

## AOI TECHNOLOGY EMBARKS ON CHESS/CHECKERS TOOL-SUITE TO DESIGN CONFIGURABLE MULTI-MEDIA CHIPS

AOI Technology Inc. announced that it has licensed the Chess/Checkers retargetable tool-suite for the design of flexible processor cores from Belgian EDA vendor Target Compiler Technologies. Chess/Checkers is being used successfully by AOI Technology as its main development environment for its next-generation configurable LSI chips for multi-media systems.



AOI Technology was established in 2002 as a fabless IC vendor focusing on the market of multi-media chips. AOI develops configurable multi-media accelerators, for computationally demanding functions such as still image coding, advanced video coding, and audio. The use of the Chess/Checkers retargetable tool-suite significantly enhances AOI's design capabilities, not only during the architecture definition phase of its novel accelerators, but also in the development and verification of embedded software that runs on these accelerators, and in the hardware implementation of its platforms.

Target Compiler Technologies spun off from the Belgian microelectronics research center IMEC in 1996. Since then, its Chess/Checkers product has become the leading retargetable tool-suite for the design, programming and verification of flexible processor cores. Chess/Checkers contains an optimizing C compiler, an assembler/disassembler, a linker, an instruction-set simulator (ISS), a hardware description language (HDL) generator, a test-program generator, and an on-chip debugging environment. The tools are retargetable to a wide range of processor architectures based on the processor description language nML, and are instrumental to the design of application-specific instruction-set processors (ASIPs) in multi-processor systems on a chip.

"We needed an efficient retargetable tool-suite as our basic infrastructure for designing novel multi-media accelerators," said Hidetaka Takagi, President of AOI Technology. "Next generation multi-media systems not only require extreme computational performance and low power consumption, but must also be able to cope with multiple standards for audio and video coding, and must be designed in a short time. The Chess/Checkers tool-suite enables the design of flexible processor cores that exactly combine those challenging requirements."



"We evaluated several commercially available retargetable tool-suites, and concluded that Chess/Checkers was the only solution that met all of our product requirements," stated Takashi Hirano, Senior Engineer at AOI Technology and responsible for its multi-media product line. "While other retargetable tools were limited to RISC microprocessors, we found Chess/Checkers to be the only solution that additionally provided excellent support for digital signal processing functions. Moreover, we were pleased with the high quality of support offered by Target and by its Japanese agent Innotech."

Hirano further commented on the applicability of the tools as follows. "Our next generation chip will contain a variety of processor cores, ranging from small application-specific micro-controllers up to parallel accelerators with vector processing capabilities and digital signal processing functions. We were impressed by the ability to model such a wide variety of architectures in Target's processor description language nML, and to quickly obtain efficient tool support for architecture exploration, optimized compilation and embedded software development, multi-processor simulation and debugging, and Verilog generation. The availability of a single retargetable tool-suite supporting these different cores, will be a strong asset for our new platform."

The license agreement between AOI and Target, which was signed last month, marks an important step in the introduction of Target's retargetable tool-suite in the Japanese market. "AOI is at the

forefront of LSI design for next generation multi-media systems," commented Gert Goossens, CEO of Target. "We are very pleased with AOI's strong commitment to base its developments on our Chess/Checkers technology."

In 2004, Target signed an agency agreement with Innotech Corporation, one of Japan's most reputable distributors of electronic design automation tools. "We are happy that Innotech has been able to win AOI as Target's customer in such a short time," said Goossens. "Thanks to the dedication of Innotech's sales and engineering teams, excellent contacts have been established with leading Japanese companies over the past year. We look forward to the further deployment of our technology in Japan," Goossens added.

Takashi Takahashi, General Manager of the Sales Department of Innotech's IC Solution Division said: "Through our long-lasting relationship with the Japanese electronics industry, we witnessed a strongly growing trend towards the design of more flexible application-specific processor architectures.

However, processor design teams often lack access to efficient software tools, in particular to efficient C compilation technology for their specialized architectures. Target's Chess/Checkers tool-suite is the ideal environment to bridge the gap between architecture and tool design. We are convinced that Chess/Checkers is poised for a successful growth in the Japanese market, and are very pleased to be able to contribute to that." ■

### About AOI Technology:

AOI Technology is a leading provider of high-performance and low-power multi-media ICs for various still image, video and audio codecs. AOI Technology was established in 2002 as the joint-venture of Olympus Corporation and ITX Corporation. Olympus is a global leader in designing, manufacturing and marketing optical-digital product solutions for health care and consumer markets. Olympus generated consolidated sales revenues of JPY 633.6 billion for the year ended March 31, 2004. ITX is an IT business creation company that aims to establish and nurture unique and innovative businesses. For more details, please visit [www.aoitech.co.jp/en](http://www.aoitech.co.jp/en). All trademarks or registered trademarks mentioned in this release are the intellectual property of their respective owners.