



Preface Special Issue on Image Processing LSIs

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The construction of broadband infrastructures and the spread of broadband wireless communication networks such as 3.5G, WiMAX, and LTE are driving the expansion of information services that support the lives of many people. The proliferation of social networking services, meanwhile, is creating an environment in which people can access or share diverse forms of content at anytime from anywhere in accordance with individual needs and preferences. This state of affairs is producing a quantum leap in the amount of information flowing on the network. At the same time, information itself is becoming increasingly diversified as high-function, high-performance terminals such as smartphones and tablets become increasingly popular in society. The age has truly arrived in which we can freely transmit, process, and store multimedia content (still images, video, voice, audio) from our personal terminals as a commonplace activity.

While broadband networks have spread and diverse services have been migrated to the cloud, we are also entering a period in which all sorts of user terminals are becoming available for accessing information services. This is taking place in an environment where networking is coming to include even home appliances like televisions and air conditioners as well as automobiles and medical and industrial equipment. We are seeing a transition to a society in which networks interconnect all types of equipment and devices, and users can comfortably, enjoyably, and safely access uniform information services at any time regardless of where they might be.

Multimedia content provided by services over the network is not only diversifying, it is also improving rapidly in terms of quality: it now features sharper images, high-speed movements, superior audio, and a heightened sense of presence. To make it easy for users to receive various types of multimedia content, user terminals must have "multifunctional, high-performance, and high-speed" properties and have a "low-power, compact, and lightweight" configuration. At the same time, they must provide robust security functions that provide the user with a safe and secure environment that protects personal information and intellectual assets.

The trend toward open solutions for providing such diverse multimedia content services is accelerating thanks to the expansion of Android, HTML, and other open development environments. Yet, the diversification of terminal equipment is also increasing the need for functions

that can evolve and improve and features that can be specialized and customized for different types of multimedia processing.

In the face of such accelerated growth in multimedia content services, this special issue introduces key technologies developed by Fujitsu Semiconductor for achieving a variety of system LSIs for image processing. These technologies are not limited to the LSI products themselves—they also include software technologies for achieving a variety of solutions and design and development support technologies for consolidating diverse functions in LSIs.

With an extensive background in advanced image-processing technology, application-support technology, and design and development support systems, Fujitsu Semiconductor is well positioned to help its customers grow their businesses through unified support, from the planning and development of LSI solutions to the manufacturing and sales of advanced products.