitz discloses a browser-based ad server such as a WAP-based system, which functions in terms of a user’s access to an ad much like the hyperlink in Gatto, which the Applicant distinguished during prosecution.

130. The additional paragraphs of Levkovitz that Petitioner and Dr. Zagal cite do not change this understanding. *See* Ex. 1008, [0175] (“a PDA device which incorporates a mobile phone, a cordless phone, a portable phone, a Digital Enhanced Cordless Telecommunications (DECT) phone or device, an Instant Messaging (IM) terminal or device, or other suitable devices.”), [0123] (“In accordance with some embodiments of the invention, device 170 may include an application 176 having a

content client 174. The application 176 may be, for example, a game or a software application. The content client 174 may be a module of application 176, a plug-in of application 176, or an external module operatively associated application 176.”). A POSITA would understand that these further describe a browser-based application on a mobile phone. *See* Ex. 1008, [0340] (“For example, in system 100 of FIG. 1, device 170 may include a WAP browser or micro-browser able to present WAP-sites, WAP-pages and/or WAP content; for example, the WAP browser may be embedded in device 170, may be a download-able or install able module or application, may be implemented using hardware components and/or software components, and/or may otherwise be included in device 170 of FIG. 1.”).

131. Neither Petitioner nor its expert provides any analysis or explanation of how Levkovitz might be modified under the knowledge of one of skill in the art to show how the ads could be “for use” in the game, nor how browser-based advertisement server method could be applied to an application that is not browser or WAP-based. Nor could they, as Levkovitz has claimed to solve a distinct problem by avoiding downloading content onto a client device given high data costs. A POSITA would, thus, not be motivated to modify Levkovitz’s ad server to achieve the claimed solution of the ’958 Patent, nor have a reasonable expectation of success in doing so.

c) Levkovitz does not teach or suggest “send[ing] the pre-selected in-game advertising stored on the storage medium

to the mobile communication device as the updated content for the mobile video game.”

132. Claim 1 requires the step of “send[ing] the pre-selected in-game advertising stored on the storage medium to the mobile communication device as the updated content for the mobile video game.” ’958 Patent, claim 1. Petitioner contends that Levkovitz teaches this limitation because “the content items (advertisements) are stored in a storage medium (such as the storage media of a server), and they are pre-selected.” Petition at 42. As I describe above, Levkovitz fails to teach that the advertisements are pre-selected, and Levkovitz fails to teach that the “pre-selected in game advertising” is “stored.”

133. Indeed, as I describe above, Levkovitz describes a WAP-based ad server. Such WAP-based systems do not upload content to the mobile communication device and only temporarily serve content to the device. Levkovitz explains that its system uses “Wireless Application Protocol.” Figure 7 shows how the protocol works and confirms that data is not uploaded to a mobile device (or any user device) in WAP Protocols. *See* Ex. 1008, Fig. 7. WAP functions in the same manner as a web browser. A WAP system retrieves and caches content for temporary viewing and retrieval, but does not require downloading and uploading content as Levkovitz explains. Ex. 1008, [0003] (“[prior art] operations, in which content is downloaded to or uploaded from the wireless device, may consume system resources and bandwidth resources, and may require a user to pay a fee to cover the cost of

using such resources.”). Levkovitz’s WAP system seeks to avoid uploading and downloading data and instead seeks to consume less resources by serving content. Thus, Levkovitz fails to render obvious claim 1.

134. Levkovitz does not render claim 1 obvious, and thus, for the same reasons, does not render claims 2-7 obvious. Claim 7 is also not obvious for additional reasons described below.

2) Claim 7

a) Levkovitz does not teach or suggest that “the server tracks the distribution of updated content.”

135. Levkovitz discloses a WAP-based ad server. *See* Ex. 1008, Abstract. Specifically, Levkovitz describes logging what content has been presented or what presentations have been performed by the WAP-based ad server. Ex. 1008, [0132]. Levkovitz’s “[d]evice 170 may store or otherwise log information related to presentations performed by device 170, e.g., data indicating the content item(s) presented, data the starting time and/or ending time of the presentations, data indicating operations performed by device 170 and/or the user of device 170 during or after the presentation (e.g., pressing a button, dialing, sending a SMS or MMS message, placing a call, or the like).” *Id.* Levkovitz, thus, stores or logs information (i.e., advertisements) that have been shown to a device via a WAP-based server. *See id.*; *see also id.*, [0154] (“a log tracking the activity or servings done by ad server

110”), [0171] (a log that tracks the “number of servings of content items (e.g., every 100 impressions, every 500 impressions, etc.).”).

136. A POSITA would understand that advertisements would be presented but not uploaded when serving advertisements through a WAP-site, as shown in the figures of Levkovitz. *See, e.g.*, Ex. 1008, Fig. 7. A POSITA would understand data is not uploaded to the mobile device when data is served via WAP-protocols. In contrast to an application, WAP operates like a web browser. A WAP-based site retrieves and caches content, but it does not download or upload data to the device, like an application does.

137. Thus, a POSITA would understand that Levkovitz teaches away from “uploading” content to the mobile communications device as required by claim 5, let alone tracking any uploaded content. As Levkovitz explains “[prior art] operations, in which content is downloaded to or uploaded from the wireless device,” like an application “may consume system resources and bandwidth resources, and may require a user to pay a fee to cover the cost of using such resources.” Ex. 1008, [0003]. Levkovitz attempts to solve this problem, and consume *less* resources, by not uploading (or downloading) content. Thus, Levkovitz operates in a manner opposite from claim 5.

138. Because of this distinction, Levkovitz does not teach or suggest “the step of tracking what has been uploaded to the mobile communication device.”

3) Claim 8

a) Levkovitz does not teach or suggest “pre-selected in-game advertising” or “advertising for use in a video game”

139. Claim 8 of the '958 Patent recites a method comprising “utilizing the request to: identify what pre-selected in-game advertising to send and send the pre-selected in-game advertising stored on the storage medium to the mobile communication device as the updated content for the mobile video game.” '958 Patent, claim 8. Claim 8 is nearly identical to claim 1, with respect to these limitations. I understand that Petitioner contends that Levkovitz renders this limitation obvious for the same reason as with respect to the “pre-selected” and “for use” limitations in claim 1. Petition at 46. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “pre-selected” and “for use” limitations in claim 1. Levkovitz, thus, does not render claim 8 obvious for the same reasons I discussed above for claim 1.

140. Levkovitz does not render claim 8 obvious, and thus, for the same reasons, does not render claims 9-14 obvious. Claim 14 is also not obvious for additional reasons described below.

4) Claim 14

a) Levkovitz does not teach or suggest that “tracking the distribution of updated content.”

141. Claim 14 of the '958 Patent recites that “tracking the distribution of updated content at the server.” '958 Patent, claim 14. Claim 14 is nearly identical to

claim 7. I understand that Petitioner contends that Levkovitz renders this limitation obvious for the same reason as with respect to the “track[ing]” limitation in claim 7. Petition at 46. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “pre-track[ing]” limitation in claim 7. It is my opinion that Levkovitz does not render claim 14 obvious for the same reasons I discussed above for claim 7.

D. Levkovitz in view of Chu does not render claims 3 and 10 obvious.

1) Claims 3 and 10

a) Levkovitz in view of Chu does not teach or suggest that “[the server sends/sending] information to the mobile communication device regarding the in-game placement location of the content, the information being part of the updated content.”

142. Petitioner and Dr. Zagal assert that Levkovitz in view of Chu renders claim 3 obvious. I disagree. For the reasons I explain above, Levkovitz alone does not render claim 1 obvious, and thus does not render claim 3 obvious. And the combination of Levkovitz and Chu fails to render claim 3 obvious for additional reasons.

143. More specifically, Petitioner and Dr. Zagal assert that Chu discloses “providing an in-game placement location” via Chu’s “location object[s].” Ex. 1003, ¶176. I disagree. As noted above, claim 3 requires that “the *server sends information*

to the mobile communication device regarding the in-game placement location of the content, the information being part of the updated content.”

144. Chu relates to an online gaming advertising system. Ex. 1007, Abstract. Chu describes a process in which clients request advertisements and provides that “[w]hen requesting advertising metadata and schedules, game clients must pass the server information such as but not limited to the location identifiers that uniquely identify an ad within a game and any game specific environment variables such as object and character positioning and actions and game player profiles and skill set and experience level.” Ex. 1007, 14:30-35. A POSITA would understand, however, that Chu only describes a method for providing information (the request) from the client to the server. *See* Ex. 1007, 14:31-33 (“**game clients must pass the server information** such as but not limited to **the location identifiers** that uniquely identify an ad within a game”); *id.*, 14:50-54 (“After an online game running on a game console or user computer (*client*) **requests advertising metadata and determines an ad campaign's display rules, schedule, and locations**, it requests the advertising assets that represent the advertisement.”). Chu’s method is, thus, distinct from providing the client information **from the server**, as required by claim 3.

145. Claim 10 of the ’958 Patent recites “sending information from the server to the mobile communication device regarding the in-game placement location of the content, the information being part of the updated content.” ’958

Patent, claim 10. Claim 10 is nearly identical to claim 3. I understand that Petitioner contends that Levkovitz in view of Chu renders this limitation obvious for the same reason as with respect to the “sends information . . .” limitation in claim 3. Petition at 49-50. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “sends information . . .” limitation in claim 3. Thus, it is my opinion that Levkovitz in view of Chu does not render claim 10 obvious for the same reasons I discussed above for claim 3.

2) No Motivation to Modify or Combine with Chu

146. Petitioner and Dr. Zagal assert that a POSITA would have been motivated to modify the ad server of Levkovitz to “include Chu’s teaching of a video game requesting ‘advertising metadata and schedules that determine what advertisements are to display in specified locations within the game.’” Petition at 47; *see also* Ex. 1003, ¶¶171, 172. Petitioner further asserts that this would result in “receiving advertisements that include ‘[a] location object (530, 630) [that] represents the location within a game at which advertisements are to appear.’” Petition at 47 (quoting Ex. 1007, 14:20-15:5) (alteration in original).

147. However, in my opinion, a POSITA would not “have been motivated to use Chu’s teachings of the server providing to the client the specific in-game locations of advertisements because of the well-known benefits of being able to display advertisements at in-game locations.” Ex. 1003, ¶172. Levkovitz does not

describe specific placement of an advertisement, let alone an in-game placements of an advertisement. Levkovitz describes ad banners—“noncontextual placement of content,” or advertisements. Ex. 1008, [0005].

148. Even assuming Chu describes in-game placement location (it does not), a POSITA, looking at Levkovitz which is agnostic as to the location of the advertisements, would not have sought to place an advertisement at a particular in-game location, as allegedly described in Chu. *Contra* Ex. 1003, ¶¶172-174. Levkovitz is directed to an ad server with broad applicability in which the ad banners can be applied across multiple gaming applications. Chu’s disclosure would have a very narrow applicability as Chu’s ads are designed to be placed at particular locations. Levkovitz teaches against such a narrow application.

149. Further, a POSITA would not have been motivated to modify Levkovitz’s system in light of Chu’s disclosures. *Contra* Ex. 1003, ¶172. Levkovitz describes a method for presenting advertisements from a server to a client device. Chu, however, describes a method in which information is provided from the client to the server. Ex. 1007, 14:31-33 (“game clients must pass the server information such as but not limited to the location identifiers that uniquely identify an ad within a game . . .”).

150. Levkovitz’s teaching of delivering targeted advertisements is opposite from Chu’s client-based system. Levkovitz relates to the server sending specified

ads while Chu only relates information sent from the client to the server, not communications from the server to the client.

151. Further, Levkovitz describes an advertisement campaign that can be applied in a broad manner with ad banners that are not specific to any game or application. A POSITA would be motivated to maintain this breadth that could allow for increased ad activity and, in turn, revenues from ads. A POSITA would not have sought to add Chu's disclosure of customizing ads and placing ads at a particular location in a game (which would still not achieve the claim as I explain above). Thus, a POSITA would not have been motivated to combine Levkovitz and Chu.

IX. Non-Obviousness of the '056 Patent

A. Hays does not render claims 1-16 obvious.

1) Claim 1

a) Hays does not teach or suggest that “the message is pre-selected by the server”

152. Claim 1 of the '056 Patent recites “wherein the message is pre-selected by the server” '056 Patent, claim 1. Claim 1 of the '056 Patent is nearly identical to claims 1 and 5 of the '958 Patent, with respect to this limitation. Thus, for the same reasons I discussed above for claims 1 and 5 of the '958 Patent, Hays does not render obvious claim 1 of the '056 Patent.

b) Hays does not teach or suggest that “the message is pre-selected by the server” based on the claimed factors.

153. Claim 1 of the '056 Patent recites “wherein the message is pre-selected by the server based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device.” '056 Patent, claim 1.

154. Hays describes a system for matching and weighting advertisements. Ex. 1005, [0040]-[0043]. The “advertising matching and weighting system” of Hays “calculate[s] the weight of each advertisement based on several factors including campaign goal and completion data from the advertisement serving database 122 and information regarding the specific client type from the advertisement recipient database 120.” *Id.* at [0043]. The system “then selects one or more advertisements from the weighted advertisement set, where the probability of an advertisement being selected is directly derived from the advertisements assigned weight, relative to other advertisements in the set.” *Id.* Once the advertisements are selected, they are “sent back to the requesting advertising request handler 210 and transmitted back to the advertisement recipient client for display.” *Id.*

155. As provided above, Hays describes that the ads are matched and weighted based on the campaign goal and competition data. A POSITA would understand that, in this advertisement matching and weighting system of Hays, advertisements are selected or checked based on the advertisement itself as opposed

to any information about the client device or service provider. A POSITA would find this distinct from the factors recited in claim 1 which only relate to the client device or service provider.

156. Further, a POSITA would understand that a weighting system is distinct from the recited “pre-select[ion]” step. A POSITA would understand that this step is a determining compatibility based on one of the recited factors. In contrast, the weighting scheme of Hays is prioritizing which ad to send, not confirming compatibility of the client mobile device to determine which ad is capable of being sent and subsequently pre-selecting an advertisement.

157. This is confirmed by the description in paragraphs [0044] and [0045] of Hays, which describes ad targeting. Hays describes serving ads that are targeted based on “demographic information.” Ex. 1005, [0044] (“[A]dvertising can be further targeted based on specific demographic characteristics of a game player,” “demographic information about a game player collected via the use of an IP address”).

158. I disagree with Dr. Zagal that, merely since it may be the case that “[d]ifferent service providers have different ranges of IP address,” this teaches the “pre-select[ion]” step, which requires pre-selecting an advertisement based on specific factors, none of which are a range of IP addresses. *See* claim 1 (“based on a model type associated with the mobile communication device, a service subscription

associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device”). Even if Hays collects information about IP addresses, Hays does not describe whether an advertisement is “pre-selected” on this basis. A POSITA would understand that Hays’s system weighs the advertisements and assigns a priority to the advertisements, which is distinct from the “pre-select[ion]” step as claimed in the ’056 Patent.

159. Dr. Zagal also asserts that “it would have been obvious for a POSITA to combine Hays’s teachings of weighing advertisements based on the type of game console (*id.*, ¶43) and Hays’s teachings of the various mobile communication devices that constitute game consoles (*id.*, ¶51).” Ex. 1003, ¶104. I disagree. A POSITA at the time of the invention would have understood that games on mobile devices operated differently than game consoles at least because of the technical limitations of mobile devices in June 2007, which I summarize in Section VII above. And a POSITA would have understood that mobile devices at the time each had different software platforms. A POSITA would not have been motivated to apply weighting of advertisements to the distinct platforms that were specific to the mobile device and mobile provider.

160. Instead, a POSITA would have understood that each mobile device and mobile provider had different platforms for content. A POSITA would not have

sought to send the same content and assign a weight across various devices or providers. Instead, a step would need to be performed to confirm compatibility, as required by the claims. But this is absent from Hays. The operations of the “advertisement matching and weighting system” are distinct from the claimed step to ensure compatibility. Nor would a POSITA have been motivated to substitute the weighting system of Hays into mobile communications devices, because such a substitution was not technically feasible. And contrary to Dr. Zagal’s statements (Ex. 1003, ¶104), a POSITA would not have had a reasonable expectation of success in combining these teachings of Hays as the mobile device platforms were each distinct at the time.

161. Instead, a POSITA would have understood that the in-game video game content had to be specifically designed for each mobile device type and each service provider. Thus, a POSITA would not have been motivated to modify the weighting system of Hays to implement the system in mobile devices at this time.

162. Hays does not render claim 1 obvious, and thus, for the same reasons, does not render claims 2-8 obvious. Claims 4-5 and 7-8 are also not obvious for additional reasons described below.

2) Claim 4

a) Hays does not teach or suggest that the step of “identifying what in-game video game content to send is based on . . .” the claimed factors.

163. Hays does not teach or suggest claim 4 because Hays does not describe a “identifying” step using any of the factors recited in claim 4. ’056 Patent, claim 4 (“identifying what in-game video game content to send is based on a model type associated with the mobile communication device, a service subscription associated with the mobile communications device, a service provider for the service subscription associated with the mobile communication device, or a location of the mobile communications device.”).

164. As I describe above with claim 1, Hays’s “advertisement matching and weighting system” does not disclose the limitations of claim 1, and in particular, the step “wherein the message is pre-selected by the server based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device.” For the same reasons, Hays fails to disclose “identifying what in-game video game content to send is based on” the same claimed factors. Ex. 1003, ¶¶115-118.

3) Claim 5

a) Hays does not teach or suggest that “the server is further configured to send information to the mobile communication device regarding the in-game placement location of the in-game video game content.”

165. Claim 5 of the ’056 Patent recites that “the server is further configured to send information to the mobile communication device regarding the in-game

placement location of the in-game video game content.” ’056 Patent, claim 5. Claim 5 is nearly identical to claim 3 of the ’958 Patent for this limitation. Hays, thus, does not render claim 5 obvious for the same reasons I discussed above with respect to this limitation of claim 3 of the ’958 Patent.

4) Claim 7

a) Hays does not teach or suggest that “the server is further configured to track the distribution of updated content.”

166. Claim 5 of the ’056 Patent recites that “the server is further configured to track the distribution of updated content.” ’056 Patent, claim 7. Claim 7 is nearly identical to claim 7 of the ’958 Patent for this limitation. Hays, thus, does not render claim 7 obvious for the same reasons I discussed above with respect to this limitation of claim 7 of the ’958 Patent.

5) Claim 8

a) Hays does not teach or suggest that “the server is further configured to check for availability of bandwidth before sending the updated content to the mobile communication device.”

167. Claim 8 requires that “the server is further configured to check for availability of bandwidth before sending the updated content to the mobile communication device.” Petitioner and Dr. Zagal assert that Hays downloads advertisements in the background that are allegedly send based on “availability of bandwidth.” Petition at 28-29; Ex. 1003, ¶¶132-134. I disagree.

168. Hays discloses “advertisements may be downloaded ‘in the background’ during times when the advertisement recipient client 104 is connected to the advertisement management service system 108, including when the gaming device is performing other tasks, such as executing a different game, operating a web browser, etc. Various applications that run quietly on the advertisement recipient client 104 may be responsible for downloading the advertisements during Such times without requiring active user involvement.” Ex. 1005, [0034]. Hays also discloses that “[c]ommunication between the advertisement server and the gaming device may be done sporadically, periodically, or by maintaining a constant connection between the appropriate com ponents while the game is being played.” Ex. 1005, [0021].

169. But neither of these disclosures in Hays explain that the server “check[s] for availability of bandwidth before sending the updated content.” These disclosures only explain how advertisements may be sent or downloaded when a connection is available. *See* Ex. 1005, [0034] (“advertisements may be downloaded ‘in the background’ during times when the advertisement recipient client 104 *is connected* to the advertisement management service system 108.”), [0021] (“When a game is played at a player’s gaming device (e.g., computer or game console) that *is connected* to an advertisement server (e.g., via the Internet or another connection), the client library functions associated with the game application may pull media data

from the advertisement server.”). In fact, these do not disclose a use of bandwidth or any “check[ing]” step before the advertisement is sent.

170. Dr. Zagal also asserts that “[a] POSITA would have understood from this discussion that the server of Hays checks for the availability of bandwidth in order to download updated content to the mobile communication device, including check for the availability of a connection with the mobile device or the availability of unused bandwidth that would allow advertisements to be downloaded “in the background” without interfering with other tasks.” Ex. 1003, ¶133. I disagree.

171. A POSITA would have only understood from this discussion that Hays downloads items in the background without any action from the user. These disclosures do not describe monitoring bandwidth or checks for availability of bandwidth. The same is true regardless of the means or media by which the advertisement data is provided. Ex. 1003, ¶134 (quoting Ex. 1005, [0034]). Hays still does not disclose any bandwidth considerations related to those different connection means.

172. A POSITA would have understood that Hays simply describes download data in the background when the user may not be actively using the game or application or that the data may be sent periodically, sporadically, or constantly. Hays, however, does not describe that the manner of sending the data is based on availability of bandwidth.

173. Thus, Hays does not render obvious claim 8.

6) Claim 9

a) Hays does not teach or suggest “pre-selected in-game video game content” or that “the message is pre-selected by the server”

174. Claim 9 of the '056 Patent recites “pre-selected in-game video game content for use in a video game” and “sending a message relating to the in-game video game content from the server to the mobile communication device in response to receiving the request, wherein the message is pre-selected by the server based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device.” '056 Patent, claim 9. Claim 9 nearly identical to claim 1 of the '056 Patent, with respect to the second limitation. I understand that Petitioner contends that Hays renders this limitation obvious for the same reason as with respect to the “pre-selected” limitation in claim 1. Petition at 30-31. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “pre-selected” limitation in claim 1. Hays, thus, does not render claim 9 obvious for the same reasons I discussed above for claim 1 of the '056 Patent.

175. But more importantly, Petitioner and Dr. Zagal entirely fail to address the first “pre-selected” limitation in claim 9: “pre-selected in-game video game

content for use in a video game.” Dr. Zagal never addresses “pre-selected in-game video game content” in the context of the ’056 Patent. Nonetheless, this limitation of claim 9 is nearly identical to the respective limitation claim 1 of the ’958 Patent. Hays, thus, does not render claim 9 obvious for the same reasons I discussed above for claim 1 of the ’958 Patent.

b) Hays does not teach or suggest “in-game video game content for use in a video game. . . .”

176. Claim 9 also requires that the “in-game video game content” is “for use in a video game” See ’056 Patent, claim 9. Again, with this element of claim 9, Petitioner and Dr. Zagal simply fail to address this specific claim language and only refer back to claim 1 of the ’056 Patent which does not include this limitation. Dr. Zagal entirely fails to address “for use” in his declaration regarding the ’056 Patent.

177. Nonetheless, claim 9 is nearly identical to claim 1 of the ’958 Patent for this limitation. Hays, thus, does not render claim 9 obvious for the same reasons I discussed above with respect to this limitation of claim 1 of the ’958 Patent.

178. Hays does not render claim 9 obvious, and thus, for the same reasons, does not render claims 10-16 obvious. Claims 12-13 and 15-16 are also not obvious for additional reasons described below.

7) Claim 12

a) Hays does not teach or suggest that the step of “identifying what in-game video game content to send is based on” the claimed factors.

179. Claim 12 of the '056 Patent recites “identifying what in-game video game content to send is based on a model type associated with the mobile communication device, a service subscription associated with the mobile communications device, a service provider for the service subscription associated with the mobile communication device, or a location of the mobile communications device.” '056 Patent, claim 12. Claim 12 nearly identical to claim 4, with respect to these limitations. I understand that Petitioner contends that Hays renders this limitation obvious for the same reason as with respect to the “identifying . . .” limitation in claim 4. Petition at 31. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “identifying . . .” limitation in claim 4. Hays, thus, does not render claim 12 obvious for the same reasons I discussed above for claim 4.

8) Claim 13

a) Hays does not teach or suggest that “sending information to the mobile communication device regarding the in-game placement location of the in-game video game content.”

180. Claim 13 of the '056 Patent recites “sending information to the mobile communication device regarding the in-game placement location of the in-game video game content.” '056 Patent, claim 13. Claim 13 nearly identical to claim 5, with respect to these limitations. I understand that Petitioner contends that Hays renders this limitation obvious for the same reason as with respect to the “send

information . . .” limitation in claim 5. Petition at 31. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “send information . . .” limitation in claim 5. Hays, thus, does not render claim 13 obvious for the same reasons I discussed above for claim 5.

9) Claim 15

a) Hays does not teach or suggest that “tracking the distribution of updated content at the server.”

181. Claim 15 of the ’056 Patent recites “tracking the distribution of updated content at the server.” ’056 Patent, claim 15. Claim 15 nearly identical to claim 7, with respect to these limitations. I understand that Petitioner contends that Hays renders this limitation obvious for the same reason as with respect to the “track[ing]” limitation in claim 7. Petition at 32. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “track[ing]” limitation in claim 7. Hays, thus, does not render claim 15 obvious for the same reasons I discussed above for claim 7.

10) Claim 16

a) Hays does not teach or suggest that “the server checks for availability of bandwidth before sending the updated content to the mobile communication device.”

182. Claim 16 of the ’056 Patent recites that “the server checks for availability of bandwidth before sending the updated content to the mobile communication device.” ’056 Patent, claim 16. Claim 16 nearly identical to claim 8,

with respect to these limitations. I understand that Petitioner contends that Hays renders this limitation obvious for the same reason as with respect to the “availability of bandwidth” limitation in claim 8. Petition at 32. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “availability of bandwidth” limitation in claim 8. Hays, thus, does not render claim 16 obvious for the same reasons I discussed above for claim 8.

B. Hays in view of Choi does not render any of the challenged claims obvious.

1) Claims 1 and 9

a) Hays in view of Choi does not teach or suggest that “the message is pre-selected by the server based on. . .” the claimed factors.

183. As I explained above, Hays fails to describe a “message” that is “pre-selected by the server.” Choi does not cure this deficiency.

184. Choi is directed to “[m]ethods and systems for managing distribution and retrieval of data (for example advertising content and viewing statistics) and insertion of control logic (for example display of advertising content) into pre-existing mobile applications.” Ex. 1006, Abstract. More specifically, Choi describes methods for “ad targeting” and “ad selection.” Ex. 1006, [0083], [0089].

185. Choi explains that its “ad targeting” is based on “user demographic and contextual information.” See Ex. 1006, [0083]. Choi also explains that personal identifying information and demographic information are known to carriers and that

the carrier can be obtained via text message. *See id.*, [0084], [0086] (allowing an “instrumented application” to “communicate its carrier identity by sending a text message to an email address monitored by the ad server; the text message will be sent as an email, and the source address domain will identify the carrier.”), [0096] (“The PII hash can be generated by a carrier (or distributor) (who has user and/or device IDs). Where mapping from PII hash to PII is not stored by the carrier for security purposes, but where the PII hash is mapped to demographic information, the mapping can be provided to an ad targeting/demographic tracking system.”).

186. From these disclosures, a POSITA would understand that Choi and Hays send advertisements based on demographic information. Demographic information is not recited in claim 1[e]. *See* claim 1 (“based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device.”). At most, Choi describes that carrier information can be provided to Choi’s ad server. But neither Choi nor Hays describe how that information can be used by the ad server to perform the “pre-selection” step of claim 1[e]. Both references only describe how to select advertisements based on demographic information. And, as described further below, a POSITA would not have been motivated to modify either of the Choi or Hays systems to arrive at the claimed invention.

187. Claim 9 of the '056 Patent recites “wherein the message is pre-selected by the server based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device.” '056 Patent, claim 9. I understand that Petitioner contends that Hays in view of Choi renders this limitation obvious for the same reason as with respect to the “wherein the message is pre-selected . . .” limitation in claim 1. Petition at 37-38. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “wherein the message is pre-selected . . .” limitation in claim 1. Thus, it is my opinion that Hays in view of Choi does not render claim 9 obvious for the same reasons I discussed above for claim 1.

2) Claims 4 and 12

b) Hays in view of Choi does not teach or suggest that the step of “identifying what in-game video game content to send is based on . . .” the claimed factors.

188. As I explained above, Hays fails to disclose claim 4 and Choi does not cure these deficiencies.

189. Petitioner and Dr. Zagal assert that this limitation is allegedly met based on Choi’s disclosure of selecting advertisements with respect to limitation 1[e]. For the same reasons as described above for the “pre-selected” step of limitation 1[e], Hays in view of Choi fails to disclose “identifying what in-game video game content

to send is based on a model type associated with the mobile communication device, a service subscription associated with the mobile communications device, a service provider for the service subscription associated with the mobile communication device, or a location of the mobile communications device” recited in claim 4.

190. Petitioner and Dr. Zagal also assert that “Choi discloses selecting advertisements based on GPS location.” Ex. 1003, ¶156; *see also* Petition at 39. But this still fails to render claim 4 obvious, in my opinion. Choi only discloses GPS location in the context of Choi’s ad server, which “can use GPS location information to request location-specific advertising content from the network server.” Ex. 1006, [0043]. This is distinct from claim 4, however, which requires that the identifying step—including “identifying what in-game video game content to send [] based on . . . a location of the mobile communications device”—is performed by the server. *See* ’056 Patent, claim 1 (“ . . . wherein the *server* is configured to: . . .”). Choi does not disclose that a server identifies what in-game video game content to send based on GPS location, or any location, because the client device is making requests for content in Choi. And a POSITA would understand that Choi’s client-based requests are distinct and operate in a fundamentally different manner than the server-based identification required by claim 4.

191. Claim 12 of the ’056 Patent recites “identifying what in-game video game content to send is based on a model type associated with the mobile

communication device, a service subscription associated with the mobile communications device, a service provider for the service subscription associated with the mobile communication device, or a location of the mobile communications device.” ’056 Patent, claim 12. Claim 12 is nearly identical to claim 4. I understand that Petitioner contends that Hays in view of Choi renders this limitation obvious for the same reason as with respect to the “identifying . . .” limitation in claim 4. Petition at 39. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “identifying . . .” limitation in claim 4. Thus, it is my opinion that Hays in view of Choi does not render claim 12 obvious for the same reasons I discussed above for claim 4.

3) No Motivation to Modify or Combine with Choi

192. A POSITA would not have been motivated to modify Hays according to the teachings in Choi and arrive at the claimed invention, even if both references are both directed to advertisements.

193. More specifically, Petitioner and Dr. Zagal assert that “a POSITA would have been motivated to combine Hays with Choi’s teaching of ‘request[ing] demographic information from the carrier’ of the mobile communication device to use in the selection of advertisements, as well as Choi’s teaching of using ‘GPS location information to request location-specific advertising.’” Ex. 1003, ¶131 (quoting Ex. 1006, ¶¶84, 43). I disagree.

194. As I describe above, Hays discloses an ad server in which the server determines which advertisement to send based on a weight assigned to advertisements. Ex. 1005, [0043]. Hays discloses an “advertisement matching and weighting system” which “calculate[s] the weight of each advertisement based on several factors including campaign goal and completion data from the advertisement serving database 122 and information regarding the specific client type from the advertisement recipient database 120.” Ex. 1005, [0043]. As noted above, this is distinct from claim 1’s “pre-select[ion]” step. Hays does not recite any of the claimed factors, and Choi does not cure this deficiency.

195. Choi discloses an “ad targeting” system which determines what advertisement to send, but this is distinct from the system of Hays. Choi discloses “ad targeting” which “depends on collection of user demographic and contextual information.” Choi, however, does not provide a sufficient explanation of how to use the collected information that would allow a POSITA to modify Hays in light of Choi’s teachings – and the Petition does not even attempt to explain how a user would do so.

196. Further, Petitioner and Dr. Zagal assert that a “POSITA would be motivated to request and use such information as taught by Choi because of the information’s well-known benefits for targeted advertising without impinging

privacy concerns and regulations.” Ex. 1003, ¶132. But a POSITA would not have been motivated to incorporate the method of Choi into the ad server of Hays.

197. Hays already discloses a method for “ad targeting.” The method disclosed in Hays targets advertisements based on time criterion, geographic criterion, or audience demographic. *See, e.g.* Ex. 1005, claim 22. More specifically, the method “allow[s] advertisers to deliver their campaign messages to specific audiences they wish to target across one or multiple game titles played across multiple platforms (e.g., PC, console, mobile, etc.) ***without being limited to delivering their campaign to only a single specific game title.***” Ex. 1005, [0017]. In contrast, the method of Choi relates to targeting advertising in ***a single*** game. A POSITA looking at Hays seeking to create an ad targeting method with a broad application, not specific to a particular gaming environment, would not have been motivated to employ the method of Choi, which is limited to a specific, pre-existing application.

198. Additionally, a POSITA would not have been motivated to incorporate Choi’s use of demographic information into Hays, which Dr. Zagal nearly concedes. Ex. 1003, ¶133 (“However, Hays does not expressly describe how to obtain such predicted demographic information.”). Hays discloses a method for weighting advertisements solely based on “campaign goal and completion data.” Ex. 1005, [0043]. Hays, thus, only teaches weighting on a quantitative value (campaign goal

and completion). A POSITA looking at Hays would not have had a reasonable expectation of success in trying to incorporate the qualitative data obtained and tracked in Choi, because the intended purpose of Choi is targeting a single user versus a broader advertising campaign.

C. Hays (or Hays and Choi) in view of Chu does not render claims 5 and 13 obvious.

1) Claims 5 and 13

a) Hays does not teach or suggest that “send[ing] information to the mobile communication device regarding the in-game placement location of the in-game video game content.”

199. For the reasons I explain above, neither Hays alone nor Hays in combination with Choi render claim 1 obvious, and thus do not render claim 5 obvious. And the Hays-Choi-Chu combination fails to render claim 5 obvious for additional reasons.

200. Claim 5 of the '056 Patent recites that “the server is further configured to send information to the mobile communication device regarding the in-game placement location of the in-game video game content.” '056 Patent, claim 5. Claim 5 of the '056 Patent is nearly identical to claim 3 of the '958 Patent, with respect to this limitation. Thus, for the same reasons I discussed above for claim 3 of the '958 Patent, Hays in view of Chu does not render obvious claim 5 of the '056 Patent.

201. Claim 13 of the '056 Patent recites “comprising sending information from the server to the mobile communication device regarding the in-game

placement location of in-game video game content.” ’056 Patent, claim 13. Claim 13 is nearly identical to claim 5. I understand that Petitioner contends that Hays (or Hays and Choi) in view of Chu renders this limitation obvious for the same reason as with respect to the “send[ing] information . . .” limitation in claim 5. Petition at 37-38. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “send[ing] information . . .” limitation in claim 5. Thus, it is my opinion that Hays (or Hays and Choi) in view of Chu does not render claim 13 obvious for the same reasons I discussed above for claim 5.

2) No Motivation to Modify or Combine with Choi or Chu

202. A POSITA would not have been motivated to combine Hays and Chu for the same reasons as provided above with respect to the ’958 Patent.

D. Levkovitz does not render claims 1-16 obvious.

1) Claim 1

a) Levkovitz does not teach or suggest that “the message is pre-selected by the server”

203. Claim 1 of the ’056 Patent recites “wherein the message is pre-selected by the server based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device.” ’056 Patent, claim 1. Claim 1 is nearly identical to claims 1 and 5 of the ’958 Patent for this limitation. Levkovitz, thus, does not render claim

1 obvious for the same reasons I discussed above with respect to this limitation of claims 1 and 5 of the '958 Patent.

204. Further, the Petition for the '056 Patent points to presentation rules, but does not explain how those presentation rules are preselected. Rather, the Petition points to rules described in Levkovitz that relate to how advertisements are displayed. Levkvoitz, [0129] (“The presentation rules may include, for example, a capping rule to cap the number of times that a certain content item may be presented, e.g., within a certain time period; a capping rule to cap the number of times that a certain type of content items (e.g., animated content items, large-sized content items, audio content items) may be presented within a certain time period; a rule instructing device 170 to present a certain content item at a certain time or within a certain time window; a rule instructing device 170 to present the content items in accordance with a certain order or priority scheme; or other suitable rules or data to control the presentation of the content items.”) and [0142] (“Control server 120 may selectively obtain from database 140 content items which are ready for serving in accordance with pre-defined rules, e.g., specific campaign-related rules. Control server 120 may selectively provide or distribute the content items to one or more ad servers 110, optionally together with capping rules and/or other rules controlling the servings of these content items.”). The rules control the display of content, but they are never described as being pre-selected as the claim requires. Nor would such rules be pre-

selected because they would instead be identified along with the advertisements the presentation rule is transmitted with. *See, e.g.,* Levkovitz, [0129] (“communicator 150 may further transmit to device 170, e.g., together with the content item(s) or in a separate transmission, one or more presentation rules associated with the transmitted content items.”).

205. Further, while Levkovitz paragraph [0142] describes that some rules are “pre-defined.” However, this paragraph does not suggest that these rules are transmitted to a mobile device. To the contrary, Levkovitz explains that these rules are transmitted to other servers, and control how the server transmits data to a recipient device, as Petitioner suggests. *See* Levkovitz, [0142] (“Control server 120 may selectively provide or distribute the content items to one or more ad servers 110, optionally together with capping rules and/or other rules controlling the servings of these content items. In one embodiment, control server 120 may distribute a content item for serving among multiple ad servers 110; for example, control server 120 may instruct a first ad server 110 to serve a first version of the content item not more than 400 times”). These rules are not transmitted to a mobile device, nor would it make sense to transmit them to a mobile device because the rule relates to how ad server 110 transmits data to the mobile device. Thus, this rule would be useless to the mobile device.

206. Levkovitz does not render claim 1 obvious, and thus, for the same reasons, does not render claims 2-8 obvious. Claims 5 and 7-8 are also not obvious for additional reasons described below.

2) Claim 5

a) Levkovitz does not teach or suggest that “the server is further configured to send information to the mobile communication device regarding the in-game placement location of the in-game video game content.”

207. Claim 5 recites that “the server is further configured to send information to the mobile communication device regarding the in-game placement location of the in-game video game content.” 056 Patent, claim 5. Petitioner and Dr. Zagal contend that Levkovitz discloses this limitation because Levkovitz describes sizing of content items. Petition at 51-52. But notably, the Petitioner fails to explain how this sizing is “in-game placement location” for the “in-game video game content,” and cannot do so.

208. Indeed, Levkovitz discloses sizing based on the screen of the device. Ex. 1008, [0033] (“content items may have multiple versions corresponding to a descriptive property of device 170, e.g., a full-size content item which may fill the entire screen of device 170, a half-screen size content item which may occupy approximately one half of the screen of device 170, a quarter-screen size content item which may include a square-shaped or rectangular content item which may occupy approximately one quarter of the screen of device 170, or the like.”). The

screen of the device does not relate to any “in-game placement location” as required by claim 5, nor does Dr. Zagal explain how it could. Instead, a POSITA would understand that this simply relates to the graphical user interface and perhaps the display ratio but not a specific location in the game.

209. Thus, Levkovitz fails to render claim 5 obvious.

3) Claim 7

b) Levkovitz does not teach or suggest that “the server is further configured to track the distribution of updated content.”

210. Claim 7 recites that “the server is further configured to track the distribution of updated content.” ’056 Patent, claim 7. Claim 7 is nearly identical to claim 7 of the ’958 Patent for this limitation. Levkovitz, thus, does not render claim 7 obvious for the same reasons I discussed above with respect to this limitation of claim 7 of the ’958 Patent.

4) Claim 8

a) Levkovitz does not teach or suggest that “the server is further configured to check for availability of bandwidth before sending the updated content to the mobile communication device.”

211. Petitioner and Dr. Zagal assert that Levkovitz’s “ad selector” checks for availability of bandwidth because the “ad selector 113 may process or parse the content request received from communicator 150 to obtain information about the device 170 from which the content request originated, and may correlate between

such device information and content items attributes accommodating such information.” Petition at 53 (quoting Ex. 1008, [0160]). I disagree.

212. Levkovitz describes a method for sending ads, but Levkovitz’s method is based on a different set of criteria that does not include bandwidth. More specifically, Levkovitz’s “[s]elector 172 may select ... one or more content items for presentation, e.g., content items matching one or more rules, conditions or criteria related to the content items or to properties associated with their presentation.” Ex. 1008, [0126]. Levkovitz, thus, discloses that its selector chooses advertisements based on criteria “related to the content items,” not any criteria related to the mobile device or network capabilities, like bandwidth.

213. Levkovitz also discloses “information about the functional capabilities of the device” but not that such information is used in a “check[ing]” step before the ad is sent. Indeed, Levkovitz does not disclose how any information about the capabilities of a device can be used to perform the “check[ing]” step of claim 8, nor how that information can be used to select any ad for presentation.

214. Instead, Levkovitz discloses that the system may “*receive* content request data, for example, information about device 170, information about the functional capabilities of device 170.” Levkovitz thus discloses that this information is “received” and not “checked.”

215. Even so, Levkovitz defines capabilities that are distinct from the “check[ing]” step of claim 8. Levkovitz provides that the system may receive information about “the functional capabilities of device 170, a handset identifier, device attributes (e.g., Operating System (OS), memory size, application type, etc.), the content request time, last connection time, desired request period (e.g., immediately, once within the next two hours, etc.), and other suitable parameters.” Ex. 1008, [0172]. Levkovitz specifically delineates a ground of device capabilities that include: “a data item representing an available memory of the wireless communication device, a data item representing an audio capability of the wireless communication device, a data item representing a video capability of the wireless communication device, a data item representing a screen size of the wireless communication device, a data item representing a content item type that the wireless communication device is able to present, and a data item representing a location of the wireless communication device.” Ex. 1008, [0010]. Bandwidth is not one of the criteria.

216. Moreover, even if Levkovitz receives information about the capabilities of a device (which do not include bandwidth), Levkovitz does not describe the “check[ing]” step of claim 8. At this “check[ing]” step, the ad (or “updated content”) has already been selected. A POSITA would understand that the “check[ing]” step is a compatibility determination to determine whether the ad (or “updated content”)

is capable of being sent. A POSITA would understand that this is distinct from a step of selecting an ad as described in Levkovitz. *See* Ex. 1008, [0160]. Thus, the combination of Levkovitz and Choi does not render obvious claim 8.

217. A POSITA would understand that Levkovitz does not receive or retrieve information about bandwidth availability and does not perform the “check[ing]” step. Thus, Levkovitz does not render claim 8 obvious.

5) Claim 9

a) Levkovitz does not teach or suggest “pre-selected in-game video game content” or that “the message is pre-selected by the server”

218. Claim 9 of the ’056 Patent recites “pre-selected in-game video game content for use in a video game” and “sending a message relating to the in-game video game content from the server to the mobile communication device in response to receiving the request, wherein the message is pre-selected by the server based on a model type associated with the mobile communication device, a service subscription associated with the mobile communication device, or a service provider for the service subscription associated with the mobile communication device” ’056 Patent, claim 9.

219. I understand that Petitioner contends that Levkovitz renders this limitation obvious for the same reason as with respect to the “pre-selected” limitations in claim 1. Petition at 54. I disagree with Petitioner’s contention for the

reasons discussed above with respect to the “pre-selected” limitations in claim 1. Levkovitz, thus, does not render claim 9 obvious for the same reasons I discussed above for claim 1 of the ’056 Patent.

220. However, and notably, Petitioner and Dr. Zagal fail to entirely address the first “pre-selected” limitation in claim 9, which requires “pre-selected in-game video game content for use in a video game.” Dr. Zagal never addresses “pre-selected in-game video game content” in the context of the ’056 Patent. Nonetheless, this limitation of claim 9 is nearly identical to the respective limitation claim 1 of the ’958 Patent. Levkovitz, thus, does not render claim 9 obvious for the same reasons I discussed above for claim 1 of the ’958 Patent.

b) Levkovitz does not teach or suggest in-game video game content for use in a video game. . . .”

221. Claim 9 of the ’056 Patent also requires that the “in-game video game content” is “for use in a video game” See ’056 Patent, claim 9. As with additional elements of claim 9, with respect to this limitation, Petitioner and Dr. Zagal simply fail to address this specific claim language and only refer back to claim 1 of the ’056 Patent which does not include this limitation. Dr. Zagal fails to address “for use” in his declaration regarding the ’056 Patent, in any ground or any claim element.

222. Even so, claim 9 is nearly identical to claim 1 of the ’958 Patent for this limitation. I understand that Petitioner contends that Levkovitz renders this limitation obvious for the same reason as with respect to claim 1 of the ’056 Patent.

Petition at 54. I disagree with Petitioner's contention for the reasons discussed above with respect to the "pre-selected" limitations in claim 1. Levkovitz, thus, does not render claim 9 obvious for the same reasons I discussed above with respect to this limitation of claim 1 of the '958 Patent.

223. Levkovitz does not render claim 9 obvious, and thus, for the same reasons, does not render claims 10-16 obvious. Claims 13 and 15-16 are also not obvious for additional reasons described below.

6) Claim 13

a) Levkovitz does not teach or suggest "sending information from the server to the mobile communication device regarding the in-game placement location of in-game video game content."

224. Claim 13 of the '056 Patent recites "sending information from the server to the mobile communication device regarding the in-game placement location of in-game video game content." '056 Patent, claim 13. Claim 13 nearly identical to claim 5, with respect to these limitations. I understand that Petitioner contends that Levkovitz renders this limitation obvious for the same reason as with respect to the "send[ing] information . . ." limitation of claim 5 of the '056 Patent. Petition at 54. I disagree with Petitioner's contention for the reasons discussed above with respect to the "send[ing] information . . ." limitation in claim 5. Levkovitz, thus, does not render claim 13 obvious for the same reasons I discussed above for claim 5.

7) Claim 15

b) Levkovitz does not teach or suggest that “tracking the distribution of updated content at the server.”

225. Claim 15 of the '056 Patent recites “tracking the distribution of updated content at the server.” '056 Patent, claim 15. Claim 15 nearly identical to claim 7, with respect to these limitations. I understand that Petitioner contends that Levkovitz renders this limitation obvious for the same reason as with respect to the “track[ing]” limitation of claim 7 of the '056 Patent. Petition at 54. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “track[ing]” limitation in claim 7. Levkovitz, thus, does not render claim 15 obvious for the same reasons I discussed above for claim 7.

8) Claim 16

a) Levkovitz does not teach or suggest that “the server checks for availability of bandwidth before sending the updated content to the mobile communication device.”

226. Claim 16 of the '056 Patent recites that “the server checks for availability of bandwidth before sending the updated content to the mobile communication device.” '056 Patent, claim 16. Claim 16 nearly identical to claim 8, with respect to these limitations. I understand that Petitioner contends that Levkovitz renders this limitation obvious for the same reason as with respect to the “availability of bandwidth” limitation of claim 8 of the '056 Patent. Petition at 54. I disagree with Petitioner’s contention for the reasons discussed above with respect to the

“availability of bandwidth” limitation in claim 8. Levkovitz, thus, does not render claim 16 obvious for the same reasons I discussed above for claim 8.

E. Levkovitz in view of Chu does not render claims 5 and 13 obvious.

1) Claims 5 and 13

a) Levkovitz does not teach or suggest that “send[ing] information to the mobile communication device regarding the in-game placement location of the in-game video game content.”

227. Claim 5 of the '056 Patent recites that “the server is further configured to send information to the mobile communication device regarding the in-game placement location of the in-game video game content.” '056 Patent, claim 5. Claim 5 of the '056 Patent is nearly identical to claim 3 of the '958 Patent, with respect to this limitation. Thus, for the same reasons I discussed above for claim 3 of the '958 Patent, Levkovitz in view of Chu does not render obvious claim 5 of the '056 Patent.

228. Claim 13 of the '056 Patent recites “sending information from the server to the mobile communication device regarding the in-game placement location of in-game video game content.” '056 Patent, claim 13. Claim 13 is nearly identical to claim 5. I understand that Petitioner contends that Levkovitz in view of Chu renders this limitation obvious for the same reason as with respect to the “send[ing] information . . .” limitation in claim 5. Petition at 56-57. I disagree with Petitioner’s contention for the reasons discussed above with respect to the “send[ing] information . . .” limitation in claim 5. Thus, it is my opinion that Levkovitz in view

of Chu does not render claim 13 obvious for the same reasons I discussed above for claim 5.

2) No Motivation to Modify or Combine with Chu

229. A POSITA would not have been motivated to combine Levkovitz and Chu for the same reasons as provided above with respect to the '958 Patent.

F. Levkovitz in view of Choi does not render claims 8 and 16 obvious.

1) Claims 8 and 16

a) Levkovitz does not teach or suggest “check[ing] for availability of bandwidth before sending the updated content to the mobile communication device.”

230. Petitioner and Dr. Zagal assert that Levkovitz in view of Choi renders claims 8 and 16 obvious. I disagree. For the reasons I explain above, Levkovitz alone does not render claims 1 and 9 obvious, and thus does not render claims 8 and 16 obvious. Petitioner and Dr. Zagal fail to establish that Choi cures any of the deficiencies in claims 1 and 9 and instead only focuses on Choi's discussions regarding bandwidth. In my opinion, this is not sufficient to cure the other deficiencies of claims 1 and 9 as I described above.

X. Petitioner's Technology Background and Secondary Considerations of Non-Obviousness

231. I have reviewed the Petitioner's "Technology Background" and disagree with many of the statements therein as provided below. Contrary to Petitioner's suggestion, in my opinion there was both (1) a long felt-need for the

claimed invention in the art, and (2) the prior art also taught away from the claimed inventions of the '958 Patent and '056 Patent.

232. The Petition states that “[a]lthough mobile game development posed some unique challenges, hardware manufacturers and software developers quickly adapted to meet these changes.” Petition at 6. I disagree. As explained above, and as the Petition acknowledges, developers were siloed, and mobile game development was not mainstream. The developers and service providers each operated and developed games in accordance with their own technology and platforms. Petition at 6 (discussion platforms specific to graphics and handset providers). The platforms were not unified nor universal, which hindered mobile game development. This led to short life cycles of games, as evidence cited by Petitioner recognizes. *See, e.g.*, Ex. 1018 at 52 (“A life cycle of a certain game will quite short, and will be replaced by more trendy games very promptly.”).

233. The Petition also states that “[g]ame developers embraced the idea of updateable games even before mobile games became popular.” '958 Petition at 6; '056 Petition at 7. I disagree. In my opinion the prior art also taught away from the claimed inventions of the '958 Patent and '056 Patent. As noted above, partial game updates were available on other video game platforms (console games or desktop computer games). But such updates were not available for mobile video games played on mobile devices at the time. As discussed in Section VII above, at this time

mobile broadband was not available and mobile devices had limited processing and data storage capacity. Thus, developers did not provide updates to these games once installed, except for full game updates requiring another download of the entire application. The evidence that Petitioner relies on does not indicate otherwise.

234. Petitioner cites to a book titled “MOBILE GAMING: A Framework for Evaluating the Industry 2000-2005” (Ex. 1018) for the contention that Nokia allowed members to download new levels for games. ’958 Petition at 6; ’056 Petition at 7. But Ex. 1018 does not support that proposition. Ex. 1018 shows that users still had to download the entire game application to get new games or versions of the game. Ex. 1018 at 52 (“Exclusive membership allows Nokia 3330 owners to download a totally new game 'Bumper' or new game packs for Space Impact and Snake II.”).

235. Petitioner also asserts that “a number of different advertising companies offered in-game advertising networks that allowed game developers to incorporate dynamic ads from third parties into their games, including mobile games.” ’958 Petition at 7; ’056 Petition at 7. As discussed above, this is incorrect. Ad servers were available for console and PC-based games, but were not available for mobile devices. This is confirmed by the very papers cited by Petitioner. Indeed, Ex. 1016, for example, states that “advertisers should experiment with in-game advertising to gain skills that could become vital in the *near future*.” Ex. 1016 at 2

(emphasis added). This confirms that in-game advertising (or other updates to video game content) were not available for mobile phone games at the time of invention of the '958 Patent and '056 Patent.

236. Likewise, Ex. 1017 is also forward looking and provides that “[i]n the *near future*, mobile in-game advertising *will become* increasingly attractive for providers of mobile phones.” Ex. 1017 at 1 (emphasis added). Again, this does not support Petitioner’s contention that in-game advertising was available at the time of invention.

237. This evidence, instead, shows that there was a need for providing updated content to video games on mobile devices, but it was not yet available. *See* Ex. 1015 at 1 (providing that “suggestive events for the future of online gaming took place in the [Australian] spring of 2007”); Ex. 1016 at 2 (suggesting that “advertisers should experiment with in-game advertising to gain skills that could become vital in the near future”); Ex. 1017 at 1 (“In the near future, mobile in-game advertising will become increasingly attractive for providers of mobile phones.”); Ex. 1018 at 50 (“The biggest change between the current game technologies and the future ones is that in the future it will be possible to offer also games with real-time interactivity.”); *id.* at 52 (“A life cycle of a certain game will quite short, and will be replaced by more trendy games very promptly.”).

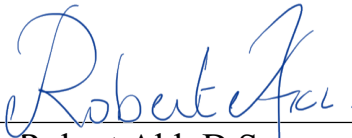
238. Thus, in my opinion there was both (1) a long felt-need for the claimed invention in the art, and (2) the prior art also taught away from the claimed inventions of the '958 Patent and '056 Patent.

XI. Conclusion

For the reasons I explain above, none of the claims of the '958 Patent or the '056 Patent are rendered obvious.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed on August 2, 2024 in Dallas, Texas.



Dr. Robert Akl, D.Sc.