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(54) Title of the Invention: Six degree-of-freedom laser tracker that cooperates with a remote structured-light scanner
 Abstract Title: Six degree-of-freedom laser tracker that cooperates with a remote structured-light scanner

(57) A method of measuring three or more surface sets on an object surface with a coordinate measurement device and a target scanner, each of the surface sets being 3D coordinates of a point on the object surface in a device frame of reference, each surface set including three values. The method includes: providing the target scanner having a body, a first retroreflector, a projector, a camera, and a scanner processor, providing the coordinate measurement device configured to send a first beam of light to the first retroreflector and to receive a second beam of light from the first retroreflector, the second beam of light being a portion of the first beam of light, the scanner processor and the device processor are jointly configured to determine the surface sets; selecting the source pattern of light; projecting the source pattern of light onto the object to produce the object pattern of light; imaging the object pattern of light onto the photosensitive array to obtain the image pattern of light; obtaining the pixel digital values for the image pattern of light; measuring the translational and orientational sets with the coordinate measurement device; determining the surface sets corresponding to each of the at least three non-collinear pattern elements; and saving the surface sets.

