Camera Captured based Myanmar Character Recognition Using Dynamic Blocking and Chain Code Normalization

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This paper presents a system for Myanmar text extraction and recognition from warning signboard images taken by a mobile phone camera. Camera captured natural images have numerous difficulties compared to the traditional scanned documents. Common problems for camera captured text extraction are variations in font style, size, color orientation, illumination condition as well as the complex background. In this system, color enhancement process is performed to distinguish the foreground text and background color. Color enhanced images are converted into binary images using color threshold range. The detected non-text objects are removed as clearly as possible using width, high, aspect ratio and object region area threshold. In the segmentation process, horizontal projection profile, vertical projection profile and bounding box are used for line segmentation and character segmentation. To recognize the above segmented Myanmar characters, blocking based pixel count and eight-direction chain codes features are proposed. In this system, characters are classified by feature based approach of template matching method by using the proposed features. In this paper, dynamic blocking based pixel count, eight-direction chain codes features and geographic features are used to correctly recognize Myanmar characters.