

IMAGE PROCESSING APPARATUS, IMAGE PROCESSING METHOD, IMAGE
INPUT DEVICE AND IMAGE INPUT/OUTPUT DEVICE

ABSTRACT

An image processing apparatus which is allowed to achieve a higher speed of a labeling process than ever before is provided. Sequential scanning is performed on pixels in a picked-up image represented by binarized data D_{in} . Moreover, during the sequential scanning, while label information representing an identification number for each connected region in the picked-up image is, as occasion arises, allocated to a target pixel based on values of pixel data of the target pixel and neighboring pixels thereof, additional information (position information and area information) for each connected region corresponding to each label information is updated as occasion arises. Thereby the label information, the position information and the area information about the whole picked-up image are obtained by one sequential scanning process.

Fig. 1