There has been a large volume of research and development work in the area of image analysis for multimedia interactive services in the past decade. The European Union COST 211 Action has actively contributed to this work for many years. The recent focus has been on two major topics: multimedia indexing and retrieval and video segmentation. Five years ago, COST 211 organized the first international workshop on Image Analysis for Multimedia Interactive Services, WIAMIS, which was held in Louvain-la-Neuve, Belgium. Since then, further workshops have been organized in Berlin in 1999 and in Tampere in 2001. The next workshop will be held in London in 2003.

WIAMIS proved to be a major window to the outside world for the closed collaborative Action COST 211. Cross fertilization of ideas is the prime goal in the workshops, in addition to attracting new members working on related areas to COST 211. To reach a broader audience, the Editor-in-Chief of the EURASIP Journal on Applied Signal Processing kindly accepted the proposal to publish a selection of the papers presented at WIAMIS 2001. The authors response to this call-for-papers exceeded our expectations and the editorial board of the journal agreed to allocate two issues for the selected papers. The next issue is planned to appear in June 2002.

This part (Part I) of the special issue covers four main topics. We open the issue with an invited tutorial on the MPEG-7 standard and future challenges for visual information analysis and retrieval. The tutorial is authored by Philippe Salembier who has been actively involved in the MPEG-7 development activity standard since its beginning. Three other papers in the area of indexing and retrieval cover the use of MPEG-7 at the consumer terminal in broadcasting, retrieval based on shape correspondences using ordinal measures, and audio classification in speech and music.

Video segmentation is the focus of the next three papers. As mentioned earlier, video segmentation has been a key research area in COST 211. The group has developed a software package called the COST AM (Analysis Model) which can produce, among other outputs, a set of segmentation masks for an input video. A call for Comparison with the COST AM has been issued and some proposals have been received and evaluated. One of these is presented here in a paper authored by E. Sifakis et al., in which they propose a novel algorithm for video segmentation using fast marching and region growing. A major issue related to video segmentation is the segmentation quality, that is, how can one objectively measure the segmentation results. Two papers in this issue propose novel solutions to this important problem.

The last two papers in this part of the special issue focus on watermarking. The first presents a scheme in which characteristics of both spatial and frequency techniques are combined to achieve robustness against image processing and geometric transformations; while the second considers segmentation and content-based watermarking for color image and image region indexing and retrieval.

Part II of the special issue will focus on video segmentation, detection, tracking, motion estimation, and post-processing. We hope the reader will enjoy this issue.
Guest Editors would like to thank all contributing authors for their efforts in meeting the quality requirements of the journal as well as the tight schedule. We are indebted to the Editor-in-Chief, Ray Liu, for his support and patience.

Moncef Gabbouj
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Geoff Morrison graduated from the University of Cambridge, UK and joined the British Post Office Research Department. He worked on analogue video transmission systems, processing, and switching, mainly for videoconferencing and videotelephony services. Subsequently his research activities centered on digital video. After a six month secondment to NTT Laboratories in Japan, he was an active contributor to the CCITT group which developed Recommendation H.261. Simultaneously he led a group at BT Labs which constructed the first European real-time hardware implementation of it. His theoretical and practical knowledge of video compression contributed to MPEG-1 and MPEG-2 where he chaired the Implementation Studies Group for several years. He also participated in many European collaborative projects including COST 211bis through to the current COST 211quat which he chairs. Geoff gained his doctorate in 1997 from the University of Waseda in Tokyo following a secondment there. He is an Honorary Fellow of the University of Essex. Currently he is Senior Research Advisor in the Content and Coding Laboratory of B'Texact Technologies.