

# Remarks for Special Issue on Embedded Software and Solutions

In this issue we will feature embedded software solutions that have taken the spotlight in recent years. Software has gained recognition as an indispensable infrastructure that supports modern society. And in it, embedded software is anticipated as the core technology in creating a competitive edge in many fields centered around manufacturing. We believe that it is of utmost importance to provide innovative embedded software in an even wider range of fields, in order to realize the full potential of manufacturing.

It is also true, however, that there are a number of issues facing embedded software. Although the scale of development is growing at a rapid pace, there is a contradictory trend where development time cycles are becoming shorter and shorter. At the same time, quality issues are becoming apparent. Now that we are at a stage where the quality of a product is determined by the quality of its embedded software, there is an urgent need to increase the reliability of embedded software in order to maintain the safety and security of people's everyday lives and social activities.

As you can see, there are great expectations and formidable challenges ahead for embedded software. NEC is promoting various activities pertaining to embedded software, among which we would like to introduce to you Platforms, Components, and Development Environments in this special issue.

The platform is an especially important key factor in the development of embedded software. Needless to say, the stability of the platform is critical to improving product quality, but beyond that the high-level functions and support services that a platform offers are indispensable to the objectives of reducing cost, reducing development lead time, and achieving higher performance. It would not be an overstatement to say that the selected platform will have a direct impact on the success or failure of development. Firstly, in this special issue, we would like to introduce you to the leading-edge platforms that NEC is providing, including the OViA platform being offered by NEC Electronics.

In the next section, Components, we are highlighting our image/audio processing

related technologies. In NGN (Next Generation Network), which is one of the future megatrends, a wide variety of communication services and applications will be integrated on ultra-high-speed, high-capacity, high-reliability IP networks. In this era of NGN, the ability to smoothly handle rich content that offer unprecedented realistic sensations, will become essential. At NEC, we have carried out R&D activities that will enable us to meet these demands in the future. By making use of components, we anticipate that the development of embedded software for devices tailored for the NGN era, will be smooth sailing.

Finally, we will be introducing our Development Environments for embedded software. Over the years, NEC has developed embedded software for use in its own products. From this expertise, we were able to build-up effective development environments based on tools that effectively alleviate the various problems that may arise on-site where development actually takes place. Over the past few years, they have been bolstered as part of the NEC group-wide preparations for our software production innovation. From among our numerous development environments, for this issue we will specifically cover those that have a proven track record both in-house and at our clients', such as our Project Management Tool, as well as new technologies such as formal methods that are still in their trial phases.

NEC is currently in the process of executing and evaluating various measures in order to realize our software production innovation, for software in general in addition to the embedded software solutions both covered and not covered in this issue. As software continues to grow in importance, we at NEC group as a whole, fully intend to develop software solutions that will more than meet the challenges of our global competition. Thank you for your attention, and your continued support in the future.



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