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Processing Camera-Based Documents
Advances in Document Engineering

J.UCS Special Issue

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Digital cameras are a pervasive technological item in the life of most people today. Either standalone or embedded in other devices such as mobile phones digital cameras are omnipresent. Their high availability, portability, low weight, low cost, and rising image quality have widened the number of applications, inaugurating a new research area within document engineering that is evolving fast in many different directions and claims for new algorithms, tools and processing environments that are able to provide users in general with simple ways of visualizing, printing, transcribing, compressing, storing and transmitting through networks such images.

Contents of this Issue

Ten papers were originally submitted to this special issue and were refereed by a board of experts in the field. Each submission was reported by three reviewers of the board and at the end of this phase five papers were rejected and five were accepted subject to revision. One of the papers was withdrawn by the author and the four remaining papers met the referees' recommendations and are presented here.

Layout Analysis for Camera-Based Whiteboard Notes is the title of the opening paper of this volume, which is authored by Szilard Vajda (Dortmund, Germany), Thomas Plötz (Newcastle, U.K.), and Gernot Fink (Dortmund, Germany). This paper follows one of the new applications of portable digital cameras that people instead of taking notes of whiteboards during classes and meeting photograph them for later processing.

The second paper of this special issue is on spotting text within a camera grabbed image. Such text contains a huge amount of meta data about that scene, which can be useful for identification, indexing and retrieval purposes. Its title is "Robust Extraction of Text from Camera Images using Colour and Spatial Information Simultaneously" and its authors are Shyama Prosad Chowdhury (Queen's University Belfast, UK), Soumyadeep Dhar (Videonetics Technology Pvt. Ltd., India), Karen Rafferty (Queen's University Belfast, UK), Amit Kumar Das (Bengal Engineering and Science University, Shibpur, India), and Bhabatosh Chanda(Indian Statistical Institute, India).

The title of the third paper "Adaptive Binarization of Unconstrained Hand-Held Camera-Captured Document Images", by Syed Saqib Bukhari (Technical University

of Kaiserslautern, Germany), Faisal Shafait (German Research Center for Artificial Intelligence, Germany), and Thomas Breuel (Technical University of Kaiserslautern, Germany), clearly explains its scope and relevance.

The closing paper of this issue deals about automatically deciding whether a document image was originally photographed or scanned. Such information is of paramount importance in deciding which filtering algorithms may be suitable for a given image. The paper entitled "Automatically Deciding if a Document was Scanned or Photographed" has as authors Gabriel Pereira e Silva, Rafael Dueire Lins and Brenno Miro (Federal University of Pernambuco, Brazil), Steven J.Simske (HP Labs, USA), and Marcelo Thielo (HP Labs, Brazil).

The authors and editor of this volume thank experts of all areas of document engineering that refereed and revised the papers for this special issue on camera-based documents.

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