JDM/005 CON7

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	Not Yet Assigned
Confirmation No.	:	Not Yet Assigned
Filed	:	Herewith
For	:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
Group Art Unit	:	Not Yet Assigned
Examiner	:	Not Yet Assigned

Mail Stop: Amendment
Hon. Commissioner for Patents
P.O. Box 1450 Pittsburgh, PA 15232
Alexandria, VA 22313-1450 August 20, 2007

PRELIMINARY AMENDMENT

Sir:

Before examination of the application, please amend the application as follows:

Amendments to the Specification are reflected on page 2.

Amendments to the Claims are reflected in the listing of claims, which begins on page 3 of this paper.

Remarks/Arguments begin on page 6 of this paper.

Amendments to the Specification:

Please replace paragraph 1, located on page 1 of the specification, with the following paragraph showing amendments.

--This application is a continuation of U.S. Patent Application No. 10/932,536, filed on September 1, 2004, which claims the benefit of U.S. Provisional Patent Application No. 60/499,810, filed on September 2, 2003 which is incorporated by reference herein in its entirety.—-

Please replace paragraph 2, located on page 1 of the specification, with the following paragraph showing amendments.

--[[This application]] U.S. Patent Application No. 10/932,536 also claims the benefit of U.S. Provisional Patent Application No. 60/603,481 [[--/---,---]] filed on [[August,]] August 20, 2004 titled "Wireless Devices With Flexible Monitors and Keyboards" (Docket No. JDM/007) which is hereby incorporated by reference herein in its entirety.--

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (cancelled).

19. (new) A location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device; and

a second character, wherein said second character is computer controlled.

20. (new) A location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device;

a second character, wherein said second character is computer controlled;

a virtual object, wherein said virtual object is operable of being picked up by said first character.

21. (new) A location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device;

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an impenetrable object, wherein said first character is stunned for a period of time when said first character contacts said impenetrable object.

22. (new) A location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein the lives of said first game character is reduced when said first game character contacts said impenetrable object.

23. (new) A location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device;

an impenetrable object, wherein a number of points is deducted when said first character contacts said impenetrable object.

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REMARKS

Summary of Applicant's Amendments

Applicant has cancelled claims 1-18 without prejudice. Applicant reserves the right to claim any subject matter lost in the cancellation of claims 1-18, or any subject matter included in the present application, in any number of continuation or divisional applications.

Applicant has added claims in order to more particularly point out and distinctly claim the subject matter that applicant regards as the invention.

Conclusion

Applicant respectfully submits that this application, including the pending claims, is in condition for allowance.

Reconsideration and prompt allowance of this application are respectfully requested.

Respectfully Submitted,

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Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey David Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Utility Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	75	75
Utility Search Fee	2111	1	250	250
Utility Examination Fee	2311	1	100	100
Pages:				
Claims:				
Independent claims in excess of 3	2201	2	100	200
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**625**

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First Named Inventor/Applicant Name:	Jeffrey David Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
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Receipt Date:	20-AUG-2007
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The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 and 1.17	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		JDM-005-USPTOScan.pdf	2789064 0be34b34625826ce110066732181028 8cbf1436b	yes	74

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Specification	1	52
	Claims	53	56
	Abstract	57	57
	Oath or Declaration filed	58	60
	Drawings	61	74

Warnings:

Information:

2	Application Data Sheet	JDM-005CON7-ADS.pdf	124027 4bfce3694b0cdb1c36c463a87670974a ccb74e99	no	5

Warnings:

Information:

This is not an USPTO supplied ADS fillable form

3		JDM-005CON7-Prelim.pdf	50128 e3c899b6d3f3c4b513ab9e94f6690be6 3e5298c4	yes	5

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Preliminary Amendment	1	1
	Specification	2	2
	Claims	3	4
	Applicant Arguments/Remarks Made in an Amendment	5	5

Warnings:

Information:

4	Fee Worksheet (PTO-06)	fee-info.pdf	8525 5f3529c731cb508902bbc51e1dc9e607 473e7c53	no	2

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Information:	
Total Files Size (in bytes):	2971744

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES

Cross-Reference to Related Application

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 60/499,810 filed on September 2, 2003 which is hereby incorporated by reference herein in its entirety.

[0002] This application claims the benefit of U.S. Provisional Patent Application No. --/---,--- filed on August, 20, 2004 titled "Wireless Devices With Flexible Monitors and Keyboards" (Docket No. JDM/007) which is hereby incorporated by reference herein in its entirety.

Background of the Invention

[0003] This invention relates to video games and video game systems.

[0004] Virtual reality games have been developed where a user places a helmet on his/her head and is immersed into an alternate reality via a display located in the helmet. This user is then allowed to move through an alternate reality by means of a joystick. The user is displayed the alternate reality

from a first person perspective. A user is limited in actual physical movement by means of a very small (e.g., 48 inches) enclosed virtual reality platform. Such traditional virtual reality systems are deficient because of the need for additional, unneeded manual actions to be made to move a joystick in order to move the user through the alternate reality. It is therefore desirable to provide a game system with improved user controls.

[0005] Traditional virtual reality systems are also unsafe because a user cannot visually see his/her physical environment. Guard rails are typically provided such that a user cannot stray from the virtual reality platform. Yet, a user may become distorted in the alternate reality and lose a sense of direction as to where such rails are located. Thus, a user may dangerously contact such guard rails or foreign objects introduced onto a virtual reality platform. It is therefore desirable to provide safer game systems.

[0006] Traditionally heavy computer hardware, multiple platforms, large interconnection wires, and numerous manual control devices are required to immerse more than one user in the same alternate reality. Such virtual reality systems typically cost in the tens of thousands, to hundreds of thousands, of dollars. It is therefore desirable provide an economical video game system with improved functionality. It is also desirable to provide software that can realize improved gaming systems in traditional devices such as wireless telephones.

[0007] Zingy.com offers wireless telephone ringers for sale and download. Zingy.com allows a user to enter in a wireless telephone number and a

corresponding wireless telephone model a website. The user, however, must set up a user profile through a user identification process that includes sending a text message containing a confirmation code to the wireless telephone number. A user must enter in this confirmation code on the website to confirm that the user is in possession of the wireless telephone. Desired ringers must be paid for, and downloaded, one at a time. After a particular ringer has been purchased, that user is sent, via a text message, a Wireless Access Protocol (WAP) address. Such an address must be manually extracted from the text message, or entered directly into a browser, in order to be directed to the location of the desired ringer. The user's wireless telephone will then ask the user if the material is OK to download. Only one ringer may be downloaded to a wireless device at a time. It is therefore desirable to provide improved data interchange capabilities for a wireless device.

[0008] Sprint offers a VISION PCS service in which the internet location of a Global Content Descriptor file (.GCD file) must be sent, via text messaging, to a Sprint VISION PCS wireless telephone in order to download a file (e.g., a ringer) from a website (e.g., Zingy.com). This .GCD file contains a variety of data fields that tell the wireless telephone, the size of the file, the title of the file, the creator of the file, the file type, and file's internet storage location. Traditional wireless telephones contain programs that use the information of the .GCD file. For example, if the size of the file, as described by the .GCD file, is too large then the wireless telephone will prompt the user that the file is too large to

download. Such systems are deficient because two files must be transferred in order to manually obtain a download of a single file. It is therefore desirable to provide a wireless telephone that does not need to download a .GCD file, or a similar file, in order to download content.

Summary of the Invention

[0009] The present invention provides an actual, reality-based video game in which a user's physical (actual) location on a playfield, reflects a virtual game character's virtual location in a video game environment. In this manner, an actual-reality (hereinafter "actuality") video game system may be provided. Generally, an actuality game is a location-based game where a user's location on a physical playfield corresponds to a video game character's location on a virtual video game playfield. Multiple types of other location-based games are also provided.

[0010] Multiple type of displays are provided that realize a variety of different types of location-based games. For example, a gaming system is provided in which a user's actual environment is completely visible to a user. In this manner, a game system that provides a visible physical playfield may be provided. A display (e.g., a monitor) may be provided to display the video game to a user. A location device may be included in the video game system such that the actual location of the video game system may be obtained and utilized, for example, to control the location of a virtual video game character on a virtual playfield. In this manner, the user is provided as choice wether

or not to view either the physical playing field or the game system display while operating the game.

[0011] As per another example, a game system is provided with a transparent display such that virtual indicial may be presented on portions of the display. Such virtual indicia may be configured to block, manipulate, or overlay a portion of a user's actual, physical environment. In this manner, a game system that provides a semi-visible physical playfield may be provided. Such displays may be, for example, flexible, transparent, and head-mounted display. Alternatively, such virtual indicia may be displayed directly on the retina through the use of light emitting elements. One advantage of a semi-visible environment game system is that the system allows a user to travel safely at fast speeds through a physical environment. The is because the user may be able to see all of, or part of, his/her physical environment.

[0012] In such a game system that provides a semi-visible environment, a user may go to a soccer field, mount a semi-visible environment gaming system display over his/her field-of-view, download a "goalie" video game, and practice blocking penalty kicks that are shown through the display. Expanding this example, as a virtual ball is virtually kicked on the head-set, the user may change locations to try and block the ball. In this manner, the gaming system may use the user's location to render the next frame of images display on the user's display. Thus, if a user moves one foot to the left towards the ball, the video game system may render the ball to be one foot closer to the user in the next frame.

[0013] Yet another game system is provided in which the video game display completely immerses a user into a virtual reality so that a user cannot see his/her physical environment. . In this manner, a game system that provides a non-visible physical playfield may be provided. Location information may be utilized, for example, to determine a virtual character's location (e.g., a particular first-person perspective) in the virtual realm.

[0014] At any time during gameplay, a user's location may be used as a reference by the video game or another user's video game. For example, a child in his/her backyard in the U.S. may play a game of virtual PACMAN with his/her father that is located in a park in Japan. At the beginning of such a multiplayer game, information about the starting location of each user may be utilized as a points of reference for the game. Accordingly, the game system may transmit the child's location with respect to the child's starting location to his/her father's game system. The father's game system may then utilize this information to determine where the child would be if the two user's were playing on the same physical playfield. Accordingly, the father and child may play the same actuality game together even though the father and the child are on opposite sides of the world.

[0015] A visor may be provided that includes a transparent display such that virtual objects can be overlayed/placed onto the user's actual, physical environment. If the game is a reincarnation of the classic game of PACMAN, maze walls may be provided to a transparent display. Thus, a user may see the actual environment that the user is running through (e.g., the

actual, physical playfield) and also see the maze walls that he/she has to follow (e.g., the virtual playfield).

[0016] Any device with a locating device and a display may be programmed to be at least a visible environment game system. For example, a wireless telephone with a Global Positioning System (GPS) system may be utilized as a visible environment game system that plays, for example, actuality games. As introduced above, one actuality game may be a reincarnation of the classic game of PACMAN. Such a game may include a multiplayer mode where multiple players may simultaneously play the game. Control of, for example, PACMAN may be provided by changing the location of the wireless telephone. A different player could use a different game system (e.g., a different wireless telephone) to control a ghost in the same game. Such a different user may be located on a remote playfield (e.g., in a park in Japan). Thus, a user may look down at a display screen, see his/her character, and run around his/her physical environment in order to similary run his/her virtual character through a virtual maze. Communication devices may be included in such multiplayer game systems such that individual gaming systems may communicate location information to each other or a remote storage device. Such a remote storage device (e.g., a remote database) may be periodically updated with each user's location information and periodically accessed by each user's device to obtain, for example, the other user's location. Accordingly, the ability of a wireless telephone to transmit/receive data may be utilized to realize multiplayer actuality games or other location-

based games. Alternatively, the devices may establish a direct communications link with each other.

[0017] Additional locating devices, or directional devices, may be placed on a user to obtain additional transparent controls (e.g., controls where a user does not have to perform an unnatural action). For example, a GPS device (or any type of locating device) may be placed on a user's hand. A hand-word locating device may be used to obtain the location of a user's hand in a three-dimensional field. Therefore, the height, latitude, and longitude of the user's hand may control the height and position of a virtual game character's hand (or other movement).

[0018] As per another example, a locating device may be provided on a head-mounted display that determines how the head-mounted display moves with respect to a reference point. In this manner, the video game may be provided with signals representative of the direction that the user's head is pointed towards. A directional electronic compass is also provided through the configuration of two location devices (e.g., two GPS devices). If, for example, one location device is placed in one location of a portable gaming system (e.g., the front of a visor) and a second location device placed in a second location of the portable gaming system (e.g., the back of a visor) then the direction the visor is pointing may be determined be determining the location of these two location devices.

[0019] Additional locating and/or directional devices may be provided on other actual objects (e.g., a sword, gun, baseball bat) such that the location of these objects may also be utilized to provide input to the location-based video game. For example, multiple

locating devices may be provided in a baseball bat such that a user may play an actuality game of baseball.

[0020] Simplistic examples of a location-based game system are provided (e.g., a dedicated non-communicating one-player game system). Such systems may be constructed and marketed for considerably less than conventional hardware (e.g., less than the cost of a wireless telephone).

[0021] Additional manual controls may be provided to increase the functionality of a game system of the present invention. Such manual controls may be, for example, buttons and/or joysticks.

[0022] A data interchange may also be provided. Users may upload content from a wireless telephone and allow different users (e.g., selected users) to download content to their different wireless devices (e.g., a wireless Personal Electronic Device). Interactive games are provided to wireless telephones by, for example, including a database that can store a player's progress in the game.

[0023] An automatic content update, or an automatic content download, may be provided to a wireless telephone user. Such an update may be the result of a paid subscription for such periodic updates. A wireless telephone is provided that includes the ability to have non-service provider automatic updates without the consent of the wireless telephone's user every time data is downloaded. A wireless telephone is also provided that is operable to download a file directly without a .GCD, or similar, file.

[0024] Conversion components are also provided that may provide a location-based game functionality to a non-located enabled device. For example, a peripheral

with a game, a locating device, and a wireless transmitter/receiver, may is provided that may interface with a particular non-location enabled device. Such a peripheral may be operable to interface with PCMCIA slots or USB ports. In this manner, a laptop user may purchase a conversion component so that the laptop is operable to play a particular location-based game or take on the attributed of a location-based gaming system.

[0025] A stationary game system is provided that interacts with an actual-location based video game system of the present invention. In this manner, a user of a stationary gaming system (e.g., a home Personal Computer) may play a game against the user of an actuality gaming system. Using PACMAN as an example, the stationary user may control a ghost with a joystick while the location-based user controls PACMAN with his/her physical location on a physical playfield. A handicap may be given to the stationary user such that the actual-location based user is provided with an advantage (e.g., the handicap's player may move slower).

Brief Description of the Drawings

[0026] The above and other features of the present invention, its nature and various advantages will be more apparent upon consideration of the following detailed description, taken in conjunction with the accompanying drawings, in which like reference characters refer to like parts throughout, and in which:

[0027] FIG. 1 is an illustration of one embodiment of a gaming system topology constructed in accordance with the principles of the present invention;

[0028] FIG. 2 is a flow chart for a variety of functionalities that may be included in a gaming system constructed in accordance with the principles of the present invention;

[0029] FIG. 3 is an illustration of a wireless telephone for use as a gaming system constructed in accordance with the principles of the present invention;

[0030] FIGS. 4-5 are illustrations of user interfaces, and accompanying functionality, constructed in accordance with principles of the present invention;

[0031] FIG. 6 is an illustration of one embodiment of a gaming system constructed in accordance with the principles of the present invention;

[0032] FIG. 7 is an illustration of one embodiment of a gaming system constructed in accordance with the principles of the present invention;

[0033] FIG. 8 is an illustration of a game system architecture constructed in accordance with the principles of the present invention;

[0034] FIG. 9 are illustrations of multiple game system configurations constructed in accordance with the principles of the present invention;

[0035] FIG. 10 is an illustration of a gaming system constructed in accordance with the principles of the present invention;

[0036] FIG. 11 are illustrations of gaming system peripherals constructed in accordance with the principles of the present invention;

[0037] FIG. 12 is an illustration of a gaming system network constructed in accordance with the principles of the present invention;

[0038] FIG. 13 is an illustration of a gaming system constructed in accordance with the principles of the present invention; and

[0039] FIG. 14 is an illustration of a flow chart of a multiplayer game that shares location information constructed in accordance with the principles of the present invention.

Detailed Description of the Drawings

[0040] U.S. Patent Application No. 10/400,296 filed on March 25, 2003 titled "Systems and Methods for Locating Wireless Telephones and Security Measures for the Same" (Docket No. JDM/002) is hereby incorporated by reference herein in its entirety.

[0041] U.S. Patent Application No. 10/797,801 filed on March 9, 2004 titled "Systems and Methods for Providing Remote Incoming Call Notification for Wireless Telephones" (Docket No. JDM/004) is hereby incorporated by reference herein in its entirety.

[0042] FIG. 1 shows gaming system 100 in which locating device 131 receives location signals from satellites 111-113. Persons skilled in the art will appreciate that satellites 111-113 may be transmitters placed around a physical playfield (e.g., may be placed around/suspend above the perimeter of a physical playfield). Wireless telephone 130 may house locating device 131 and may provide a location-based game on display 140.

[0043] To initiate a location-based game, a user may be prompted to set an origin for the game trough a

Graphical User Interface (GUI). Alternatively, an origin may be set automatically. Furthermore, a GUI may be provided that prompts a user on how much free physical space is needed on all sides of the origin for gameplay. Such a functionality may allow a user to locate a proper spot on an actual, physical playfield before gameplay begins or to allow a video game to establish a reference location. The dimensions of the physical playfield may be operable to be changed by a user. For example, a user may be provided with a number of physical playfield dimensions to choose from as shown in GUI 411.

[0044] In multiplayer embodiments, for example, a user may determine playfield dimensions and an opponent may be, for example, requested to confirm that user's selected dimensions (or display that user's selected dimensions). Alternatively, each user may select different dimensions for their local, physical playfield and control signals may be appropriately scaled as will be discussed below. Default dimensions for the physical playfield may be utilized by a video game and displayed to a user. Such dimensions may be changed during operation of the video game (e.g., a game may be PAUSED, taken to a different physical, playfield, and the physical playfield dimensions may be changed before the game is RESTARTED).

[0045] Persons skilled in the art will appreciate that location-based video games may be initially configured in a variety of ways by a user. For example, a user may be provided with a GUI that includes a number of choices as to the shape of an physical playfield (e.g., a circle, square, or rectangle). As per another example, GUI 412 may be

provided in which a user may go to a physical playfield boundary that the user desires and establish that location as a location boundary for a game. Dimensions information may be utilized by a video game system to determine how to scale location-based inputs. For example, if a user is playing an actualty game of PACMAN then a user movement in a 10 ft. x 10 ft. physical playfield may result in PACMAN moving faster than that same user movement in a 100 ft. x 100 ft. foot physical playfield. Accordingly, a video game system may scale location inputs such that a person playing on a 10 ft. x 10 ft. playfield may play in the same virtual playfield (although multiple displays may display the virtual playfield) as a user playing on a 100 ft. x 100 ft. playfield. A program may scale user inputs based on, for example, the dimensions (e.g., size) of both user's playfield or scale to a user defined or default playfield. Control signals may be transmitted to other game systems such that scaling is taken into account. For example, transmitted control signals may represent the direction and magnitude that a current player's location is away from that user's origin. Dimension information for a user's physical playfield may also be transmitted to other user's game system. Using any one of a number of scaling methods, a user's movement North of his/her physical playfield origin by 10% may cause an opponent to view, on the opponent's display, movement of the user's video game character to a location 10% North of the opponent's origin.

[0046] Persons skilled in the art will appreciate that a variety of locating devices may be utilized. For example, a Global Positioning System (GPS) may be

utilized. Alternatively, a Local Positioning System (hereafter "LPS") may be utilized. Additionally, the difference in two locations provided by a locating device (e.g., the magnitude and direction of a location to an origin) may be utilized to move a character in a video game playfield (or provide other control signals to the video game system). Similarly, devices that measure movement (e.g., an accelerometer) may be utilized as a locating device. Accordingly, acceleration information may be translated into location information and this location information may be utilized as a control signal (e.g., for changing the location of a video game character).

[0047] Person skilled in the art will also appreciate that any type of device may be configured into a gaming system of the present invention. In addition to wireless telephones (e.g., cellular or PCS wireless telephones), laptops, Personal Digital Assistants (e.g., PDAs), Blackberries, Personal Electronic Device (PED), iPODs, or any other portable electronic device may be utilized.

[0048] Multiple portable gaming systems may be operable to directly communicate with each other (e.g., Cellular, PCS, WiFi, radio, satellite, or infrared communications) in order to achieve a variety of functionality. For example, portable gaming systems may communicate location information directly with one another in order to increase the speed in transferring location information. Alternatively, one or more remote storage devices (e.g., a database or memory) may be provided that stores location information for one or more users. Portable gaming devices may routinely retrieve other user's location information from such a

remote storage device. Portable gaming devices may also routinely write location information for a particular user to such a remote storage device either periodically, continually, or as soon as a new location reading has been completed.

[0049] To decrease the weight of a portable gaming device, a base station (e.g., base station 170) may be provided that includes components that may otherwise be included in a portable gaming system. For example, a satellite communications device may weigh more than a WiFi device. In this manner, a WiFi transmitter/receiver may be included in the portable gaming device to relay the portable devices location information to the base station. The base station may then use, for example, the satellite communications transmitter/receiver to update location information on a remote storage device. Alternatively, the base station may include, for example, the remote storage device for one or more portable devices.

[0050] Base stations (e.g., base station 170) may also include a majority of the processing circuitry for a gaming system. For example, a portable gaming device may be provided with a display, a locating device, and a transmitter/receiver. This portable gaming device may periodically transmit location information to a base station. The base station may use this information as an input to a video game being played, render a new frame for the portable display, and forward this newly rendered frame (that takes into account the impact of the new location-based control signal) to the portable gaming device. Multiple portable devices may utilize one base station. Similarly, one portable device may utilize multiple

base stations. Base stations may also communicate information between each other.

[0051] FIG. 2 shows flow chart 200 that includes a variety of different functionalities that may be included in a location-based gaming system. Persons skilled in the art will appreciate that any number of steps may be added to, or removed from, flow chart 200. Generally, flow chart 200 may be utilized in a location-based game where the location of a user on a defined physical playfield, or that user's latitude/longitude information in the world, is utilized as a control signal to a location-based game. In one embodiment, such control signals may, for example, replace a tradition joystick such that a user's physical location is utilized as the main control device for a game (e.g., control a character's location in a video game's virtual playfield).

[0052] Step 201 occurs when a request for a location-based game is received. This may be simply a user turning ON a location-based gaming system (e.g., turning ON a dedicated PACMAN location-based system) or a user selecting a location-based game from a list of location-based games. If a list of games is provided such games may be stored locally (e.g., on the gaming system). Alternatively, the list may be stored remotely, or locally, and a selected game may be downloaded from a remote location (e.g., wirelessly from a remote database). A cost may be associated with such location-based games and a user may be required to agree to purchase the game or rent the game for a period of time. Such game downloads may be free of charge. A subscription (e.g., an yearly or monthly billed subscription) may be purchased by the user such

that all location based games are free to download while the subscription lasts (e.g., has not expired). Alternatively, an amount of time for gameplay may be purchased (e.g., 10 hours).

[0053] Step 201 may alternatively commence when a user starts a game on a location-based gaming system. Step 201 may also commence when a user agrees to join a game (e.g., a different user requests that the user plays a multiplayer location-based game).

[0054] Step 203 determines if the game needs an origin setting. Persons skilled in the art will appreciate that many embodiments of a location-based gaming system may operate without the need to set an origin. For example, the longitude and latitude of the location of a user in the world may be utilized as a control signal. For example, if the location-based game is a single-player game of PACMAN then the game may utilize multiple instances of the user's location to determine the change in location and translate this change in location into a control signal to move PACMAN through a virtual video-game playfield such as a maze. As per another example, an origin-functionality may not be utilized, although it may be utilized in some embodiments, in a location-based game where the actual location of a user in the world is a control signal. For example, one location based game may provide control signals depending upon the city that the user is located in (e.g., New York City may cause one control signal to be provided while Washing D.C. may provide a different control signal to be provided). If a game does utilize an origin setting then, for example, step 217 may occur.

[0055] As stated above the game may autonomously set an origin for the game. As such step 209 may be initiated from step 201. In this manner, step 203 may not be included in a gaming system. Generally, step 203 is included to emphasize the varieties of gaming systems that may be provided.

[0056] If a game, or gaming system, needs a manual origin setting then, for example, step 205 may occur. Step 205 may prompt a user to position the device at a desired origin. Step 207 may then wait for a user to submit the origin (e.g., for a user to select a physical location as the start of a game). Persons skilled in the art will appreciate that even if an origin is not utilized by a video game, or video game system, that a user may still be provided with a display screen that allows a user to find a clear area before gameplay. In this manner, a "when you find an open area, and are ready to begin gameplay, press OK" display screen may be provided for a game, or game system, that does not utilize an origin as a reference location. Persons skilled in the art will also appreciate that in some embodiments, a user may select a perimeter by, for example, going to locations on the perimeters (e.g., the corners of a rectangle) and recording these perimeter locations. The video game, or video game system may utilize such perimeter locations to derive an origin. An origin-based game may, or may not utilize, perimeter locations. Additionally, setting a perimeter may encompass a variety of embodiments. For example, a location reading outside of a perimeter may still be utilized as a control signal (e.g., to deduct a particular number of points from a user's score). Alternatively, only

location readings inside (and possibly even on) the perimeter may be utilized by a particular gaming system embodiment.

[0057] Step 207 may reiterated until a user selects a location as the origin for gameplay. Once a user selects a location for the origin of gameplay the device may record (e.g., in local memory or in remote memory such as a remote database) the location of the selected origin (e.g., by obtaining the location from a locating device) and use this location as a reference location during gameplay. Multiple features may be provided as the result of including, for example, one or more reference/origin values. As shown above, one such feature may be a multiplayer feature where the players may be located on different physical playfields.

[0058] Step 209 may be initiated, for example, after an origin is selected in step 207 or autonomously after step 203, or step 201, occurs. Step 209 may then take a reading of one or more locations for a user's locating device to determine a reference location (e.g., an origin). Step 209 may obtain location information for a period of time (e.g., 1 minute) and average the location information together to obtain a reference location. During this time a display screen may be displayed to the user along the lines of "stay perfectly still while we calibrate the game with your current location." Persons skilled in the art will appreciate that additional configuration steps may be provided. For example, a user may be asked to take a step forward and a step back, and shown the speed of the movement of a video game character based on that movement so the user may determine if the game-speed is

acceptable (and if not, change the perimeter of the game or the scaling of user movement to character movement). In this manner, step 209 may also begin tracking the user's location continually, or periodically.

[0059] At any time, a user may be prompted if a multiplayer game is desired. For example, a user may be prompted if a multiplayer game is desired in step 213. Step 211 may be included in flow chart 200 to located nearby players that can play the game. For example, a communications device may send out a signal to determine if any other similar, or compatible, devices are on the physical playfield (or a surrounding area). Alternatively, a player exchange may be provided in which the communications device sends a signal to the exchange noting that the user is desires to play a particular game in a multiplayer mode. If another player desires to play the game on the exchange then, for example, the two player's gaming systems may autonomously be configured with information about each others origin so that a multiple-player game may be initiated. Persons skilled in the art will appreciate that the origin of a users device does not need to be transmitted to the other users in a multiplayer game. Instead, control signals may be translated into control signals that a different user's device may utilize. For example, instead of transmitting an origin, a device may transmit a signal that represents a particular distance and direction (e.g., 5 feet North or 10% North of the physical playfield). Generally, such multiplayer control signals may assume that each user started at an origin and that each user's device recorded such an origin. As can be seen, multiple

methods may be utilized to SYNC the location-aspect of multiple location-based gaming devices.

[0060] Various other multiplayer configurations may also be provided. For example, a user may enter in the phone number of a wireless telephone and request if the user of that wireless telephone wants to play a multiplayer game wants to be played. Accordingly, the requested wireless telephone may be anywhere (e.g., halfway across the world) and still be requested to commence play on the same virtual, video-game playfield (e.g., by uploading data to a remote server or communicating directly with the wireless telephone). Step 215 may be utilized to initialize any communications link needed between the gaming devices (e.g., communications to a common remote memory device such as a database). Step 217 may be utilized to begin gameplay of a location-based video game.

[0061] FIG. 3 shows wireless telephone 300 constructed in accordance with the principles of the present invention. Wireless telephone 300 preferably includes speaker 330, antenna 310, display screen 320, control keys 360, alpha-numeric keys 350, and microphone 340. Wireless telephone 300 also preferably may include, for example, a communications transmitter (not shown), communications receiver (not shown), memory (not shown), positioning device such as a GPS or LPS (not shown), and a microprocessor (not shown). Control keys 360 may include any number of joystick, control buttons, or other user interfaces (e.g., speech recognition controls). Such control keys 360 may be utilized to provide, for example, additional control signals to a location-based game or gaming system (e.g., a control may be utilized as a FIRE or ACTION

button). Controls may also be included in wireless telephone 300 that are directed to location-based games and, in some instances, are used exclusively for location-based games. For example, ACTUALITY button 165 may be included on wireless telephone 300 that, when pressed, provides a location-based game, a list of location-based game, or a location-based game service. The use of ACTUALITY button 165 may alternatively, automatically log a user into a location-based game network that may provide not only location based games but additional information such as, for example how many users are requesting opponents for a particular game.

[0062] Persons skilled in the art will appreciate that a gaming device dedicated to a single game (e.g., FROGGER) may be easily incorporated into a device the size of, for example, a traditional Tamagochi device. Such dedicated devices may be sold relatively cheaply (e.g., $40). A gaming device may also accept cartridges of different games so as to reduce the need of purchasing a new location device with the purchase of a game. As discussed above, games can also be wirelessly downloaded to a portable gaming device or a traditional commercial device if that commercial device includes, for example, a locating device.

[0063] FIG. 4 shows display screens 425, 450, and 475 that may be provided to a gaming device.

[0064] Display screen 425 displays a list of location-based games that a user can choose from. Display screen 425 may display information other than just the title of each game. For example, display screen 425 may also display the dimensions of the physical playfield that is needed to play the game (or

the preferred or default dimensions). Display screen 425 may also display information related to if a different user has requested an opponent to play the game (or the number of different user's waiting for an opponent). Any game list be scrollable, or partitioned into multiple display screens, such that a large number of games may be included on the list.

[0065] The games on such a list may be stored locally (e.g., in onboard memory) or remotely (e.g., on a remote database). Additional information that may be displayed on display screen 425 may include whether or not a user has purchased such a game, the amount of time left in a rental period for a game, the size of the game (e.g., 1MB), and information about the gaming device (e.g., 100 MBs of memory available). Any other type of information may be included on any display screen described herein.

[0066] Display screen 450 is one example of the information that may be presented when a location-based game is chosen. Display screen 450 may also contain a static (e.g., transparent) origin functionality such that when a user acknowledges reading the instructions, the system will autonomously record an origin location. As stated above, an origin does not have to be set for a location-based game to be played where movement on a physical playfield correlates to a video game character's movement on a virtual video game playfield.

[0067] Display screen 475 is one example of a multiplayer initialization screen and accompanying functionality. More particularly, display screen 475 may include additional information such as how to, for example, initiate a multiplayer game. In one multiplayer embodiment, the gaming device may generate

a gaming code unique to that device. Such a code may, for example, include information about the location device and the game being requested. For example, ID#PAC52312, as illustrated, may include PAC to correspond to a particular game (e.g., PACMAN) and 52312 to correspond to the ID of a particular device (e.g., a telephone number) or a particular user that is logged into a device (e.g., user 52312). As in another multiplayer embodiment, a gaming device may include a communications receiver/transmitter to locate if one or more other devices are within range. Such a multiplayer signal may be signaled upon request of a particular multiplayer game. For example, display screen 465 may be initiated if "PACMAN (MULTIPLAYER)" is chosen from a list of games.

[0068] FIG. 5 shows display screens 525, 550, and 575.

[0069] Display screen 525 is a screen that allows a user to chose from a variety of characters for gameplay. In this manner, display screen 525 may be utilized in a multiplayer game such that each player may chose a different character or in a single player game. These characters may have different modes of operation (e.g., different goals, gaming constraints, and characteristics). For example, in PACMAN the goal of PACMAN is to eat pellets and run away, at times, from four ghosts. The ghosts, however, have a goal of killing PACMAN. Each ghost may, however, have different speeds (e.g., different characteristics). Player characteristics may include for example character speed, weapons, fighting styles, ability to do particular actions, or any other characteristic.

[0070] Display screen 550 may provide the user with a rule-set for the player that is chosen from display screen 525. A location-based game where a user's actual physical location on a physical playfield correlates to a video game character's location on a virtual video game playfield may require that the operational rules of current game be changed. Using PACMAN as an example, in the classic PACMAN, PACMAN is not operable to stray close to maze walls. In an actuality PACMAN game, however, a player may stray close to maze walls and even come into contact with maze walls. Hitting a maze wall may be similar to a user contacting, or passing through, a perimeter of the video game playfield. In this manner, functionality is provided for this scenario. For example, a user may be deducted a particular number of points if that user contacts a maze wall, a game's perimeter/boundary, or an object that a video game character cannot pass through and/or cannot use. For the purposes of this application, such objects will be referred to as impenetrable objects. One alternative to reducing points is to stun the character for a period of time (e.g., not allowing the video game character to move for a period of time), reduce the number of lives of that character (e.g., reduce the number of character lives left by 1), or end the game (e.g., display "GAME OVER" to the user).

[0071] As per another example, the gaming system may be configured to stop the movement of a video game character when a user travels through the location on a physical playfield that correlates to an impenetrable object on a virtual playfield. Thus if a user travels to through a wall, PACMAN may be left behind on the

side of the wall that the user penetrated. The game may be configured such that the user may regain control of the video game character by returning to, or near, the location where the video game character was left behind.

[0072] Display screen 575 includes one embodiment of a screen shot from a location-based game, particularly an actuality game PACMAN game. Virtual character 576 is first displayed to a user at the virtual character's origin. As a player moves around a physical playfield, the player's actual location may be translated into a virtual location for virtual character 576. As mentioned above, one of the many ways in determining virtual character movement may be by determining the difference and direction between the user's current location and his/her origin location. Such information may be stored, retrieved, and/or processed as a vector. Thus, as a user runs through a playground, character 26 may through the virtual environment of display screen 575. If vectors are used as control signals, these vectors may be communicated to other players such that a multiplayer game is realized. Such vector sharing may be desirable in order to keep the actual location of a user private from opponent users. A user may, however, give an opponent permission (e.g., access to) his/her location such that, for example, the opponent can travel to the same physical playfield as the user.

[0073] Character 577 may be a second character controlled either by a program or by a second player. Character 577 may have a different origin on display screen 575. In this manner, a user may be physically directed to an origin after the first player sets his/her origin so that they are both properly aligned

on the physical playfield. At any time, a display screen, or a portion of a display screen, may include an outline of a playfield and the user's location on that playfield. If a player has to go to a particular area of the playfield (e.g., to a particular origin position such as area 580) then this display screen may aid a user in setting up a game. One a player is on the origin, or in an origin area, then the player may be requested to begin gameplay or gameplay may autonomously begin.

[0074] Virtual interactive objects 585 may be provided in an actuality, or location-based game. Such virtual interactive objects may be activated when, for example, a virtual character's location on a virtual playfield nears, contacts, and/or resides in the virtual location of the virtual interactive object on the virtual playfield. Activating an object may cause, for example, the rules of the game to change (e.g., PACMAN can eat a ghost) or the characteristics of a player to change (e.g., the player obtains a particular weapon) for a period of time or until the game, or game-level, ends. In some embodiments, virtual objects may be PICKED UP by a virtual game character (e.g., by a user physically pressing an ACTION button on a controller such as an instruction glove or control buttons on a gaming device). Accordingly, a virtual object may then be PUT DOWN by a virtual game character.

[0075] Alternatively, both user's can have any actual origin (this allows for gameplay between two remote users). As described above, multiple embodiments may be provided that configure each user's gaming system, or the control signals provided to each

user's gaming system, such that two remote users may play on the same virtual playfield. When playing of the same virtual playfield, the information sent to a user's gaming device of an opponents location may be utilized to generate a virtual character for that opponent on the user's gaming device. In this manner, a user may play an actuality game, or any location-based game, against his/her opponents.

[0076] FIG. 6. shows environment 600 that includes gaming devices 620 and 630. Remote hardware 610 (e.g., a base station and/or remote processing circuitry) may also included to assist with single player or multiplayer gameplay.

[0077] Remote hardware 610 may be, for example, a remote memory (e.g., a remote database) that wirelessly communicates with one, or both, of devices 620 and 630. Remote hardware 610 may be positioned around the playfield and, for example. emit a local location signal. Devices 620 and 630 may then determine a location based on one or more signals from remote hardware 610. Additional remote hardware 610 may be utilized so that devices 620 and 630 can more accurately obtain their physical positions. For example, three instances of remote hardware 610 may be provided around the playfield such that devices 620 and 630 and utilize the time it takes for these signals (e.g., the difference in time it took to transmit/receive each signal) to triangulate the location of devices 610 and/or 620.

[0078] Remote hardware 610 may include the functionality of a gaming base station such that the location of each of devices 620 and 630, or control signals indicative of the location of the devices on a

playfield, is stored/retrieved by devices 620 and/or devices 630 on one or more instances of remote hardware 630. Persons skilled in the art will appreciate that remote hardware 610 is not necessary. Instead, devices 620 and 630 may communicate with each other and determine their relation to one another. This may be cost-efficient for simple multiplayer games such as, for example, the classic game of pong where the location devices represent paddles on the virtual video game playfield. In this manner, a "perimeterless" game of pong may be played such that a user may move 1,000 feet to the left to block an incoming pong-ball from passing while, the whole time, the other user moves 1,000 feet to follow the opponent player. Such a perimterless game, or any location-based game, may provide great a large amount of exercise to a user.

[0079] Device 620 may include one or more displays 621. Such displays may be, for example, visible or semi-visible environment displays such that a user can see the environment around him/her. Images can then be selectively displayed on displays 621 and 622 such that a user can be displayed gaming indicia (e.g., virtual game characters, virtual interactive objects, and virtual impenetrable objects). Virtual game character 622 may be provided to device 620 to represent the character that the user of device 620 is controlling. In this manner, the location of a user on an physical playfield may not correlate exactly to the position of the virtual game character on the virtual game playfield. Instead, a "lagging" perspective may be provide such that the character controlled by a user appears at a distance in front of the user (e.g., 5 feet). In this manner, a user may be able to gain

additional information about the video game (e.g., if another virtual character is chasing him/her). A control may be provided to switch the perspectives of the video game. For example, a control button may be provided to change such a "lagging" perspective to a first-person perspective.

[0080] Furthermore, because the location of device 630 is known, device 620 (or remote hardware 610) may provide an image of the virtual character of device as virtual character 623. Accordingly, virtual character 623 may be generated at the position where device 630 is located on the virtual playfield to represent the user of device 630. In this manner, if the user of device 630 picked PACMAN than virtual character 621 may be PACMAN. For displays that can provide images that completely block-out the environment in front of the user then he/she may not see the user of device 630 (if both users are playing on the same physical playfield) but the virtual character of the opponent. Generation of a user's virtual character, at the virtual character's location on a virtual playfield, on another user's display allows, for example, two users to play the same game on remote physical playfields.

[0081] Any instance of display 621 may be non-visible environment display such that a user is not able to see his/her world - only the virtual playfield. One benefit with a visible or a semi-visible environment device is that a user may move very quickly without the worry of tripping over the physical playfield (e.g., tripping over a rock). As a result, a user may be operable to use a visible, or semi-visible, environment device in more areas (e.g., a rocky field)

than a non-visible environment configuration that is limited to a smooth surface (e.g., a basketball court).

[0082] Display 631 of device 630 shows a visor-type embodiment that does not overlay virtual characters over the positions of physical players on the same physical playfield. Display 631 of device 630 may display other virtual environment indicia 633 (e.g., interactive objects, impenetrable objects, and other virtual characters). Persons skilled in the art will appreciate that virtual environment indicia 633 may include software-controlled gaming characters (e.g., video game characters with artificial intelligence).

[0083] Circuitry 624 and 632 may include, for example, communications devices, processing circuitry, memory, speakers, additional locating devices, and locating receivers/transmitters. Additional locating data may be utilized. For example, the direction that a visor, or a gaming device with a game display, is pointing in may be determined by any number of location devices. For example, four location devices may be provided to determine not only the direction that visor 632 is pointing but also the pitch at which visor 632 is pointed in. Such information may be utilized to determine the user's perspective of the physical environment such that a corresponding perspective may be generated and subsequently displayed to the user. For example, four LPS devices may be provided. Two at the front of the visor at two different heights and two at the back of the visor at two different heights. If a user points his/her head down then the two LPS devices on both sides may record a difference in location and such a difference may be translated into a the pitch of the helmet. The direction that the visor

is pointing in may be determined by the position of, for example, the average location of the front LPS devices and the average location of the rear LPS devices. Any methods of determining the pitch and/or direction that a device is pointing in may be utilized.

[0084] Persons skilled in the art will appreciate that a base station may be provided that determines images to be displayed to a user and transmits these images to a user at a rate (e.g., 32 frames per second). As a result, the weight of visor 630 may be decreased.

[0085] Turning now to FIG. 7, a compact and inexpensive actuality gaming system is provided as gaming system 700. Gaming system 700 of FIG. 7 may include no physical input devices other than optional ON/OFF switch 710. Alternatively, however, any number of buttons 720 may be provided (e.g., one or more FIRE WEAPON or ACTION buttons). If not additional input controls are provided then, for example, the size of display screen 702 may be maximized. Gaming system 700 may include chain 704 and clip 703 and may be small enough to fit inside a user's pocket. A user may interacts with game character 725 through his/her physical location. This location may be determined by any number, or types, of locating devices 701 (e.g., a GPS receiver or an accelerometer). Such a system may set an origin reference autonomously when the game is turned ON or right before the game starts. For example, a game may display that the game will start in a period of time (e.g., 3 seconds). Right before the game starts, an origin position may be read from locating device 701 and stored in a portion of memory that corresponds to an origin). Accordingly, the game

may call a particularly, pre-defined portion of memory anytime that the origin is needed for gameplay.

[0086] As illustrated, the game of FROGGER is provided on display 702. In such an example, a user may turn ON his/her FROGGER Actuality game and the user's origin may be stored. For embodiments where the origin is stored, the user's location with respect to that position may, for example, be utilized to move FROGGER along a virtual playfield. For embodiments where the origin is not stored, the user's movement may, for example, be utilized to move FROGGER (e.g., an accelerometer may be used. Alternatively, a user's change in location may be utilized. Therefore, if a user's location (e.g., GPS location) changes by five feet than FROGGER's location change by 10 pixels.

[0087] Multiple types of impenetrable (or interactive) objects may be provided in a single game. For example, in FROGGER cars may be impenetrable objects that cause FROGGER to die (e.g., lose a life). Alternatively, the perimeter of the playfield may be an invisible impenetrable object such that when a user leaves a portion of the actual playfield that corresponds to a location of the virtual playfield outside of the perimeter, FROGGER is left behind at the perimeter. FROGGER can then be picked back up again by the user having his/her location correlate to FROGGER's location on the playfield. An additional icon may be provided when such a user goes out of bounds that shows the user where out of bounds the user is located. Such an additional icon may be beneficial to allow a user to more easily find the left-behind game character's position.

[0088] At the end of each level, for example, a new origin may be autonomously set, the user may be requested to return to the original origin (which may be shown on display 702 along with the user's current position), and/or the user may be prompted to select a new origin. In FROGGER, for example, the origin may be near the boundary of the virtual playfield. Accordingly, the user may be prompted to select a direction for gameplay. Such a direction may be determined by the device prompting the user to point the device in a particular direction (where the direction the device is pointed in may be displayed to the user) and recording this direction. The origin and/or the direction the user is pointing in may be utilized to calibrate system 700. Such directional information may also be utilized to calibrate an opponents gaming system, or signals sent to an opponents gaming system representative of a user's location on a virtual playfield.

[0089] Persons skilled in the art will appreciate that a gaming systems may take a long period of time (e.g., 30 seconds) to determine a user's location. This may be the result of, for example, a slow processor or a locating device that takes an amount of time to gather a location. A number of games may take advantage of this delay and to provide a unique actuality gaming experience. For example, suppose that a locating device takes 30 seconds to obtain location information. Display 702 may be a grid and a random box in the grid may highlight a particular period of time (e.g., 2 minutes). A count-down timer may be provided to display this, or a different period of time. For example, the count-down timer may display 2

minutes (time period minus time to determine a location). During the 90 seconds that the timer counts down, the user may be required to run to the next highlighted box. At the end of 90 seconds the user may be prompted to stop and take a 30 second break to catch his/her breath. During this time, a new location may be gathered and a new box on the grid highlighted. Such an example exhibits the functionality that even a simplistic device may provide. In this embodiment, an exercise device may be provided that increases a user's stamina by requesting that the user provide short bursts of movement. The selection of the next grid to be highlighted may result from an algorithm implemented to maximize the amount of calories that a particular user (e.g., a user having a particular weight) burns.

[0090] FIG. 8 shows a number of components that may be included into gaming system 800. Persons skilled in the art will appreciate that components of gaming system 800 may also be utilized in, for example, a gaming base station. Gaming system 800 may include one or more power sources 820, output devices 825, memory devices 830, connection terminals 835, location devices 845, manual input controls 850, wireless transmitters/receivers 855, additional communication transmitters/receivers 860, and additional components 840.

[0091] FIG. 9 shows a few of the many types of location-based gaming systems operable to be constructed in accordance with the principles of the present invention. Particularly, FIG. 9 shows gaming systems 910, 930, and 960.

[0092] System 910 includes gaming system 911. Gaming system 911 may operate as follows. Step 921

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waits until the system is turned ON. When the system is turned ON, a location-based game is initiated (e.g., step 922). The game continues playing until the game is over (determined by step 923). After the game is over, the results (e.g., a score, "GAME OVER," or "GAME WON" may displayed) be displayed in step 924.

[0093] System 930 includes gaming system 931 that is operable to be separated into two game systems. When the two game systems are connected together, a single game-system may be provided so that, for example, a larger display screen may be viewed by a user. When a two-player game is selected, the two gaming systems may be separated and information may be transmitted between the two gaming systems (e.g., location information or other opponent control signals).

[0094] Persons skilled in the art will appreciate that game cartridges may be utilized so that a system is operable to play any number of games. System 932 may, for example, include a single cartridge port, but may contain two separate memories (one for each of the two individual systems). Alternatively, the system may include one memory device in the system that does not include the game cartridge such that that system (or both systems) may have the entire game, or a portion of the game, written to memory. In this manner, one cartridge may be utilized to supply a game to both systems. In one embodiment, one system may run the game off the cartridge while the other system may run the game off a stored copy of the game that was written to memory on the other system before the two systems were separated. Each system may include, for example, their own power supplies and processors.

[0095] System 931 may operate as follows. When the system is turned ON at step 941, step 942 may initiate to receive location information (and other additional information) from an opponent and transmit location information (and other additional information) to an opponent. When the same location that is transmitted is received at step 943, step 944 may initiate and display the results of the game. Such a game may provide, for example, a global "tag your it" location-based game. The precision of the location may be chosen to change the way such a game is played. For example, the location may represent an area code. Therefore a "tag" occurs only when both players are in the same area code. The less amount of time it takes for a user to make a "tag" may associate to a higher score for that "tag."

[0096] System 960 includes two commercial devices 961 and 962 programmed to play a location-based game. System 960 may operate as follows. While a game in ON, location information is periodically transmitted and received by commercial devices 961 and 962. The games on commercial devices 961 and 962 may then be updated according to the received information. Game, or level, results may be displayed in step 974. Identical results, or customized results, may be displayed to both devices 961 or 962.

[0097] Persons skilled in the art will appreciate that received information is not limited to an opponents location information. For example, if an opponent performs an action (e.g, shoots a gun) that action may be transmitted, in some for, to the user's device such that the display of the user's device shows that action being performed by the opponent. In such a

manner, a user's device may manipulate gameplay depending on, for example, an opponent's location and an opponent's actions.

[0098] FIG. 10 shows one embodiment of location-based game 1000. Location based game 1000 may include housing 1001, display 1030, controls 1020 (e.g., a keyboard), and handles 1040.

[0099] A grid may be included, among other things, on display 1030 that is associated to different location areas that a user may travel in. Character 1091 may be included to represent the grid location on the virtual playfield that the user's actual location on a physical playfield corresponds too. One game functionality may hide unexplored areas of the grid (e.g., grid area 1092). Once the virtual character reaches such a grid area, however, grid 1092 may be uncovered to show what the grid contains (if anything). Past "findings" may be displayed. For example, clue 1093 may be uncovered and permanently displayed (or displayed until a game event occurs).

[0100] In one game embodiment, a user may have a fixed time to find a treasure on a playfield. Each block that the user uncovers (e.g., travels to), may require the user to win a mini-game. Such a mini-game may include, for example, defeating an enemy. In such an embodiment controls 1020 may be utilized to fight the enemy and display screen 1030 may, for the duration of the fight, replace the grid, or a portion of the grid, with a display screen showing an up-close perspective of the user's character and the enemy. The user may be given a time period to complete each mini-game. Other mini-games may be, for example, puzzles or other types of games. Such games may be location-based

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games in which movement of system 1000 moves the character in the mini-game. Some of the defeated enemies may not be removed from the game so that a return to the grid coordinate where the defeated enemy resides may result in a new fight with the enemy. Enemies (or other characters) may be inserted into grid coordinates at any time by the game and may move between such grid coordinates. In this manner, a location-based version of the classic game of Zelda maybe realized. Since such a game may be larger than an actual playfield (e.g., a soccer field), an origin may be manually reset at any time where the origin may be representative of a mid-game starting position. For example, if a user reaches the end of his/her physical playfield at the position of the grid that character 1091 resides then the user may reset that location to the origin, turn around, and set that direction and the reference direction. Before this occurred, if the user walked backward, that user may have moved into a grid position down-from the location of character 1091. Now, the user may walk in that same direction, but may move forward into the grid location above character 1091.

[0101] FIG. 11 shows system 1100 in which non-location based game enabled device 1110 is enable to play location-based games with any one of peripherals 1121, 1122, and 1123. Peripheral may include a location system (e.g., a GPS device) and a unique ID that may be utilized for multiplayer use. Alternatively, just a locating device (e.g., a GPS device or an accelerometer) may be provided on peripheral 1121 and software may be utilized in device 1110 to provide an ID for that device (if needed to

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play a particular multiplayer game). Alternatively, peripheral 1122 may be utilized. Peripheral 1122 may include a location system and one or more particular location based games. Alternatively still, peripheral 1123 may be provided and may include one or more locating systems, one or more particular location-based games (e.g., actuality games), and a ID (or an ID for each game). Persons skilled in the art will appreciate that like the peripherals of system 1100, a game cartridge may also include a locating device (e.g., an accelerometer or GPS device) and/or an ID for multiplayer use.

[0102] FIG. 12 shows stationary device 1210 and network topology 1250. As mentioned above, stationary devices may also be utilized to control a virtual game character in a location-based game (e.g., an actuality game). As in one PACMAN embodiment, a stationary personal computer may be utilized to play a ghost on a virtual playfield against a person whose physical position on an physical playfield controls PACMAN on that same virtual playfield. The functionality that this, and other embodiments, of the present invention may provide may provide numerous benefits. For example, a father who is a soldier overseas fighting a war may go to a computer and play with his child who is at home playing an actuality game in a school playground. Such a father could also put on, for example, a visor-enabled actuality system or hold a portable visible environment gaming system (e.g., system 700 of FIG. 7) and go outside of a barracks and physically play a game with, and interact with, his child. As discussed above, such functionality may be obtained without sending a signal representative of

either user's location (e.g., the distance and direction from a pre-defined origin may be transmitted, not the location itself).

[0103] Topology 1250 shows a gaming network. Such a gaming network may include any type of communications 1251 (e.g., wire-based or wireless communications). Any number of portable devices 1260 may be connected to the network. Portable devices 1260 may utilize the internet to provide information (e.g., portable devices 1260 may submit information through the internet or publish information to a webpage accessible by other components of topology 1250). Similarly, stationary devices 1270 may be included in and may transmit/receive information via the internet or other methods (e.g., wireless through a wireless telephone). One or more remote facilities 1280, or third-party content providers, may be coupled to any component of network topology 1250. Such facilities, or third-party content providers, may, for example, store gameplay information (e.g., a players location information or action information). Such facilities, or third-party content providers, may, for example, provide games for portable devices 1260 and stationary devices 1270 to download.

[0104] Turning now to FIG. 13, system 1300 is shown that includes user 1301 using gaming device 1360 and controller 1350. Gaming device 1360 and controller 1350 may communicate to each other, and other devices, either wirelessly or through a wire-based connection. Controller 1351 and Gaming device 1390 may include any components included in, for example, system 800 of FIG. 8.

[0105] For example, controller 1351 may include manual controls 1352 and anonymous controls 1353. Manual controls 1352 may take the form of manual buttons, such as a trigger. As such, controller 1351 may take the form of a gun. Autonomous controls 1353 may include a directional device that determines the direction that the gun is pointed in and/or the pitch that the gun is pointed in. Autonomous controls 1352 may also include any number of locating devices such that the location of controller 1351 may be determined. Accordingly, the location of controller 1351 may be determined on a pre-defined, or user-defined, playfield or in the world. Controller 1351 may take any shape. For example, controller 1351 may take the shape of a steering wheel, baseball bat, golf-club, sword, glove, or any other shape a user can interact with.

[0106] Physical interactive objects may also be included with any of the components of controller 1351 that multiple users may physically interact with. Such physical interactive objects may include, for example, a soccer ball, baseball, football. A user's sword may also be an interactive object because an opponents sword may physically interact with that user's sword. Such interaction may provide additional controls signals to a game. For example, the swords may have touch sensors to determine when they are in contact with one another (or if something is in contact with the sword).

[0107] Gaming device 1390 may include a display in which, for example, the virtual playfield and virtual objects (e.g., virtual characters, impenetrable objects, and interactive objects) may be displayed. Gaming device 1390 may also include any number of

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location devices 1362. In this manner, a user may walk through a virtual playfield by using gaming device 1360 and interact with the environment using controller 1351. Accordingly, gaming device 1360 may be, for example, a visor-based device.

[0108] Persons skilled in the art will appreciate that manual buttons may be provided as manual controls on a gaming device or a controller. For example, a SPEED BOOST button may be provided that may propel a user a particular distance forward through a virtual playfield. Alternatively, such a SPEED BOOST button may change the scaling of the player's physical movement to the virtual character's movement such that the speed of the virtual character is increased. Such a SPEED BOOST may last for a period of time or as long as the SPEED BOOST button is pressed. If the SPEED BOOST is used to display a user's location then a new origin may, for example, be determined such that a user's movement on the physical playfield does not cause the virtual character to return to the location on the virtual playfield that virtual character was before the SPEED BOOST was initiated. In this manner, an origin may periodically, or manually, be updated. Generally, an origin is a location reference that the gaming system utilizes to map a virtual playfield to a physical playfield.

[0109] Generally, a game is goal-oriented in nature. The goal may be, for example, to kill a particular character, solve a puzzle, reach a particular destination, or perform a particular action. Generally, such goals are not able to be obtained on a particular physical playfield, but, for example, with

video game control signals provided by a user's interaction with that physical playfield.

[0110] Looking at FIG. 14, flow chart 1400 is provided that illustrates one embodiment of a multiplayer game where location information may be scaled and shared to multiple users. Flow chart 1440 may start at step 1401 and continue to step 1405 where a first location (e.g., an origin location) is determined.

[0111] Such a location may be determined by retrieving a location reading from a location device or accessing a portion of memory dedicated to storing the most recently determined location by a location device. In this manner a location device may be provided that writes to this dedicated portion of memory every time a new location is determined. Such a dedicated memory may include space to store more than just one location (or information representative of one location). For example, a dedicated memory may store any number of locations (e.g., the last 100 locations). When writing a new location to memory, that location information may overwrite the oldest location stored in such memory. Alternatively, an different user's origin may be obtained in step 1405 by receiving location information from a different user.

[0112] After step 1405 occurs, step 1410 may occur. In step 1410 the next, or a current, location may be utilized (e.g., by a processor). Alternatively, this origin location (and/or information about a user's playfield perimeter) may be transmitted to a different user after step 1405 occurs. Persons skilled in the art will appreciate that numerous steps may be included at any portion of flow chart 1400. For example, once

an original location is obtained, a virtual game character may be displayed on a virtual playfield at the origin of that virtual playfield (e.g., PACMAN or FROGGER's origin position).

[0113] Step 1420 may occur after step 1410. As shown above in multiple embodiments multiple ways of scaling a location control input may be utilized. Scaling a location control input may similarly be utilized in many ways. For example, scaling an input may cause a virtual game character to move at a different speed while a particular scaling is being used. Alternatively, multiple devices may have control information that is scaled so that each user may play the same game from remote locations (e.g., "location-synching" two devices) yet even location synching here is optional. For example, no "location-synching" may be included in a game system where no origin is needed at the start of the game, a playfield does not have a perimeter, and only the distance/magnitude moved between two locations is used as a control signal).

[0114] As shown, step 1420 may determine the magnitude between the origin location and the current location in step 1421. Additionally, step 1420 may determine the direction, or angle, between the origin location and the current location in step 1422. Such angle and magnitude information may be stored, for example, as a vector. To determine the angle of the new location, for example, an angle reference vector may be generated based on the origin location and utilized to determine angle offset of new locations based on this angle reference vector. Persons skilled in the art will appreciate that a location reading may take many forms. In some embodiments, a location

reading may be a latitude and longitude (either on the world or on a local playfield). In other embodiments, a location reading may be a a direction and/or magnitude change or a movement vector. In even other embodiments, a location reading may be a rate of acceleration.

[0115] To illustrate yet another scaling embodiment, suppose step 1420 determines a direction and magnitude change. If in a multiplayer mode (e.g., step 1430) then this information may be transmitted to an opponents gaming system in step 1435. The opponent's gaming system may have past transmitted location information and may utilize the current transmitted information to determine where the user's virtual character has moved to on the virtual playfield. If the user and the opponent are on physical playfields of different sizes, then the control information may have to be scaled. Such scaling may occur before the information is transmitted such that the opponents system may not have to have knowledge of the user's physical playfield. The transmitted information may be scaled (e.g., in step 1422) to a default playfield size (e.g., the system scales to a 100 ft x 100 ft default playfield size). Similarly, the opponents device may scale its own location information to this third, default playfield size (e.g., the system scales to a 100 ft x 100 ft default playfield size). Suppose the user of process 1400 is on a 10 ft. x 10 ft. defined physical playfield. Step 1400 may, for example, multiple each magnitude by 10 such that a location that is on the 10 ft. physical perimeter is associated to the default 100 ft. perimeter. Such 100 ft. information may then be transmitted to an opponent and

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used directly by that opponents system without the need to scale. Suppose the opponent's physical playfield is 200 ft. x 200 ft. Then the opponent's location data may be scaled, for example, by 0.5 and transmitted to the user of process 1400 such that process 1400 does not have to scale incoming data (instead process 1400 may assume data is already scaled). Alternatively, process 1400 may scale incoming data (and may be provided information as to how the incoming data should be scaled). Alternatively, location information may be transmitted and utilized as a percentage to the perimeter and the angle from the origin (such that the perimeter information may not be transmitted). Alternatively, location information may be scaled to, for example, a particular user's playfield (and such information may be shared by the devices). In this manner, two physical playfields may be normalized onto one virtual playfield (even though each system may technically have its own generated virtual playfield).

[0116] Step 1400 may process the impact of location information on the video game. Particularly, one or more locations may be translated into control signals to the video game and the outcome of such control signals may be determined and utilized to display an updated game to a user. Step 1445 may display a new frame or a sequence of frames to a display to update a game. For example, if an opponent's game system takes an amount of time for location information to be obtained (e.g., 5 seconds), step 1445 may display a sequence of frames, over a period of time, such that the opponent's virtual character's location does not appear to dramatically skip between locations. As per another example, if a particular user performs a

particular action, a pre-stored animation may play. Such an animation may be displayed as a sequence of frames in step 1445.

[0117] Step 1450 may determine if the games over. In this manner, step 1450 may occur after step 1440. If the game is not over, step 1410 may be repeated. Else, step 1455 may be initiated such that a game ending program is executed (e.g., the game is restarted) or a GAME OVER screen is displayed. After step 1445, the process may end at step 1499.

[0118] Systems and methods for delivering content to a wireless telephone are also provided. For example, data interchange between wireless telephones and the internet, or an intranet, using a minimal number of steps for at least first time users is provided.

[0119] Confirmation that a user is in possession of a wireless telephone may be provided, for example, by having the user respond to a text message from the wireless telephone. Multiple types of content may be downloaded to a user either by themselves or in groups with a single download or email. Multiple links may be included, for example, in a text message to a wireless telephone such that multiple types of content may be downloaded with a single message.

[0120] If the content (e.g., the location-based game) is free-of-charge then a payment confirmation step my be removed from a download process. Types of content may include, for example, phone numbers, applications, location-based games, ringers, and pictures.

[0121] A data interchange is provided. Users may upload content from a wireless telephone and allow different people, or a select set of people (e.g.,

people that the user has given permission to), to download content to the downloading user's wireless devices (e.g., a wireless Personal Electronic Device). For example, phone numbers may be uploaded and stored on a webpage for a particular user. Thus, a user has a backup of his or her wireless telephone numbers that can then be downloaded to a different wireless telephone. As per another example, the location of a user may be uploaded to a remote server and accessed by people that the user has given permission to.

[0122] Interactive games are provided to wireless telephones by, for example, including a database that can store the game's progress. As in one embodiment, to provide a simple wireless chess game, a user may upload his "next" move onto a remote database. In this manner, a second user may then download this "next" move from the remote database either himself, automatically, or the user may be prompted to do so. In this manner, a user's location may be uploaded to a user database and downloaded to a subsequent user database.

[0123] An automatic update may be provided to a wireless telephone user. In this manner, a user may sign up for a particular service (e.g., daily wallpaper) and, every morning, that user may be provided a different background (e.g., a January 15th Calendar page exhibiting a comic personality) every day or period of time. This feature may be extended to games such that, every morning, a new game level, or a new game, is sent to a user.

[0124] A wireless telephone is provided that is operable to have non-service provider automatic updates without the consent of the wireless telephones user

every time data is downloaded. For example, a program may be provided to the wireless telephone that allows a user to accept and begin downloading any type of content from a particular entity. This program utilizes the "content provider" descriptor to determine if the content is allowable for download. Thus, a user only has to approve content from the "content provider" once and then all subsequent downloads from that content provider are automatically approved by the program. In order to protect from people falsifying the "content provider field," a wireless telephone may be configured to send a "file receipt message" to a source location (e.g., a wireless telephone may be configured to receive a "source location" description field). If the acknowledgement does not match a shipment by the source location then the wireless telephone may be notified of a falsified transmission and the downloaded material deleted. A service provider (e.g., Sprint PCS) may keep a list of all content origins and may serve as an intermediary to confirm that the file was sent by the third-party content provider acknowledged in the "source location" field.

[0125] A wireless telephone is also provided that is operable to download a file directly without a .GCD, or similar, file. This wireless telephone preferably contains a large amount of memory (e.g., 128MB or 1GB) such that the download of a file of an unrecognizable file type does not result in a user having to delete already downloaded content in order to make room for the new file. The wireless telephone can be configured to provide a message to a user if the downloaded file is of an unrecognizable type. The wireless telephone

can also connect to a remote database to obtain a list of file types and associated programs and, if a program is associated to a file type, automatically download the program to run the previously unrecognized file type.

[0126] Person skilled in the art will appreciate that when playing in a multiplayer mode, or playing a location-based game, other functions of a device may be utilized. For example, a user may be provided the ability to talk to an opponent through that user's gaming system while that user is playing a multiplayer actuality game against the opponent. Such a capability may be provided, for example, by forming a wireless communications message by interspersing frames of data with frames of audio.

[0127] From the foregoing description, persons skilled in the art will recognize that this invention generally relates to providing a control signal to a game that is representative of the physical location of a person in an actual environment and for improving data sharing and exchange in wireless devices such as wireless telephones. Persons skilled in the art will appreciate that the various configurations described herein may be combined without departing from the present invention. It will also be recognized that the invention may take many forms other than those disclosed in this specification. Accordingly, it is emphasized that the invention is not limited to the disclosed assemblies and methods, but is intended to include variations to and modifications therefrom which are within the spirit of the following claims.

What is Claimed is:

1. A system comprising:

a display;

a locating device operable to determine the physical location of said locating device on a physical playfield; and

a processor coupled to said display and said locating device, wherein said processor is operable to provide a video game comprising a virtual character with a virtual location on a virtual playfield, wherein said virtual location on said virtual playfield corresponds to said physical location on said physical playfield.

2. The system of claim 1, wherein said locating device is a global positioning system receiver.

3. The system of claim 1, wherein said physical playfield comprises a default perimeter.

4. The system of claim 1, wherein said physical playfield comprises a perimeter selected by user-inputs.

5. The system of claim 1, wherein said locating device is a local positioning system receiver.

6. The system of claim 1, further comprising:

a memory coupled to said processor, wherein said video game is stored in said memory.

7. The system of claim 6, wherein location information based on said physical location, and

obtained from said locating device, is stored in said memory.

8. The system of claim 7, wherein said location information comprises a set of coordinates.

9. The system of claim 7, wherein said location information comprises a vector having a magnitude component and a directional component.

10. The system of claim 1, further comprising:

a transmitter, wherein said processor determines an origin location at a point in time in said video game and transmits origin information based on said origin location.

11. The system of claim 1, further comprising:

a directional device, wherein said directional device is operable to determine the physical direction of said directional device on said physical playfield.

12. The system of claim 11, wherein said virtual character is operable to point in a virtual direction on said virtual playfield and said virtual direction on said virtual playfield corresponds to said physical direction on said physical playfield.

13. The system of claim 1, further comprising:

manual controls for controlling non-located based aspects of said virtual character.

14. The system of claim 1, further comprising:

a receiver for obtaining remote origin information based on a remote origin location, wherein said processor configures the operation of said video game based on said remote origin information.

15. The system of claim 1, further comprising:

a remote memory, wherein physical location information is operable to be stored in said remote memory when said physical location is determined and said physical location information is based on said determined physical location.

16. The system of claim 1, wherein said locating device is housed in a wireless telephone.

17. A method for controlling a character in a location-based video game comprising:

determining a first physical location of a locating device on a physical playfield;

mapping a video game environment around said first physical location; and

placing said character in said video game environment based on said first physical location.

18. A method for providing a remote multiplayer location-based video game:

obtaining a first physical location of a first locating device on a first physical playfield;

obtaining a second physical location of a second locating device on a second physical

playfield, wherein said first physical playfield is remote from said second physical playfield; and

operating a video game such that first locating information from said first locating device represents a first virtual character on a virtual playfield and second locating information from said second locating device represents a second virtual character on said virtual playfield.

SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES

Abstract of the Disclosure

A location-based game system is provided. Such a system may take the form of any device (e.g., a wireless telephone) that includes a locating device (e.g., a GPS system).

One such location-based game may operate such that the actual, physical location of a user on a physical playfield corresponds to the location of a virtual character on a virtual playfield. Such location based games are referred to herein as actuality games.

In one multiplayer actuality embodiment, two game devices may communicate location, and other, information to a remote database such that the two user's may interact on different physical playfields, but play on the same virtual playfield.

A number of wireless communications protocols, self-configuration, and auto-download software applications are also provided to optimize integration with, for example, a wireless telephone.

SMALL ENTITY
JDM/005

DECLARATION

I, Jeffrey D. Mullen, declare that I am a citizen of the United States of America, respectively residing at and having post office addresses at 1 Mercer Court, Scarsdale, New York 10583; and

that I verily believe myself to be the original and first inventor of the invention or discovery in:

SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES

which is described and claimed in the attached specification, and for which a patent is sought;

that I have reviewed and do understand the content of said specification, including the claims, and acknowledge my duty to disclose to the United States Patent and Trademark Office information known by myself to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56;

that I do not know and do not believe that this invention or discovery was ever known or used in the United States of America before my invention or discovery thereof, or patented or described in any printed publication in any country before my invention or discovery thereof, or more than one year prior to this application; or in public use or on sale in the United States of America more than one year prior to this application; that this invention or discovery has not been patented or made the subject of an inventor's certificate issued before the date of this application in

any country foreign to the United States of America on an application filed by myself or my legal representatives or assigns more than twelve months prior to this application; and that no application for patent or inventor's certificate on this invention or discovery has been filed in any country foreign to the United States of America by myself or my legal representatives or assigns;

I hereby claim the benefit under Title 35, United States Code § 119(e) to the United States provisional applications listed below.

60/499,810	September 2, 2003
(Application Serial No.)	(Filing Date)
60/---,----	August 20, 2004
(Application Serial No.)	(Filing Date)

(Docket No. JDM/007 titled "Wireless Devices With Flexible Monitors and Keyboards")

and I request that communications be sent to:

Jeffrey D. Mullen
1 Mercer Court
Scarsdale, New York 10583

and that telephone calls be directed to:

Jeffrey D. Mullen
(914) 837-7741

Wherefore, I pray that Letters Patent be granted to myself for the invention or discovery described and claimed in the attached specification and claims, and I hereby subscribe my name to the foregoing specification, claims, and declaration.

I declare, further, that I understand the English language and that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and, further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

09/01/2004
Date

Jeffrey D. Mullen

100

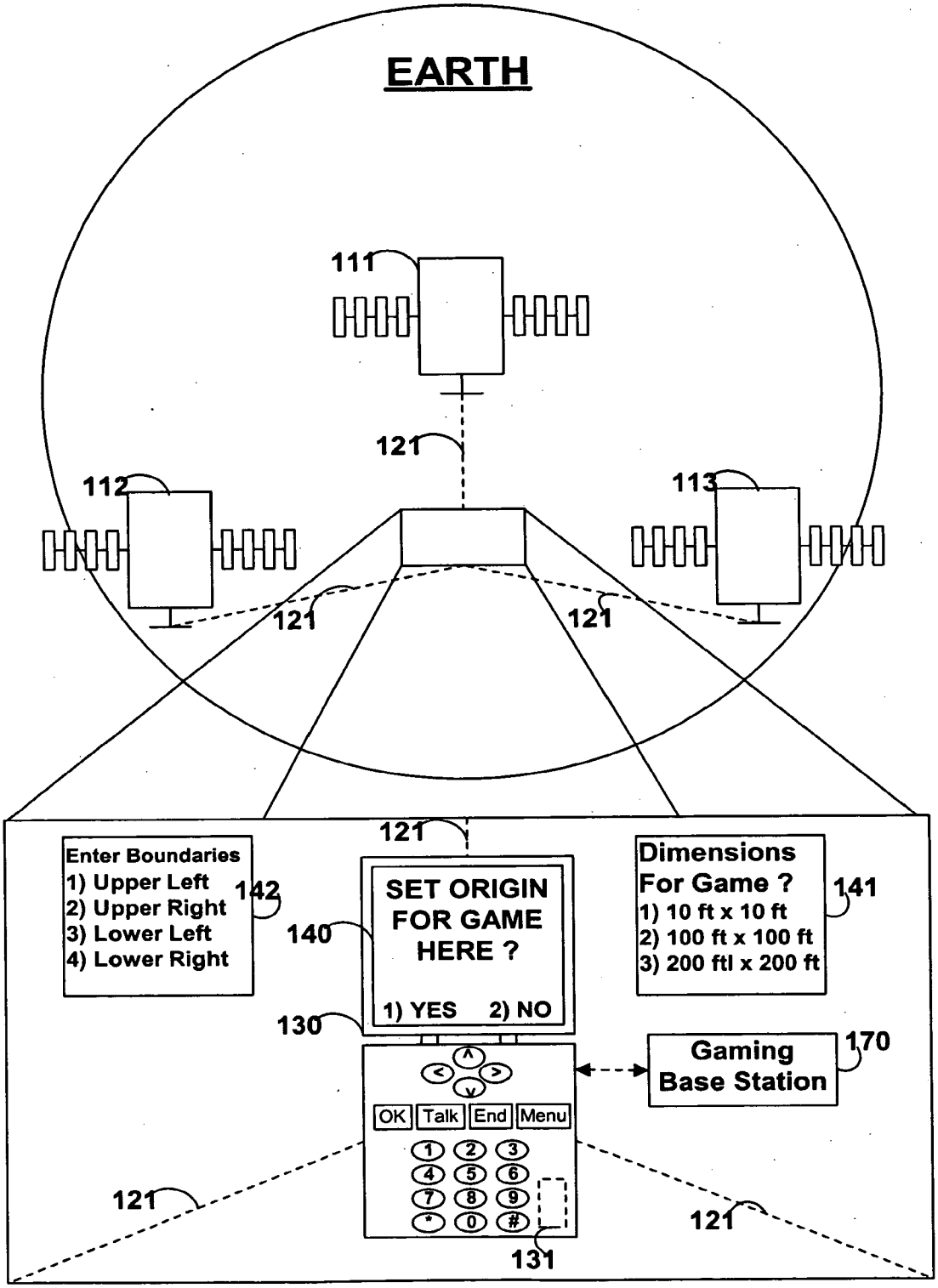


FIG. 1

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200

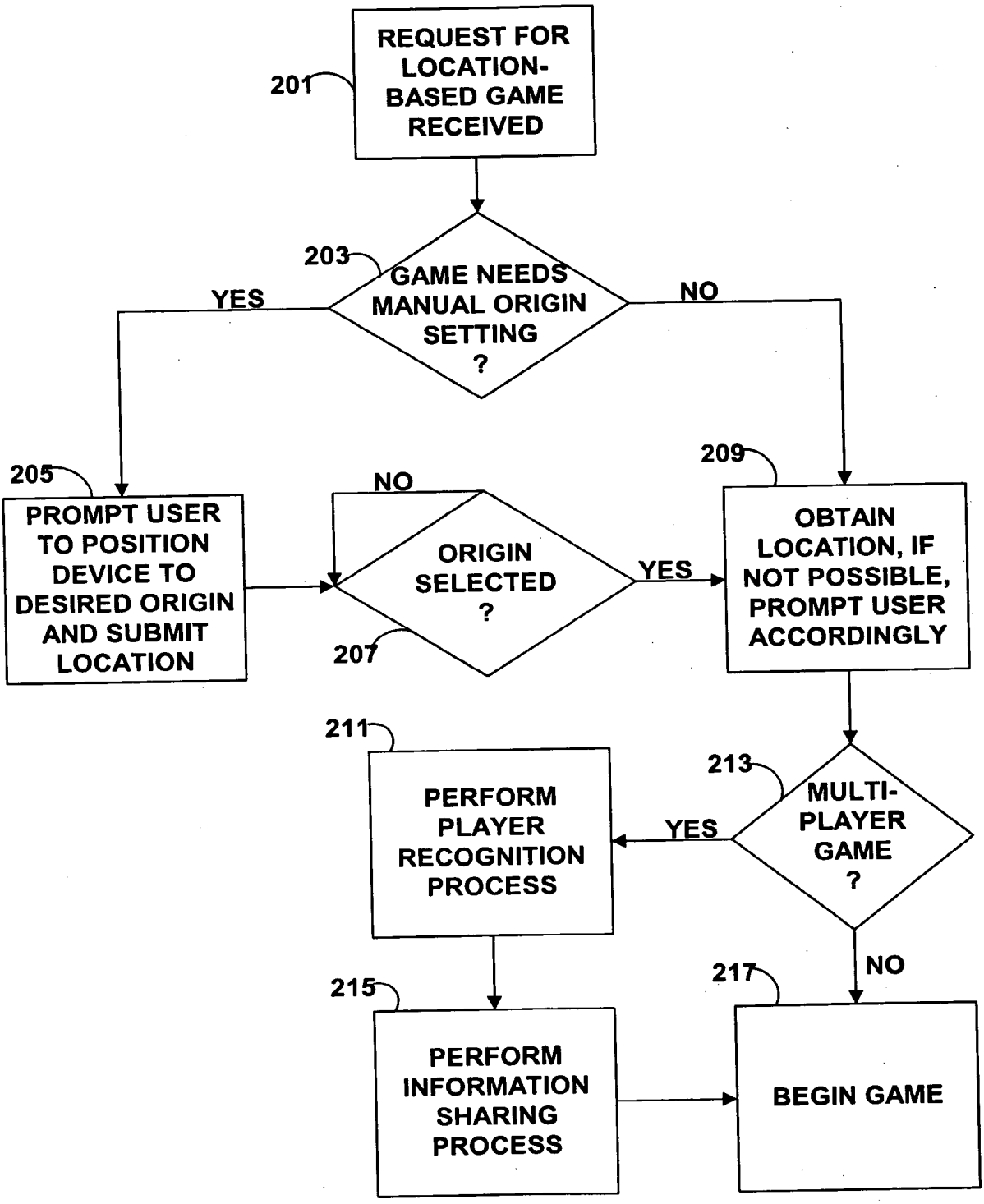


FIG. 2

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300

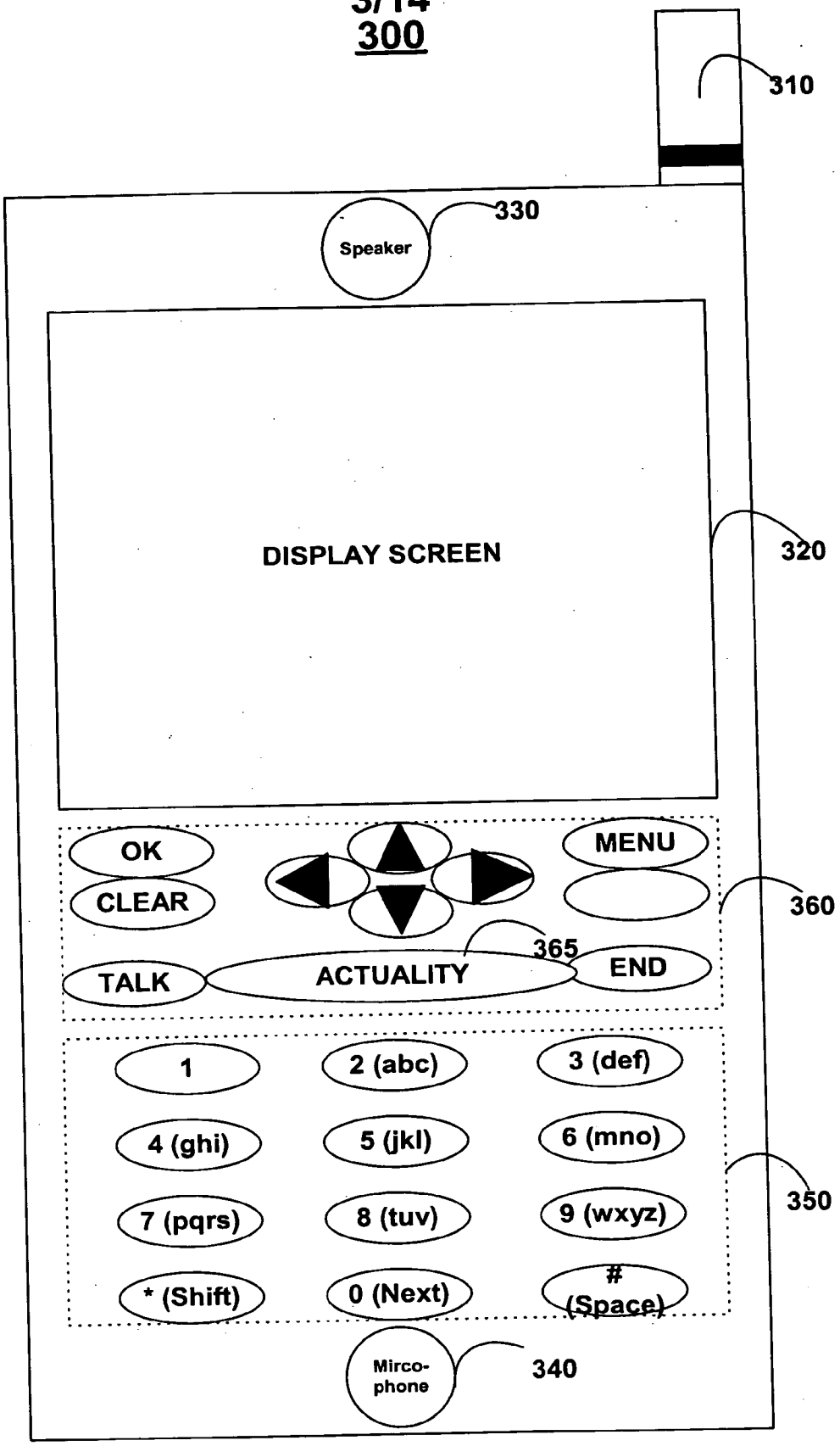

310
330
Speaker
DISPLAY SCREEN
320
OK
CLEAR
MENU
360
TALK
ACTUALITY
365
END
1
2 (abc)
3 (def)
4 (ghi)
5 (jkl)
6 (mno)
7 (pqrs)
8 (tuv)
9 (wxyz)
350
* (Shift)
0 (Next)
(Space)
Mirco-phone
340

FIG. 3

425

PICK LOCATION BASED GAME

1) PACMAN
2) Frogger
3) Track
4) SPACE INVADERS
5) BUBBLES
6) TREASURE HUNTERS
7) ZELDA
8) PONG
9) Football

450

YOU PICKED PACMAN!

PACMAN is a location-based game, pressing OK will mark your current location as pacman's origin in the maze. Press OK to begin. You will need an open area of 200 feet x 200 feet to play the game.

475

PACMAN IS A MULTI-PLAYER GAME

If you want to play with a remote player press 1 and enter in player device ID or send this game ID, ID#PAC52312, to player.

If a local player wants to join, have player place device within 1 feet of this device.

FIG. 4

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MULTIPLAYER FOUND

One additional device has been found. Chose your character from the list of available characters.

1) PACMAN

2) Ghost

550

Rules for Actuality PACMAN

Actuality PACMAN lets you play as PACMAN. Since you have selected Pacman, your mission is to literally run through the maze, your device will represent pacman's location, and gobble pellets while you flee ghosts (3 computer controlled, 1 player controlled). When powered up, you can consume ghosts, you cannot go through walls. Hitting a wall will recalibrate or position (or in certain modes simply cost you 100 points).

575

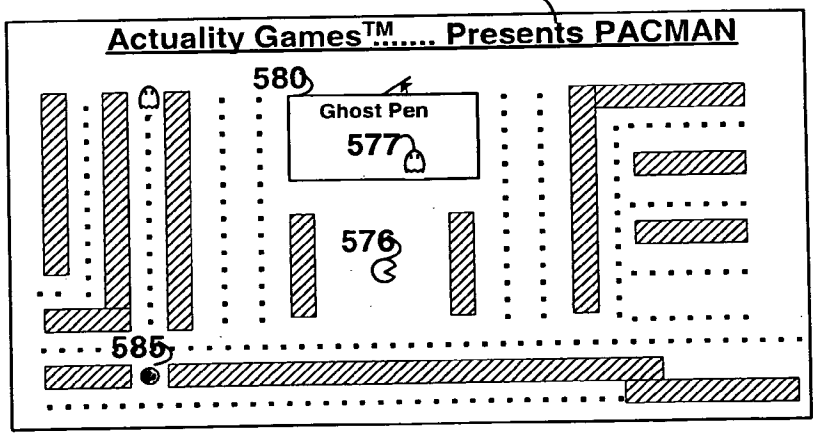


FIG. 5

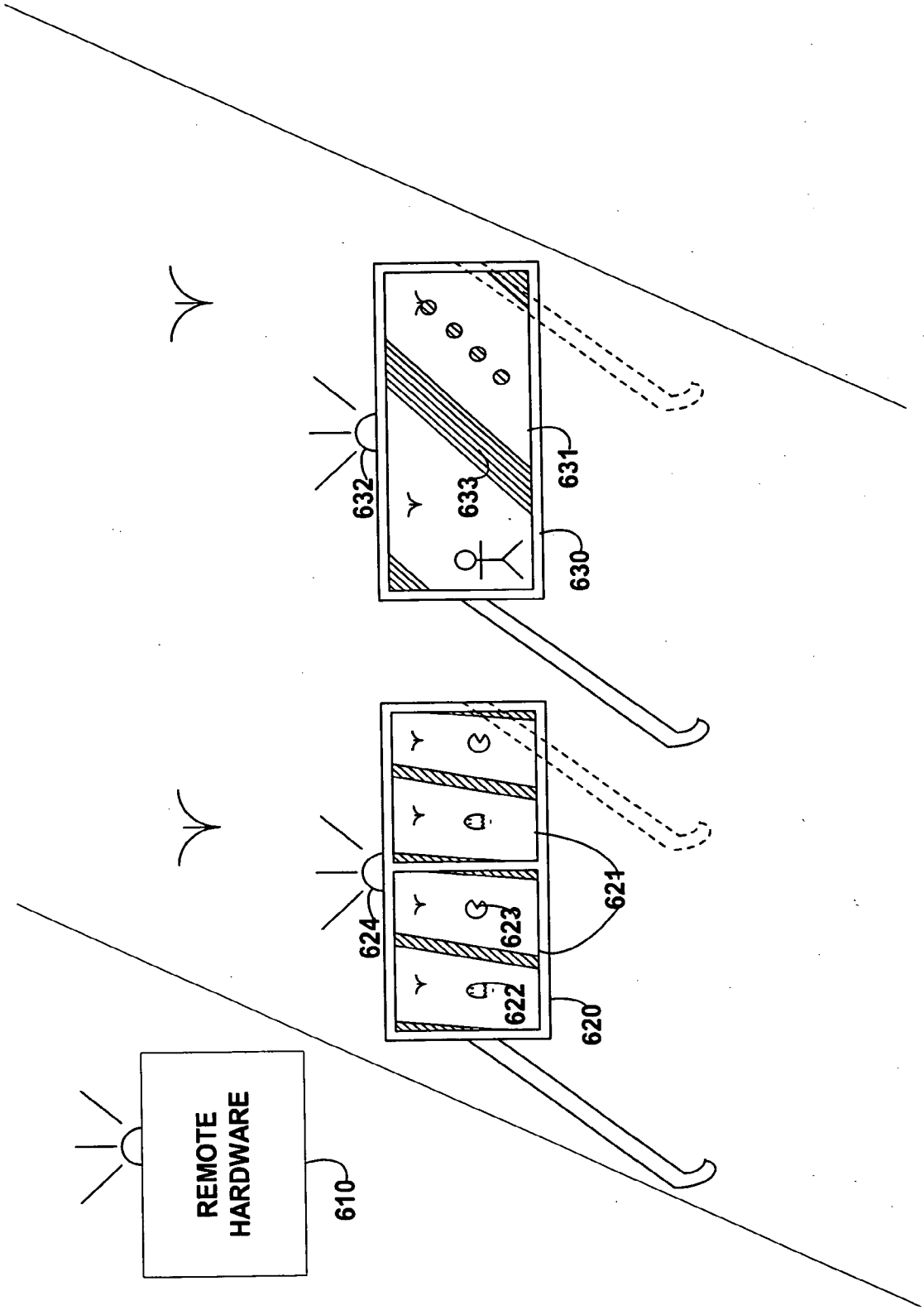


FIG. 6

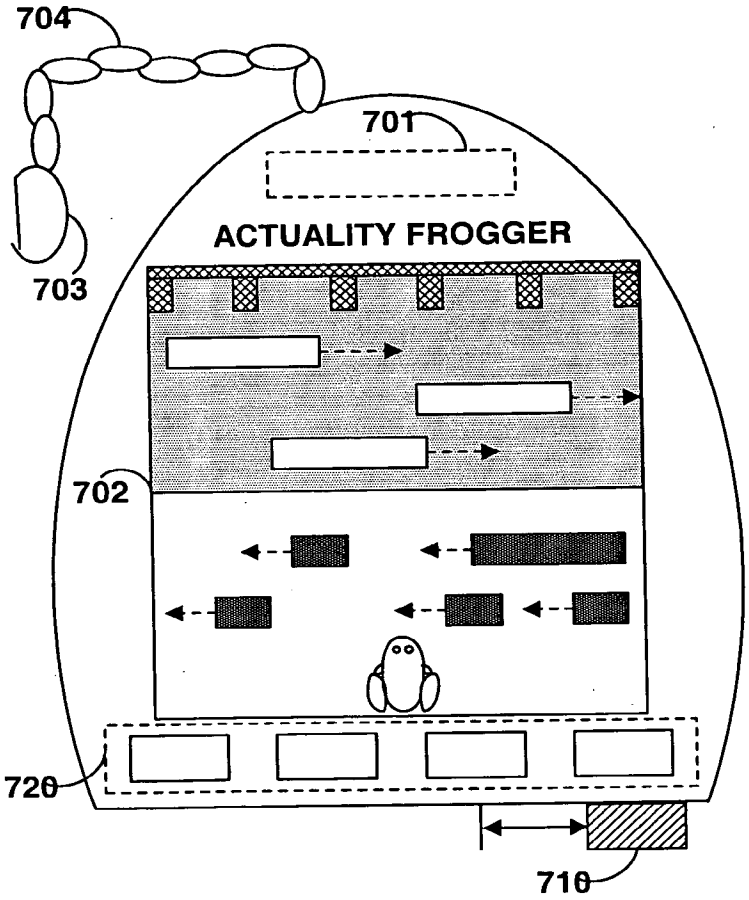


FIG. 7

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800

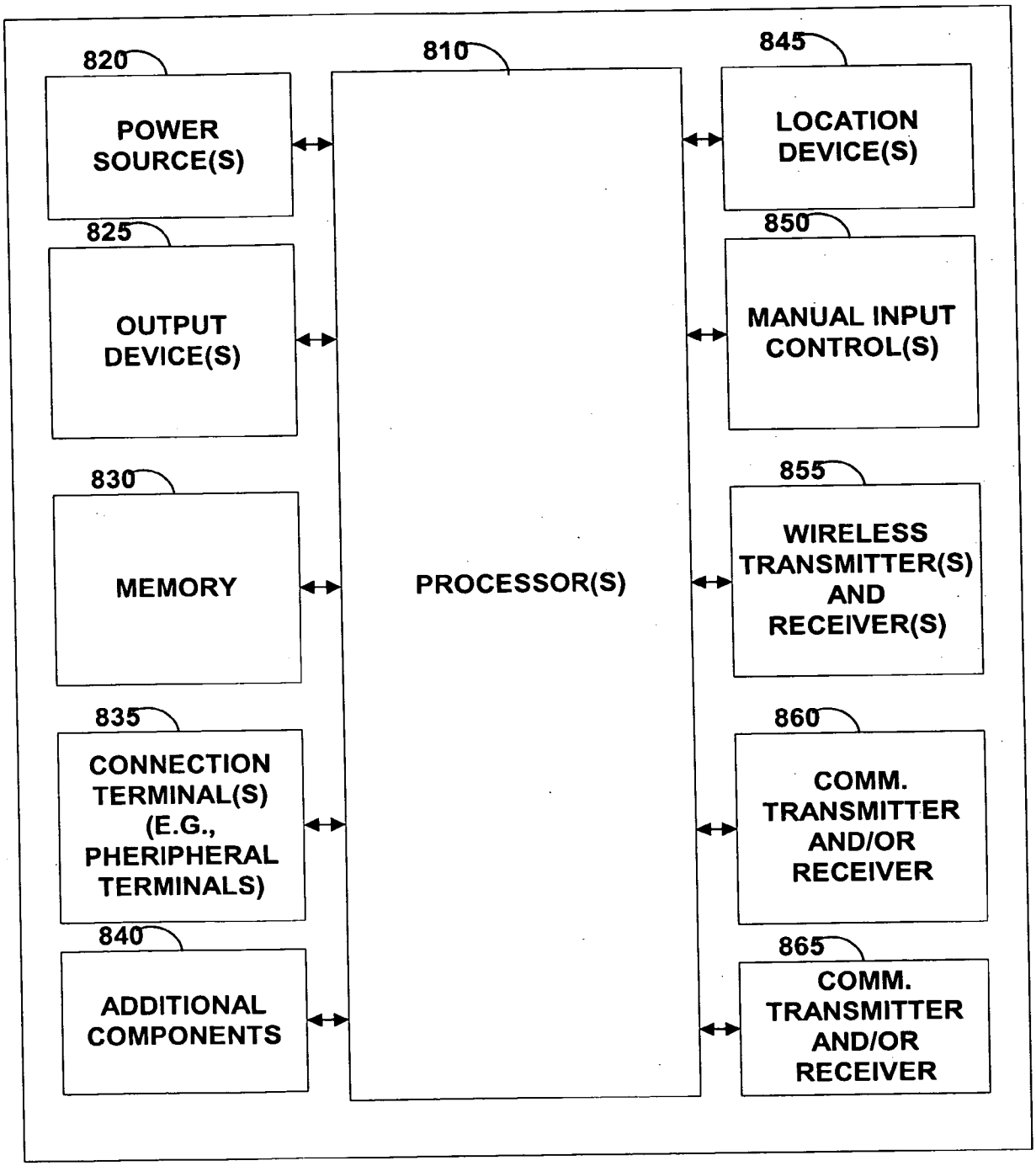


FIG. 8

Express Mail No.
EV371754078US
Meta Exhibit 1004
Meta v. Mullen - Page 0078

900

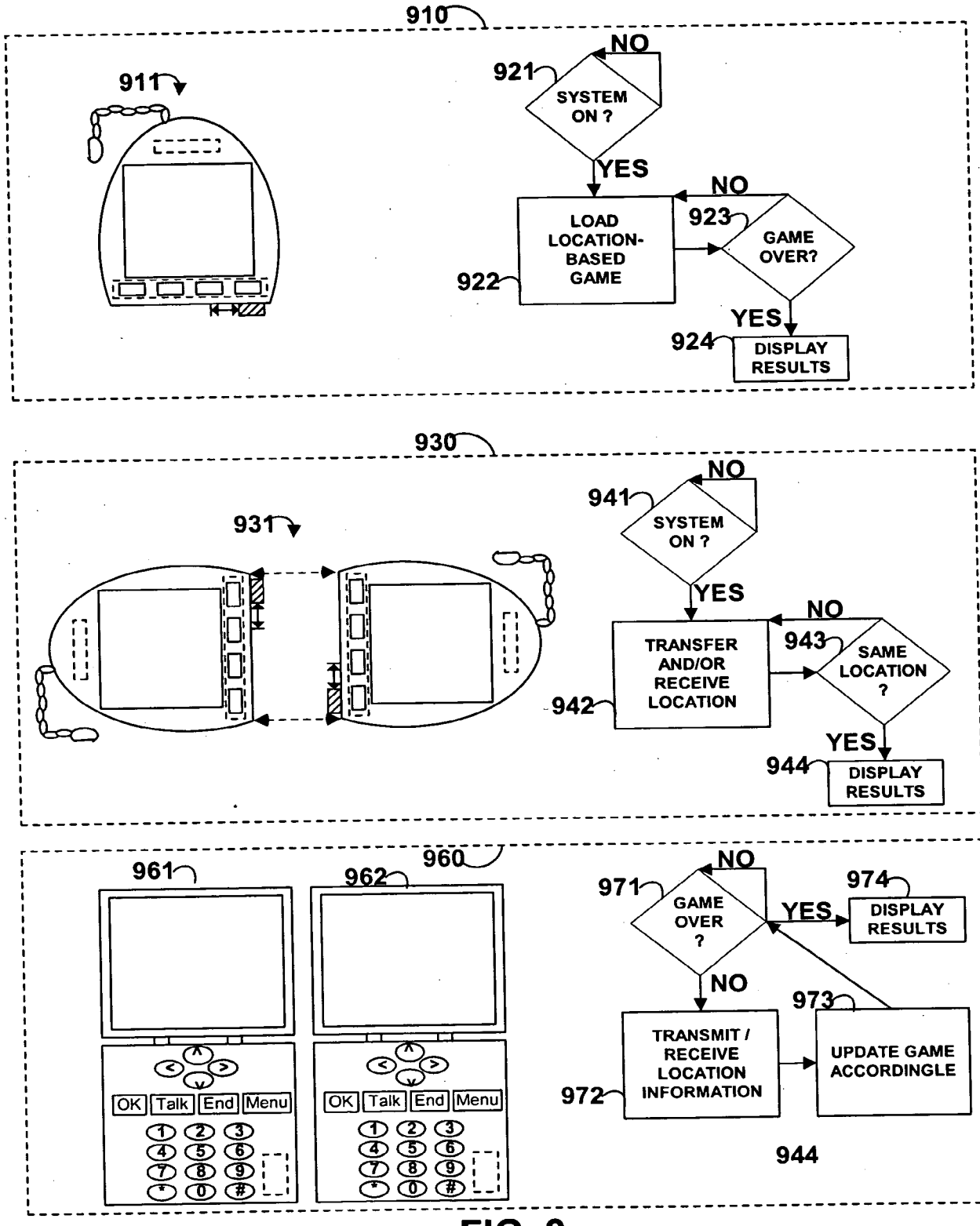


FIG. 9

Express Mail No.
EV371754078US
Meta Exhibit 1004
Meta v. Mullen - Page 0079

1000

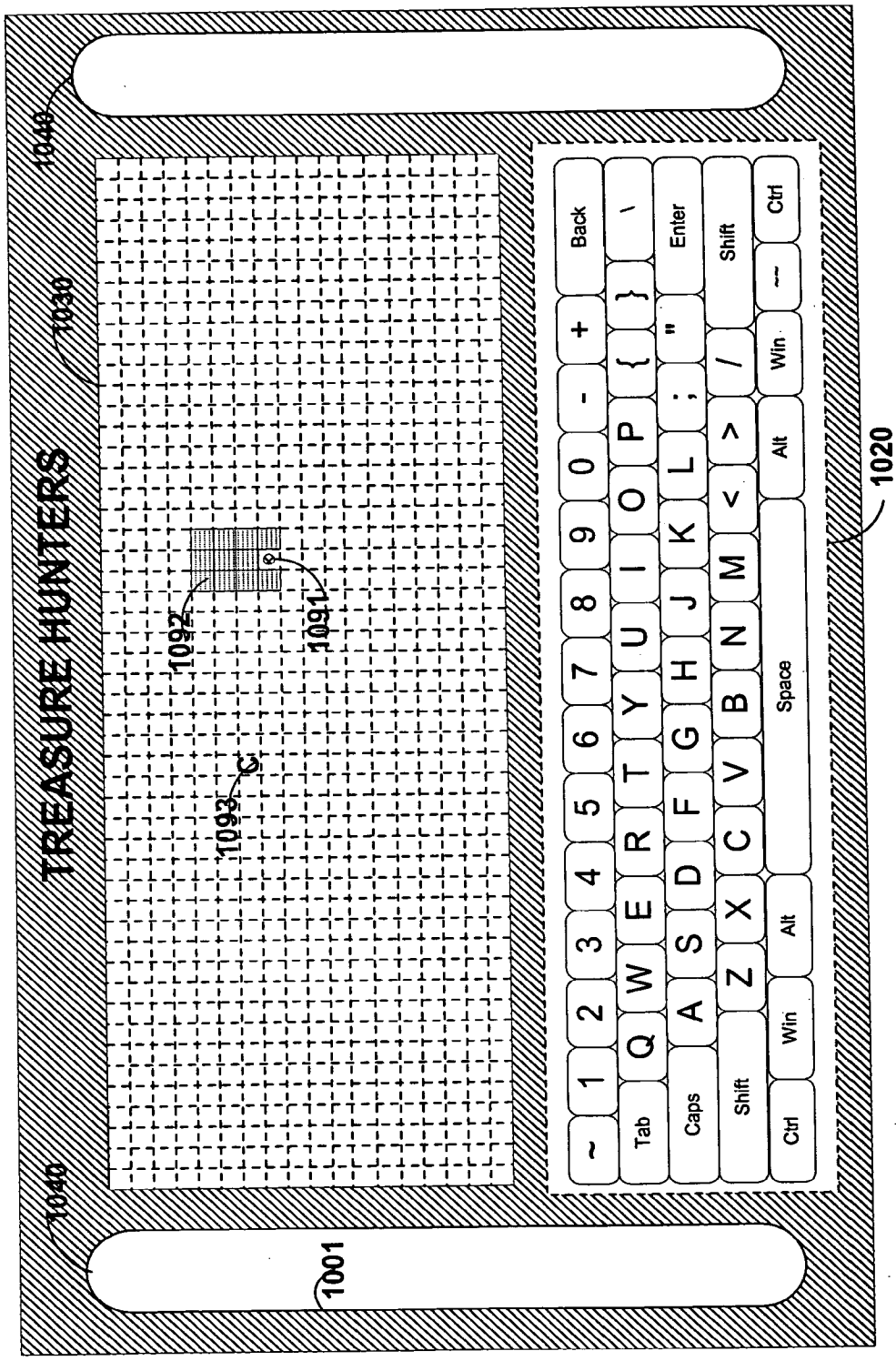


FIG. 10

Express Mail No.
EV371754078US
Meta Exhibit 1004
Meta v. Mullen - Page 0080

1100

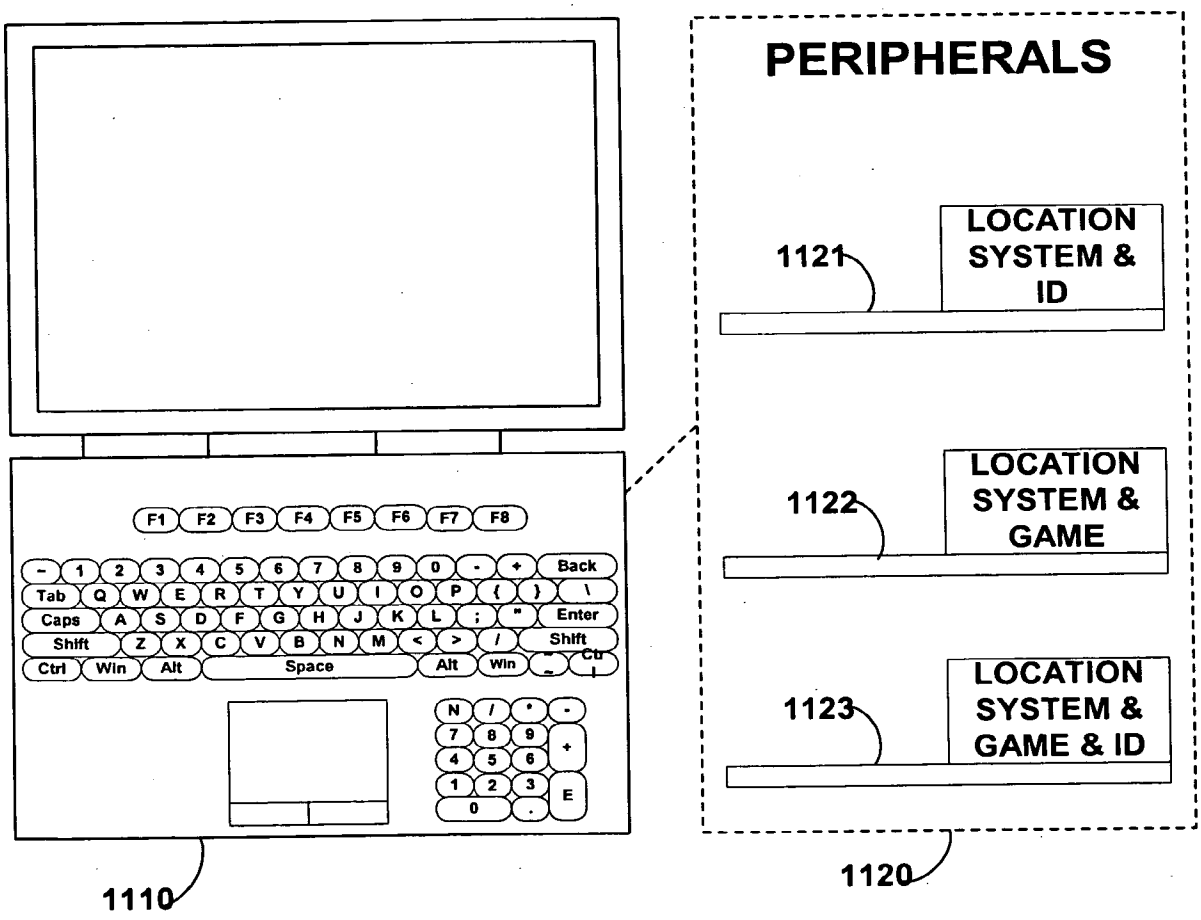


FIG. 11

Express Mail No.
EV371754078US
Meta Exhibit 1004
Meta v. Mullen - Page 0081

1200

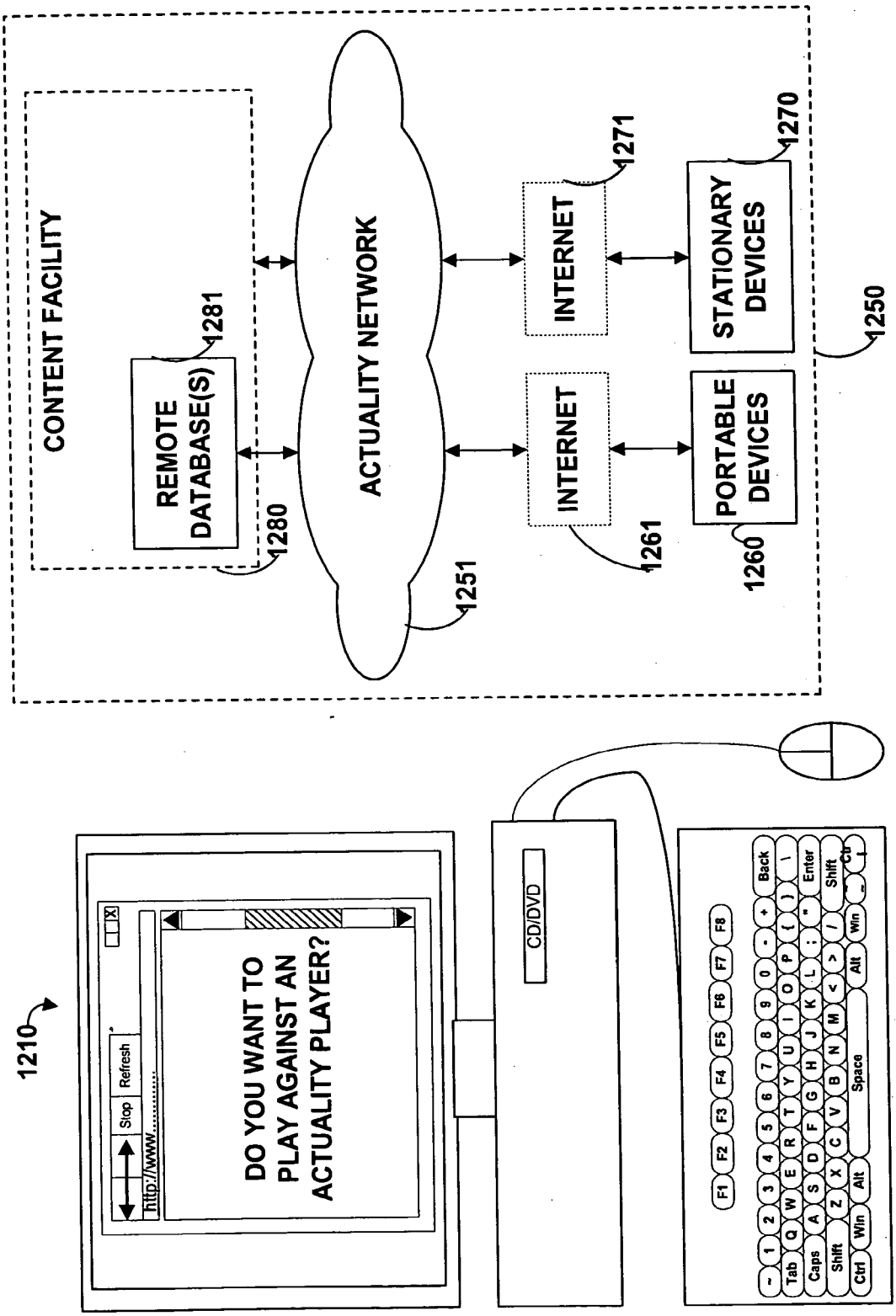

CONTENT FACILITY
REMOTE DATABASE(S)
1281
1280
ACTUALITY NETWORK
1251
INTERNET
1271
INTERNET
1261
STATIONARY DEVICES
1270
PORTABLE DEVICES
1260
1250
1210
DO YOU WANT TO PLAY AGAINST AN ACTUALITY PLAYER?
Refresh
Stop
http://www.....
CD/DVD

FIG. 12

1300

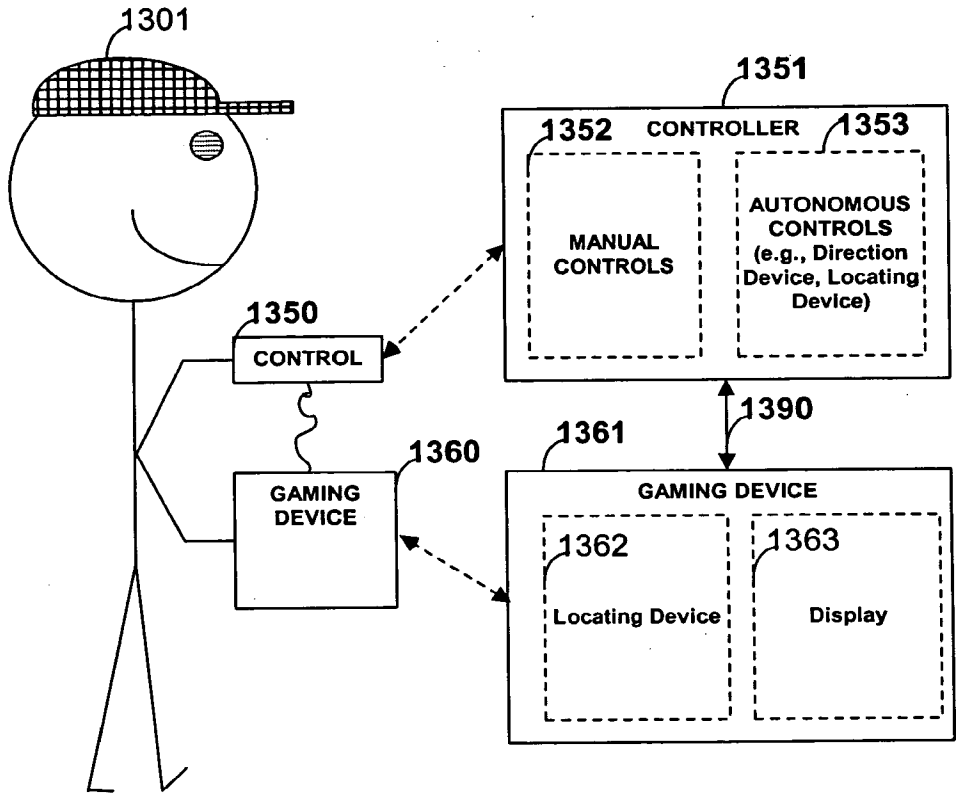


FIG. 13

Express Mail No. EV371754078US
Meta Exhibit 1004
Meta v. Mullen - Page 0083

1400

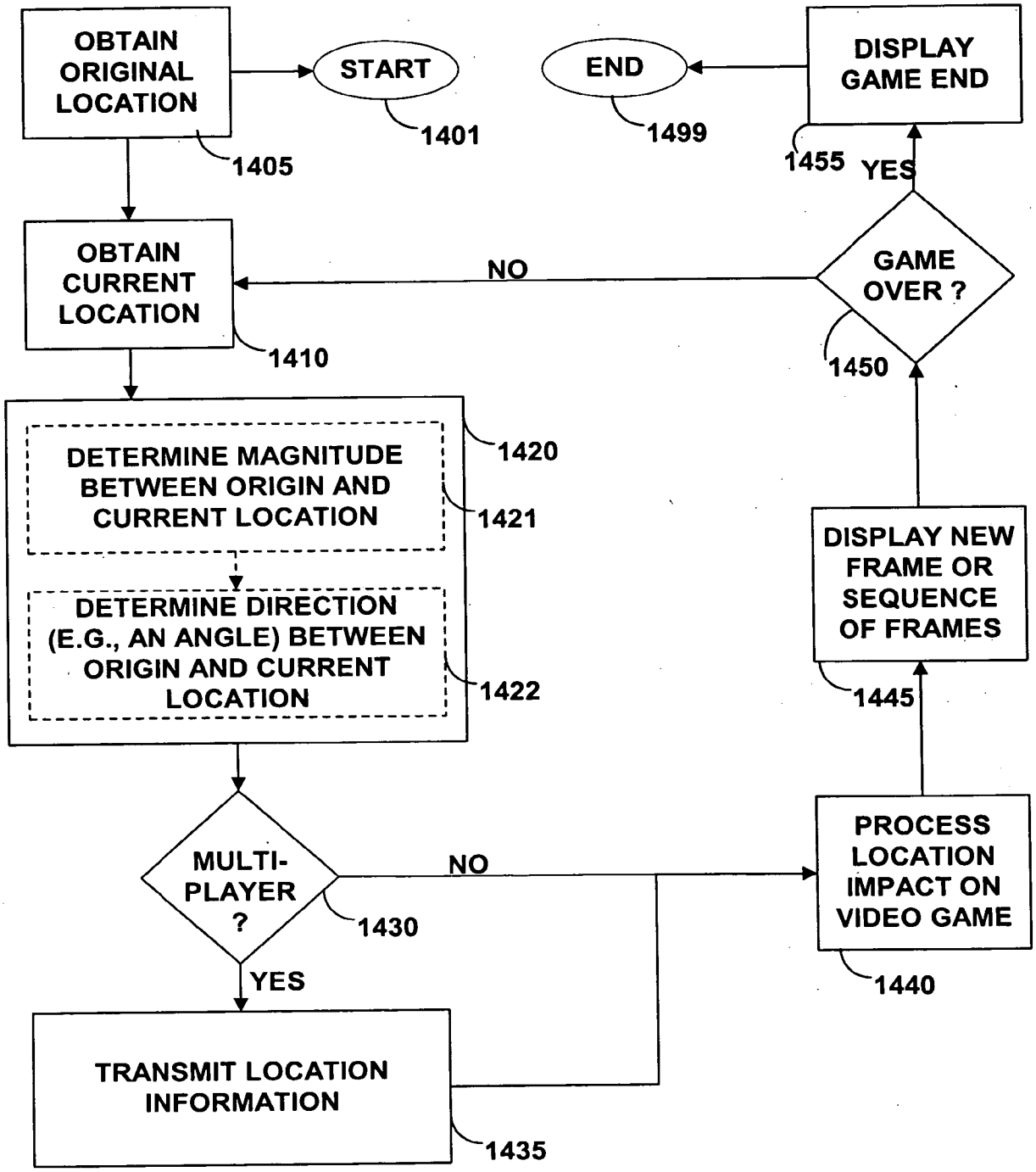


FIG. 14

Express Mail No.
EV371754078US

Meta Exhibit 1004
Meta v. Mullen - Page 0084

PTO/SB/14(08-05)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	JDM/005 CON7
	Application Number	Not yet assigned
Title of Invention	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1

Applicant Authority ☒ Inventor ☐ Legal Representative under 35 U.S.C. 117 ☐ Party of Interest under 35 U.S.C. 118

If applicant is not an inventor, indicate the authority to file for the patent on behalf of the inventor, the inventor is:

Prefix	Given Name	Middle Name	Family Name	Suffix
	Jeffrey	David	Mullen	

Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service

City	Pittsburgh	State/Province	PA	Country of Residence [i]	USA

Citizenship under 37 CFR 1.41 (b) [i] USA

Mailing Address of Applicant:

Address 1	731 South Negley, Apt. 2
Address 2	

City	Pittsburgh	State/Province	PA
Postal Code	15232	Country [i]	USA

If the representative for the inventor is an Organization check here. ☐

Prefix	Given Name	Middle Name	Family Name	Suffix

Residence Information of the Inventor's Representative:

Residence Information (Select One) ☐ US Residency ☐ Non US Residency ☐ Active US Military Service

City		State/Province		Country of Residence	

Citizenship under 37 CFR 1.41 (b) i

Mailing Address of the Inventor's Representative:

Address 1			
Address 2			
City		State/Province	
Postal Code		Country [i]	

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	JDM/005 CON7
	Application Number	Not yet assigned
Title of Invention	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES	

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
☐ An Address is being provided for the correspondence Information of this application.	
Customer Number	32733
Email Address	Jmullen54@aol.com

Application Information:

Title of the Invention	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES		
Attorney Docket Number	JDM/005 CON7	**Small Entity Status Claimed** ☒	
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		**Sub Class (if any)**	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)		**Suggested Figure for Publication (if any)**	

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	JDM/005 CON7
	Application Number	Not yet assigned
Title of Invention	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not been and will not be the subject of an application filed in another country, or under a multilateral agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ US Representative (37 CFR 11.9)
Customer Number	32733		

Domestic Priority Information:

This section allows for the applicant to claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c). Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
This application	Continuation of	10/932,536	2004-09-01
10/932,536	Non Provisional of	60/499,810	2003-09-02
10/932,536	Non Provisional of	60/603,481	2004-08-20

Additional Domestic Priority Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Application Number	Country i	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			☐ Yes ☒ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	JDM/005 CON7
	Application Number	Not yet assigned
Title of Invention	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES	

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1

If the Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	**Suffix**

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button.

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/Jeffrey D. Mullen/			Date (YYYY-MM-DD)	2007-08-20
First Name	Jeffrey	Last Name	Mullen	Registration Number	52,056

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USP TO becomes aware of a violation or potential violation of law or regulation.

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8/20/07

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PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

11/842,019

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))				75			
SEARCH FEE (37 CFR 1.16(k), (i), or (m))				250			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))				100			
TOTAL CLAIMS (37 CFR 1.16(i))	5 minus 20 =		X 25=		OR	X 50=	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	5 minus 3 =	2	X 100=	200		X 200=	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			N/A			N/A	
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	625		TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X =		OR	X =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X =		OR	X =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
					TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X =		OR	X =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X =		OR	X =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
					TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
11/842,019	08/20/2007	2629	625	JDM/005 CON7	5	5

CONFIRMATION NO. 2744

32733
JEFFREY D. MULLEN
731 SOUTH NEGLEY
APT. 2
PITTSBURGH, PA15232

FILING RECEIPT

Date Mailed: 08/30/2007

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Jeffrey D. Mullen, Pittsburgh, PA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 10/932,536 09/01/2004
which claims benefit of 60/499,810 09/02/2003
and claims benefit of 60/603,481 08/20/2004

Foreign Applications

If Required, Foreign Filing License Granted: 08/30/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US11/842,019**

Projected Publication Date: 12/06/2007

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF

THE SAME ON LOCATION ENABLED DEVICES

Preliminary Class

345

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Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

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For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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APPLICATION NUMBER	FILING OR 371(c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7

CONFIRMATION NO. 2744

32733
JEFFREY D. MULLEN
731 SOUTH NEGLEY
APT. 2
PITTSBURGH, PA15232

Title: SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES

Publication No. US-2007-0281766-A1
Publication Date: 12/06/2007

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

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In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Pre-Grant Publication Division, 703-605-4283

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 12/16/2010

JEFFREY D. MULLEN
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PITTSBURGH, PA 15232

EXAMINER	
KIM, ANDREW	

ART UNIT	PAPER NUMBER
3716	

MAIL DATE	DELIVERY MODE
12/16/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	11/842,019	MULLEN, JEFFREY D.	
	Examiner	Art Unit	
	ANDREW KIM	3716	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *8/20/07* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

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Meta v. Mullen - Page 0096

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Based upon consideration of all the relevant factors with respect to the claim as a whole, Claim(s) 19-23 are held to claim an abstract idea, and [is/are] rejected as ineligible subject matter under 35 U.S.C. 101.

The rationale for this finding is explained below, which is a result of careful consideration of the listed factors when analyzing the claim(s) as a whole to evaluate whether a method claim is directed to an abstract idea. These factors are not intended to be exclusive or exhaustive.

I. Factors weighing toward eligibility are:

a) Recitation of a machine or transformation: In particular, machine or transformation meaningfully limits the execution of the steps, a machine implements the claimed steps, the article being transformed is particular, an object or substance, the article undergoes a change in state or thing (objectively different function or use);

b) Practically applying a law of nature to meaningfully limit the execution of the steps; or

c) The claim is more than a mere statement of a concept: It describes a particular solution of the problem to be solved; implements a concept in a tangible way, performance of steps are observable and verifiable.

II. Factors weighing against eligibility are:

a) No recitation or insufficient recitation of a machine or transformation:

+ Insufficient involvement of the machine or transformation, merely nominally, insignificantly, or intangibly related to the performance of the steps, (e.g., data gathering, or merely recites a field in which the method is intended to be applied).

+ Machine is generically recited such that it covers any machine capable of performing the claimed step(s) or merely an object on which the method operates.

+ Transformation involves only a change in position or location of the article.

b) Improperly applying a law of nature that would monopolize a natural force or patent a scientific fact (e.g., by claiming every mode of producing an effect of that law of nature); or applied in a merely subjective determination or merely nominally, insignificantly, or tangentially related to the performance of the steps; or

c) The claim is a mere statement of a general concept: Use of the concept, as expressed in the method, would effectively grant a monopoly over the concept; or both known and unknown uses of the concept are covered, and can be performed through any existing or future-devised machinery, or even without any apparatus; or states only a problem to be solved; or general concept is disembodied; or mechanism by which the step(s) are implemented is subjective or imperceptible.

+ Examples of general concepts: Basic economic practices or theories, basic legal theories, mathematical concepts, mental activity, interpersonal relations or relationships, teaching concepts, human behavior, and instructing how business should be conducted.

Claim(s) 19-23 are illegible subject matter because the claimed limitations a virtual playfield, a first character, a second character, a virtual or impenetrable object, include no

recitation or insufficient recitation of a machine or transformation, or not directed to a proper application of a law of nature, or just a mere statement of a general concept.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,287,200 B1 to Sharma.

Regarding claim 19, Sharma discloses a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61); and a second character, wherein said second character is computer controlled (col. 3, lines 9-61).

Claim Rejections - 35 USC § 103

3. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of Super Dodgeball by Nintendo (hereinafter "Super Dodgeball").

Regarding claim 20, Sharma in view of Super Dodgeball discloses a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61); a second character, wherein said second character is computer controlled; a virtual object, wherein said virtual object is operable of being picked up by said first character (Super Dodgeball: picking up, youtube video at 1:00 and 6:15, and Blocking in the Gamefaq). Sharma substantially discloses the invention as claimed but fails to explicitly disclose picking up a virtual object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches picking up a virtual object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game. One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to maintain the continuity of the game. If the game simply skipped over the part when a player picks up an object, the game would lose realism and lose player appeal.

Regarding claim 21, Sharma in view of Super Dodgeball discloses a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device(col. 3, lines 9-61); an impenetrable object, wherein said first character is stunned for a period of time when said first character contacts said impenetrable object (Super Dodgeball: youtube video whenever a player is hit with a power move the player is stunned on the floor or left panting, and Blocking and energy in the Gamefaq). Sharma substantially discloses the invention as claimed but fails to explicitly disclose stunning a player. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches a stun feature as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game. One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to add excitement to a game. Stunning a player adds additional strategy to the game and allows the attacker a small advantage. Adding strategy and a stun feature common in many games increases player appeal. Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to add a stun feature into the game.

Regarding claim 22, Sharma in view of Super Dodgeball discloses a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device(col. 3, lines 9-61); and an impenetrable object, wherein the lives of said first

game character is reduced when said first game character contacts said impenetrable object (Super Dodgeball: youtube video at 3:00 the team loses their life and floats up as angels, and Energy in the Gamefaq). Sharma substantially discloses the invention as claimed but fails to explicitly disclose losing lives. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches losing lives from contact with an object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game. One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to add excitement and an ending to a game. Since the players are expected to make the other players lose their life, the object of the game is to stay alive while attacking the other player. If no lives are lost then the game would continue indefinitely and players may lose interest. Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to add the ability to lose life from contact with an object to provide an end to the game before the player loses interest.

Regarding claim 23, Sharma in view of Super Dodgeball discloses a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device(col. 3, lines 9-61); an impenetrable object, wherein a number of points is deducted when said first character contacts said impenetrable object (Super Dodgeball: youtube video at 2:47, and Energy in the Gamefaq). Sharma substantially discloses the invention as

claimed but fails to explicitly disclose deducting points from contact with an object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches deducting points as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game. One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to show the player a sense of progress when attacking and defending. If the players died on the first hit the game would be over too quickly. In addition, showing a life bar that is decreased from contact adds suspense to the game if opposing players are low on life and they each must defeat the opponent before being defeated themselves. Therefore, it would have been obvious to one or ordinary skill in the art at the time of the instant invention to include deducting points from contact with an object.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW KIM whose telephone number is (571)272-1691. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on 571-272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dmitry Suhol/
Supervisory Patent Examiner, Art Unit 3716

12/15/2010 /A. K./
Examiner, Art Unit 3716

Notice of References Cited	Application/Control No. 11/842,019	Applicant(s)/Patent Under Reexamination MULLEN, JEFFREY D.	
	Examiner ANDREW KIM	Art Unit 3716	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,287,200	09-2001	Sharma, Dipanshu	463/40
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Wikipedia, Super Dodge Ball - Wikipedia, the free encyclopedia. Accessed December 14, 2010. http://en.wikipedia.org/wiki/Super_Dodge_Ball
	V	GameFAQs: Super Dodge Ball (NES) FAQ/Walkthrough by TOKADasrik. Accessed December 14, 2010. http://www.gamefaqs.com/nes/587662-super-dodge-ball/faqs/34823
	W	Youtube.com Screenshot of Super Dodge Ball Walkthrough with Commentary (Part 1 of 2). Accessed: December 14, 2010. http://www.youtube.com/watch?v=E1lUWmr64JA
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
11842019	11842019	MULLEN, JEFFREY D.
	Examiner	Art Unit
	ANDREW KIM	3716

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	12/15/2010								
	1	-								
	2	-								
	3	-								
	4	-								
	5	-								
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	11	-								
	12	-								
	13	-								
	14	-								
	15	-								
	16	-								
	17	-								
	18	-								
	19	✓								
	20	✓								
	21	✓								
	22	✓								
	23	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
11842019	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	ANDREW KIM	3716

SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
463	2,7,31,40	12/15/2010	AK

SEARCH NOTES		
Search Notes	**Date**	**Examiner**

INTERFERENCE SEARCH			
Class	**Subclass**	**Date**	**Examiner**

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Meta v. Mullen - Page 00107

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BIB DATA SHEET

CONFIRMATION NO. 2744

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/842,019	08/20/2007	463	3716	JDM/005 CON7

APPLICANTS
Jeffrey D. Mullen, Pittsburgh, PA;

**** CONTINUING DATA ***************************
This application is a CON of 10/932,536 09/01/2004
which claims benefit of 60/499,810 09/02/2003
and claims benefit of 60/603,481 08/20/2004

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
08/30/2007

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /ANDREW KIM/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		PA	14	5	5

ADDRESS

JEFFREY D. MULLEN
731 SOUTH NEGLEY
APT. 2
PITTSBURGH, PA 15232
UNITED STATES

TITLE

SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES

FILING FEE RECEIVED		
625	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2941	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/15 00:50
S1	5686	(463/31,40,42).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/13 23:30
S2	10	"842019".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/13 23:31
S3	47	pick near2 up near2 virtual with object	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:35
S4	42	impenetrable.clm. object.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:44
S5	1	impenetrable.clm. object.clm. mullen.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:44
S6	2	impenetrable.clm. object.clm. game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 01:42
S7	29	impenetrable with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 01:43
S8	130	((live or life) or points) with reducing with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 03:27
S9	1	stun with player with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 15:07
S10	5	"461171".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 16:10

12/15/2010 12:51:06 AM

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	11/842,019
Confirmation No.	:	2744
Filed	:	August 20, 2007
For	:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
Group Art Unit	:	3716
Examiner	:	Andrew Kim

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pittsburgh, PA 15232
June 16, 2011

REPLY TO OFFICE ACTION

Sir:

This is in response to the Office Action dated December 16, 2010. A three-month extension of time is applicable hereto and is being submitted herewith. In response to the Office Action dated December 16, 2010, applicant amends the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (cancelled)

19. (currently amended) A computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device; and

a second character, wherein said second character is computer controlled.

20. (currently amended) A computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device;

a second character, wherein said second character is computer controlled; and

a virtual object, wherein said virtual object is operable of being picked up by said first character.

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21. (currently amended) A computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein said first character is stunned for a period of time when said first character contacts said impenetrable object.

22. (currently amended) A computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein the lives of said first game character is reduced when said first game character contacts said impenetrable object.

23. (currently amended) A computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is determined

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utilizing a first control signal from a first locating device; and

an impenetrable object, wherein a number of points is deducted when said first game character contacts said impenetrable object.

24. (new) The computer-readable medium of claim 19, further comprising program logic for providing a third character, wherein said third character is manually controlled.

25. (new) The computer-readable medium of claim 20, further comprising program logic for providing a third character, wherein said third character is manually controlled.

26. (new) The computer-readable medium of claim 21, further comprising program logic for providing a second character, wherein said second character is manually controlled.

27. (new) The computer-readable medium of claim 22, further comprising program logic for providing a second character, wherein said second character is manually controlled.

28. (new) The computer-readable medium of claim 23, further comprising program logic for providing a second character, wherein said second character is manually controlled.

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REMARKS/ARGUMENTS

Summary of Office Action

Claims 19-23 were pending in the application.

Claims 19-23 were rejected under 35 U.S.C. 101.

Claims 19 was rejected under 35 U.S.C. 102(b) as being anticipated by Sharma U.S. Patent No. 6,287,200 (hereinafter “Sharma”).

Claims 20-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,278,200 to Sharma in view of Super Dodgeball by Nintendo (hereinafter “Super Dodgeball”).

Summary of Applicant's Amendments

Applicant has amended claims 19-23 without prejudice and solely in order to expedite prosecution.

Applicant has added new claims 24-28 in order to more particularly point out and distinctly claim the subject matter that applicant regards as the invention.

Applicant traverses the Examiner's rejections. Applicant reserves the right to claim any subject matter lost by any claim amendment or cancellation, or any subject matter included in the present application, in one or more continuation or divisional applications.

Applicant's Response to the Rejections Under 35 U.S.C. § 101

Claims 19-23 was rejected under 35 U.S.C. 101.

Applicant has amended claims 19-23 to be in a form similar to Beauregard claims.

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Accordingly, applicant hereby respectfully requests that the Examiner's rejection of claim 19 under 35 U.S.C. 101 be withdrawn.

Applicant's Response to the
Rejections Under 35 U.S.C. § 102(b)

Claims 19 was rejected under 35 U.S.C. 102(b) as being anticipated by Sharma.

Applicant's invention of claim 19 includes a virtual playfield, a first character, where the location of the first character in the virtual playfield is determined utilizing a first control signal from a first locating device, and a second character, where the second character is computer controlled.

The Examiner stated:

> "Sharma discloses … said second character is computer controlled (col. 3, lines 9-61)" (Office Action, Page 4)

Sharma, however, does not show or suggest applicant's invention of claim 19 that includes a second character that is computer controlled. Sharma's game requires all players to use devices to provide GPS coordinates. An external device can used to display an interactive virtual game for a participating mobile device user on an external device. Displaying a game on an external device is not a computer controlled character.

Accordingly, Sharma does not show or suggest applicant's invention of claim 19 that includes a second character that is computer controlled. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 19 be withdrawn.

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Applicant's Response to the
Rejections Under 35 U.S.C. § 103(a)

Claims 20-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,278,200 to Sharma in view of Super Dodgeball.

Claim 20

Applicant's invention of claim 20 includes a second character that is computer controlled. As shown above in connection with applicant's arguments for the patentability of claim 19, Sharma does not show or suggest this feature. Moreover, neither Sharma nor Super Dodgeball, used either alone or in combination, show or suggest applicant's invention of claim 20 that includes such a feature. Accordingly, applicant respectfully requests that the Examiner's rejection be withdrawn.

Furthermore, Super Dodgeball is irrelevant as a reference.

First, the reference is a Wikipedia entry from 2010 that characterizes an allegedly different reference. A characterization from 2010 is not prior art to the present application. Applicant respectfully requests that the Examiner provide a reference that is prior art to the present application. Furthermore, the characterization includes 2010 characterizations of games from 2008, which, even if correct 2008 references were found, would still not even be prior art to the present application.

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Second, the underlying implied reference is allegedly just a traditional game on the Nintendo Entertainment System (NES). Such a reference is so far removed from applicant's invention that not even a single part of the reference is relevant. Particularly, such a traditional game is not a location-based game. In fact, the Examiner's alleged NES game directly teaches away from a location-based game. The architecture of the game play is directly opposed to that of a location-based game. The Examiner is merely using hindsight reconstruction to eviscerate the spirit of Super Dodgeball – as well as Sharma – and merely creates an inoperable game that is neither shown nor suggested by the individual games.

Moreover, video games have been around for almost forty years. Accordingly, the fact that applicant's invention was not provided during such a long period of game development is a bona fide showing of patentability.

Furthermore, the Examiner cannot use any traditional game as art that is not applicant's invention of a location-based game. Such references are irrelevant references that cannot be combined, except in hindsight, and would do nothing other than eviscerate the spirit of the individual games and create an inoperable game neither shown nor suggested by the individual games.

In this manner, neither Sharma nor Super Dodgeball, used either alone or in combination, shows or suggests applicant's invention of claim 20. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 20 be withdrawn.

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Claims 21-23

As shown above, claim 20 is patentable. Claims 21-23 includes features similar to features of claim 20. Furthermore, as shown above in connection for the arguments of patentability for claim 20, Super Dodgeball is not a proper reference and also cannot be combined with Sharma.

Accordingly, applicant respectfully submits that claims 21-23 are also patentable. In this manner, applicant respectfully requests that the Examiner's rejections be withdrawn.

New Claims 24-28

Applicant has added new claims 24-28 in order to more particularly point out and distinctly claim the subject matter that applicant regards as the invention.

As shown above, claims 19-23 are patentable. Claims 24-28 depend from one of claims 19-23. Accordingly, claims 24-28 are patentable for depending from patentable base claims.

Official Notice Rejections

The rejections made by the Examiner herein appear to have been rejected in view of Official Notice. Any rejection that does not show each and every element of a claim in one or more references is an inadequate rejection. For rejections under 35 U.S.C. § 103(a), the Examiner has the burden of showing each and every element of applicant's invention in the prior art combination. If the Examiner is taking Official Notice, MPEP § 2144.03 requires that the facts of which notice are being taken be capable of instant and unquestionable demonstration as being well known in the art. *See In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418,

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420 (CCPA 1970). Applicant believes that the "facts" of which the Examiner may have taken Official Notice do not meet that standard, and invoke his right under MPEP § 2144.03 to have the Examiner provide documentary proof that those facts are actually well known. The Examiner "cannot simply reach conclusions based on its own understanding or experience - or on its assessment of what would be basic knowledge or common sense. Rather, ... [the Examiner] ... must point to some concrete evidence in the record in support of these findings." *In re Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 (Fed. Cir. 2001). If the Examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affadavit or declaration setting forth factual statements and explanation to such a finding. *See* MPEP 2144.03(c). The Examiner cannot make rejections using a reference or combination of references where the references do not show each and every element of a particular claim. Applicant respectfully requests that the Examiner withdraw any rejections that do not show the inclusion of each and every element of a particular claim in a reference or a combination of references.

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Conclusion

Applicant respectfully submits that this application, including the pending claims, is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested.

The Director is hereby authorized to charge any fees required in conjunction with this filing, or credit any overpayment of the same, to Deposit Account No. 50-3855, Order No. JDM/005 CON7.

Respectfully Submitted,

/Jeffrey D. Mullen/
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Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with $0 paid	2253	1	555	555

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**555**

Electronic Acknowledgement Receipt

EFS ID:	10319961
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	16-JUN-2011
Filing Date:	20-AUG-2007
Time Stamp:	14:31:52
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$555
RAM confirmation Number	808
Deposit Account	503855
Authorized User	MULLEN,JEFFREY D.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		JDM-005C7--Reply.pdf	20050 bec302e571e4941fbb8096118615e90ea35a3a20	yes	11

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	4
	Applicant Arguments/Remarks Made in an Amendment	5	11

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30483 406d3e517a52af0609ae42677b67bf79c37eb348	no	2

Warnings:

Information:

Total Files Size (in bytes):	50533

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/842,019	08/20/2007	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 06/16/2011	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 10	Minus	** 20	= 0	X $26 =	0	OR	X $ =	
Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $110 =	0	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

AMENDMENT	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/PATRICIA WARNER/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 09/14/2011

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EXAMINER	
KIM, ANDREW	

ART UNIT	PAPER NUMBER
3716	

MAIL DATE	DELIVERY MODE
09/14/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	11/842,019	MULLEN, JEFFREY D.	
	Examiner	Art Unit	
	ANDREW KIM	3716	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 June 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 August 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Based upon consideration of all the relevant factors with respect to the claim as a whole, Claim(s) 19-23 are held to claim an abstract idea, and [is/are] rejected as ineligible subject matter under 35 U.S.C. 101.

The broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers foms of non-transitory tangible media and transitory propagating signals *per se* in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. ***See*** MPEP 2111.01. When the broadest reasonable interpretation of a claim covers a signal *per se,* the claim must be rejected under 35 U.S.C. 101 as covering non-statutory subject matter. ***See*** In ***re Nuijten,*** 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and ***Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C.* 101, Aug. 24,2009; p. 2.**

Claim(s) 24-28 are illegible subject matter because the claims depend on rejected independent claims and fails to cure the deficiencies.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,287,200 B1 to Sharma.

Regarding claim 19, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61); and a second character, wherein said second character is computer controlled (col. 3, lines 9-61, when the other players move, the character on the display of the computer is moved by the computer using the information received from other devices).

3. Claims 19 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pub. No. 2004/0058732 A1 to Piccionelli.

Regarding claim 19, Piccionelli discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (paragraphs [0011, 0012, 0014, 0015]); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device (paragraphs [0015-0018]); and a second character, wherein said second character is computer controlled (paragraph [0015], the gaming program generates and therefore controls the dinosaur).

Regarding claim 24, Piccionelli discloses providing a third character, wherein said third character is manually controlled (paragraph [0015-0018]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of Super Dodgeball by Nintendo (hereinafter "Super Dodgeball").

Regarding claim 20, Sharma in view of Super Dodgeball discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61); a second character, wherein said second character is computer controlled (col. 3, lines 9-61, when the other players move, the character on the display of the computer is moved by the computer using the information received from other devices); a virtual object, wherein said virtual object is operable of being picked up by said first character (Super Dodgeball: picking up, youtube video at 1:00 and 6:15, and Blocking in the Gamefaq). Sharma substantially discloses the invention as claimed but fails to explicitly disclose picking up a virtual object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches picking up a virtual object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game. One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to maintain the continuity of the game. If the game

simply skipped over the part when a player picks up an object, the game would lose realism and lose player appeal.

7. Claims 20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub. No. 2004/0058732 A1 to Piccionelli in view of Super Dodgeball by Nintendo (hereinafter "Super Dodgeball").

Regarding claim 20, Piccionelli in view of Super Dodgeball discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (paragraphs [0011, 0012, 0014, 0015]); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device (paragraphs [0015-0018]); a second character, wherein said second character is computer controlled (paragraph [0015], the gaming program generates and therefore controls the dinosaur);

Piccionelli substantially discloses the invention as claimed but fails to explicitly disclose picking up a virtual object. Instead, the virtual objects may be used by the player to strike the aforesaid virtual dinosaur (paragraph [0016]). However, in an analogous art, Super Dodgeball teaches a game having a rating of 8.5 out of 10 which teaches picking up a virtual object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: picking up, youtube video at 1:00 and 6:15, and Blocking in the Gamefaq). One of ordinary skill in the art at the time of the invention would

have seen this to be an obvious feature to maintain the continuity of the game. If the game simply skipped over the part when a player picks up an object, the game would lose realism and lose player appeal.

Regarding claim 25, Piccionelli discloses a third character, wherein said third character is manually controlled (paragraph [0015-0018]).

8. Claims 21-23, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of Super Dodgeball by Nintendo (hereinafter "Super Dodgeball").

Regarding claim 21, Sharma in view of Super Dodgeball discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device(col. 3, lines 9-61); an impenetrable object, wherein said first character is stunned for a period of time when said first character contacts said impenetrable object (Super Dodgeball: youtube video whenever a player is hit with a power move the player is stunned on the floor or left panting, and Blocking and energy in the Gamefaq). Sharma substantially discloses the invention as claimed but fails to explicitly disclose stunning a player. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches a stun feature as evidenced by the youtube video of actual footage from the game that was released

in 1998 and a gamefaq describing the same game. One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to add excitement to a game. Stunning a player adds additional strategy to the game and allows the attacker a small advantage. Adding strategy and a stun feature common in many games increases player appeal. Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to add a stun feature into the game.

Regarding claim 22, Sharma in view of Super Dodgeball discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device(col. 3, lines 9-61); and an impenetrable object, wherein the lives of said first game character is reduced when said first game character contacts said impenetrable object (Super Dodgeball: youtube video at 3:00 the team loses their life and floats up as angels, and Energy in the Gamefaq). Sharma substantially discloses the invention as claimed but fails to explicitly disclose losing lives. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches losing lives from contact with an object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game. One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to add excitement and an ending to a game. Since the players are expected to make the other players lose their life, the object of the game is to stay

alive while attacking the other player. If no lives are lost then the game would continue indefinitely and players may lose interest. Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to add the ability to lose life from contact with an object to provide an end to the game before the player loses interest.

Regarding claim 23, Sharma in view of Super Dodgeball discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is determined utilizing a first control signal from a first locating device(col. 3, lines 9-61); an impenetrable object, wherein a number of points is deducted when said first character contacts said impenetrable object (Super Dodgeball: youtube video at 2:47, and Energy in the Gamefaq). Sharma substantially discloses the invention as claimed but fails to explicitly disclose deducting points from contact with an object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches deducting points as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game. One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to show the player a sense of progress when attacking and defending. If the players died on the first hit the game would be over too quickly. In addition, showing a life bar that is decreased from contact adds suspense to the game if opposing players are low on life and they each must defeat the

opponent before being defeated themselves. Therefore, it would have been obvious to one or ordinary skill in the art at the time of the instant invention to include deducting points from contact with an object.

Regarding claims 26-28, Sharma discloses a second character, wherein said second character is manually controlled (col. 3, lines 9-61, the players corresponding to the devices A-D).

Response to Arguments

9. Applicant's arguments filed 6/16/11 have been fully considered but they are not persuasive. Regarding the argument with respect to the computer-controlled characters, the Examiner respectfully asserts that the term, "computer controlled" is lacking any clear distinguishing features therefore the term may be interpreted above as previously discussed. Regarding the super dodgeball reference, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Regarding the age of references, Wiki merely describes the game that was released in 1987. The prior art however is the Gamefaq and youtube video that predates the instant application.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW KIM whose telephone number is (571)272-1691. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on 571-272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dmitry Suhol/
Supervisory Patent Examiner, Art Unit 3716

9/13/2011 /A. K./
Examiner, Art Unit 3716

Notice of References Cited	Application/Control No. 11/842,019	Applicant(s)/Patent Under Reexamination MULLEN, JEFFREY D.	
	Examiner ANDREW KIM	Art Unit 3716	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2004/0058732	03-2004	Piccionelli, Gregory A.	463/042
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	ANDREW KIM	3716

SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
463	2,7,31,40	9/1/2011	AK

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
EAST Text search of PGPUB, USPAT, USOCR, EPO, JPO, DERWENT. See attached search results.	9/1/2011	AK

INTERFERENCE SEARCH			
Class	**Subclass**	**Date**	**Examiner**

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3300	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/09/01 17:01
S1	5686	(463/31,40,42).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/13 23:30
S2	10	"842019".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/13 23:31
S3	47	pick near2 up near2 virtual with object	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:35
S4	42	impenetrable.clm. object.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:44
S5	1	impenetrable.clm. object.clm. mullen.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:44
S6	2	impenetrable.clm. object.clm. game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 01:42
S7	29	impenetrable with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 01:43
S8	130	((live or life) or points) with reducing with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 03:27
S9	1	stun with player with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 15:07
S10	5	"461171".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 16:10
S11	2941	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/15 00:50

S12	1	("6,287,200").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/09/01 11:17
S13	43	("5434904" | "5738583" | "5797085" | "6111541").PN. OR ("6287200").URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2011/09/01 11:18

EAST Search History (Interference)

<This search history is empty>

9/1/2011 5:01:42 PM
C:\Documents and Settings\akim1\My Documents\EAST\Workspaces\11842019_Mullen_LocationBasedGame.wsp

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	Art Unit
	ANDREW KIM	3716

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	12/15/2010	09/01/2011							
	1	-	-							
	2	-	-							
	3	-	-							
	4	-	-							
	5	-	-							
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	14	-	-							
	15	-	-							
	16	-	-							
	17	-	-							
	18	-	-							
	19	✓	✓							
	20	✓	✓							
	21	✓	✓							
	22	✓	✓							
	23	✓	✓							
	24		✓							
	25		✓							
	26		✓							
	27		✓							
	28		✓							

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Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (10-08)
Approved for use through 11/30/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	11842019	Filing Date	2007-08-20	Docket Number (if applicable)	JDM/005 CON7	Art Unit	3716
First Named Inventor	Jeffrey D. Mullen			Examiner Name	Andrew Kim		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 503855

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☐ Patent Practitioner Signature

☒ Applicant Signature

PTO/SB/30EFS (10-08)
Approved for use through 11/30/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Applicant Signature			
Applicant 1		Remove	
Signature	/Jeffrey D. Mullen/	Date (YYYY-MM-DD)	2012-03-14
Name	Jeffrey D. Mullen		
Click ADD for additional Applicant Signature		Add	

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

JDM/005 CON7

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	11/842,019
Confirmation No.	:	2744
Filed	:	August 20, 2007
For	:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
Group Art Unit	:	3716
Examiner	:	Andrew Kim

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pittsburgh, PA 15232
March 13, 2012

REPLY TO OFFICE ACTION

Sir:

This is in response to the Office Action dated September 13, 2011. A three-month extension of time and a Request for Continued Examinatoin is applicable hereto and is being submitted herewith. In response to the Office Action, applicant amends the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (cancelled)

19. (currently amended) A computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

a second character, wherein said second character is computer controlled via artificial intelligence.

20. (currently amended) A computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device;

a second character, wherein said second character is computer controlled via artificial intelligence; and

a virtual object, wherein said virtual object is operable of being picked up by said first character.

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21. (currently amended) A computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein said first character is stunned for a period of time when said first character contacts said impenetrable object.

22. (currently amended) A computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein the lives of said first game character is reduced when said first game character contacts said impenetrable object.

23. (currently amended) A computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a

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display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein a number of points is deducted when said first game character contacts said impenetrable object.

24. (previously presented) The computer-readable medium of claim 19, further comprising program logic for providing a third character, wherein said third character is manually controlled.

25. (previously presented) The computer-readable medium of claim 20, further comprising program logic for providing a third character, wherein said third character is manually controlled.

26. (previously presented) The computer-readable medium of claim 21, further comprising program logic for providing a second character, wherein said second character is manually controlled.

27. (previously presented) The computer-readable medium of claim 22, further comprising program logic for providing a second character, wherein said second character is manually controlled.

28. (previously presented) The computer-readable medium of claim 23, further comprising program logic for providing a second character, wherein said second character is manually controlled.

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REMARKS/ARGUMENTS

Summary of Office Action

Claims 19-23 were pending in the application.

Claims 19-23 were rejected under 35 U.S.C. 101.

Claims 19 was rejected under 35 U.S.C. 102(b) as being anticipated by Sharma U.S. Patent No. 6,287,200 (hereinafter “Sharma”).

Claims 19 and 24 were rejected under 35 U.S.C. 102(e) as being anticipated by Piccionelli U.S. Patent Application Publication No. 2004/0058732 (hereinafter “Piccionelli”).

Claims 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,278,200 to Sharma in view of Super Dodgeball by Nintendo (hereinafter “Super Dodgeball”).

Claims 20 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Piccionelli in view of Super Dodgeball.

Claims 21-23 and 26-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,278,200 to Sharma in view of Super Dodgeball.

Summary of Applicant's Amendments

Applicant has amended claims 19-23 without prejudice and solely in order to expedite prosecution.

Applicant traverses the Examiner's rejections. Applicant reserves the right to claim any subject matter lost by any claim amendment or cancellation, or any subject matter included in the present application, in one or more continuation or divisional applications.

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Applicant's Response to the
Rejections Under 35 U.S.C. § 101

Claims 19-23 was rejected under 35 U.S.C. 101.

Applicant has amended claims 19-23 to include a virtual playfield that is displayed on a display and is determined utilizing a first control signal from a device.

Accordingly, applicant hereby respectfully requests that the Examiner's rejection of claim 19 under 35 U.S.C. 101 be withdrawn.

Applicant's Response to the
Rejections Under 35 U.S.C. § 102(b)

Sharma

Claims 19 was rejected under 35 U.S.C. 102(b) as being anticipated by Sharma.

Applicant's invention of claim 19 includes a virtual playfield, a first character, where the location of the first character in the virtual playfield is determined utilizing a first control signal from a first locating device, and a second character, where the second character is computer controlled.

The Examiner stated:

> "computer controlled … lacking … features"
> (Office Action, Page 10)

Computer controlled is computer controlled. However, without prejudice and solely in order to expedite prosecution, applicant has amended the claim to include computer controlled via artificial intelligence.

Sharma does not show or suggest applicant's invention of claim 19 that includes a second character that is computer controlled. Sharma's game requires all players to use devices to provide GPS coordinates. An external

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device can used to display an interactive virtual game for a participating mobile device user on an external device. Displaying a game on an external device is not a computer controlled character.

Accordingly, Sharma does not show or suggest applicant's invention of claim 19 that includes a second character that is computer controlled. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 19 be withdrawn.

Piccionelli

Claims 19 and 24 were rejected under 35 U.S.C. 102(e) as being anticipated by Piccionelli.

Piccionelli does not show or suggest applicant's invention of claim 19 that includes a second character that is computer controlled.

Accordingly, Piccionelli does not show or suggest applicant's invention of claim 19 that includes a second character that is computer controlled. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 19 be withdrawn.

Applicant's Response to the Sharma Rejections Under 35 U.S.C. § 103(a)

Claims 20-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,278,200 to Sharma in view of Super Dodgeball.

Claim 20

Applicant's invention of claim 20 includes a second character that is computer controlled. As shown above in connection with applicant's arguments for the

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patentability of claim 19, Sharma does not show or suggest this feature. Moreover, neither Sharma nor Super Dodgeball, used either alone or in combination, show or suggest applicant's invention of claim 20 that includes such a feature. Accordingly, applicant respectfully requests that the Examiner's rejection be withdrawn.

Furthermore, Super Dodgeball is irrelevant as a reference. Super Dodgeball merely alleges a traditional game. Such a reference is so far removed from applicant's invention that not even a single part of the reference is relevant. Particularly, such a traditional game is not a location-based game. In fact, the Examiner's alleged NES game directly teaches away from a location-based game. The architecture of the game play is directly opposed to that of a location-based game. The Examiner is merely using hindsight reconstruction to eviscerate the spirit of Super Dodgeball - as well as Sharma - and merely creates an inoperable game that is neither shown nor suggested by the individual games.

Moreover, video games have been around for almost forty years. Accordingly, the fact that applicant's invention was not provided during such a long period of game development is a bona fide showing of patentability.

Furthermore, the Examiner cannot use any traditional game as art that is not applicant's invention of a location-based game. Such references are irrelevant references that cannot be combined, except in hindsight, and would do nothing other than eviscerate the spirit of the individual games and create an inoperable game neither shown nor suggested by the individual games.

The Examiner cannot pick and chose unrelated elements of unrelated references and put them together, in

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hindsight, to create entirely new devices neither shown nor suggested by the individual references. In doing so, the Examiner merely creates an inoperable device, in hindsight, that eviscerates the spirit of the individual references.

In this manner, neither Sharma nor Super Dodgeball, used either alone or in combination, shows or suggests applicant's invention of claim 20. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 20 be withdrawn.

Claims 21-23

As shown above, claim 20 is patentable. Claims 21-23 includes features similar to features of claim 20. Furthermore, as shown above in connection for the arguments of patentability for claim 20, Super Dodgeball is not a proper reference and also cannot be combined with Sharma.

Furthermore Super Dodgeball is an irrelevant references that cannot be combined, except in hindsight, and would do nothing other than eviscerate the spirit of the individual games and create an inoperable game neither shown nor suggested by the individual games.

The Examiner cannot pick and chose unrelated elements of unrelated references and put them together, in hindsight, to create entirely new devices neither shown nor suggested by the individual references. In doing so, the Examiner merely creates an inoperable device, in hindsight, that eviscerates the spirit of the individual references.

Accordingly, applicant respectfully submits that claims 21-23 are also patentable. In this manner, applicant respectfully requests that the Examiner's rejections be withdrawn.

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Applicant's Response to the Piccionelli Rejections Under 35 U.S.C. § 103(a)

Claims 20 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Piccionelli in view of Super Dodgeball.

Piccionelli does not show or suggest applicant's invention of claim 20 that includes a second character that is computer controlled. Super Dodgeball does not correct for this deficiency.

The Examiner cannot pick and chose unrelated elements of unrelated references and put them together, in hindsight, to create entirely new devices neither shown nor suggested by the individual references. In doing so, the Examiner merely creates an inoperable device, in hindsight, that eviscerates the spirit of the individual references.

In this manner, neither Piccionelli nor Super Dodgeball, used either alone or in combination, shows or suggests applicant's invention of claim 20. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 20 be withdrawn.

Official Notice Rejections

The rejections made by the Examiner herein appear to have been rejected in view of Official Notice. Any rejection that does not show each and every element of a claim in one or more references is an inadequate rejection. For rejections under 35 U.S.C. § 103(a), the Examiner has the burden of showing each and every element of applicant's invention in the prior art combination. If the Examiner is taking Official Notice, MPEP § 2144.03 requires that the facts of which notice are being taken be capable of instant

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and unquestionable demonstration as being well known in the art. *See In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). Applicant believes that the "facts" of which the Examiner may have taken Official Notice do not meet that standard, and invoke his right under MPEP § 2144.03 to have the Examiner provide documentary proof that those facts are actually well known. The Examiner "cannot simply reach conclusions based on its own understanding or experience - or on its assessment of what would be basic knowledge or common sense. Rather, ... [the Examiner] ... must point to some concrete evidence in the record in support of these findings." *In re Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 (Fed. Cir. 2001). If the Examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affadavit or declaration setting forth factual statements and explanation to such a finding. *See* MPEP 2144.03(c). The Examiner cannot make rejections using a reference or combination of references where the references do not show each and every element of a particular claim. Applicant respectfully requests that the Examiner withdraw any rejections that do not show the inclusion of each and every element of a particular claim in a reference or a combination of references.

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Conclusion

Applicant respectfully submits that this application, including the pending claims, is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested.

The Director is hereby authorized to charge any fees required in conjunction with this filing, or credit any overpayment of the same, to Deposit Account No. 50-3855, Order No. JDM/005 CON7.

Respectfully Submitted,

/Jeffrey D. Mullen/
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Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with $0 paid	2253	1	635	635

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for continued examination	2801	1	465	465
		Total in USD ($)		**1100**

Electronic Acknowledgement Receipt

EFS ID:	12298131
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	14-MAR-2012
Filing Date:	20-AUG-2007
Time Stamp:	08:17:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1100
RAM confirmation Number	8066
Deposit Account	503855
Authorized User	MULLEN,JEFFREY D.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)	
Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)	
Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	JDM-05C7--RCE.pdf	697303 7391d76af33c701655c0d0fb9cf3f25f14c9946a	no	3
Warnings:					
Information:					
2		JDM-005C7--Reply.pdf	22045 b73116a97eed261b78f6e8b47840799a94486cec	yes	12

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment Submitted/Entered with Filing of CPA/RCE	1	1
Claims	2	4
Applicant Arguments/Remarks Made in an Amendment	5	12

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32437 becd4378d5dc6261058be2f9e2e8a7ad360ecb61	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	751785		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/842,019	08/20/2007	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	03/14/2012	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 10	Minus	** 20	= 0	X $30 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $125 =	0	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/DORRETTA BROOKS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 06/07/2012

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EXAMINER	
KIM, ANDREW	

ART UNIT	PAPER NUMBER
3716	

MAIL DATE	DELIVERY MODE
06/07/2012	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	11/842,019	MULLEN, JEFFREY D.	
	Examiner	Art Unit	
	ANDREW KIM	3716	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2012*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 August 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Based upon consideration of all the relevant factors with respect to the claim as a whole, Claim(s) 19-28 are held to claim an abstract idea, and [is/are] rejected as ineligible subject matter under 35 U.S.C. 101.

Regarding claims 19-23, the broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media and transitory propagating signals *per se* in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. ***See*** MPEP 2111.01. When the broadest reasonable interpretation of a claim covers a signal *per se,* the claim must be rejected under 35 U.S.C. 101 as covering non-statutory subject matter. ***See*** In ***re Nuijten,*** 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and ***Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C.*** **101, Aug. 24,2009; p. 2.** Amending the claim language to recite a non-transitory computer-readable medium instead of a computer-readable medium (which includes signals) is an option to overcome this rejection.

Claim(s) 24-28 are illegible subject matter because the claims depend on rejected independent claims and fails to cure the deficiencies.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of US Pub. No. 2006/0154710 A1 to Serafat.

Regarding claim 19, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating

device (col. 3, lines 9-61); and a second character, wherein said second character is computer controlled (col. 3, lines 9-61).

Sharma substantially discloses the invention as claimed but fails to explicitly teach that the second character is computer controlled via artificial intelligence, Instead Sharma discloses characters controlled via human inputs. However, in an analogous reference, Serafat teaches using artificial intelligence (Serafat: paragraph [0056]) in mobile gaming (Serafat: paragraph [0054]) to continue a game even in the absence of a player, without the need to interrupt the game itself. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sharma with AI for continuing a multi-player game in case of an absence of a player participating in the game by simulating the participation of the player who is absent.

Regarding claim 24, Sharma discloses a third character, wherein said third character is manually controlled (col. 3, lines 9-61, the players corresponding to the devices A-D).

4. Claims 20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of US Pub. No. 2006/0154710 A1 to Serafat and further in view of Super Dodgeball by Nintendo (hereinafter "Super Dodgeball").

Regarding claim 20, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3,

lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61); a second character, wherein said second character is computer controlled (col. 3, lines 9-61, when the other players move, the character on the display of the computer is moved by the computer using the information received from other devices);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose wherein said virtual object is operable of being picked up by said first character. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches picking up a virtual object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: picking up, youtube video at 1:00 and 6:15, and Blocking in the Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to maintain the continuity of the game. If the game simply skipped over the part when a player picks up an object, the game would lose realism and lose player appeal.

Sharma substantially discloses the invention as claimed but fails to explicitly teach that the second character is computer controlled via artificial intelligence, Instead Sharma discloses computer controlled characters via human inputs. However, in an analogous reference, Serafat teaches using artificial intelligence (Serafat: paragraph [0056]) in mobile gaming (Serafat: paragraph [0054]) to continue a game even in the absence of a player, without the need to

interrupt the game itself. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sharma with AI for continuing a multi-player game in case of an absence of a player participating in the game by simulating the participation of the player who is absent.

5. Regarding claim 25, Sharma discloses a third character, wherein said third character is manually controlled (col. 3, lines 9-61, the players corresponding to the devices A-D).

6. Claims 21-23, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of Super Dodgeball by Nintendo (hereinafter "Super Dodgeball").

Regarding claim 21, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose stunning a player with an impenetrable object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides

and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches a stun feature as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: youtube video whenever a player is hit with a power move the player is stunned on the floor or left panting, and Blocking and energy in the Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to add excitement to a game. Stunning a player adds additional strategy to the game and allows the attacker a small advantage. Adding strategy and a stun feature common in many games increases player appeal. Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to add a stun feature into the game.

Regarding claim 22, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device(col. 3, lines 9-61);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose an impenetrable object, wherein the lives of said first game character is reduced when said first game character contacts said impenetrable object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on

having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches losing lives from contact with an object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: youtube video at 3:00 the team loses their life and floats up as angels, and Energy in the Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to add excitement and an ending to a game. Since the players are expected to make the other players lose their life, the object of the game is to stay alive while attacking the other player. If no lives are lost then the game would continue indefinitely and players may lose interest. Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to add the ability to lose life from contact with an object to provide an end to the game before the player loses interest.

Regarding claim 23, Sharma in view of Super Dodgeball discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device(col. 3, lines 9-61);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose an impenetrable object, wherein a number of points is deducted when said first character contacts said impenetrable object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60).

However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches deducting points as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: youtube video at 2:47, and Energy in the Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to show the player a sense of progress when attacking and defending. If the players died on the first hit the game would be over too quickly. In addition, showing a life bar that is decreased from contact adds suspense to the game if opposing players are low on life and they each must defeat the opponent before being defeated themselves. Therefore, it would have been obvious to one or ordinary skill in the art at the time of the instant invention to include deducting points from contact with an object.

Regarding claims 26-28, Sharma discloses a second character, wherein said second character is manually controlled (col. 3, lines 9-61, the players corresponding to the devices A-D).

Response to Arguments

7. Applicant's arguments filed 3/14/12 have been fully considered but they are not persuasive. Regarding the 101 rejection, amending the claim preamble to recite a non-transitory computer-readable medium is an option to overcome the rejection. Regarding the argument with respect to the computer-controlled characters, the Examiner respectfully asserts that the term, "computer controlled" is lacking any clear distinguishing features therefore the term may be interpreted above as previously discussed. Regarding the Piccionelli reference, the reference is

no longer being used in the office action and therefore remarks related thereto are moot. Regarding the Super Dodgeball reference, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Regarding the Official Notice remarks, the Office action does not use any rejections based on Official Notice.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW KIM whose telephone number is (571)272-1691. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on 571-272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

6/4/2012 /A. K./
Examiner, Art Unit 3716

/Dmitry Suhol/
Supervisory Patent Examiner, Art Unit 3716

Notice of References Cited	Application/Control No. 11/842,019	Applicant(s)/Patent Under Reexamination MULLEN, JEFFREY D.	
	Examiner ANDREW KIM	Art Unit 3716	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2006/0154710	07-2006	Serafat, Reza	463/001
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	ANDREW KIM	3716

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	12/15/2010	09/01/2011	06/03/2012						
	1	-	-	-						
	2	-	-	-						
	3	-	-	-						
	4	-	-	-						
	5	-	-	-						
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	7	-	-	-						
	8	-	-	-						
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	13	-	-	-						
	14	-	-	-						
	15	-	-	-						
	16	-	-	-						
	17	-	-	-						
	18	-	-	-						
	19	✓	✓	✓						
	20	✓	✓	✓						
	21	✓	✓	✓						
	22	✓	✓	✓						
	23	✓	✓	✓						
	24		✓	✓						
	25		✓	✓						
	26		✓	✓						
	27		✓	✓						
	28		✓	✓						

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3781	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/03 19:14
S1	5686	(463/31,40,42).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/13 23:30
S2	10	"842019".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/13 23:31
S3	47	pick near2 up near2 virtual with object	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:35
S4	42	impenetrable.clm. object.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:44
S5	1	impenetrable.clm. object.clm. mullen.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:44
S6	2	impenetrable.clm. object.clm. game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 01:42
S7	29	impenetrable with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 01:43
S8	130	((live or life) or points) with reducing with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 03:27
S9	1	stun with player with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 15:07
S10	5	"461171".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 16:10
S11	2941	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/15 00:50
S12	1	("6,287,200").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/09/01 11:17
S13	43	("5434904" | "5738583" | "5797085" | "6111541").PN. OR ("6287200").URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2011/09/01 11:18
S14	3300	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/09/01 17:01
S15	1	("20060154710").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/03 16:11

EAST Search History (Interference)

< This search history is empty>

6/3/2012 7:14:19 PM
C:\Users\akim1\Documents\EAST\Workspaces\11842019_Mullen_LocationBasedGame.wsp

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	ANDREW KIM	3716

SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
463	2,7,31,40	6/3/2012	AK

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
EAST Text search of PGPUB, USPAT, USOCR, EPO, JPO, DERWENT. See attached search results.	6/3/2012	AK

INTERFERENCE SEARCH			
Class	**Subclass**	**Date**	**Examiner**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	11/842,019
Confirmation No.	:	2744
Filed	:	August 20, 2007
For	:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
Group Art Unit	:	3716
Examiner	:	Andrew Kim

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pittsburgh, PA 15232
December 7, 2012

REPLY TO OFFICE ACTION

Sir:

This is in response to the Office Action dated June 7, 2012. A three-month extension of time is applicable hereto and is being submitted herewith. In response to the Office Action, applicant amends the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (cancelled)

19. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

a second character, wherein said second character is computer controlled via artificial intelligence.

20. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device;

a second character, wherein said second character is computer controlled via artificial intelligence; and

a virtual object, wherein said virtual object is operable of being picked up by said first character.

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21. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein said first character is stunned for a period of time when said first character contacts said impenetrable object.

22. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein the lives of said first game character is reduced when said first game character contacts said impenetrable object.

23. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a

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display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein a number of points is deducted when said first game character contacts said impenetrable object.

24. (currently amended) The non-transitory computer-readable medium of claim 19, further comprising program logic for providing a third character, wherein said third character is manually controlled.

25. (currently amended) The non-transitory computer-readable medium of claim 20, further comprising program logic for providing a third character, wherein said third character is manually controlled.

26. (currently amended) The non-transitory computer-readable medium of claim 21, further comprising program logic for providing a second character, wherein said second character is manually controlled.

27. (currently amended) The non-transitory computer-readable medium of claim 22, further comprising program logic for providing a second character, wherein said second character is manually controlled.

28. (currently amended) The non-transitory computer-readable medium of claim 23, further comprising program logic for providing a second character, wherein said second character is manually controlled.

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REMARKS/ARGUMENTS

Summary of Office Action

Claims 19-28 were pending in the application.

Claims 19-23 were rejected under 35 U.S.C. 101.

Claims 19 was rejected under 35 U.S.C. 102(b) as being anticipated by Sharma U.S. Patent No. 6,287,200 (hereinafter "Sharma") in view of Serafat U.S. Publication No. 2006/0154710 (hereinafter "Serafat").

Claims 20 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma in view of Super Dodgeball.

Claims 21-23 and 26-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,278,200 to Sharma in view of Super Dodgeball.

Summary of Applicant's Amendments

Applicant has amended claims 19-23 without prejudice and solely in order to expedite prosecution.

Applicant traverses the Examiner's rejections. Applicant reserves the right to claim any subject matter lost by any claim amendment or cancellation, or any subject matter included in the present application, in one or more continuation or divisional applications.

Applicant's Response to the Rejections Under 35 U.S.C. § 101

Claims 19-23 was rejected under 35 U.S.C. 101.

Applicant has amended claims 19-23 solely in order to expedite prosecution and without prejudice. Applicant added the word "non-transitory."

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Accordingly, applicant hereby respectfully requests that the Examiner's rejection of claims 19-23, and any claims dependent therefrom, under 35 U.S.C. 101 be withdrawn.

Applicant's Response to the
Rejections Under 35 U.S.C. § 102(b)

Sharma

Claims 19 and 24 was rejected under 35 U.S.C. 102(b) as being anticipated by Sharma and Serafat.

Applicant's invention of claim 19 includes a virtual playfield, a first character, where the location of the first character in the virtual playfield is determined utilizing a first control signal from a first locating device, and a second character, where the second character is computer controlled via artificial intelligence.

The Examiner stated:

> "Sharma … fails to explicitly teach that the second character is computer controlled"
> (Office Action, Page 4)

Serafat does not correct for this deficiency. Sharma's game requires all players to use devices to provide GPS coordinates. Serafat does not. Serafat merely alleges simulating a player. Accordingly, Sharma and Serafat directly teach away from one another. An external device can used to display an interactive virtual game for a participating mobile device user on an external device. Displaying a game on an external device is not a computer controlled character. The Examiner cannot pick and choose unrelated elements of unrelated applications and stitch them together, in hindsight, to form a new device neither shown nor suggested by the individual devices.

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Accordingly, Sharma does not show or suggest applicant's invention of claim 19 that includes a second character that is computer controlled. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 19, and any claim dependent therefrom, be withdrawn.

Applicant's Response to the Sharma Rejections Under 35 U.S.C. § 103(a)

Claims 20-23 and 25-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,278,200 to Sharma in view of Super Dodgeball.

Claim 20

Applicant's invention of claim 20 includes a second character that is computer controlled. As shown above in connection with applicant's arguments for the patentability of claim 19, Sharma does not show or suggest this feature. Moreover, neither Sharma nor Super Dodgeball, used either alone or in combination, show or suggest applicant's invention of claim 20 that includes such a feature. Accordingly, applicant respectfully requests that the Examiner's rejection be withdrawn.

Furthermore, Super Dodgeball is irrelevant as a reference. Super Dodgeball merely alleges a traditional game. Such a reference is so far removed from applicant's invention that not even a single part of the reference is relevant. Particularly, such a traditional game is not a location-based game. In fact, the Examiner's alleged NES game directly teaches away from a location-based game. The architecture of the game play is directly opposed to that of a location-based game. The Examiner is merely using

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hindsight reconstruction to eviscerate the spirit of Super Dodgeball – as well as Sharma – and merely creates an inoperable game that is neither shown nor suggested by the individual games.

Moreover, video games have been around for almost forty years. Accordingly, the fact that applicant's invention was not provided during such a long period of game development is a bona fide showing of patentability.

Furthermore, the Examiner cannot use any traditional game as art that is not applicant's invention of a location-based game. Such references are irrelevant references that cannot be combined, except in hindsight, and would do nothing other than eviscerate the spirit of the individual games and create an inoperable game neither shown nor suggested by the individual games.

The Examiner cannot pick and chose unrelated elements of unrelated references and put them together, in hindsight, to create entirely new devices neither shown nor suggested by the individual references. In doing so, the Examiner merely creates an inoperable device, in hindsight, that eviscerates the spirit of the individual references.

In this manner, neither Sharma nor Super Dodgeball, used either alone or in combination, shows or suggests applicant's invention of claim 20. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 20, and any claims dependent therefrom, be withdrawn.

Claims 21-23

As shown above, claim 20 is patentable. Claims 21-23 includes features similar to features of claim 20. Furthermore, as shown above in connection for the arguments

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of patentability for claim 20, Super Dodgeball is not a proper reference and also cannot be combined with Sharma.

Furthermore Super Dodgeball is an irrelevant references that cannot be combined, except in hindsight, and would do nothing other than eviscerate the spirit of the individual games and create an inoperable game neither shown nor suggested by the individual games.

The Examiner cannot pick and chose unrelated elements of unrelated references and put them together, in hindsight, to create entirely new devices neither shown nor suggested by the individual references. In doing so, the Examiner merely creates an inoperable device, in hindsight, that eviscerates the spirit of the individual references.

Accordingly, applicant respectfully submits that claims 21-23, and any claims dependent therefrom, are also patentable. In this manner, applicant respectfully requests that the Examiner's rejections be withdrawn.

Official Notice Rejections

The rejections made by the Examiner herein appear to have been rejected in view of Official Notice. Any rejection that does not show each and every element of a claim in one or more references is an inadequate rejection. For rejections under 35 U.S.C. § 103(a), the Examiner has the burden of showing each and every element of applicant's invention in the prior art combination. If the Examiner is taking Official Notice, MPEP § 2144.03 requires that the facts of which notice are being taken be capable of instant and unquestionable demonstration as being well known in the art. *See In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). Applicant believes that the "facts" of which the Examiner may have taken Official Notice do not

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meet that standard, and invoke his right under MPEP § 2144.03 to have the Examiner provide documentary proof that those facts are actually well known. The Examiner "cannot simply reach conclusions based on its own understanding or experience - or on its assessment of what would be basic knowledge or common sense. Rather, ... [the Examiner] ... must point to some concrete evidence in the record in support of these findings." *In re Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 (Fed. Cir. 2001). If the Examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affadavit or declaration setting forth factual statements and explanation to such a finding. *See* MPEP 2144.03(c). The Examiner cannot make rejections using a reference or combination of references where the references do not show each and every element of a particular claim. Applicant respectfully requests that the Examiner withdraw any rejections that do not show the inclusion of each and every element of a particular claim in a reference or a combination of references.

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Conclusion

Applicant respectfully submits that this application, including the pending claims, is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested.

The Director is hereby authorized to charge any fees required in conjunction with this filing, or credit any overpayment of the same, to Deposit Account No. 50-3855, Order No. JDM/005 CON7.

Respectfully Submitted,

/Jeffrey D. Mullen/
Jeffrey D. Mullen
Applicant (Reg. No. 52,056)
Customer No. 32733
1310 Riverfront Drive
Pittsburgh, PA 15238
Mobile: (914) 837-7741

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Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with $0 paid	2253	1	645	645

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**645**

Electronic Acknowledgement Receipt

EFS ID:	14407617
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	07-DEC-2012
Filing Date:	20-AUG-2007
Time Stamp:	02:12:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$645
RAM confirmation Number	7743
Deposit Account	503855
Authorized User	MULLEN, JEFFREY D.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		JDM-005C7--Reply.pdf	179175 c5938bd1b3f80dd5a458de87610da8153db392cb	yes	11

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	4
	Applicant Arguments/Remarks Made in an Amendment	5	11

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30769 21a1ec156710ed77cd0c480fb81494b4fd343fcc	no	2

Warnings:

Information:

Total Files Size (in bytes):	209944

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Acknowledgement Receipt

EFS ID:	14407617
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	07-DEC-2012
Filing Date:	20-AUG-2007
Time Stamp:	02:12:44
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Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$645
RAM confirmation Number	7743
Deposit Account	503855
Authorized User	MULLEN, JEFFREY D.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		JDM-005C7--Reply.pdf	179175 c5938bd1b3f80dd5a458de87610da8153db392cb	yes	11

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	4
	Applicant Arguments/Remarks Made in an Amendment	5	11

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30769 21a1ec156710ed77cd0c480fb81494b4fd343fcc	no	2

Warnings:

Information:

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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/842,019	08/20/2007	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 12/07/2012	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 10	Minus	** 20	= 0	X $31 =	0	OR	X $ =	
Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $125 =	0	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

AMENDMENT	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/TERRY MALLOY/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 01/16/2013

JEFFREY D. MULLEN
1310 Riverfront Drive
PITTSBURGH, PA 15238

EXAMINER	
KIM, ANDREW	

ART UNIT	PAPER NUMBER
3716	

MAIL DATE	DELIVERY MODE
01/16/2013	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	11/842,019	MULLEN, JEFFREY D.	
	Examiner	Art Unit	
	ANDREW KIM	3716	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2012*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 August 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Meta Exhibit 1004
Meta v. Mullen - Page 00202

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of US Pub. No. 2006/0154710 A1 to Serafat.

Regarding claim 19, Sharma discloses a non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield (fig. 3, lines 30-67);

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61); and

a second character, wherein said second character is computer controlled via artificial intelligence (col. 3, lines 9-61).

Sharma substantially discloses the invention as claimed but fails to explicitly teach that the second character is computer controlled via artificial intelligence, Instead Sharma discloses characters controlled via human inputs. However, in an analogous reference, Serafat teaches using artificial intelligence (Serafat: paragraph [0056]) in mobile gaming (Serafat: paragraph [0054]) to continue a game even in the absence of a player, without the need to interrupt the game itself. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sharma with AI for continuing a multi-player game in case of an absence of a player participating in the game by simulating the participation of the player who is absent.

Regarding claim 24, Sharma discloses a third character, wherein said third character is manually controlled (col. 3, lines 9-61, the players corresponding to the devices A-D).

4. Claims 20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of US Pub. No. 2006/0154710 A1 to Serafat and further in view of Super Dodgeball by Nintendo (hereinafter "Super Dodgeball").

Regarding claim 20, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61); a second character, wherein said second character is computer controlled (col. 3, lines 9-61, when the other players move, the character on the display of the computer is moved by the computer using the information received from other devices);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose wherein said virtual object is operable of being picked up by said first character. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches picking up a virtual object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: picking up, youtube video at 1:00 and 6:15, and Blocking in the Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to maintain the continuity of the game. If the game simply skipped over the part when a player picks up an object, the game would lose realism and lose player appeal.

Sharma substantially discloses the invention as claimed but fails to explicitly teach that the second character is computer controlled via artificial intelligence, Instead Sharma discloses

computer controlled characters via human inputs. However, in an analogous reference, Serafat teaches using artificial intelligence (Serafat: paragraph [0056]) in mobile gaming (Serafat: paragraph [0054]) to continue a game even in the absence of a player, without the need to interrupt the game itself. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sharma with AI for continuing a multi-player game in case of an absence of a player participating in the game by simulating the participation of the player who is absent.

5. Regarding claim 25, Sharma discloses a third character, wherein said third character is manually controlled (col. 3, lines 9-61, the players corresponding to the devices A-D).

6. Claims 21-23, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of Super Dodgeball by Nintendo (hereinafter "Super Dodgeball").

Regarding claim 21, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose stunning a player with an impenetrable object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches a stun feature as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: youtube video whenever a player is hit with a power move the player is stunned on the floor or left panting, and Blocking and energy in the Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to add excitement to a game. Stunning a player adds additional strategy to the game and allows the attacker a small advantage. Adding strategy and a stun feature common in many games increases player appeal. Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to add a stun feature into the game.

Regarding claim 22, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose an impenetrable object, wherein the lives of said first game character is reduced when said first game character contacts said impenetrable object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches losing lives from contact with an object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: youtube video at 3:00 the team loses their life and floats up as angels, and Energy in the Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to add excitement and an ending to a game. Since the players are expected to make the other players lose their life, the object of the game is to stay alive while attacking the other player. If no lives are lost then the game would continue indefinitely and players may lose interest. Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to add the ability to lose life from contact with an object to provide an end to the game before the player loses interest.

Regarding claim 23, Sharma in view of Super Dodgeball discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said

virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device(col. 3, lines 9-61);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose an impenetrable object, wherein a number of points is deducted when said first character contacts said impenetrable object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches deducting points as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: youtube video at 2:47, and Energy in the Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to show the player a sense of progress when attacking and defending. If the players died on the first hit the game would be over too quickly. In addition, showing a life bar that is decreased from contact adds suspense to the game if opposing players are low on life and they each must defeat the opponent before being defeated themselves. Therefore, it would have been obvious to one or ordinary skill in the art at the time of the instant invention to include deducting points from contact with an object.

Regarding claims 26-28, Sharma discloses a second character, wherein said second character is manually controlled (col. 3, lines 9-61, the players corresponding to the devices A-D).

Response to Arguments

7. Applicant's arguments filed 12/7/12 have been fully considered but they are not persuasive. Regarding the argument with respect to a 102(b) rejection, it should be noted that the office does not rely on anticipation, 102(b), rather the office action only uses 103 rejections. Regarding the combination of Sharma and Serafat, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Although Serafat does not use GPS coordinates, Serafat is still an analogous and combinable reference because both Sharma and Serafat are in the same class 463, and refer to video games. Further, it would have been obvious to an artisan to combine Sharma with AI as desirably taught by Serafat as previously discussed. Regarding claim 20, and the argument with respect to the computer-controlled characters, the Examiner respectfully asserts that the term, "computer controlled" is lacking clear distinguishing features therefore the term may be interpreted in a broad manner as indicated above and as previously discussed. Regarding the Super Dodgeball reference, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention

was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Although the Super Dodgeball reference is not a location-based game in the applicant's definition, Super Dodgeball is still an analogous and combinable reference because both Sharma and Super Dodgeball are in the same class 463, and refer to video games. Further, it would have been obvious to an artisan to combine Sharma with a game such as Super Dodgeball because playing only one game would get stale and less attractive to players. One of ordinary skill in the art would have known to combine location-based gaming with all the popular video games that have proven to be successful in the past. Regarding the Official Notice remarks, the Office action does not use any rejections based on Official Notice.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW KIM whose telephone number is (571)272-1691. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on 571-272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

1/15/2013 /A. K./
Examiner, Art Unit 3716

/Dmitry Suhol/
Supervisory Patent Examiner, Art Unit 3716

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	Art Unit
	ANDREW KIM	3716

SEARCHED			
Class	Subclass	Date	Examiner
463	2,7,31,40	1/13/2013	AK

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Text search of PGPUB, USPAT, USOCR, EPO, JPO, DERWENT. See attached search results.	1/13/2013	AK

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

Meta Exhibit 1004
Meta v. Mullen - Page 00213

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	(("20020090985") or ("20030224855")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/13 20:51
L4	4319	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/13 21:24
S1	5686	(463/31,40,42).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/13 23:30
S2	10	"842019".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/13 23:31
S3	47	pick near2 up near2 virtual with object	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:35
S4	42	impenetrable.clm. object.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:44
S5	1	impenetrable.clm. object.clm. mullen.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:44
S6	2	impenetrable.clm. object.clm. game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 01:42
S7	29	impenetrable with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 01:43
S8	130	((live or life) or points) with reducing with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 03:27
S9	1	stun with player with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 15:07
S10	5	"461171".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 16:10
S11	2941	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/15 00:50
S12	1	("6,287,200").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/09/01 11:17
S13	43	("5434904" | "5738583" | "5797085" | "6111541").PN. OR ("6287200").URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2011/09/01 11:18
S14	3300	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/09/01 17:01
S15	1	("20060154710").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/03 16:11
S16	3781	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/03 19:14

EAST Search History (Interference)

<This search history is empty>

1/13/2013 9:24:44 PM
C:\Users\akim1\Documents\EAST\Workspaces\11842019_Mullen_LocationBasedGame.wsp

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	ANDREW KIM	3716

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	12/15/2010	09/01/2011	06/03/2012	01/13/2013					
	1	-	-	-	-					
	2	-	-	-	-					
	3	-	-	-	-					
	4	-	-	-	-					
	5	-	-	-	-					
	6	-	-	-	-					
	7	-	-	-	-					
	8	-	-	-	-					
	9	-	-	-	-					
	10	-	-	-	-					
	11	-	-	-	-					
	12	-	-	-	-					
	13	-	-	-	-					
	14	-	-	-	-					
	15	-	-	-	-					
	16	-	-	-	-					
	17	-	-	-	-					
	18	-	-	-	-					
	19	✓	✓	✓	✓					
	20	✓	✓	✓	✓					
	21	✓	✓	✓	✓					
	22	✓	✓	✓	✓					
	23	✓	✓	✓	✓					
	24		✓	✓	✓					
	25		✓	✓	✓					
	26		✓	✓	✓					
	27		✓	✓	✓					
	28		✓	✓	✓					

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (10-08)
Approved for use through 11/30/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	11842019	Filing Date	2007-08-20	Docket Number (if applicable)	JDM/005 CON7	Art Unit	3716
First Named Inventor	Jeffrey D. Mullen			Examiner Name	Andrew Kim		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 503855

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☐ Patent Practitioner Signature

☒ Applicant Signature

PTO/SB/30EFS (10-08)
Approved for use through 11/30/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Applicant Signature			
Applicant 1		Remove	
Signature	/Jeffrey D. Mullen/	Date (YYYY-MM-DD)	2013-07-16
Name	Jeffrey D. Mullen		
Click ADD for additional Applicant Signature		Add	

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	11/842,019
Confirmation No.	:	2744
Filed	:	August 20, 2007
For	:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
Group Art Unit	:	3716
Examiner	:	Andrew Kim

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pittsburgh, PA 15232
July 16, 2013

REPLY TO OFFICE ACTION

Sir:

This is in response to the Office Action dated January 16, 2013. A three-month extension of time and a Request for Continued Examination is applicable hereto and is being submitted herewith. In response to the Office Action, applicant amends the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (cancelled)

19. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

a second character, wherein said second character is computer controlled via artificial intelligence.

20. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device;

a second character, wherein said second character is computer controlled via artificial intelligence; and

a virtual object, wherein said virtual object is operable of being picked up by said first character.

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21. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is stunned for a period of time when said first character contacts said impenetrable object.

22. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and the lives of said first game character is reduced when said first game character contacts said impenetrable object.

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23. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and wherein a number of points is deducted when said first game character contacts said impenetrable object.

24. (previously presented) The non-transitory computer-readable medium of claim 19, further comprising program logic for providing a third character, wherein said third character is manually controlled.

25. (previously presented) The non-transitory computer-readable medium of claim 20, further comprising program logic for providing a third character, wherein said third character is manually controlled.

26. (previously presented) The non-transitory computer-readable medium of claim 21, further comprising program logic for providing a second character, wherein said second character is manually controlled.

27. (previously presented) The non-transitory computer-readable medium of claim 22, further comprising

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program logic for providing a second character, wherein said second character is manually controlled.

28. (previously presented) The non-transitory computer-readable medium of claim 23, further comprising program logic for providing a second character, wherein said second character is manually controlled.

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REMARKS/ARGUMENTS

Summary of Office Action

Claims 19-28 were pending in the application.

Claims 19 and 24 was rejected under 35 U.S.C. 102(b) as being anticipated by Sharma U.S. Patent No. 6,287,200 (hereinafter "Sharma") in view of Serafat U.S. Publication No. 2006/0154710 (hereinafter "Serafat").

Claims 20 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma and Serafat in view of Super Dodgeball.

Claims 21-23 and 26-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma in view of Super Dodgeball.

Summary of Applicant's Amendments

Applicant has amended claims 21-23 without prejudice and solely in order to expedite prosecution.

Applicant traverses the Examiner's rejections. Applicant reserves the right to claim any subject matter lost by any claim amendment or cancellation, or any subject matter included in the present application, in one or more continuation or divisional applications.

Applicant's Response to the Rejections Under 35 U.S.C. § 102(b)

Sharma

Claims 19 and 24 was rejected under 35 U.S.C. 102(b) as being anticipated by Sharma and Serafat.

Applicant's invention of claim 19 includes a virtual playfield, a first character, where the location of the first character in the virtual playfield is determined

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utilizing a first control signal from a first locating device, and a second character, where the second character is computer controlled via artificial intelligence.

The Examiner stated:

> "Sharma … fails to explicitly teach that the second character is computer controlled via artificial intelligence"
> (Office Action, Page 3)

Serafat, however, is not able to be combined with Sharma.

Serafat merely discusses simulating a player in a gaming device. Serafat is inoperable to utilize a location. As a result, Serafat is inoperable to provide a computer controlled character that interacts with applicant's invention that includes claim 19 of a first character where the location of the first character is determined utilizing a first control signal from a first locating device.

Stationary video games with have been around for decades. Serafat's engine merely alleges simulating a player to interact with players in stationary video games. Serafat's engine would need to be re-constructed to be combined with Sharma. No motivation, teaching, or suggestion is provided in Sharma or Serafat to do so. And, even if the combination occurred, Serafat's engine would only interact with stationary characters – not a character with a location determined from a locating device.

Similarly, Sharma is inoperable to be combined with Serafat. For example, Sharma requires mobile devices to handshake and for those mobile device participants to take part in the game. As a computer controlled character is not associated with a mobile device, Sharma's architecture is inoperable to include such a feature. As

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per another example, Sharma is precision configured for user controlled devices. Sharma's precision configuration is restricted to a precision process tailored for user controlled devices. Accordingly, Sharma not only teaches away from, but is inoperable to be combined with a simulated player. In fact, adding a simulated player would merely eviscerate the spirit and operability of the Sharma device.

Accordingly, Serafat is inoperable to be combined with Sharma and Sharma is inoperable to be combined with Serafat. Thus, neither Serafat nor Sharma, used either alone or in combination, shows or suggests applicant's invention of claim 19. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 19, and any claim dependent therefrom, be withdrawn.

Applicant's Response to the Sharma
Rejections Under 35 U.S.C. § 103(a)

Claims 20 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma in view of Serafat and further in view of Super Dodgeball.

Claims 21-23 and 26-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma in view of Super Dodgeball.

Claim 20

Applicant's invention of claim 20 includes a second character that is computer controlled. As shown above in connection with applicant's arguments for the patentability of claim 19, the combination of Sharma and Serafat does not show or suggest this feature.

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Super Dodgeball suffers from the same deficiency as Serafat. Furthermore, Super Dodgeball is irrelevant as a reference as Super Dodgeball is a stationary video game. Stationary video games have been around for almost forty years. In this manner, the fact that applicant's invention was not provided during such a long period of game development is a bona fide showing of patentability. A stationary game is not a location-based game. In fact, the Examiner's alleged NES game directly teaches away from a location-based game. The architecture of the game play is directly opposed to that of a location-based game. The Examiner is merely using hindsight reconstruction to eviscerate the spirit of Super Dodgeball – as well as Sharma – and merely creates an inoperable game that is neither shown nor suggested by the individual games.

In this manner, neither Sharma, Serafat, nor Super Dodgeball, used either alone or in combination, shows or suggests applicant's invention of claim 20. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 20, and any claims dependent therefrom, be withdrawn.

Claims 21-23

Without prejudice and solely in order to expedite prosecution, applicant has amended claims 21-23. Amended claims 21-23 include an impenetrable object where a first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on the virtual playfield.

The Examiner stated that Super Dodgeball alleges various impenetrable objects.

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Super Dodgeball, however, is a stationary game. An object in a stationary game does not show or suggest, and is inoperable to provide, a virtual location for an impenetrable object and a physical location, that the locating device is operable to travel through, that correlates to the virtual location. For at least this reason, a stationary game cannot be combined with a location-based game.

Neither Sharma, nor Super Dodgeball, used either alone or in combination, show or suggest the features of claims 21-23. Accordingly, applicant respectfully submits that claims 21-23, and any claims dependent therefrom, are also patentable. In this manner, applicant respectfully requests that the Examiner's rejections be withdrawn.

Official Notice Rejections

The rejections made by the Examiner herein appear to have been rejected in view of Official Notice. Any rejection that does not show each and every element of a claim in one or more references is an inadequate rejection. For rejections under 35 U.S.C. § 103(a), the Examiner has the burden of showing each and every element of applicant's invention in the prior art combination. If the Examiner is taking Official Notice, MPEP § 2144.03 requires that the facts of which notice are being taken be capable of instant and unquestionable demonstration as being well known in the art. *See In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). Applicant believes that the "facts" of which the Examiner may have taken Official Notice do not meet that standard, and invoke his right under MPEP § 2144.03 to have the Examiner provide documentary proof that those facts are actually well known. The Examiner

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"cannot simply reach conclusions based on its own understanding or experience – or on its assessment of what would be basic knowledge or common sense. Rather, ... [the Examiner] ... must point to some concrete evidence in the record in support of these findings." *In re Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 (Fed. Cir. 2001). If the Examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affadavit or declaration setting forth factual statements and explanation to such a finding. *See* MPEP 2144.03(c). The Examiner cannot make rejections using a reference or combination of references where the references do not show each and every element of a particular claim. Applicant respectfully requests that the Examiner withdraw any rejections that do not show the inclusion of each and every element of a particular claim in a reference or a combination of references.

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Conclusion

Applicant respectfully submits that this application, including the pending claims, is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested.

The Director is hereby authorized to charge any fees required in conjunction with this filing, or credit any overpayment of the same, to Deposit Account No. 50-3855, Order No. JDM/005 CON7.

Respectfully Submitted,

/Jeffrey D. Mullen/
Jeffrey D. Mullen
Applicant (Reg. No. 52,056)
Customer No. 32733
1310 Riverfront Drive
Pittsburgh, PA 15238
Mobile: (914) 837-7741

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Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with $0 paid	2253	1	700	700

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
RCE - 2nd and Subsequent Request	2820	1	850	850
		Total in USD ($)		**1550**

Electronic Acknowledgement Receipt

EFS ID:	16333236
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	16-JUL-2013
Filing Date:	20-AUG-2007
Time Stamp:	17:22:26
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1550
RAM confirmation Number	4500
Deposit Account	503855
Authorized User	MULLEN, JEFFREY D.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees) Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees) Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	JDM-05C7--RCE.pdf	697793 1960b184bcf87bc7786127cd924c29be66cc408c	no	3
Warnings:					
Information:					
2		JDM-005C7--Reply.pdf	181512 084b07dac63f7550b7a700b9454adb93a4b60226	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment Submitted/Entered with Filing of CPA/RCE	1	1
	Claims	2	5
	Applicant Arguments/Remarks Made in an Amendment	6	12

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32357 9b2285af64740aa1df1f7508455b9d7a8f8c79f8	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	911662	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/842,019	08/20/2007	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
			TOTAL			TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

AMENDMENT	07/16/2013	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 10	Minus	** 20	= 0	X $40 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $210 =	0	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/JAMES ELLIOTT/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 08/21/2013

JEFFREY D. MULLEN
1310 Riverfront Drive
PITTSBURGH, PA 15238

EXAMINER	
KIM, ANDREW	

ART UNIT	PAPER NUMBER
3716	

MAIL DATE	DELIVERY MODE
08/21/2013	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/842,019	Applicant(s) MULLEN, JEFFREY D.	
	Examiner ANDREW KIM	Art Unit 3716	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2013*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *19-28* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *19-28* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some * c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

Meta Exhibit 1004
Meta v. Mullen - Page 00239

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/16/13 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of US Pub. No. 2006/0154710 A1 to Serafat.

Regarding claim 19, Sharma discloses a non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield (fig. 3, lines 30-67);

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61); and

a second character, wherein said second character is computer controlled via artificial intelligence (col. 3, lines 9-61).

Sharma substantially discloses the invention as claimed but fails to explicitly teach that the second character is computer controlled via artificial intelligence, Instead Sharma discloses characters controlled via human inputs. However, in an analogous reference, Serafat teaches using artificial intelligence (Serafat: paragraph [0056]) in mobile gaming (Serafat: paragraph [0054]) to continue a game even in the absence of a player, without the need to interrupt the game itself. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sharma with AI for continuing a multi-player game in case of an absence of a player participating in the game by simulating the participation of the player who is absent.

Regarding claim 24, Sharma discloses a third character, wherein said third character is manually controlled (col. 3, lines 9-61, the players corresponding to the devices A-D).

4. Claims 20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of US Pub. No. 2006/0154710 A1 to Serafat and further in view of Super Dodgeball by Nintendo (hereinafter "Super Dodgeball").

Regarding claim 20, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61); a second character, wherein said second character is computer controlled (col. 3, lines 9-61, when the other players move, the character on the display of the computer is moved by the computer using the information received from other devices);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose wherein said virtual object is operable of being picked up by said first character. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches picking up a virtual object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: picking up, youtube video at 1:00 and 6:15, and Blocking in the Gamefaq).

One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to maintain the continuity of the game. If the game simply skipped over the part when a player picks up an object, the game would lose realism and lose player appeal.

Sharma substantially discloses the invention as claimed but fails to explicitly teach that the second character is computer controlled via artificial intelligence, Instead Sharma discloses computer controlled characters via human inputs. However, in an analogous reference, Serafat teaches using artificial intelligence (Serafat: paragraph [0056]) in mobile gaming (Serafat: paragraph [0054]) to continue a game even in the absence of a player, without the need to interrupt the game itself. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sharma with AI for continuing a multi-player game in case of an absence of a player participating in the game by simulating the participation of the player who is absent.

5. Regarding claim 25, Sharma discloses a third character, wherein said third character is manually controlled (col. 3, lines 9-61, the players corresponding to the devices A-D).

6. Claims 21-23, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,287,200 B1 to Sharma in view of Super Dodgeball by Nintendo (hereinafter "Super Dodgeball").

Regarding claim 21, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose stunning a player with an impenetrable object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches a stun feature as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: youtube video whenever a player is hit with a power move the player is stunned on the floor or left panting, and Blocking and energy in the Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to add excitement to a game. Stunning a player adds additional strategy to the game and allows the attacker a small advantage. Adding strategy and a stun feature common in many games increases player appeal. Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to have an impenetrable object with a stun feature into the game. In addition, it would have been inherent that said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield because the impenetrable object exists only in the

virtual world and to physically travel through an object that does not exist in the physical world is not only possible but assured.

Regarding claim 22, Sharma discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (col. 3, lines 9-61);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose an impenetrable object, wherein the lives of said first game character is reduced when said first game character contacts said impenetrable object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches losing lives from contact with an object as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: youtube video at 3:00 the team loses their life and floats up as angels, and Energy in the Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to add excitement and an ending to a game. Since the players are expected to make the other players lose their life, the object of the game is to stay alive while attacking the other player. If no lives are lost then the game would continue indefinitely and

players may lose interest. Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to add the ability to lose life from contact with an object to provide an end to the game before the player loses interest. In addition, it would have been inherent that said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield because the impenetrable object exists only in the virtual world and to physically travel through an object that does not exist in the physical world is not only possible but assured.

Regarding claim 23, Sharma in view of Super Dodgeball discloses a computer-readable medium having program logic provided thereon for providing a location-based game comprising: a virtual playfield (fig. 3, lines 30-67); a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device(col. 3, lines 9-61);

Sharma substantially discloses the invention as claimed but fails to explicitly disclose an impenetrable object, wherein a number of points is deducted when said first character contacts said impenetrable object. Instead, the virtual object is simply contacted by the player to be sent over the net and that a variety of other games may be played (Sharma: col. 3, lines 35-60). However, in an analogous art, Super Dodgeball teaches a game based on having two sides and a middle line similar to volleyball and has a rating of 8.5 out of 10 which teaches deducting points as evidenced by the youtube video of actual footage from the game that was released in 1998 and a gamefaq describing the same game (Super Dodgeball: youtube video at 2:47, and Energy in the

Gamefaq). One of ordinary skill in the art at the time of the invention would have seen this to be an obvious feature to show the player a sense of progress when attacking and defending. If the players died on the first hit the game would be over too quickly. In addition, showing a life bar that is decreased from contact adds suspense to the game if opposing players are low on life and they each must defeat the opponent before being defeated themselves. Therefore, it would have been obvious to one or ordinary skill in the art at the time of the instant invention to include deducting points from contact with an object. In addition, it would have been inherent that said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield because the impenetrable object exists only in the virtual world and to physically travel through an object that does not exist in the physical world is not only possible but assured.

Regarding claims 26-28, Sharma discloses a second character, wherein said second character is manually controlled (col. 3, lines 9-61, the players corresponding to the devices A-D).

Response to Arguments

Applicant's arguments filed 7/16/13 have been fully considered but they are not persuasive. Regarding the argument with respect to a 102(b) rejection, it should be noted that the office does not rely on anticipation, 102(b), rather the office action only uses 103 rejections. Regarding the combination of Sharma and Serafat, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based

upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Although Serafat does not use GPS coordinates, Serafat is still an analogous and combinable reference because both Sharma and Serafat are in the same class 463, and refer to video games. Further, it would have been obvious to an artisan to combine Sharma with AI as desirably taught by Serafat as previously discussed. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Serafat does not teach using GPS coordinates but Sharma does. When combined, Sharma and Serafat teach/make obvious the claimed invention.

7. Regarding claim 20, and the argument with respect to the computer-controlled characters, the Examiner respectfully asserts that the term, "computer controlled" is lacking clear distinguishing features therefore the term may be interpreted in a broad and reasonable manner as indicated above and as previously discussed. Regarding the Super Dodgeball reference, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's

disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Although the Super Dodgeball reference is a stationary video game is not a location-based game in the applicant's definition, Super Dodgeball is still an analogous and combinable reference because both Sharma and Super Dodgeball are in the same class 463, and refer to video games. Further, it would have been obvious to an artisan to combine Sharma with a game such as Super Dodgeball because playing only one game would get stale and less attractive to players. One of ordinary skill in the art would have known to combine location-based gaming with all the popular video games that have proven to be successful in the past.

8. Regarding claims 21-23, although the Super Dodgeball reference is a stationary video game is not a location-based game in the applicant's definition, Super Dodgeball is still an analogous and combinable reference because both Sharma and Super Dodgeball are in the same class 463, and refer to video games. One of ordinary skill in the art would have known to combine location-based gaming with any popular video games that have proven to be successful in the past.

9. Regarding the Official Notice remarks, the Office action does not use any rejections based on Official Notice.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW KIM whose telephone number is (571)272-1691. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on 571-272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

8/20/2013 /A. K./
Examiner, Art Unit 3716

/Dmitry Suhol/
Supervisory Patent Examiner, Art Unit 3716

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	Art Unit
	ANDREW KIM	3716

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	2,7,31,40	8/15/2013	AK

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Text search of PGPUB, USPAT, USOCR, EPO, JPO, DERWENT. See attached search results.	8/15/2013	AK

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

Meta Exhibit 1004
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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	ANDREW KIM	3716

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	12/15/2010	09/01/2011	06/03/2012	01/13/2013	08/15/2013				
	1	-	-	-	-	-				
	2	-	-	-	-	-				
	3	-	-	-	-	-				
	4	-	-	-	-	-				
	5	-	-	-	-	-				
	6	-	-	-	-	-				
	7	-	-	-	-	-				
	8	-	-	-	-	-				
	9	-	-	-	-	-				
	10	-	-	-	-	-				
	11	-	-	-	-	-				
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	15	-	-	-	-	-				
	16	-	-	-	-	-				
	17	-	-	-	-	-				
	18	-	-	-	-	-				
	19	✓	✓	✓	✓	✓				
	20	✓	✓	✓	✓	✓				
	21	✓	✓	✓	✓	✓				
	22	✓	✓	✓	✓	✓				
	23	✓	✓	✓	✓	✓				
	24		✓	✓	✓	✓				
	25		✓	✓	✓	✓				
	26		✓	✓	✓	✓				
	27		✓	✓	✓	✓				
	28		✓	✓	✓	✓				

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4775	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/08/15 10:01
S1	5686	(463/31,40,42).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/13 23:30
S2	10	"842019".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/13 23:31
S3	47	pick near2 up near2 virtual with object	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:35
S4	42	impenetrable.clm. object.clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:44
S5	1	impenetrable.clm. object.clm. mullen.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 00:44
S6	2	impenetrable.clm. object.clm. game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 01:42
S7	29	impenetrable with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 01:43
S8	130	((live or life) or points) with reducing with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 03:27
S9	1	stun with player with object game	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 15:07
S10	5	"461171".ap.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	AND	ON	2010/12/14 16:10
S11	2941	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/12/15 00:50
S12	1	("6,287,200").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/09/01 11:17
S13	43	("5434904" | "5738583" | "5797085" | "6111541").PN. OR ("6287200").URPN.	US-PGPUB; USPAT; USOCR	AND	ON	2011/09/01 11:18
S14	3300	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/09/01 17:01
S15	1	("20060154710").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/03 16:11
S16	3781	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/03 19:14
S17	2	(("20020090985") or ("20030224855")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/13 20:51

S18	4319	(463/2,7,31,40).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/13 21:24

8/15/2013 10:01:44 AM
C:\Users\akim1\Documents\EAST\Workspaces\11842019_Mullen_LocationBasedGame.wsp

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	11/842,019
Confirmation No.	:	2744
Filed	:	August 20, 2007
For	:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
Group Art Unit	:	3716
Examiner	:	Andrew Kim

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pittsburgh, PA 15232
December 23, 2013

REPLY TO OFFICE ACTION

Sir:

This is in response to the Office Action dated August 21, 2013. A one-month extension of time is applicable hereto and is being submitted herewith. In response to the Office Action, applicant amends the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (cancelled)

19. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character.

20. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device;

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a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character; and

a virtual object, wherein said virtual object is operable of being picked up by said first character.

21. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is stunned for a period of time when said first character contacts said impenetrable object.

22. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

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an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and the lives of said first game character is reduced when said first game character contacts said impenetrable object.

23. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and wherein a number of points is deducted when said first game character contacts said impenetrable object.

24. (previously presented) The non-transitory computer-readable medium of claim 19, further comprising program logic for providing a third character, wherein said third character is manually controlled.

25. (previously presented) The non-transitory computer-readable medium of claim 20, further comprising program logic for providing a third character, wherein said third character is manually controlled.

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26. (previously presented) The non-transitory computer-readable medium of claim 21, further comprising program logic for providing a second character, wherein said second character is manually controlled.

27. (previously presented) The non-transitory computer-readable medium of claim 22, further comprising program logic for providing a second character, wherein said second character is manually controlled.

28. (previously presented) The non-transitory computer-readable medium of claim 23, further comprising program logic for providing a second character, wherein said second character is manually controlled.

29. (new) The non-transitory computer-readable medium of claim 19, wherein said first locating device comprises an accelerometer.

30. (new) The non-transitory computer-readable medium of claim 19, wherein said first locating device comprises a global positioning system.

31. (new) The non-transitory computer-readable medium of claim 20, wherein said first locating device comprises an accelerometer.

32. (new) The non-transitory computer-readable medium of claim 20, wherein said first locating device comprises a global positioning system.

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33. (new) The non-transitory computer-readable medium of claim 21, wherein said first locating device comprises an accelerometer.

34. (new) The non-transitory computer-readable medium of claim 21, wherein said first locating device comprises a global positioning system.

35. (new) The non-transitory computer-readable medium of claim 22, wherein said first locating device comprises an accelerometer.

36. (new) The non-transitory computer-readable medium of claim 22, wherein said first locating device comprises a global positioning system.

37. (new) The non-transitory computer-readable medium of claim 23, wherein said first locating device comprises an accelerometer.

38. (new) The non-transitory computer-readable medium of claim 23, wherein said first locating device comprises a global positioning system.

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REMARKS/ARGUMENTS

Summary of Office Action

Claims 19-28 were pending in the application.

Claims 19 and 24 was rejected under 35 U.S.C. 103(a) as being anticipated by Sharma U.S. Patent No. 6,287,200 (hereinafter "Sharma") in view of Serafat U.S. Publication No. 2006/0154710 (hereinafter "Serafat").

Claims 20 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma and Serafat in view of Super Dodgeball.

Claims 21-23 and 26-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma in view of Super Dodgeball.

Summary of Applicant's Amendments

Applicant has added new claims 29-38 without prejudice and solely in order to expedite prosecution.

Applicant has amended claims 19-23 without prejudice and solely in order to expedite prosecution.

Applicant traverses the Examiner's rejections. Applicant reserves the right to claim any subject matter lost by any claim amendment or cancellation, or any subject matter included in the present application, in one or more continuation or divisional applications.

Applicant's Response to the Rejections Under 35 U.S.C. § 102(b)

Sharma and Serafat

Claims 19 and 24 was rejected under 35 U.S.C. 102(b) as being anticipated by Sharma and Serafat.

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Applicant's invention of claim 19 includes a location of the first character in the virtual playfield is determined utilizing a first control signal from a first locating device and a second character that is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling said second character.

The Examiner stated:

> "Sharma … fails to explicitly teach that the second character is computer controlled via artificial intelligence"
> (Office Action, Page 3)

Serafat, however, is irrelevant. Sarafat does not provide applicant's location based game. Sarafat, like many traditional systems, merely discusses a system-simulated character.

Without prejudice and solely to expedite prosecution, applicant has amended claim 19 to include the feature where the artificial intelligence utilizes the first control signal from the first locating device for controlling said second character. Even if the Examiner provides Serafat's simulated character in a location-based game – which the Examiner is not permitted to do due to inoperability/teaching away – the combination would still not show or suggest the feature of claim 19 of an artificial intelligence that utilizes the first control signal from the first locating device for controlling said second character.

Accordingly, neither Serafat nor Sharma, used either alone or in combination, shows or suggests the features of claim 19. Accordingly, applicant respectfully

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requests that the Examiner's rejection of claim 19, and any claim dependent therefrom, be withdrawn.

Applicant's Response to the Sharma Rejections Under 35 U.S.C. § 103(a)

Claims 20 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma in view of Serafat and further in view of Super Dodgeball.

Claims 21-23 and 26-28 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma in view of Super Dodgeball.

Claim 20

Applicant's invention of claim 20 includes a second character that is computer controlled.

Without prejudice and solely in order to expedite prosecution, applicant has amended claim 20. Claim 20 includes where the artificial intelligence utilizes the first control signal from the first locating device for controlling the second character.

As shown above in connection with applicant's arguments for the patentability of claim 19, the combination of Sharma and Serafat does not show or suggest this feature. Super Dodgeball suffers from the same deficiency as Serafat in addition to Super Dodgeball teaching away from Sharma and Serafat.

In this manner, neither Sharma, Serafat, nor Super Dodgeball, used either alone or in combination, shows or suggests applicant's invention of claim 20. Accordingly, applicant respectfully requests that the Examiner's rejection of claim 20, and any claims dependent therefrom, be withdrawn.

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Claims 21-23

Without prejudice and solely in order to expedite prosecution, applicant had previously amended claims 21-23.

Amended claims 21-23 include an impenetrable object where a first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on the virtual playfield.

The Examiner stated:

> "One of ordinary skill in the art would have known to combine location-based gaming with any popular video games" (Office Action, page 11).

First, applicant invokes his right below that the Examiner provide documentary proof of the Examiner's personal knowledge. Second, applicant's claims provide a location-based game with features not shown or suggested by any reference. Merely adding a "popular video game" – which applicant contends is not permissible – would still not do anything to introduce new functionality not shown or suggested by the Examiner's "popular video game."

Regardless, an object in a stationary game does not show or suggest an impenetrable object that the locating device is operable to travel through.

Accordingly, claims 21-23 provide an impenetrable object in a location-based game that the locating device is actually operable to travel through. For at least the feature of an impenetrable object that the locating device is actually operable to travel through, a stationary game cannot be combined with a location-based game to show this feature.

As an additional point, applicant's claim 21 also includes the lives of the first game character is reduced

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when the first game character contacts said impenetrable object, claim 22 includes the lives of the first game character is reduced when the first game character contacts said impenetrable object, and claim 23 includes a number of points is deducted when the first game character contacts said impenetrable object. None of these references show or suggest such features – let alone each feature where the impenetrable is provided so the first locating device is operable to travel through a physical location that correlates to the virtual location of the impenetrable object on the virtual playfield.

Neither Sharma, nor Super Dodgeball, used either alone or in combination, show or suggest the features of claims 21-23. Accordingly, applicant respectfully submits that claims 21-23, and any claims dependent therefrom, are also patentable. In this manner, applicant respectfully requests that the Examiner's rejections be withdrawn.

Official Notice Rejections

The rejections made by the Examiner herein appear to have been rejected in view of Official Notice. Any rejection that does not show each and every element of a claim in one or more references is an inadequate rejection. For rejections under 35 U.S.C. § 103(a), the Examiner has the burden of showing each and every element of applicant's invention in the prior art combination. If the Examiner is taking Official Notice, MPEP § 2144.03 requires that the facts of which notice are being taken be capable of instant and unquestionable demonstration as being well known in the art. *See In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). Applicant believes that the "facts" of which the Examiner may have taken Official Notice do not

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meet that standard, and invoke his right under MPEP § 2144.03 to have the Examiner provide documentary proof that those facts are actually well known. The Examiner "cannot simply reach conclusions based on its own understanding or experience - or on its assessment of what would be basic knowledge or common sense. Rather, ... [the Examiner] ... must point to some concrete evidence in the record in support of these findings." *In re Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 (Fed. Cir. 2001). If the Examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affadavit or declaration setting forth factual statements and explanation to such a finding. *See* MPEP 2144.03(c). The Examiner cannot make rejections using a reference or combination of references where the references do not show each and every element of a particular claim. Applicant respectfully requests that the Examiner withdraw any rejections that do not show the inclusion of each and every element of a particular claim in a reference or a combination of references.

New Claims 28-39

Applicant has added new claims 28-39 without prejudice and solely in order to expedite prosecution. Claims 28-39 depend from one of claims 19-23. As shown above claims 19-23 are patentable. Accordingly, claims 28-39 are patentable for depending from a patentable base claim.

Conclusion

Applicant respectfully submits that this application, including the pending claims, is in condition

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for allowance. Reconsideration and prompt allowance of this application are respectfully requested.

The Director is hereby authorized to charge any fees required in conjunction with this filing, or credit any overpayment of the same, to Deposit Account No. 50-3855, Order No. JDM/005 CON7.

Respectfully Submitted,

/Jeffrey D. Mullen/

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Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with $0 paid	2251	1	100	100

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**100**

Electronic Acknowledgement Receipt

EFS ID:	17749519
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	23-DEC-2013
Filing Date:	20-AUG-2007
Time Stamp:	20:06:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$100
RAM confirmation Number	9035
Deposit Account	503855
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		JDM-005C7--Reply.pdf	185193 8c4fb7a44cf19fd5085a4a8e2134de78781fa154	yes	13

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	6
	Applicant Arguments/Remarks Made in an Amendment	7	13

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30452 0e2d72624c78917c7e67441c4c370a8b96a9d3ab	no	2

Warnings:

Information:

Total Files Size (in bytes):	215645

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/842,019	08/20/2007	

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **12/23/2013**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/Tina J. Barden/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 07/21/2014

JEFFREY D. MULLEN
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EXAMINER	
KIM, KEVIN Y	
ART UNIT	**PAPER NUMBER**
3716	
MAIL DATE	**DELIVERY MODE**
07/21/2014	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/842,019	Applicant(s) MULLEN, JEFFREY D.	
	Examiner Kevin Y. Kim	Art Unit 3716	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/23/13*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *19-38* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *19-38* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

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DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. The present application is being examined under the pre-AIA first to invent provisions.

Based upon consideration of all the relevant factors with respect to the claims as a whole, claim(s) 19-38 are rejected under 35 U.S.C. 101 as being directed to ineligible subject matter. Although the claim(s) are drawn to at least one of the four statutory categories of invention (i.e. process, machine, manufacture, or composition), which would normally be considered within an appropriate statutory category, as has been noted in the recent Supreme Court decisions Bilski v. Kappos, 130 S. Ct. at 3227, *Alice Corp. Pty. Ltd. V. CLS Bank International* , and the Court of Appeals for the Federal Circuit in CyberSource Corp. v. Retail Decisions, Inc., 654 F.3d 1366 (Fed. Cir. 2011), Bancorp Services, L. L. C v Sun Life Assur. Co. of Canada (U.S.), -- F.3d ---, 2012 WL 3037176 (Fed. Circ. 2012) one must look beyond whether the claim falls within a statutory category and determine whether or not the claim is an attempt to patent ineligible subject matter which the courts have proclaimed judicially excepted,

specifically, laws of nature, physical phenomena and abstract ideas. The Supreme Court noted that said decisions are instructive on how to investigate issues of subject matter eligibility and that the question underlying such an investigation is whether or not the claim is an attempt to claim subject matter which has been judicially excepted.

The recently published USPTO interim guidelines (http://www.uspto.gov/patents/announce/interim_alice_guidance.jsp) outline a two part analysis which must be undertaken as it pertains to the concept of an abstract idea.

Part 1 - A determination of whether the claim(s) is/are directed to an abstract idea must be performed.

- Examples of abstract ideas include:
  - Fundamental economic practices;
  - Certain methods of organizing human activities;
  - An idea of itself; and,
  - Mathematical relationships/formulas.

Part 2 - A determination of whether the claim(s) amounts to significantly more than the abstract idea itself.

- Non-limiting or non-exclusive examples of limitations which qualify as "significantly more" include:
  - Improvements in another technology or technical field;
  - Improvements in the functioning of the computer itself;
  - Meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.

- Non-limiting or non-exclusive examples of limitations which fail to qualify as "significantly more" include:
  - Adding the words "apply it" (or equivalent) with an abstract idea, or mere instructions to implement an abstract idea on a computer;

- Requiring no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry.

In the instant application, the claims when analyzed as a whole, are held to be non-statutory because they are considered to be drawn to an abstract idea (displaying the location of characters on a display is considered an idea of itself, a method of human organization, and mathematical relationships/formulas) without any limitation(s) which qualify as "significantly more" than the abstract idea itself, but rather are merely implemented/applied on a computer.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 19, 20, 24, and 25 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Pikmin (with reference to the instruction manual, attached).

6. Re claim 19, Pikmin discloses a non-transitory computer-readable medium having program logic provided thereon for providing a location-based game (Pikmin is a Nintendo Gamecube game running from a Gamecube disc, shown on page 8), comprising:

a virtual playfield (pp. 6, 7, 12, 15, etc. illustrate the virtual playfield comprising

the planet that the character Olimar landed on);

a first character (p. 8, Olimar), wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device (p. 11, Olimar is visible on the ground, and is controlled by control signals from the Gamecube controller on pp. 10 and 11, considered a locating device); and

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character (p. 8, the Pikmin can be called, p. 10, separated by color, p. 11, picked, thrown, or moved as a group, p. 15, wherein the Pikmin are controlled by the computer by means of artificial intelligence. As disclosed on p. 15, while the player may control certain aspects of the Pikmin, the Pikmin are themselves controlled by AI and will decide for themselves what to do based on the object they reach, e.g. fight enemies, break down walls, move obstacles, carry things, and build bridges).

7. Re claim 20, see the rejection to claim 19. Pikmin also discloses a virtual object which is picked up by the first character (p. 16, Pikmin seeds are plucked by Olimar). Furthermore, as disclosed on p. 15, there are objects that Olimar may direct the Pikmin to pick up and move. Thus, the first character is picking up virtual objects (by commanding Pikmin to move it for him).

8. Re claims 24 and 25, Olimar can control up to 100 Pikmin (p. 14) and thus, Pikmin discloses at least a second and third character. And, as disclosed above, Olimar

can directly/manually control certain actions of Pikmin by means of the controller (e.g. throwing or moving the Pikmin as a group with the C Stick, p. 10).

Claim Rejections - 35 USC § 103

9. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 29 and 31 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Pikmin in view of Goschy et al (US 6,545,661 B1).

11. Re the above claims, Pikmin has been discussed, but does not disclose the locating device comprising an accelerometer. Goschy teaches a video game in which the game controller contains a capacitive two-axis accelerometer (fig. 3, 18). This allows the controller to sense tilting motion and control the action of the game character (col. 3, 37-64).}

It would have been obvious to incorporate an accelerometer in the control of a video game in order to allow players to control a character with physical motions mimicking the actions of the character (e.g. throwing motions to throw Pikmin, tilting for aiming, etc.), enhancing player immersion and player excitement.

12. Claims 30 and 32 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Pikmin in view of Aoyama (US 2002/0063655 A1).

13. Re the above claims, Pikmin does not disclose the locating device comprising a global positioning system (GPS). Aoyama teaches a game in which the virtual character's position is controlled based on positional information from GPS satellites (par. [0045]). It would have been obvious to utilize GPS in a video game system in order to incorporate real-life player movement into control of the video game (e.g. a player's movements in real-life would place Olimar in various locations on the planet to find new space objects and Pikmin to control), enhancing player immersion and excitement.

Allowable Subject Matter

14. Due to outstanding 35 U.S.C. 101 rejections, claims 21-23 (and depending claims) remain rejected. However, the examiner is currently unable to find prior art to teach the claims. Therefore, were the 101 rejections to be overcome, the claims would be allowable.

Conclusion

15. Examiner Kevin Y Kim has taken over examining the application. As such, with a change of examiners comes a change of interpretation of prior art and the claims. Applicant is invited to contact Examiner Kim to discuss matters further if needed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is (571)270-3215. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on (571) 272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Y Kim/
Primary Examiner, Art Unit 3716

Notice of References Cited	Application/Control No. 11/842,019	Applicant(s)/Patent Under Reexamination MULLEN, JEFFREY D.	
	Examiner Kevin Y. Kim	Art Unit 3716	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2002/0063655 A1	05-2002	Aoyama, Akihiro	342/357.13
*	B	US-6,545,661 B1	04-2003	Goschy et al.	345/158
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	"Pikmin," December 2, 2001, Nintendo, instruction manual
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	115175	game near3 control$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:13
L2	744523	(accelerometer or GPS or (global near2 position$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
L3	1322	1 with 2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
L4	27265943	@ad<"20030820"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
L5	39	3 and L4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
L6	236361	(physical or real) near4 (location or area)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:36
L7	7216	(correspond$ or correlat$) near4 ((virtual or electronic or video or game) near4 (area or location or place))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
L8	551	6 with 7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
L9	103	8 and 4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
L10	45540	"463".clas.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
L11	3	L10 and 9	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
S1	2	"6287200".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 10:21

S2	2	"20060154710"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 10:35
S3	45540	"463".clas.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 10:59
S4	181796	(virtual or game) near3 (character or player or team or member)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:00
S5	33717	S3 and S4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:00
S6	123484	AI or (artificial adj intelligence)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:02
S7	636154	second near2 (character or member or team)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:02
S8	101	S6 same S7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:02
S9	27265943	@ad<"20030820"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:03
S10	27	S8 and S9	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:05

7/16/2014 12:58:48 PM
C:\Users\kkim4\Documents\EAST\Workspaces\11842019.wsp

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	Art Unit
	ANDREW KIM	3716

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	2,7,31,40	8/15/2013	AK

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Text search of PGPUB, USPAT, USOCR, EPO, JPO, DERWENT. See attached search results.	8/15/2013	AK
NPL search for games with multiple virtual characters, one controlled by AI	7/16/14	KK

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

	/KEVIN Y KIM/ Primary Examiner.Art Unit 3716

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	11/842,019
Confirmation No.	:	2744
Filed	:	August 20, 2007
For	:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
Group Art Unit	:	3716
Examiner	:	Andrew Kim

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pittsburgh, PA 15116
December 21, 2015

REPLY TO OFFICE ACTION

Sir:

This is in response to the Office Action dated July 21, 2014. A three-month extension of time is applicable hereto and is being submitted herewith. In response to the Office Action, applicant amends the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (cancelled)

19. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device that determines a physical location; and

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character.

20. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal

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from a first locating device that determines a physical location;

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character; and

a virtual object, wherein said virtual object is operable of being picked up by said first character.

21. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is stunned for a period of time when said first character contacts said impenetrable object.

22. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a

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display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and the lives of said first game character is reduced when said first game character contacts said impenetrable object.

23. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device; and

an impenetrable object, said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and wherein a number of points is deducted when said first game character contacts said impenetrable object.

24. (previously presented) The non-transitory computer-readable medium of claim 19, further comprising program logic for providing a third character, wherein said third character is manually controlled.

25. (previously presented) The non-transitory computer-readable medium of claim 20, further comprising

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program logic for providing a third character, wherein said third character is manually controlled.

26. (previously presented) The non-transitory computer-readable medium of claim 21, further comprising program logic for providing a second character, wherein said second character is manually controlled.

27. (previously presented) The non-transitory computer-readable medium of claim 22, further comprising program logic for providing a second character, wherein said second character is manually controlled.

28. (previously presented) The non-transitory computer-readable medium of claim 23, further comprising program logic for providing a second character, wherein said second character is manually controlled.

29. (previously presented) The non-transitory computer-readable medium of claim 19, wherein said first locating device comprises an accelerometer.

30. (previously presented) The non-transitory computer-readable medium of claim 19, wherein said first locating device comprises a global positioning system.

31. (previously presented) The non-transitory computer-readable medium of claim 20, wherein said first locating device comprises an accelerometer.

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32. (previously presented) The non-transitory computer-readable medium of claim 20, wherein said first locating device comprises a global positioning system.

33. (previously presented) The non-transitory computer-readable medium of claim 21, wherein said first locating device comprises an accelerometer.

34. (previously presented) The non-transitory computer-readable medium of claim 21, wherein said first locating device comprises a global positioning system.

35. (previously presented) The non-transitory computer-readable medium of claim 22, wherein said first locating device comprises an accelerometer.

36. (previously presented) The non-transitory computer-readable medium of claim 22, wherein said first locating device comprises a global positioning system.

37. (previously presented) The non-transitory computer-readable medium of claim 23, wherein said first locating device comprises an accelerometer.

38. (previously presented) The non-transitory computer-readable medium of claim 23, wherein said first locating device comprises a global positioning system.

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REMARKS/ARGUMENTS

Summary of Office Action

Claims 19-38 were pending in the application.

The Examiner rejected claims 19-38 were rejected under 35 U.S.C. 101 as being directed to ineligible subject matter.

The Examiner noted claims 21-23 were allowable should the 101 rejections be overcome.

The Examiner rejected claims 19, 20, 24, and 25 under 35 U.S.C. 102(b) as being unpatentable under non-patent publication literature Pikmin (hereinafter "Pikmin").

The Examiner rejected claims 29 and 31 under 35 U.S.C. 103(a) as being unpatentable over Pikmin in view of Goschy U.S. Patent No. 6,545,661 (hereinafter "Goschy").

The Examiner rejected claims 30 and 32 under 35 U.S.C. 103(a) as being unpatentable over Pimin in view of Aoyama U.S. Patent Application No. 2002/0063655 (hereinafter "Aoyama").

Summary of Applicant's Amendments

Without prejudice and solely in order to expedite prosecution, applicant has amended claims 19 and 20.

Applicant traverses the Examiner's rejections. Applicant reserves the right to claim any subject matter lost by any claim amendment or cancellation, or any subject matter included in the present application, in one or more continuation or divisional applications.

Applicant's Response to the
Rejections Under 35 U.S.C. § 101

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> The Examiner stated that the claims are non-statory because "they are considered to be drawn to an abstract idea (displaying the location of characters on a display is considered an idea of itself, a method of human organization, and mathematical relationships/formulas) without any limitation(s) which qualify as 'significantly more' than the abstract idea, but rather are merely implemented/applied on a computer." (Office Action, page 4)

Applicant's claims 18-32 are not abstract ideas. As just one example, applicants independent claims include utilizing a first control signal from a first locating device, which is not an abstract idea – or merely human organization applied on a computer.

Accordingly, in light of the foregoing, applicant respectfully requests that the Examiner's rejections of claims 18-32 be withdrawn.

Applicant's Response to the
Allowable Subject Matter In Claims 21-23

The Examiner noted claims 21-23 were allowable should the 35 U.S.C. 101 rejections be overcome. In light of applicant's arguments for the withdrawal of the 101 rejections, applicant respectfully requests that the Examiner place the application in condition for allowance.

Applicant's Response to the
Rejections Under 35 U.S.C. § 102(b)

The Examiner rejected claims 19, 20, 24, and 25 under 35 U.S.C. 102(b) as being unpatentable under non-patent publication literature Pikmin (hereinafter "Pikmin").

Claim 19

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The Examiner stated that "GameCube controller … considered a locating device." (Office Action, page 5).

A GameCube controller is not a locating device. A GameCube controller is just a controller. A controller is not a locating device.

Without prejudice and solely in order to expedite prosecution applicant has amended claim 19 to include a first locating device that determines a physical location. GameCube is merely a stationary device with a controller. GameCube is not a locating device that determines a physical location.

In light of the foregoing, applicant respectfully requests that the Examiner's rejection be withdrawn.

Claim 20

The Examiner stated that "GameCube controller … considered a locating device." (Office Action, page 5).

A GameCube controller is not a locating device. A GameCube controller is just a controller. A controller is not a locating device.

Without prejudice and solely in order to expedite prosecution applicant has amended claim 20 to include a first locating device that determines a physical location. GameCube is merely a stationary device with a controller. GameCube is not a locating device that determines a physical location.

In light of the foregoing, applicant respectfully requests that the Examiner's rejection be withdrawn.

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Applicant's Response to the
Dependent Claim Rejections

The Examiner rejected claims 29 and 31 under 35 U.S.C. 103(a) as being unpatentable over Pikmin in view of Goschy U.S. Patent No. 6,545,661 (hereinafter "Goschy"). The Examiner rejected claims 30 and 32 under 35 U.S.C. 103(a) as being unpatentable over Pimin in view of Aoyama U.S. Patent Application No. 2002/0063655 (hereinafter "Aoyama"). As shown above, the independent claims are patentable. Accordingly, the dependent claims are patentable for depending from rejected independent claims. In light of the foregoing, applicant respectfully submits that the claims are patentable.

Official Notice Rejections

The rejections made by the Examiner herein appear to have been rejected in view of Official Notice. Any rejection that does not show each and every element of a claim in one or more references is an inadequate rejection. For rejections under 35 U.S.C. § 103(a), the Examiner has the burden of showing each and every element of applicant's invention in the prior art combination. If the Examiner is taking Official Notice, MPEP § 2144.03 requires that the facts of which notice are being taken be capable of instant and unquestionable demonstration as being well known in the art. *See In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). Applicant believes that the "facts" of which the Examiner may have taken Official Notice do not meet that standard, and invoke his right under MPEP § 2144.03 to have the Examiner provide documentary proof that those facts are actually well known. The Examiner "cannot simply reach conclusions based on its own

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understanding or experience – or on its assessment of what would be basic knowledge or common sense. Rather, ... [the Examiner] ... must point to some concrete evidence in the record in support of these findings." *In re Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 (Fed. Cir. 2001). If the Examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affadavit or declaration setting forth factual statements and explanation to such a finding. *See* MPEP 2144.03(c). The Examiner cannot make rejections using a reference or combination of references where the references do not show each and every element of a particular claim. Applicant respectfully requests that the Examiner withdraw any rejections that do not show the inclusion of each and every element of a particular claim in a reference or a combination of references.

Conclusion

Applicant respectfully submits that this application, including the pending claims, is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested. The Director is hereby authorized to charge any fees required in conjunction with this filing, or credit any overpayment of the same, to Deposit Account No. 50-3855, Order No. JDM/005 CON7.

Respectfully Submitted,

/Jeffrey D. Mullen/

Jeffrey D. Mullen
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Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	2253	1	700	700
Miscellaneous:				
			Total in USD ($)	**700**

Electronic Acknowledgement Receipt

EFS ID:	21260305
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	21-JAN-2015
Filing Date:	20-AUG-2007
Time Stamp:	04:32:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$700
RAM confirmation Number	9044
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The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		JDM-005C7-V1-Reply.pdf	180242 386bba738d1ec8ea09b010e3834bbe691a6d2a85	yes	11

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	6
	Applicant Arguments/Remarks Made in an Amendment	7	11

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30904 0b4bb98b6ede94341a9ec1e72414a275ed7d10c1	no	2

Warnings:

Information:

Total Files Size (in bytes):	211146

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 11/842,019	Filing Date 08/20/2007	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	01/21/2015	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
	Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/BRENDA MURPHY/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 02/18/2015

JEFFREY D. MULLEN
2212 Hassinger Lane
Glenshaw, PA 15116

EXAMINER	
KIM, KEVIN Y	

ART UNIT	PAPER NUMBER
3716	

MAIL DATE	DELIVERY MODE
02/18/2015	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/842,019	Applicant(s) MULLEN, JEFFREY D.	
	Examiner Kevin Y. Kim	Art Unit 3716	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/21/15*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *19-38* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *19-38* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

Meta Exhibit 1004
Meta v. Mullen - Page 00303

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

2. The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 19-38 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Claim 19, as amended, discloses a first locating device that determines a physical location. However, there is no clarification as to what object's location is being determined, e.g. the player's physical location in the world, the player character's physical location in-game, the location of the gaming machine with respect to other gaming machines, etc.

Clarification is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 19-38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. Claim(s) 19-38 is/are directed to an abstract idea. The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claim only discloses implementing a method of organizing the human activity of people on a field implemented on a general purpose computer. Since the interaction of the physical location in the newly amended claim does not clearly outline the interaction between physical locations and the virtual playfield, the claim remains abstract.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 19, 20, 24, and 25 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Pikmin (with reference to the instruction manual, attached).

8. Re claim 19, Pikmin discloses a non-transitory computer-readable medium having program logic provided thereon for providing a location-based game (Pikmin is a Nintendo Gamecube game running from a Gamecube disc, shown on page 8),

comprising:

a virtual playfield (pp. 6, 7, 12, 15, etc. illustrate the virtual playfield comprising the planet that the character Olimar landed on);

a first character (p. 8, Olimar), wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device that determines a physical location (p. 11, Olimar is visible on the ground, and is controlled by control signals from the Gamecube controller on pp. 10 and 11, considered a locating device, which determines Olimar's physical location in the playfield); and

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character (p. 8, the Pikmin can be called, p. 10, separated by color, p. 11, picked, thrown, or moved as a group, p. 15, wherein the Pikmin are controlled by the computer by means of artificial intelligence. As disclosed on p. 15, while the player may control certain aspects of the Pikmin, the Pikmin are themselves controlled by AI and will decide for themselves what to do based on the object they reach, e.g. fight enemies, break down walls, move obstacles, carry things, and build bridges).

9. Re claim 20, see the rejection to claim 19. Pikmin also discloses a virtual object which is picked up by the first character (p. 16, Pikmin seeds are plucked by Olimar). Furthermore, as disclosed on p. 15, there are objects that Olimar may direct the Pikmin

to pick up and move. Thus, the first character is picking up virtual objects (by commanding Pikmin to move it for him).

10. Re claims 24 and 25, Olimar can control up to 100 Pikmin (p. 14) and thus, Pikmin discloses at least a second and third character. And, as disclosed above, Olimar can directly/manually control certain actions of Pikmin by means of the controller (e.g. throwing or moving the Pikmin as a group with the C Stick, p. 10).

Claim Rejections - 35 USC § 103

11. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 29 and 31 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Pikmin in view of Goschy et al (US 6,545,661 B1).

13. Re the above claims, Pikmin has been discussed, but does not disclose the locating device comprising an accelerometer. Goschy teaches a video game in which the game controller contains a capacitive two-axis accelerometer (fig. 3, 18). This allows the controller to sense tilting motion and control the action of the game character (col. 3, 37-64).}

It would have been obvious to incorporate an accelerometer in the control of a video game in order to allow players to control a character with physical motions

mimicking the actions of the character (e.g. throwing motions to throw Pikmin, tilting for aiming, etc.), enhancing player immersion and player excitement.

14. Claims 30 and 32 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Pikmin in view of Aoyama (US 2002/0063655 A1).

15. Re the above claims, Pikmin does not disclose the locating device comprising a global positioning system (GPS). Aoyama teaches a game in which the virtual character's position is controlled based on positional information from GPS satellites (par. [0045]). It would have been obvious to utilize GPS in a video game system in order to incorporate real-life player movement into control of the video game (e.g. a player's movements in real-life would place Olimar in various locations on the planet to find new space objects and Pikmin to control), enhancing player immersion and excitement.

Allowable Subject Matter

16. Due to outstanding 35 U.S.C. 101 rejections, claims 21-23 (and depending claims) remain rejected. However, the examiner is currently unable to find prior art to teach the claims. Therefore, were the 101 rejections to be overcome, the claims would be allowable.

Response to Arguments

17. Applicant's arguments filed 1/21/15 have been fully considered but they are not persuasive. Due to the indefiniteness introduced by the amendments, the claims remain

an abstract idea, as it is not clear as to how the physical location of an unknown object interacts with the game. Therefore, the examiner has interpreted the physical location being that of the virtual player character's physical location in the game (e.g. Olimar's position in the playfield).

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is (571)270-3215. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on (571) 272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Y Kim/
Primary Examiner, Art Unit 3716

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	Art Unit
	ANDREW KIM	3716

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	2,7,31,40	8/15/2013	AK

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Text search of PGPUB, USPAT, USOCR, EPO, JPO, DERWENT. See attached search results.	8/15/2013	AK
NPL search for games with multiple virtual characters, one controlled by AI	7/16/14	KK

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

Meta Exhibit 1004
Meta v. Mullen - Page 00311

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (10-08)
Approved for use through 11/30/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	11842019	Filing Date	2007-08-20	Docket Number (if applicable)	JDM/005 CON7	Art Unit	3716
First Named Inventor	Jeffrey D. Mullen			Examiner Name	Kevin Kim		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 503855

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☐ Patent Practitioner Signature

☒ Applicant Signature

PTO/SB/30EFS (10-08)
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Applicant Signature			
Applicant 1		Remove	
Signature	/Jeffrey D. Mullen/	Date (YYYY-MM-DD)	2015-07-20
Name	Jeffrey D. Mullen		
Click ADD for additional Applicant Signature		Add	

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	11/842,019
Confirmation No.	:	2744
Filed	:	August 20, 2007
For	:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
Group Art Unit	:	3716
Examiner	:	Andrew Kim

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pittsburgh, PA 15116
July 20, 2015

REPLY TO OFFICE ACTION

Sir:

This is in response to the Office Action dated July 21, 2014. A two-month extension of time and a Request for Continued Examination is applicable hereto and is being submitted herewith. In response to the Office Action, applicant amends the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (cancelled)

19. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device that is based, at least in part, on a physical location determined by said first locating device ~~that determines a physical location~~; and

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is negatively impacted when said first character contacts said impenetrable object.

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20. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device that is based, at least in part, on a physical location determined by said first locating device ~~that determines a physical location~~;

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character; ~~and~~

a virtual object, wherein said virtual object is operable of being picked up by said first character; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is negatively impacted when said first character contacts said impenetrable object.

21. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device that is based, at least in

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part, on a physical location determined by said first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is stunned for a period of time when said first character contacts said impenetrable object.

22. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device that is based, at least in part, on a physical location determined by said first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and the lives of said first game character is reduced when said first game character contacts said impenetrable object.

23. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a

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display and is determined utilizing a first control signal from a first locating device that is based, at least in part, on a physical location determined by said first locating device; and

an impenetrable object, said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and wherein a number of points is deducted when said first game character contacts said impenetrable object.

24. (previously presented) The non-transitory computer-readable medium of claim 19, further comprising program logic for providing a third character, wherein said third character is manually controlled.

25. (previously presented) The non-transitory computer-readable medium of claim 20, further comprising program logic for providing a third character, wherein said third character is manually controlled.

26. (previously presented) The non-transitory computer-readable medium of claim 21, further comprising program logic for providing a second character, wherein said second character is manually controlled.

27. (previously presented) The non-transitory computer-readable medium of claim 22, further comprising program logic for providing a second character, wherein said second character is manually controlled.

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28. (previously presented) The non-transitory computer-readable medium of claim 23, further comprising program logic for providing a second character, wherein said second character is manually controlled.

29. (previously presented) The non-transitory computer-readable medium of claim 19, wherein said first locating device comprises an accelerometer.

30. (previously presented) The non-transitory computer-readable medium of claim 19, wherein said first locating device comprises a global positioning system.

31. (previously presented) The non-transitory computer-readable medium of claim 20, wherein said first locating device comprises an accelerometer.

32. (previously presented) The non-transitory computer-readable medium of claim 20, wherein said first locating device comprises a global positioning system.

33. (previously presented) The non-transitory computer-readable medium of claim 21, wherein said first locating device comprises an accelerometer.

34. (previously presented) The non-transitory computer-readable medium of claim 21, wherein said first locating device comprises a global positioning system.

35. (previously presented) The non-transitory computer-readable medium of claim 22, wherein said first locating device comprises an accelerometer.

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36. (previously presented) The non-transitory computer-readable medium of claim 22, wherein said first locating device comprises a global positioning system.

37. (previously presented) The non-transitory computer-readable medium of claim 23, wherein said first locating device comprises an accelerometer.

38. (previously presented) The non-transitory computer-readable medium of claim 23, wherein said first locating device comprises a global positioning system.

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REMARKS/ARGUMENTS

Summary of Office Action

Claims 19-38 were pending in the application.

The Examiner rejected claims 19-38 were rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112, second paragraph.

The Examiner rejected claims 19-38 were rejected under 35 U.S.C. 101 as being directed to a judicial exception.

The Examiner noted claims 21-23 were allowable should the 101 rejections be overcome.

The Examiner rejected claims 19, 20, 24, and 25 under 35 U.S.C. 102(b) as being unpatentable under non-patent publication literature Pikmin (hereinafter "Pikmin").

The Examiner rejected claims 29 and 31 under 35 U.S.C. 103(a) as being unpatentable over Pikmin in view of Goschy U.S. Patent No. 6,545,661 (hereinafter "Goschy").

The Examiner rejected claims 30 and 32 under 35 U.S.C. 103(a) as being unpatentable over Pimin in view of Aoyama U.S. Patent Application No. 2002/0063655 (hereinafter "Aoyama").

Summary of Applicant's Amendments

Without prejudice, and solely in order to expedite prosecution, applicant has amended claims 19-23.

Applicant traverses the Examiner's rejections. Applicant reserves the right to claim any subject matter lost by any claim amendment or cancellation, or any subject matter included in the present application, in one or more continuation or divisional applications.

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Applicant's Response to the
Allowable Subject Matter In Claims 21-23

The Examiner noted claims 21-23 were allowable should the 35 U.S.C. 101 rejections be overcome.

Applicant has included patentable subject matter included in claims 21, 22, or 23 in claims 19 and 20.

Accordingly, applicant respectfully requests that the Examiner's rejections of claims 19 and 20, and any claims dependent therefrom, be withdrawn.

Applicant's Response to the
Rejections Under 35 U.S.C. § 112

The Examiner stated:

> "claim 19, as amended, discloses a first locating device that determines a physical location. However, there is no clarification as to what object's location is being determined." (Office Action, page 4)

Without prejudice, and solely to expedite prosecution, applicant has amended claims 19 and 20, which were the claims previously amended. Without prejudice, and solely to expedite prosecution, applicant has amended claims 19 and 20 to include a first control signal from a first locating device that is based, at least in part, on a physical location determined by said first locating device.

Accordingly, in light of the foregoing, applicant respectfully requests that the Examiner's rejections of claims 18-32 be withdrawn.

Applicant's Response to the
Rejections Under 35 U.S.C. § 101

The Examiner stated

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> "The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claim only discloses implementing a method of organizing human activity of people on a field implemented on a general purpose computer. Since the interaction of the physical location in the newly amended claim does not clearly outline the interaction between the physical locations and the virtual playfield, the claim remains abstract." (Office Action, page 3)

The Examiner relies upon the Examiner's judicial exception, but then appears to state that the abstraction is due to an indefinitely between the physical location and the virtual playfield.

It is clear that Examiner's claim include patentable subject matter outside a judicial exception of an abstract idea - the Examiner cannot even find prior art for the Examiner's alleged "abstract idea."

Furthermore, applciant's claims include a control signal and a locating device - not a general purpose computer, which - by itself - would not even render an claim as abstract.

However, without prejudice, and solely to expedite prosecution, applicant has amended claims 19-22 to include a first control signal from a first locating device that is based, at least in part, on a physical location determined by said first locating device

Accordingly, in light of the foregoing, applicant respectfully requests that the Examiner's rejections of claims 18-32 be withdrawn.

Applicant's Response to the
Rejections Under 35 U.S.C. § 102(b)

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The Examiner rejected claims 19, 20, 24, and 25 under 35 U.S.C. 102(b) as being unpatentable under non-patent publication literature Pikmin (hereinafter "Pikmin").

Claim 19

The Examiner previously stated that "GameCube controller … considered a locating device." (previous Office Action, page 5).

A GameCube controller is not a locating device. A GameCube controller is just a controller. A controller is not a locating device.

Without prejudice and solely in order to expedite prosecution applicant has amended claim 19 to include an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is negatively impacted when said first character contacts said impenetrable object.

None of the references, used either alone or in combination either show or suggest applicant's claim 19. In light of the foregoing, applicant respectfully requests that the Examiner's rejection be withdrawn.

Claim 20

The Examiner previously stated that "GameCube controller … considered a locating device." (previously Office Action, page 5).

A GameCube controller is not a locating device. A GameCube controller is just a controller. A controller is not a locating device.

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Without prejudice and solely in order to expedite prosecution applicant has amended claim 20 to include a

Without prejudice and solely in order to expedite prosecution applicant has amended claim 19 to include an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is negatively impacted when said first character contacts said impenetrable object.

None of the references, used either alone or in combination either show or suggest applicant's claim 20. In light of the foregoing, applicant respectfully requests that the Examiner's rejection be withdrawn.

Applicant's Response to the
Dependent Claim Rejections

The Examiner rejected claims 29 and 31 under 35 U.S.C. 103(a) as being unpatentable over Pikmin in view of Goschy U.S. Patent No. 6,545,661 (hereinafter "Goschy"). The Examiner rejected claims 30 and 32 under 35 U.S.C. 103(a) as being unpatentable over Pimin in view of Aoyama U.S. Patent Application No. 2002/0063655 (hereinafter "Aoyama"). As shown above, the independent claims are patentable. Accordingly, the dependent claims are patentable for depending from rejected independent claims. In light of the foregoing, applicant respectfully submits that the claims are patentable.

Official Notice Rejections

The rejections made by the Examiner herein appear to have been rejected in view of Official Notice. Any

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rejection that does not show each and every element of a claim in one or more references is an inadequate rejection. For rejections under 35 U.S.C. § 103(a), the Examiner has the burden of showing each and every element of applicant's invention in the prior art combination. If the Examiner is taking Official Notice, MPEP § 2144.03 requires that the facts of which notice are being taken be capable of instant and unquestionable demonstration as being well known in the art. *See In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). Applicant believes that the "facts" of which the Examiner may have taken Official Notice do not meet that standard, and invoke his right under MPEP § 2144.03 to have the Examiner provide documentary proof that those facts are actually well known. The Examiner "cannot simply reach conclusions based on its own understanding or experience - or on its assessment of what would be basic knowledge or common sense. Rather, ... [the Examiner] ... must point to some concrete evidence in the record in support of these findings." *In re Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 (Fed. Cir. 2001). If the Examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affadavit or declaration setting forth factual statements and explanation to such a finding. *See* MPEP 2144.03(c). The Examiner cannot make rejections using a reference or combination of references where the references do not show each and every element of a particular claim. Applicant respectfully requests that the Examiner withdraw any rejections that do not show the inclusion of each and every element of a particular claim in a reference or a combination of references.

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Conclusion

Applicant respectfully submits that this application, including the pending claims, is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested. The Director is hereby authorized to charge any fees required in conjunction with this filing, or credit any overpayment of the same, to Deposit Account No. 50-3855, Order No. JDM/005 CON7.

Respectfully Submitted,

/Jeffrey D. Mullen/

Jeffrey D. Mullen
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Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 2 months with $0 paid	2252	1	300	300
Miscellaneous:				
RCE- 2nd and Subsequent Request	2820	1	850	850
		Total in USD ($)		**1150**

Electronic Acknowledgement Receipt

EFS ID:	22970898
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	20-JUL-2015
Filing Date:	20-AUG-2007
Time Stamp:	23:26:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1150
RAM confirmation Number	7636
Deposit Account	503855
Authorized User	MULLEN, JEFFREY D.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	JDM-005CON7--RCE.pdf	697794 8627b8cee92f0534a3be64e88f6ff7f9c1f5d6c8	no	3
Warnings:					
Information:					
2		JDM-005C7--Reply.pdf	185362 3820c002ff0c8b1d573a104b1f0de0ed4cd373bd	yes	14

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment Submitted/Entered with Filing of CPA/RCE	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	14

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32629 cefb1165975c760a38a625254c0c585eec86bf7c	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	915785	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 11/842,019	Filing Date 08/20/2007	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **07/20/2015**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/ANTJUAN RIVERA/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 08/18/2015

JEFFREY D. MULLEN
2212 Hassinger Lane
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EXAMINER	
KIM, KEVIN Y	

ART UNIT	PAPER NUMBER
3716	

MAIL DATE	DELIVERY MODE
08/18/2015	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/842,019	Applicant(s) MULLEN, JEFFREY D.	
	Examiner Kevin Y. Kim	Art Unit 3716	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/20/15*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *19-38* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *19-38* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

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DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/20/15 has been entered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of 35 U.S.C. 112(b):

> (b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 19-27 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

5. The term "negatively impacted" in claims 19-23 is a relative term which renders the claim indefinite. The term "negatively impacted" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. What one person may consider a negative impact may not necessarily be considered to be negative by another, and as such, it is not clear as to how the first character is to be affected by contacting the impenetrable object. The claim must clearly define what is considered to be a negative impact.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 19-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. Claim(s) 19-27 is/are directed to an abstract idea of management of a location-based game. The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because they amount to no more than the abstract idea being implemented on general purpose computers.

As defined by the MPEP, games defined by rules are considered to be abstract ideas and therefore, judicial exceptions. Additionally, the claimed invention is also

directed to a method of organizing human activity of moving around in a location. The claim describes a virtual playfield and a virtual location of a character based on a physical location determined by a locating device, which merely enables the virtualization of the abstract idea.

While the claims define an abstract idea, certain limitations can qualify a judicial exception as being statutory if they are considered to be "significantly more" than the abstract idea itself. In the instant application, the limitations not directed to the abstract idea are the first locating device and a non-transitory, computer-readable medium. These are considered to be generic computing elements, as no elaboration is made as to what kind of hardware is being used in the application. Locating devices have been present in many different kinds of generic computers in the form of GPS devices, IP addresses assigned by network adapters, Bluetooth addresses, etc. Additionally, a locating device could be considered a game controller, e.g. a joystick, mouse, keyboard, etc., as it provides a change in location of the game character by inputs.

Thus, the computer is a general purpose computer and does not qualify as being significantly more than the abstract idea.

Claim Rejections - 35 USC § 103

8. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 19, 20, 24, and 25 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Pikmin (with reference to the attached manual) in view of Rosenberg et al (US 6,028,593).

10. Re claim 19, Pikmin discloses a non-transitory computer-readable medium having program logic provided thereon for providing a location-based game (Pikmin is a Nintendo Gamecube game running from a Gamecube disc, shown on page 8), comprising:

a virtual playfield (pp. 6, 7, 12, 15, etc. illustrate the virtual playfield comprising the planet that the character Olimar landed on);

a first character (p. 8, Olimar), wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device that determines a physical location (p. 11, Olimar is visible on the ground, and is controlled by control signals from the Gamecube controller on pp. 10 and 11, considered a locating device, which determines Olimar's physical location in the playfield); and

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character (p. 8, the Pikmin can be called, p. 10, separated by color, p. 11, picked, thrown, or moved as a group, p. 15, wherein the Pikmin are controlled by the computer by means of artificial intelligence. As disclosed on p. 15, while the player may control certain aspects of the

Pikmin, the Pikmin are themselves controlled by AI and will decide for themselves what to do based on the object they reach, e.g. fight enemies, break down walls, move obstacles, carry things, and build bridges).

However, while the locating device used by Pikmin could feasibly be interpreted as determining the location of the character based on a physical location determined by the locating device (i.e. the analog control stick moves physically and determines movement of the character), for the sake of argument, the Examiner notes that Pikmin may not necessarily disclose the locating device traveling through a physical location correlating to a virtual location of an impenetrable object on the virtual playfield, negatively impacting the character when the character contacts it.

Rosenberg teaches a method of controlling objects in a virtual playfield, similar to Pikmin (fig. 2, 14). A haptic, physical controller is moved by the player to simulate the movement of a held object in the virtual game environment (see at least fig. 14, where the player holds controller 514 to play a game displayed on screen 504). In the game, a user-controlled simulated object can interact with virtual “walls” that can collide with the user-controlled object (figs. 7a-c, cols. 31-33). As disclosed by Rosenberg, the user controls a physical controller that moves a virtual paddle in the game, and when the virtual paddle collides with obstruction in the virtual game, the controller provides feedback indicating such.

Since the controller directly correlates to the location of the virtual paddle, the physical location of the locating device (controller 514) travels through physical locations that correlate to virtual locations in the game. Among those locations are

impenetrable objects (the virtual walls), which provides both a negative impact on the character in the game in the form of a collision and a blocking of the paddle (col. 32:45-50), and of the actual locating device in the form of haptic feedback.

By implementing a force feedback control system such as the one implemented by Rosenberg in a game like Pikmin, a player would be able to control the position of the in-game characters using a controller with built-in haptic feedback (which the Gamecube controllers possess in the form of vibrating motors) and enhanced motion control in order to increase the immersion and realism of the game. For example, a player could move the Olimar character within the virtual playfield moving a controller in a physical location such as the controller of Rosenberg, 514, and the game would accordingly stop Olimar if he hits a wall and provide feedback in controller 514.

It would have been obvious to implement locating devices that travels through physical locations that correlate to virtual locations in a virtual playfield, including impenetrable objects, in order to increase the realism and immersion of the game by providing force feedback to players based on the location of the controller and character in the game.

11. Re claim 20, see the rejection to claim 19. Pikmin also discloses a virtual object which is picked up by the first character (p. 16, Pikmin seeds are plucked by Olimar). Furthermore, as disclosed on p. 15, there are objects that Olimar may direct the Pikmin to pick up and move. Thus, the first character is picking up virtual objects (by commanding Pikmin to move it for him).

12. Re claims 21-23, see the rejection to claim 19 above.

13. Re claims 24-28, Olimar can control up to 100 Pikmin (p. 14) and thus, Pikmin discloses at least a second and third character. And, as disclosed above, Olimar can directly/manually control certain actions of Pikmin by means of the controller (e.g. throwing or moving the Pikmin as a group with the C Stick, p. 10).

14. Claims 29, 31, 33, 35, and 37 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Pikmin in view of Rosenberg as applied to the above claims, and in further view of Goschy et al (US 6,545,661 B1).

15. Re the above claims, Pikmin has been discussed, but does not disclose the locating device comprising an accelerometer. Goschy teaches a video game in which the game controller contains a capacitive two-axis accelerometer (fig. 3, 18). This allows the controller to sense tilting motion and control the action of the game character (col. 3, 37-64).}

It would have been obvious to incorporate an accelerometer in the control of a video game in order to allow players to control a character with physical motions mimicking the actions of the character (e.g. throwing motions to throw Pikmin, tilting for aiming, etc.), enhancing player immersion and player excitement.

16. Claims 30, 32, 34, 36, and 38 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Pikmin in view of Rosenberg as applied to the above claims, and in further view of Aoyama (US 2002/0063655 A1).

17. Re the above claims, Pikmin does not disclose the locating device comprising a global positioning system (GPS). Aoyama teaches a game in which the virtual character's position is controlled based on positional information from GPS satellites (par. [0045]). It would have been obvious to utilize GPS in a video game system in order to incorporate real-life player movement into control of the video game (e.g. a player's movements in real-life would place Olimar in various locations on the planet to find new space objects and Pikmin to control), enhancing player immersion and excitement.

Response to Arguments

18. Applicant's arguments with respect to the claims have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection. While claims 21-23 and depending claims were previously indicated as containing subject matter that would be allowable upon overcoming the 101 rejections, the Examiner has cited new prior art (Rosenberg) in order to disclose the claimed limitations, and as such, the indication has been withdrawn.

While the Gamecube controller used in the Pikmin game is still considered to be a locating device by the Examiner (due to it directly influencing the location of Olimar in the game by means of the analog sticks), Rosenberg teaches an immersive control system for a game that directly correlates the physical location of the controller with the position of an object representing the player in the virtual game.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is (571)270-3215. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul D'Agostino can be reached on (571) 270-1992. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Y Kim/
Primary Examiner, Art Unit 3716

Notice of References Cited	Application/Control No. 11/842,019	Applicant(s)/Patent Under Reexamination MULLEN, JEFFREY D.	
	Examiner Kevin Y. Kim	Art Unit 3716	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,028,593 A	02-2000	Rosenberg et al.	345/156
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L6	0	(08/664086).APP.	US-PGPUB; USOCR	OR	ON	2015/08/17 12:13
L7	28	08/664086	US-PGPUB; USOCR	OR	ON	2015/08/17 12:13
L8	4566	virtual near3 (wall or barrier)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/17 12:13
L9	21	L8 and 7	US-PGPUB; USOCR	OR	ON	2015/08/17 12:13
L10	10	(US-20060154710-$ or US-20020063655-$).did. or (US-6287200-$ or US-5611731-$ or US-6545661-$ or US-5825308-$ or US-5889951-$ or US-6028593-$ or US-6098458-$).did. or (EP-1062994-$).did.	US-PGPUB; USPAT; DERWENT	OR	ON	2015/08/17 12:49
L11	1	10 and (ai or (artificial near2 intelligence))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2015/08/17 12:49
S1	2	"6287200".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 10:21
S2	2	"20060154710"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 10:35
S3	45540	"463".clas.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 10:59
S4	181796	(virtual or game) near3 (character or player or team or member)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:00
S5	33717	S3 and S4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:00
S6	123484	AI or (artificial adj intelligence)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:02
S7	636154	second near2 (character or member or team)	US-PGPUB; USPAT;	OR	ON	2014/07/16 11:02

			EPO; JPO; DERWENT			
S8	101	S6 same S7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:02
S9	27265943	@ad<"20030820"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:03
S10	27	S8 and S9	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:05
S11	115175	game near3 control$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:13
S12	744523	(accelerometer or GPS or (global near2 position$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
S13	1322	S11 with S12	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
S14	27265943	@ad<"20030820"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
S15	39	S13 and S14	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
S16	236361	(physical or real) near4 (location or area)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:36
S17	7216	(correspond$ or correlat$) near4 ((virtual or electronic or video or game) near4 (area or location or place))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
S18	551	S16 with S17	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
S19	103	S18 and S14	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
S20	45540	"463".clas.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
S21	3	S20 and S19	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37

S22	33342	virtual near2 reality	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/13 13:04
S23	152283	(physical near2 location)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/13 13:04
S24	2973	S22 and S23	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/13 13:04
S25	4565	virtual near3 (wall or barrier)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/13 13:05
S26	195	S24 and S25	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/13 13:05

8/ 17/ 2015 1:01:33 PM
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	Art Unit
	ANDREW KIM	3716

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	2,7,31,40	8/15/2013	AK

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Text search of PGPUB, USPAT, USOCR, EPO, JPO, DERWENT. See attached search results.	8/15/2013	AK
NPL search for games with multiple virtual characters, one controlled by AI	7/16/14	KK
EAST search refresh	8/17/15	KK

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

	/KEVIN Y KIM/ Primary Examiner.Art Unit 3716

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JDM/005 CON7

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	11/842,019
Confirmation No.	:	2744
Filed	:	August 20, 2007
For	:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
Group Art Unit	:	3716
Examiner	:	Andrew Kim

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pittsburgh, PA 15116
February 18, 2016

REPLY TO OFFICE ACTION

Sir:

This is in response to the Office Action dated August 18, 2015. A three-month extension of time is applicable hereto and is being submitted herewith. In response to the Office Action, applicant amends the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (cancelled)

19. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device that is based, at least in part, on a physical location determined by said first locating device; and

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is ~~negatively~~ impacted when said first character contacts said impenetrable object.

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20. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display of a portable device and is determined utilizing a first control signal from a first locating device of said portable device that is based, at least in part, on a physical location determined by said first locating device;

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character;

a virtual object, wherein said virtual object is operable of being picked up by said first character; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is ~~negatively~~ impacted when said first character contacts said impenetrable object.

21. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display of a portable device and is determined utilizing a first control signal from a first locating device of said

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portable device that is based, at least in part, on a physical location determined by said first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is stunned for a period of time when said first character contacts said impenetrable object.

22. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display of a portable device and is determined utilizing a first control signal from a first locating device of said portable device that is based, at least in part, on a physical location determined by said first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and the lives of said first game character is reduced when said first game character contacts said impenetrable object.

23. (currently amended) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

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a first character, wherein the location of said first character in said virtual playfield is displayed on a display of said portable device and is determined utilizing a first control signal from a first locating device of said portable device that is based, at least in part, on a physical location determined by said first locating device; and

an impenetrable object, said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and wherein a number of points is deducted when said first game character contacts said impenetrable object.

24. (previously presented) The non-transitory computer-readable medium of claim 19, further comprising program logic for providing a third character, wherein said third character is manually controlled.

25. (previously presented) The non-transitory computer-readable medium of claim 20, further comprising program logic for providing a third character, wherein said third character is manually controlled.

26. (previously presented) The non-transitory computer-readable medium of claim 21, further comprising program logic for providing a second character, wherein said second character is manually controlled.

27. (previously presented) The non-transitory computer-readable medium of claim 22, further comprising

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program logic for providing a second character, wherein said second character is manually controlled.

28. (previously presented) The non-transitory computer-readable medium of claim 23, further comprising program logic for providing a second character, wherein said second character is manually controlled.

29. (previously presented) The non-transitory computer-readable medium of claim 19, wherein said first locating device comprises an accelerometer.

30. (previously presented) The non-transitory computer-readable medium of claim 19, wherein said first locating device comprises a global positioning system.

31. (previously presented) The non-transitory computer-readable medium of claim 20, wherein said first locating device comprises an accelerometer.

32. (previously presented) The non-transitory computer-readable medium of claim 20, wherein said first locating device comprises a global positioning system.

33. (previously presented) The non-transitory computer-readable medium of claim 21, wherein said first locating device comprises an accelerometer.

34. (previously presented) The non-transitory computer-readable medium of claim 21, wherein said first locating device comprises a global positioning system.

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35. (previously presented) The non-transitory computer-readable medium of claim 22, wherein said first locating device comprises an accelerometer.

36. (previously presented) The non-transitory computer-readable medium of claim 22, wherein said first locating device comprises a global positioning system.

37. (previously presented) The non-transitory computer-readable medium of claim 23, wherein said first locating device comprises an accelerometer.

38. (previously presented) The non-transitory computer-readable medium of claim 23, wherein said first locating device comprises a global positioning system.

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REMARKS/ARGUMENTS

Summary of Office Action

Claims 19-38 were pending in the application.

The Examiner rejected claims 19-27 were rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112, second paragraph.

The Examiner rejected claims 19-27 were rejected under 35 U.S.C. 101 as being directed to a judicial exception.

The Examiner noted claims 21-23 were allowable should the 101 rejections be overcome.

The Examiner rejected claims 19, 20, 24, and 25 under 35 U.S.C. 102(b) as being unpatentable under non-patent publication literature Pikmin (hereinafter "Pikmin") in view of Rosenberg U.S. Patent Application Publication No. 6,028,593 (hereinafter "Rosenberg")

The Examiner rejected claims 29, 31, 33, 35, and 37 under 35 U.S.C. 103(a) as being unpatentable over Pikmin and Rosenberg in view of Goschy U.S. Patent No. 6,545,661 (hereinafter "Goschy").

The Examiner rejected claims 30, 32, 34, 36, and 38 under 35 U.S.C. 103(a) as being unpatentable over Pimkin in view of Aoyama U.S. Patent Application No. 2002/0063655 (hereinafter "Aoyama").

Summary of Applicant's Amendments

Without prejudice and solely in order to expedite prosecution applicant has amended claims 19-23.

Applicant traverses the Examiner's rejections. Applicant reserves the right to claim any subject matter lost by any claim amendment or cancellation, or any subject matter included in the present application, in one or more

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continuation or divisional applications.

Applicant's Response to the
Rejections Under 35 U.S.C. § 112

The Examiner stated:

"The term 'negatively impacted' in claims 19-23 is a relative term…" (Office Action, page 3)

Applicant traverses the Examiner's rejection. The term "negatively impacted" is definite. However, without prejudice, and solely to expedite prosecution, applicant has amended claims 19 and 20. Claims 21-23 do not include the term "negatively impacted." Claims 21-23 are definite. Accordingly, in light of the foregoing, applicant respectfully requests that the Examiner's rejections of claims 18-32 be withdrawn.

Applicant's Response to the
Rejections Under 35 U.S.C. § 101

The Examiner stated

"Claims 19-27 are directed to an abstract idea of management of a location based game." (Office Action, page 3)

The Examiner relies upon the Examiner's judicial exception, but then appears to state that the abstraction is due to management of a location based game. Albeit the claims are definite and are directed to a physical system that operates as a system, the Examiner's alleged "management of a location based game" is not among the specified list of classes for an abstract idea. Accordingly, applicant respectfully requests that the Examiner's rejection be withdrawn. Furthermore, as shown

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above, applicant has amended claims 19 and 20. Accordingly, in light of the foregoing, applicant respectfully requests that the Examiner's rejections of claims 19-27 be withdrawn.

Applicant's Response to the
Rejections Under 35 U.S.C. § 102(b)

The Examiner rejected claims 19, 20, 24, and 25 under 35 U.S.C. 102(b) as being unpatentable under non-patent publication literature Pikmin in view of Rosenberg.

Claim 19

Applicant notes that claims were noted to include allowable subject matter in the Office Action dated February 2, 2015. Without prejudice and solely in order to expedite prosecution applicant previously amended claim 19 to include an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is impacted when said first character contacts said impenetrable object.

The Examiner stated:

> "Pikmin may not necessarily disclose the locating device traveling through a physical location correlating to a virtual location of an impenetrable object on the virtual playfield, negatively impacting the character when the character contacts it" (Office Action, page 6)

Pikmin does not show or suggest many additional features. Pikmin does not show or suggest, for example, features of claim 19 including a location of said first character in a virtual playfield is displayed on a display and is determined utilizing a first control signal from a first

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locating device that is based, at least in part, on a physical location determined by said first locating device locating device that is based, at least in part, on a physical location determined by said first locating.

The Examiner also stated:

> "Rosenberg … controls a physical controller that moves a virtual paddle in the game, and when the virtual paddle collides with obstruction in the virtual game, the controller provides feedback indicating such" (Office Action, page 6)

Rosenberg, however, is not relevant to the features of claim 19. Rosenberg is also not relevant to Pikmin. However, without prejudice and solely to expedite prosecution applicant has amended claim 19 to include the display of a portable device and a locating device of the portable device. Rosenberg, used either alone or in combination, does not shows or suggest claim 19 of a display of a portable device and a locating device of the portable device and an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield. Pikmin also does not show or suggest this feature.

None of the references, used either alone or in combination either show or suggest applicant's claim 19. In light of the foregoing, applicant respectfully requests that the Examiner's rejection be withdrawn.

Claim 20

Applicant notes that claims were noted to include allowable subject matter in the Office Action dated February 2, 2015. Without prejudice and solely in order to expedite prosecution applicant has amended claim 20 to

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include an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is impacted when said first character contacts said impenetrable object.

Furthermore, as shown above, claim 19 is patentable. Claim 20 includes patentable features similar to patentable features included in claim 19. Accordingly, applicant respectfully requests that the rejections of claim 20 be withdrawn.

Moreover, Rosenberg, used either alone or in combination with Pikmin does not show or suggest the features of claim 20 that include a virtual object, wherein said virtual object is operable of being picked up by said first character.

None of the references, used either alone or in combination either show or suggest applicant's claim 20. In light of the foregoing, applicant respectfully requests that the Examiner's rejection be withdrawn.

Claim 21

As shown above, claim 19 is patentable. Claim 21 includes patentable features similar to patentable features included in claim 19. Accordingly, applicant respectfully requests that the rejections of claim 21 be withdrawn.

None of the references, used either alone or in combination either show or suggest applicant's claim 21. In light of the foregoing, applicant respectfully requests that the Examiner's rejection be withdrawn.

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Claim 22

Furthermore, as shown above, claim 19 is patentable. Claim 20 includes patentable features similar to patentable features included in claim 22. Accordingly, applicant respectfully requests that the rejections of claim 22 be withdrawn.

None of the references, used either alone or in combination either show or suggest applicant's claim 22. In light of the foregoing, applicant respectfully requests that the Examiner's rejection be withdrawn.

Claim 23

Furthermore, as shown above, claim 23 is patentable. Claim 20 includes patentable features similar to patentable features included in claim 19. Accordingly, applicant respectfully requests that the rejections of claim 23 be withdrawn.

None of the references, used either alone or in combination either show or suggest applicant's claim 23. In light of the foregoing, applicant respectfully requests that the Examiner's rejection be withdrawn.

Applicant's Response to the
Dependent Claim Rejections

The Examiner rejected claims 29 and 31 under 35 U.S.C. 103(a) as being unpatentable over Pikmin and Rosenberg in view of Goschy U.S. Patent No. 6,545,661 (hereinafter "Goschy"). The Examiner rejected claims 30 and 32 under 35 U.S.C. 103(a) as being unpatentable over Pimkin and Rosenberg in view of Aoyama U.S. Patent Application No. 2002/0063655 (hereinafter "Aoyama"). As shown above, the independent claims are patentable.

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Accordingly, the dependent claims are patentable for depending from rejected independent claims. In light of the foregoing, applicant respectfully submits that the claims are patentable.

Official Notice Rejections

The rejections made by the Examiner herein appear to have been rejected in view of Official Notice. Any rejection that does not show each and every element of a claim in one or more references is an inadequate rejection. For rejections under 35 U.S.C. § 103(a), the Examiner has the burden of showing each and every element of applicant's invention in the prior art combination. If the Examiner is taking Official Notice, MPEP § 2144.03 requires that the facts of which notice are being taken be capable of instant and unquestionable demonstration as being well known in the art. *See In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). Applicant believes that the "facts" of which the Examiner may have taken Official Notice do not meet that standard, and invoke his right under MPEP § 2144.03 to have the Examiner provide documentary proof that those facts are actually well known. The Examiner "cannot simply reach conclusions based on its own understanding or experience - or on its assessment of what would be basic knowledge or common sense. Rather, ... [the Examiner] ... must point to some concrete evidence in the record in support of these findings." *In re Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 (Fed. Cir. 2001). If the Examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affadavit or declaration setting forth factual statements and explanation to such a finding. *See* MPEP

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2144.03(c). The Examiner cannot make rejections using a reference or combination of references where the references do not show each and every element of a particular claim. Applicant respectfully requests that the Examiner withdraw any rejections that do not show the inclusion of each and every element of a particular claim in a reference or a combination of references.

Conclusion

Applicant respectfully submits that this application, including the pending claims, is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested. The Director is hereby authorized to charge any fees required in conjunction with this filing, or credit any overpayment of the same, to Deposit Account No. 50-3855, Order No. JDM/005 CON7.

Respectfully Submitted,

/Jeffrey D. Mullen/

Jeffrey D. Mullen
Applicant (Reg. No. 52,056)
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Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	2253	1	700	700
Miscellaneous:				
			Total in USD ($)	**700**

Electronic Acknowledgement Receipt

EFS ID:	24957807
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	18-FEB-2016
Filing Date:	20-AUG-2007
Time Stamp:	19:38:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$700
RAM confirmation Number	6122
Deposit Account	503855
Authorized User	MULLEN, JEFFREY D.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 CFR 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 CFR 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 CFR 1.19 (Document supply fees)

Charge any Additional Fees required under 37 CFR 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		JDM-005C7--Reply.pdf	188827 6eedffc8c3d961b4d7400722dbef4c1b039c18ef	yes	15

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Claims	2	7
Applicant Arguments/Remarks Made in an Amendment	8	15

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30904 efb22df67ee34bd4c4c433b954af581574e02b6c	no	2

Warnings:

Information:

Total Files Size (in bytes):	219731

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 11/842,019	Filing Date 08/20/2007	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **02/18/2016**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/MARCIA GORDON/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 03/15/2016

JEFFREY D. MULLEN
2212 Hassinger Lane
Glenshaw, PA 15116

EXAMINER
KIM, KEVIN Y

ART UNIT	PAPER NUMBER
3716	

MAIL DATE	DELIVERY MODE
03/15/2016	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/842,019	Applicant(s) MULLEN, JEFFREY D.	
	Examiner Kevin Y. Kim	Art Unit 3716	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/18/16*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *19-27* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *19-27* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

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DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 19-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. Claim(s) 19-27 is/are directed to an abstract idea of management of a location-based game. The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because they amount to no more than the abstract idea being implemented on general purpose computers.

4. As defined by the MPEP, games defined by rules are considered to be abstract ideas and therefore, judicial exceptions. Additionally, the claimed invention is also directed to a method of organizing human activity of moving around in a location. The claim describes a virtual playfield and a virtual location of a character based on a physical location determined by a locating device, which merely enables the virtualization of the abstract idea. The player's physical location correlates to the

location of the virtual character and is affected by in-game impenetrable objects. This is a simulation of a real person being blocked by physical obstructions.

While the claims define an abstract idea, certain limitations can qualify a judicial exception as being statutory if they are considered to be “significantly more” than the abstract idea itself. In the instant application, the limitations not directed to the abstract idea are the first locating device and a non-transitory, computer-readable medium. These are considered to be generic computing elements, as no elaboration is made as to what kind of hardware is being used in the application. Locating devices have been present in many different kinds of generic computers in the form of GPS devices, IP addresses assigned by network adapters, Bluetooth addresses, etc. Additionally, a locating device could be considered a game controller, e.g. a joystick, mouse, keyboard, etc., as it provides a change in location of the game character by inputs. The claims are therefore a combination of well-understood, routine, and conventional activities specified at a high level of generality. While no apparent prior art can be found to specifically perform the claimed game, the invention is one that amounts to a combination of previously known elements that while novel, does not amount to significantly more than the abstract idea.

Thus, the computer is a general purpose computer and does not qualify as being significantly more than the abstract idea.

Response to Arguments

5. Applicant's arguments filed 2/18/16 have been fully considered but they are not persuasive. While “management of a location based game” is not a specific example of the known examples of abstract ideas as dictated by the USPTO guidelines, the already existing examples of abstract ideas in combination with the elements of the claims illustrate that the application is directed to an abstract idea. The claim describes a character whose location is based on a physical location of a locating device held by a player. In the virtual environment, there are impenetrable objects that negatively impact the first character when encountered by said first character. This is an abstract idea, in that the human analog exists in a human walking in the environment and encountering a wall that cannot be walked through. Implementing a virtual version of a human activity is considered a method of organizing human activity, and the claims are a clear example of such a human activity (e.g. exploring, moving about, and being unable to pass through impenetrable objects). Since the computer used is a generic computer with no specific requirements, the computer is seen as simply a vehicle for implementing the abstract idea on a computer and cannot be significantly more than the abstract idea.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is (571)270-3215. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on (571) 272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Y Kim/
Primary Examiner, Art Unit 3716

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	Art Unit
	ANDREW KIM	3716

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	2,7,31,40	8/15/2013	AK

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Text search of PGPUB, USPAT, USOCR, EPO, JPO, DERWENT. See attached search results.	8/15/2013	AK
NPL search for games with multiple virtual characters, one controlled by AI	7/16/14	KK
EAST search refresh	8/17/15	KK

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (10-08)
Approved for use through 11/30/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	11842019	Filing Date	2007-08-20	Docket Number (if applicable)	JDM/005 CON7	Art Unit	3716
First Named Inventor	Jeffrey D. Mullen			Examiner Name	Andrew Kim		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Patent Practitioner Signature

X Applicant Signature

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (10-08)
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Applicant Signature			
Applicant 1		Remove	
Signature	/Jeffrey D. Mullen/	Date (YYYY-MM-DD)	2016-09-15
Name	Jeffrey D. Mullen		
Click ADD for additional Applicant Signature		Add	

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	11/842,019
Confirmation No.	:	2744
Filed	:	August 20, 2007
For	:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
Group Art Unit	:	3716
Examiner	:	Andrew Kim

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pittsburgh, PA 15116
September 15, 2016

REPLY TO OFFICE ACTION

Sir:

This is in response to the Office Action dated August 18, 2015. A three-month extension of time and a Request for Continued Examination is applicable hereto and is being submitted herewith. In response to the Office Action, applicant amends the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 5 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-18. (cancelled)

19. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device that is based, at least in part, on a physical location determined by said first locating device; and

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is impacted when said first character contacts said impenetrable object.

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20. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display of a portable device and is determined utilizing a first control signal from a first locating device of said portable device that is based, at least in part, on a physical location determined by said first locating device;

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character;

a virtual object, wherein said virtual object is operable of being picked up by said first character; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is impacted when said first character contacts said impenetrable object.

21. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display of a portable device and is determined utilizing a first control signal from a first locating device of said

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portable device that is based, at least in part, on a physical location determined by said first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is stunned for a period of time when said first character contacts said impenetrable object.

22. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

a first character, wherein the location of said first character in said virtual playfield is displayed on a display of a portable device and is determined utilizing a first control signal from a first locating device of said portable device that is based, at least in part, on a physical location determined by said first locating device; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and the lives of said first game character is reduced when said first game character contacts said impenetrable object.

23. (previously presented) A non-transitory computer-readable medium having program logic provided thereon for providing a location-based game comprising:

a virtual playfield;

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a first character, wherein the location of said first character in said virtual playfield is displayed on a display of said portable device and is determined utilizing a first control signal from a first locating device of said portable device that is based, at least in part, on a physical location determined by said first locating device; and

an impenetrable object, said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and wherein a number of points is deducted when said first game character contacts said impenetrable object.

24. (previously presented) The non-transitory computer-readable medium of claim 19, further comprising program logic for providing a third character, wherein said third character is manually controlled.

25. (previously presented) The non-transitory computer-readable medium of claim 20, further comprising program logic for providing a third character, wherein said third character is manually controlled.

26. (previously presented) The non-transitory computer-readable medium of claim 21, further comprising program logic for providing a second character, wherein said second character is manually controlled.

27. (previously presented) The non-transitory computer-readable medium of claim 22, further comprising

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program logic for providing a second character, wherein said second character is manually controlled.

28. (previously presented) The non-transitory computer-readable medium of claim 23, further comprising program logic for providing a second character, wherein said second character is manually controlled.

29. (previously presented) The non-transitory computer-readable medium of claim 19, wherein said first locating device comprises an accelerometer.

30. (previously presented) The non-transitory computer-readable medium of claim 19, wherein said first locating device comprises a global positioning system.

31. (previously presented) The non-transitory computer-readable medium of claim 20, wherein said first locating device comprises an accelerometer.

32. (previously presented) The non-transitory computer-readable medium of claim 20, wherein said first locating device comprises a global positioning system.

33. (previously presented) The non-transitory computer-readable medium of claim 21, wherein said first locating device comprises an accelerometer.

34. (previously presented) The non-transitory computer-readable medium of claim 21, wherein said first locating device comprises a global positioning system.

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35. (previously presented) The non-transitory computer-readable medium of claim 22, wherein said first locating device comprises an accelerometer.

36. (previously presented) The non-transitory computer-readable medium of claim 22, wherein said first locating device comprises a global positioning system.

37. (previously presented) The non-transitory computer-readable medium of claim 23, wherein said first locating device comprises an accelerometer.

38. (previously presented) The non-transitory computer-readable medium of claim 23, wherein said first locating device comprises a global positioning system.

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REMARKS/ARGUMENTS

Summary of Office Action

Claims 19-38 were pending in the application.

The Examiner rejected claims 19-27 were rejected under 35 U.S.C. 101 as being directed to a judicial exception.

Summary of Applicant's Amendments

Applicant traverses the Examiner's rejections. Applicant reserves the right to claim any subject matter lost by any claim amendment or cancellation, or any subject matter included in the present application, in one or more continuation or divisional applications.

Applicant's Response to the Rejections Under 35 U.S.C. § 101

The Examiner stated

> "Claims 19-27 are directed to an abstract idea of management of a location based game." (Office Action, page 3)

First, applicant notes with appreciation that after that applicant's claims are in condition of allowance over patents that are allegedly, like the present application, not covered by a judicial exception.

The Examiner relies upon the Examiner's judicial exception, but then appears to state that the abstraction is due to management of a location based game.

Applicant and Examiner have instructions from the USPTO stating that positioning is not a judicially created

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example. First, however, the USPTO advises an abstract idea is:

> "such as an idea that could be done by a human analog (*i.e.*, by hand or by merely thinking." (USPTO July 2015 Update: Subject Matter Eligibility, page 7)

Applicant's location based structures cannot be done by a human analog and no argument can be made as such. Accordingly, for this reason alone, the present application is patentable.

The USPTO advises:

> "if the elements and functions are beyond those recognized … by the courts as being well-understood, routine or conventional, then the elements or functions will in most cases amount to significantly more…." (USPTO July 2015 Update: Subject Matter Eligibility, page 7)

The Examiner has not provided a court example with location based structures that are similar to applicants. Accordingly, for this reason alone, the present application is patentable.

The USPTO advises that positioning is not an exception:

> "The importance of considering the additional elements in combination was emphasized in examiner training (*see* Section V below), and in numerous examples. For instance, Examples … 4 (AI-4: global positioning systems) … illustrate how generic computer components that individually perform merely generic computer functions (*e.g.*, a CPU that performs mathematical calculations or a clock that produces time data) are able in combination to perform functions that are not generic computer functions and that amount to

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> significantly more." (USPTO July 2015 Update: Subject Matter Eligibility, page 7)

Accordingly, the USPTO itself states that positioning structures are more than just an abstract idea. Accordingly, for this reason alone, the present application is patentable. Applicant believes that the "facts" of which the Examiner has provided this rejection without showing the elements in a precedent case not meet the standard, and invoke his right under MPEP § 2144.03 to have the Examiner provide documentary proof that a comparison example exists in case law. None have been provided because none exist.

The USPTO advises an abstract idea is:

> "Because the courts have declined to define abstract ideas, other than by example, the 2014 IEG instructs examiners to refer to the body of case law precedent in order to identify abstract ideas by way of comparison…." (USPTO July 2015 Update: Subject Matter Eligibility, page 3)

Accordingly, the USPTO states that the Examiner is to rely on case law precedent to find comparison examples. None have been provided. Case law on this exception is very limited. Applicant believes that the "facts" of which the Examiner has provided this rejection without showing the elements in a precedent case not meet the standard, and invoke his right under MPEP § 2144.03 to have the Examiner provide documentary proof that a comparison example exists in case law.

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Applicant has provided USPTO guidance that positioning is not a judicial exception and has shown that no examples contradicting this have been provided in case law are provided.

The judicial exception rejection is very limited in scope based on case law and applies to very limited circumstances. Only one a few, limited occasions has it been utilized and the case law is limited to exactly the circumstances of those cases.

Applicant notes with appreciation the allowance of the claims over the cited prior art patents.

In light of the foregoing, applicant respectfully requests that the Examiner rejections be withdrawn.

Conclusion

Applicant respectfully submits that this application, including the pending claims, is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested. The Director is hereby authorized to charge any fees required in conjunction with this filing, or credit any overpayment of the same, to Deposit Account No. 50-3855, Order No. JDM/005 CON7.

Respectfully Submitted,

/Jeffrey D. Mullen/

Jeffrey D. Mullen
Applicant (Reg. No. 52,056)
Customer No. 32733
2212 Hassinger Lane
Glenshaw, PA 15116
Mobile: (914) 837-7741

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Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	2253	1	700	700
Miscellaneous:				
RCE- 2nd and Subsequent Request	2820	1	850	850
		Total in USD ($)		**1550**

Electronic Acknowledgement Receipt

EFS ID:	26941023
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	15-SEP-2016
Filing Date:	20-AUG-2007
Time Stamp:	17:17:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1550
RAM confirmation Number	4464
Deposit Account	503855
Authorized User	MULLEN, JEFFREY D.

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	JDM-005C7--RCE.pdf	697794 6ae874c32749586fe325e9f308a61e7a55e9130e	no	3
Warnings:					
Information:					
2		JDM-005C7--Reply.pdf	176738 bf2f04765c240d9dcaef24d9914afc4406b64faf	yes	11

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment Submitted/Entered with Filing of CPA/RCE	1	1
Claims	2	7
Amendment/Req. Reconsideration-After Non-Final Reject	8	11

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32628 60b446856870e9753231ce0ed06086b4359be194	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	907160		

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	To be Mailed
11/842,019	08/20/2007	☐

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **09/15/2016**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/GLORIA NORRIS/

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NOTICE OF ALLOWANCE AND FEE(S) DUE

32733 7590 09/29/2016

JEFFREY D. MULLEN
2212 Hassinger Lane
Glenshaw, PA 15116

EXAMINER
KIM, KEVIN Y

ART UNIT	PAPER NUMBER
3716	

DATE MAILED: 09/29/2016

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

TITLE OF INVENTION: SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	12/29/2016

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

32733 7590 09/29/2016
JEFFREY D. MULLEN
2212 Hassinger Lane
Glenshaw, PA 15116

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

TITLE OF INVENTION: SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	12/29/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
KIM, KEVIN Y	3716	463-007000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

Meta Exhibit 1004
Meta v. Mullen, IPR2017-00401

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 09/29/2016

JEFFREY D. MULLEN
2212 Hassinger Lane
Glenshaw, PA 15116

EXAMINER	
KIM, KEVIN Y	
ART UNIT	PAPER NUMBER
3716	

DATE MAILED: 09/29/2016

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 11/842,019	Applicant(s) MULLEN, JEFFREY D.	
	Examiner Kevin Y. Kim	Art Unit 3716	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *claims filed 9/15/2016*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *19-38*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/Kevin Y Kim/
Primary Examiner, Art Unit 3716

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Allowable Subject Matter

2. Claims 19-38 are allowed.

3. The following is an examiner's statement of reasons for allowance: there is no teaching or suggestion in the prior art of a location-based game comprising a virtual playfield, a first character, wherein the location of said first character in said virtual playfield is displayed on a display and is determined utilizing a first control signal from a first locating device that is based, at least in part, on a physical location determined by said first locating device; and

a second character, wherein said second character is computer controlled via artificial intelligence and said artificial intelligence utilizes said first control signal from said first locating device for controlling, at least in part, said second character; and

an impenetrable object, wherein said first locating device is operable to travel through a physical location that correlates to a virtual location of said impenetrable object on said virtual playfield, and said first character is impacted when said first character contacts said impenetrable object.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is (571)270-3215. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on (571) 272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Y Kim/
Primary Examiner, Art Unit 3716

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	KEVIN Y KIM	3716

CPC								
Symbol							**Type**	**Version**
A63F		13	/	65			F	2014-09-02
A63F		13	/	216			I	2014-09-02
A63F		13	/	79			I	2014-09-02
A63F		13	/	332			I	2014-09-02
A63F		13	/	42			I	2014-09-02
A63F		13	/	12			I	2013-01-01
A63F		2300	/	204			A	2013-01-01
A63F		2300	/	205			A	2013-01-01
A63F		2300	/	406			A	2013-01-01
A63F		2300	/	408			A	2013-01-01
A63F		2300	/	5573			A	2013-01-01
A63F		2300	/	8082			A	2013-01-01
			/					
			/					
			/					

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	19	
/KEVIN Y KIM/ Primary Examiner.Art Unit 3716	09/26/2016	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	KEVIN Y KIM	3716

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
463	7

CROSS REFERENCE(S)

CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
463	30	31	32	34	

INTERNATIONAL CLASSIFICATION					
CLAIMED					**NON-CLAIMED**
A	6	3	F	9 / 24 (2006.0)	
A	6	3	F	13 / 00 (2014.0)	
G	0	6	F	17 / 00 (2006.0)	
G	0	6	F	19 / 00 (2011.01.01)	

NONE		**Total Claims Allowed:** 19
(Assistant Examiner)	(Date)	
/KEVIN Y KIM/ Primary Examiner.Art Unit 3716	09/26/2016	O.G. Print Claim(s): 1 / O.G. Print Figure: 1
(Primary Examiner)	(Date)	

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	KEVIN Y KIM	3716

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17		33										
	2		18		34										
	3		19		35										
	4		20		36										
	5		21		37										
	6		22		38										
	7		23												
	8		24												
	9		25												
	10		26												
	11		27												
	12		28												
	13		29												
	14		30												
	15		31												
	16		32												

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 19	
/KEVIN Y KIM/ Primary Examiner.Art Unit 3716 (Primary Examiner)	09/26/2016 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	11329	463/7,30-34.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2016/09/26 11:32
S1	2	"6287200".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 10:21
S2	2	"20060154710"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 10:35
S3	45540	"463".clas.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 10:59
S4	181796	(virtual or game) near3 (character or player or team or member)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:00
S5	33717	S3 and S4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:00
S6	123484	AI or (artificial adj intelligence)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:02
S7	636154	second near2 (character or member or team)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:02
S8	101	S6 same S7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:02
S9	27265943	@ad<"20030820"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:03
S10	27	S8 and S9	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 11:05
S11	115175	game near3 control$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:13

S12	744523	(accelerometer or GPS or (global near2 position$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
S13	1322	S11 with S12	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
S14	27265943	@ad<"20030820"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
S15	39	S13 and S14	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:14
S16	236361	(physical or real) near4 (location or area)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:36
S17	7216	(correspond$ or correlat$) near4 ((virtual or electronic or video or game) near4 (area or location or place))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
S18	551	S16 with S17	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
S19	103	S18 and S14	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
S20	45540	"463".clas.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
S21	3	S20 and S19	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2014/07/16 12:37
S22	33342	virtual near2 reality	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/13 13:04
S23	152283	(physical near2 location)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/13 13:04
S24	2973	S22 and S23	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/13 13:04
S25	4565	virtual near3 (wall or barrier)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/13 13:05
S26	195	S24 and S25	US-PGPUB; USPAT; EPO; JPO;	OR	ON	2015/08/13 13:05

			DERWENT			
S27	0	(08/664086).APP.	US-PGPUB; USOCR	OR	ON	2015/08/17 12:13
S28	28	08/664086	US-PGPUB; USOCR	OR	ON	2015/08/17 12:13
S29	4566	virtual near3 (wall or barrier)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2015/08/17 12:13
S30	21	S29 and S28	US-PGPUB; USOCR	OR	ON	2015/08/17 12:13
S31	10	(US-20060154710-$ or US-20020063655-$).did. or (US-6287200-$ or US-5611731-$ or US-6545661-$ or US-5825308-$ or US-5889951-$ or US-6028593-$ or US-6098458-$).did. or (EP-1062994-$).did.	US-PGPUB; USPAT; DERWENT	OR	ON	2015/08/17 12:49
S32	1	S31 and (ai or (artificial near2 intelligence))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2015/08/17 12:49

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	3443	463/7,30-34.ccls.	USPAT	OR	ON	2016/09/26 11:42
L3	0	((impenetrable near2 object) and (physical near2 location)).clm.	USPAT	OR	ON	2016/09/26 11:42
L4	0	2 and 3	USPAT	OR	ON	2016/09/26 11:43

9/26/2016 11:43:08 AM
C:\Users\kkim4\Documents\EAST\Workspaces\11842019.wsp

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	Art Unit
	ANDREW KIM	3716

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	2,7,31,40	8/15/2013	AK

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Text search of PGPUB, USPAT, USOCR, EPO, JPO, DERWENT. See attached search results.	8/15/2013	AK
NPL search for games with multiple virtual characters, one controlled by AI	7/16/14	KK
EAST search refresh	8/17/15	KK

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
463	7,30-34	9/28/16	KK

	/KEVIN Y KIM/ Primary Examiner.Art Unit 3716

Meta Exhibit 1004
Meta v. Mullen - Page 00413

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BIB DATA SHEET

CONFIRMATION NO. 2744

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APPLICANTS

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ADDRESS

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TITLE

SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES

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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	11842019	Filing Date	2016-03-25	Docket Number (if applicable)	JDM/005CON7	Art Unit	3716
First Named Inventor	Jeffrey D. Mullen			Examiner Name	Kevin Y Kim		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
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☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

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FEES

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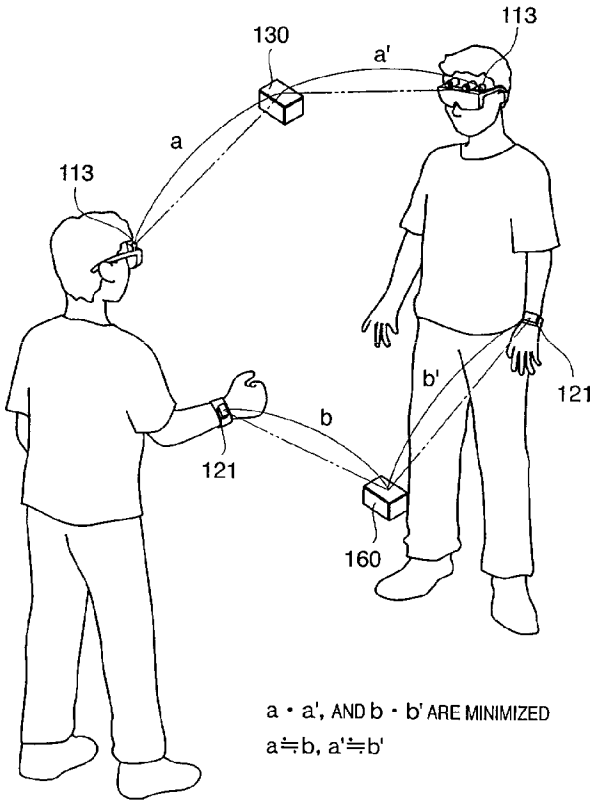
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(54) Title: MIXED REALITY SYSTEM WHICH REDUCES MEASUREMENT ERRORS OF VIEWPOINT POSITION AND DIRECTION OF OBSERVER



(57) Abstract: ABSTRACT A mixed reality system which reduces positional shifts between a real space picture and a virtual space picture with an inexpensive arrangement is disclosed. The mixed reality system according to this invention detects the viewpoint position and direction of an observer and the position and direction of another region of the observer by using reception results on signals output from a transmitter. In this mixed reality system, the transmitter is positioned such that the distance between the transmitter and a receiver used for the measurement of the viewpoint position and direction of the observer becomes shorter than the distance between the transmitter and a receiver used for the measurement of the position and direction of another region of the observer. This makes it possible to reduce measurement errors of the line-of-sight position and direction which are more dominant over positional shifts.

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DESCRIPTION

MIXED REALITY SYSTEM WHICH REDUCES MEASUREMENT ERRORS OF VIEWPOINT POSITION AND DIRECTION OF OBSERVER

TECHNICAL FIELD

The present invention relates to an augmented or mixed reality system which creates and displays a mixed reality space picture by combining a real space picture received from a video camera or the like and a virtual space picture created by CG or the like, and a head mounted display apparatus which can be used for the mixed reality system.

The present invention also relates to a method of determining the position of a transmitter used to measure the position and direction of a predetermined region of an observer in the above mixed reality system.

BACKGROUND ART

In a mixed reality system, to merge a real space with a virtual space, the 3D coordinates and direction of a real space object by using some means. As methods of acquiring these pieces of information, for example, the following method are realized: a method using a position/direction measurement apparatus typified by FASTRAK (trademark) available from Polhemus Inc. in the US, a method of combining information obtained by image processing of a real space picture based on known camera parameters with

information obtained by a gyro, and a method of measuring the position and direction of a real space object by using a special multi-eye camera.

Apparatuses used in these methods are expensive, and besides, have measurement errors. To reduce such measurement errors, a measurement apparatus which is more expensive rather than cost-effective is required, which is one of the factors that hinder a reduction in the cost of a mixed reality system.

Fig. 22 shows an example of how a conventional position/direction measurement apparatus typified by FASTRAK available from Polhemus Inc. in the US.

Referring to Fig. 22, reference numerals 300a and 300b denote observers; 301, an HMD (Head Mounted Display) used by an observer to observe a mixed real space; 302, a position/direction measurement receiver mounted on the HMD 301; and 304, a position/direction measurement transmitter hidden by a wall. The observers 300a and 300b stand to face each other in a set 310. Each observer can freely determine a viewpoint position and line-of-sight direction within a movable area 311.

Reference numeral 312 denotes a mixed real space picture observable area. When the observer 300a or 300b sees this mixed real space picture observable area 312, he/she can observe, through the HMD 301, a mixed real space picture obtained by merging a CG picture as a virtual space picture with a real space picture. When the observer does

not see the mixed real space picture observable area 312, only a real space picture is displayed on the HMD 301. A virtual space picture is displayed at a position determined on the basis of the viewpoint position and line-of-sight direction of the observer. It is therefore important to reduce measurement errors of the viewpoint position and line-of-sight direction when the observer sees the mixed real space picture observable area 312.

As shown in Fig. 22, if, however, the receiver 302 is fixed to the left side of the HMD 301 to measure the viewpoint position and line-of-sight direction of an observer, the distance between the receiver 302 and the transmitter 304 becomes long. This may result in an increase in measurement errors.

DISCLOSURE OF INVENTION

The present invention has been made in consideration of the above problem in the prior art, and has as its object to reduce positional shifts between a real space picture and a virtual space picture with an inexpensive arrangement.

According to the first aspect of the present invention, a mixed reality system which creates and displays a mixed real space picture by combining a real space picture with a virtual space picture, characterized by comprising a transmitter, a first receiver which receives a signal generated by said transmitter to measure

a viewpoint position and direction of an observer, and a second receiver which receives a signal generated by said transmitter to measure a position and direction of another body region of the observer, wherein said transmitter is positioned such that a distance between said transmitter and said first receiver becomes shorter than a distance between said transmitter and said second receiver.

According to the second aspect of the present invention, a head mounted display apparatus which is used in a mixed reality system that creates and displays a mixed real space picture by combining a real space picture with a virtual space picture, and which can mount a receiver used to measure a viewpoint position and direction of an observer to be mounted, characterized in that a plurality of mount portions for detachably mounting said receiver are formed.

According to the third aspect of the present invention, a method of positioning a transmitter in a mixed reality system which includes the transmitter, a first receiver which receives a signal generated by the transmitter to measure a viewpoint position and direction of an observer, and a second receiver which receives a signal generated by the transmitter to measure a position and direction of another body region of the observer, and creates and displays a mixed real space picture by combining a real space picture with a virtual space picture, characterized in that said transmitter is positioned such that a distance between the transmitter and the first

receiver becomes shorter than a distance between the transmitter and the second receiver.

BRIEF DESCRIPTION OF DRAWINGS

The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate embodiments of the invention and, together with the description, serve to explain the principles of the invention.

Fig. 1 is a view showing the schematic arrangement of a mixed reality system to which the third embodiment of the present invention is applied;

Fig. 2 is a view showing the arrangement of an HMD;

Fig. 3 is a flow chart showing the processing of creating a mixed real space picture;

Figs. 4A and 4B are views showing a real space picture example and virtual space picture;

Fig. 5 is a view showing an ideal (with no error in position sensor measurement values) mixed real space picture corresponding to the real space picture example and virtual space picture example in Figs. 4A and 4B;

Fig. 6 is a view showing a mixed real space picture corresponding to the real space picture example and virtual space picture example in Figs. 4A and 4B in a case where an error exists only in an eye position sensor measurement value;

Fig. 7 is a view showing a mixed real space picture

corresponding to the real space picture example and virtual space picture example in Figs. 4A and 4B in a case where an error exists only in a hand position sensor measurement value;

Fig. 8 is a view for explaining the distance relationship between a position sensor transmitter and a position sensor in the first embodiment of the present invention;

Fig. 9 is a view for explaining the distance relationship between a position sensor transmitter and a position sensor in the second embodiment of the present invention;

Fig. 10 is a view for explaining the distance relationship between a position sensor transmitter and a position sensor in the third embodiment of the present invention;

Fig. 11 is a view showing the schematic arrangement of a mixed reality system to which the third embodiment of the present invention is applied;

Fig. 12 is a view showing the schematic arrangement of a mixed reality system to which the fourth embodiment of the present invention is applied;

Fig. 13 is a view for explaining the distance relationship between a position sensor transmitter and a position sensor in the fourth embodiment of the present invention;

Fig. 14 is a view showing the schematic arrangement

of a mixed reality system to which the fifth embodiment of the present invention is applied;

Fig. 15 is a view for explaining the distance relationship between position sensor transmitters and position sensors in the fifth embodiment of the present invention;

Fig. 16 is a view showing the schematic arrangement of a mixed reality system to which the sixth embodiment of the present invention is applied;

Fig. 17 is a perspective view showing a case where the HMD according to the sixth and seventh embodiments is viewed from the direction of a photographing unit;

Fig. 18 is a perspective view showing a case where the HMD according to the sixth and seventh embodiments is viewed from the direction of a display unit;

Fig. 19 is a block diagram showing a hardware arrangement corresponding to one observer in the system shown in Fig. 16;

Fig. 20 is a view for explaining the mount position of a position sensor (receiver) in the sixth embodiment of the present invention;

Fig. 21 is a view for explaining the mount position of a position sensor (receiver) in the seventh embodiment of the present invention; and

Fig. 22 is a view for explaining an example of a problem in the prior art.

BEST MODE OF CARRYING OUT THE INVENTION

Preferred embodiments of the present invention will now be described in detail in accordance with the accompanying drawings.

[First Embodiment]

Fig. 1 is a view showing the schematic arrangement of a mixed reality system to which the first embodiment of the present invention is applied. An observer 100 is wearing an HMD (Head Mounted Display) 110 on the head and a glove 120 on his/her hand.

As shown in Fig. 2, the HMD 110 is comprised of a video camera 111, LCD 112, position/direction measurement apparatus receiver (eye position sensor) 113, and optical prisms 114 and 115. The video camera 111 photographs a real space picture at/in the viewpoint position and line-of-sight direction of the observer through the optical prism 115. The eye position sensor 113 is used to measure the viewpoint position and line-of-sight direction of an observer. The LCD 112 displays a mixed real space picture. This picture is guided to the pupil of the observer through the optical prism 114.

The glove 120 incorporates a hand position sensor 121 and speaker 122 (not shown). The hand position sensor 121 is used as a sensor for measuring the position and direction of the hand of the observer. The speaker 122 generates a sound corresponding to an event that has occurred at the

position of the hand. This sound may be a sound generated when the user touches or hits a virtual space object with his/her hand, a sound generated when the condition of a virtual space object displayed in synchronism with the position of the hand changes, or the like.

Reference numeral 130 denotes a position/direction measurement apparatus transmitter (position sensor transmitter); and 131, a position/direction measurement apparatus body (position sensor body). The eye position sensor 113, hand position sensor 121, and position sensor transmitter 130 are connected to the position sensor body 131. Magnetism is transmitted from the position sensor transmitter 130. This magnetism is received by the eye position sensor 113 and hand position sensor 121. The position sensor body 131 calculates the position and direction of the eye and hand on the basis of the reception intensity signal from the hand position sensor 121. As this position/direction measurement apparatus, FASTRAK available from Polhemus Inc. in the US or the like can be used.

Reference numeral 140 denotes a processing apparatus for creating a mixed real space picture for one observer and displaying it on the HMD 110. This processing apparatus 140 is comprised of, for example, a personal computer, a video capture card, a video card having a CG function, a sound card, and the like. The HMD 110, speaker 122, and position sensor body 131 are connected to the processing

apparatus 140.

A procedure for creating a mixed real space picture in the processing apparatus 140 will be described next with reference to the flow chart of Fig. 3.

First of all, the processing apparatus 140 receives a viewpoint position, a line-of-sight direction, and the position and direction of the hand transmitted from the position sensor body 131 (step S301). Note that the operation in step S301 uses thread S311 of periodically receiving the viewpoint position, the line-of-sight direction, and the position and direction of the hand transmitted from the position sensor body 131.

The virtual space time is then updated, and the state of the virtual space (the type, position, and condition of a virtual space object) is updated (step S302). In this case, if there is a virtual space object whose position and direction change in synchronism with the position and direction of a real space object, the state of such an object is also updated. If, for example, the user is made to see that he/she is always wearing a glove as a virtual space object on his/her hand, the position and direction of the glove are updated in accordance with changes in the position and direction of the hand in step S302.

If the relationship between the position and direction (the hand position and viewpoint position) of the real space object and the position and direction of the virtual space object is then checked, and it is determined

that a predefined event has occurred, the state of the virtual space is updated in accordance with the event (step S303). For example, the occurrence of an even corresponds to a case where it is determined that the user touches the virtual space object with his/her hand. Updating the state of a virtual space in accordance with this event may be equivalent to changing, for example, the picture of the touched virtual space object into a picture of an explosion.

A real space picture at/in the viewpoint position and line-of-sight direction of the observer which is obtained from the video camera 111 is received (step S304). This operation in step S304 uses thread S314 of periodically acquiring the real space picture obtained from the video camera 111 through a video capture card.

A virtual space picture at/in the viewpoint position and line-of-sight direction of the observer, which are obtained in step S301, is created in accordance with the state of virtual space updated in steps S302 and S303 (step S305).

Finally, the virtual space picture created in step S305 is combined with the real space picture received in step S304, and the resultant picture is output to the LCD 112 of the HMD 110 (step S306). The above processing is repeatedly executed until some terminating operation is performed (step S307).

A method unique to this embodiment will be described next, which is used to reduce the differences in position

and direction between a virtual space object and a real space object in a mixed real space picture observed by each observer.

If the position/direction measurement apparatus can properly measure the viewpoint position and line-of-sight direction of an observer and the position and direction of the hand, there are no differences in position and direction between the virtual space object and the real space object. Consider the real space picture shown in Fig. 4A and the virtual space picture shown in Fig. 4B. In this case, ideally, a mixed reality picture like the one shown in Fig. 5 is created. In practice, however, the position/direction measurement apparatus uses magnetism or ultrasonic waves, and hence is very susceptible to disturbances and has a small measurable range. The actual position/direction measurement apparatus can measure with effective accuracy only within a range of about 80 cm from the position sensor transmitter. It is also known that even in measurement in a space without any ferromagnetic object, position and direction measurement errors monotonously increase with an increase in distance between the position sensor transmitter and the position sensor (receiver). In order to improve this situation, it is important to minimize the distance between the position sensor transmitter and the receiver.

Measurement errors in the position/direction measurement apparatus pose a more serious problem in the

measurement of viewpoint position and line-of-sight direction. If measurement errors about the hand position and direction increase, only a positional shift occurs between the hand the virtual space object that moves in synchronism with the hand, as shown in Fig. 7. If, however, measurement errors about the viewpoint position and line-of-sight direction increase, positional shifts occur with respect to all virtual space objects as well as a positional shift with respect to the hand, as shown in Fig. 6.

The principal object of the first embodiment is therefore to improve the measurement accuracy of the eye position sensor 113. To reduce positional shifts between a real space object and a virtual space object, the position sensor transmitter 130 is placed such that the distance between the eye position sensor 113 and the position sensor transmitter 130 becomes shorter than the distances between the position sensor transmitter 130 and the remaining sensors connected to the position sensor body 131 at the positions and directions at/in which the respective position sensors are used with high frequencies, as shown in Fig. 8, thereby improving the measurement accuracy of the viewpoint position and line-of-sight direction as compared with the measurement accuracy of the position and direction of the remaining position sensors. This makes it possible to make positional shifts with respect to all the virtual space objects less noticeable.

The position of the position sensor transmitter 130 cannot be specified but should be changed flexibly depending on the type of mixed reality picture the mixed reality system displays and the position and direction viewed by an observer.

Assume that a plurality of observers exist. In this case, mixed reality can be further augmented by setting a situation in which the observers can observe each other. In general, therefore, the direction in which each observer observes with a high frequency becomes the horizontal direction. In such a situation, placing the position sensor transmitter 130 above the head of the observer as shown in Fig. 8 makes it possible to have the merits of this embodiment and prevent a picture of the transmitter, which should not be combined as a real space object in the mixed real space, from being combined. In addition, this allows the observer to freely move in all directions. Furthermore, since measurement errors caused when the observer moves become equal to each other in all directions, management is facilitated. As described above, a mixed real space picture without any unnecessary real object, which has high quality as a whole, can be observed while the freedom of movement is ensured.

[Second Embodiment]

The second embodiment exemplifies a case where a position sensor transmitter 130 is placed such that the

distance from a hand position sensor 121 is shortened, as well as the distance from an eye position sensor 113, at/in the viewpoint position and line-of-sight direction at/in which the hand is observed with a high frequency and at/in the hand position and direction, as shown in Fig. 9.

In the second embodiment, in a situation where an observer frequently observes the hand, the position sensor transmitter 130 is so placed as to shorten the distance between the eye position sensor 113 and the position sensor transmitter 130 as well as the distance between the hand position sensor 121 and the position sensor transmitter 130. This makes it possible to reduce measurement errors in both the eye position sensor 113 and the hand position sensor 121. As compared with the first embodiment, a virtual space object that moves in synchronism with the hand can be observed while the object is localized on the hand with a small error.

Obviously, the posture of an observer in which the hand is frequently observed depends on the contents of a mixed real space picture which the mixed reality system is to present to the observer. For this reason, the position sensor transmitter 130 must be adjusted such that the distance from the hand position sensor 121 becomes almost equal to the distance from the eye position sensor 113 when the hand is frequently observed.

This embodiment has exemplified the case where the position of a virtual space object is changed in synchronism

with the hand. However, the present invention is not limited to this, and can also be applied to a case where the position of a virtual space object is changed in synchronism with another body region such as a foot.

[Third Embodiment]

Fig. 11 is a view showing the schematic arrangement of a mixed reality system to which the third embodiment is applied. This system is based on the assumption that two observers simultaneously observe the same mixed real space. This system includes two systems each identical to the one shown in Fig. 1. Note that a position sensor transmitter 130 and position sensor body 131 are shared by the two observers to realize a reduction in the total cost of the mixed real space system. The position sensor body 131 is connected to only one processing apparatus 140 and is not connected to the other processing apparatus 140. For this reason, the processing apparatuses 140 for the respective observers are connected to each other through a network 150 to allow the processing apparatus 140 to which the position sensor body 131 is not connected to create a mixed real space picture.

In the third embodiment, as shown in Fig. 10, at the position where each observer observes a hand with a high frequency, the position sensor transmitter 130 is so placed as to almost match the distance (a or a') between an eye position sensor 113 for each observer and the position

sensor transmitter 130 with the distance (b or b') between a hand position sensor 121 and the position sensor transmitter 130. In addition, the position sensor transmitter 130 is so placed as to minimize the respective distances (a, a', b, and b').

With this arrangement, each observer can observe a virtual space object that moves in synchronism with a hand with a small position shift on the hand.

Note that positional shifts can be made uniform with respect to all observers by placing the position sensor transmitter 130 such that the distance (a) between the eye position sensor 113 for a given observer and the position sensor transmitter 130 becomes almost equal to the distance (a') between the eye position sensor 113 for the other observer and the position sensor transmitter 130, and the distance (b) between the hand position sensor 121 for a given observer and the position sensor transmitter 130 becomes almost equal to the distance (b') between the hand position sensor 121 for the other observer and the position sensor transmitter 130.

The procedure executed by each processing apparatus 140 is almost the same as that in the first embodiment except that the processing apparatus 140 to which the position sensor body 131 controls the position sensor body 131 through a position/direction acquisition thread in thread S311 in Fig. 3 to acquire measurement values. This processing apparatus 140 then accesses the network 150 to

distribute the measurement values obtained by the respective position sensors to the other processing apparatus.

The processing apparatus 140 to which the position sensor body 131 is not connected accesses the network through a position/direction acquisition thread in thread S311 in Fig. 3 to acquire the measurement values obtained by the respective position sensors which are sent from the processing apparatus 140 to which the position sensor body 131 is connected.

[Fourth Embodiment]

The fourth embodiment is obtained by developing the first embodiment to have one each of a position sensor transmitter and a position sensor body for one position sensor. In this case, two components, i.e., a position sensor transmitter and position sensor body, are required for one position sensor, and hence the cost increases accordingly. However, a viewpoint position, a line-of-sight direction, and the position and direction of the hand can be measured with high accuracy.

Fig. 12 is a view showing the schematic arrangement of a mixed reality system to which the fourth embodiment is applied. This system additionally has a hand position sensor transmitter 160 and position sensor body 161 as compared with the arrangement of the first embodiment shown in Fig. 1. The hand position sensor body 161 is connected

to a processing apparatus 140, and the hand position sensor transmitter 160 is connected to the hand position sensor body 161. A hand position sensor 121 is designed to receive magnetism from the hand position sensor transmitter 160. In this embodiment, a position sensor transmitter 130 and position sensor body 131 function as dedicated devices for the eyes.

The hand position sensor transmitter 160 is so placed as to shorten the distance between the hand position sensor 121 and the hand position sensor transmitter 160 at/in the hand position and direction where an observer observes the hand with a high frequency. The position sensor transmitter 130 is so placed as to shorten the distance between an eye position sensor 113 and the eye position sensor transmitter 130.

Although the procedure executed by the processing apparatus 140 is almost the same as that in the first embodiment except that in thread S311 in Fig. 3, a position/direction acquisition thread controls the plurality of position sensor bodies 131 and 161 to acquire measurement values from the respective sensor bodies.

By arranging the dedicated position sensor transmitter and position sensor body for each position sensor in this manner, positional shifts between a real space picture and a virtual space picture can be further reduced in the viewpoint position, the line-of-sight direction, and the hand position and direction where the

hand is observed with high frequencies, as compared with the second embodiment. This allows the observer to observe a mixed real space picture with higher quality.

The fourth embodiment is especially effective in preventing an observer from feeling a positional shift when a translucent virtual space object like seawater or a virtual space picture almost equal in size to a hand (real space picture) is to be expressed as if it were always on the hand of the observer.

Assume that a virtual space object is not translucent. In this case, if the virtual space object is larger than the hand, the hand is completely hidden by the virtual space object. Even if, therefore, a slight positional shift occurs, the resultant mixed real space picture does not look strange to the observer. In the case of a translucent virtual space object equal in size to a hand, even with a slight positional shift, the hand cannot be hidden by the virtual space object, and the positional shift between the hand and the virtual space object is seen by the observer. Furthermore, in the case of a translucent virtual space object, a positional shift between a virtual space object and a real space object is always seen by the observer regardless of the size of the virtual space object.

Even in such a situation, this embodiment can prevent the observer from observing positional shifts between the virtual space object and the real space object.

Note that the quality of a mixed real space picture

can be improved by placing the eye position sensor transmitter 130 above the head of the observer, as shown in Fig. 13, as in the first embodiment. In addition, if possible, the hand position sensor transmitter 160 may be placed below the hand position at/in the hand position and direction where the observer uses the system with a high accuracy. With this arrangement, the hand position sensor transmitter 160 does not interfere with the field of view of the observer in the horizontal direction, thereby presenting a mixed real space picture with higher quality.

[Fifth Embodiment]

Fig. 14 is a view showing the arrangement of a mixed reality system to which the fifth embodiment is applied. In this embodiment, as in the fourth embodiment, position sensor transmitters 130 and 160 and position sensor bodies 131 and 161 are respectively provided for an eye position sensor 113 and hand position sensor 121 to allow high-accuracy measurement of a viewpoint position, a line-of-sight direction, and the position and direction of the hand. In addition, the position sensor transmitters 130 and 160 and position sensor bodies 131 and 161 are shared by two observers to attain a reduction in cost.

The two position sensor bodies 131 and 161 are connected to only one processing apparatus 140 and are not connected to the other processing apparatus 140. The processing apparatuses 140 for the respective observers are

therefore connected to each other through a network 150 to allow the processing apparatus 140 to which the position sensor bodies 131 and 161 are not connected to create a mixed real space picture.

In this embodiment, as shown in Fig. 15, the distance between the eye position sensor 113 for each observer and the eye position sensor transmitter 130 and the distance between the hand position sensor 121 and the hand position sensor transmitter 160 are minimized at a position where each observer makes observations with a high frequency. In addition, the eye position sensor transmitter 130 and hand position sensor transmitter 160 are placed such that the distances between the eye position sensors 113 for the respective observers and the position sensor transmitter 130 become almost equal to each other, and the distances between the hand position sensors 121 for the respective observers and the hand position sensor transmitter 160 become almost equal to each other.

With this arrangement, all observers can observe a high-quality mixed real picture with positional shifts between a virtual object and a real object being further reduced, and positional shifts are made uniform to all the observers.

The procedure executed by each processing apparatus 140 is the same as that in the first embodiment except that the processing apparatus 140 to which the position sensor bodies 131 and 161 are connected controls the position

sensor bodies 131 and 161 through a position/direction acquisition thread in thread S311 in Fig. 3 to acquire measurement values. The apparatus then accesses the network 150 to distribute the measurement values obtained by the respective position sensors to the other processing apparatus.

If the eye position sensor transmitter 130 is placed above the head of an observer and the hand position sensor transmitter 160 is placed below the hand position where the observer observes the hand with a high frequency as in the fourth embodiment, the position sensor transmitters 130 and 160 do not interfere with the field of view of the observer in the horizontal direction. This allows the observer to observe a high-quality mixed real space picture in the direction in which a mixed real space is observed with a high frequency.

[Sixth Embodiment]

Fig. 16 is a view showing the schematic arrangement of a mixed reality system to which the sixth embodiment is applied. Referring to Fig. 16, reference numerals 300a and 300b denote observers who observe mixed real space pictures created in this system. Each of the observers 300a and 300b wears an HMD 301 on which a receiver 302 is mounted. Each observer can observe a mixed real space corresponding to position/direction measurement values through the HMD 301.

Reference numeral 306 denotes a position/direction measurement apparatus. A transmitter 304 and receiver 302 are connected to this position/direction measurement apparatus 306. The magnetism generated from the transmitter 304 is received by the receiver 302. The position/direction measurement apparatus 306 then measures the viewpoint position and line-of-sight direction of the observer from the strength of magnetism.

The position/direction measurement apparatus 306 is connected to a processing apparatus 307 to be always notified of the viewpoint position and line-of-sight direction of the observer from the position/direction measurement apparatus 306. The processing apparatus 307 creates a mixed real space picture corresponding to the viewpoint position and line-of-sight direction of each observer on the basis of this information, and displays it on the HMD 301.

The processing apparatuses 307 for the respective observers are connected to each other through a network 330. The respective processing apparatuses 307 share the viewpoint positions and line-of-sight directions of the respective observers and the position and direction of a virtual space object by using the network 330. This allows a given observer to display a virtual space object at the position of the other observer.

Figs. 17 and 18 are perspective views of the HMD 301 to which the sixth embodiment is applied. Fig. 17 is a

perspective view from the direction of a photographing unit. Fig. 18 is a perspective view from the direction of a display unit.

Reference numeral 201 denotes an HMD display unit. This HMD display unit 201 includes two units, i.e., a right-eye display 201R and left-eye display 201L, each of which has a color liquid crystal and prism. A mixed real space picture corresponding to the viewpoint position and line-of-sight direction of an observer is displayed on each display unit.

Reference numerals 204 to 208 denote constituent members for head mounting. To mount the HMD 301 on the head, the observer wears it while the length adjusting portion 206 is loosened by the adjuster 205. After the forehead pad 208 is brought into tight contact with the forehead, the length adjusting portion 206 may be fastened by the adjuster 205 to bring the temple bridges 204 and occiput pad 207 into tight contact with the temple and occipital portion of the observer, respectively.

Reference numeral 203 denotes an HMD photographing unit for photographing a real space picture at/in the viewpoint position and line-of-sight direction of an observer. This HMD photographing unit 203 includes two units, i.e., a right-eye photographing unit 203R and left-eye photographing unit 203L, each of which is formed by an NTSC compact video camera. The photographed real space picture is superimposed on a virtual space picture

to create a mixed real space picture.

The receiver 302 is used to receive magnetism generated by the transmitter 304 as information for the measurement of the viewpoint position and line-of-sight direction of the observer. As the mount portions of the receiver 302 for the HMD 301, three portions, i.e., receiver joints 200R, 200L, and 200C, are formed. The receiver 302 can be detachably mounted on an arbitrary joint of these receiver joints 200R, 200L, and 200C. Referring to Figs. 17 and 18, the receiver 302 is mounted on the receiver joint 200R on the right side in the direction of the light of sight of the observer. However, the receiver 302 can be amounted on the receiver joint 200L on the left side in the direction of the light of sight of the observer or the receiver joint 200C on the median line of the observer.

In this embodiment, the receiver joints 200R, 200L, and 200C are designed to have receptacles in which the receiver 302 is fitted to be fixed. However, other detachable joint (mount) schemes may be used.

Reference numeral 210 denotes a receiver signal line, which is exposed outside the HMD 301 at a position near the receiver joint 200C. This receiver signal line 210 is long enough to allow the receiver 302 to be mounted on either of the receiver joints 200R, 200L, and 200C.

Reference numeral 209 denotes a tied linear member obtained by binding various kinds of lines, e.g., signal lines and power feed lines to the HMD photographing unit

203 and the like and the above receiver signal line 210. The tied linear member 209 is attached to the occipital portion mount portion 207. Signal lines and power feed lines to the right and left displays 201R and 201L, HMD photographing units 203R and 203L, and the like in the tied linear member 209 pass through the right and left temple mount portions 204.

Fig. 19 is a block diagram showing a hardware arrangement corresponding to one observer in the system shown in Fig. 16. The processing apparatus 307 incorporates a right-eye video capture board 350, left-eye video capture board 351, right-eye graphic board 352, left-eye graphic board 353, I/O interface 354, and network interface 359. These constituent elements are connected to a CPU 356, HDD 355, and memory 357.

The left- and right-eye video capture boards 351 and 350 are respectively connected to the left- and right-eye video cameras 203L and 203R, and convert pictures actually photographed by these video cameras 203L and 203R into pictures in a form that can be processed by the processing apparatus 307 with a virtual space picture. The left- and right-eye graphic boards 353 and 352 are respectively connected to the left- and right-eye display units (devices) 201L and 201R to perform display control on the left- and right-eye display units 201L and 201R.

The I/O interface 354 is connected to the position/direction measurement apparatus 306. The

network interface 359 is connected to the network 330. Note that each of the processing apparatuses 140 according to the first to fifth embodiments is constituted by the same constituent elements as those of the processing apparatus 307 according to this embodiment.

An outline of processing performed by the mixed reality system according to this embodiment will be described next. In this system, (1) a real space picture at/in the current viewpoint position and line-of-sight direction of an observer is acquired, (2) the viewpoint position and line-of-sight direction of the observer are acquired, and (3) a virtual space picture at/in the acquired viewpoint position and line-of-sight direction is created. In this case, the positional relationship between an object in a virtual space viewed from the viewpoint position and an object in a real space in consideration of the position, shape, and the like of the object in the real space which are stored in advance, (4) the real space picture is superimposed on the virtual space picture to create a mixed real space picture, and (5) the mixed real space picture is presented to the observer. By repeating this series of operations, the observer is made to experience a mixed real space picture.

In this series of operations, acquisition processing of a real space picture at/in the current viewpoint position and line-of-sight direction of the observer is performed by the video capture boards 350 and 351. More specifically,

the video capture boards 350 and 351 convert video signals from the video cameras 203R and 203L into digital signals and continuously store them in the memory 357. The viewpoint position and line-of-sight direction of the observer are kept transmitted from the position/direction measurement apparatus 306 to the processing apparatus 307 through the I/O interface 354.

The processing apparatus 307 updates the time in a virtual space on the basis of a program stored in the memory 357 and calculates the position and direction of the virtual space object again. A virtual space picture corresponding to the viewpoint position and direction of the observer, which are acquired through the I/O interface 354, is created.

In this case, by defining in advance an object existing in a real space such that it exists in a virtual space, a virtual space picture can also be created in consideration of the positional relationship between the real space object and the virtual space object. For example, a virtual space object can be seen as if it were hidden behind a real wall.

Finally, the real space picture and virtual space picture created in the memory 357 are superimposed on each other to create a mixed real space picture. The created mixed real space picture is displayed on the HMD displays 201R and 201L under the control of the graphic boards 352 and 353.

A method of mounting the receiver 302, which is a characteristic feature of this embodiment, will be described next. Fig. 20 shows a state where the receiver 302 is mounted on a right receiver joint 210R of the HMD 301 for the observer 300a, and the receiver 302 is mounted on left receiver joint 210L of the HMD 301 for the observer 300b in the same situation as that shown in Fig. 22 which shows the problem in the prior art.

Assume that the transmitters 304 for measuring the viewpoint positions and line-of-sight directions of the observers 300a and 300b are placed at the positions in Fig. 20. In this case, by selecting receiver joints for mounting the receivers 302 in the above manner, the distances between the transmitters 304 and receivers 302 used by the observers 300a and 300b are shortened when both the observers 300a and 300b set their viewpoint positions in movable areas 311, and line-of-sight directions are set in the direction of a mixed real space picture observable area 312. In other words, position/direction measurement errors can be reduced in a situation where the observers 300a and 300b make observations with high frequencies.

In addition, by selecting mount positions for the receivers 302 as shown in Fig. 20, since the observers 300a and 300b, receivers 302, and transmitters 304 are symmetrical about a line segment 313 passing through the center of the mixed real space picture observable area 312, measurement errors of positions and directions associated

with the two observers 300a and 300b can be made uniform.

[Seventh Embodiment]

The seventh embodiment is applied to a case where transmitters 304 are placed in front of observers 300a and 300b, as shown in Fig. 21.

When the transmitters 304 are placed in front of the observers 300a and 300b in this manner, receivers 302 are mounted on central receiver joints 200C of HMDs 301 to minimize the distances between the receivers 302 on the HMD 301 and the transmitters 304.

In this case, as in the sixth embodiment, position/direction measurement errors can be reduced in a situation where the observers 300a and 300b make observations with high frequencies. In addition, position/direction measurement errors associated with the two observers 300a and 300b can be made uniform.

As described above, according to the first to seventh embodiments positional shifts between a real space picture and a virtual space picture can be reduced by the method requiring no cost, i.e., adjusting the mount position of the transmitter for position/direction measurement or the mount position of the receiver on each HMD.

The present invention is not limited to the above embodiments. For example, as the transmitters and receivers (position/direction measurement apparatus), for example, devices based on an ultrasonic scheme instead of

a magnetic scheme can be used. In addition, the respective embodiments described above can be properly combined with each other.

As has been described above, according to the present invention, positional shifts between a real space picture and a virtual space picture can be reduced with an inexpensive arrangement.

Furthermore, the present invention can be applied to the system comprising either a plurality of units or a single unit. It is needless to say that the present invention can be applied to the case which can be attained by supplying programs which execute the process defined by the present system or invention.

CLAIMS

1. A mixed reality system which creates and displays a mixed real space picture by combining a real space picture with a virtual space picture, characterized by comprising:

a transmitter;

a first receiver which receives a signal generated by said transmitter to measure a viewpoint position and direction of an observer; and

a second receiver which receives a signal generated by said transmitter to measure a position and direction of another body region of the observer,

wherein said transmitter is positioned such that a distance between said transmitter and said first receiver becomes shorter than a distance between said transmitter and said second receiver.

2. The mixed reality system according to claim 1, characterized in that said transmitter is positioned such that the distance between said transmitter and said first receiver always become shorter than the distance between said transmitter and said second receiver within at least a predetermined movement range of the observer.

3. The mixed reality system according to claim 1, characterized in that the mount position of said transmitter for measuring the viewpoint position and direction of the observer is above the head of the observer.

4. The mixed reality system according to claim 1, characterized in that said transmitter is shared by said

plurality of first and second receivers.

5. The mixed reality system according to claim 1, characterized in that said receiver and transmitter receive and transmit magnetism or an ultrasonic wave.

6. A head mounted display apparatus which is used in a mixed reality system that creates and displays a mixed real space picture by combining a real space picture with a virtual space picture, and which can mount a receiver used to measure a viewpoint position and direction of an observer to be mounted,

characterized in that a plurality of mount portions for detachably mounting said receiver are formed.

7. The head mounted display apparatus according to claim 6, characterized in that said mount portions are formed at least on a median line of the observer and both left and right sides in a line-of-sight direction of the observer.

8. The head mounted display apparatus according to claim 6 or 7, characterized in that a signal line connected to said receiver extends from a portion near said mount portion on the median line to the outside.

9. The head mounted display apparatus according to claim 6, characterized in that said receiver receives magnetism or an ultrasonic wave.

10. A method of positioning a transmitter in a mixed reality system which includes the transmitter, a first receiver which receives a signal generated by the transmitter to measure a viewpoint position and direction

of an observer, and a second receiver which receives a signal generated by the transmitter to measure a position and direction of another body region of the observer, and creates and displays a mixed real space picture by combining a real space picture with a virtual space picture,

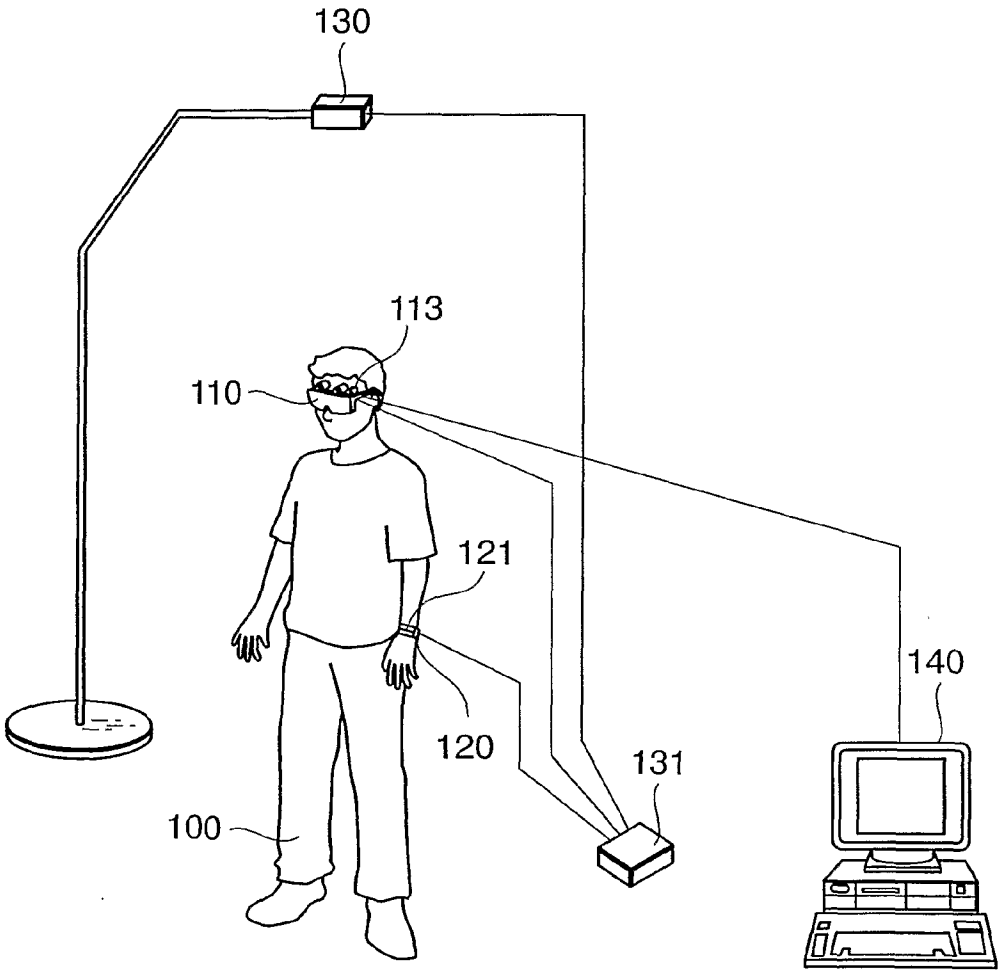
characterized in that said transmitter is positioned such that a distance between the transmitter and the first receiver becomes shorter than a distance between the transmitter and the second receiver.

11. The method of positioning the transmitter in the mixed reality system according to claim 10, characterized in that said transmitter is positioned such that the distance between said transmitter and said first receiver always become shorter than the distance between said transmitter and said second receiver within at least a predetermined movement range of the observer.

12. The method of positioning the transmitter in the mixed reality system according to claim 10, characterized in that the mount position of said transmitter for measuring the viewpoint position and direction of the observer is above the head of the observer.

13. The method of positioning the transmitter in the mixed reality system according to claim 10, characterized in that said transmitter is shared by said plurality of first and second receivers.

FIG. 1



3/26/2008, EAST Version: 2.2.1.0

FIG. 2

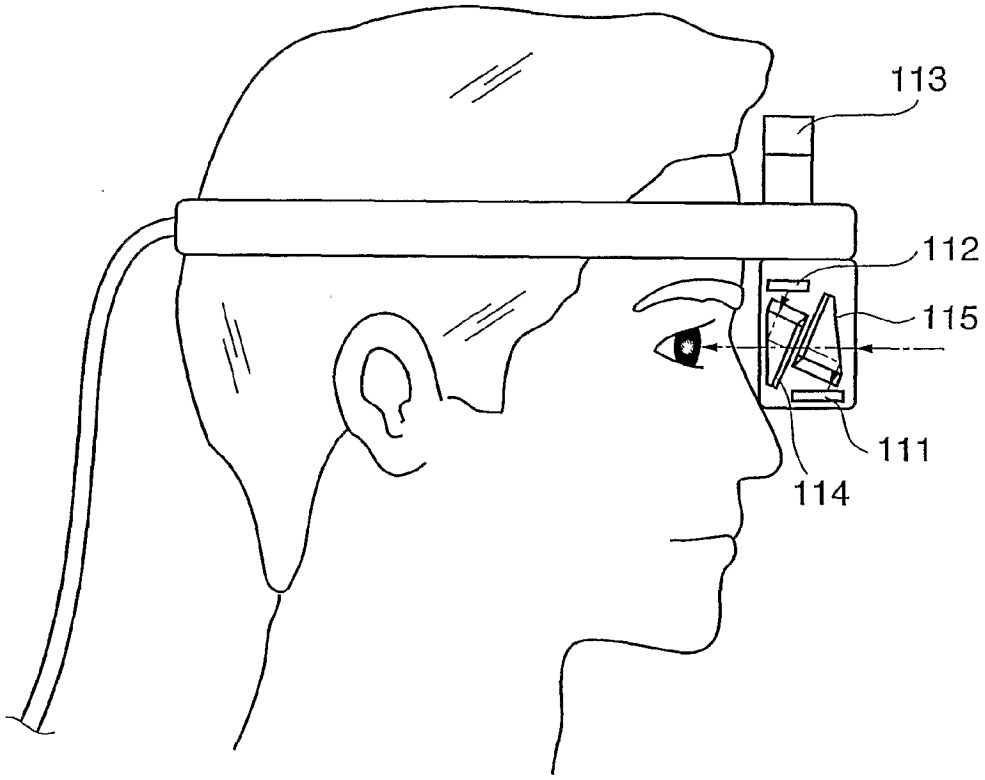
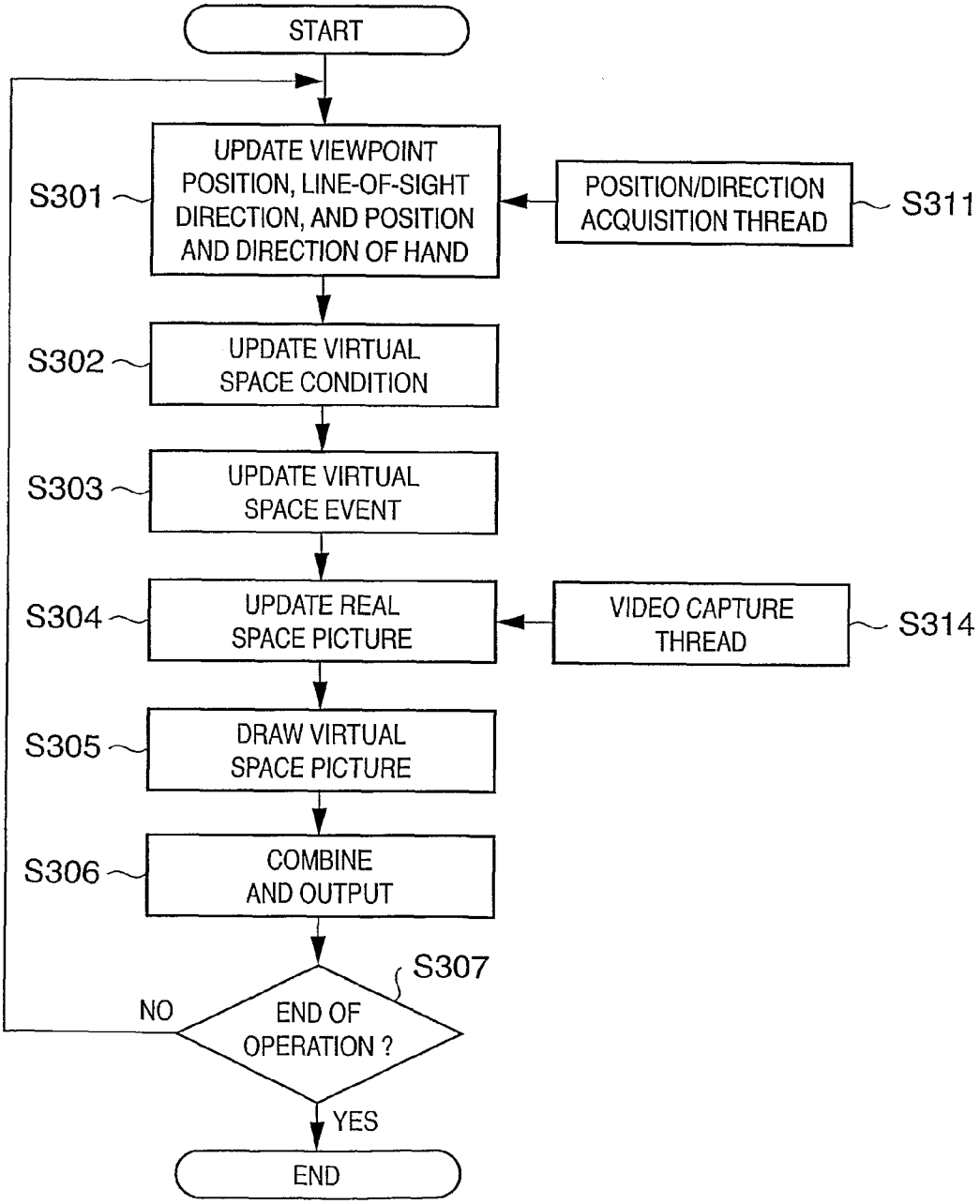


FIG. 3



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FIG. 4A

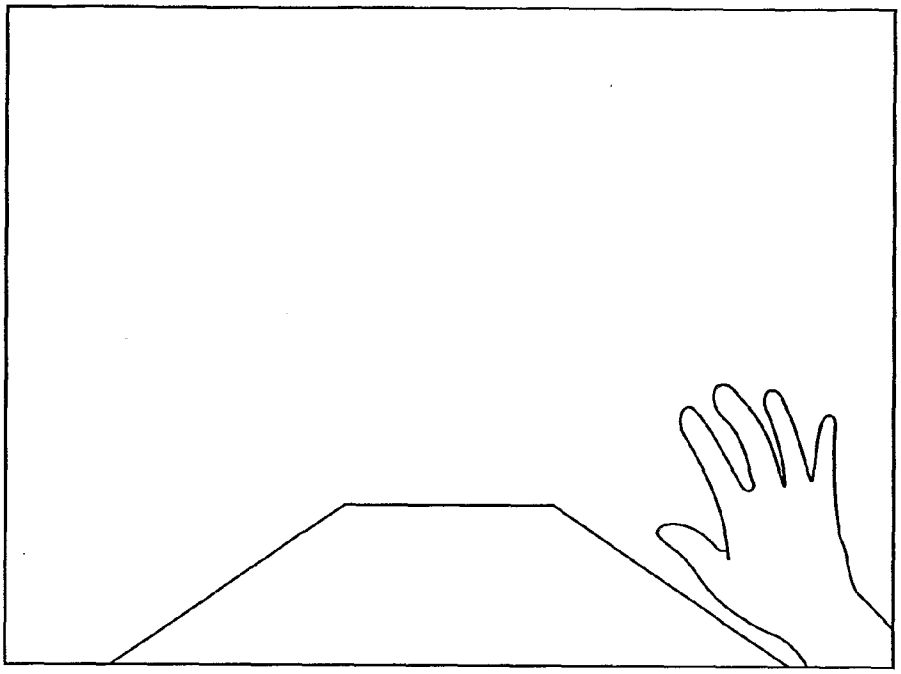
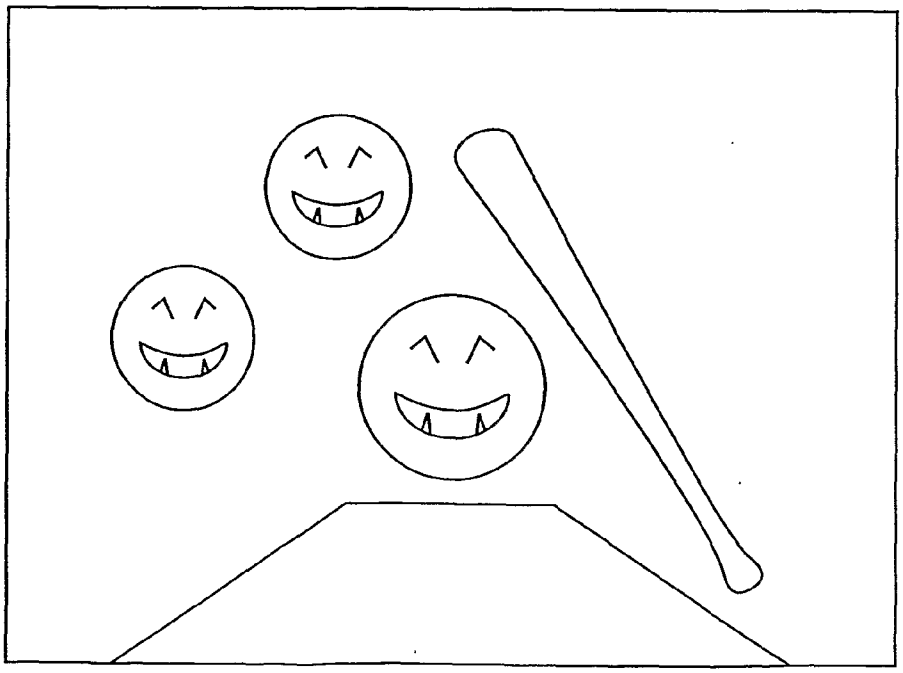


FIG. 4B



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FIG. 5

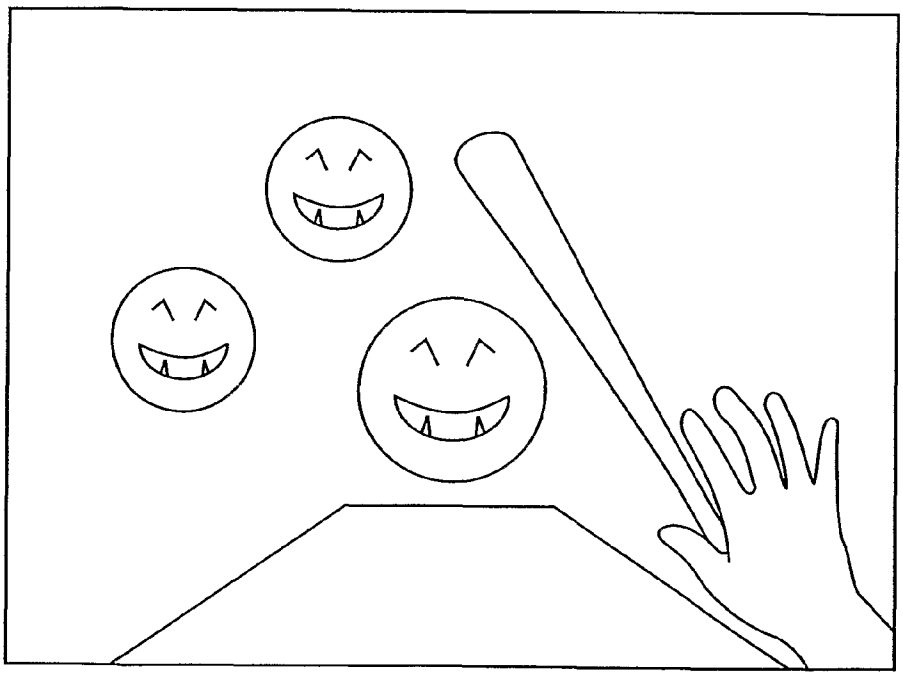


FIG. 6

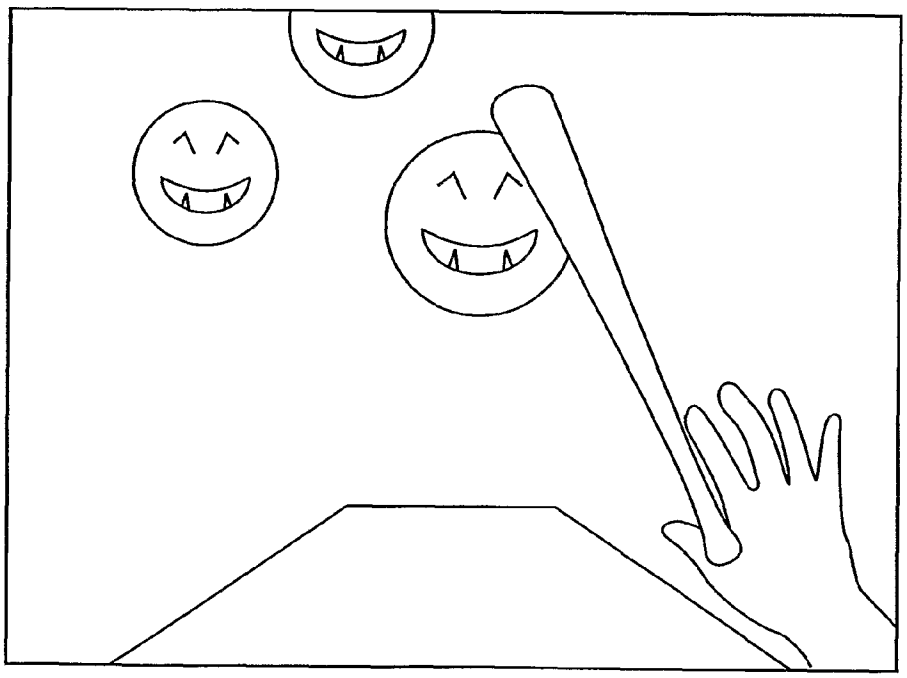
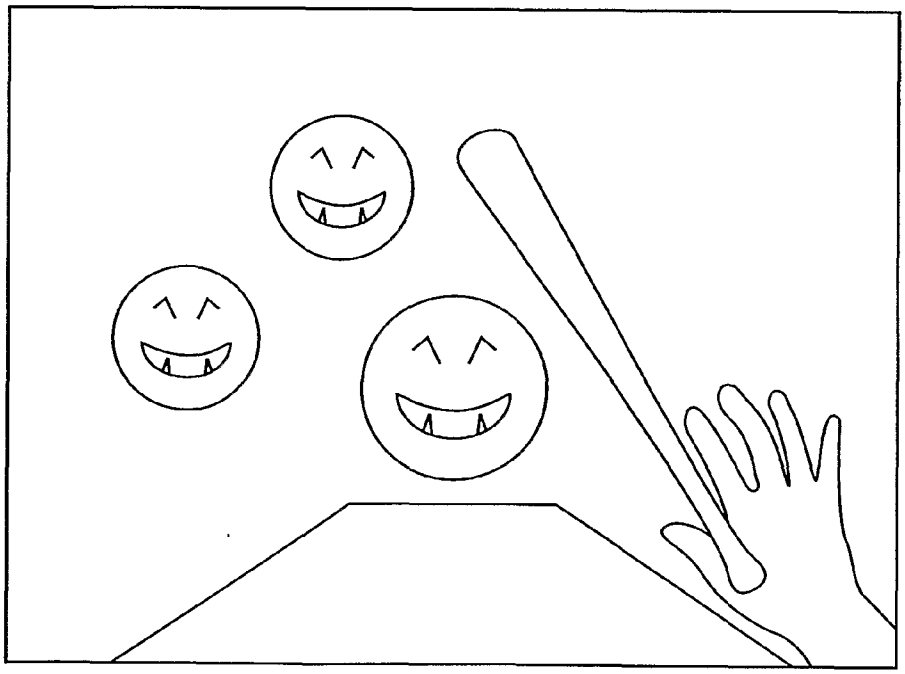


FIG. 7



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FIG. 8

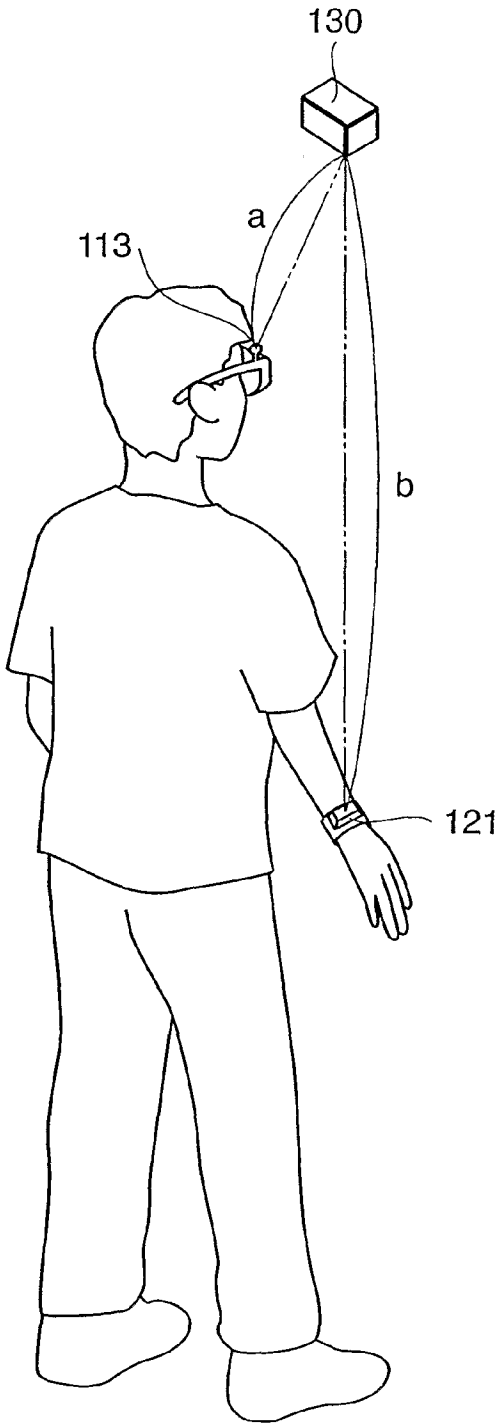


FIG. 9

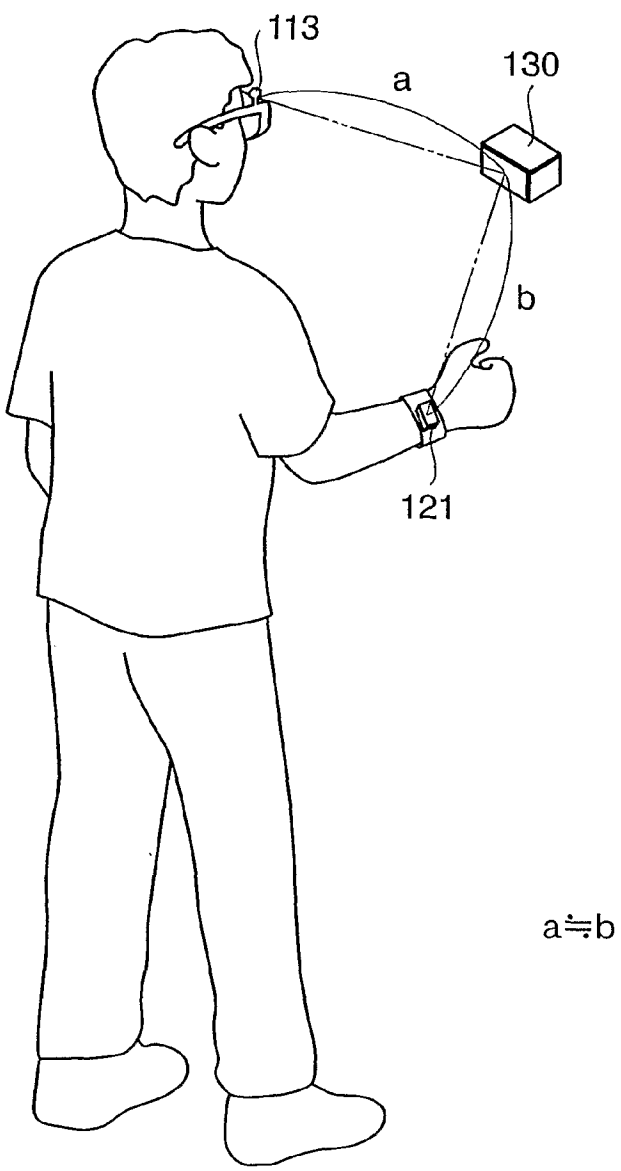
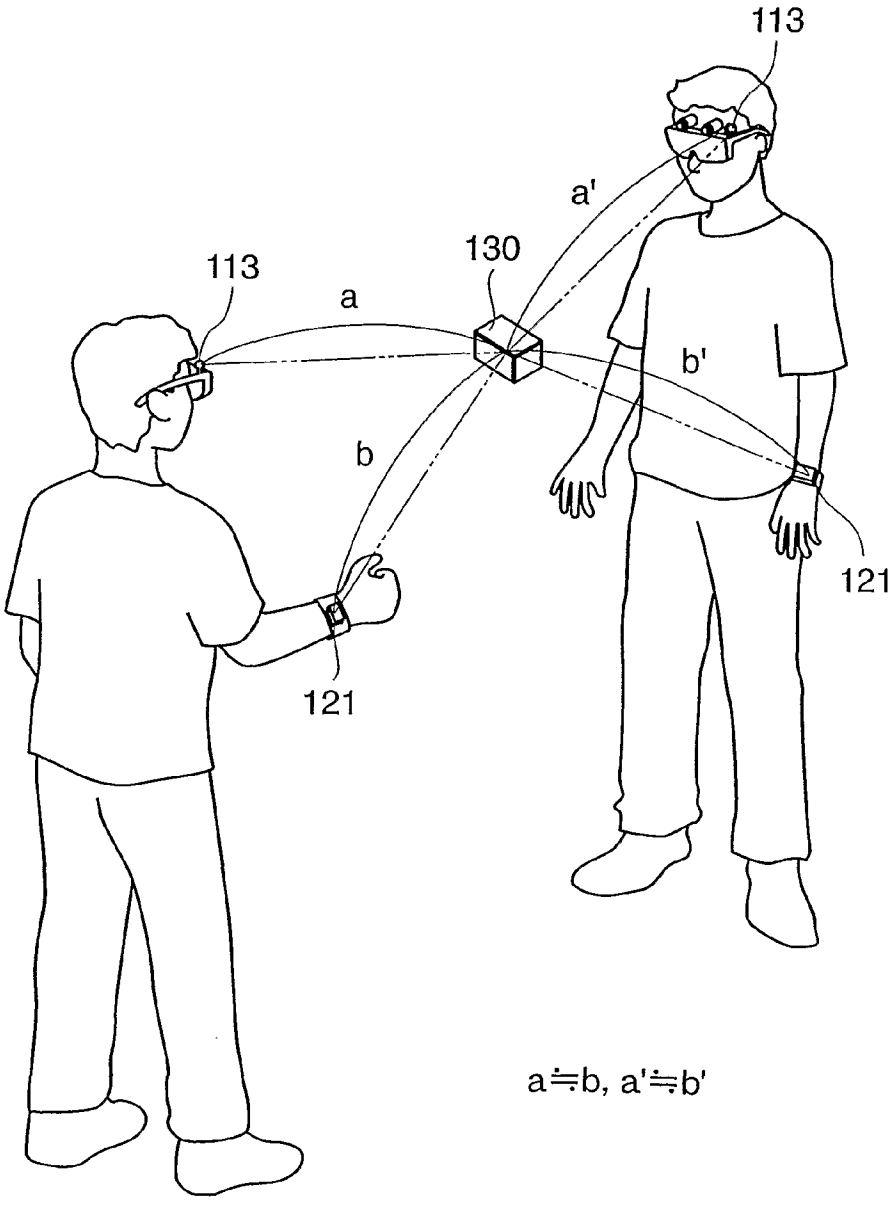


FIG. 10



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FIG. 11

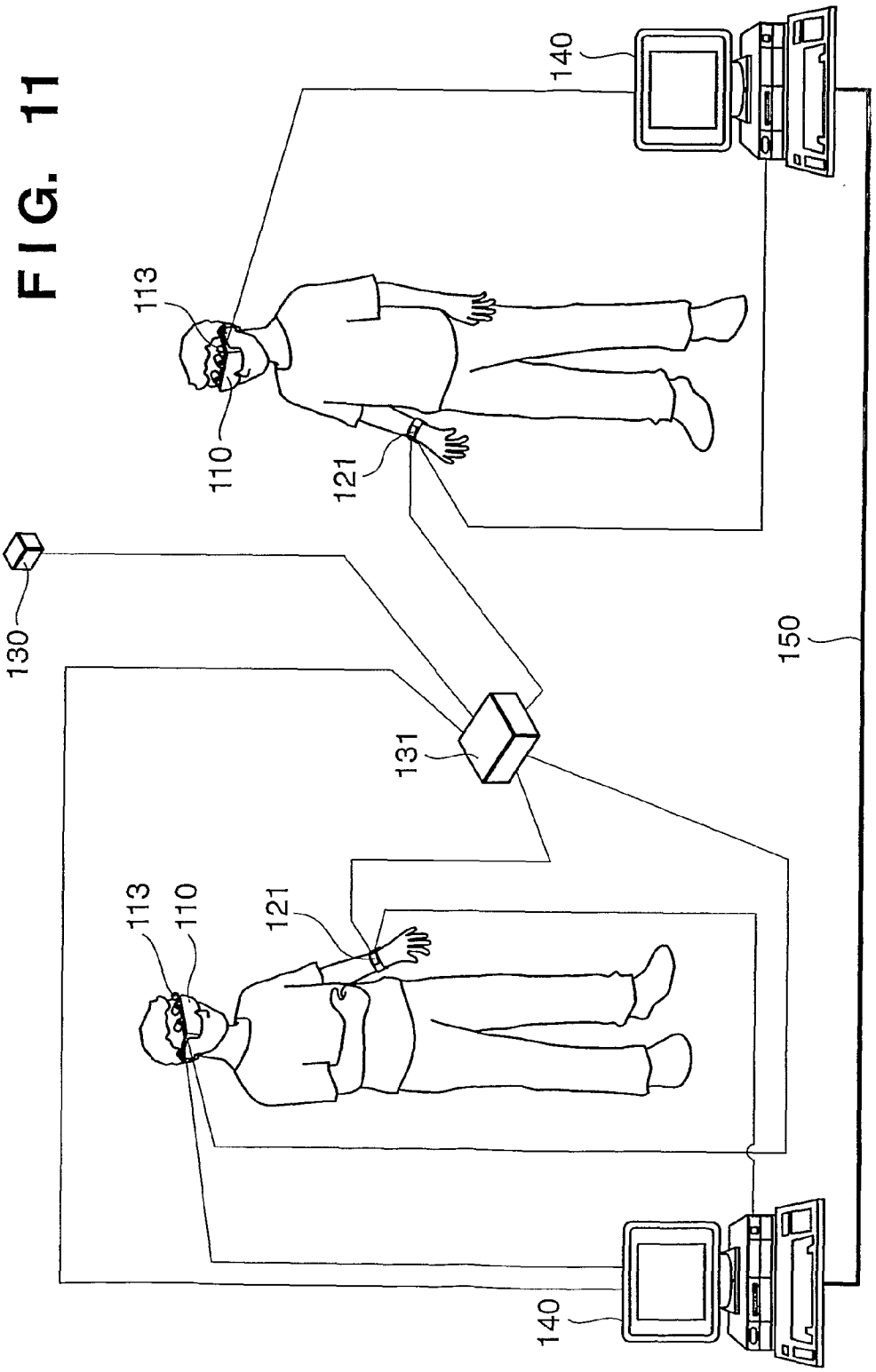


FIG. 12

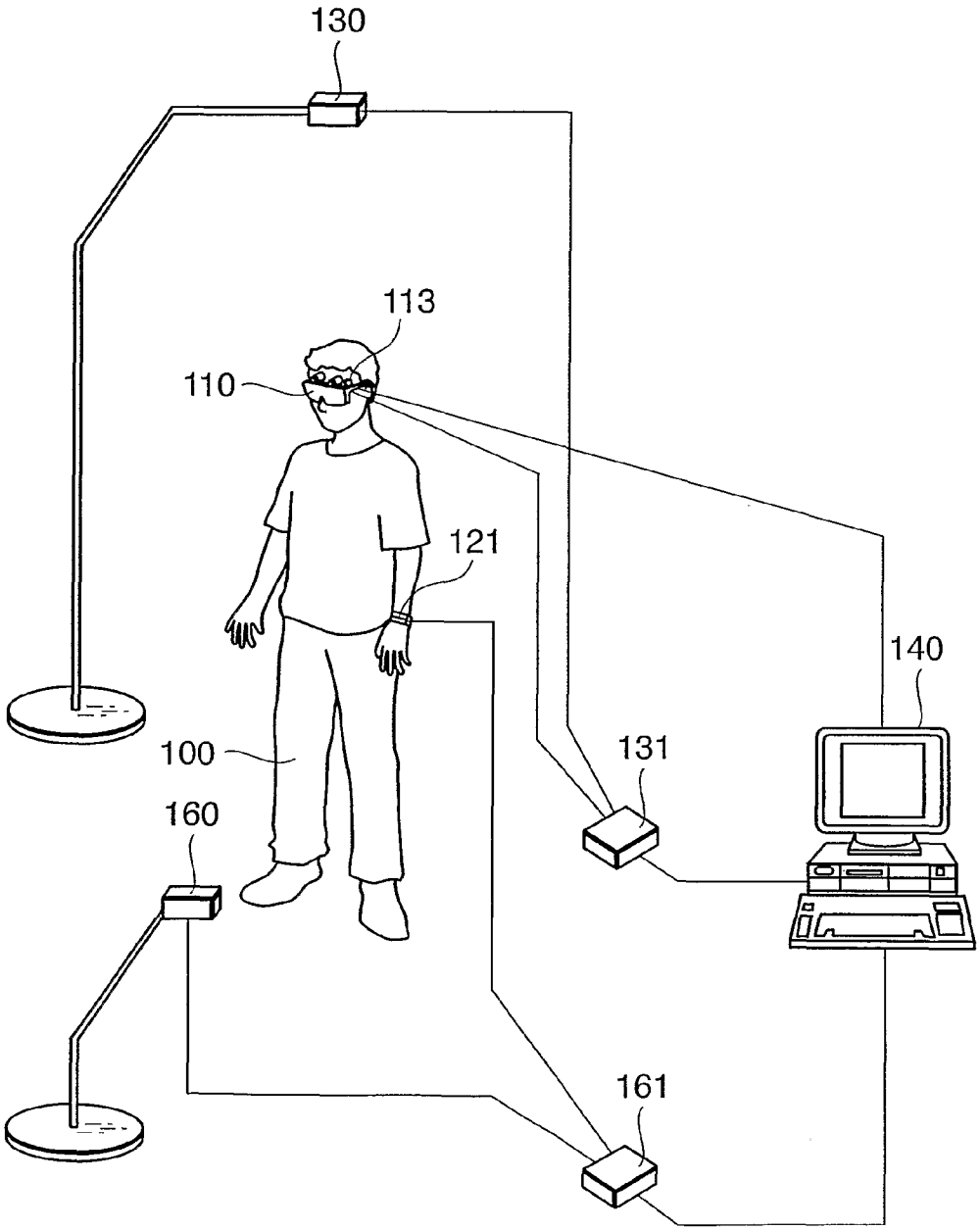


FIG. 13

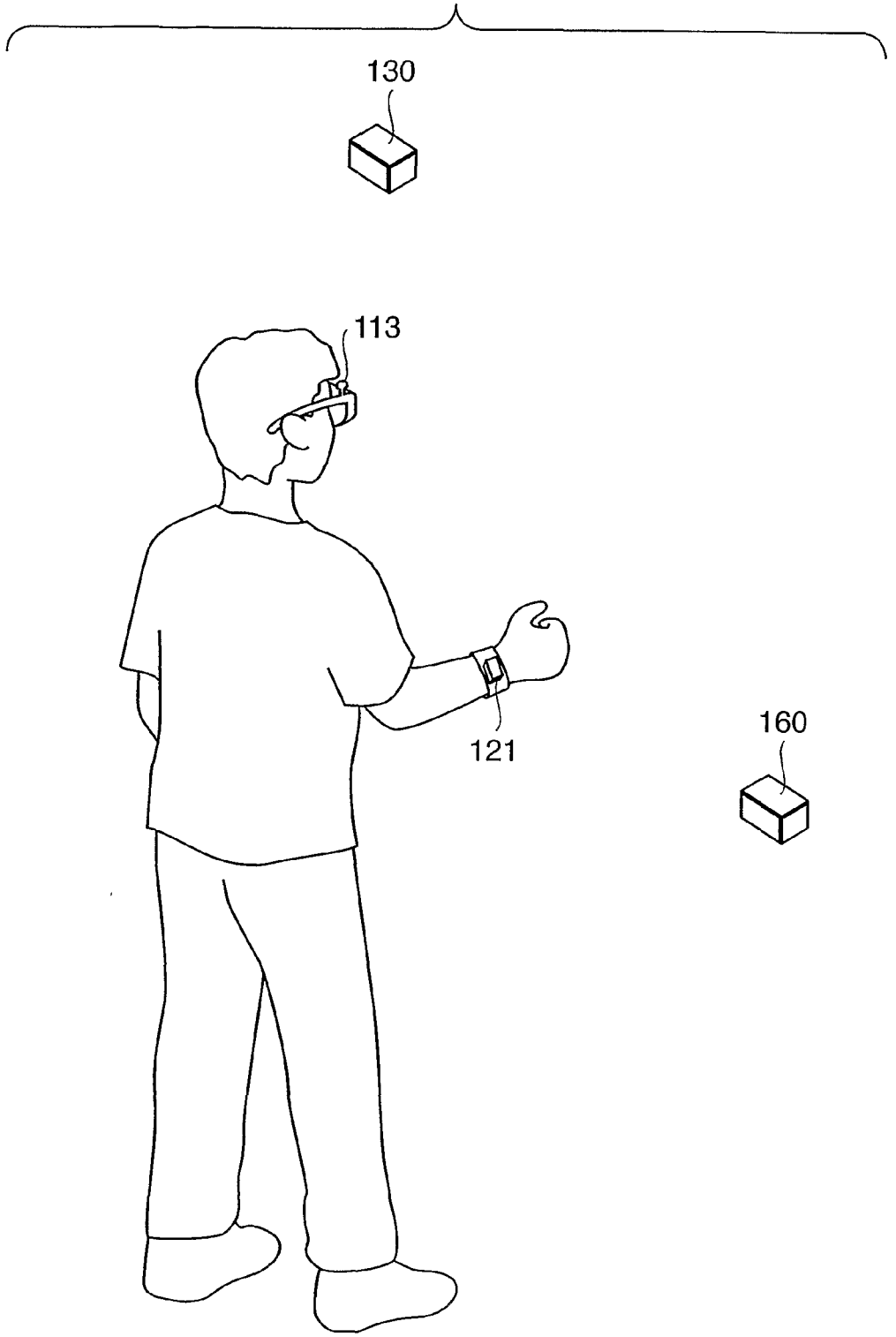


FIG. 14

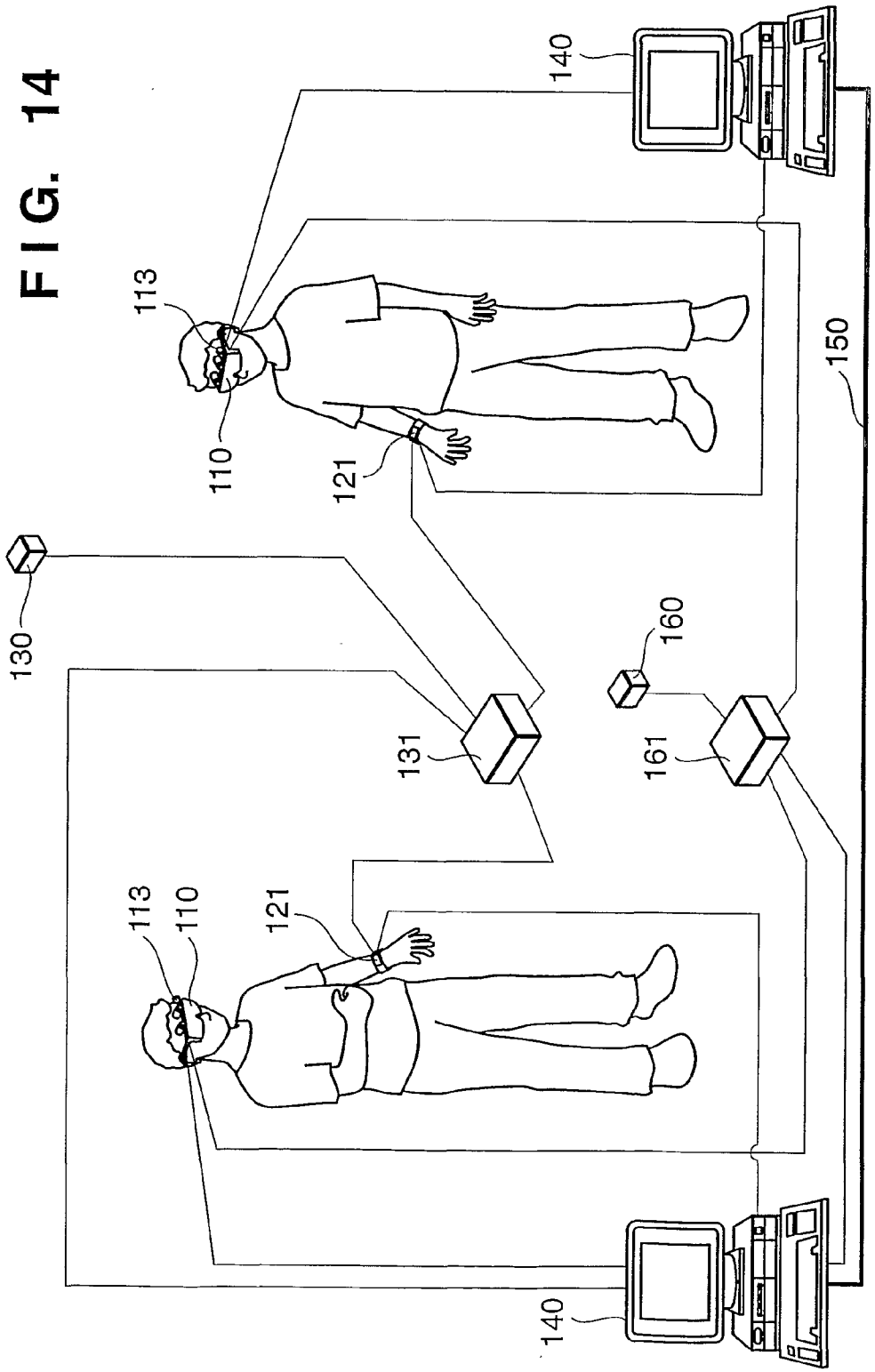
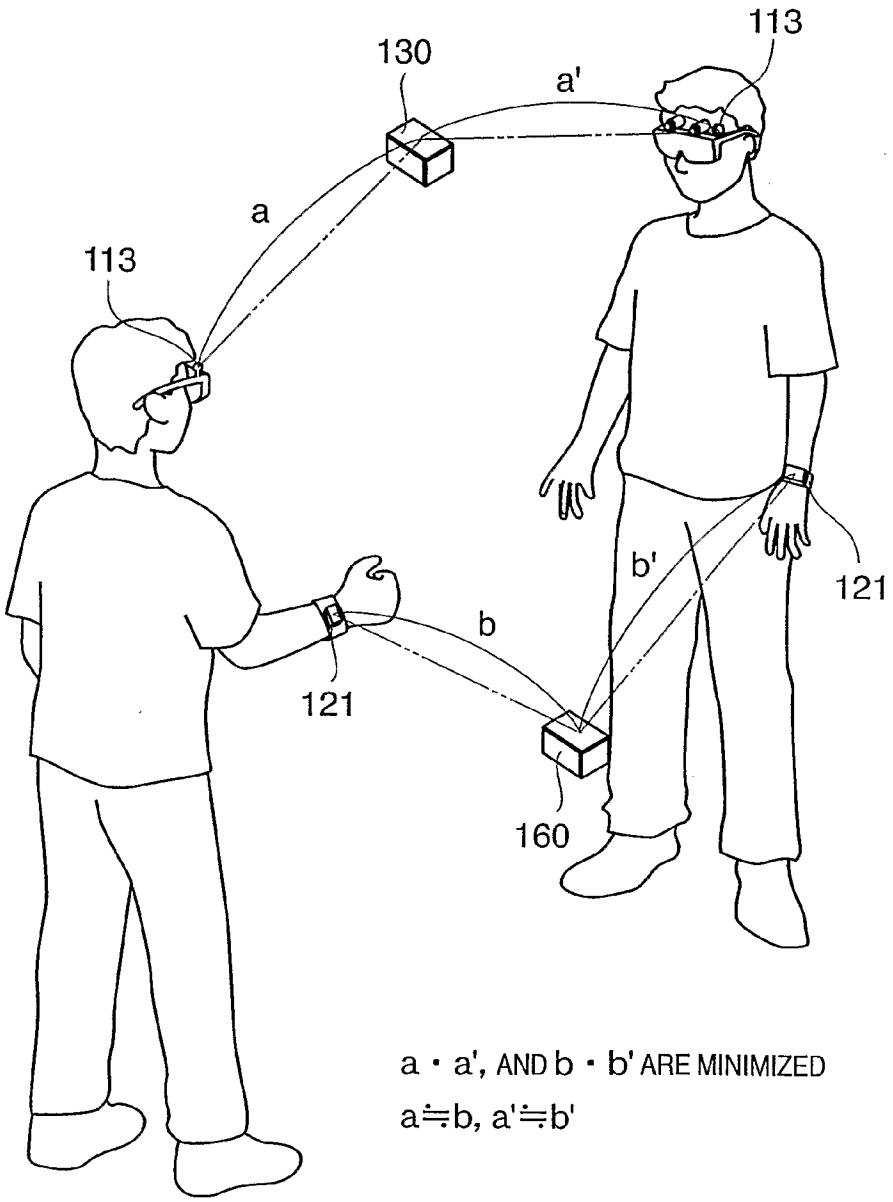


FIG. 15



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FIG. 16

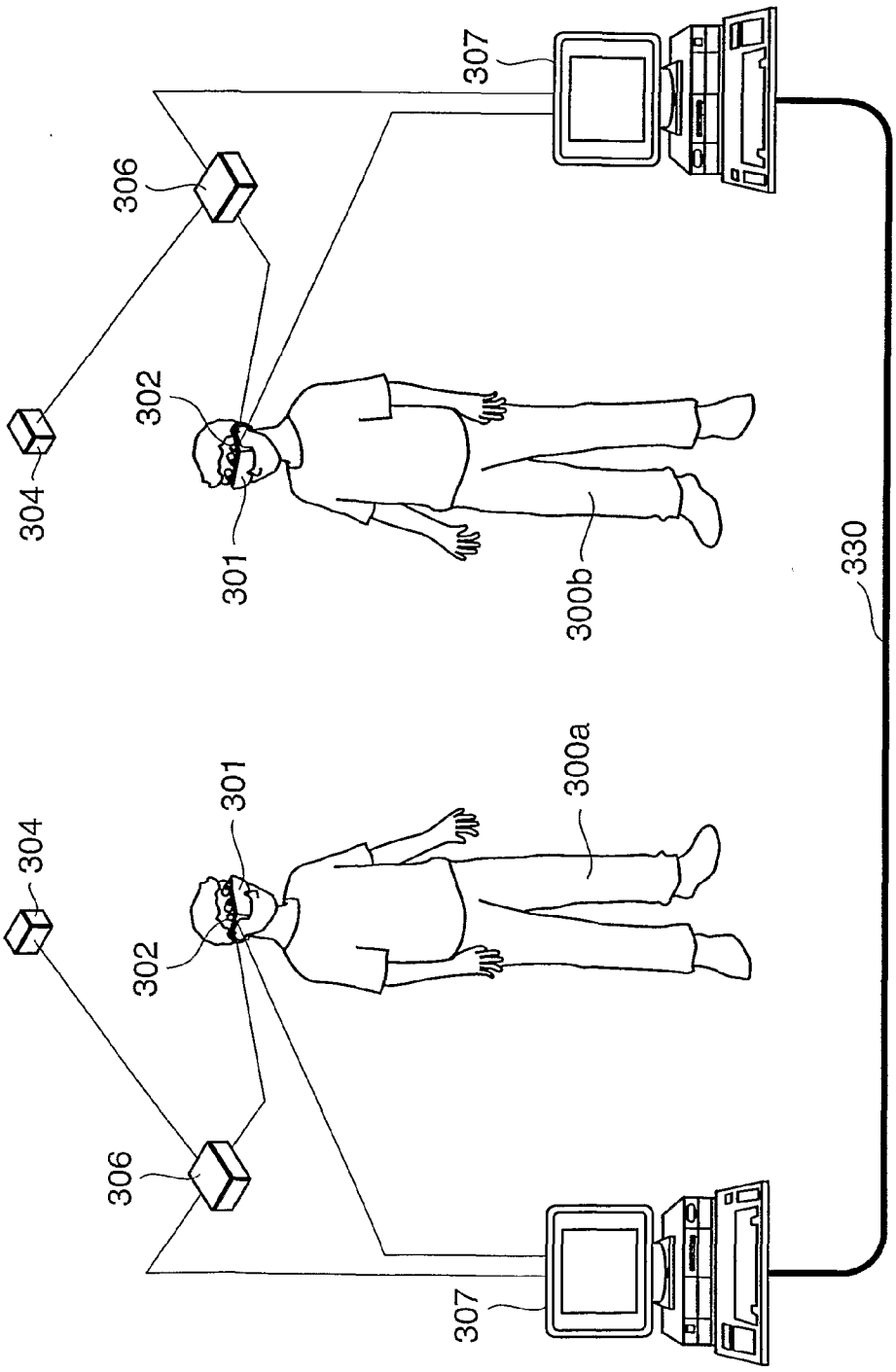


FIG. 17

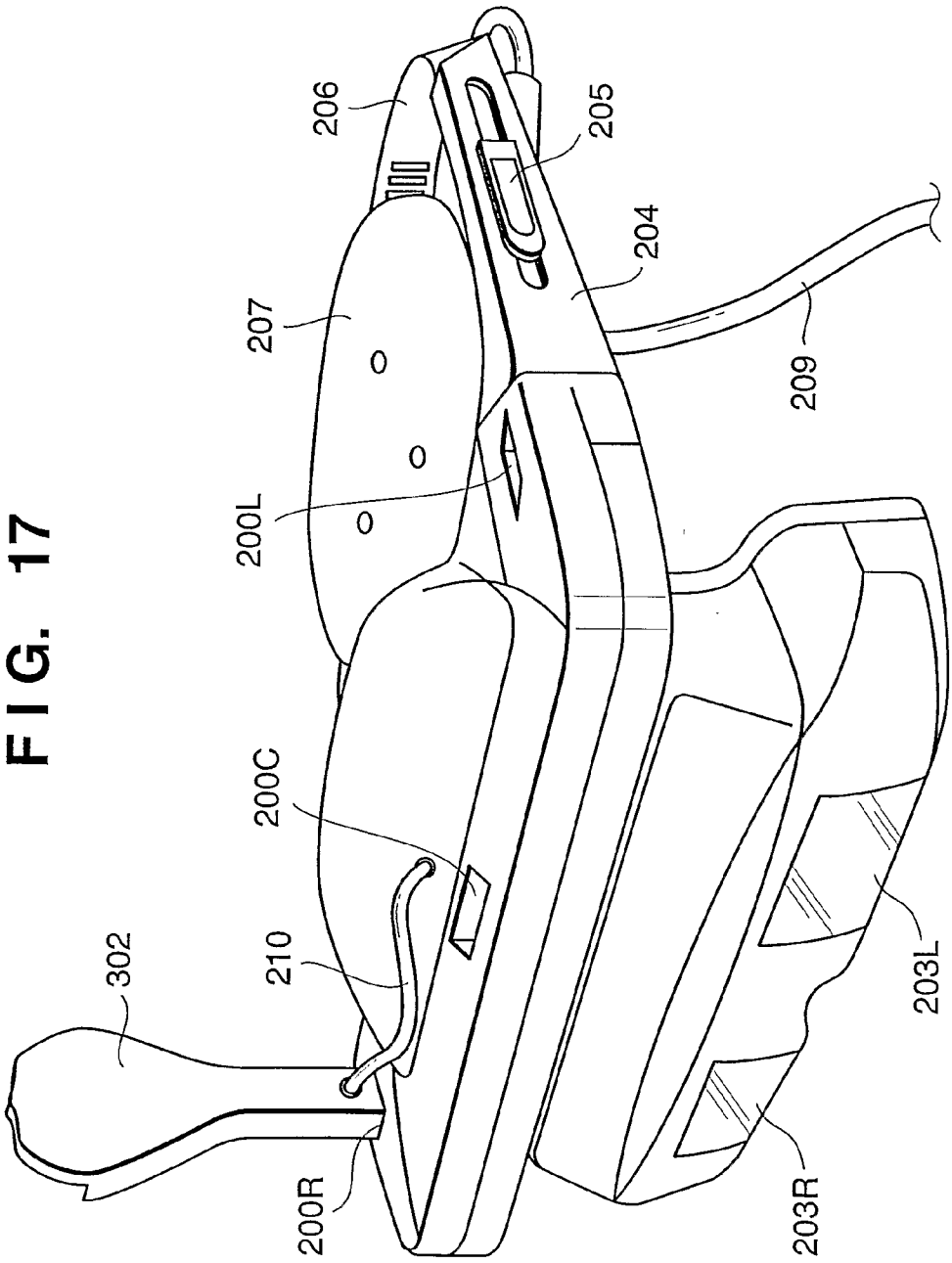


FIG. 18

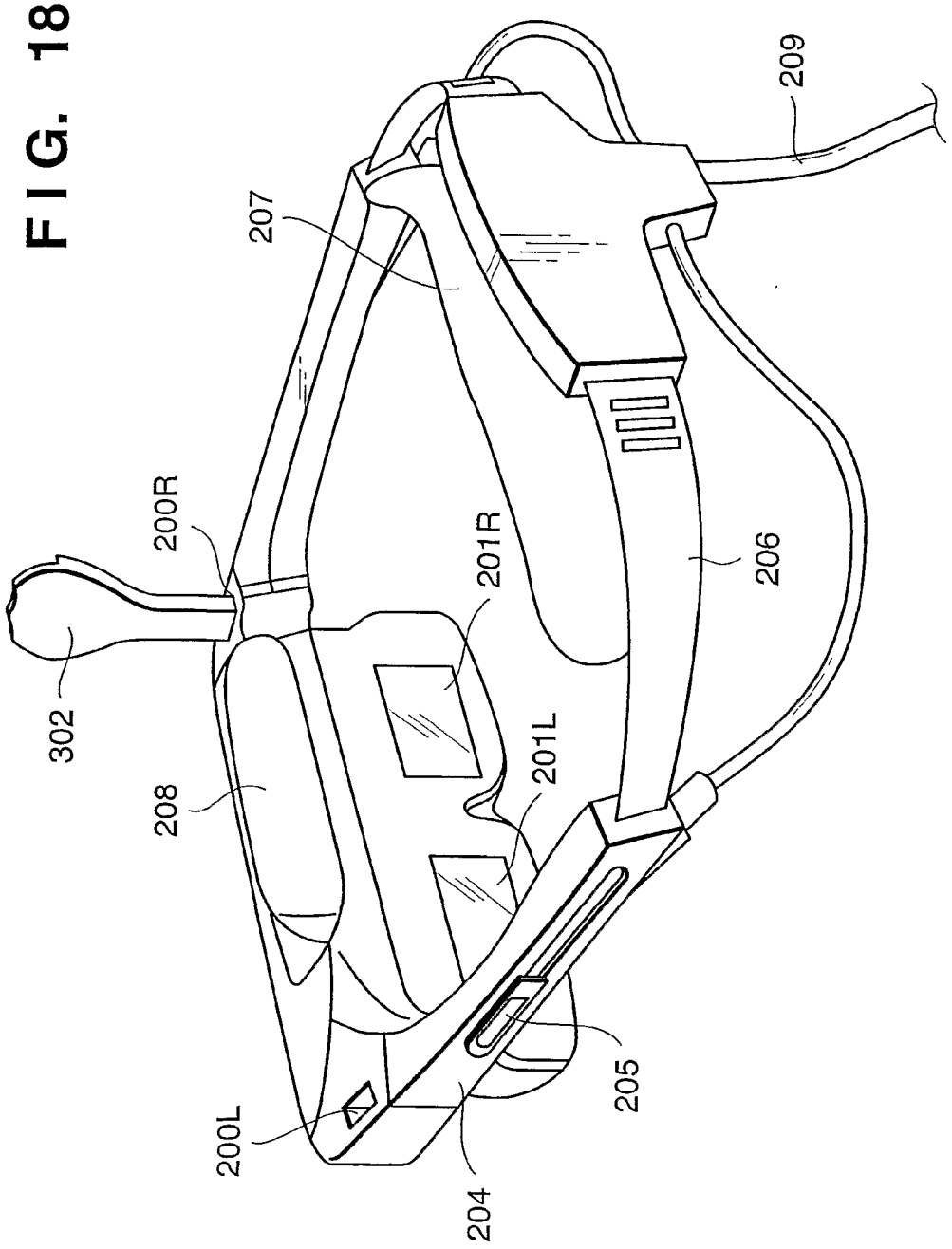


FIG. 19

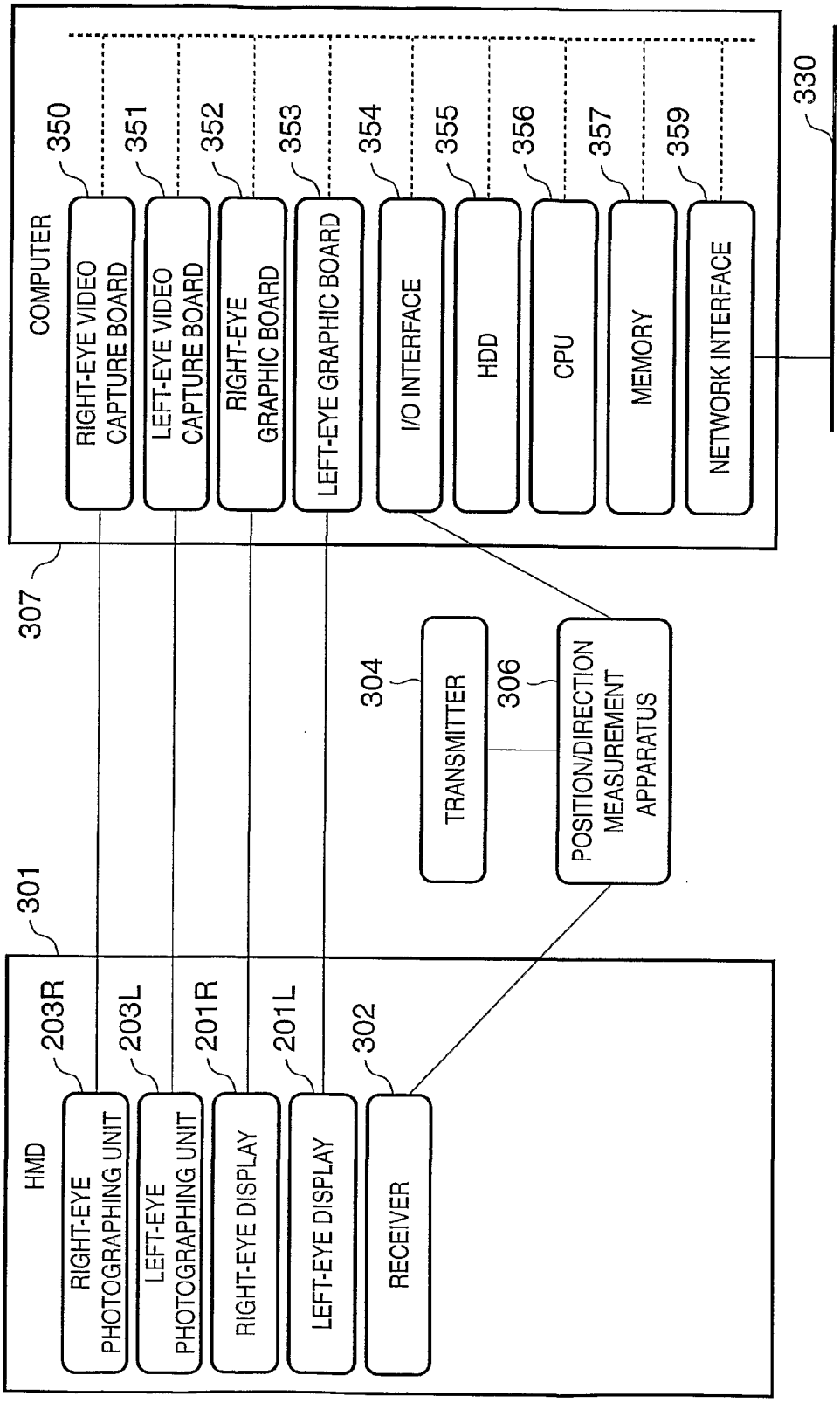

COMPUTER
350
RIGHT-EYE VIDEO CAPTURE BOARD
351
LEFT-EYE VIDEO CAPTURE BOARD
352
RIGHT-EYE GRAPHIC BOARD
353
LEFT-EYE GRAPHIC BOARD
354
I/O INTERFACE
355
HDD
356
CPU
357
MEMORY
359
NETWORK INTERFACE
330
307
304
TRANSMITTER
306
POSITION/DIRECTION MEASUREMENT APPARATUS
301
HMD
203R
RIGHT-EYE PHOTOGRAPHING UNIT
203L
LEFT-EYE PHOTOGRAPHING UNIT
201R
RIGHT-EYE DISPLAY
201L
LEFT-EYE DISPLAY
302
RECEIVER

FIG. 20

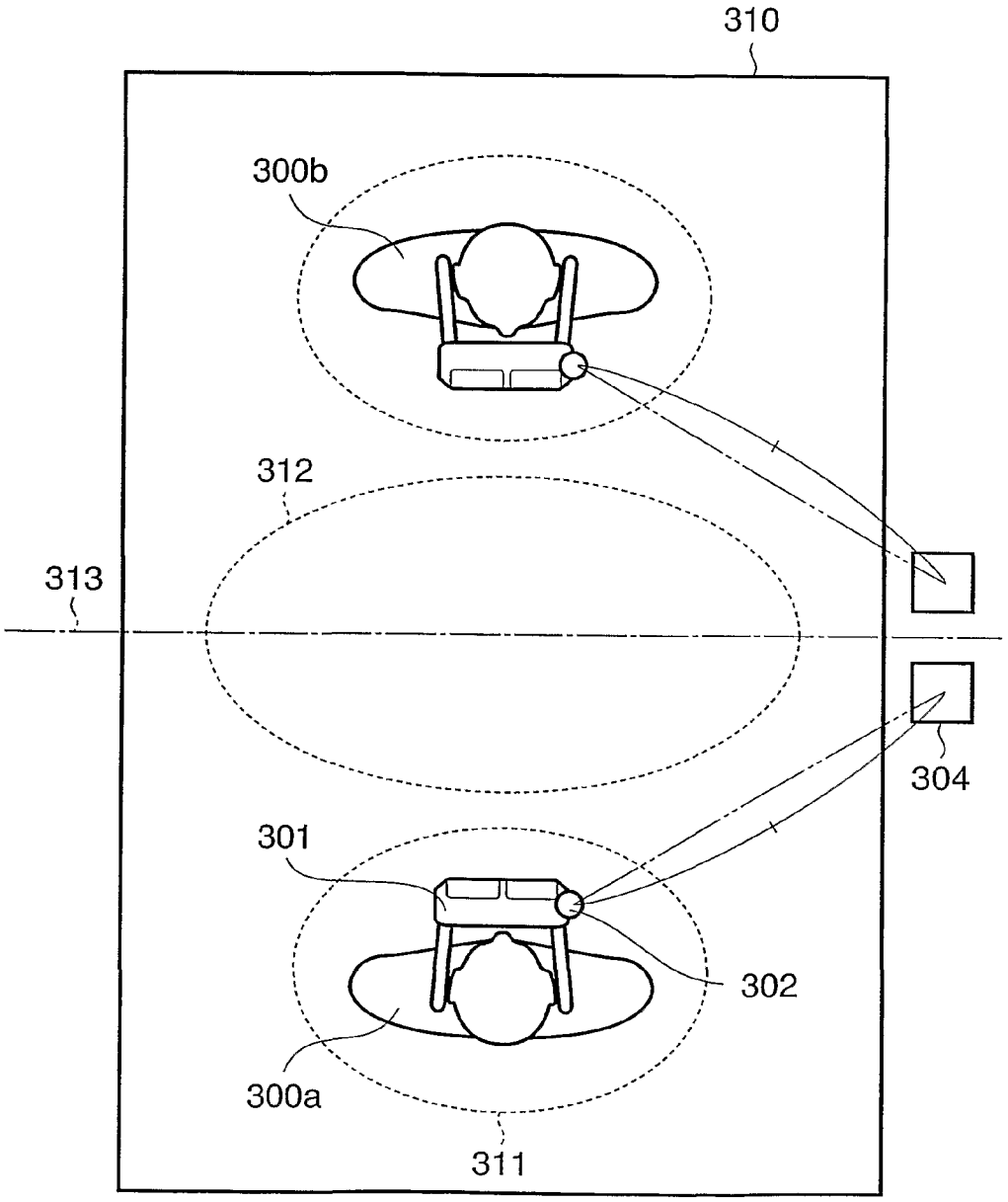


FIG. 21

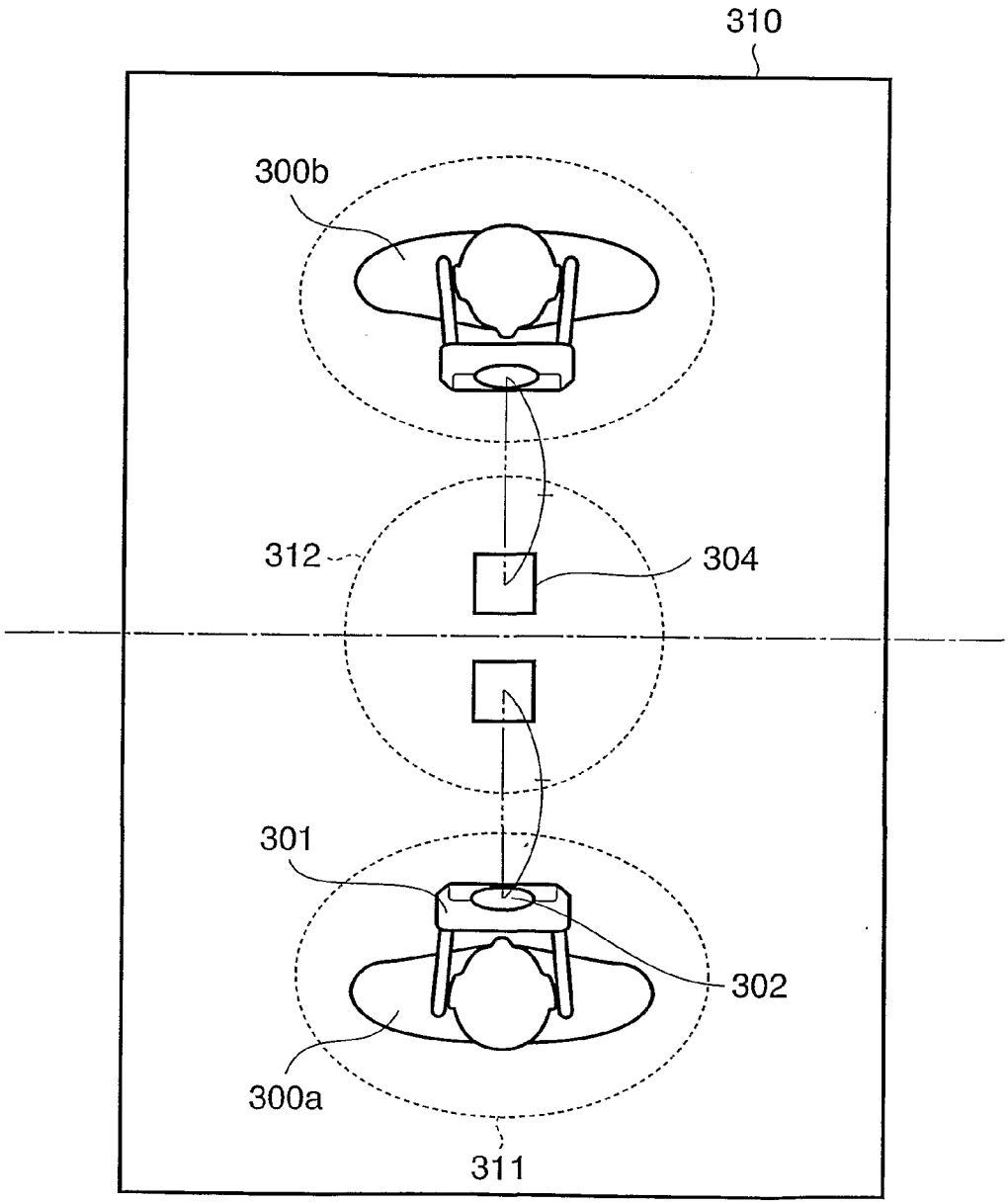
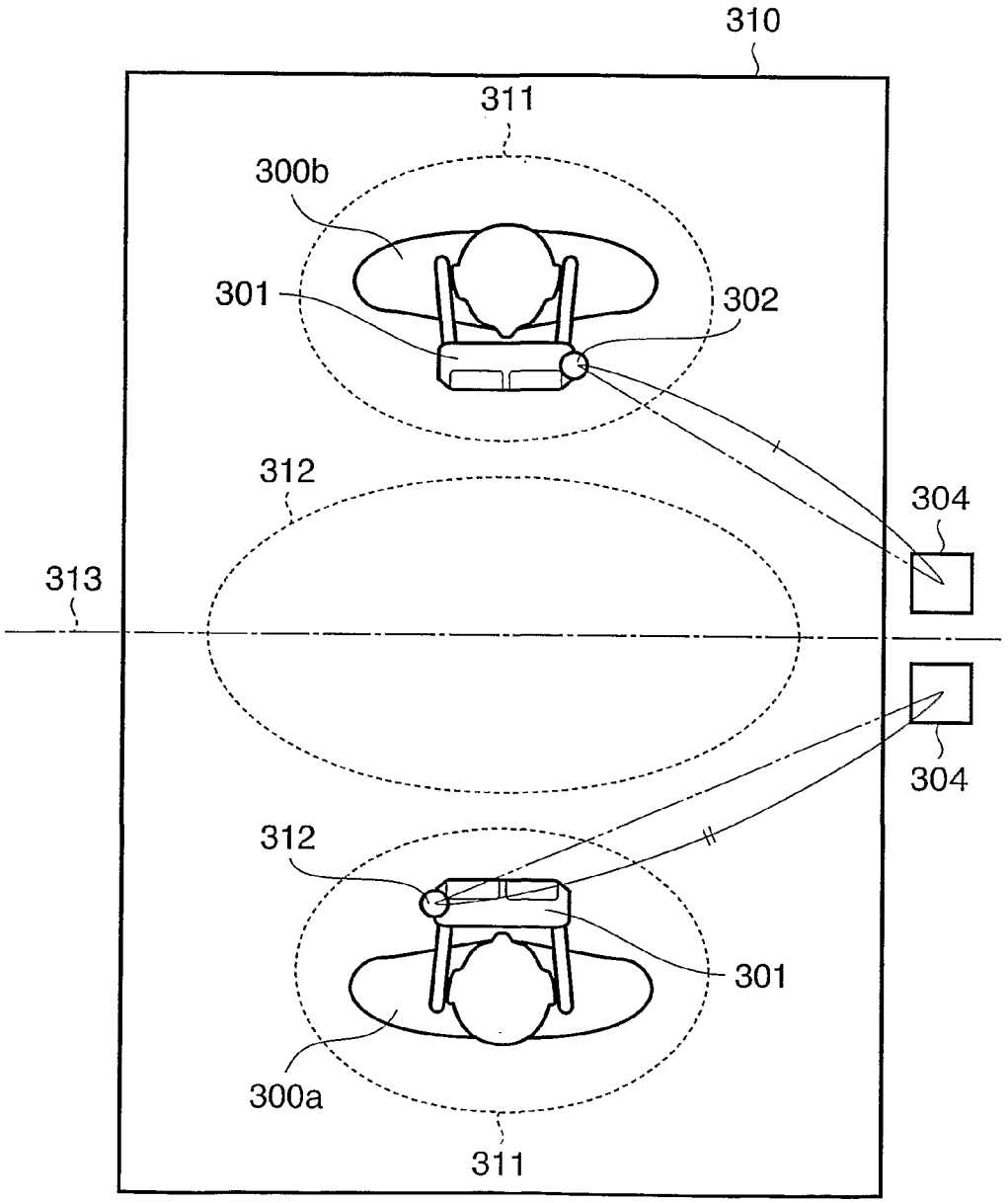


FIG. 22



PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 4

Complete if known	
Application Number	11/842,019
Filing Date	August 20, 2007
First Named Inventor	Jeffrey D. Mullen
Art Unit	3716
Examiner Name	Kevin Y. Kim
Attorney Docket Number	JDM/005CON7

U.S. PATENT DOCUMENTS

Examiner initials*	Cite No.[1]	Document Number: Number – Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		5,139,261	08/1992	Openiano	
		5,523,890	06/1996	Reaney	
		5,724,660	03/1998	Kauser et al.	
		5,741,182	04/1998	Lipps et al.	
		5,802,274	09/1998	Dorak et al.	
		5,902,343	05/1999	Hale et al.	
		5,913,727	06/1999	Ahdoot	
		5,999,808	12/2999	LaDue	
		6,080,063	06/2000	Khosla	
		6,011,653	01/2000	Karasawa	
		6,015,344	01/2000	Kelly et al.	
		6,106,397	08/2000	Phillips	
		6,106,399	08/2000	Baker et al.	
		6,124,825	09/2000	Eschenbach	
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		6,337,688	01/2002	Berstis	
		6,378,390	04/2002	Saito	
		6,520,853	02/2003	Suzuki	
		6,522,312	02/2003	Ohshima et al.	
		6,527,641	03/2003	Sinclair et al.	
		6,625,299	09/2003	Meisner et al.	
		6,633,267	10/2003	Numa	
		6,633,304	10/2003	Anabuki	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Substitute for form 1449A/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** (use as many sheets as necessary)				***Complete if known***	
				Application Number	11/842,019
				Filing Date	August 20, 2007
				First Named Inventor	Jeffrey D. Mullen
				Art Unit	3716
				Examiner Name	Kevin Y. Kim
Sheet	2	of	4	**Attorney Docket Number**	JDM/005CON7

		6,663,105	12/2003	Sullivan et al.	
		6,690,947	02/2004	Tom	
		6,735,435	05/2004	Newell et al.	
		6,850,844	02/2005	Walters et al.	
		6,853,935	02/2005	Satch et al.	
		6,872,139	03/2005	Sato et al.	
		6,951,515	10/2005	Ohshima et al.	
		6,961,055	11/2005	Doak et al.	
		6,972,734	12/2005	Ohshima et al.	
		7,038,699	05/2006	Sato et al.	
		7,050,078	05/2006	Dempski	
		7,056,216	08/2006	Ohshima et al.	
		7,084,887	08/2006	Sato et al.	
		7,303,474	12/2007	Anderson et al.	
		7,657,910	02/2010	McAulay et al	
		2001/0040591	11/2001	Abbott et al.	
		2001/0054019	12/2001	de Fabrega	
		2001/0006908	07/2001	Fujioka et al.	
		2002/0052933	05/2002	Leonhard et al.	
		2002/0061741	05/2002	Leung et al.	
		2002/0063655	05/2002	Aoyama	
		2002/0082068	06/2002	Singhai	
		2002/0082082	06/2002	Stamper et al.	
		2002/0086732	07/2002	Kirmse et al	
		2002/0090985	07/2002	Tochner et al	
		2002/0102992	08/2002	Koorapaty	

Examiner Signature		Date Considered	

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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
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				Application Number	11/842,019
				Filing Date	August 20, 2007
				First Named Inventor	Jeffrey D. Mullen
				Art Unit	3716
				Examiner Name	Kevin Y. Kim
Sheet	3	of	4	**Attorney Docket Number**	JDM/005CON7

		2002/0128063	09/2002	Kunieda et al	
		2002/0190861	12/2002	Wentworth	
		2002/0131404	09/2002	Mehta et al	
		2003/0134665	07/2003	Kato et al.	
		2003/0144047	07/2003	Sprogis	
		2003/0171147	09/2003	Sinclair et al.	
		2003/0032484	02/2003	Ohshima	
		2003/0062675	04/2003	Noro et al.	
		2003/0210228	11/2003	Ebersole et al.	
		2003/0217070	11/2003	Gotoh	
		2003/0224855	12/2003	Cunningham	
		2004/0046655	03/2004	Benes et al.	
		2004/0053690	03/2004	Fogel et al.	
		2004/0058732	03/2004	Plocionelli	
		2004/0128250	07/2004	Fox	
		2004/0164897	08/2004	Treadwell et al.	
		2004/0224740	11/2004	Ball et al.	
		2004/0248653	12/2004	Barros et al.	
		2005/0009608	01/2005	Roberts et al.	
		2005/0048987	03/2005	Glass	
		2006/0154710	07/2006	Serafat	
		2008/0253315	10/2008	Bodlaender	

FOREIGN PATENT DOCUMENTS						
Examiner initials*	Cite No.[1]	Foreign Patent Document Country Code[3] - Number[4] - Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
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Substitute for form 1449A/PTO				**Complete if known**	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				**Application Number**	11/842,019
				Filing Date	August 20, 2007
				First Named Inventor	Jeffrey D. Mullen
				Art Unit	3716
(use as many sheets as necessary)				**Examiner Name**	Kevin Y. Kim
Sheet	4	of	4	**Attorney Docket Number**	JDM/005CON7

FOREIGN PATENT DOCUMENTS						
Examiner initials*	Cite No.[1]	Foreign Patent Document Country Code[3] - Number[4] - Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
		WO02073287A2	09/1992	Yonezawa et al.		

NON PATENT LITERATURE DOCUMENTS			
Examiner initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
		"Antti Kotanen, Marko Hannikainen, Helena Leppakoski, Timo D. Hamalainen "Experimnets with Bluetooth" Proeedings of the International Conferene on Information Technology: Computers and Communications (ITCC '03) April, 2003.	
		"First Person Indoor/outdoor Augmented Reality Application: ARQuake", written by Thomas et al, and published February 2002	
		Mortal Kombat instruction booklet for Super Nintendo, 1992, Licensed from Midway.	
		Mortak Kombat 4 (released October 15, 1997). Published by Midway Games <http://en.wikipedia.org/w/index.php?title=Mortal_Kombat_4&printable=yes>	
		Youtube.com Screenshot of Super Dodge Ball Walkthrough with Commentary (Part 1 of 2). Accessed: December 14, 2010. http://www.youtube.com/watch?E1LUWmr64JA	
		GameFAQs: Super Dodge Ball (NES) FAG/Walkthrough by TOKADasrik. Accessed: December 14, 2010. http://www.gamefaqs.com/nes/587662-super-dodge-ball/faqs/34823	
		Halo: Combat Evolved, Wikipedia description, http://en.wikipedia.org/wiki/Halo_%28game%29	
		Quake Game Manual, Release cira 1996	
		Wikipedia, N-Gage (device), 7 October 2003, https://en.wikipedia.org/wiki/N-Gage_(devie)	
		IGN, Call of Duty, 27 September 2004. http:/www.ign.com/artiles/2004/09/28/call-of-duty-6	
		"Description of Journey Geolocation Game" published November 4, 2004 accessible via URLhttps://web.archive.org/web/20041102005616 /http://journey.mop/us.com/, 1 page	

Examiner Signature		Date Considered	

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JDM/005CON7

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Jeffrey D. Mullen
Application No.	:	11/842,019
Confirmation No.	:	2744
Filed	:	August 20, 2007
For	:	SYSTEMS AND METHODS FOR LOCATING CELLULAR PHONES AND SECURITY MEASURES FOR THE SAME
Group Art Unit	:	3716
Examiner	:	Kevin Y Kim

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pittsburgh, PA 15116
December 28, 2016

INFORMATION DISCLOSURE STATEMENT

Sir:

A Request for Continued Examination is applicable hereto and being submitted herewith. In accordance with 37 C.F.R. §§ 1.56 and 1.97, applicant wishes to call the attention of the Examiner to the following documents:

Patent Documents

5,139,261	08/1992	Openiano	(4)
5,523,890	06/1996	Reaney	(1)
5,724,660	03/1998	Kauser et al.	(1)
5,741,182	04/1998	Lipps et al.	(4)
5,802,274	09/1998	Dorak et al.	(5)

5,902,343	05/1999	Hale et al.	(1)
5,913,727	06/1999	Ahdoot	(1)
5,999,808	12/2999	LaDue	(4)
6,080,063	06/2000	Khosla	(1)
6,011,653	01/2000	Karasawa	(1)
6,015,344	01/2000	Kelly et al.	(5)
6,106,397	08/2000	Phillips	(2)
6,106,399	08/2000	Baker et al.	(6)
6,124,825	09/2000	Eschenbach	(2)
6,287,200	09/2001	Sharma	(1)
6,337,688	01/2002	Berstis	(1)
6,378,390	04/2002	Saito	(2)
6,520,853	02/2003	Suzuki	(3)
6,522,312	02/2003	Ohshima et al.	(2)
6,527,641	03/2003	Sinclair et al.	(7)
6,625,299	09/2003	Meisner et al.	(2)
6,633,267	10/2003	Numa	(1)
6,633,304	10/2003	Anabuki	(2)
6,663,105	12/2003	Sullivan et al.	(5)
6,690,947	02/2004	Tom	(1)
6,735,435	05/2004	Newell et al.	(1)
6,850,844	02/2005	Walters et al.	(3)
6,853,935	02/2005	Satch et al.	(2)
6,872,139	03/2005	Sato et al.	(2)
6,951,515	10/2005	Ohshima et al.	(2)
6,961,055	11/2005	Doak et al.	(3)
6,972,734	12/2005	Ohshima et al.	(2)
7,038,699	05/2006	Sato et al.	(2)
7,050,078	05/2006	Dempski	(2)
7,056,216	08/2006	Ohshima et al.	(2)
7,084,887	08/2006	Sato et al.	(2)

7,303,474	12/2007	Anderson et al.	(1)
7,657,910	02/2010	McAulay et al	(5)
2001/0040591	11/2001	Abbott et al.	(6)
2001/0054019	12/2001	de Fabrega	(5)
2001/0006908	07/2001	Fujioka et al.	(4)
2002/0052933	05/2002	Leonhard et al.	(1)
2002/0061741	05/2002	Leung et al.	(1)
2002/0063655	05/2002	Aoyama	(6)
2002/0082068	06/2002	Singhai	(7)
2002/0082082	06/2002	Stamper et al.	(3)
2002/0086732	07/2002	Kirmse et al	(7)
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2002/0102992	08/2002	Koorapaty	(6)
2002/0128063	09/2002	Kunieda et al	(7)
2002/0190861	12/2002	Wentworth	(6)
2002/0131404	09/2002	Mehta et al	(6)
2003/0134665	07/2003	Kato et al.	(5)
2003/0144047	07/2003	Sprogis	(7)
2003/0171147	09/2003	Sinclair et al.	(7)
2003/0032484	02/2003	Ohshima	(4)
2003/0062675	04/2003	Noro et al.	(1)
2003/0210228	11/2003	Ebersole et al.	(1)
2003/0217070	11/2003	Gotoh	(1)
2003/0224855	12/2003	Cunningham	(3)
2004/0046655	03/2004	Benes et al.	(1)
2004/0053690	03/2004	Fogel et al.	(2)
2004/0058732	03/2004	Plocionelli	(5)
2004/0128250	07/2004	Fox	(5)
2004/0164897	08/2004	Treadwell et al.	(5)
2004/0224740	11/2004	Ball et al.	(6)
2004/0248653	12/2004	Barros et al.	(1)

2005/0009608	01/2005	Roberts et al.	(1)
2005/0048987	03/2005	Glass	(7)
2006/0154710	07/2006	Serafat	(1)
2008/0253315	10/2008	Bodlaender	(4)

Foreign Patent Documents

WO02073287A2	09/1992	Japan	Yonezawa et al.	(2)

Non-Patent Documents

"Antti Kotanen, Marko Hannikainen, Helena Leppakoski, Timo D. Hamalainen "Experimnets with Bluetooth" Proeedings of the International Conferene on Information Technology: Computers and Communications (ITCC '03) April, 2003.	(1)
"First Person Indoor/outdoor Augmented Reality Application: ARQuake", written by Thomas et al, and published February 2002	(2)
Mortal Kombat instruction booklet for Super Nintendo, 1992, Licensed from Midway.	(1)
Mortak Kombat 4 (released October 15, 1997). Published by Midway Games <http://en.wikipedia.org/w/index.php?title=Mortal_Kombat_4&printable=yes>	(1)
Youtube.com Screenshot of Super Dodge Ball Walkthrough with Commentary (Part 1 of 2). Accessed: December 14, 2010. http://www.youtube.com/watch?E1LUWmr64JA	(1)
GameFAQs: Super Dodge Ball (NES) FAG/Walkthrough by TOKADasrik. Accessed: December 14, 2010. http://www.gamefaqs.com/nes/587662-super-dodge-ball/faqs/34823	(1)
Halo: Combat Evolved, Wikipedia description, http://en.wikipedia.org/wiki/Halo_%28game%29	(2)
Quake Game Manual, Release cira 1996	(2)

Wikipedia, N-Gage (device), 7 October 2003, https://en.wikipedia.org/wiki/N-Gage_(devie)	(3)
IGN, Call of Duty, 27 September 2004. http:/www.ign.com/artiles/2004/09/28/call-of-duty-6	(3)
"Description of Journey Geolocation Game" published November 4, 2004 accessible via URL https://web.archive.org/web/20041102005616/http://journey.mop/us.com/, 1 page	(6)

It is respectfully requested that these documents be (1) fully considered by the Patent and Trademark Office during examination of this application; and (2) printed on any patent which may issue on this application. Applicant requests that a copy of Form PTO/SB/08A, as considered and initialed by the Examiner, be returned with the next communication.

Documents above marked with a (1) were cited in Application No. 10/932,536. Applicant respectfully requests the Examiner review the prosecution history of this application including all communications from the United States Patent and Trademark Office contained therein (e.g., the Office Actions contained therein).

Documents above marked with a (2) were cited in Application No. 11/486,756. Applicant respectfully requests the Examiner review the prosecution history of this application including all communications from the United

Meta Exhibit 1004
Meta v. Mullen - Page 00485

States Patent and Trademark Office contained therein (e.g., the Office Actions contained therein).

Documents above marked with a (3) were cited in Application No. 11/461,761. Applicant respectfully requests the Examiner review the prosecution history of this application including all communications from the United States Patent and Trademark Office contained therein (e.g., the Office Actions contained therein).

Documents above marked with a (4) were cited in Application No. 11/461,827. Applicant respectfully requests the Examiner review the prosecution history of this application including all communications from the United States Patent and Trademark Office contained therein (e.g., the Office Actions contained therein).

Documents above marked with a (5) were cited in Application No. 11/775,227. Applicant respectfully requests the Examiner review the prosecution history of this application including all communications from the United States Patent and Trademark Office contained therein (e.g., the Office Actions contained therein).

Documents above marked with a (6) were cited in Application No. 11/778,047. Applicant respectfully requests the Examiner review the prosecution history of this

Meta Exhibit 1004
Meta v. Mullen - Page 00486

application including all communications from the United States Patent and Trademark Office contained therein (e.g., the Office Actions contained therein).

Documents above marked with a (7) were cited in Application No. 11/841,889. Applicant respectfully requests the Examiner review the prosecution history of this application including all communications from the United States Patent and Trademark Office contained therein (e.g., the Office Actions contained therein).

Applicant hereby submits that not all of the patent documents and non-patent literature submitted herein may be, in fact, prior art to the present application. Applicant reserves the right to dispute whether references, or subject matter within references, are prior art to the present application (e.g., continuation-in-part subject matter filed after the filing date of the present application).

Applicant respectfully submits that this application, including the pending claims, is in condition for allowance. A favorable action is respectfully requested.

Meta Exhibit 1004
Meta v. Mullen - Page 00487

This Statement is being submitted with a Request for Continued Examination.

The Director is hereby authorized to charge any fees associated with this filing, or credit any overpayment of the same, to Deposit Account No. 50-3855.

Respectfully Submitted,

/Jeffrey D. Mullen/
Jeffrey D. Mullen
Applicant (Reg. No. 52,056)
Customer No. 32733
2212 Hassinger Lane
Glenshaw, PA 15116
Tel.: (914) 837-7741

Meta Exhibit 1004
Meta v. Mullen - Page 00488

Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
RCE- 2ND AND SUBSEQUENT REQUEST	2820	1	850	850
		Total in USD ($)		**850**

Electronic Acknowledgement Receipt

EFS ID:	27922220
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	28-DEC-2016
Filing Date:	20-AUG-2007
Time Stamp:	18:50:46
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$850
RAM confirmation Number	122916INTEFSW18525600
Deposit Account	503855
Authorized User	Jeffrey Mullen

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	JDM-005C7--RCE.pdf	697854 4fb38053a9b9f396c69fc58501872253c09c4cab	no	3
Warnings:					
Information:					
2	Non Patent Literature	JDM-005CON2--NPL.pdf	1299711 8fe6e2a06673423f5775af6d9cdaf03bf09a446d	no	11
Warnings:					
Information:					
3	Non Patent Literature	JDM-005CON5--NPL.pdf	687326 e36a31d7deedc2245c029e3a888b691be79c04cb	no	1
Warnings:					
Information:					
4	Non Patent Literature	JDM-005--NPL.pdf	12223619 1b076be351fad078fc094ea807b40eba0a49dcc1	no	45
Warnings:					
Information:					
5		JDM-005CON--NPLandFR.pdf	5585526 9f73359ee22dbabb3fbf9fc9466187b73e2f5a4e	yes	109

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Document Description	Start	End
Non Patent Literature	1	23
Non Patent Literature	24	38
Non Patent Literature	39	50

	Foreign Reference		51	109	
Warnings:					
Information:					
6	Information Disclosure Statement (IDS) Form (SB08)	JDM-005C7--PTOSB08A.pdf	301640 b254f8ad28b8b18b80f844e281e95dc17e058de0	no	4
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
7	Transmittal Letter	JDM-005C7--IDS.pdf	104711 4cf2af5a4dda33cea274e9b08cd25d0fecd4350f	no	8
Warnings:					
Information:					
8	Fee Worksheet (SB06)	fee-info.pdf	30472 99e8972fe71e576920bec0663cac56fb9cbedc72	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	20930859		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

32733 7590 02/02/2017

JEFFREY D. MULLEN
2212 Hassinger Lane
Glenshaw, PA 15116

EXAMINER
KIM, KEVIN Y

ART UNIT	PAPER NUMBER
3716	

DATE MAILED: 02/02/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

TITLE OF INVENTION: SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	05/02/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

32733 7590 02/02/2017
JEFFREY D. MULLEN
2212 Hassinger Lane
Glenshaw, PA 15116

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

TITLE OF INVENTION: SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	05/02/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
KIM, KEVIN Y	3716	463-007000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

Meta Exhibit 1004
Meta v. Mullen, IPR2018-00495

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	08/20/2007	Jeffrey D. Mullen	JDM/005 CON7	2744

32733 7590 02/02/2017

JEFFREY D. MULLEN
2212 Hassinger Lane
Glenshaw, PA 15116

EXAMINER	
KIM, KEVIN Y	
ART UNIT	PAPER NUMBER
3716	

DATE MAILED: 02/02/2017

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 11/842,019	Applicant(s) MULLEN, JEFFREY D.	
	Examiner Kevin Y. Kim	Art Unit 3716	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the IDS filed 12/28/2016*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *19-38*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☒ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☒ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/Kevin Y Kim/
Primary Examiner, Art Unit 3716

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 12/28/2016 has been entered.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 12/28/2016 was filed after the mailing date of the Notice of Allowance on 9/29/2016. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Allowable Subject Matter

4. Claims 19-38 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is (571)270-3215. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on (571) 272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Y Kim/
Primary Examiner, Art Unit 3716

PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** (use as many sheets as necessary)				***Complete if known***	
				Application Number	11/842,019
				Filing Date	August 20, 2007
				First Named Inventor	Jeffrey D. Mullen
				Art Unit	3716
				Examiner Name	Kevin Y. Kim
Sheet	1	of	4	**Attorney Docket Number**	JDM/005CON7

U.S. PATENT DOCUMENTS					
Examiner initials*	Cite No.[1]	Document Number Number – Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		5,139,261	08/1992	Openiano	
		5,523,890	06/1996	Reaney	
		5,724,660	03/1998	Kauser et al.	
		5,741,182	04/1998	Lipps et al.	
		5,802,274	09/1998	Dorak et al.	
		5,902,343	05/1999	Hale et al.	
		5,913,727	06/1999	Ahdoot	
		5,999,808	12/2999	LaDue	
		6,080,063	06/2000	Khosla	
		6,011,653	01/2000	Karasawa	
		6,015,344	01/2000	Kelly et al.	
		6,106,397	08/2000	Phillips	
		6,106,399	08/2000	Baker et al.	
		6,124,825	09/2000	Eschenbach	
		6,287,200	09/2001	Sharma	
		6,337,688	01/2002	Berstis	
		6,378,390	04/2002	Saito	
		6,520,853	02/2003	Suzuki	
		6,522,312	02/2003	Ohshima et al.	
		6,527,641	03/2003	Sinclair et al.	
		6,625,299	09/2003	Meisner et al.	
		6,633,267	10/2003	Numa	
		6,633,304	10/2003	Anabuki	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 4

Complete if known	
Application Number	11/842,019
Filing Date	August 20, 2007
First Named Inventor	Jeffrey D. Mullen
Art Unit	3716
Examiner Name	Kevin Y. Kim
Attorney Docket Number	JDM/005CON7

		6,663,105	12/2003	Sullivan et al.	
		6,690,947	02/2004	Tom	
		6,735,435	05/2004	Newell et al.	
		6,850,844	02/2005	Walters et al.	
		6,853,935	02/2005	Satch et al.	
		6,872,139	03/2005	Sato et al.	
		6,951,515	10/2005	Ohshima et al.	
		6,961,055	11/2005	Doak et al.	
		6,972,734	12/2005	Ohshima et al.	
		7,038,699	05/2006	Sato et al.	
		7,050,078	05/2006	Dempski	
		7,056,216	08/2006	Ohshima et al.	
		7,084,887	08/2006	Sato et al.	
		7,303,474	12/2007	Anderson et al.	
		7,657,910	02/2010	McAulay et al	
		2001/0040591	11/2001	Abbott et al.	
		2001/0054019	12/2001	de Fabrega	
		2001/0006908	07/2001	Fujioka et al.	
		2002/0052933	05/2002	Leonhard et al.	
		2002/0061741	05/2002	Leung et al.	
		2002/0063655	05/2002	Aoyama	
		2002/0082068	06/2002	Singhai	
		2002/0082082	06/2002	Stamper et al.	
		2002/0086732	07/2002	Kirmse et al	
		2002/0090985	07/2002	Tochner et al	
		2002/0102992	08/2002	Koorapaty	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 4

Complete if known	
Application Number	11/842,019
Filing Date	August 20, 2007
First Named Inventor	Jeffrey D. Mullen
Art Unit	3716
Examiner Name	Kevin Y. Kim
Attorney Docket Number	JDM/005CON7

		2002/0128063	09/2002	Kunieda et al	
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FOREIGN PATENT DOCUMENTS

Examiner initials*	Cite No.[1]	Foreign Patent Document: Country Code[3] - Number[4] - Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

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Substitute for form 1449A/PTO				Complete if known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				**Application Number**	11/842,019
				Filing Date	August 20, 2007
				First Named Inventor	Jeffrey D. Mullen
				Art Unit	3716
(use as many sheets as necessary)				**Examiner Name**	Kevin Y. Kim
Sheet	4	of	4	**Attorney Docket Number**	JDM/005CON7

FOREIGN PATENT DOCUMENTS

Examiner initials*	Cite No.[1]	Foreign Patent Document Country Code[3] - Number[4] - Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
		WO02073287A2	09/1992	Yonezawa et al.		

NON PATENT LITERATURE DOCUMENTS

Examiner initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
		"Antti Kotanen, Marko Hannikainen, Helena Leppakoski, Timo D. Hamalainen "Experimnets with Bluetooth" Proeedings of the International Conferene on Information Technology: Computers and Communications (ITCC '03) April, 2003.	
		"First Person Indoor/outdoor Augmented Reality Application: ARQuake", written by Thomas et al, and published February 2002	
		Mortal Kombat instruction booklet for Super Nintendo, 1992, Licensed from Midway.	
		Mortak Kombat 4 (released October 15, 1997). Published by Midway Games <http://en.wikipedia.org/w/index.php?title=Mortal_Kombat_4&printable=yes>	
		Youtube.com Screenshot of Super Dodge Ball Walkthrough with Commentary (Part 1 of 2). Accessed: December 14, 2010. http://www.youtube.com/watch?E1LUWmr64JA	
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		Wikipedia, N-Gage (device), 7 October 2003, https://en.wikipedia.org/wiki/N-Gage_(devie)	
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		"Description of Journey Geolocation Game" published November 4, 2004 accessible via URLhttps://web.archive.org/web/20041102005616 /http://journey.mop/us.com/, 1 page	

Examiner Signature	/KEVIN Y KIM/	Date Considered	01/24/2017

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.Y./

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	Art Unit
	ANDREW KIM	3716

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
463	2,7,31,40	8/15/2013	AK

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Text search of PGPUB, USPAT, USOCR, EPO, JPO, DERWENT. See attached search results.	8/15/2013	AK
NPL search for games with multiple virtual characters, one controlled by AI	7/16/14	KK
EAST search refresh	8/17/15	KK

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
463	7,30-34	9/28/16	KK

Meta Exhibit 1004
Meta v. Mullen - Page 00505

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	KEVIN Y KIM	3716

CPC							
Symbol						**Type**	**Version**
A63F		13	/	65		F	2014-09-02
A63F		13	/	216		I	2014-09-02
A63F		13	/	79		I	2014-09-02
A63F		13	/	332		I	2014-09-02
A63F		13	/	42		I	2014-09-02
A63F		13	/	12		I	2013-01-01
A63F		2300	/	204		A	2013-01-01
A63F		2300	/	205		A	2013-01-01
A63F		2300	/	406		A	2013-01-01
A63F		2300	/	408		A	2013-01-01
A63F		2300	/	5573		A	2013-01-01
A63F		2300	/	8082		A	2013-01-01
			/				
			/				
			/				

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/KEVIN Y KIM/ Primary Examiner.Art Unit 3716	01/24/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	KEVIN Y KIM	3716

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
463	7

CROSS REFERENCE(S)

CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
463	30	31	32	34	

INTERNATIONAL CLASSIFICATION														
CLAIMED					**NON-CLAIMED**									
A	6	3	F	9 / 24 (2006.0)										
A	6	3	F	13 / 00 (2014.0)										
G	0	6	F	17 / 00 (2006.0)										
G	0	6	F	19 / 00 (2011.0)										

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/KEVIN Y KIM/ Primary Examiner.Art Unit 3716	01/24/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11842019	MULLEN, JEFFREY D.
	Examiner	**Art Unit**
	KEVIN Y KIM	3716

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17		33										
	2		18		34										
	3		19		35										
	4		20		36										
	5		21		37										
	6		22		38										
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	10		26												
	11		27												
	12		28												
	13		29												
	14		30												
	15		31												
	16		32												

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 20	
/KEVIN Y KIM/ Primary Examiner.Art Unit 3716 (Primary Examiner)	01/24/2017 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11842019	08/20/2007	Jeffrey D. Mullen	JDM/005CON7	2744

TITLE OF INVENTION:

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$480	$0	$0	$480	05/02/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

☑ Issue Fee

☑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

☑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 50-3855 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Jeffrey D. Mullen/ Date 05/01/2017

Typed or printed name Jeffrey D. Mullen Registration No. 52,056

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Meta Exhibit 1004
Meta v. Mullen - Page 00509

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	11842019
Filing Date:	20-Aug-2007
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Filer:	Jeffrey David Mullen
Attorney Docket Number:	JDM/005 CON7

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	2501	1	480	480

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**480**

Electronic Acknowledgement Receipt

EFS ID:	29072199
Application Number:	11842019
International Application Number:	
Confirmation Number:	2744
Title of Invention:	SYSTEMS AND METHODS FOR LOCATION BASED GAMES AND EMPLOYMENT OF THE SAME ON LOCATION ENABLED DEVICES
First Named Inventor/Applicant Name:	Jeffrey D. Mullen
Customer Number:	32733
Filer:	Jeffrey David Mullen
Filer Authorized By:	
Attorney Docket Number:	JDM/005 CON7
Receipt Date:	01-MAY-2017
Filing Date:	20-AUG-2007
Time Stamp:	08:46:49
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$480
RAM confirmation Number	050117INTEFSW08475300
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	JDM-005CON7--ptol85b.pdf	72065 5a963a3f351aae39a9c895b720b812f6aa5de6b1	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30453 b5bbca2307184afbdc3a2bf369d0971dd14d6efb	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	102518		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/08A (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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Substitute for form 1449A/PTO				Complete if known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				**Application Number**	11/842,019
				Filing Date	August 20, 2007
				First Named Inventor	Jeffrey D. Mullen
				Art Unit	3716
(use as many sheets as necessary)				**Examiner Name**	Kevin Y. Kim
Sheet	4	of	4	**Attorney Docket Number**	JDM/005CON7

Change(s) applied to document, /T.W./ 5/4/2017

FOREIGN PATENT DOCUMENTS

Examiner initials*	Cite No.[1]	Foreign Patent Document Country Code[3] - Number[4] - Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
		WO02073287A2	~~09/1992~~ 09/2002	Yonezawa et al.		

NON PATENT LITERATURE DOCUMENTS

Examiner initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
		"Antti Kotanen, Marko Hannikainen, Helena Leppakoski, Timo D. Hamalainen "Experimnets with Bluetooth" Proeedings of the International Conferene on Information Technology: Computers and Communications (ITCC '03) April, 2003.	
		"First Person Indoor/outdoor Augmented Reality Application: ARQuake", written by Thomas et al, and published February 2002	
		Mortal Kombat instruction booklet for Super Nintendo, 1992, Licensed from Midway.	
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Examiner Signature	/KEVIN Y KIM/	Date Considered	01/24/2017

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /K.Y./

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 4

Complete if known	
Application Number	11/842,019
Filing Date	August 20, 2007
First Named Inventor	Jeffrey D. Mullen
Art Unit	3716
Examiner Name	Kevin Y. Kim
Attorney Docket Number	JDM/005CON7

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Change(s) applied to document, /T.W./ 5/4/2017

Examiner Signature		Date Considered	

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/842,019	05/30/2017	9662582	JDM/005 CON7	2744

32733 7590 05/10/2017

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ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 709 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Jeffrey D. Mullen, Pittsburgh, PA;

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