(54) **Title:** METHODS AND APPARATUS FOR MERGING DEPTH IMAGES GENERATED USING DISTINCT DEPTH IMAGING TECHNIQUES

FIG. 1
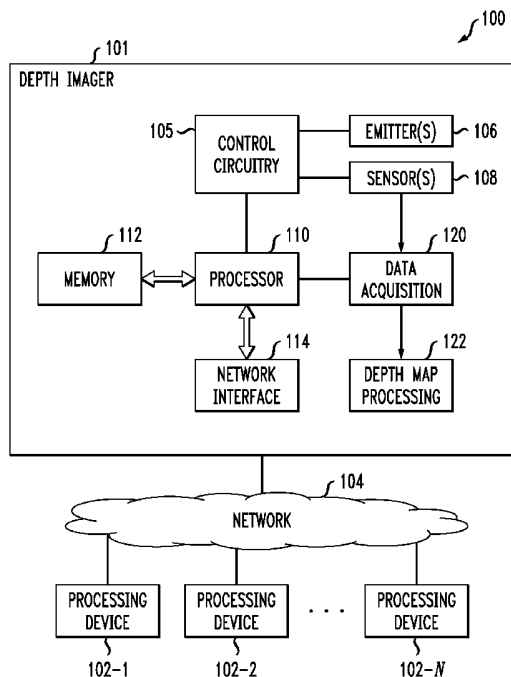
(57) **Abstract:** A depth imager is configured to generate a first depth image using a first depth imaging technique, and to generate a second depth image using a second depth imaging technique different than the first depth imaging technique. At least portions of the first and second depth images are merged to form a third depth image. The depth imager comprises at least one sensor including a single common sensor at least partially shared by the first and second depth imaging techniques, such that the first and second depth images are both generated at least in part using data acquired from the single common sensor. By way of example, the first depth image may comprise a structured light (SL) depth map generated using an SL depth imaging technique, and the second depth image may comprise a time of flight (ToF) depth map generated using a ToF depth imaging technique.

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