STMicroelectronics Presents its Latest Advances in Architectures and Compilers for Embedded Systems

October 5 2004

STMicroelectronics, a world leader in creating platforms for embedded solutions, has published a new issue of the ST Journal of Research, which focuses on **processor architecture and compilation for embedded systems**.

Today's sophisticated embedded systems rarely consist of a single microcontroller; they are now full computing systems containing several processors, hardware accelerators, buses, memories, and peripherals. In building these complex computing systems, engineers need to take a true system-level approach to simultaneously and successfully address hardware, operating system, and applications challenges. In this scenario, compilers and software tools play an increasingly important role.

The editors of the ST Journal of Research have collected eight papers which present a wide spectrum of activities in embedded systems, spanning pure hardware technologies and techniques to pure software ones. Among the subjects covered in this issue are the presentation of a new multi-core architecture, the research of solutions to optimize the size of programming code, and the usage of innovative compiler techniques. Moreover, a special report on VLIW machine scheduling will be available in the next few weeks.

"Compilers and software tools represent key aspects of the design of today's embedded systems," said Andrea Cuomo, Corporate Vice President and General Manager of ST's Advanced System Technology

Group. "ST gives special attention to these crucial aspects of system design and we've highlighted our efforts in this issue of the ST Journal of Research."

The ST Journal of Research aims to facilitate knowledge sharing and exchange on key research issues, methodologies, and solutions. In an effort to reduce consumption of paper, in line with the Company's environmental policies, ST publishes its journal in electronic format and is available at http: //www.st.com/stonline/press/magazine/stjournal/index.htm.

Written by STMicroelectronics researchers, in cooperation with top-notch universities and research partners, the ST Journal of Research hosts technical papers and discussions on selected themes. It offers tutorial papers and insights, with each issue being dedicated to a specific theme, such as low- power system design, video processing, or this issue's processor architecture and compilation for embedded systems. All papers are peer-reviewed and coverage is coordinated by an expert in the relevant field