

Invalidity of U.S. Patent No. 10,406,432
in View of

U.S. Patent No. 9,392,212 to (“Ross”),
Filed September 17, 2014 (claims benefit of provisional application 61/980,658 filed April 17, 2014).

U.S. Patent No. 10,406,432	Ross
<p>1. A computer program product embodied on a non-transitory computer-readable medium, comprising code executable by a virtual image display apparatus having at least a processor and a memory, the memory being configured to store an information providing condition of the virtual image display apparatus and being further configured to store to-be-provided information, to cause the virtual image display apparatus to carry out the following steps:</p>	<p>Ross expressly or inherently discloses these claim element(s).</p> <p>[A computer program product embodied on a non-transitory computer-readable medium, comprising code executable by a virtual image display apparatus having at least a processor and a memory,]</p> <p>“The processor may be configured to execute computer program components. The computer program components may be configured to enable an expert and/or user to interface with the system and/or provide other functionality attributed herein to the user interface, the sensor, the electronic storage, and/or the processor. The computer program components may include a direction component, a content component, a display component, an interaction component, and/or other components.” 3:57-65</p> <p><i>Accordingly, in view of the above, the Ross reference anticipates the claim element of A computer program product embodied on a non-transitory computer-readable medium (e.g., the computer program components), comprising code executable by a virtual image display apparatus (e.g., the display component) having at least a processor and a memory (e.g., the electronic storage and processor.</i></p> <p>[the memory being configured to store an information providing condition of the virtual image display apparatus]</p> <p>“Returning to FIG. 1, electronic storage 30 may comprise electronic storage media that electronically stores information. The electronic storage media of the electronic storage may include one or both of storage that is provided integrally (i.e., substantially non-removable) with the respective device and/or removable storage that is removably connectable to the respective device...Electronic storage may</p>

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	<p>store files, software algorithms, information determined by processor(s) 20, and/or other information that enables the respective devices to function as described herein.” 23:46-68</p> <p><i>Accordingly, in view of the above, the Ross reference anticipates the claim element of the memory (e.g., the electronic storage 30) being configured to store an information providing condition of the virtual image display apparatus (e.g., the information that enables the respective devices to function, such as any instructions related to an information providing condition).</i></p> <p>[and being further configured to store to-be-provided information, to cause the virtual image display apparatus to carry out the following steps:]</p> <p>“The display may be configured to present the virtual reality content to the user. The display may be controlled by the processor to present the virtual reality content to the user such that the presented virtual reality content corresponds to a view direction of the user. In some implementations, the display may be included in a virtual reality headset worn by the user.” 3:38-45</p> <p>“Display 16 may be controlled by processor 20 to present the virtual reality content to the user such that the presented virtual reality content corresponds to a view direction of the user...As described above, in some implementations, display 16 may be included in a virtual reality headset worn by the user.” 12:7-10</p> <p><i>Accordingly, in view of the above, the Ross reference anticipates the claim element of and being further configured to store to-be-provided information (e.g., the virtual reality content), to cause the virtual image display apparatus (e.g., the display 16) to carry out the following steps (e.g., information stored in the electronic storage 30 executed by the processor 30 and enabling the display to function).</i></p>
<p>detecting, with a sensor operationally linked to the virtual image display apparatus, a movement of a body part of a player, the body part comprising</p>	<p>Ross expressly or inherently discloses these claim element(s).</p>

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<p>at least one of a head of the player and an eye of the player, and the sensor being at least one of the set of: a gyro sensor configured to measure movement of the head of the player, an acceleration sensor configured to measure movement of the head of the player, a geomagnetic sensor configured to measure movement of the head of the player and a line-of-sight sensor configured to measure movement of the eye of the player; and</p>	<p>[detecting, with a sensor operationally linked to the virtual image display apparatus, a movement of a body part of a player, the body part comprising at least one of a head of the player and an eye of the player,]</p> <p>“Returning to FIG. 1, sensors 18 may be configured to generate output signals conveying information related to a view direction of the user and/or other information” 11:4-6</p> <p>“In some implementations, system 10 may comprise one or more of a user interface 14 (which may include a display 16 and/or other components as described herein), a sensor 18, a processor 20, electronic storage 30, and/or other components.” 7:63-66</p> <p>“For example, the system may be configured to determine that a view direction of the user has moved across a field boundary between a first field of view (where the primary virtual reality content is displayed) and a second field of view (e.g., where the secondary virtual reality content is displayed). The view direction of the user may refer to a direction toward which the user's gaze is directed, an orientation of the user's gaze (e.g., the user may tilt his head and/or lean over), a position of the user within the virtual space, and/or other directional and/or positional information (e.g., a user may move his position in the virtual space across a boundary).” 2:41-52</p> <p><i>Accordingly, in view of the above, the Ross reference anticipates the claim element of detecting, with a sensor (e.g., sensor 18) operationally linked (e.g., via the system 10) to the virtual image display apparatus (e.g., display 16), a movement of a body part of a player (e.g., view direction of the user), the body part comprising at least one of a head of the player and an eye of the player (e.g., the user's head tilt or user's gaze corresponding to the view direction).</i></p> <p>[and the sensor being at least one of the set of: a gyro sensor configured to measure movement of the head of the player, an acceleration sensor configured to measure movement of the head of the player, a geomagnetic sensor configured to measure movement of the head of the player and a line-of-sight sensor configured to measure movement of the eye of the player;]</p> <p>“In some implementations, sensors 18 may include one or more of a GPS sensor, a gyroscope, an accelerometer, an altimeter, a compass, a camera based sensor, a magnetic sensor, an optical sensor, an</p>

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	<p>infrared sensor, a motion tracking sensor, an inertial sensor, a CCB sensor, an eye tracking sensor, a facial tracking sensor, a body tracking sensor, and/or other sensors.” 11:22-28</p> <p><i>Accordingly, in view of the above, the Ross reference anticipates the claim element of and the sensor being at least one of the set of: a gyro sensor configured to measure movement of the head of the player, an acceleration sensor configured to measure movement of the head of the player, a geomagnetic sensor configured to measure movement of the head of the player and a line-of-sight sensor configured to measure movement of the eye of the player (e.g., sensor 18 examples including a gyroscope, accelerometer, magnetic sensor, eye tracking sensor)</i></p>
<p>determining, based on the movement of the body part of the player, a position and direction of the body part of a player;</p>	<p>Ross expressly or inherently discloses these claim element(s).</p> <p>“Returning to FIG. 1, sensors 18 may be configured to generate output signals conveying information related to a view direction of the user and/or other information. The view direction of the user may correspond to a physical direction toward which a gaze of the user is directed, an orientation of one or more parts of the user's body (e.g., the user's head may be tilted, the user may be leaning over), a position of a user within the virtual space, and/or other directional information.” 11:18-26</p> <p><i>Accordingly, in view of the above, the Ross reference anticipates the claim element of determining (e.g., using the sensors 18 to determine the view direction), based on the movement of the body part of the player (e.g., gaze, user body part orientation), a position (e.g., position of the user) and direction of the body part of a player (e.g., and other directional information);</i></p>
<p>displaying, on a display operationally linked to the virtual image display apparatus, in accordance with the position and direction of the body part of the player, an image of a virtual space including a first area and a second area; and</p>	<p>[displaying, on a display operationally linked to the virtual image display apparatus, in accordance with the position and direction of the body part of the player,]</p> <p>“Display 16 may be configured to present the virtual reality content to the user. Display 16 may be configured to present the virtual reality content to the user such that the presented virtual reality content corresponds to a view direction of the user. Display 16 may be controlled by processor 20 to present the virtual reality content to the user such that the presented virtual reality content corresponds to a view direction of the user.” 12:3-10</p>

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	<p><i>Accordingly, in view of the above, the Ross reference anticipates the claim element of displaying, on a display operationally linked to the virtual image display apparatus (e.g., display 16), in accordance with the position and direction of the body part of the player (e.g., presented VR content corresponds to a view direction of the user).</i></p> <p>[an image of a virtual space including a first area and a second area;]</p> <p>“The present system may facilitate storytelling using virtual reality via boundaries that divide a virtual space into areas where primary content, secondary content, tertiary content, etc. may be presented to the user.” 5:52-55</p> <p>“Field boundary 404 may be visible, partially visible, and/or invisible to a user.” 19:43-44.</p> <p><i>As field boundaries may be invisible, the different areas are not visibly separate from each other.</i></p> <p><i>Accordingly, in view of the above, the Ross reference anticipates the claim element of an image of a virtual space (e.g., the virtual space) including a first area (e.g., the area including the primary content) and a second area (e.g., the area of the virtual space including the secondary content).</i></p>
<p>with the virtual image display apparatus, providing, when the information providing condition is satisfied, the to-be-provided information to the player by displaying the to-be-provided information in the second area;</p>	<p>Ross expressly or inherently discloses these claim element(s).</p> <p><i>Presented below are two separate interpretations of the claimed language using the Ross reference. Each interpretation by itself anticipates the claimed limitation. In the first comparison, the first area of the claims is corresponded to the secondary content of Ross, and the second area of the claims is corresponded to the primary content of Ross. In the second comparison, these are reversed, with the first area corresponded to the primary content in Ross, and the second area corresponded to the secondary content in Ross.</i></p> <p><u>Comparison 1) first area = secondary content in Ross, second area = primary content in Ross</u></p> <p>“The user may interact with the secondary, tertiary, etc., virtual reality content and then return his view back to the movie wherein the movie has been adjusted to reflect the user's interaction with the</p>

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