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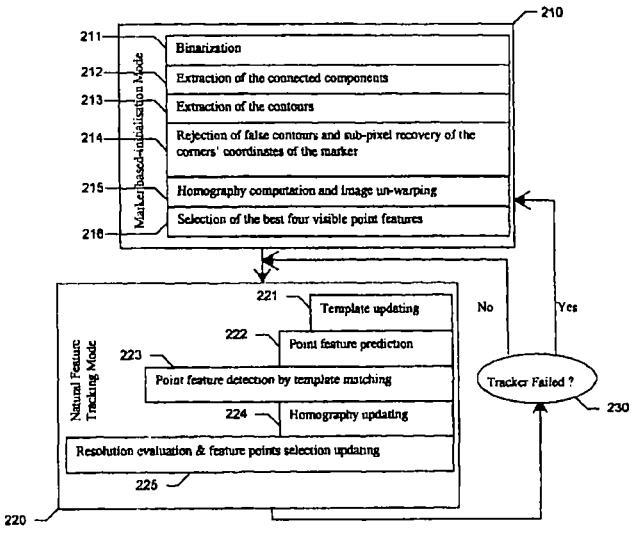
(54) Title: TRACKING A SURFACE IN A 3-DIMENSIONAL SCENE USING NATURAL VISUAL FEATURES OF THE SURFACE



(57) Abstract: A facility for determining the 3-dimensional location and orientation of a subject surface in a distinguished perspective image of the subject surface is described. The subject surface has innate visual features, a subset of which are selected (216). The facility uses the location of the selected visual features in a perspective image of the subject surface that precedes the distinguished perspective image in time to identify search zones in the distinguished perspective image. The facility searches the identified search zones for the selected visual features to determine the 2-dimensional locations at which the selected visual features occur. Based on the determined 2-dimensional locations, the facility determines the 3-dimensional location and orientation of the subject surface in the distinguished perspective image(210, 230, 220).

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