ABSTRACT

3D GEOMETRIC MODELING AND 3D VIDEO CONTENT CREATION

The present invention relates to a system, apparatus and method of obtaining data from a 2D (two-dimensional) image in order to determine the 3D (three-dimensional) shape of objects appearing in said 2D image, said 2D image having distinguishable epipolar lines, said method comprising: (a) providing a predefined set of types of features, giving rise to feature types (20), each feature type being distinguishable according to a unique bi-dimensional formation; (b) providing a coded light pattern comprising multiple appearances of said feature types; (c) projecting said coded light pattern on said objects such that the distance between epipolar lines associated with substantially identical features is less than the distance between corresponding locations of two neighboring features; (d) capturing a 2D image of said objects having said projected coded light pattern projected thereupon, said 2D image comprising reflected said feature types; and (e) extracting: (i) said reflected feature types according to the unique bi-dimensional formations; and (ii) locations of said reflected feature types on respective said epipolar lines in said 2D image.

Fig 1A