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(54) Title: METHOD AND APPARATUS FOR CONSTRUCTING A 3D GEOMETRY

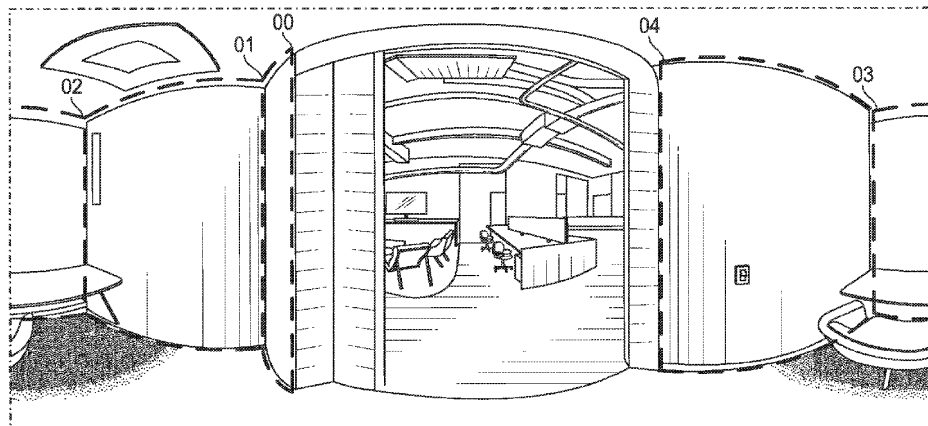


FIG. 1A

(57) Abstract: Aspects of the disclosure include methods, apparatuses, and non-transitory computer-readable storage mediums for generating a three-dimensional (3D) geometry of a room from a panorama image of the room. An apparatus includes processing circuitry that determine two-dimensional (2D) positions of wall corner points of the room in the panorama image based on a user input. Each wall corner point is in one of a floor plane or a ceiling plane of the room. The processing circuitry calculates 3D positions of the wall corner points based on the 2D positions of the wall corner points, a size of the panorama image, and a distance between the floor plane and a capture position of a device capturing the panorama image, determines a room layout based on an order of the wall corner points, and generates the 3D geometry based on the room layout and the 3D positions of the wall corner points.

[Continued on next page]

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