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(54) Title: THREE-DIMENSIONAL SENSOR WITH COUNTERPOSED CHANNELS

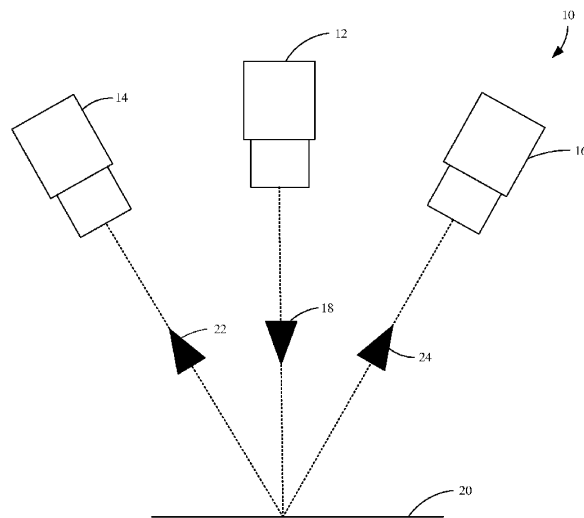


FIG. 1

(57) Abstract: A method of determining dimensional information of a target surface includes generating a first point cloud corresponding to a first plurality of reconstructed surface points of the target surface generated by a first imaging system-illumination source pair (1302) of a phase profilometry system (1300); generating a second point cloud corresponding to a second plurality of reconstructed surface points of the target surface generated by a second imaging system-illumination source pair (1304) of the phase profilometry system (1300); generating an initial estimate of the target surface based on the first and second point clouds; and refining the initial surface estimate using positions of the first and second point clouds and geometry of the first and second imaging system-illumination source pairs (1302, 1304) to generate a final point cloud.

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WO 2020/081927 A1

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