Paving the Way to an ICT Society with the World's Most Advanced Technology

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The forthcoming ICT (information communication technology) society is likely to revolutionize the way we live. By networking a wide diversity of different kinds of equipment including consumer electronic products, we will begin to see new services that make our daily lives safer, more comfortable and more convenient. Its constituent elements — multifunctional cell phones, large flat-panel displays, MP3 players, remotely accessible security systems, domestic robots and so on — were only recently thought of as being technologies from the distant future, but are now real products that are available to anyone.

To meet the demand for miniaturization and greater performance, the advanced electronic devices that support this ICT society are rapidly evolving towards higher integration densities and multi-layer structures, so it is essential to employ control and measurement techniques at the atomic, molecular and electron levels. Specifically, implementing advanced devices requires technology not only for precise and efficient device fabrication but also for the evaluation and systematic management of these fabrication processes. Hitachi Group provides the latest fabrication equipment for devices such as semiconductors, liquid crystal displays and hard disk drives, together with measurement, test and analysis equipment and state-of-the-art device fabrication systems including utilities such as clean rooms, so it could be said that our nanotechnology provides support for the ICT society.

Today, the feature size of semiconductor devices is approaching the 45-nm node, display devices are becoming larger and more ubiquitous, and hard disks can achieve recording densities of over 100 Gbit/cm^2. As further improvements in performance and functionality are made in the future, the role of Hitachi Group will become increasingly vital. Based on wide-ranging feedback from our customers and on prompt identification of latent needs in the market, we must direct our efforts toward creating and nurturing the seeds of innovation. It is also essential to create mechanisms for the smooth functioning of the technology supply chain. In this way, we hope to develop the world's most advanced device fabrication systems and contribute to the next-generation ICT society of our dreams.