Morphological Edge Detection And Corner Detection Algorithm Using Chain-Encoding

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Abstract - Edges and corners are regions of interest where there is a sudden change in intensity. This feature lay an important role in object identification methods used in machine vision and image processing systems. This paper presents a novel method for edge and corner detection in images. The approach used here is extracting edges of the input image using morphological operator and then sending it for Chain Encoding. We are proposing a new morphological edge detector which returns a one pixel thick m-connected binary boundary image. This is followed by our chain encoding method to detect corners on the extracted edges. The algorithm works on all types of images (i.e. binary, gray level and color images). Since the proposed methods are used on morphological operations , these are very simple , efficient and fast. Experimental results on a variety of images identified all the prominent edges and significant corners efficiently .