Color image preprocessing and segmentation has been widely accepted as an important component of the image mining. In this paper, we have proposed the denoising concept. The method used for pre-processing the color image includes wavelet based segmentation which has the advantage of more efficiency, better quality and accuracy of image. The preprocessing method wavelet transforming has the advantage of multi-resolution in both time domains as well as in frequency domain, so it can be used to describe the partial characteristics for both domains. Wavelet denoising is a more successful kind of application of wavelet transforming. Using the multi-resolution of wavelet, the non-steady characteristics of signals can be analyzed efficiently and give more refined results. The experiment has shown enhanced results produced by our proposed technique than the previous approaches in practice.

References

- Chin-Chuan Han, Hsu-Liang Cheng, et al. Personal authentication using palm-print
- D. Weiler, J. Eggert, "Multi-dimensional Histogram-based Image
  Sementation," Springer-Verlag 14th International Conference Neural Information
- Dong Jingwei, Sun Yan, Huang Yaping, Hu Silue, "Preprocessing of Palm Image
  Based on Wavelet Modulus Maximum Value," proceedings of IEEE conference on
- D. Weiler, J. Eggert, "Multi-dimensional Histogram-based Image
  Sementation," Springer-Verlag 14th International Conference Neural Information
- E. Sifakis, I. Grinias, G. Tziritas, "Video segmentation using fast marching and
- F. Scroff, A. Criminisi, A. Zisserman, "Single-histogram class models for image
  segmentation," 5th Indian conference on Computer vision, graphics and image
  processing, Madurai, India, vol. 4338, pp: 82-93, Dec 2006.
- H. Zhang, J. E. Frittsb, S. A. Goldman, "Image segmentation evaluation: A
- K. S. Chenaoua, A. Bouridane, F. Kurugollu, "Unsupervised histogram based color
  image segmentation," Proceedings of the 10th IEEE International Conference on
- M. Tabb, N. Ahuja, "Multiscale image segmentation by integrated edge and region
- M. Dai, P. Baylou, L. Humbert, M. Najim, "Image segmentation by a dynamic
  thresholding using edge detection based on cascaded uniform filters," Elsevier Journal of
- M. Sezgin and B. Sankur, "Survey over image thresholding techniques and
- Nita M. Nimbarte and Milind M. Mushrif, "Multi-level Thresholding Algorithm for
  Color Image Segmentation," in Conference on Computer Engineering and
  segmentation by clustering techniques," Proceedings of the International Conference
- Shitong Wang, F. L. Chung and Fusong Xiong, "A Novel Image Thresholding
  Method Based on Parzen Window Estimate," Pattern Recognition, vol. 41, pp. 117-129,
- X. P. Zang, M. D. Desai, "Wavelet based automatic thresholding for image
  segmentation," Proceedings of International Conference on Image Processing, Santa

Index Terms

Computer Science

Signal Processing
Keywords

Color Image  Otsu Algorithm  Wavelet Transform  Karhunen-loeve Algorithm  image  Preprocessing  Image-segmentation