

IMAGE PROCESSING APPARATUS, IMAGE PROCESSING METHOD, AND COMPUTER-READABLE RECORDING MEDIUM

ABSTRACT

An image processing apparatus 10 is a apparatus for building a three-dimensional shape from a plurality of images. The image processing apparatus 10 includes a feature point extraction unit 11 that extracts combinations of corresponding feature points from the plurality of images, a matrix calculation unit 12 that, if two or more line segments or points corresponding to each other are designated in at least two images, specifies a geometric relationship between the two or more line segments corresponding to each other or a geometric relationship between the two or more points corresponding to each other, and calculates a numerical matrix that represents the geometric relationship, and a shape building unit 13 that specifies a combination of feature points with a conflicting geometric relationship, from among the extracted combinations of feature points, using the numerical matrix, and builds a three-dimensional shape using the combinations of feature points other than the specified combination of feature points.

Fig. 1