

31 Documents

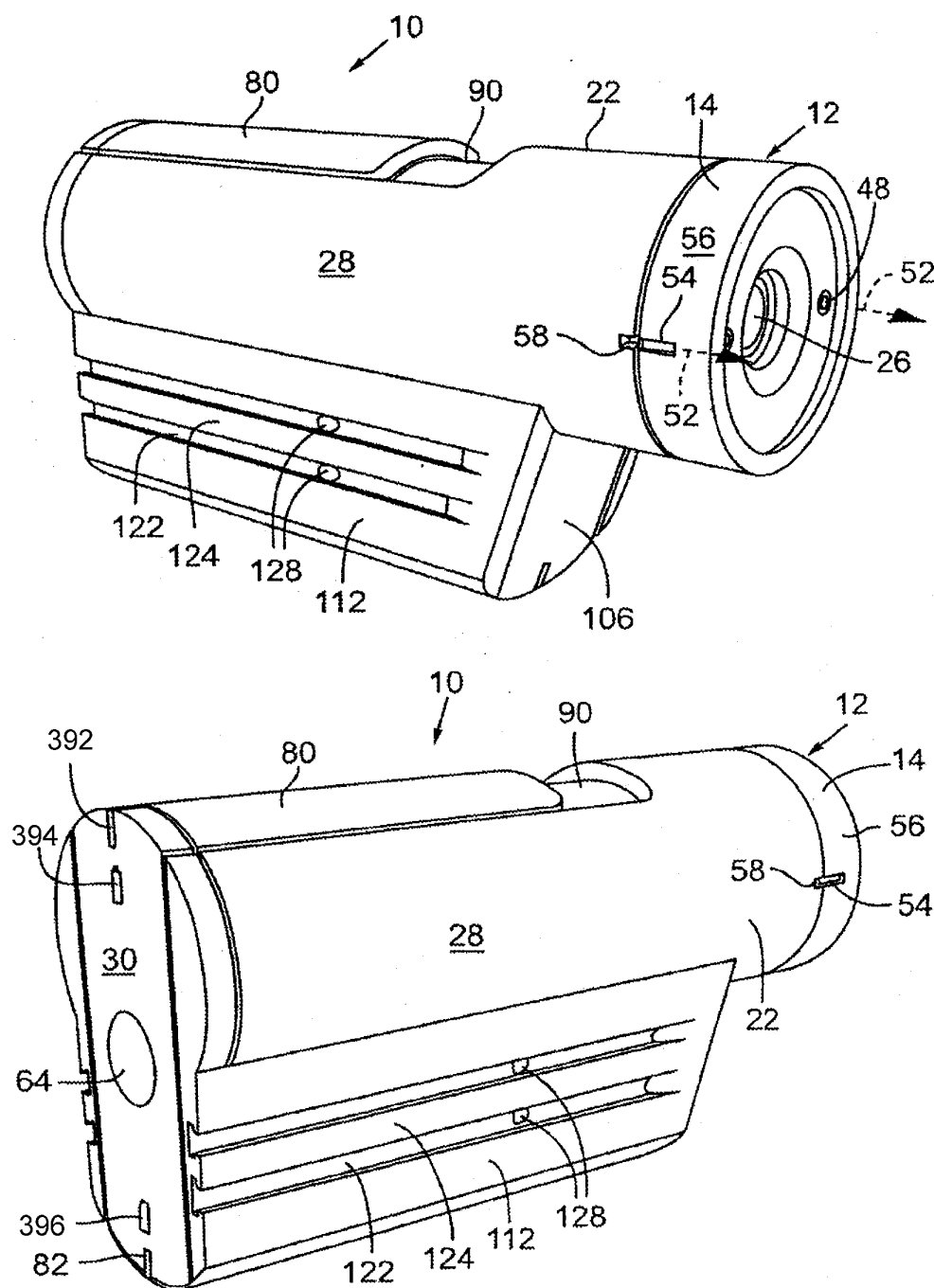
Publication numbers	Title	Current assignees
WO201517572 A1	Orientation control of an image sensor of a portable digital video camera	CONTOUR IP HOLDING
WO2015103211 A1	Modular camera core	LYVE MINDS
US20070015586 A1	Gps based spectator and participant sport system and method	HUSTON CHARLES D
WO201637114 A1	Panoramic camera systems	360FLY
US20130077931 A1	Remotely controllable digital video camera system	PAKON, ...
WO201062481 A1	Near to eye display system and appliance	CHAUM DAVID, ...
US20150181123 A1	Modular Camera Core	LYVE MINDS
US20130077932 A1	Digital video camera system having two microphones	PAKON, ...
US20170195561 A1	Automated processing of panoramic video content	360FLY
US20170308116 A1	Apparel-mountable panoramic camera systems	360FLY
US20170195563 A1	Body-mountable panoramic cameras with wide fields of view	360FLY
CA2864003 A1	System and method for creating an environment and for sharing a location based experience in an environment	Charles D. Houston, ...
WO2016174659 A1	Estimating and using relative head pose and camera field-of-view	SNAP AID PATENTS
US20140098241 A1	Compact, rugged, intelligent tracking apparatus and method	JIGABOT
WO2015183887 A1	Video headphones, systems, helmets, methods and video content files	CHASE STEPHEN
US20130124207 A1	Voice-controlled camera operations	MICROSOFT TECHNOLOGY LICENSING
WO2015127383 A1	Person wearable photo experience aggregator apparatuses, methods and systems	CATCH MOTION
US20160166193 A1	Mobile Sensor System and Methods for Use	ROSALIND FRANKLIN UNIVERSITY OF MEDICINE & SCIENCE
US20170195562 A1	Dynamic field of view adjustment for panoramic video content using eye tracker apparatus	360FLY
US20160026423 A1	Mountable display devices	BEAM AUTHENTIC
WO2017149526 A2	A method and apparatus for cooperative usage of multiple distance meters	MAY PATENTS
CA2953335 A1	Methods and systems for creating virtual and augmented reality	MAGIC LEAP
US9691152 B1	Minimizing variations in camera height to estimate distance to objects	A9 COM
US20100110368 A1	Near to Eye Display System and Appliance	CHAUM DAVID, ...

Publication numbers	Title	Current assignees
WO2015109145 A1	See-through computer display systems	OSTERHOUT
CA2843670 A1	Video-game console for allied touchscreen media	ARGIRO CHRIS
WO2013138846 A1	Method and system of interacting with content disposed on substrates	SILVERBROOK RESEARCH
WO201832457 A1	Systems and methods for augmented stereoscopic display	SZ DJI TECHNOLOGY
US20150277123 A1	Near to eye display and appliance	CHAUM DAVID, ...
US20140059472 A1	Methods and systems for controlling electronic devices	INTEL
US20150049487 A1	Wearable device for disrupting unwelcome photography	OSTENDO

Family 1/31 - FAMPAT - ©Questel

Title

(WO201517572)

Orientation control of an image **sensor** of a portable digital video **camera****Images****Publication data including kind & date**[US20150036047](#)

A1 2015-02-05

US20150036047

[WO2015017572](#)

A1 2015-02-05

WO201517572

**Abstract**

(WO201517572)

A **camera** accessory includes one or more kinematic **sensor(s)**, such as **accelerometer(s)** and/or angular rate **sensor(s)**, an actuator, and a coupling mechanism to adjust the orientation of a horizontal image plane of an image **sensor** of a digital video **camera** independent of the orientation of the **camera** housing of the digital video **camera**.

Inventors

BLEDSON DEREK LEE

Latest standardized assignees - inventors removed

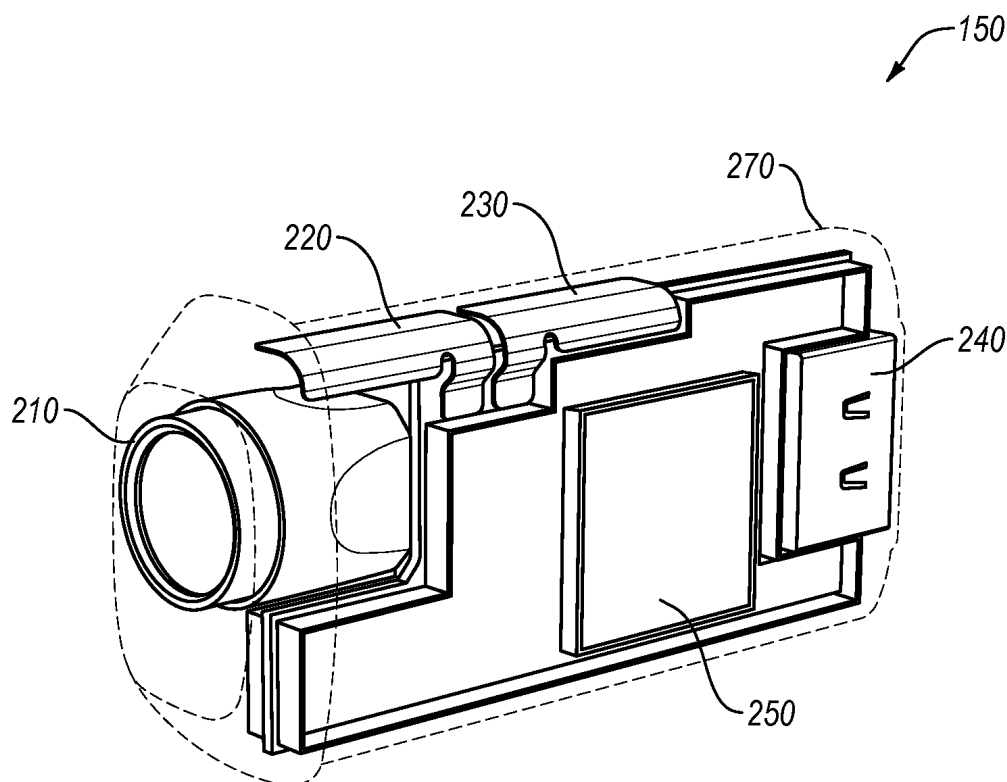
CONTOUR IP HOLDING

Family 2/31 - FAMPAT - ©Questel

Title

(WO2015103211)

Modular camera core

Images**Fig. 2A****Publication data including kind & date**

WO2015103211	A1	2015-07-09	WO2015103211
TW201527861	A	2015-07-16	TW201527861
CN105874777	A	2016-08-17	CN105874777
KR20160123295	A	2016-10-25	KR20160123295

**Abstract**

(WO2015103211)

A modular camera comprising a camera capable of capturing digital video, audio, and photograph data, a processor capable of controlling the controller to initiate the capture of digital video, audio, or photograph data and receive the captured digital video, audio, or photograph data and transferring the captured digital video, audio, and photograph data to an external computing device, a memory for storing captured digital video, audio, or photograph data, an electrical connection connected to the processor, and a housing which houses the camera, processor, and the electrical connection,

wherein the housing is configured to couple with a plurality of external camera modules, each of which encloses at least a portion of the housing and which includes a housing electrical connection which connects electrically to the electrical connection of the modular camera.

Inventors

PACURARIU MIHNEA CALIN

HOENIG DAVID

VON SNEIDERN ANDREAS

PALMER JOSEPH

Latest standardized assignees - inventors removed

LYVE MINDS

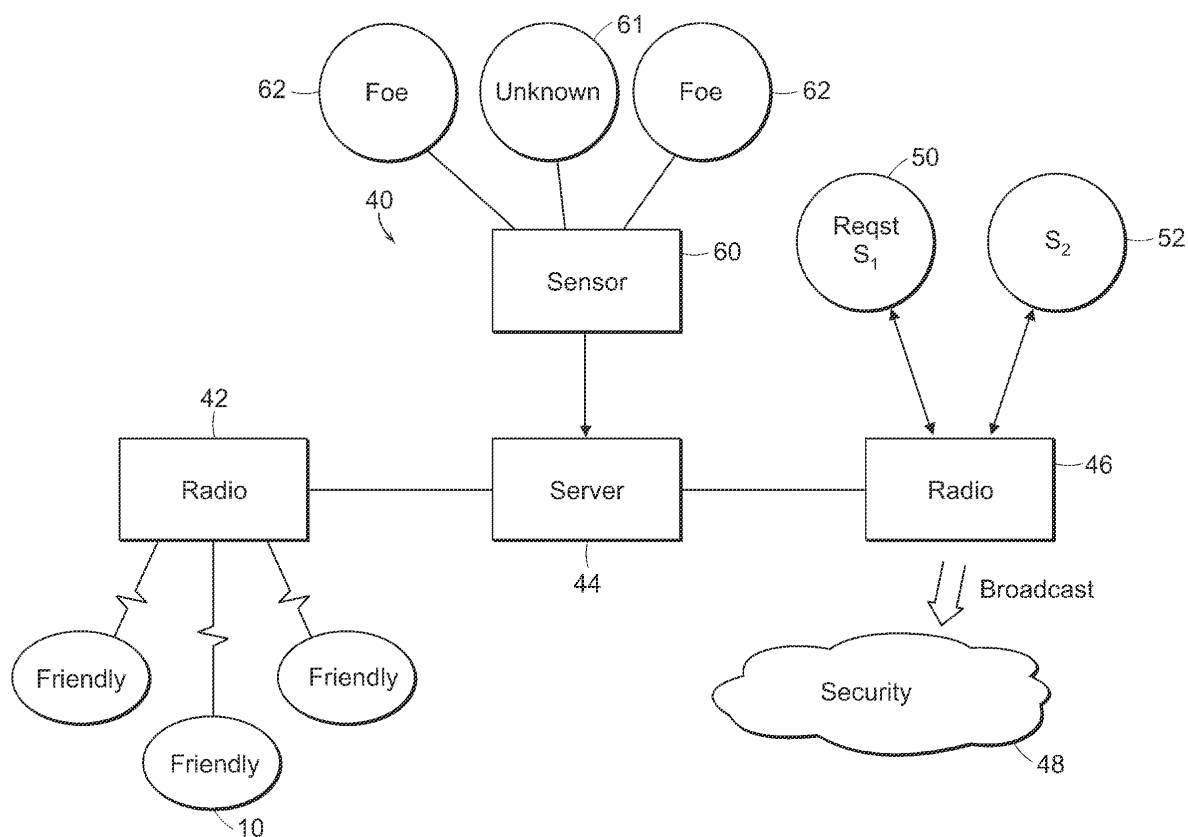
Family 3/31 - FAMPAT - ©Questel

Title

(EP1904202)

Gps based spectator and participant sport system and method

Images



Publication data including kind & date

US20070015586	A1	2007-01-18	US20070015586
WO2007011648	A2	2007-01-25	WO200711648
US20070018880	A1	2007-01-25	US20070018880
US20070117576	A1	2007-05-24	US20070117576
WO2007011648	A3	2007-05-31	WO200711648
WO2007011648	B1	2007-07-05	WO200711648
US20080036653	A1	2008-02-14	US20080036653
EP1904202	A2	2008-04-02	EP1904202
KR20080046631	A	2008-05-27	KR20080046631
CN101222957	A	2008-07-16	CN101222957



US20080198230	A1	2008-08-21	US20080198230				
US20080259096	A1	2008-10-23	US20080259096				
US7518501	B2	2009-04-14	US7518501				
US7855638	B2	2010-12-21	US7855638				
US20110282799	A1	2011-11-17	US20110282799				
US20120004956	A1	2012-01-05	US20120004956				
CN101222957	B	2012-01-11	CN101222957B				
US20120007885	A1	2012-01-12	US20120007885				
US8207843	B2	2012-06-26	US8207843				
US20120176411	A1	2012-07-12	US20120176411				
US8249626	B2	2012-08-21	US8249626				
US8275397	B2	2012-09-25	US8275397				
US20120331058	A1	2012-12-27	US20120331058				
US8417261	B2	2013-04-09	US8417261				
US8589488	B2	2013-11-19	US8589488				
KR101350888	B1	2014-01-14	KR101350888				
US20140025768	A1	2014-01-23	US20140025768				
US20140218193	A1	2014-08-07	US20140218193				
US8842003	B2	2014-09-23	US8842003				
US20150006639	A1	2015-01-01	US20150006639				
US8933967	B2	2015-01-13	US8933967				
US9344842	B2	2016-05-17	US9344842				
US20160220885	A1	2016-08-04	US20160220885				
US9445225	B2	2016-09-13	US9445225				
US9498694	B2	2016-11-22	US9498694				
EP1904202	B1	2016-12-21	EP1904202				
US9566494	B2	2017-02-14	US9566494				
US9798012	B2	2017-10-24	US9798012				
US20180045831	A1	2018-02-15	US20180045831				

Abstract

(EP1904202)

A spectator sport system and method that displays different views of a sporting event and, in particular, uses the spectator's **GPS** position to assist in displaying a view from the spectator's position. The spectator, using a personal device, can zoom, pan, tilt and change the view, as well as change the view to another position, such as a finish line, goal, or a participant position. Vital information on the sporting event or a participant can be appended to the view. In some forms, augmented reality can be used, such as a finish line or goal, to enhance the experience. Additional service requests can be made from the personal device.

Inventors

HUSTON CHARLES D

Latest standardized assignees - inventors removed

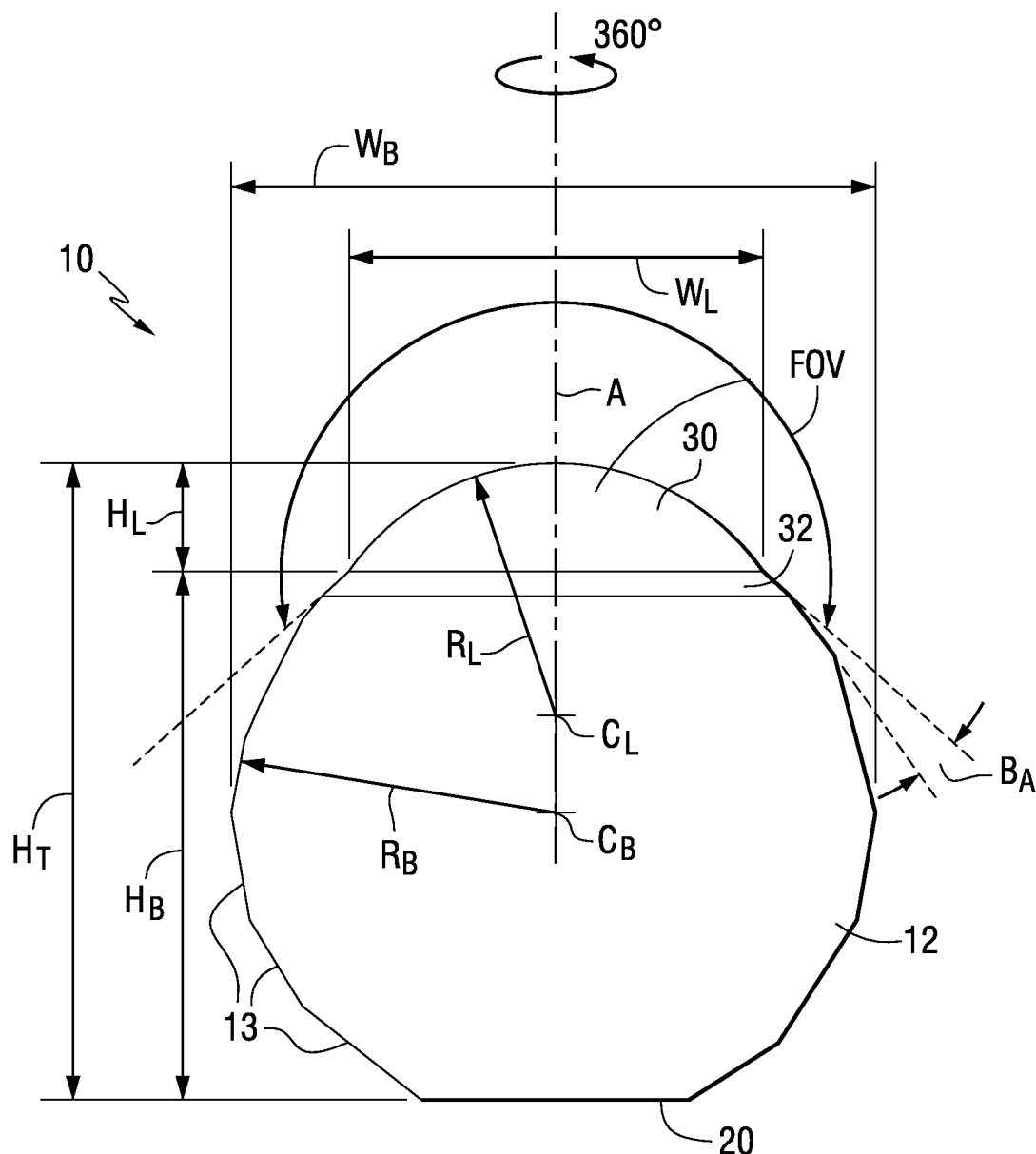
HUSTON CHARLES D

Family 4/31 - FAMPAT - ©Questel

Title

(WO201637114)

Panoramic **camera** systems**Images**



Publication data including kind & date

US20160073023

A1 2016-03-10

US20160073023



WO2016037114

A1 2016-03-10

WO201637114

Abstract

(WO201637114)

Panoramic **camera** systems are disclosed. The panoramic **camera** systems include a panoramic lens with a wide field of view, a video **sensor** and a processor module contained in a **camera** body that remains outside the field of view of the lens. The panoramic **camera** systems may also capture **audio** sounds and may include various types of motion sensors. Mounting assemblies and charging cradles for the **camera** systems are also disclosed. Methods for processing panoramic video image data are disclosed. Methods and devices for displaying video images are also disclosed.

Inventors

RONDINELLI MICHAEL

CHOI MINKYU

BARBARIC MLADEN

KIM SUNGMOON

KIM BONGGEUN

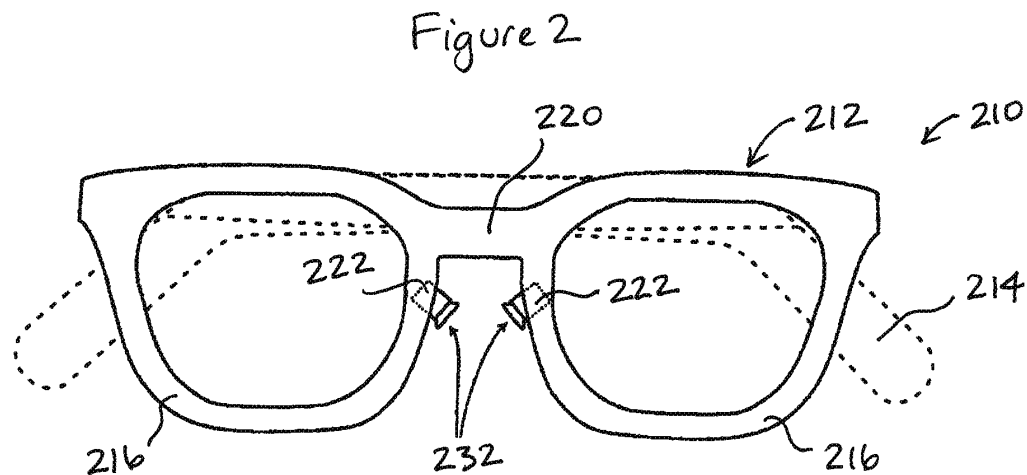
TIMOTHY DREW

BARTHELEMY MIKE

STEELE NICK

Near to eye **display** system and appliance

Images



Publication data including kind & date

WO2010062481	A1	2010-06-03	WO201062481
WO2010062479	A1	2010-06-03	WO201062479
EP2486450	A1	2012-08-15	EP2486450
IN1117/MUMNP/2012	A	2012-08-24	IN2012MN01117
CN103119512	A	2013-05-22	CN103119512
EP2486450	A4	2017-07-05	EP2486450



Abstract

(EP2486450)

A near-to-eye **display** system for forming an image as an illuminated region on a retina of at least one eye of a user is disclosed. The system includes a source of modulated light, a proximal optic positionable adjacent an eye of the user to receive the modulated light. The proximal optic has a plurality of groups of optically redirecting regions. The optically redirecting regions are configured to direct a plurality of beams of the modulated light into a pupil of the eye to form a contiguous illuminated portion of the retina of the eye. A first group of the optically redirecting regions is configured to receive modulated light from the source and redirect beams of the modulated light into the pupil of the eye for illumination of a first portion of the retina. A second group of the optically redirecting regions is configured to receive modulated light from the source and redirect beams of the modulated light into the pupil of the eye for illumination of a second portion of the retina.

Inventors

CHAUM DAVID

MOSSBERG THOMAS W

ROGERS JOHN R

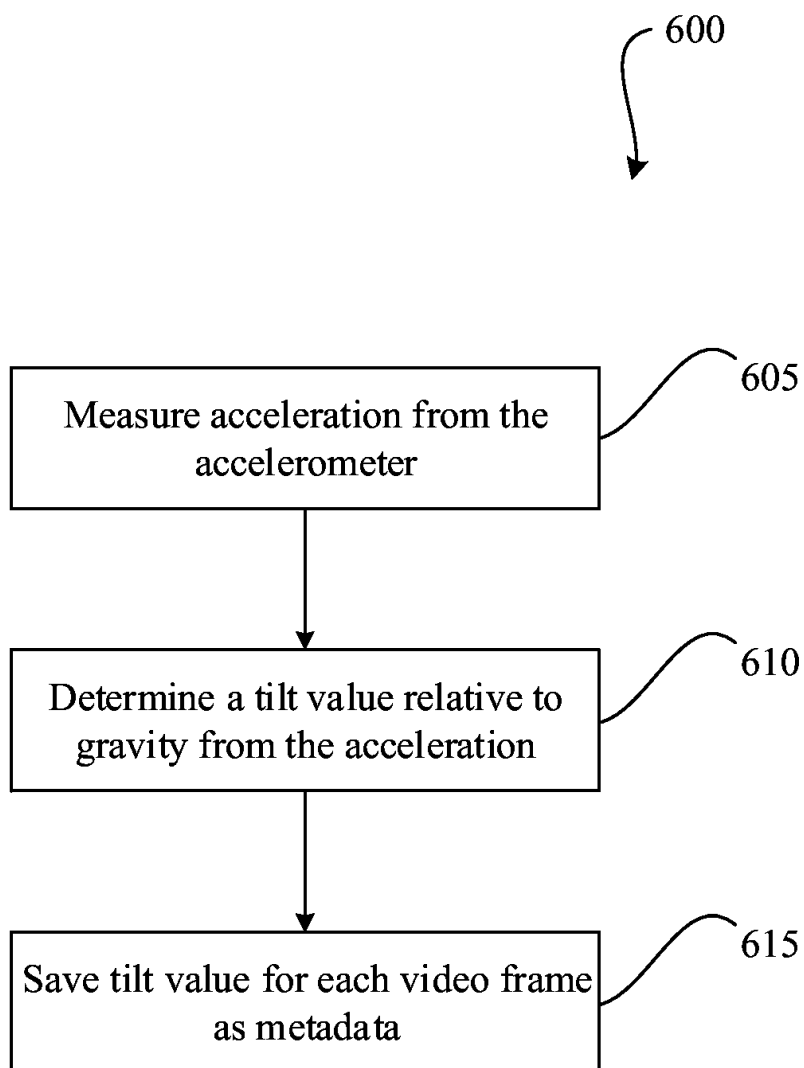
Family 7/31 - FAMPAT - ©Questel

Title

(US20150195432)

Modular **Camera** Core

Images

**Publication data including kind & date**

US20150181123	A1	2015-06-25	US20150181123
US20150195432	A1	2015-07-09	US20150195432

**Abstract**

(US20150195432)

A modular **camera** comprising a **camera** capable of capturing digital video, **audio**, and photograph data, a processor capable of controlling the controller to initiate the capture of digital video, **audio**, or photograph data and receive the captured digital video, **audio**, or photograph data and transferring the captured digital video, **audio**, and photograph data to an external computing device, a memory for storing captured digital video, **audio**, or photograph data, an electrical connection connected to the processor, and a housing which houses the **camera**, processor, and the electrical connection, wherein the housing is configured to couple with a plurality of external **camera** modules, each of which encloses at least a portion of the housing and which includes a housing electrical connection which connects electrically to the electrical connection of the modular **camera**.

Inventors

PACURARIU MIHNEA CALIN
HOENIG DAVID

VON SNEIDERN ANDREAS

PALMER JOSEPH

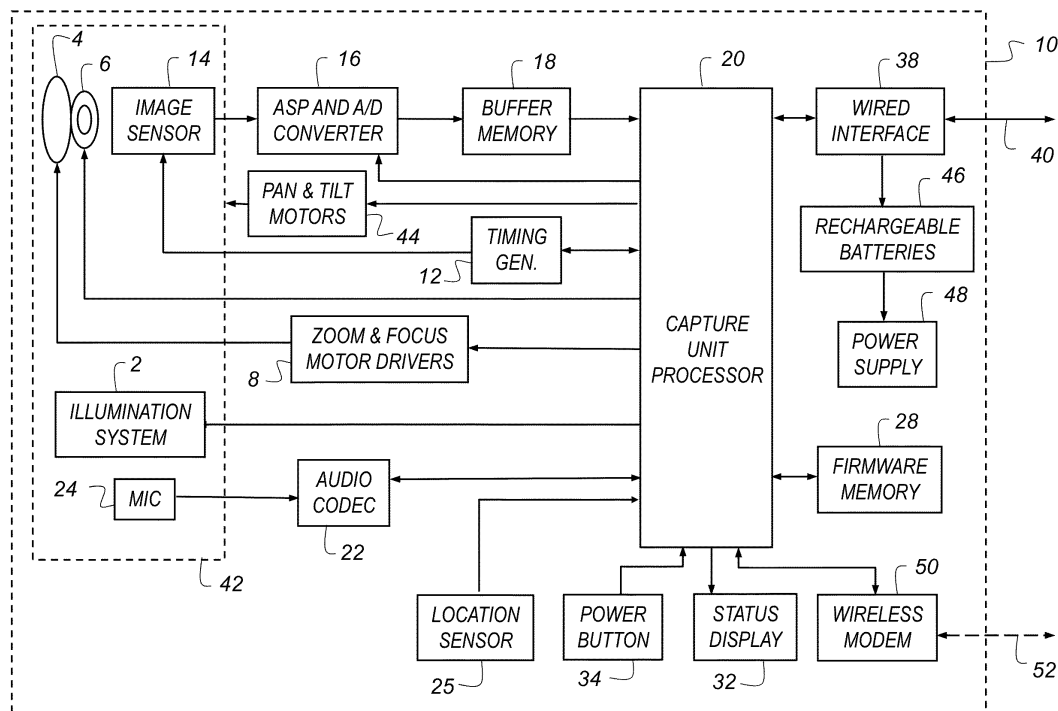
Latest standardized assignees - inventors removed

LYVE MINDS

Family 8/31 - FAMPAT - ©Questel

Title

(US20130077932)

Digital video **camera** system having two microphones**Images****Publication data including kind & date**

US20130077932

A1 2013-03-28

US20130077932

**Abstract**

(US20130077932)

A digital video **camera** system comprising image capture and an image recording units. The image capture unit includes an image **sensor** for capturing a digital video signal, an optical system for forming an image of a scene onto the image **sensor**, a first **microphone**, and a first **wireless** communication system. The image recording unit includes a second **wireless** communication system, a second **microphone**, an image **display**, a user interface including user controls, and a program memory storing instructions to implement a method for capturing a digital video sequence in response to user activation of a user control. The method includes wirelessly receiving a digital video signal from the image capture unit, displaying the received digital video signal on the image **display**, recording an **audio** signal from the microphones, and storing the received digital video signal and the recorded **audio** signal.

Inventors

CORNELL DAVID JAMES

PARULSKI KENNETH ALAN

Latest standardized assignees - inventors removed

PAKON

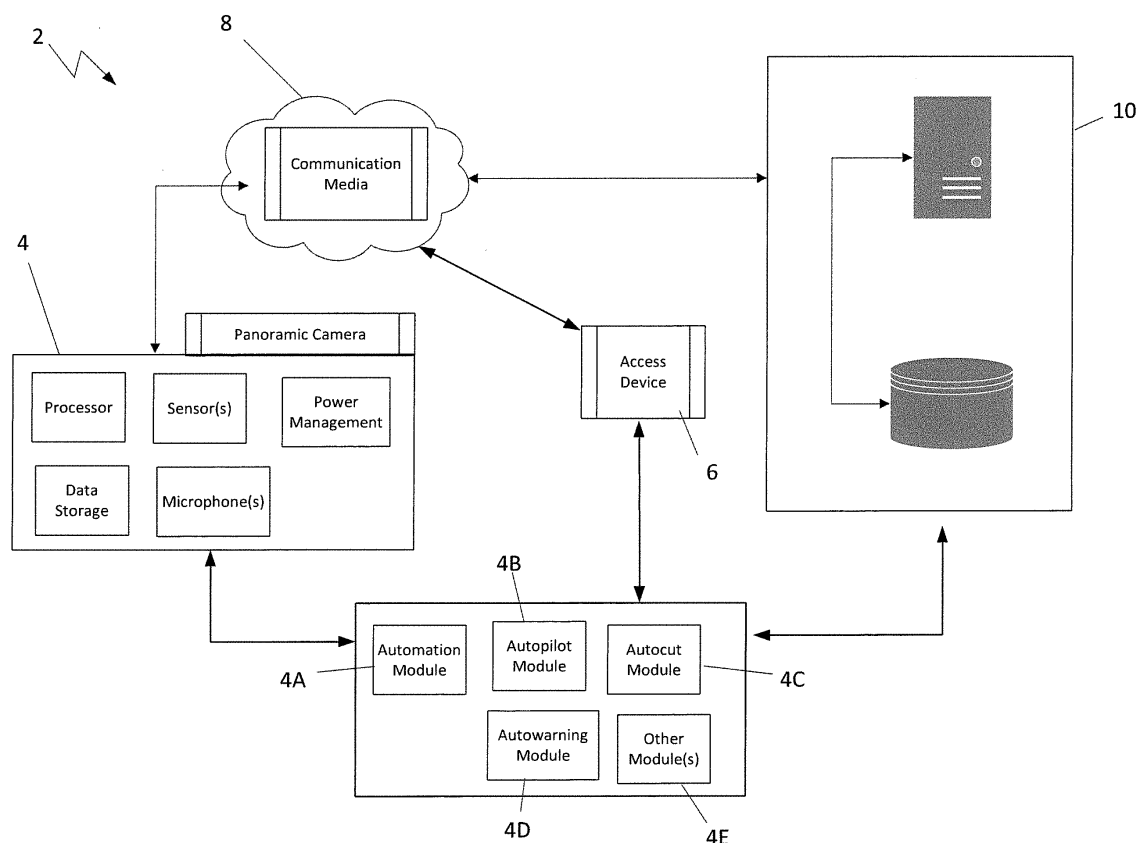
APPLE

Family 9/31 - FAMPAT - ©Questel

Title

(WO2017120224)

Automated processing of panoramic video content

Images**Publication data including kind & date**

US20170195561	A1	2017-07-06	US20170195561
WO2017120224	A1	2017-07-13	WO2017120224

**Abstract**

(WO2017120224)

The present disclosure provides techniques for capturing, processing, and displaying panoramic content such as video content and image data with a panoramic camera system. In one embodiment, a method for processing panoramic video content may include communicating captured video content to a virtual sensor of a panoramic camera; applying a machine learning algorithm to the captured video content; identifying content of interest information suitable for use by at least one smart application; and executing a smart application in connection with the identified content of interest information. The machine learning algorithm may include at least one of a pattern recognition algorithm or an object classification algorithm. Examples of smart applications include executing modules for automatically panning movement of the camera field of view, creating video content focused on the content of interest, and warning a user of objects, obstacles, vehicles, or other potential hazards in the vicinity of the panoramic camera.

Inventors

HEGELICH SIMON
 RONDINELLI MICHAEL
 ANDERSON GEOFFREY T
 HEGELICH KOLJA
 SHAHREZAYE MORTEZA

RIBEIRO CLAUDIO SANTIAGO

SMITH SYBREN DANIEL

DE LA CRUZ MOISÉS

SHEMELYNCE JOHN NICHOLAS

DESAI PRATIK

BICUDO FELIPPE MORAIS

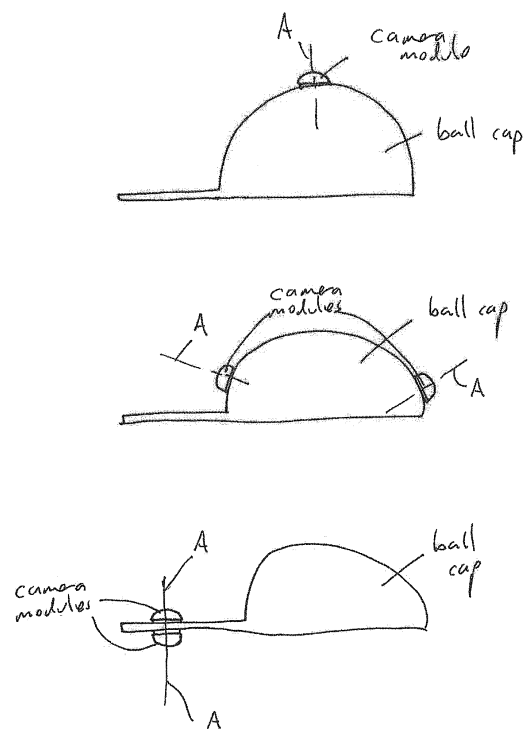
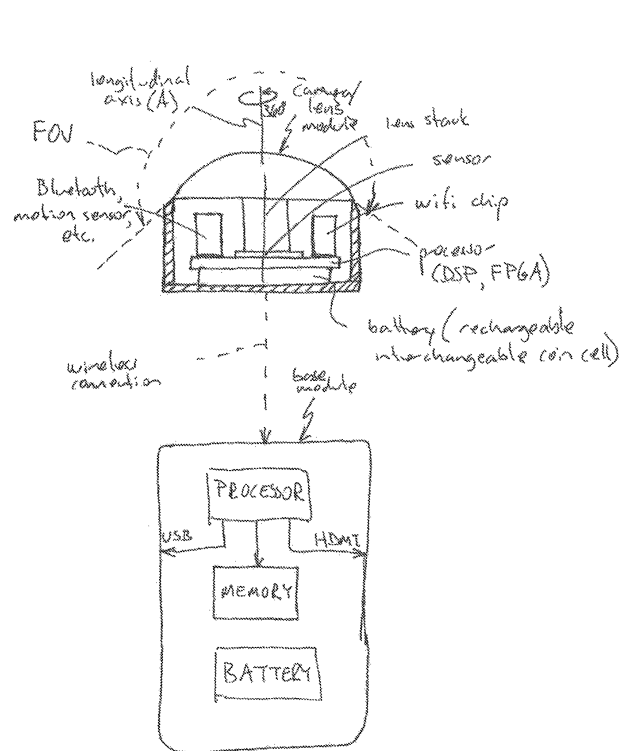
Latest standardized assignees - inventors removed

360FLY

Family 10/31 - FAMPAT - ©Questel

Title

(US9939843)

Apparel-mountable panoramic **camera** systems**Images****Publication data including kind & date**[US20170308116](#)

A1 2017-10-26

[US20170308116](#)[US9939843](#)

B2 2018-04-10

[US9939843](#)**Abstract**

(US9939843)

According to one embodiment, an apparel-mounted panoramic **camera** system includes a panoramic **camera** module, a base module, and a mounting apparatus. The **camera** module includes a panoramic lens having a longitudinal axis, an image **sensor** positioned below the lens, a processor operable to process image data received from the **sensor**, a **wireless** communication transceiver operable to transmit processed image data provided by the processor, and a **battery** that supplies power to the **camera** module components. The base module includes a **wireless** communication transceiver operable to receive the processed image data from the **camera** module communication transceiver, a processor operable to further process the received processed image data, and a **battery** that supplies power to the base module components. The mounting apparatus attaches the **camera** module to an item of apparel such that the longitudinal axis of the panoramic lens is tilted from a vertical direction by a non-zero tilt angle.

Inventors

RONDINELLI MICHAEL

SIMON BRADLEY A

Latest standardized assignees - inventors removed

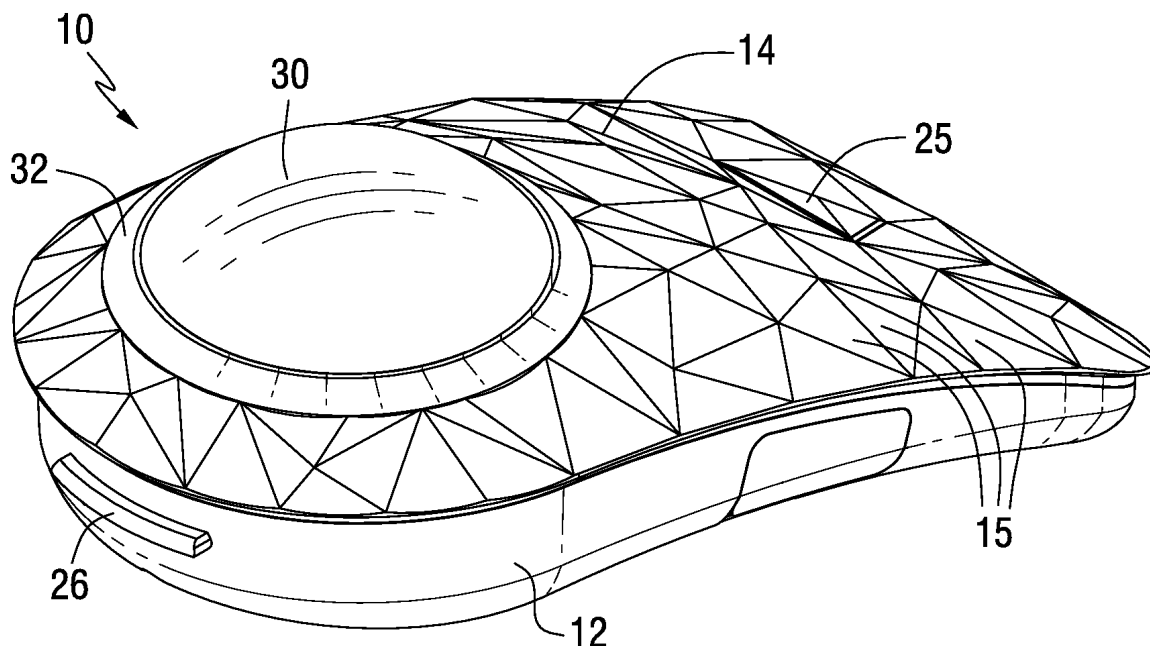
360FLY

Family 11/31 - FAMPAT - ©Questel

Title

(WO2017120240)

Body-mountable panoramic cameras with wide fields of view

Images**Publication data including kind & date**[US20170195563](#)

A1 2017-07-06

US20170195563

[WO2017120240](#)

A1 2017-07-13

WO2017120240

**Abstract**

(WO2017120240)

A low-profile panoramic **camera** is disclosed comprising an elongated **camera** body and a panoramic lens. The panoramic lens has a principle longitudinal axis and a field of view angle of greater than 180°. A portion of the **camera** body adjacent to the panoramic lens comprises a surface defining a rake angle that is outside the field of view angle. The panoramic **camera** has a total height less than a length of the **camera** body.

Inventors

RIBEIRO CLAUDIO SANTIAGO

HARMON MICHAEL JOHN

ROBERTSON BILLY

DE LA CRUZ MOISÉS

SHEMELYNCE JOHN NICHOLAS

RONDINELLI MICHAEL

Latest standardized assignees - inventors removed

360FLY

of the region. Users connect to this experience platform to view the 3D model from a user selected location and orientation and to participate in experiences with, for example, a social network.

Inventors

HUSTON CHARLES D

COLEMAN CHRIS

Family 13/31 - FAMPAT - ©Questel

Title

(EP3289430)

Estimating and using relative head pose and camera field-of-view

Images

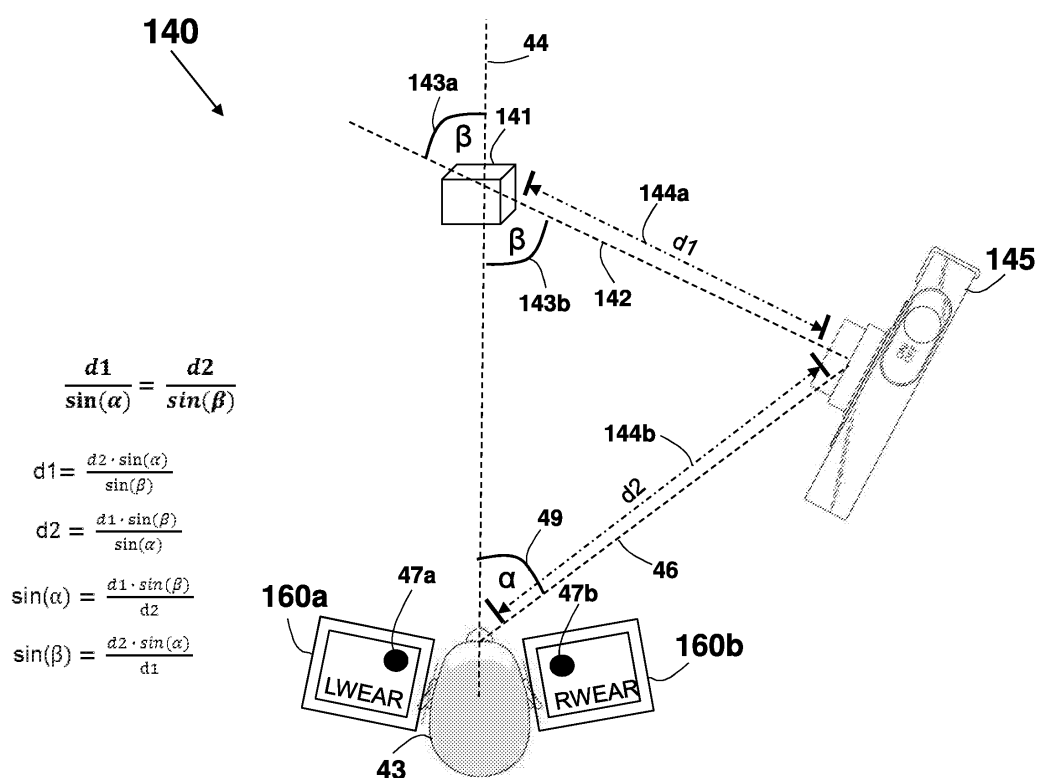


FIG. 14

Publication data including kind & date

[WO2016174659](#)

A1 2016-11-03

WO2016174659

[EP3289430](#)

A1 2018-03-07

EP3289430



Abstract

(EP3289430)

A video or still hand-held digital camera is activated or controlled based on estimation of a user head pose or gaze direction. The system comprises uses two wearable devices associated with right and left sides of the user body, each comprises an RF beacon. The head pose or gaze detection is estimated by comparing the signal strength (such as RSSI) or the phase of the RF signals from the wearable devices at the digital camera device. An angular deviation between the head pose (or gaze detection) and the digital camera (such as the line of sight) is estimated, and the digital camera is activated or controlled based on comparing the angular deviation to a set threshold. The RF signals may be Personal Area Network (PAN) signals, such as Bluetooth Low Energy (BLE) signals. The wearable devices may be head mounted, structured as glasses, ear-pieces, headphones, or hat mounted.

Inventors

SIVAN ISHAY

Latest standardized assignees - inventors removed

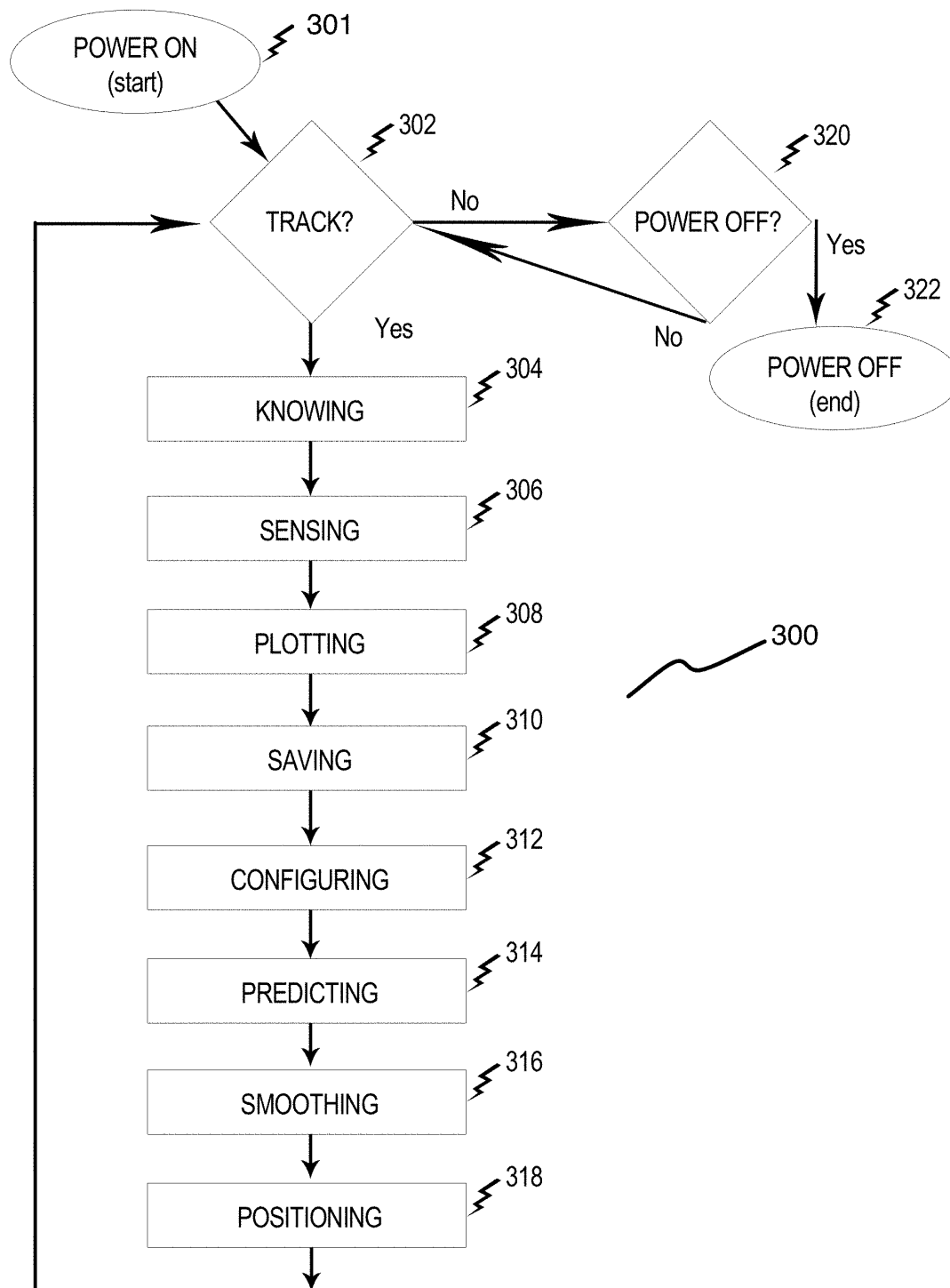
SNAP AID PATENTS

Family 14/31 - FAMPAT - ©Questel

Title

(WO201550575)

Compact, rugged, intelligent tracking apparatus and method

Images

US20140098241	A1	2014-04-10	US20140098241				
US20150100268	A1	2015-04-09	US20150100268				
US20150097965	A1	2015-04-09	US20150097965				
US20150097946	A1	2015-04-09	US20150097946				
WO2015050575	A1	2015-04-09	WO2015050575				
US9699365	B2	2017-07-04	US9699365				

Abstract

(WO201550575)

In a video recording environment, a compact, rugged, intelligent tracking apparatus and method enables the automation of labor-intensive operating of cameras, lights, microphones and other devices. Auto-framing of a tracked object within the **viewfinder** of a supported **camera** is possible. The device can sense more than one object at once, and includes multiple ways to easily switch from one object to another. The methods show how the auto-framing device can be "predictive" of movements, intelligently smooth the tilt and swivel motions so that the end effect is a professional looking picture or video. It is designed to be uniquely small, yet rugged and waterproof. And it can accept configuration input from users via a smartphone or extreme-sports **camera** over wi-fi or bluetooth, including user-programmable scripts that automate the device functionality in easy to use ways.

Inventors

STOUT RICHARD F

ENGH CAMERON

JOHNSON KYLE KEN

SHELLY KEVIN

Latest standardized assignees - inventors removed

JIGABOT

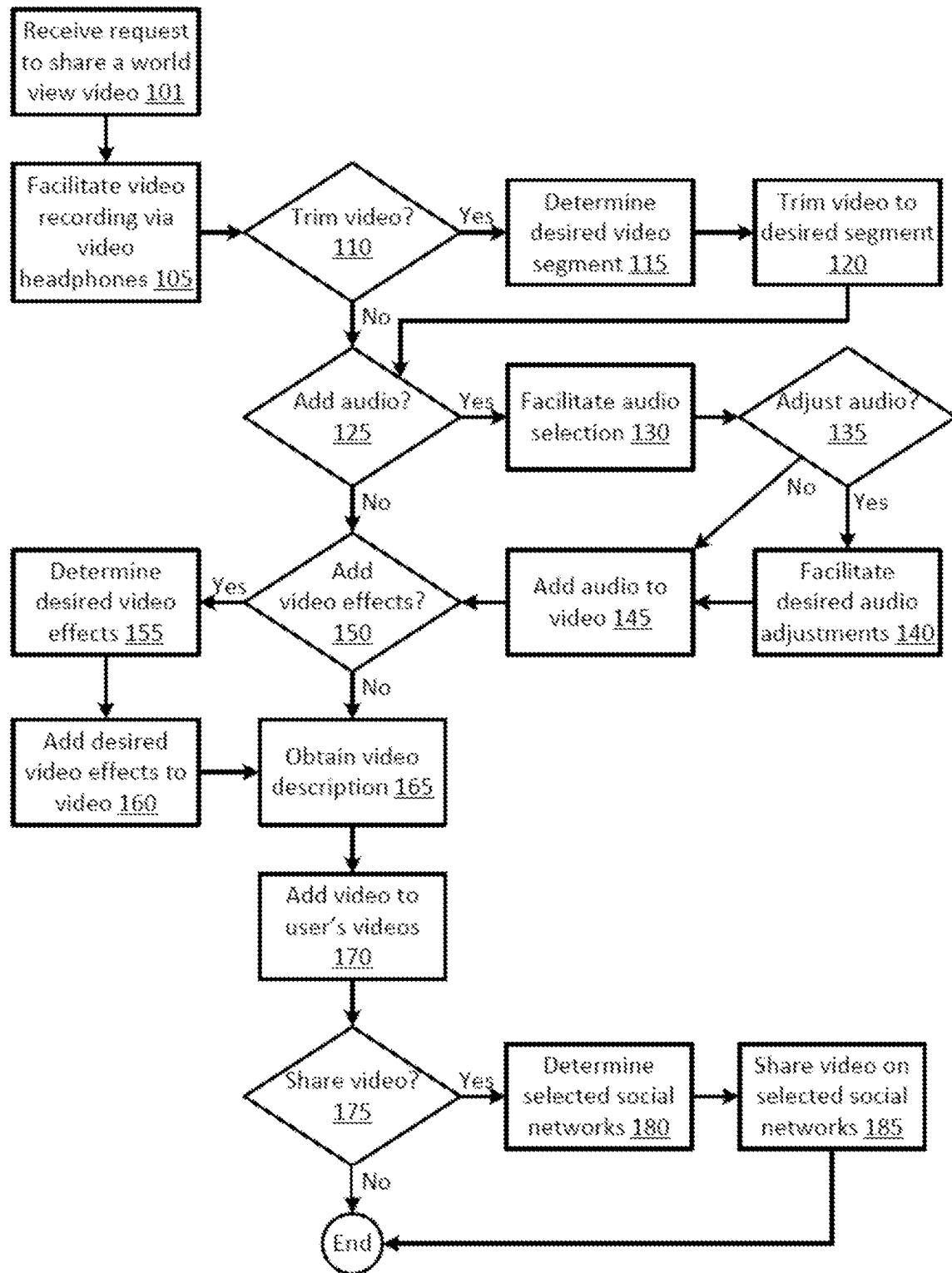
Family 15/31 - FAMPAT - ©Questel

Title

(EP3161828)

Video headphones, systems, helmets, methods and video content files

Images



Publication data including kind & date

WO2015183887	A1	2015-12-03	WO2015183887
US20170104928	A1	2017-04-13	US20170104928
EP3161828	A1	2017-05-03	EP3161828
EP3161828	A4	2017-08-09	EP3161828



Abstract

(EP3161828)

In one aspect, there is provided video headphones, including a plurality of cameras, wherein the cameras are arranged to capture a panorama of at least 2700. In another aspect, there is provided a video headphones system including the video headphones and further including a mobile device (eg. a smartphone) connectable to the video headphones, the mobile device including an application arranged to communicate with the video headphones. In another aspect, there is provided a

helmet including a holder configured, in use, to receive and to secure video headphones on a head of a user.

Inventors

GORILOVSKY DMITRY ALEKSEEVICH

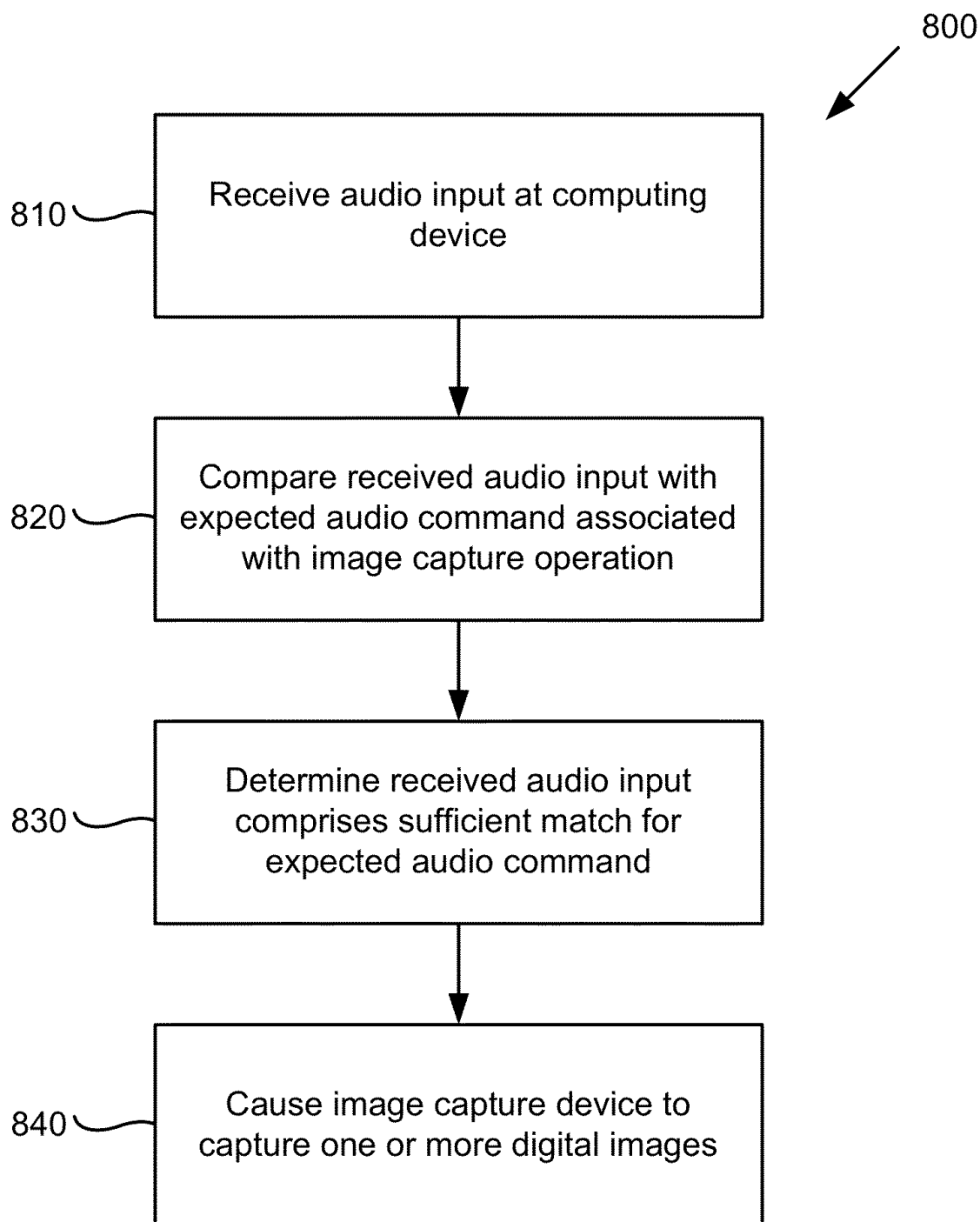
Latest standardized assignees - inventors removed

CHASE STEPHEN

Family 16/31 - FAMPAT - ©Questel

Title

(US9031847)

Voice-controlled **camera** operations**Images****Publication data including kind & date**[US20130124207](#)

A1 2013-05-16

US20130124207

[US9031847](#)

B2 2015-05-12

US9031847



Abstract

(US9031847)

A computing device (e.g., a smart phone, a tablet computer, digital camera, or other device with image capture functionality) causes an image capture device to capture one or more digital images based on audio input (e.g., a voice command) received by the computing device. For example, a user's voice (e.g., a word or phrase) is converted to audio input data by the computing device, which then compares (e.g., using an audio matching algorithm) the audio input data to an expected voice command associated with an image capture application. In another aspect, a computing device activates an image capture application and captures one or more digital images based on a received voice command. In another aspect, a computing device transitions from a low-power state to an active state, activates an image capture application, and causes a camera device to capture digital images based on a received voice command.

Inventors

SARIN RAMAN KUMAR

MATTHEWS III JOSEPH H

LAU JAMES KAI YU

GONZALEZ VERON MONICA ESTELA

PARK JAE PUM

Latest standardized assignees - inventors removed

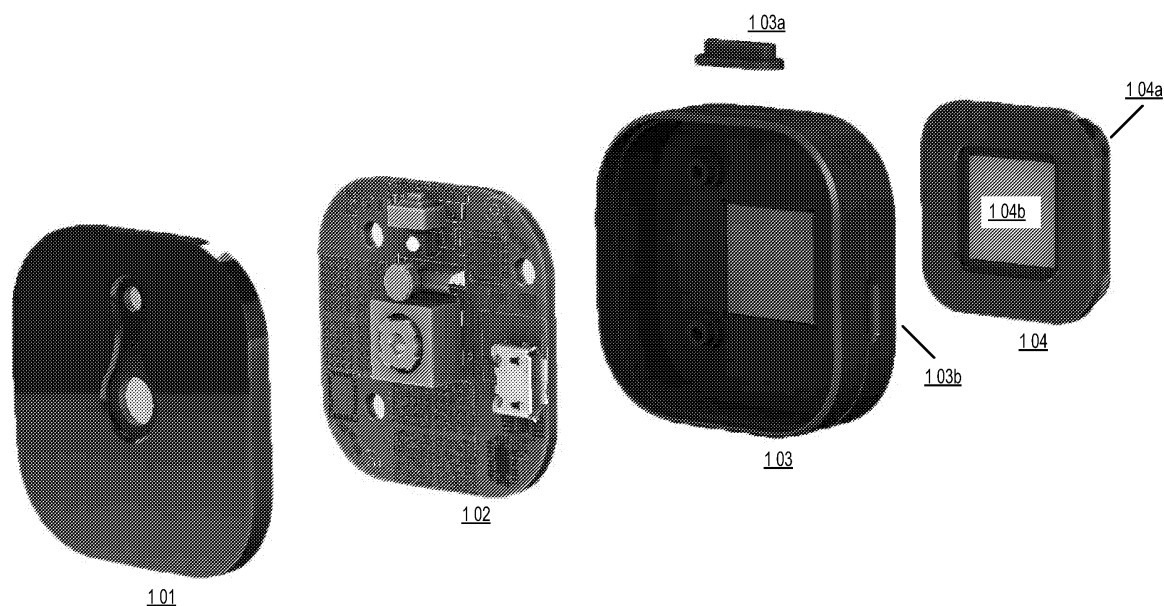
MICROSOFT TECHNOLOGY LICENSING

Family 17/31 - FAMPAT - ©Questel

Title

(WO2015127383)

Person wearable photo experience aggregator apparatuses, methods and systems

Images**Publication data including kind & date**[WO2015127383](#)

A1 2015-08-27

WO2015127383

[US20160360160](#)

A1 2016-12-08

US20160360160

**Abstract**

(WO2015127383)

The person wearable photo experience aggregator apparatuses, methods and systems ("CMN") may transform event creation and user experience media object generation inputs using CMN components into meta- tagged media objects and time-bounded, location-common social experience timelines. Apparatuses, methods, and systems herein describe capturing media using a wearable photo capture device which can use sensors to stabilize media capture, and/or can use the

sensors to determine when to capture media. The wearable photo capture device can connect to an application on a mobile device for further functionality, including a social network (SN) feature which allows for creation of public and private Events for which a user (or, with permission from the user, additional users) can provide substantially live streams of media objects generated by the wearable photo capture device. The user can also, via the SN, interact with media objects created by other users and added to such Events.

Inventors

EIZENBERG ROM

Latest standardized assignees - inventors removed

CATCH MOTION

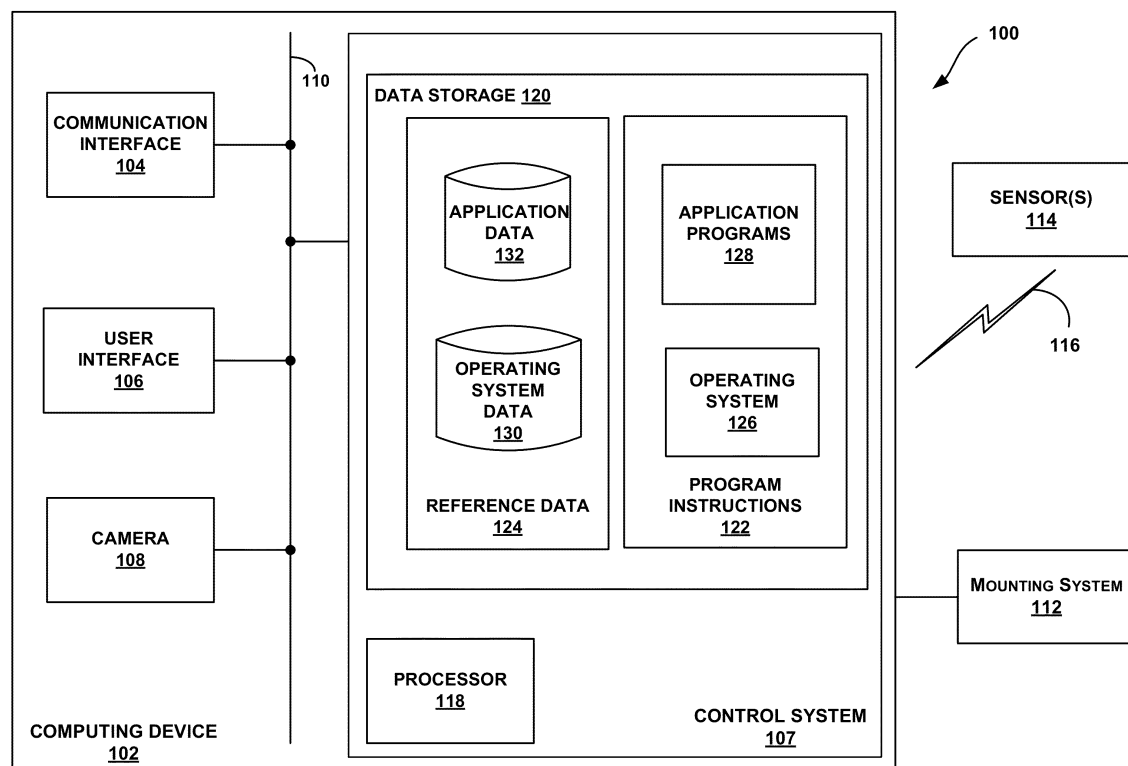
Family 18/31 - FAMPAT - ©Questel

Title

(US20160166193)

Mobile **Sensor** System and Methods for Use

Images



Publication data including kind & date

[US20160166193](#)

A1 2016-06-16

US20160166193



Abstract

(US20160166193)

The present disclosure provides a system including one or more sensors, a mounting system configured to removeably mount a computing device such that a **camera** of the computing device is positioned facing an eye of a subject, and a control system. The control system is configured to (a) receive **sensor** data from the one or more sensors, (b) determine whether the **sensor** data is indicative of balance instability of the subject, (c) track a position of the eye of the subject to assess vestibular dysfunction, (d) determine whether the **camera** data is indicative of vestibular dysfunction of the subject, and (e) in response to (i) the **sensor** data being indicative of balance instability of the subject and/or (ii) the **camera** data being indicative of vestibular dysfunction of the subject, **display** an indication of symptoms that are characteristic of a traumatic brain injury or concussion.

Inventors

LIN FANG

YALLA SAI V

Latest standardized assignees - inventors removed

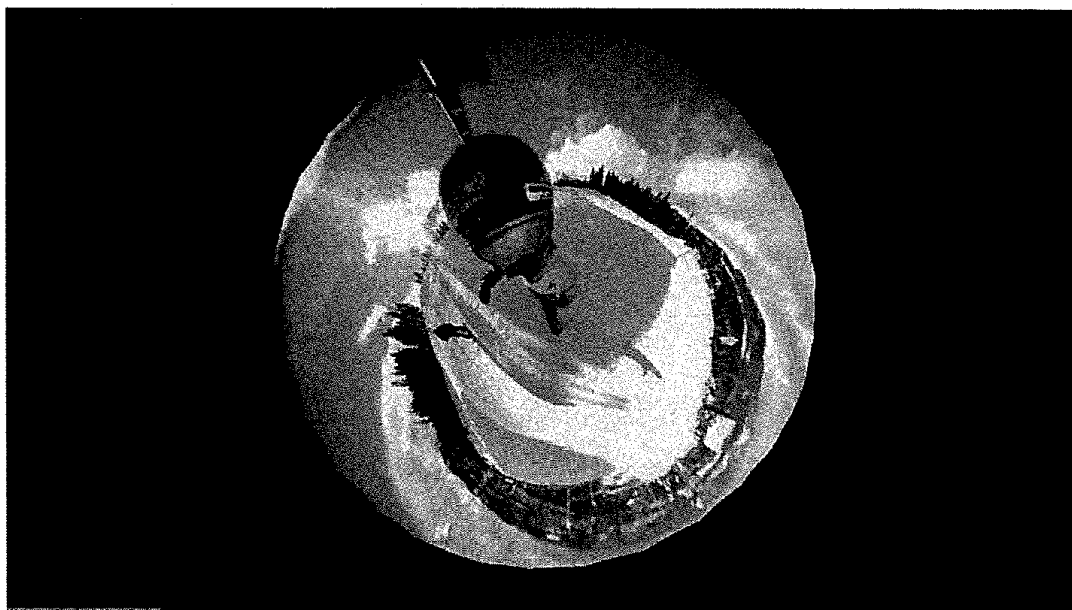
ROSALIND FRANKLIN UNIVERSITY OF MEDICINE & SCIENCE

Family 19/31 - FAMPAT - ©Questel

Title

(WO2017120312)

Dynamic field of view adjustment for panoramic video content using eye tracker apparatus

Images**Publication data including kind & date**

US20170195562	A1	2017-07-06	US20170195562
WO2017120312	A1	2017-07-13	WO2017120312
US20180295284	A1	2018-10-11	US20180295284

**Abstract**

(WO2017120312)

The invention relates to capturing, processing, and displaying panoramic content such as video content and image data with a panoramic **camera** system. In one embodiment, a method for processing panoramic video content may include capturing video content in a data storage medium of a panoramic **camera**; receiving eye location data from an eye tracker apparatus operatively associated with the panoramic **camera** and with at least one eye of a content creator; and, associating the eye location data with at least a portion of the captured video content. The captured video content with the associated eye location data may be communicated to an access device. In one embodiment, a field of view of the access device can be automatically panned or zoomed on a **display** of the access device in response to the eye location data.

Inventors

DESAI PRATIK

RIBEIRO CLAUDIO SANTIAGO

BICUDO FELIPPE MORAIS

Latest standardized assignees - inventors removed

360FLY

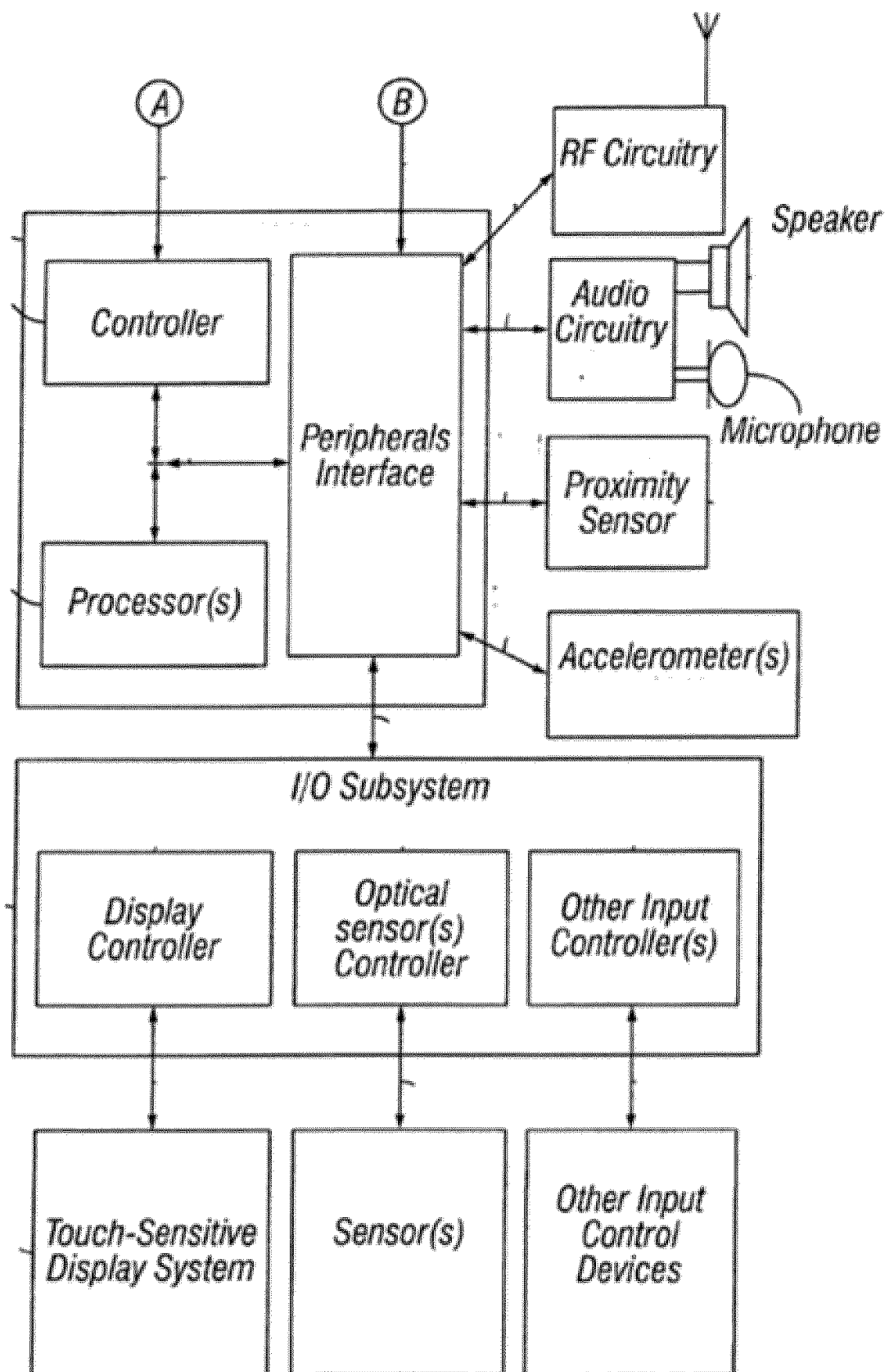
Family 20/31 - FAMPAT - ©Questel

Title

(EP3174759)

Mountable **display** devices

Images



Abstract

(WO2017149526)

A method and apparatus for an angle meter cooperatively using two or more non-contact distance meters for measuring distances to a surface along substantially parallel lines. The measured distances are used for estimating or calculating the angle to the surface and the distance to the surface. The distance meters may use optical means, where a visible or non-visible light or laser beam is emitted and received, acoustical means, where an audible or ultrasound sound is emitted and received, or an electro-magnetic scheme, where radar beam is transmitted and received. The distances may be estimated using a Time-of-Flight (TOF), homodyne or heterodyne phase detection schemes. The distance meters may share the same correlator, signal conditioning circuits, or the same **sensor**. Two or more angle meters may be used defining parallel or perpendicular measurement planes, for measuring angles between surfaces, and for estimating physical dimensions such as length, area or volume.

Inventors

BINDER YEHUDA

Latest standardized assignees - inventors removed

MAY PATENTS

Family 22/31 - FAMPAT - ©Questel

Title

(EP3155560)

Methods and systems for creating virtual and augmented reality

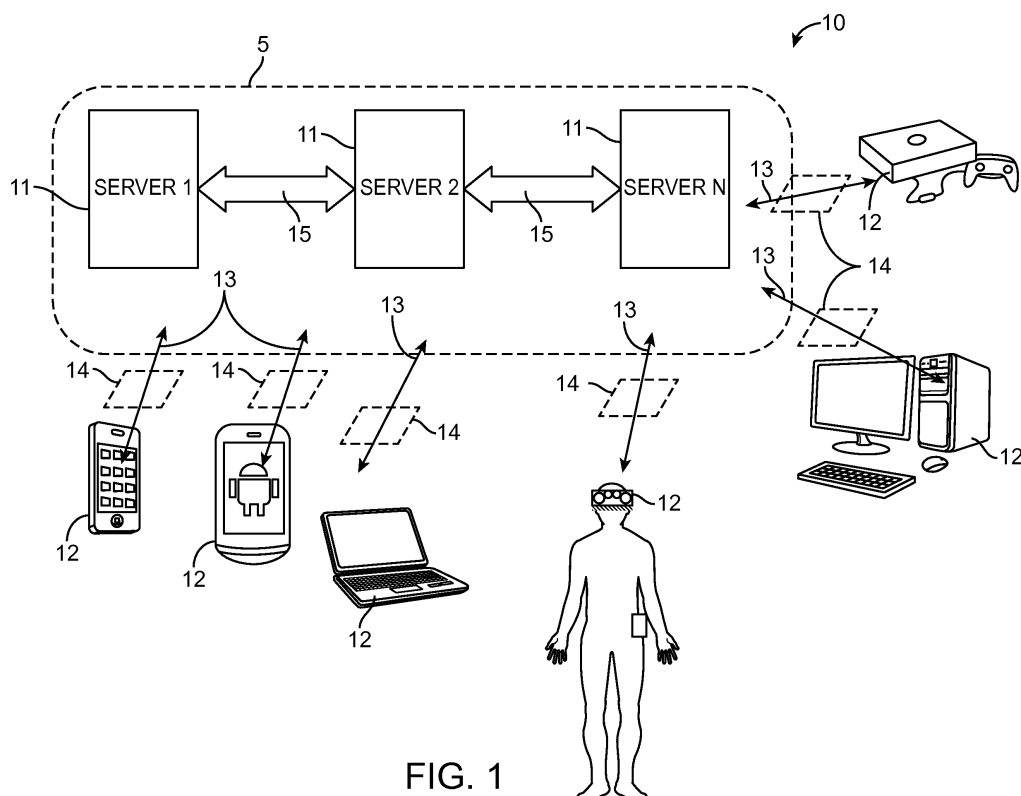
Images

FIG. 1

Publication data including kind & date

CA2953335	A1	2015-12-17	CA2953335
WO2015192117	A1	2015-12-17	WO2015192117
AU2015274283	A1	2017-01-12	AU2015274283
KR20170018930	A	2017-02-20	KR20170018930



IL249371	A	2017-02-28	IL-249371				
EP3155560	A1	2017-04-19	EP3155560				
IN201747001399	A	2017-05-12	IN201747001399				
CN106937531	A	2017-07-07	CN106937531				
JP2017529635	A	2017-10-05	JP2017529635				
EP3155560	A4	2018-01-10	EP3155560				

Abstract

(EP3155560)

Configurations are disclosed for presenting virtual reality and augmented reality experiences to users. The system may comprise an image capturing device to capture one or more images, the one or more images corresponding to a field of the view of a user of a head-mounted augmented reality device, and a processor communicatively coupled to the image capturing device to extract a set of map points from the set of images, to identify a set of sparse points and a set of dense points from the extracted set of map points, and to perform a normalization on the set of map points.

Inventors

BRADSKI GARY R

MILLER SAMUEL A

ABOVITZ RONY

Latest standardized assignees - inventors removed

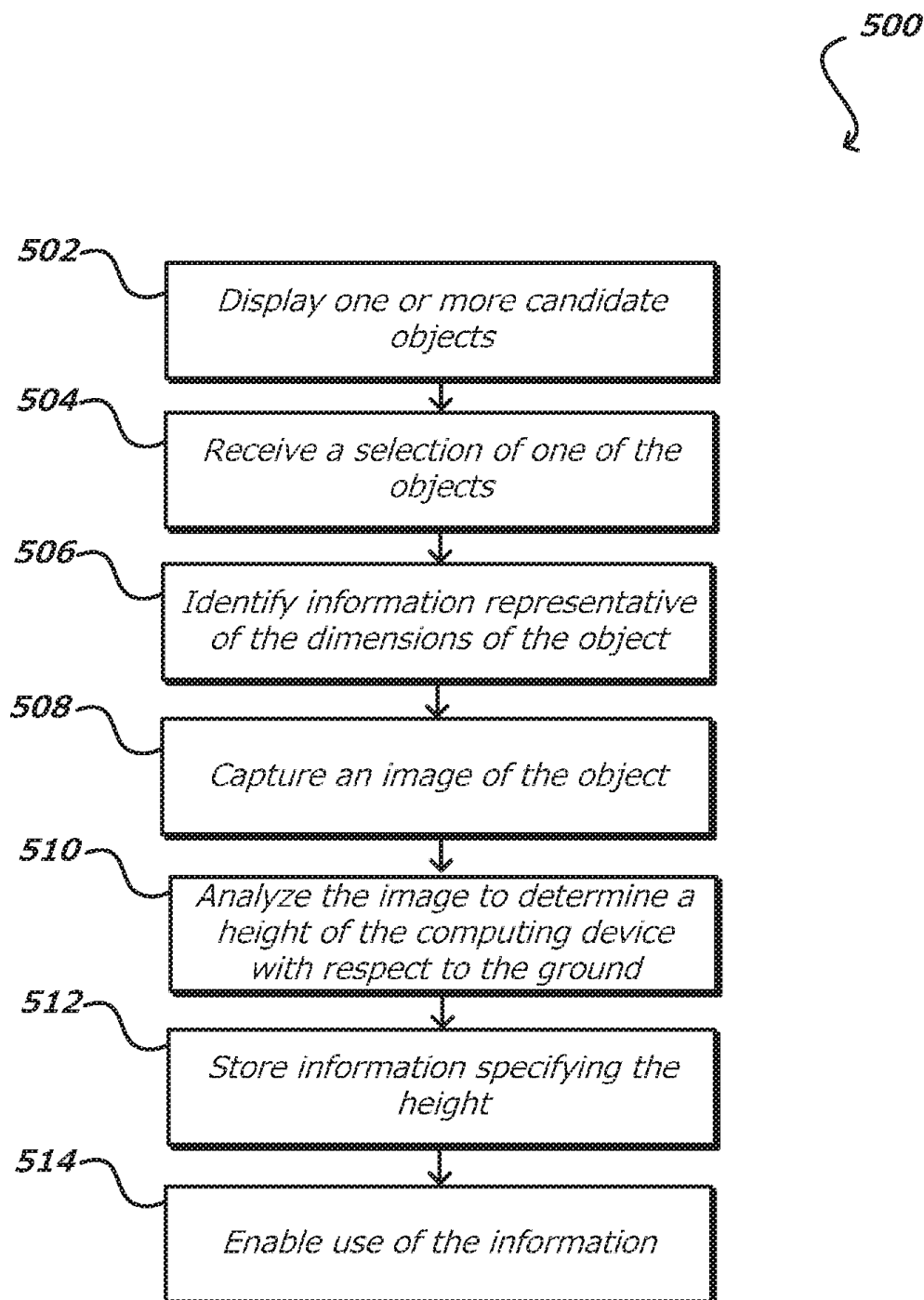
MAGIC LEAP

Family 23/31 - FAMPAT - ©Questel

Title

(US9691152)

Minimizing variations in **camera** height to estimate distance to objects**Images**

**Publication data including kind & date**

US9691152	B1	2017-06-27	US9691152
US20170256073	A1	2017-09-07	US20170256073
US10037614	B2	2018-07-31	US10037614

**Abstract**

(US9691152)

Approaches provide for minimizing variations in the height of a **camera** of a computing device when estimating the distance to objects represented in image data captured by the **camera**. For example, a front-facing **camera** of a computing device can be used to capture a live **camera** view of a user. An application can analyze the image data to locate features of the user's face for purposes of aligning the user with the computing device. As the position and/or orientation of the device changes with respect to the user, the image data can be analyzed to detect whether a location of a representation of a

feature of the user aligns with the alignment element. Once the feature is aligned with the alignment element, a rear-facing **camera** (or other **camera**) can capture second image data of an object. The second image data can be analyzed to determine a geometric relationship between the rear-facing **camera** and the object, and the geometric relationship can be used to determine a distance to the object with respect to the computing device.

Inventors

BORENSTEIN ERAN

DEVADOSS ARUNKUMAR

NEHUSHTAN ZUR

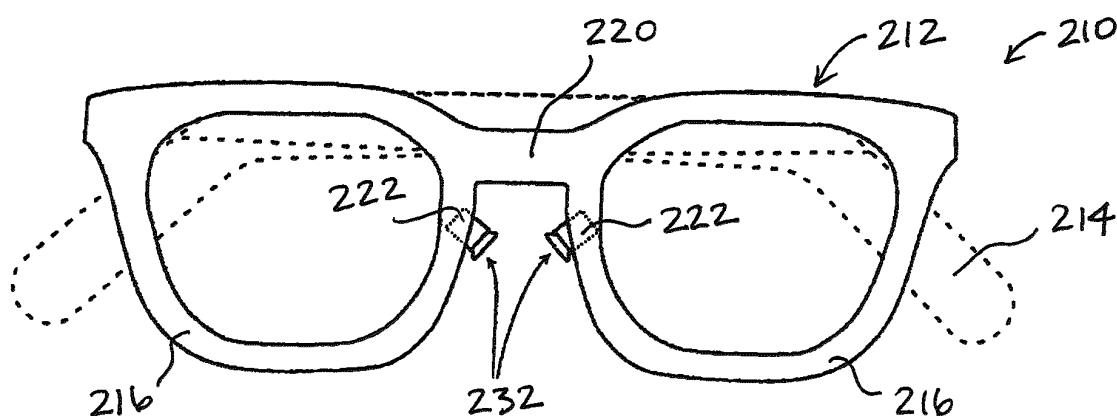
Latest standardized assignees - inventors removed

A9 COM

Family 24/31 - FAMPAT - ©Questel

Title

(US20100149073)

Near to Eye **Display** System and Appliance**Images****Publication data including kind & date**[US20100110368](#) A1 2010-05-06 US20100110368[US20100149073](#) A1 2010-06-17 US20100149073**Abstract**

(US20100149073)

A near-to-eye **display** system for forming an image as an illuminated region on a retina of at least one eye of a user is disclosed. The system includes a source of modulated light, a proximal optic positionable adjacent an eye of the user to receive the modulated light. The proximal optic has a plurality of groups of optically redirecting regions. The optically redirecting regions are configured to direct a plurality of beams of the modulated light into a pupil of the eye to form a contiguous illuminated portion of the retina of the eye. A first group of the optically redirecting regions is configured to receive modulated light from the source and redirect beams of the modulated light into the pupil of the eye for illumination of a first portion of the retina. A second group of the optically redirecting regions is configured to receive modulated light from the source and redirect beams of the modulated light into the pupil of the eye for illumination of a second portion of the retina.

Inventors

CHAUM DAVID

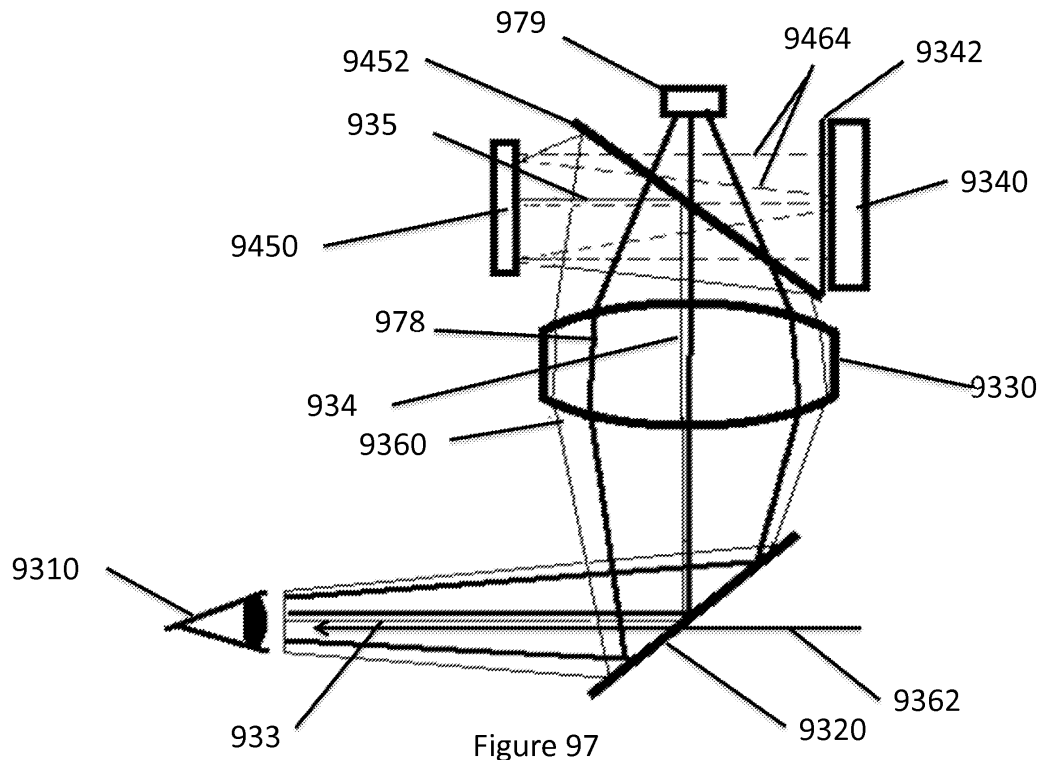
MOSSBERG THOMAS W

ROGERS JOHN R

Family 25/31 - FAMPAT - ©Questel

Title

(EP3095026)

See-through computer **display** systems**Images****Publication data including kind & date**

WO2015109145	A1	2015-07-23	WO2015109145
WO2015109145	A9	2015-09-11	WO2015109145
CN106133674	A	2016-11-16	CN106133674
EP3095026	A1	2016-11-23	EP3095026
EP3095026	A4	2017-11-08	EP3095026

**Abstract**

(EP3095026)

The present invention relate to head-worn computing ("HWC") systems. HWC involves, in some instances, a system that mimics the appearance of head-worn glasses or sunglasses. The glasses may be a fully developed computing platform, such as including computer displays presented in each of the lenses of the glasses to the eyes of the user. In embodiments, the lenses and displays may be configured to allow a person wearing the glasses to see the environment through the lenses while also seeing, simultaneously, digital imagery, which forms an overlaid image that is perceived by the person as a digitally augmented image of the environment, or augmented reality ("AR").

Inventors

OSTERHOUT RALPH F
 BORDER JOHN N
 HADDICK JOHN D
 LOHSE ROBERT MICHAEL
 SHAMS NIMA L
 NORTRUP EDWARD H

Latest standardized assignees - inventors removed

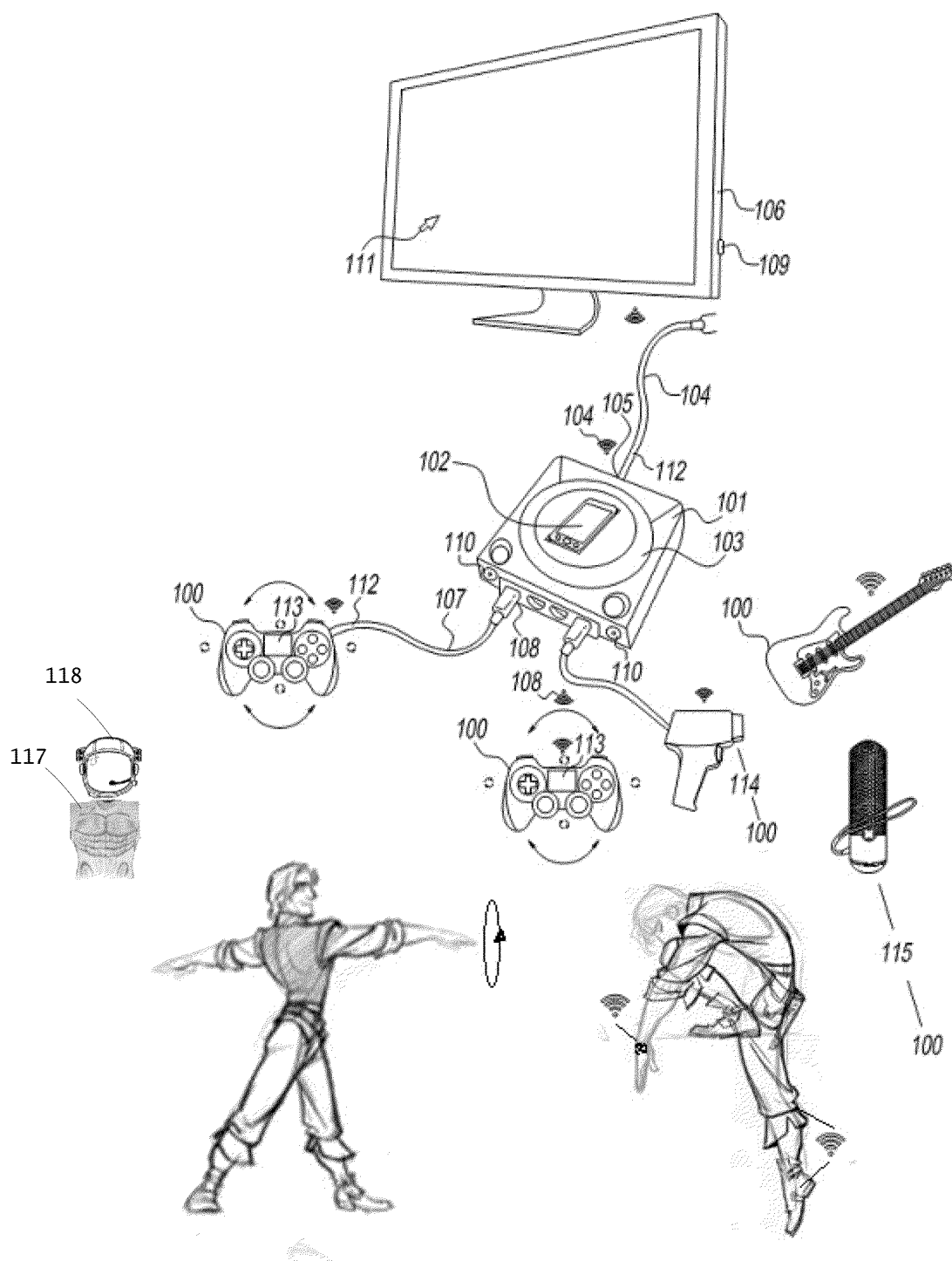
OSTERHOUT

Family 26/31 - FAMPAT - ©Questel

Title

(US20160030835)

Video-game console for allied touchscreen media

Images**Publication data including kind & date**[CA2843670](#)

A1 2015-08-24

CA2843670

[US20160030835](#)

A1 2016-02-04

US20160030835

**Abstract**

(US20160030835)

The present invention seeks to introduce a new delivery system, interactive platform and controller compliment for an allied touchscreen media; with said media particularly comprising repository-sourced mobile game applications configured for native operation. Mapping systems are dynamic and include an interface for user manipulation of immersive, 3-D holographic imaging modalities to advance input in a video-game environment. A series of specialty-input controllers for interaction with said touchscreen media are also advanced by the inventor; including those designed for remote and

mappable manipulation of an actionable **sensor** input where salient to the input dynamics of an engaged gaming title. A user worn artificial muscle interface that reacts to game events are also advanced by the inventor.

Inventors

ARGIRO CHRIS

Family 27/31 - FAMPAT - ©Questel

Title

(WO2013138846)

Method and system of interacting with content disposed on substrates

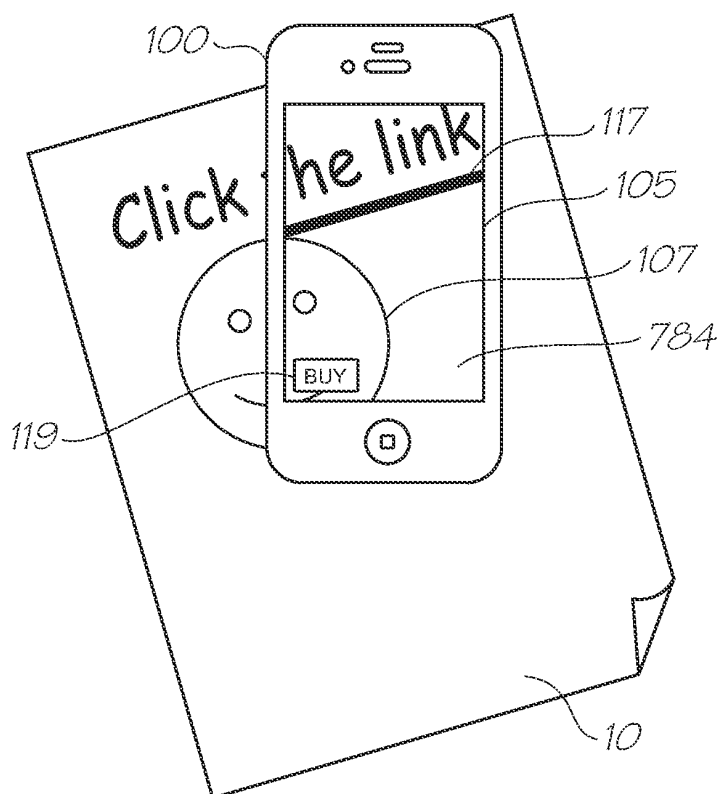
Images

FIG. 50A

Publication data including kind & date[WO2013138846](#)

A1 2013-09-26

WO2013138846

**Abstract**

(WO2013138846)

A system and method of interacting with content disposed on a substrate is provided. An image of the content disposed on the substrate is captured and used to identify the substrate via an image-matching technique. Digital content corresponding to the identified substrate is retrieved and displayed on a screen of a viewing device. The displayed digital content is a virtual reality and/or augmented reality view, referred to herein as a 'digital twin', of the imaged content. The digital twin has at least one interactive element for user interaction. 10

Inventors

SILVERBROOK KIA

NAPPER JONATHON LEIGH

LONG TIMOTHY MERRICK

GATES ROBERT DUGALD

WOOLDRIDGE CHRISTOPHER

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SANKEY JASON WAYNE

ROBERTS PETER MALCOLM

Latest standardized assignees - inventors removed

SILVERBROOK RESEARCH

Family 28/31 - FAMPAT - ©Questel

Title

(WO201832457)

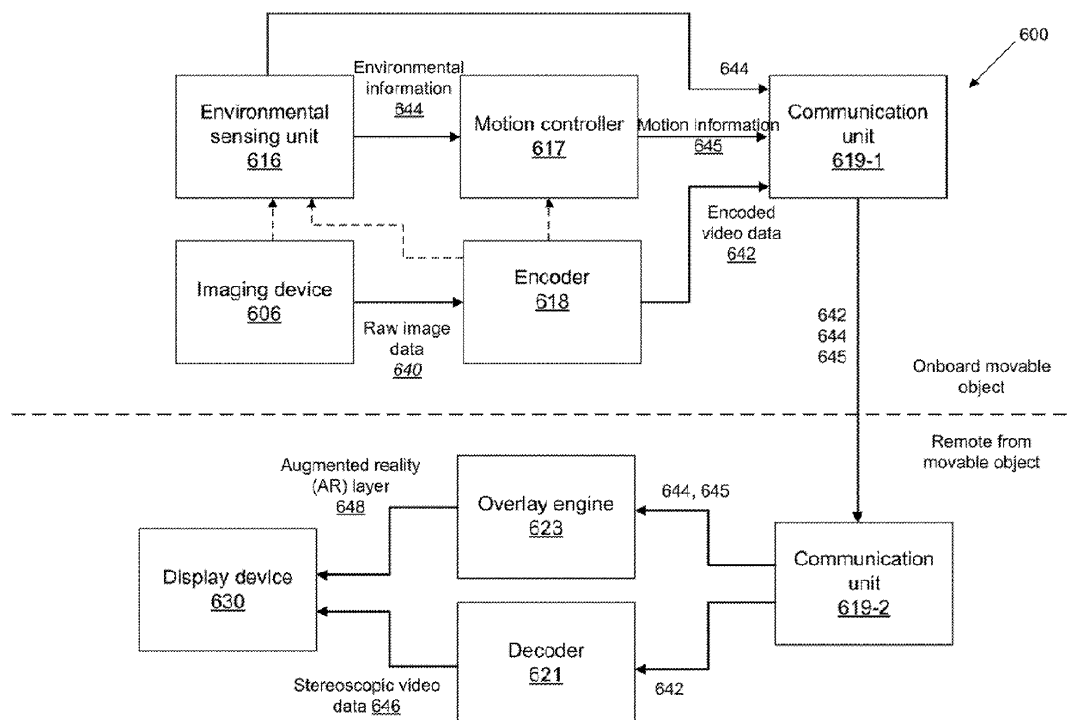
Systems and methods for augmented stereoscopic **display****Images**

FIG. 6

Publication data including kind & date

WO2018032457

A1 2018-02-22 WO201832457

**Abstract**

(WO201832457)

Systems, methods, and devices are provided herein for processing and displaying stereoscopic video data obtained by a movable object. A method for sensing an environment in which a movable object is configured to operate may be provided. A method for generating a first person view (FPV) of an environment may also be provided. The method may comprise, with the aid of one or more processors individually or collectively, analyzing stereoscopic video data of the environment to determine environmental information, and generating augmented stereoscopic video data of the environment by fusing the stereoscopic video data and the environmental information.

Inventors

HUANG ZHICONG

ZHAO CONG

YANG SHUO

WU YANNAN

YANG KANG

ZHOU GUYUE

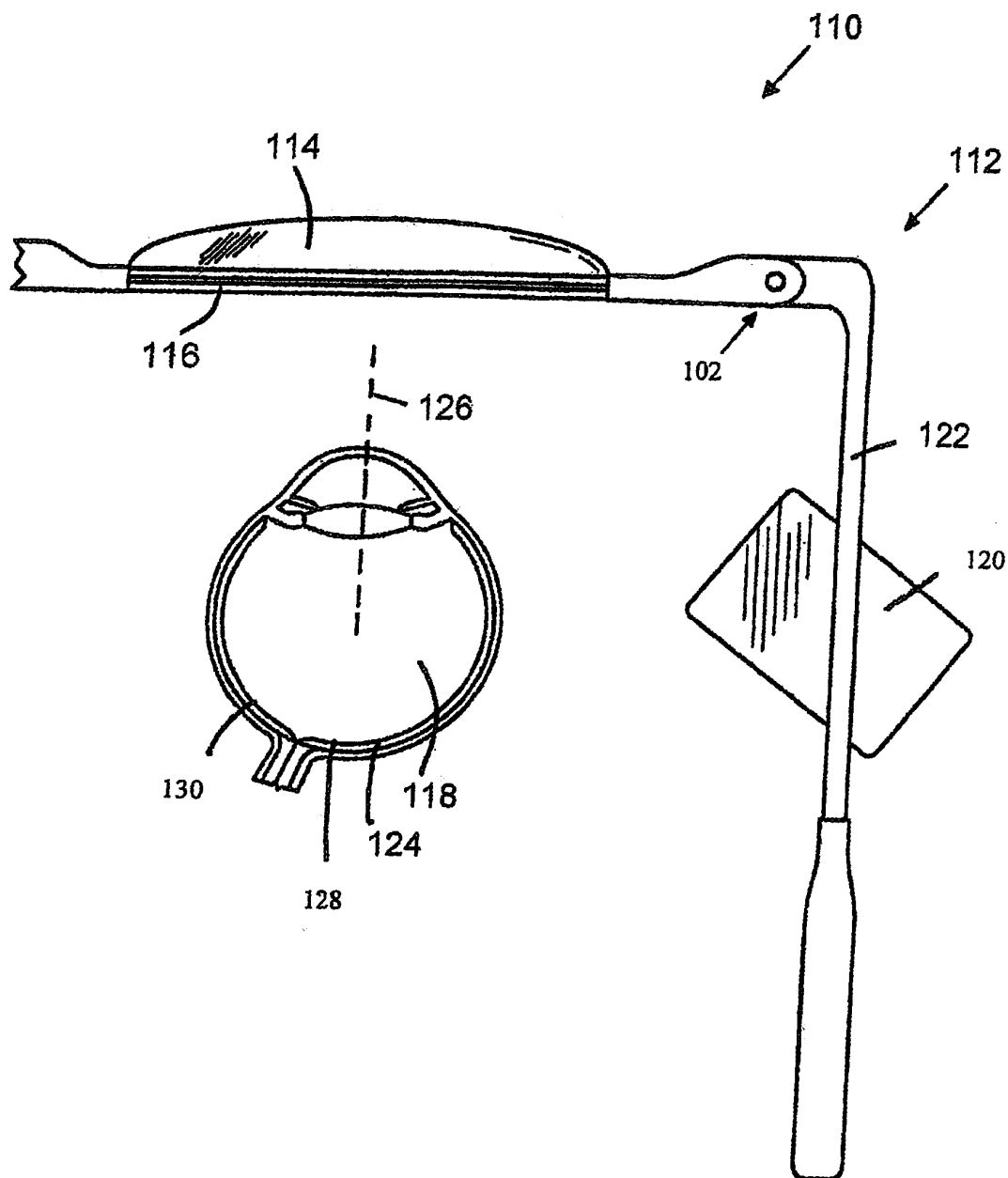
Latest standardized assignees - inventors removed

SZ DJI TECHNOLOGY

Family 29/31 - FAMPAT - ©Questel

Title

(US20150277123)

Near to eye **display** and appliance**Images****Publication data including kind & date**[US20150277123](#)

A1 2015-10-01

US20150277123

**Abstract**

(US20150277123)

A near-to-eye **display** system includes a source of modulated light, a proximal optic positionable adjacent an eye of the user to receive the modulated light. The proximal optic has a plurality of groups of optically redirecting regions. The optically redirecting regions are configured to direct a plurality of beams of the modulated light into a pupil of the eye to form a contiguous illuminated portion of the retina of the eye. A first group of the optically redirecting regions receives modulated

light from the source and redirect beams of the modulated light into the pupil of the eye for illumination of a first portion of the retina. A second group of the optically redirecting regions receives modulated light from the source and redirect beams of the modulated light into the pupil of the eye for illumination of a second portion of the retina.

Inventors

CHAUM DAVID

MOSSBERG THOMAS W

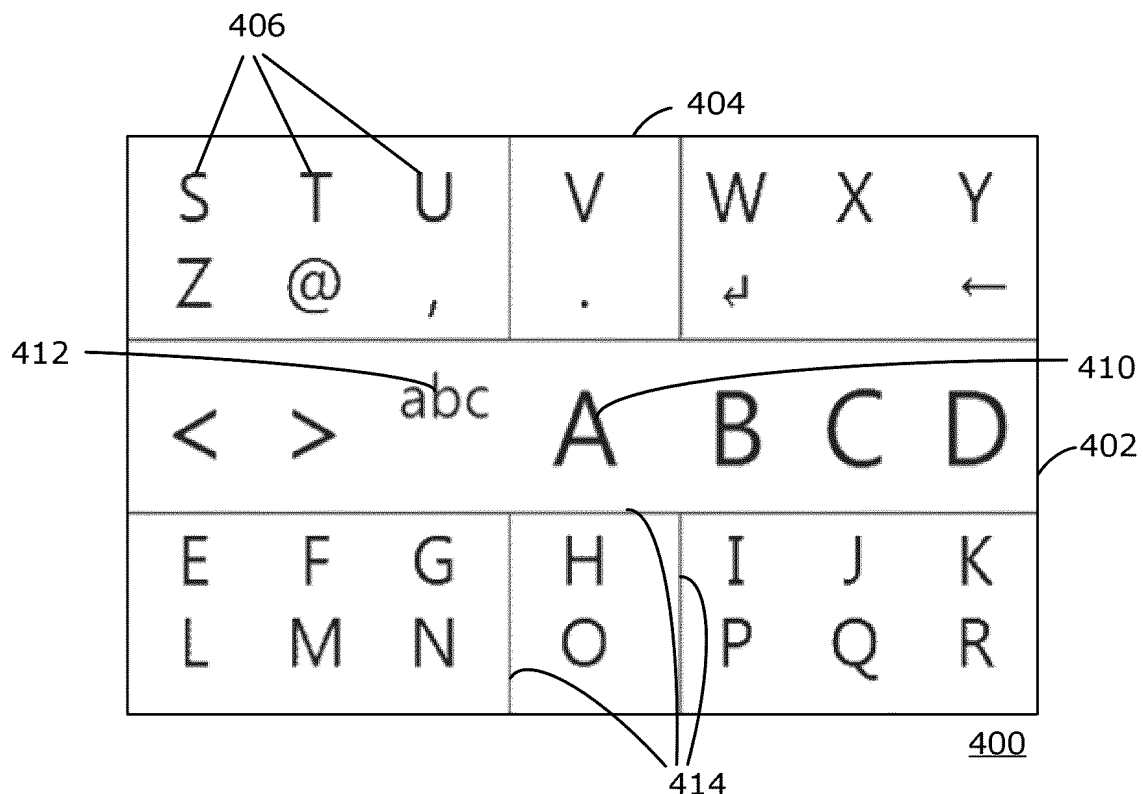
ROGERS JOHN R

Family 30/31 - FAMPAT - ©Questel

Title

(US20140059472)

Methods and systems for controlling electronic devices

Images**Publication data including kind & date**[US20140059472](#)

A1 2014-02-27 US20140059472

**Abstract**

(US20140059472)

A method includes, on a **display** of an electronic device, displaying a key layout, the key layout comprising a plurality of rows of keys and a plurality of columns of keys, displaying an indication of an active position at a first location for selecting one of the keys, detecting a directional input, and in response to the directional input, adjusting the key layout while maintaining **display** of the indication of the active position at the first location.

Inventors

ZHAIEK GIL

TOLLIDAY CHRISTOPHER ROBERT

Latest standardized assignees - inventors removed

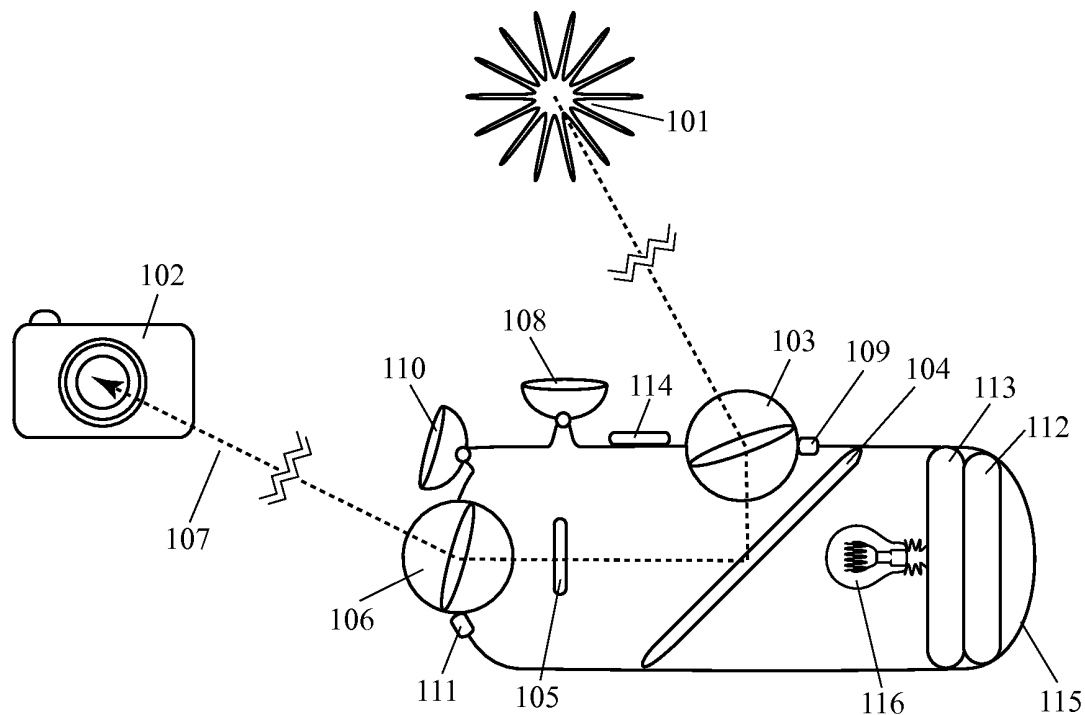
INTEL

Family 31/31 - FAMPAT - ©Questel

Title

(US9140444)

Wearable device for disrupting unwelcome photography

Images**Publication data including kind & date**[US20150049487](#)

A1 2015-02-19

US20150049487

[US9140444](#)

B2 2015-09-22

US9140444

**Abstract**

(US9140444)

This invention is a wearable device and method for disrupting unwelcome photography by a proximal imaging device in order to protect a person's privacy. This invention can be embodied in a device worn by the person whose privacy is to be protected comprising: a wearable light source; an ambient light **sensor**; an inbound light guide that harvests light from an ambient light source; a data processing unit that selects the use of light from the wearable light source, from the ambient light source, or from both the wearable light source and the ambient light source to disrupt unwelcome photography; and an outbound light guide that directs light from the wearable light source, from the ambient light source, or from both the wearable light source and the ambient light source toward the proximal imaging device in order to disrupt unwelcome photography.

Inventors

CONNOR ROBERT A

Latest standardized assignees - inventors removed

OSTENDO