Perspectives of Multimedia SoC

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Multimedia technology is one of the driving forces for the digital convergence of computer, communication, and consumer electronics. While digital technology beingapplied to human daily life, multimedia has been brought to office, home, and even the outdoors, from large devices to portable devices, and from specific people to everybody. Diverse multimedia applications have been realized and are emerging around various multimedia terminals, making human life more convenient and more interesting. One of the key factors that multimedia systems could become so popular is the advances in SoC technology, which enables the integration of large-scale complex system into single chip and results in low-cost and low-power features desired by multimedia terminals.

In this talk, the recent advances in signal processing and video codec implementations for multimediaapplications will be presented. The technology issues and directions of the multimedia design approaches based on the latest research results, ex. MPEG-4, H.264, will be introduced. Key challenges of multimedia SoC design, ex. complexity, low power, flexibility, will be addressed. Finally, the future trend of multimedia SoC will be discussed.