

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY INTERACTIVE ENTERTAINMENT LLC
Petitioner,

v.

QUANTUM IMAGING LLC
Patent Owner.

Case No. IPR2023-00954
U.S. Patent No. 8,458,028

DECLARATION OF MR. DAVID CRANE

TABLE OF CONTENTS

I. INTRODUCTION	1
II. BACKGROUND AND QUALIFICATIONS	2
A. Publications	5
III. ASSIGNMENT AND MATERIALS CONSIDERED.....	8
IV. UNDERSTANDING OF THE LAW	9
V. LEVEL OF SKILL IN THE ART	13
VI. THE '028 PATENT'S EFFECTIVE FILING DATE	15
VII. THE '028 PATENT	15
A. Overview	15
B. Prosecution History of the '028 Patent	20
C. The '028 Patent's Claims	20
1. Claim 1:.....	20
2. Claim 3:.....	21
3. Claim 4:.....	21
4. Claim 5:.....	21
5. Claim 6:.....	22
6. Claim 7:.....	22
7. Claim 8:.....	23
8. Claim 9:.....	23
VIII. CLAIM CONSTRUCTION	23
IX. UNPATENTABILITY ANALYSIS.....	24
A. Background Information	24
1. Advertising served into network-connected systems	24
2. Advergaming.....	25
3. Using a Web Browser as a Game Application	28
B. Overview of the Primary Prior Art	29
1. U.S. Patent No. 5,933,811 to Angles et al. ("Angles")	29
2. U.S. Patent No. 7,168,051 to Robinson et al. ("Robinson")	35
C. Ground 1: Claims 1, 3-9 Are Obvious Over U.S. Patent No. 5,933,811 to	

Angles et al. (“Angles”) in View of the Knowledge of a POSITA	43
1. Claim-By-Claim Analysis.....	44
D. Ground 2: Claims 1, 3-9 Are Obvious Over U.S. Patent No. 7,168,051 to Robinson et al. (“Robinson”) in View of the Knowledge of a POSITA	68
1. Claim-By-Claim Analysis.....	70
E. Ground 3: Claim 6 Is Obvious Over Angles, Robinson, and Ginter in View of the Knowledge of a POSITA.....	90
F. Secondary Considerations of Non-Obviousness	93

I. INTRODUCTION

1. I have been retained by the firm of KXT Law, LLP, representing Sony Interactive Entertainment LLC (“Sony” or “Petitioner”) as an independent expert consultant in this proceeding before the Patent Trial and Appeal Board (“PTAB”) of United States Patent and Trademark Office (“PTO”). I am not an employee of Sony or any affiliate or subsidiary of Sony.

2. I have been asked to provide my opinions and analysis regarding the subject matter of the U.S. Patent No. 8,458,028 (the “’028 Patent”). I am being compensated at my ordinary and customary rate of \$500 per hour for my work, plus reimbursement for any reasonable expenses. My compensation is based solely on the amount of time that I devote to activity related to this case and is in no way contingent on the nature of my findings, the presentation of my findings in testimony, or the outcome of this or any other proceeding. I have no other financial interest in this proceeding.

3. This declaration is based on information currently available to me. I reserve the right to modify, amend and/or supplement my opinions in response to any additional information that becomes available to me, and/or in light of any relevant orders from the PTAB.

4. To the extent I am asked to testify in this proceeding, I may provide background on the issues at hand and reserve the right to use visual aids to illustrate my testimony.

II. BACKGROUND AND QUALIFICATIONS

5. My curriculum vitae (“CV”) is provided as (“Ex. 1005”) and provides an accurate identification of my background and experience.

6. I am a world-renowned video game designer and game industry pioneer. I received a Bachelor of Science in Electronic Engineering Technology in 1975 from DeVry Institute of Technology, Phoenix, Arizona. This degree course of study included grounding in all areas of electronic circuitry and computer programming.

7. I have an engineering, gaming, and programming background going back more than 40 years. I built my first computer—an unbeatable Tic-Tac-Toe computer—at the age of 14 and graduated high school able to program IBM mainframe computers in 3 languages.

8. I began my professional engineering career at National Semiconductor in 1975 developing integrated circuits and working with early analog-to-digital and digital-to-analog converters. I brought microprocessor automation techniques to the IC development and testing processes.

9. In 1977, I joined Nolan Bushnell’s Atari Inc., developing games for the Atari Video Computer System. In a period of one year, my games generated approximately \$15 million in sales revenues for the company. While at Atari, I developed a number of programming techniques incorporated in dozens, if not hundreds, of video games. I developed for publication several game products while at Atari, including an electronic Slot Machine game program in 1978.

10. In 1979, I co-founded Activision, Inc., the first third-party publisher of video game cartridges. Activision grew to over \$300 million in value in three years and is now the largest video game publisher in the world with a market capitalization of over \$60 billion.

11. During my tenure at Activision, I designed and programmed many hit games with unit sales over 500,000. One such example is the game Pitfall!™ which sold over 3,500,000 copies and held the #1 spot on the Billboard Charts for 64 consecutive weeks. Pitfall!™ generated over \$50 million in wholesale revenues and spawned numerous other products including many sequels, toys, and a Saturday morning cartoon.

12. Throughout my 40+ year career, I have focused on video game technology as it evolved, creating and publishing more than 80 commercial game products generating over \$400 million in revenues. I have designed and programmed games on virtually every video game system invented, from the early

days of Atari and Magnavox through to present-day systems such as the iPhone and iPad.

13. I have received many other awards for my work and career. Most notably, I received one of the Academy of Interactive Arts and Sciences lifetime honors: The Pioneer Award, celebrating my foundational and continuing work in the creation and development of the video game business. This singular honor, presented to me in 2010, was the inaugural award in a new category. I was the first to receive this award out of everyone who had ever worked in the video game industry throughout its entire history.

14. Additional awards include Game Designer of the Year (twice), the prestigious 2003 Game Developer Choice Award for contribution to the field, and the Lifetime Achievement Award in Video Games from Classic Gaming Expo. In addition to these personal honors, many of the individual games that I have developed have also received numerous awards.

15. I am a regular speaker and/or panelist at video game industry trade events such as the D.I.C.E. Summit (Design, Innovate, Communicate & Entertain), and GDC (Game Developers Conference). I have spoken at gatherings of game business executives (such as at the Pepperdine University Graziadio School of Business and Management), and I am featured annually at many consumer-focused game events. I have been profiled in national press publications including Forbes

Magazine and Newsweek, and I have been interviewed by such diverse publications as television’s 20/20 News Magazine and the G4 Television Network.

A. Publications

16. A partial list of the published game titles for which I am responsible for the game design and/or programming would include: Canyon Bomber, Outlaw, Slot Machine, Pitfall!, Pitfall II, Lost Caverns, Freeway, Laser Blast, Fishing Derby, Dragster, Grand Prix, A Boy and His Blob, The Rescue of Princess Blobette, Ghostbusters, Skateboardin’, Super Skateboardin’, The Activision Decathlon, T*O*Y*S, Transformers, the computer game, David Crane’s Amazing Tennis, Bart Simpson’s Escape from Camp Deadly, CHOMP, Arcade Bowling, Ten Pin Championship Bowling, Stellar Blast, Arcade Hoops, 3 Point Hoops, QB Pass Attack, Field Goal Frenzy, Lotto Letters, Super Swish, Stellar Blast, Mariner Hybrid Infomercial, Lacrosse, Beach Volleyball, Spiderman Climbing game, Miller Seat Salsa, Super Cocoa Man, Break the Rules Hoops, Downfield Strike, Mini Motocross, Robopup Run, Toyota 4runner Challenge, Tyco RC Speed Wrench, Vertical Jam, E.T.’s Adventure, Bubble Yum Home Run Derby, Bubble Yum Bullpen Blast, Gummi Savers Egg Hunt, Foul Shot Shootout, Life Savers Water Park Pinball, Field Goal Challenge, Crème Savers Bowling, Golf Solitaire, Skyworks Lanes Bowling, Carefree on Ice, Gummi Savers Rock-N-Skate, YIPES! Photo Safari, Ice Breakers Slap Shot Shootout, Southpark Pinball, Breath Savers

Road Rally, Ford NASCAR racing challenge, MTV Cranks Dirt Bike Game, Ice Breakers Ultimate Bobsled, Breath Savers Billiards, Snackwells Chocolate Factory Pinball, Snowboard Big Air, Skate Rage Inline Skating, Candystand Miniature Golf, Hole In One Golf, Lifesavers Word Challenge, Candystand Open Tennis, Mountain Climbing, 3 Point Shootout, Grand Slam Pinball, Nabisco World Team Racing, Soccer Shootout, LifeSavers Treasure Hunt, Oreo Adventure, LifeSavers Roll-A- ball, Air Crisps Slam Dunk, Fruit Chews BMX, and Postopia Bowling. A more complete list of these titles is included in my Curriculum Vitae, *see* Ex. 1005 at page 7.

17. In 1995, I co-founded Skyworks, Inc., a company dedicated to creating advertising-sponsored browser-based games served to, and played in, a consumer’s home computer. At its peak around the year 2000, Skyworks games were serving over 80 million game plays per month.

18. More than 50 of the games noted in my CV (those listed as “Online Games”) integrated advertising into the browser page serving the game, integrated advertising into the game itself, or both. More than a dozen of these games integrated advertising into the game-playing experience prior to the year 2002. Each of the Online Games that I developed communicated online between a game computer and a central game server either before, during, or after game play. These games include those where a server communicated with, and synchronized game

play between client computers, those in which the game was managed by the game server, and those in which the server was used to keep and track game statistics.

19. Many of the games I developed required expertise in 3D environments, such as Little Computer People™, Transformers®: Battle to Save the Earth, David Crane’s Amazing Tennis™, Spiderman®, Toyota® 4runner® Challenge, Boxer’s Road, Bubble Yum® Home Run Derby, Foul Shot Shootout, and Skyworks Lanes Bowling, to name a few. Other games I developed took said 3D environment expertise into the realm of true VR (virtual reality), including war-themed games such as Battletech: Gray Death Legions (rendering mechanical “mech warriors” in a virtual environment) and Warrior 2000 (rendering soldiers in futuristic military exoskeletons); an auto-themed terrain simulation for the BMW X3; and a sports-themed 3D golf game for The Weather Channel that was served simultaneously with the Masters golf tournament - complete with real-world matching terrain, hole placements, and weather. I was also a lead designer and programmer for “The Road,” a VR experience with open-road driving, sponsored buildings and billboards, and destination locations including a bowling alley and arcade (with 3D lobby for social interaction and player pairing). I have extensive experience with 3D environments and VR gaming.

20. As explained in my CV, I am also extensively familiar with a variety of different programming languages, including mainframe computer languages like

FOTRAN, COBOL, and BASIC, numerous microprocessor assembly languages, several microprocessor programming languages like C and JAVA, scripting languages like JavaScript and HTML, and engineering languages employed by modern mobile devices like SPICE and VHDL.

III. ASSIGNMENT AND MATERIALS CONSIDERED

21. I have been asked to provide analysis and explain the subject matter of the '028 Patent, including the state of the art when the '028 Patent application was filed. I have also been asked to consider, analyze, and explain certain prior art to the '028 Patent, including how that art relates to the challenged claims of the '028 Patent and to provide my opinions regarding whether that art renders unpatentable the claimed subject matter.

22. The opinions expressed in this declaration are not exhaustive of opinions I may offer in the future regarding the unpatentability of the claims of the '028 Patent. Therefore, the fact that I do not address a particular point should not be understood to indicate an agreement on my part that any claim complies with the requirements of any applicable patent or other rule.

23. I reserve the right to amend and supplement this declaration in light of additional evidence, arguments, or testimony presented during this IPR or related proceedings on the '028 Patent.

24. In forming the opinions set forth in this declaration, I have considered and relied upon my education, knowledge of the relevant field, knowledge of scientific and engineering principles, and my experience, as well as external materials cited in the body of this declaration. I have also reviewed and considered the '028 Patent (Ex. 1001), its prosecution history (Ex. 1003), and the following additional materials:

Exhibit	Description
Ex. 1007	U.S. Patent No. 5,933,811 to Angles et al. (“Angles”)
Ex. 1008	U.S. Patent No. 7,168,051 to Robinson et al. (“Robinson”)
Ex. 1009	U.S. Patent No. 5,949,876 to Ginter et al. (“Ginter”)

IV. UNDERSTANDING OF THE LAW

25. I am not an attorney but have been instructed in and applied the law as described in this section.

26. I understand that the first step in comparing an asserted claim to the prior art is for the claim to be properly construed. I address how a person of ordinary skill in the art (“POSITA”) would have understood the claims of the alleged invention of the '028 Patent in Section V below.

27. I have been further instructed and understand that a patent claim is unpatentable and invalid as obvious if the subject matter of the claim as a whole would have been obvious to a POSITA of the claimed subject matter as of the time of the invention at issue. I understand that when assessing the obviousness of claimed subject matter, the following factors are evaluated: (1) the scope and

content of the prior art; (2) the difference or differences between each claim of the patent and the prior art; and (3) the level of ordinary skill in the art at the time the patent was filed.

28. I understand that claimed subject matter may be obvious in view of prior art. I understand that the knowledge and understanding of a POSITA is relevant to an obviousness analysis. I understand, however, that it is not enough to show simply that all the limitations of the claimed subject matter are spread throughout the prior art. Instead, for claimed subject matter to be obvious over multiple references, including the knowledge of a POSITA, there must be some reason or motivation for a POSITA to combine the prior art references to arrive at the claimed subject matter. I understand that this motivation to combine need not be explicit in any of the prior art, but may be inferred from the knowledge of a POSITA at the time the patent was filed. I further understand that a single piece of prior art that discloses fewer than all of the elements of a patent claim may render a patent claim obvious if including the missing element would have been obvious to a POSITA (e.g., the missing element represents only an insubstantial difference over the prior art).

29. I understand that a patent claim is obvious if the differences between the subject matter claimed and the prior art are such that the subject matter as a whole would have been obvious during the relevant time period (e.g., at the time of

the alleged invention). I understand that the obviousness analysis must focus on the knowledge available to a POSITA during the relevant time period in order to avoid impermissible hindsight. I further understand that the obviousness inquiry assumes that the POSITA would have knowledge of all relevant references available during the relevant time period.

30. I have been informed and understand that, while not required, each prior art reference itself may provide a teaching, suggestion, motivation, or reason to combine, but other times the motivation linking the prior art references is common sense to a POSITA at the time of the invention.

31. I understand that a particular combination may be proven obvious by showing that it was obvious to try the combination. I have been informed that, if a technique has been used to improve one device, and a POSITA would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

32. I further understand that an obviousness analysis recognizes that market demand, rather than scientific literature, often drives innovation, and that a motivation to combine references also may be supplied by the direction of the marketplace. For example, when there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a POSITA has good reason to pursue the known options within his or her technical

grasp because the result is likely the product not of innovation but of ordinary skill and common sense.

33. I have been informed that the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. Thus, where all the elements of a claim are used in substantially the same manner, in devices in the same field of endeavor, the claim is likely obvious.

34. Additionally, I understand that a patent is likely to be invalid for obviousness if a POSITA can implement a predictable variation or if there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent’s claims. Therefore, when a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one.

35. I further understand that combining embodiments related to each other in a single prior art reference would not ordinarily require a leap of inventiveness.

36. I also understand that a POSITA must have had a reasonable expectation of success when combining references for claimed subject matter to be obvious.

37. I have been informed and I understand that factors referred to as “objective indicia of non-obviousness” or “secondary considerations” are also to

be considered when assessing obviousness when such evidence is available. I understand that these factors can include: (1) commercial success; (2) long-felt but unresolved needs; (3) copying of the invention by others in the field; (4) initial expressions of disbelief by experts in the field; (5) failure of others to solve the problem the claimed subject matter solved; and (6) unexpected results.

38. I also understand that evidence of objective indicia of non-obviousness must be commensurate in scope with the claimed subject matter. I further understand that there must be a relationship, sometimes referred to as a “nexus,” between any such secondary indicia and the claimed invention.

39. Finally, I have been informed that one cannot use hindsight to determine that an invention was obvious.

40. I provide my opinions in this declaration based on the guidelines set forth above.

V. LEVEL OF SKILL IN THE ART

41. I have been informed and understand that the level of ordinary skill in the relevant art, at the time of the invention is relevant to inquiries such as the meaning of claim terms, the meaning of disclosures found in the prior art, and the reasons a POSITA may have for understanding the claim terms.

42. I have been informed and understand that factors that may be considered in determining the level of ordinary skill include: (1) the education of

the inventor; (2) the type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) education level of active workers in the relevant field. I have been further informed and understand that a POSITA is also a person of ordinary creativity.

43. A POSITA in the technology field of the ‘028 Patent would, in my opinion, have had a bachelor degree in computer engineering, computer science, or a similar discipline, and/or two years of professional experience in the fields of networking and network-based systems or applications, such as client-server and web-based systems, in the specific context of console and gaming or an equivalent level of skill, knowledge, and experience. A POSITA would have at least a general knowledge of online and in-game advertising methods prevalent in the field, as well as at least a general knowledge of 3D rendering and virtual reality.

44. In view of my educational background (e.g., a Bachelor of Science in Electronic Engineering Technology obtained in 1975) and decades of computer programming experience—including experience with advertising-supported games as discussed in Section II above, I was a person of more than the ordinary level of skill in the art as of the application filing date of the ’028 Patent. In forming my opinion, I have drawn on my academic background and professional experiences.

My opinions herein, however, were formed taking into account the perspective of an ordinarily skilled artisan.

VI. THE ’028 PATENT’S EFFECTIVE FILING DATE

45. The filing date of the application that ultimately resulted in the ’028 Patent is listed on the face of the patent as Oct.16, 2002. I am informed that the ’028 Patent is not entitled to any priority prior to that date.

VII. THE ’028 PATENT

A. Overview

46. The ’028 Patent is entitled “System and Method for Integrating Business-related Content into an Electronic Game.” Per the Abstract, the patent discloses a “method of integrating business-related content into the execution of a game application” such that a “player of the game application is exposed to the business-related content.” (Ex. 1001, Abstract)

47. In the “Background” section, the ’028 Patent refers to shortfalls of “conventional methods of advertising” (*id.* 1:24), relating the invention to advertising as a form of business-related content. The term “business-related content” should be construed to have its plain and ordinary meaning, and in my opinion, a POSITA would recognize advertising to be a form of “business-related content.”

48. Said term “business-related content” is widely used in the ’028 Patent. The “Brief Summary of the Invention” of the ’028 Patent defines “branded

business-related content” as referring to “business-related content which uniquely identifies the goods and services of a particular company.”

“The electronic game, which may be executed on a local device or via a network connection to a remote server, exposes the player to branded business-related content. The term branded refers to business-related content which uniquely identifies the goods and services of a particular company.” (Ex. 1001, 1:37-42)

49. Thus, “business-related content” would refer to “content which identifies the goods and services of a company,” with “branded business-related content” more narrowly referring to content that *uniquely* identifies a *particular* company. In either case, this disclosure is consistent with advertising as a form of “business-related content.”

50. As shown in Fig. 1 of the '028 Patent , User 12 uses a Web Browser 16 on his client computer to connect to a Network 10 (i.e., the Internet). The user is able to download and execute a game application through the network. Also available over the network is Business-Related Content 40 and/or Business-Related Content (24, 30, 36...) from various sources through Customized Web Sites (22, 28, 34...) respectively.

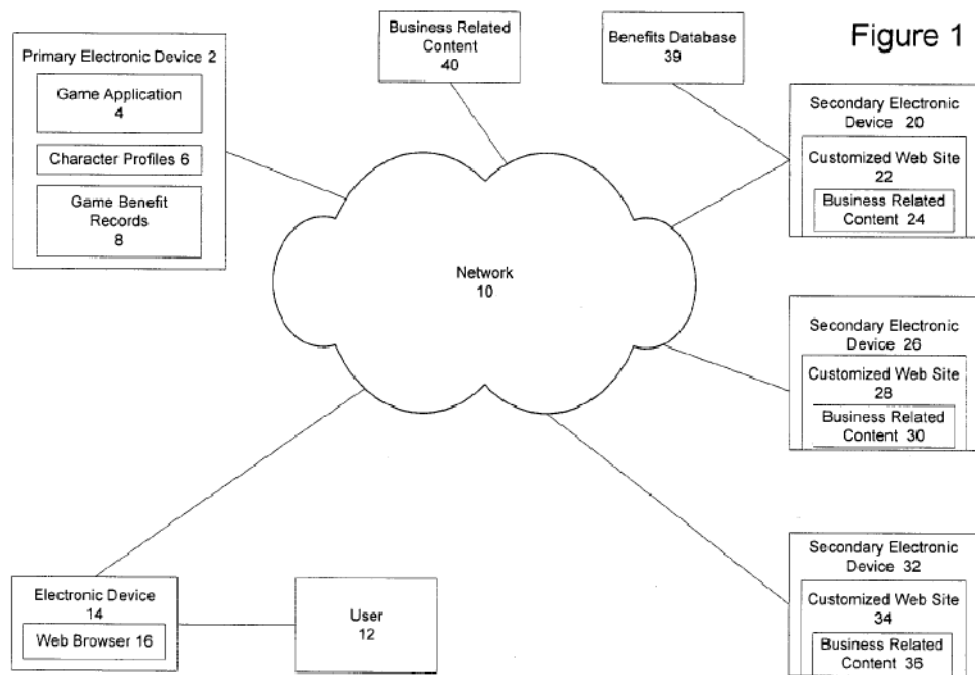


Fig. 1 of the '028 Patent

51. An alternate embodiment is shown in Fig. 2:

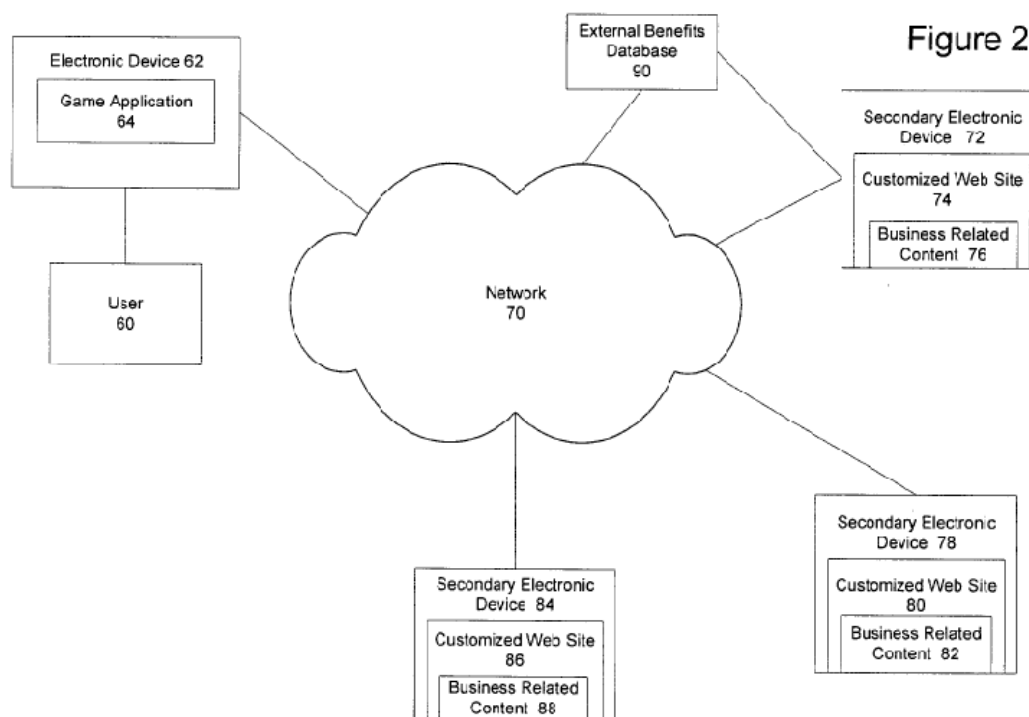


Fig. 2 of the '028 Patent

52. In the Brief Description of the Drawings section of the '028 Patent, the specification explains that “FIG. 2 depicts a block diagram of an alternate environment suitable for practicing the illustrative embodiment of the present invention where a local device holds the game application.” (Ex. 1001, 2:53-56). In this alternate embodiment, Game Application 64 resides on Electronic Device 62 associated with User 60, while business-related software is served through Network 70.

53. The '028 Patent also discloses a method of exiting a game application to view additional business-related content, and subsequently returning to a game application. This is captured in the flowchart of Fig. 5 of the '028 Patent:

Figure 5

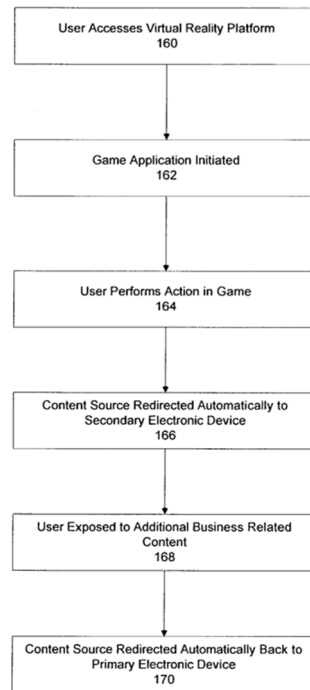


Fig. 5 of the '028 Patent

54. This functionality is described in the body of the specification of the Detailed Description section of the '028 Patent:

“User actions within the game cause the game application to automatically re-direct the user to a customized corporate web site containing selected information from a business sponsor. [...] Following the occurrence of a pre-determined event, the game application re-directs the player back to the original game site.” (Ex. 1001, 3:7-26).

55. Thus, in the '028 Patent, a user is directed to a corporate website through an action (such as clicking on an ad), and following the occurrence of a

pre-determined event (such as clicking a ‘back’ button) the user is returned to the original application.

B. Prosecution History of the ’028 Patent

56. As noted above, I have reviewed the ’028 Patent’s prosecution history.

57. I am informed, and I have confirmed, that during prosecution of the ’028 Patent, the concept of “automatically re-directing said user to one of said web pages of said secondary electronic device from said primary electronic device” was determined by the patent examiner, and confirmed by the Patent Board to be disclosed by prior art:

“Here, we agree with the Examiner that Czepluch discloses the automatic re-directing feature with respect to Figure 4” (Ex. 1003, p. 33).

58. *See* the attached Petition, section VI.B for more detail.

C. The ’028 Patent’s Claims

59. For reference, claim 1 and claims 3-9 of the ’028 Patent are reproduced below:

1. Claim 1:

[pre]: A method of integrating business-related content over a computerized network, into a primary electronic device that accesses a game application, from at least one secondary electronic device that accesses business-related content on a plurality of web pages, the method comprising:

- a. 1[a]: receiving a request at said primary electronic device to initiate a locally executed game application that is accessible at said primary electronic device, from a user interfaced with said network;
- b. 1[b]: initiating said game application at said primary electronic device;
- c. 1[c]: automatically integrating business-related content from at least one of said web pages of said secondary electronic device into said locally executed game application during execution of said game application;
- d. 1[d]: automatically re-directing said user to one of said web pages of said secondary electronic device from said primary electronic device, said re-direction being integrated into said game application and said re-direction occurring as part of the user executing said game application; and
- e. 1[e]: executing a user action on said business-related content from said secondary electronic device.

2. Claim 3:

The method of claim 1 wherein said game application displays branded business-related content to said user.

3. Claim 4:

The method of claim 3 wherein said branded business-related content is dynamically updated.

4. Claim 5:

[pre]: The method of claim 1, comprising the further steps of:

- a. 5[a]: executing game-related user actions in said game application as a result of user choices; and
- b. 5[b]: generating a player profile based on said user choices made during said game application;

c. 5[c]: wherein the player profile is specific to said user.

5. Claim 6:

The method of claim 5 wherein said player profile is disseminated to providers of business-related content used in said game application.

6. Claim 7:

[pre]: A method of automatically integrating content into an electronic device over a computerized network, comprising:

- a. 7[a]: receiving a request from a user at a primary electronic device to initiate at least one of a plurality of locally executed applications that are accessible to said primary electronic device interfaced with said network;
- b. 7[b]: initiating said at least one of said plurality of applications at said primary electronic device;
- c. 7[c]: providing at least one customized web page at a secondary electronic device, accessed over said computerized network by said primary electronic device, said web page being customized with content for use with said one of said plurality of applications;
- d. 7[d]: automatically integrating said content from said secondary electronic device into said at least one of said plurality of locally executed applications during execution of said at least one of said plurality of applications;
- e. 7[e]: automatically re-directing said user to one of said customized web pages at said secondary electronic device, from said primary electronic device, said re-direction being integrated into said one of said plurality of applications and said re-direction occurring as part of the user executing said one of said plurality of applications; and

- f. 7[f]: executing a user action on said content from said secondary electronic device, said user action generating a benefit for said user relating to said content.

7. Claim 8:

The method of claim 7, wherein said content includes dynamic content.

8. Claim 9:

[pre]: The method of claim 7, further comprising:

- a. 9[a]: providing a virtual reality platform interfaced with said primary electronic device, said virtual reality platform providing a three-dimensional visualization in which the user interacts.

VIII. CLAIM CONSTRUCTION

60. I am not a legal expert or an attorney and offer no opinions on the law.

I understand that claim construction is a matter of law. However, I have been informed by counsel of the legal standards that apply to claim construction in an *inter partes* review, and I have applied them in forming my opinions. I understand that during an *inter partes* review, the same claim construction standard used in federal district court is applied when addressing the meaning of claim terms.

61. I have been informed that the words of a claim are generally given the ordinary and customary meaning that the term or phrase would have to a POSITA at the time of the invention in view of the surrounding claim language in the specification and the file history (collectively, the “intrinsic evidence” or “intrinsic record”).

62. I also understand that courts may consider extrinsic evidence, such as expert and inventor testimony, dictionaries, and learned treatises (collectively, the “extrinsic evidence” or the “extrinsic record”), but that such extrinsic evidence should be given less weight than the intrinsic evidence.

IX. UNPATENTABILITY ANALYSIS

63. The following paragraphs provide some basic background and then proceed with an overview of the main prior art references that I discuss throughout this declaration.

A. Background Information

64. In my opinion, as of the '028 Patent's October 16, 2002 filing date, a POSITA would have been aware of various different types of software, programming languages, and applications related to the subject matter of the '028 Patent. Some of this background knowledge is discussed here.

1. Advertising served into network-connected systems

65. To the best of my knowledge, online advertising has been around since the beginning of the World Wide Web in about 1989. The top-level domain “.com” refers to a website address representing a “commercial” presence on the Web. A commercial presence on the Web primarily exists to perform business-related operations. A common business-related operation supported by the Web is the advertising of goods and services. As of the first few years of the 2000s, a

POSITA would have experienced more than a decade of online advertising served across the Internet.

66. Since at least the mid-1990s, online advertisements have taken many forms, such as for example, web banner ads served by companies created to automate the process of serving ads to web pages. As one example, the ad serving company, Doubleclick, was founded in 1995 and by 1996 was well known for serving advertisements to millions of online users.¹ One primary function of banner ads was the ability to redirect a user to the advertiser’s web site with a single click of the mouse. This allowed the advertiser to capture information about any consumer who showed interest in its product or services.

2. Advergaming

67. Based on my experience, an online game is a type of network-connected system. Advertising imbedded in games was well known in the 1990s through the prevalence of Advergaming. An Advergame is a video game that advertises a brand-name product by featuring it as part of the game. In some cases the game featured a main character that figured into a company’s marketing strategy, such as “Pepsiman,” a 1999 video game “for PlayStation to promote the Pepsi brand. Players get to take control of the Japanese drinks (sic) mascot,

¹ See the 1996 Doubleclick citation in the Angles specification under OTHER PUBLICATIONS, “Doubleclick Network Officially Exceeds 10 Million Users”.

Pepsiman as he races to the rescue,”² or the 1993 video game “Cool Spot” where the player controlled the 7Up mascot through an adventure game.³

68. In other cases an Advergame contained company logos as non-interactive product placements, such as the Ralston Purina Chuck Wagon featured on the game screen in the 1983 Atari 2600 game “Chase the Chuck Wagon.”⁴ Whether the game featured a branded on-screen character as the player’s avatar or not, there were numerous uses of branded items in each Advergame.

² <https://www.imdb.com/title/tt5987646/>

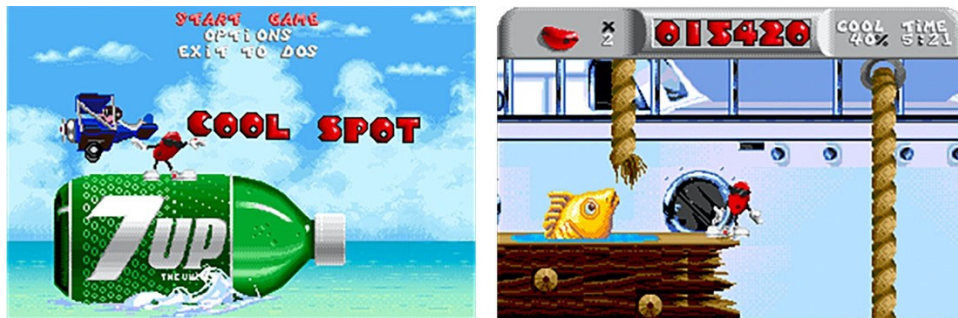
³ <https://www.mobygames.com/game/682/cool-spot/>

⁴ <https://www.mobygames.com/game/16472/chase-the-chuck-wagon/>



Pepsiman Game, Screen Grab

https://www.youtube.com/watch?v=0mhRqCfD_mY at 2:57



7Up Cool Spot Game

<https://www.mobygames.com/game/682/cool-spot/screenshots/dos/>



Chase the Chuck Wagon Game

<https://www.mobygames.com/game/16472/chase-the-chuck-wagon/screenshots/atari-2600/>

69. As of the priority date of the '028 Patent, a POSITA was well aware that branded business-related content proliferated online in at least the form of advertising; a POSITA was well aware of online advertising that redirected a user to an advertiser’s website through a user action such as a mouse click; and a POSITA was well aware of seeing advertising (i.e., branded business-related content) imbedded into video games.

3. Using a Web Browser as a Game Application

70. Gaming using a Web Browser program has been well known since the 1990s. A major leap in browser-based gaming came when Macromedia launched its “Shockwave” browser plug-in in 1995.

“Macromedia Shockwave Player (also known as Shockwave for Director and later Adobe Shockwave Player), was a freeware plug-in for viewing multimedia and video games in web pages, content created on the Macromedia Shockwave platform. Content was developed with Macromedia Director and published on the Internet. Such content could be viewed in a web browser on any computer with the Shockwave Player plug-in installed. It was first developed by Macromedia, and released in 1995 ...”⁵

71. Macromedia followed Shockwave with Flash, another browser plug-in designed to add multimedia and game-playing functionality to a standard Web

⁵ https://macromedia.fandom.com/wiki/Macromedia_Shockwave_Player

Browser program. By April 1, 2000, Shockwave and Flash had been successfully downloaded by over 200 million users around the world.⁶

72. Note that a Web Browser is a computer program that resides locally on a player’s personal computer. The Shockwave and/or Flash plug-ins were downloaded from Macromedia and automatically installed as part of the browser program functionality. Prior to the priority date of the ’028 Patent, the Shockwave plug-in was installed in the browser programs on millions of computers, turning each browser program into a game-playing program. The playing of browser-based games was well known in the art, and a POSITA would have recognized that a browser program that resides on a game player’s computer served as a locally executed game application.

B. Overview of the Primary Prior Art

73. The following paragraphs proceed with an overview of the main prior art references I discuss throughout this declaration.

1. U.S. Patent No. 5,933,811 to Angles et al. (“Angles”)

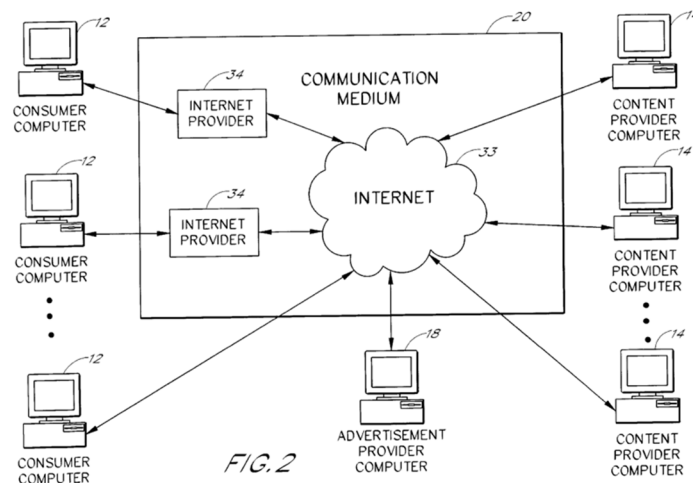
74. I am informed that Angles (Ex. 1007), filed August 20, 1996, qualifies as prior art under 35 U.S.C. § 102 against the ’028 Patent.

75. Angles teaches the serving of customized advertisements:

⁶ <https://www.awn.com/animationworld/shockwavecom-fun-and-games-high-flying-hub>

“The present invention relates to communication systems, and in particular, to an apparatus and method for delivering customized advertisements within interactive communications systems” (*Id.*, 1:9-11).

76. As shown in Fig. 2 of Angles, said customized advertisements are communicated through a communication network between a plurality of CONSUMER COMPUTERS (**primary electronic devices**) and a plurality of CONTENT and ADVERTISEMENT PROVIDER COMPUTERS (**secondary electronic devices**):



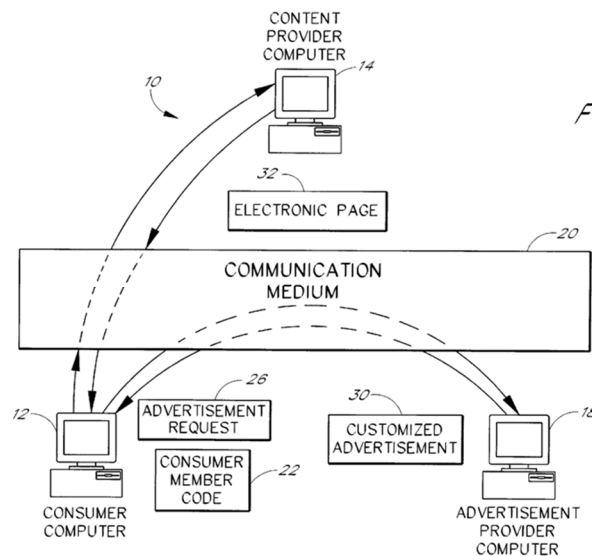
Angles Fig. 2

77. Angles discloses that said electronic devices are interfaced to COMMUNICATION MEDIUM 20, which is a computerized network such as the Internet:

“Focusing now on the communication medium 20 as shown in FIG. 2,

the presently preferred computer medium includes the Internet 33 which is a global network of computers.” (Ex. 1007, 9:4-7).

78. Angles Fig. 1 shows an interactive system that “includes a consumer computer 12, a content provider computer 14 and an advertisement provider computer 18 which communicate with each other by use of the communication medium 20.” (*id.*, 7:49-52):



Angles Fig. 1

79. As shown in Fig. 1 of Angles, customized advertisements can be served from an advertiser’s computer to a consumer’s computer. This occurs in a system whereby content, such as an electronic game, is served from a content provider computer. Fig. 1 of Angles shows communication between a CONSUMER COMPUTER 12 (**a primary electronic device**), and a CONTENT

PROVIDER COMPUTER 14 and an ADVERTISEMENT PROVIDER

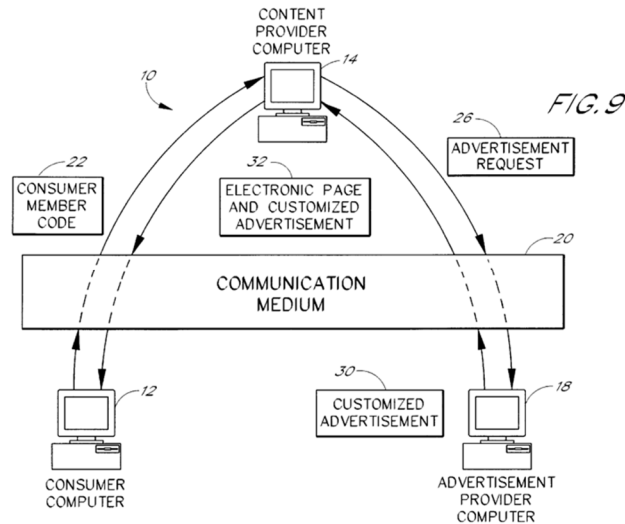
COMPUTER 18, both of which are **at least one secondary electronic device**.

80. In this, the preferred embodiment, Angles teaches that the consumer computer can be equipped with a Web Browser to allow the consumer to access the business-related content from said content and/or advertisement provider computers.

“In the preferred embodiment, the consumer computer 12 utilizes Several operational modules including a **consumer browser module** 40, a consumer member code 22 and an advertising storage medium 44. The consumer browser module 40 (hereinafter referred to as the consumer browser) is a **software program** which allows a consumer to access different content providers through the communication medium 20.” (Ex. 1007, 10:43-50. Emphasis added).⁷

81. Alternately, as shown in Fig. 9 of Angles, customized advertisements can be served from an advertiser’s computer through the content provider computer to a consumer’s computer:

⁷ All emphasis in this declaration is added by me unless otherwise noted.



Angles Fig. 9

82. Fig. 9 of Angles shows direct communication between a CONSUMER COMPUTER 12 (**a primary electronic device**), and a CONTENT PROVIDER COMPUTER 14, which is also coupled to an ADVERTISING PROVIDER COMPUTER 18, both of which are **at least one secondary electronic device**.

83. Both illustrated embodiments indicate the communication path for customized advertisements, which represent business-related content.

84. The customized advertisements taught by Angles can be integrated into online games, including those played on a locally executed game application (i.e., a Web Browser, aka “the consumer browser module”):

“The embodiment shown in FIG. 9 allows the customized advertisements 30 to be **incorporated directly into the content provider’s offerings**. Thus, in addition to integrating the customized

advertisements 30 in to an electronic page 32, the content provider computer 14 can integrate the customized advertisements 30 into **offerings such as on-line games**, video programming, internet radio, virtual reality environments and the like.” (Ex. 1007, 21:53-60. Emphasis added).

85. Angles teaches examples of imbedding (i.e., integrating or incorporating) advertising into games and three-dimensional worlds:

“For example, assuming the content provider computer 14 offers consumers **on-line games such as interactive car races**. In this example, the content provider computer 14 can **integrate the customized advertisements 30 into signs and billboards** which appear in the interactive game. In other embodiments, the content provider computer 14 can integrate the customized advertisements 30 into three dimensional worlds defined by the Virtual Reality Modeling Language (VRML 1.0).” (*Id.*, 21:61 - 22:2. Emphasis added).

86. Angles further teaches that said billboards can redirect a player to a business’ website for more information on the company’s goods or services based upon a user action:

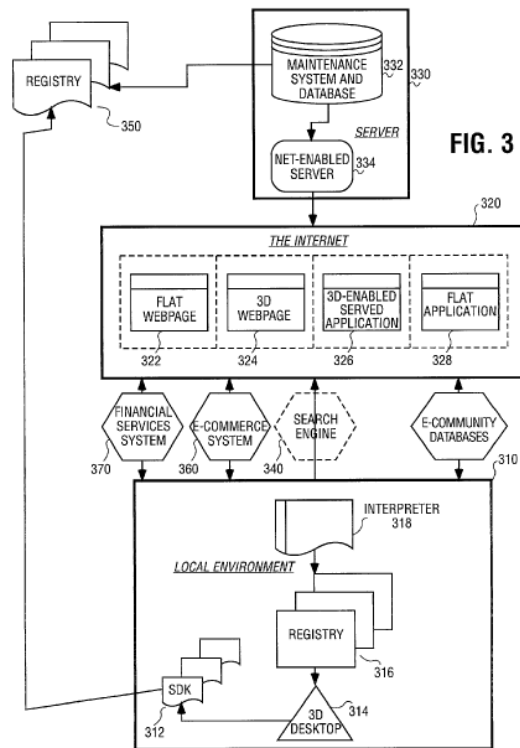
“The invention also supports custom **advertisements which can contain hyper-links to other information**. The hyper-links typically direct the user’s Internet browser to access different websites on the Internet. For example, if a consumer wishes to obtain additional information about an advertised product or service, the consumer may

simply use a mouse to **select an embedded hyper-link in the custom advertisement and be immediately transported to an advertiser’s website**. At the advertiser’s website, the user may receive a directed sales pitch, more information or a purchase order request form.” (*Id.*, 4:6-16. Emphasis added).

2. U.S. Patent No. 7,168,051 to Robinson et al. (“Robinson”)

87. I am informed that Robinson (Ex. 1008) qualifies as prior art under 35 U.S.C. § 102(a) and § 102(e)(1) against the ’028 Patent.

88. Robinson teaches a computerized network connecting a client computer to a plurality of networked services, including for example a financial services system, an e-commerce system, and other e-communities as shown in Fig. 3:



Robinson Fig. 3

89. As shown by the diagram of FIG. 3, Robinson teaches a “user object 310,” which represents a single user computer:

“The user object 310 contains everything that happens at a single computer, manned by a human who connects to the Internet.” (Ex. 1008, 7:7-9).

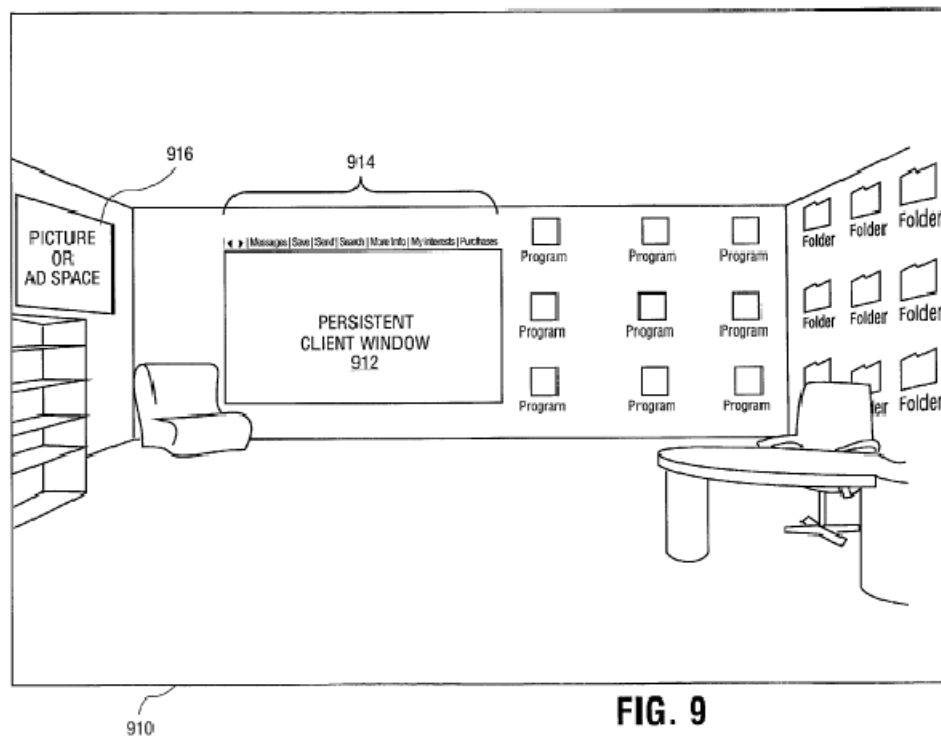
90. Also shown in Fig. 3 of Robinson, a single user computer is a “server object 330:”

“The server object 330 contains everything needed to serve up webpages and/or applications to the network-enabled 3D computing environment-enabled user.” (Ex. 1008, 7:10-13).

91. Also shown in Fig. 3 of Robinson is an “e-commerce system 360:”

“The present invention’s e-commerce system 360 takes advantage of key areas of a user’s 3D computing desktop environment that are reserved for placing messages and advertisements from commercial clients.” (Ex. 1008, 9:8-12).

92. The Robinson invention centers around a “3D visual interface for computing environments” as depicted in Fig. 9:



Robinson Fig. 9

“The present invention improves this desktop computing environment by creating a 3D visual interface for computing environments. With the interface of the present invention, a user turns his or her computer on and the monitor immediately displays the computer desktop as a

360°, 3-Dimensional room “inside’ of the monitor - a 3D computing environment.” (*Id.*, 5:16-23).

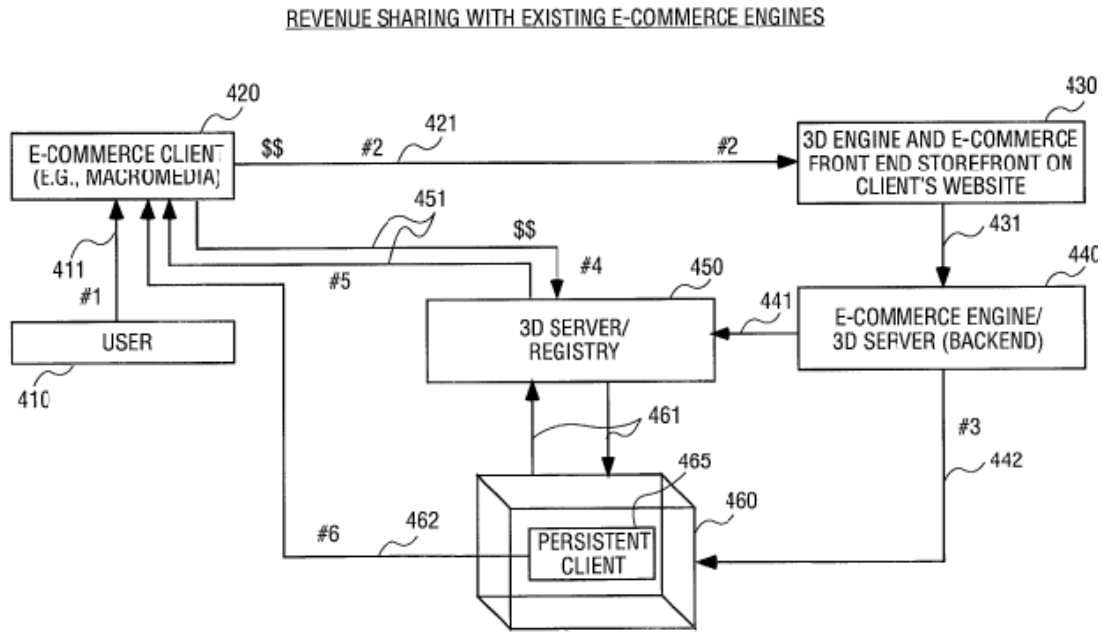
93. This 3D computing environment of Robinson can be customized:

“For example, the user may want to place the desktop icons on the left wall of his or her 3D computing room (the 3D desktop) and by merely moving the cursor or computer mouse the user can quickly navigate to those icons as easily as he or she can navigate around any physical room. There can be pictures on the walls of the 3D environment computing room displaying family members, advertisements, or other messages.” (Ex. 1008, 5:29-37).

94. Robinson teaches that the 3D computing environment can include “avatars” and “online games,” among other extensions:

“The network-enabled 3D computing environment of the present invention has several extensions, including: the introduction of **real-time avatars**. Avatars are virtual representations of users, allowing them to interact with other users across a network. The ability to create an interactive online community is very powerful. Such a utility would allow for intra- and inter-company meetings, the extension of the online communities which exist today, virtual concerts, **online games**, etc.” (*Id.*, 9:29-37. Emphasis added).

95. Robinson teaches the use of its 3D computing environment for “e-commerce,” depicted in Fig. 4:

**FIG. 4**

Robinson Fig. 4 which “illustrates the use of the present invention in an e-commerce setting” (Ex. 1008, 2:15-16).

96. In an e-commerce setting, Robinson teaches downloading a “Persistent Client kernel 465” to manage the serving of business-related content, as well as capturing information about the user:

“When user 410 installs the downloaded software on client machine 460, the persistent 3D kernel is automatically installed on the user’s desktop environment at client machine 460.” (*Id.*, 10:26-29).

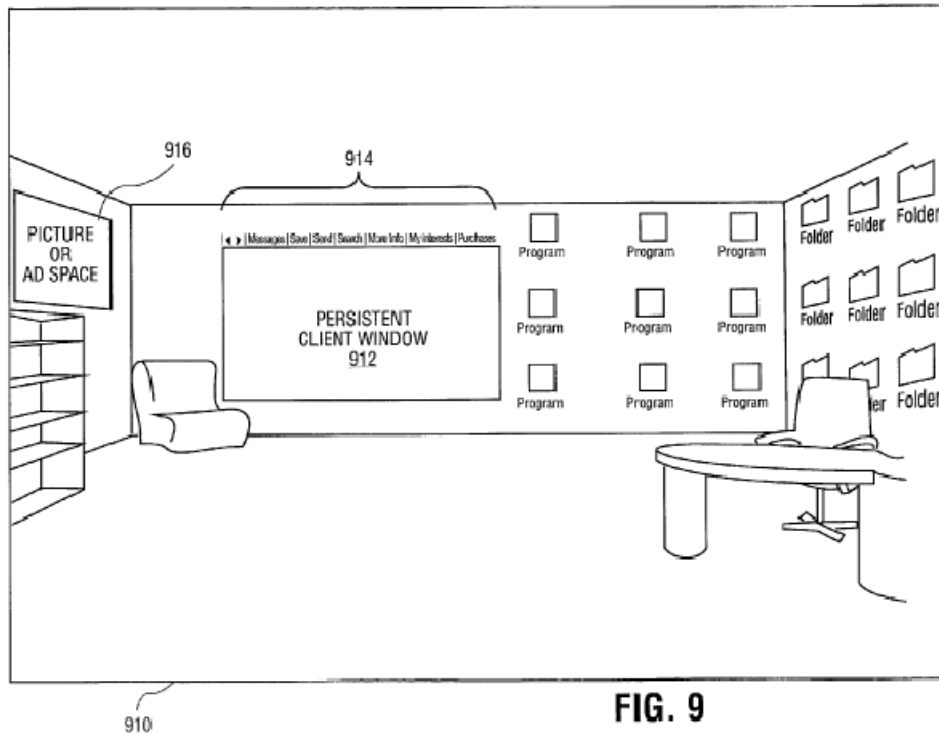
[The Persistent Client] “remains active in an unobtrusive two-dimensional persistent window on the user’s desktop for the delivery of advertisement or messages to the user’s desktop.” (*Id.*, 10:43-45).

97. The Persistent Client also serves to identify a particular user’s computer and to profile the user, generating and disseminating a profile of a user to a related e-commerce supplier:

“Following the downloading of the requested or purchased software with the appended 3D environment Persistent Client kernel 465, [...] the 3D environment server is now **aware of the identity and/or location of a client machine** 460 to which the persistent 3D kernel 465 has been downloaded.” (Ex. 1008, 10:29-36. Emphasis added).

“... the 3D server 450 may keep a registry of such downloads along with **corresponding user profiles, buying patterns, searches, etc.** This registry and associated user information can be made accessible to the e-commerce client 420 via interface 451 with 3D server 450. In this manner, **the e-commerce Supplier 420 can thereby obtain information about users** of the e-commerce site via 3D server and registry 450. Because the present invention through 3D **server 450 can provide e-commerce client 420 with a wealth of information about particular users**, the e-commerce client 420 **may generate targeted advertising** or product offerings for particular client machines 460. (*Id.*, 10:53-64. Emphasis added).

98. Robinson teaches various types of advertising through a clickable Persistent Client Window 912 shown in Fig. 9 (repeated here for reference):



Robinson Fig. 9

99. Robinson teaches the serving of interactive advertisements through a user-clickable window to link to an e-commerce website:

“The present invention includes functionality to place 2D or “3D/spatial” **advertisements, promotions, or messages** in the Persistent Client Window 912 that, when **clicked on by a user/viewer**, will activate full or partial-screen interactive **3D virtual reality environment advertisements** that can also be **equipped with e-commerce capabilities**, such as **links to product/service ordering websites.**” (Ex. 1008, 15:5-11. Emphasis added).

100. In addition, Robinson teaches opening a full-screen VR advertising environment:

“Further, the present invention can be used to embed a similar VR/spatial environment behind a static or dynamic two dimensional (2D) advertisement that is placed in the Persistent Client window 912. For example, a 3D or 2D advertisement may be positioned in the Persistent Client window 912. When this advertisement is selected by a user/viewer clicking on it, the advertisement enlarges into a partial or full-screen VR/spatial environment that the user can move through spatially and take advantage of the media-enriched features of the advertisement.” (Ex. 1008, 15:31-40).

101. Within the disclosed VR advertising environment, the user can select an avatar, meet up with other users as if in a video game, and meet and discuss the business-related advertisement:

“If the advertisement is a 3D VR environment, the user can click onto an avatar section of the advertisement and choose a virtual body (avatar) that will be the identification or representation of the user’s presence in the 3D advertisement VR environment. The user can then virtually walk around that advertisement, meet other virtual users who have entered into the collaborative VR advertisement in the same way from their own computer desktops. The virtual users can converse with each other about the content of the advertisement.” (*Id.*, 15:48-57).

C. Ground 1: Claims 1, 3-9 Are Obvious Over U.S. Patent No. 5,933,811 to Angles et al. (“Angles”) in View of the Knowledge of a POSITA

102. In my opinion, a POSITA would have considered Angles to be a prior art and highly relevant to the patentability of the '028 Patent's claims. The '028 Patent purports to provide for a “System and method for integrating business-related content into an electronic game” (Ex. 1001, Title). Angles is titled “System and method for delivering customized advertisements within interactive communication systems” (Ex. 1007, Title). As noted in section IX.A.1 above, advertisements delivered into interactive systems would have been understood by a POSITA as business-related content, given the purpose of such advertisements. Angles teaches that such customized advertisements can be integrated into “offerings such as on-line games” (*Id.*, 21:57-60). Angles teaches integrating business-related content into an electronic game, as well as teaching connecting and navigating to an advertiser's website mirroring fundamental elements of the alleged invention of the '028 Patent.

103. A POSITA would have been motivated to combine and collectively consider the teachings of Angles with his knowledge of the state of the art of advertising in video games (*see* Section IX.A: Background Information) to arrive at the subject matter claimed by the '028 Patent.

104. Additionally, the exemplary systems disclosed in both Angles and the ’028 Patent serve business-related content in a substantially similar manner, transmitting said content from a server computer over a network such as the Internet to a client computer. Not only would a POSITA have been motivated to combine and collectively consider the teachings of Angles with well-known industry knowledge to arrive at the subject matter claimed by the ’028 Patent, a POSITA would have had a reasonable expectation of success when doing so.

105. In my opinion, when viewed and considered in light of the knowledge possessed by a POSITA, Angles and said knowledge together disclose all the limitations of Claims 1, 3-9 of the ’028 Patent and render all such claims obvious.

1. Claim-By-Claim Analysis

a. Claim 1

- (i) **1[preamble]: A method of integrating business-related content over a computerized network, into a primary electronic device that accesses a game application, from at least one secondary electronic device that accesses business-related content on a plurality of web pages, the method comprising:**

106. To the extent the preamble of Claim 1 is limiting, Angles teaches this element. Angles teaches **integrating business-related content over a computerized network** in the form of customized advertising, which when clicked redirects the game player to a business website (*See* ¶86). Angles teaches a **primary electronic device that accesses a game application** in the form of a

consumer computer equipped with a Web Browser (*See* ¶82 and ¶85). The browser works in conjunction with a consumer control module, which is a software plug-in application, to merge customized advertisements into the content (on-line game).

Ex. 1007, 6:66-7:9 (“a plug-in works in concert with the Web browser or a Web server to provide additional features”), 21:53-22:8, 23:7-15. As such, Angles’ consumer computer running a browser in conjunction with the consumer control module plug-in application disclose or teach the “primary electronic device accesses a game application.”

107. Said business-related content can originate from an “advertiser’s website” (*see* ¶86) necessarily including a plurality of web pages, thus teaching the claimed **access[ing] business-related content on a plurality of web pages**.

108. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

(ii) **1[a]: receiving a request at said primary electronic device to initiate a locally executed game application that is accessible at said primary electronic device, from a user interfaced with said network;**

109. Angles teaches **operating a locally executed game application that is accessible at said primary device** in the form of a Web Browser (*See* ¶84). As noted in section IX.A.3, a POSITA would have recognized a Web Browser to be a locally executed gaming application, and that the claimed **locally executed game**

application would be, by definition **accessible at said primary electronic device**.

Angles’ user, while **interfaced with said network**, requests that the **primary electronic device initiate a locally executed game application** by pointing his browser (**locally executed game application**) to the content provider’s website:

“As discussed in more detail below, the consumer computer 12 uses **internet browsing software** (not shown) to access the content provider’s URL address. The **consumer browser software then accesses an electronic document** 32 stored on the content provider computer 14.” (Ex. 1007, 8:37-43).

The “browser...executes on the consumer computer” and that the consumer control module is “[l]ocated in the consumer computer” (Ex. 1007, 9:65-66, 23:7-15, FIGS. 4, 11), which a POSITA would understand to be “local” operation as opposed to “remote” that runs on a different computer. Angles describes that “the consumer invokes a browser which executes on the consumer computer 12.” EX1007, 9:65-10:18; FIGS. 1, 2, 4. A POSITA would understand that a user’s invocation of the browser will cause the consumer computer to receive a request to initiate the browser, which then works in conjunction with the consumer control module to support the user’s access or playing of on-line games.

110. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

(iii) 1[b]: initiating said game application at said primary electronic device;

111. Angles teaches this limitation. As an initial matter, the very act of opening a Web Browser (**game application**) to access a content provider would cause the initiation of said game application.

112. Moreover, Angles refers to the aforementioned “electronic document” as synonymous with “content” and “offering.” Angles teaches that an “offering” can be, among other things, an “online game” (*See* ¶84). A POSITA would have understood that upon downloading an online game offering into the locally executed browser software, said online game would be **initiated**.

113. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

(iv) 1[c]: automatically integrating business-related content from at least one of said web pages of said secondary electronic device into said locally executed game application during execution of said game application;

114. Angles teaches this limitation, first claiming an advertisement provider computer:

“An advertisement provider computer for customizing advertisements to be transferred via the internet.” (Ex. 1007, Claim 1).

115. Angles further discloses that said advertisement provider to be a “website,” which a POSITA would have understood to be made up of **business-related content from at least one of said web pages**:

“The advertisement provider computer according to claim 1, wherein said advertisement provider computer is associated with a **website** which is comprised of a plurality of computers.” (*Id.*, Claim 11. Emphasis added).

116. Said advertisement provider computer was one of the **secondary electronic devices** disclosed in Figs. 1 and 9 of Angles (*See* ¶¶79, 82).

117. Angles teaches serving/integrating said advertising (**business-related content**) into an online-game offering (**locally executed game application**) **during execution of said game application** by, for example, integrating customized advertisements into signs and billboards which appear in an interactive car racing game during its execution (*See* ¶85). Note that such integration of customized advertisements into the signs and billboards happens automatically without human initiation or intervention, since “the content provider computer 14 can integrate the customized advertisements 30 into signs and billboards which appear in the interactive game.” (Ex. 1007, 21:63-65)

118. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

- (v) **1[d]: automatically re-directing said user to one of said web pages of said secondary electronic device from said primary electronic device, said re-direction being integrated into said game application and said re-direction occurring as part of the user executing said game application; and**

119. A POSITA would understand that re-directing a user to a web page means displaying the web page to the user on a computer associated with the user, e.g., the consumer computer 12 associated with a consumer as shown in FIGs. 1 and 9 of Angles. It was well known in the art that in the context of viewing a web page or operating a Web Browser, “re-directing” simply meant to direct the user’s electronic device to display a different web page - basically re-directing the attention of the user, through the computer’s display, to a different page. As stated, this was well known, also referred to as “linking” such as when activating a “hyperlink.”

120. Angles teaches hyperlinking (**automatically re-directing said user**) from the user’s browser (**from said primary electronic device**) to an advertiser’s website (**said web pages of said secondary electronic device**) through interaction with a content provider’s offering (**said re-direction occurring as part of the user executing said game application**) (*See ¶86*).

121. Specifically, “the consumer may simply use a mouse to select an embedded hyper-link in the custom advertisement and be immediately transported

to an advertiser’s website.” (Ex. 1007, 4:11-14). An interaction (such as a mouse click) with a hyper-linked billboard encountered during game play would cause a player to be “immediately transported” (automatically redirected) to an advertiser’s website (a web page containing business-related content).

122. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

(vi) **1[e]: executing a user action on said business-related content from said secondary electronic device.**

123. Angles teaches that the advertiser webpage accessed by hyperlink from within the game application would itself be equipped with hyperlinks, offering additional information, as well as links to other content providers:

“In addition, in the preferred embodiment, the advertisements are HTML compatible, such that **an advertisement can contain hyper-links to other information.** These hyper-links can contain for example, the URL of another content provider computer 14 which contains more information about the advertised product, sales pitches, electronic catalogs, purchase order forms and the like.” (Ex, 1007, 15:43-49. Emphasis added).

124. Selecting a hyperlink constitutes **executing a user action.**

“For example, if after viewing a customized advertisement 30, a consumer wishes to obtain additional information about an advertised product or service, the consumer can simply **select the hyper-link** in

the custom advertisement 30 and be immediately transported to a **different** content provider computer 14 which contains more advertising information” (*Id.*, 15:49-55. Emphasis added).

125. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, every element of Claim 1 of the ’028 Patent.

b. Claim 3: The method of claim 1 wherein said game application displays branded business-related content to said user.

126. Angles disclosed, or at least rendered obvious to a POSITA, Claim 1 of the ’028 Patent from which Claim 3 depends. For that reason alone Angles disclosed, or at least rendered obvious to a POSITA, Claim 3 of the ’028 Patent.

127. Additionally, and as noted above, Angles disclosed displaying advertisements to a user. Advertisements are a form of branded content. Advertisements are also business-related content, intended to promote a company’s business. Thus, Angles disclosed **display[ing] branded business-related content to said user**.

128. Moreover, at the time of the filing of the ’028 Patent, a POSITA would have been familiar with in-game advertising that had been prevalent for more than a decade as seen in, for example, Advergames (*See* ¶¶67 - 68). Such in-game advertising was well known to include a company’s branded content such as logos, characters, and mascots. Said POSITA would have interpreted advertising integrated into a game as **branded** business-related content.

129. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 3 of the '028 Patent.

c. Claim 4: The method of claim 3 wherein said branded business-related content is dynamically updated.

130. Angles disclosed, or at least rendered obvious to a POSITA, Claim 3 of the '028 Patent from which Claim 4 depends. For that reason alone Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 4 of the '028 Patent.

131. Angles teaches the limitation of this claim. Angles teaches that when an advertisement (**branded business-related content**) is displayed to the user for a period of time, said advertisement is **dynamically updated**:

“if the consumer continues to view the electronic page 32, the advertising module 62 continues to **update the customized advertisements 30** that are seen on the consumer’s computer 12. For example, if a consumer views a particular electronic page 32 for **more than a minute**, the advertising module 52 can **send a new customized advertisement 30**” (Ex. 1007, 20:11-17. Emphasis added).

Angles discloses that the advertising module “continues to update the customized advertisements 30 that are seen on the consumer's computer” such that the advertising module “can send a new customized advertisement....” Ex. 1007, 20:11-17. Because the customized advertisement are not static, but rather continuously update, they are

“dynamically updated.”

132. Angles disclosed, or at least rendered obvious to a POSITA, Claim 3 of the '028 Patent from which Claim 4 depends. For that reason, combined with the citation in this section, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 4 of the '028 Patent.

d. Claim 5

(i) 5[preamble]: The method of claim 1, comprising the further steps of:

133. Angles disclosed, or at least rendered obvious to a POSITA, Claim 1 of the '028 Patent from which Claim 5 depends. For that reason alone Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 5 of the '028 Patent.

134. Regarding Claim 5 specifically, regardless of whether the preambles of the '028 Patent are deemed to be limiting, the preamble of Claim 5 contains no limitation.

(ii) 5[a]: executing game-related user actions in said game application as a result of user choices;

135. Angles teaches embedding branded business-related advertisements into consumer applications, including integrating customized advertisements into signs and billboards displayed during the play of on-line games such as interactive car races (*See* ¶85). As an initial matter, a POSITA would understand that

executing game-related user actions in said game application as a result of user choices is inherent in playing any game. For example, in a car racing game, the player is making user choices throughout the game: steering, accelerating, braking, passing to the left or right, choosing to take a pit stop, etc. Every user choice made during play determines what future game-related actions will be required in the game. And certain choices will expose a player to a different set of billboards. Angles describes the on-line games as “interactive,” (Ex. 1007, 21:53-22:8 (“on-line games such as interactive car races,” “interactive game”)), thus indicating that the “user” is initiating “actions” which are “executed” by the consumer computer during game play. Ex. 1007 (“browser which executes on the consumer computer”).

136. Moreover, Angles teaches that, if he wishes, a consumer can choose (a **user choice**) to enter demographic information that will be used to refine what advertisements may be served in his online game:

“A **consumer who wishes** to receive customized advertisements first **registers** with the advertisement provider by entering pertinent demographic information into the advertisement provider’s demographic database.” (Ex. 1007, 4:6-16. Emphasis added).

137. Based on said user choices, the advertiser will serve customized advertisements relating to the user’s demographic:

“The advertisement provider uses the consumer member code to identify the **consumer’s demographic profile and preferences**. The advertisement provider then **selects an appropriate advertisement based on the consumer’s profile** and sends the customized advertisement to the consumer computer. The consumer computer then **merges the content provider’s electronic document with the advertisement provided** by the advertisement provider to create a single displayed document to the consumer.” (Ex. 1007, 3:55-65. Emphasis added).

138. Thus, any game-related user actions in said game application relating to a particular advertisement will be made based on the specific advertisement resulting from said user choice.

139. Moreover, Angles teaches that billboards encountered in a game contain hyper-links (*see* ¶86), and that choices made by the user relating to said advertisements (additional claimed **user choices**) are monitored and tracked:

“The advertisement provider’s computer stores demographic information about consumers, and sends customized advertisements to the consumers based on the consumers demographic profile and **tracks consumer responses to the customized advertisements**. For example, when accessing a content provider’s website, a consumer with a demographic profile indicating an interest in farming would be sent customized advertisements for farm products by the advertisement provider. **Customer requests for more information about the advertised farm products are also monitored.**” (*Id.*, 3:7-17.

Emphasis added).

140. Viewing one advertisement vs. another, responding to an encountered advertisement, accessing a content provider’s website, and requesting more information are all based on **game-related user actions in said game application** as claimed.

141. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

(iii) **5[b]: generating a player profile based on said user choices made during said game application;**

142. Angles teaches generating at least two user profiles: a demographic/preference profile (*see* ¶136) and an interaction profile tracking which advertisements are viewed by a specific consumer:

“Another feature of the invention is directed to **monitoring the particular advertisements** which are **viewed by particular consumers**. With this information, advertisers can pay for advertising directed at specific demographic target groups. Additionally, advertisers may be billed by the advertisement provider based on actual delivery of the advertisements to pertinent consumers.” (Ex. 1007, 3:66 - 4:5. Emphasis added).

143. Note that Angles teaches that in the event that an advertiser serves “advertising directed at specific demographic groups” (*id.*), for each player in said

demographic group (who has also chosen to provide a demographic profile), the billboard advertisements that are *available* to be viewed by a player of the aforementioned online racing game are served based on the player’s choice to provide a demographic profile or progress within a game. Relatedly, a **player profile** detailing which advertisements were viewed or interacted with during play is **based on user choices made during said game application** as claimed. It would have been obvious to a POSITA that the generation of user profiles in Angles would be “based on said user choices made during said game application” in the case where the consumer or user in Angles is playing an on-line game, such as an interactive car race, and viewing customized advertisements integrated into signs and billboards appearing in the interactive game.” Ex. 1007, 21:53-22:8.

144. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

(iv) 5[c]: wherein the player profile is specific to said user.

145. Angles teaches this limitation. Angles discloses assigning a “unique member code” that uniquely identifies a consumer when the consumer’s profile is created:

“A consumer who wishes to receive customized advertisements first registers with the advertisement provider by entering pertinent demographic information into the advertisement provider’s

demographic database. The advertisement provider then retains a demographic profile of the consumer. In return, **the advertisement provider assigns the consumer a unique member code.**” (Ex. 1007, 3:18-24. Emphasis added).

146. Angles further teaches that said “unique member code” is used to access the claimed **player profile specific to said user:**

“The advertisement provider computer 18 obtains the consumer member code 22 and **uses the consumer’s member code 22 to access the consumer’s profile** in a demographic database (not shown). Based on the consumer’s profile, the advertisement provider computer 18 selects an appropriate customized advertisement 30.” (*Id.*, 8:10-15. Emphasis added)

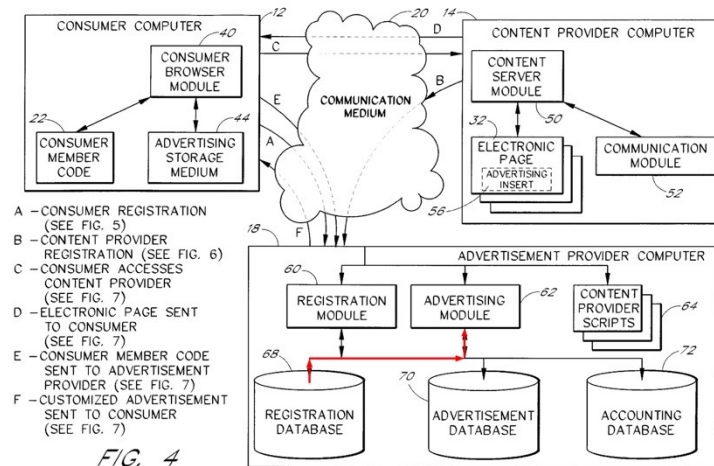
147. Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 1 of the ’028 Patent from which Claim 5 depends. For that reason, combined with the citations in this section, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 5 of the ’028 Patent.

e. Claim 6: The method of claim 5 wherein said player profile is disseminated to providers of business-related content used in said game application

148. Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 5 of the ’028 Patent from which Claim 6 depends.

For that reason alone Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 6 of the '028 Patent.

149. In addition, Angles teaches the dissemination (to providers of business-related content) of both the demographic/preference profile and the interaction profile discussed for element 5[b] above.



Angles Fig. 4
(Annotated with profile dissemination path)

150. The ADVERTISING MODULE 62 within Angles’ ADVERTISEMENT PROVIDER COMPUTER 18 serves as one of the claimed **providers of business-related content used in said game application**, serving advertisements, sending (i.e., acting as a **provider** of) a customized advertisement to the consumer computer:

“The advertising module 62 then **sends a customized advertisement** 30 directly to the **consumer computer** 12 to be incorporated into an electronic page 32 from the content provider computer 14.” (Ex. 1007,

15:28-31. Emphasis added)

151. In order for module 62 to provide advertisements customized to a particular user, said user’s demographic information must be sent (disseminated) from the REGISTRATION DATABASE 68 using the consumer member code 22. Using the unique user code, said user’s demographic information is obtained from the database and disseminated to the provider of business-related content.

“The **advertising module 62** uses the consumer member code 22 to **obtain a consumer profile** from the registration database 68. As discussed in more detail below, the advertising module 62 then uses the consumer profile to select an appropriate advertisement from the advertisement database 70.” (Ex. 1007, 15:20-25. Emphasis added)

152. Thus Angles teaches the claimed dissemination of a specific user’s demographic profile to a **provider[] of business-related content used in said game application.**

153. As noted in the analysis of element 5[b] above, Angles also teaches the generation of a player profile at least containing which advertisements are viewed by a specific consumer. Angles teaches that this profile information is disseminated to specific advertisers – the originators (and therefore also providers) of the business-related content used in said game application:

“Another feature of the invention is directed to monitoring the particular advertisements which are **viewed by particular**

consumers. With this information, advertisers can pay for advertising directed at specific demographic target groups.

Additionally, advertisers may be billed by the advertisement provider based on actual delivery of the advertisements to pertinent consumers.” (*Id.*, 3:66 – 4:5. Emphasis added).

154. Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 5 of the ’028 Patent from which Claim 6 depends. For that reason, combined with the citations in this section, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 6 of the ’028 Patent.

f. Claim 7

(i) 7[preamble]: A method of automatically integrating content into an electronic device over a computerized network, comprising:

155. To the extent the preamble of Claim 7 is limiting, Angles teaches this claim limitation (*See* my analysis of Claim 1[preamble]).

(ii) 7[a]: receiving a request from a user at a primary electronic device to initiate at least one of a plurality of locally executed applications that are accessible to said primary electronic device interfaced with said network;

156. Angles teaches this claim limitation with regard to browser-based gaming (*see* my analysis of Claim 1[a]). Angles further discloses that “a consumer directs one of the consumer computers to access an offering existing in one of the

content provider computers,” Ex. 1007, Abstract. (*See also id.*, 7:53-54) The “consumer computer 12” is the claimed **primary electronic device**. A POSITA would understand that when a user “directs” an action (such as accessing an online offering) at a computer, said direction would take the form of a request through, for example, a mouse or keyboard. Thus the “consumer computer 12” would have **received a request from the user** as claimed. Angles also teaches this claim limitation as applied to non-gaming applications:

“In other embodiments, the content provider computer 14 can integrate the customized advertisements 30 into three dimensional worlds defined by the Virtual Reality Modeling Language (VRML 1.0). [. . .] For instance, the content provider computer 14 may display a **three-dimensional mall, shopping center or city which displays customized advertisements 30 on virtual reality posters and billboards.**” (Ex. 1007, 21:65 - 22:8 Emphasis added).

- (iii) **7[b]: initiating said at least one of said plurality of applications at said primary electronic device;**

157. Angles teaches this claim limitation (*see* my analysis of Claim 1[b]).

- (iv) **7[c]: providing at least one customized web page at a secondary electronic device, accessed over said computerized network by said primary electronic device, said web page being customized with content for use with said one of said plurality of applications;**

158. Angles uses the terms “electronic page”, “electronic document”, “home page” and “HTML page” interchangeably, as well as “Web documents.”

“A website is defined by an Internet address which has an associated **electronic page**, often called a “**home page**.” Generally, a home page is an **electronic document** which organizes the presentation of text, graphical images, audio and video into a desired display.” (Ex. 1007, 1:37-42 Emphasis added) (*See also id.*, 7:30)

159. Upon reading the Angles specification, a POSITA would understand any of said interchangeable terms to be teaching the claimed web page being customized with content.

160. Angles teaches the serving of electronic documents containing customized advertisements, and providing at least one customized web page at a secondary electronic device, accessed over said computerized network by said primary electronic device (*see my analysis of Claim 1[c]*).

- (v) **7[d]: automatically integrating said content from said secondary electronic device into said at least one of said plurality of locally executed applications during execution of said at least one of said plurality of applications;**

161. Angles teaches this limitation, disclosing that an advertising provider computer generates a customized advertisement based on a consumer’s profile, the resulting electronic page to be displayed by the user’s locally executed Web Browser:

“Upon receiving the customized advertisement, the content provider incorporates the customized advertisement 30 into an **electronic page** 32. The content provider computer 14 then forwards the electronic page 32, combined with the customized advertisement 30 to the **consumer computer** 12. The consumer computer 12 then **displays the electronic page 32 and customized advertisement 30 to the consumer.**” (Ex. 1007, 21:38-44 Emphasis added).

162. See also my analysis of Claim 1[c].

- (vi) **7[e]: automatically re-directing said user to one of said customized web pages at said secondary electronic device, from said primary electronic device, said re-direction being integrated into said one of said plurality of applications and said re-direction occurring as part of the user executing said one of said plurality of applications;**

163. Angles teaches this claim limitation (*See* my analysis of Claim 1[d]).

- (vii) **7[f]: executing a user action on said content from said secondary electronic device, said user action generating a benefit for said user relating to said content.**

164. Angles teaches this limitation, disclosing a number of **benefit[s] for said user relating to said content**. For example, based on the **user action** of viewing an advertisement:

“The advertisement provider computer also **credits a consumer account**, a **content provider account** and an **internet provider account** each time a **consumer views** a custom advertisement.” (Ex. 1007, Abstract. Emphasis added)

“[T]he preferred embodiment can **pay a consumer for viewing advertisements** by crediting a consumer’s Internet provider account.” (*Id.*, 16:35-37. Emphasis added)

“In other embodiments, the advertising module 62 also **credits a consumer’s digital cash account each time the consumer views a customized advertisement** 30. The consumer can then **use the digital cash to purchase goods and services** offered for sale on the Internet 33.” (*Id.*, 21:25-29. Emphasis added)

165. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, all elements of Claim 7 of the ’028 Patent.

g. Claim 8: The method of claim 7, wherein said content includes dynamic content.

166. Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 7 of the '028 Patent from which Claim 8 depends. For that reason alone Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 8 of the '028 Patent.

167. In addition, Angles teaches serving dynamically changing branded business-related content (the claimed dynamic content) as seen in my analysis of Claim 4 above.

h. Claim 9

(i) 9[preamble]: The method of claim 7, further comprising:

168. Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 7 of the '028 Patent from which Claim 9 depends. For that reason alone Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 9 of the '028 Patent.

169. Regarding Claim 9 specifically, regardless of whether the preambles of the claims of the '028 Patent are deemed to be limiting, the preamble of Claim 9 contains no limitation.

- (ii) **9[a]: providing a virtual reality platform interfaced with said primary electronic device, said virtual reality platform providing a three-dimensional visualization in which the user interacts.**

170. Angles teaches this limitation, disclosing a number of three-dimensional virtual reality environments into which branded business-related content can be served:

“Thus, in addition to integrating the customized advertisements 30 in to an electronic page 32, the content provider computer 14 can integrate the customized advertisements 30 into offerings such as on-line games, video programming, internet radio, **virtual reality environments** and the like.” (Ex. 1007, 21:55-60 Emphasis added).

“In other embodiments, the content provider computer 14 can integrate the customized advertisements 30 into three dimensional worlds defined by the Virtual Reality Modeling Language (VRML 1.0). VRML 1.0 is a draft specification for the design and implementation of a platform independent language for virtual reality scene description. VRML 1.0 was released on May 26, 1995. For instance, the content provider computer 14 may display a **three-dimensional mall, shopping center or city which displays customized advertisements 30 on virtual reality posters and billboards.**” (Ex. 1007, 21:65 - 22:8 Emphasis added).

As such, Angles’ content provider computer interacting with the consumer computer, to deliver a virtual reality environment constitute a “virtual

reality platform interfaced with said primary electronic device.”

171. Thus, Angles disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claims 1, 3-9 of the '028 Patent.

D. Ground 2: Claims 1, 3-9 Are Obvious Over U.S. Patent No. 7,168,051 to Robinson et al. (“Robinson”) in View of the Knowledge of a POSITA

172. In my opinion, a POSITA would have considered Robinson to be a prior art that is highly relevant to the patentability of the '028 Patent's claims. The '028 Patent relates to “the integration of business-related content into a computer game.” (*See* Ex. 1001, ‘Field of Invention’). Robinson relates to business-related content in the form of e-commerce (*see* Ex. 1008, ‘Field of Invention’ relating to: “computer interfaces, networking, e-commerce, and configurable websites.” Electronic Commerce (aka “e-commerce”) was well known as of the filing of the '028 Patent as a method of conducting business over the Internet. Robinson also teaches a user interface configured to display advertisements (*id.*, 8-11) that can be integrated into “online communities which exist today, virtual concerts, online games, etc.” (Ex. 1008, 9:29-37). As noted in section IX.A.1 above, advertisements delivered into interactive systems would have been understood by a POSITA as business-related content, as would web content directed toward e-commerce, given that the purpose of e-commerce was the act of buying and selling goods and/or services. Robinson teaches integrating business-related content into

an electronic game, as well as teaching connecting and navigating to an advertiser’s website mirroring fundamental elements of the alleged invention of the ’028 Patent.

173. Robinson explicitly describes that its 3D computing environment can serve existing online communities such as online games (Ex. 1008, 9:29-37), and can support real-time avatars (*id.*) - an element in common use in online games. Even without such specific game-related disclosures, a POSITA would have been motivated to apply the teachings of Robinson to well-known, existing in-game advertising methods.

174. A POSITA would have been motivated to combine and collectively consider the teachings of Robinson with his understanding of the state of the art of advertising in video games (*see* Section IX.A: Background Information) to arrive at the subject matter claimed by the ’028 Patent.

175. Additionally, the exemplary systems disclosed in both Robinson and the ’028 Patent serve business-related content in a substantially similar manner, transmitting said content from a server computer over a network such as the Internet to a client computer. Not only would a POSITA have been motivated to combine and collectively consider the teachings of Robinson with well-known industry knowledge to arrive at the subject matter claimed by the ’028 Patent, the POSITA would have had a reasonable expectation of success when doing so.

176. In my opinion, when viewed and considered in light of the knowledge possessed by a POSITA, Robinson and said knowledge together disclose all the limitations of Claims 1, 3-9 of the ’028 Patent and render all such claims obvious.

1. Claim-By-Claim Analysis

a. Claim 1

- (i) 1[preamble]: A method of integrating business-related content over a computerized network, into a primary electronic device that accesses a game application, from at least one secondary electronic device that accesses business-related content on a plurality of web pages, the method comprising:**

177. To the extent the preamble of Claim 1 is limiting, Robinson teaches this limitation. Robinson discloses a client computer (**a primary electronic device**) (*see* ¶89) and a server of web pages containing business-related content (**at least one secondary electronic device**) (*See* ¶90). Robinson also teaches an e-commerce server (**at least one secondary electronic device that accesses business-related content**) (*See* ¶91).

178. Robinson also teaches that its 3D computing environment is configured to serve the online gaming community (**a game application**) and real-time avatars (*See* ¶94).

179. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

- (ii) **1[a]: receiving a request at said primary electronic device to initiate a locally executed game application that is accessible at said primary electronic device, from a user interfaced with said network;**

180. Robinson teaches this limitation, disclosing a user **request** to download software to be **locally executed** at his primary electronic device - said locally executed software being the 3D computing environment that can be configured to display real-time avatars and play online games (**locally executed game application**):

“Thus, 3D engine and e-commerce front end 430 processes the user 410 order and **downloads the requested or purchased software to the user’s client machine 460.**” (Ex. 1008, 10:22-29. Emphasis added.)

181. Software requested and downloaded into a user’s client machine is **accessible at said primary electronic device, from a user interfaced with said network** as claimed.

182. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

- (iii) **1[b]: initiating said game application at said primary electronic device;**

183. Robinson teaches this limitation, disclosing that once the 3D computing environment is downloaded and installed on the user’s **primary**

electronic device, the 3D computing environment is initiated to run a demonstration:

“**Upon automatic installation** of the 3D Persistent Client kernel 465, **the user is given a demonstration of the 3D environment software** and given the choice to activate a full three-dimensional computing environment on the user’s desktop at client machine 460.” (*Id.*, 10:36-41)

“Companies such as id software (the makers of Quake), Blizzard North (the makers of Diablo), and others have explored limited avatar use with startling results. [...] The network-enabled 3D computing environment allows for the creation of a cyberspace experience previously only available in science fiction.” (*Id.*, 9:40-50)

184. When using Robinson’s 3D environment for online gaming (*see* ¶84), or preparing to play Quake or Diablo, initiating the “demonstration of the 3D environment software” cited above teaches the claimed **initiating said game application**. Moreover, once the user chooses to activate the “choice to activate a full three-dimensional computing environment” cited above, Robinson teaches that the system is configured to initiate a cyberspace experience like that of Quake or Diablo previously only available in science fiction.

185. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

- (iv) **1[c]: automatically integrating business-related content from at least one of said web pages of said secondary electronic device into said locally executed game application during execution of said game application;**

186. Robinson teaches this limitation, disclosing that advertisements can be transferred from a server to a client machine/computer of the user.

“When the user logs onto an intranet or internet system, the present invention will go to a server that contains **advertisements or messages** that can be downloaded and buffered onto the user’s computer.” (Ex. 1008, 12:59-62. Emphasis added.)

187. Note that in using the term “server,” Robinson made it clear that a server disseminates content via the claimed **at least one of said web pages**, specifically disclosing that a server “contains everything needed to serve up webpages and/or applications to the network-enabled 3D computing environment-enabled user.” (*Id.*, 7:11-13). Note also that a POSITA would have understood an “advertisement” to meet the claimed limitation of **business-related content** (*See* ¶69).

188. Shown in Fig. 9, Robinson discloses the “Persistent Client Window 912” integrated into the whole of the “3D computing environment” (the **locally executed game application**) using a window within the desktop window (*See* ¶92). Any disclosure of an advertisement displayed in the Persistent Client Window teaches the claimed **automatically integrating business-related content**

... into said locally executed game application during execution of said game application. Robinson explicitly discloses just that:

“The computer will periodically display a different advertisement or message within the Persistent Client Window per a predefined cycling period for rotating the advertisements or messages that are being displayed.” (Ex. 1008, 12:62-66)

“In this way, when the user first turns the computer on, the computer will automatically display an advertisement or message in the Persistent Client Window and it will periodically display other advertisements or messages to the user as long as the Persistent Client Window can be displayed or while the enter desktop is being displayed.” (*Id.*, 13:5-11)

“Advertisements, messages, pictures, video and other information or data contained within the Persistent Client Window 912 ...” (*Id.*, 15:1-3).

189. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

- (v) **1[d]: automatically re-directing said user to one of said web pages of said secondary electronic device from said primary electronic device, said re-direction being integrated into said game application and said re-direction occurring as part of the user executing said game application; and**

190. Robinson teaches this limitation, disclosing numerous examples of **re-directing said user to other web pages through user action as part of the user executing said game application:**

“The present invention includes functionality to place 2D or “3D/spatial” advertisements, promotions, or messages in the Persistent Client Window 912 that, **when clicked on by a user/viewer**, will activate full or partial-screen interactive 3D virtual reality environment advertisements that can also be equipped with e-commerce capabilities, such as **links to product/service ordering websites.**” (Ex. 1008, 15:5-11. Emphasis added.)

“Further, the present invention can be used to embed a similar VR/spatial environment behind a **static or dynamic two dimensional (2D) advertisement** that is placed in the Persistent Client window 912. For example, a 3D or 2D advertisement may be positioned in the Persistent Client window 912. When this advertisement is selected by a **user/viewer clicking on it**, the advertisement enlarges into a partial or full-screen VR/spatial environment that the user can move through spatially and take advantage of the media-enriched features of the advertisement.” (*Id.*, 15:31-40. Emphasis added.)

“As shown in FIG. 9, a portion 916 of the persistent client desktop environment 910 is allocated for the positioning of 2D or 3D advertisements, pictures, promotions, or messages. In a configuration mode, a user can use conventional drag & drop user interface techniques to position a desired advertisement in region 916. Subsequently, a user/viewer can view the advertisement in region 916 and **select a portion of the advertisement** or a related link by clicking on a portion of region 916 using a conventional mouse. Upon selection of the region 916, an expanded view of the advertisement is presented. **Upon activation of a related link** provided within region 916, **the user is taken to a related website** where an e-commerce transaction corresponding to the advertisement may be initiated.” (*Id.*, 15:11-25. Emphasis added.)

191. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

(vi) **1[e]: executing a user action on said business-related content from said secondary electronic device.**

192. Robinson teaches this limitation, disclosing that the user may move an advertisement (the claimed **business-related content**) from the Persistent Client Window 912 to another region on the 3D desktop through a drag-and-drop **user action**:

“**Advertisements**, messages, pictures, video and other information or data contained within the Persistent Client Window 912 **can be**

moved to the desktop and vice versa through **conventional drag-and-drop procedures**” (Ex. 1008, 15:1-4)

193. Performing a drag-and-drop action on an advertisement would have been understood by a POSITA to meet the claimed **executing a user action on said business-related content from said secondary electronic device**.

194. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, every element of Claim 1 of the '028 Patent.

b. Claim 3: The method of claim 1 wherein said game application displays branded business-related content to said user.

195. Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 1 of the '028 Patent from which Claim 3 depends. For that reason alone Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 3 of the '028 Patent.

196. Additionally, and as noted above, Robinson disclosed displaying advertisements to a user. Advertisements are a form of branded content. Advertisements are also business-related content, intended to promote a company's business. Thus, Robinson disclosed **display[ing] branded business-related content to said user**.

197. Most advertisements are “branded” by, for example, including the advertiser's logo or mascot in the ad. In the event this fact is disputed, note that

Robinson teaches examples of advertising that contain branding through disclosed “Scenarios.” For example, in Scenario Three (Toy company):

“Of course, the toy company has its logo branding and advertisements within the doll house.” (Ex. 1008, 6:54-56)

198. Robinson also teaches using branding to reinforce the message of the advertiser:

“This approach enables one to capitalize on the use of recognizable characters (i.e. corporate mascots) to 1) enrich the user’s experience and 2) reinforce the message of the advertiser through further branding.” (*Id.*, 17:14-17)

199. Moreover, at the time of the filing of the ’028 Patent, a POSITA would have been familiar with in-game advertising that had been prevalent for more than a decade as seen in, for example, Advergames (*See* ¶¶67 - 68). Such in-game advertising was well known to include a company’s branded content such as logos, characters, and mascots. Said POSITA would have interpreted advertising integrated into a game as **branded** business-related content.

200. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 3 of the ’028 Patent.

c. Claim 4: The method of claim 3 wherein said branded business-related content is dynamically updated.

201. Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 3 of the '028 Patent from which Claim 4 depends. For that reason alone Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 4 of the '028 Patent.

202. Robinson teaches the limitation in Claim 4, disclosing the process of rotating or cycling the advertisement presented in the Persistent Client Window, teaching the claimed limitation whereby the **branded business-related content is dynamically updated**.

“The computer will periodically display a different advertisement or message within the Persistent Client Window per a predefined **cycling** period for **rotating** the **advertisements** or messages that are being displayed.” (Ex. 1008, 12:62-66. Emphasis added.)

“In this way, when the user first turns the computer on, the computer will **automatically display an advertisement** or message in the Persistent Client Window and it will **periodically display other advertisements** or messages to the user as long as the Persistent Client Window can be displayed or while the enter desktop is being displayed.” (*Id.*, 13:5-11. Emphasis added.)

203. Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 3 of the '028 Patent from which Claim 4 depends.

For that reason, combined with the citations in this section, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 4 of the '028 Patent.

d. Claim 5

(i) 5[preamble]: The method of claim 1, comprising the further steps of:

204. Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 1 of the '028 Patent from which Claim 5 depends. For that reason alone Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 5 of the '028 Patent.

205. Regarding Claim 5 specifically, regardless of whether the preambles of the claims of the '028 Patent are deemed to be limiting, the preamble of Claim 5 contains no limitation.

(ii) 5[a]: executing game-related user actions in said game application as a result of user choices;

206. Robinson teaches this limitation. A user can click on an “avatar section” of an advertisement and choose (a **user choice**) a virtual body avatar to represent the user (*See* ¶101). The user can then “virtually walk around that advertisement,” “meet other virtual users,” and “converse with each other.” (¶101). Virtually walking around with, meeting, and conversing with other users are **game-related user actions** - particularly with doing so within an online gaming community as disclosed by Robinson (*See* Ex. 1008, 9:34-37).

(iii) **5[b]: generating a player profile based on said user choices made during said game application;**

207. Robinson teaches this limitation, disclosing the use of data from user interactions (the claimed **user choices**) in the 3D environment, e.g., during a game application, for the purposes of user profiling (**generating a player profile**) and marketing:

“**User interactions** within the room can also be **tracked** including how long they visited the space, what they looked at and for how long. This data can then be used for **profiling user preferences** and in focused marketing.” (*Id.*, 6:38-42. Emphasis added)

208. This citation clearly shows that the 3D environment **generated** and continually updated the claimed **player profile** based on user choices, said choices including “how long they visited the space, what they looked at and for how long.” And a POSITA would have recognized that the 3D Environment taught by Robinson could be a **game application** as claimed (*See* IX.A.3; *See also* ¶84). Robinson further teaches that client profiles can be retained by the server:

“Again, as described above, this Persistent Client kernel 565 may be used to obtain **client information such as profiles**, buying patterns, searches, etc. which can be retained in the registry of 3D server 550.” (Ex. 1008, 11:55-58. Emphasis added.)

(iv) **5[c]: wherein the player profile is specific to said user.**

209. Robinson teaches this limitation, disclosing that said profile information is specific to both an individual’s client machine and specific to a particular user:

“This user information retained in the registry of 3D server 550 may be accessed and used by the e-community database provider 520 via interface 551. In this manner, e-community database provider 520 may employ targeted advertising, targeted information publications, links, or other information particularly relevant to **individual client machines 560.**” (Ex. 1008, 11:58-64. Emphasis added.)

“Referring to FIG. 8, in a next step, the 3D server/registry 550 **receives frequent profile information and metrics** from each Persistent Client 565 on a user’s desktop. This information can be used for focused searching and **targeted advertising specific for a particular user.**” (*Id.*, 12:48-52. Emphasis added.)

210. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 5 of the ’028 Patent.

e. **Claim 6: The method of claim 5 wherein said player profile is disseminated to providers of business-related content used in said game application.**

211. Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 5 of the ’028 Patent from which Claim 6 depends.

For that reason alone Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 6 of the ’028 Patent.

212. In addition, Robinson disclosed that an e-commerce provider may employ user profile information for the purpose of targeted marketing:

“In this manner, e-community database provider 520 may employ targeted advertising, targeted information publications, links, or other information particularly relevant to individual client machines 560.”
(Ex. 1008, 11:61-64. Emphasis added.)

213. For an e-community database provider to “employ” information for the purpose of targeted marketing, said profile information must necessarily be **disseminated to providers of business-related content** as claimed.

214. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 6 of the ’028 Patent.

f. Claim 7

(i) 7[preamble]: A method of automatically integrating content into an electronic device over a computerized network, comprising:

215. To the extent the preamble of Claim 7 is limiting, Robinson teaches this claim limitation (*See my analysis of Claim 1[preamble]*).

- (ii) **7[a]: receiving a request from a user at a primary electronic device to initiate at least one of a plurality of locally executed applications that are accessible to said primary electronic device interfaced with said network;**

216. Robinson teaches this element, disclosing a computerized network connecting a client computer (the claimed **primary electronic device**) to a plurality of networked services, including for example a financial services system, an e-commerce system, and other e-communities (*See* ¶88).

- (iii) **7[b]: initiating said at least one of said plurality of applications at said primary electronic device;**

217. Robinson teaches this limitation. *See* my analysis of Claim 1[b].

- (iv) **7[c]: providing at least one customized web page at a secondary electronic device, accessed over said computerized network by said primary electronic device, said web page being customized with content for use with said one of said plurality of applications;**

218. Robinson teaches this limitation, disclosing an e-commerce and advertising system configured to deliver “targeted advertising” (i.e., advertising **customized** to a particular user) from a web server (a **customized web page** from the claimed **secondary electronic device**) over the Internet (the claimed **computerized network**) (*See* ¶209).

219. Said customized web page contains content for use with Robinson’s disclosed locally-executed 3D computing environment (the claimed **one of a plurality of locally executed applications**).

220. Moreover, Robinson teaches drilling down into a collaborative, communal VR experience served by the advertiser that can be further customized for use by the user:

“For example, a 3D or 2D advertisement may be positioned in the Persistent Client window 912. When this advertisement is selected by a user/viewer clicking on it, the advertisement enlarges into a partial or full-screen VR/spatial environment that the user can move through spatially and take advantage of the media-enriched features of the advertisement.” (Ex. 1008, 15:34-40.)

“The user can then virtually walk around that advertisement, meet other virtual users who have entered into the collaborative VR advertisement in the same way from their own computer desktops.” (*Id.*, 15:52-55.)

“The present invention includes the ability for users to leave the “communal” nature of an interactive multi-user VR advertisement environment to **customize a ‘private’ or ‘user-customized’** version of the VR advertisement environment on their own desktop. For example, the advertisement sponsor may have objects, textures or colors in a toolbar or other section of the advertisement that the user

can **drag and drop to customize** that VR advertisement environment.” (Ex. 1008, 16:34-43. Emphasis added.)

“A user can also invite others to leave that “communal” environment and come into his/her own “individually-customized” version of the VR advertisement environment and that user can control who can enter that personal/individually-customized environment.” (*Id.*, 16:49-53.)

221. In order for multiple distributed users to simultaneously view a customized VR space, said customized space must necessarily reside on a server and be served to each user over a network.

222. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, this claim element.

(v) **7[d]: automatically integrating said content from said secondary electronic device into said at least one of said plurality of locally executed applications during execution of said at least one of said plurality of applications;**

223. Robinson teaches this limitation, disclosing that advertisements are at least integrated into the 3D computing environment within the “Persistent Client Window 912.” *See* also my analysis of Claim 1[c].

- (vi) **7[e]: automatically re-directing said user to one of said customized web pages at said secondary electronic device, from said primary electronic device, said re-direction being integrated into said one of said plurality of applications and said re-direction occurring as part of the user executing said one of said plurality of applications;**

224. Robinson teaches this claim limitation (*See* my analysis of Claim 1[d]).

- (vii) **7[f]: executing a user action on said content from said secondary electronic device, said user action generating a benefit for said user relating to said content.**

225. The specification of the ‘028 Patent informs the POSITA as to what is meant by “benefits” in this claim element. For example:

“Game actions undertaken by the user 12 while at the customized web sites or at the primary electronic device 2 may cause the generation of player benefits. Some of the benefits are real-life benefits external to the game which may be accessed by the player after the conclusion of the game or by pausing the game.” (Ex. 1001, 1:57-61.)

226. Robinson teaches this limitation, disclosing, for example, such benefits external to a game as the benefit of giving the user an easier way to purchase products whose advertisements appeal to said user by, for example, interacting with a toolbar (a claimed **user action to generat[e] a benefit for said user**):

“The Persistent Client Window 912 includes a **toolbar** 914 at the top, which lists features **that the user can use to interact with** or through the Persistent Client 565. Clicking on these items enable the features such as those that are described below:

...

PURCHASE: The **ability to initiate purchase** of whatever is being displayed in the Persistent Client Window 912.” (Ex. 1008, 14:21-67. Emphasis added.)

227. Moreover, in the VR advertising space, one can obtain valuable testimonial benefit through the user action of chatting with other consumers:

“A typical conversation between virtual users may proceed as follows. (“Have you tried this product that’s being advertised?” “Yes, I have ... it’s great. I bought it at ...” “What have you used it for?” “I’ve used it for doing . . . , but I was talking with another person in this advertisement and she was telling me that she uses it for . . . I think I’ll give that a try.” “Thanks for the advice. I think I’ll buy this product and give that a try too. By the way, does the manufacturer have other products like this?”)” (*Id.*, 15:62 - 16:4.)

228. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, all elements of Claim 7 of the ’028 Patent.

g. Claim 8: The method of claim 7, wherein said content includes dynamic content.

229. Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 7 of the ’028 Patent from which Claim 8 depends.

For that reason alone Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 8 of the '028 Patent.

230. In addition, Robinson teaches serving dynamically changing branded business-related content (the claimed **dynamic content**) as seen in my analysis of Claim 4 above.

h. Claim 9

(i) 9[preamble]: The method of claim 7, further comprising:

231. Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 7 of the '028 Patent from which Claim 9 depends. For that reason alone Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 9 of the '028 Patent.

232. Regarding Claim 9 specifically, regardless of whether the preambles of the claims of the '028 Patent are deemed to be limiting, the preamble of Claim 9 contains no limitation.

(ii) 9[a]: providing a virtual reality platform interfaced with said primary electronic device, said virtual reality platform providing a three-dimensional visualization in which the user interacts.

233. Robinson teaches this limitation, disclosing an interactive 3D virtual reality environment in the Persistent Client Window 912.

“The present invention includes functionality to place 2D or

“3D/spatial” advertisements, promotions, or messages in the Persistent Client Window 912 that, when clicked on by a user/viewer, will activate **full or partial-screen interactive 3D virtual reality environment** advertisements that can also be equipped with e-commerce capabilities, such as links to product/service ordering websites.” (Ex. 1008, 15:5-11. Emphasis added.)

234. Robinson teaches that a **user interacts** with said virtual reality environment, walking around it while meeting and conversing with other users:

“The user can then **virtually walk around that advertisement, meet other virtual users** who have entered into the collaborative VR advertisement in the same way from their own computer desktops. The virtual users can **converse with each other** about the content of the advertisement.” (*Id.*, 15:52-57. Emphasis added.)

235. Thus, Robinson disclosed, or at least rendered obvious in view of the knowledge of a POSITA, Claim 9 of the ’028 Patent.

E. Ground 3: Claim 6 Is Obvious Over Angles, Robinson, and Ginter in View of the Knowledge of a POSITA

236. I am informed that Ginter (Ex. 1009) qualifies as prior art against the ’028 Patent. Ginter relates to “systems and methods for secure transaction management and electronic rights protection.” Ex. 1009, Abstract. Ginter describes “[e]lectronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in

authorized ways, and maintain the integrity, availability, and/or confidentiality of the information.” *Id.* “Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information.” Among the information handled by Ginter’s systems and methods are “user profiles.” *Id.*, 36:10-43.

237. A POSITA would have found it obvious and been motivated to combine the teachings of Angles and Robinson to arrive at the claimed subject matter. Both references relate to systems and methods for providing advertising in virtual or on-line environments with which a user can interact. See e.g., Ex. 1007, Abstract (“delivering customized electronic advertisements in an interactive communication system”), 21:34-22:8 (“a three-dimensional mall, shopping center or city which displays customized advertisements 30 on virtual reality posters and billboards”), FIGS. 1, 2, 4, 9-11; Ex. 1008, Abstract, 5:29-6:58 (“There can be pictures on the walls of the 3D environment computing room displaying family members, advertisements, or other messages.”), FIGS. 1, 3-6, 9. A POSITA would have been motivated to modify Angles’ systems and methods to employ Robinson’s techniques, including Robinson’s feature of providing advertising content that is branded, because doing so would increase or enhance the recognition of goods or services offered, and potentially increase sales. Indeed,

Robinson itself teaches that “[c]ompanies may want to use a 3D environment as a tool their customers can download for product updates, sales and marketing, etc.”

Ex. 1008, 5:44-46. Robinson also discloses that “the present invention can provide advertisers a means to extend their “stickiness” and branding” (*id.*, 16:30-31) and the use of avatars in the 3D user interface environment “enables one to capitalize on the use of recognizable characters (i.e. corporate mascots) to 1) enrich the user's experience and 2) reinforce the message of the advertiser through further branding.” Ex. 1008, 17:14-17. Such modifications to Angles’ systems and methods in accordance with the teachings of Robinson would have been the mere application of known techniques to a piece of prior art ready for improvement.

238. Likewise, A POSITA would have found it obvious and been motivated to combine the teachings of Ginter with Angles and/or Robinson to arrive at the claimed subject matter. As already discussed above, Angles and Robinson relate to systems and methods for providing advertising in virtual or on-line environments with which a user can interact. *See e.g.*, Ex. 1007, Abstract, 21:34-22:8; Ex. 1008, Abstract, 5:29-6:58. Angles and Robinson described generating and maintaining user profiles, which can be used to direct targeted advertising to users. Ex. 1007, Abstract; Ex. 1008, 10:44-67. Ginter describes disseminating information, such as user profiles, in a secure manner. Ex. 1009, Abstract. A POSITA would have been motivated to modify Angle’s and/or

Robinson’s system to employ Ginter’s techniques, including the secure dissemination of user profiles, because doing so would allow the user profiles to be leveraged by more than just one advertiser for targeted advertising. Such a modification would have been the mere application of a known technique to a piece of prior art ready for improvement.

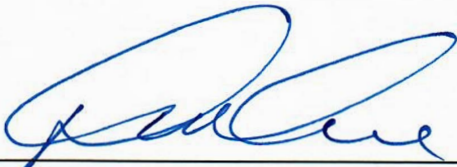
F. Secondary Considerations of Non-Obviousness

239. Based on my review of the ’028 Patent’s prosecution history, I note that no secondary considerations of non-obviousness were identified in connection with the claims of the ’028 Patent.

240. I am not separately aware of any evidence of commercial success, skepticism, failure of others, industry praise, unexpected results, or the like. Instead, as discussed above, it is my opinion that the subject matter embraced by the ’028 Patent’s claims was known in the art and would have been expected to function as any service configured to deliver clickable, online advertising (e.g., banner ads).

I declare that all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willfully 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.

Date: MAY 23, 2023



David Crane