

MICROPROCESSOR

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THE INSIDER'S GUIDE TO MICROPROCESSOR HARDWARE

MPR ANALYSTS' CHOICE AWARDS

Five Companies Make Our First Group of Winners for 2006

By Tom R. Halfhill {2/20/07-01}

This week we're announcing the first group of our annual *Microprocessor Report* Analysts' Choice Awards. Next week we'll announce the final group of winners. For each award, we are publishing a brief article about the winning product or technology and the reasons for our choice.

Five companies are in the winner's circle this week: Ambric, ARM, Freescale Semiconductor, Handshake Solutions, and Intel. We're actually handing out four awards, because two of those companies (ARM and Handshake Solutions) share an award.

We modified our award process this year. In the past, we gave awards in narrow categories, such as Best High-Performance Embedded Processor or Best Desktop PC Processor. Although we haven't permanently abandoned such categories, we find them too restrictive. Often, we want to reward an outstanding product, design, concept, or technology without necessarily declaring that a specific processor is the absolute best in its field. Defining what's "best" is always a problem, given the many criteria for evaluating a processor.

So this year, we have created a new category: Innovation. This broader category frees us to reward innovative developments relating to microprocessors with-

out necessarily singling out specific chips or cores. Of course, it's possible for more than one company to do something innovative during the year, so we can honor those achievements by bestowing more than one award in the Innovation category each year. In fact, all our awards this



All winners of MPR Analysts' Choice Awards will receive a wall plaque like this one, which displays a reproduction of the MPR article announcing the award.

year are in the Innovation category—largely because we couldn't agree that any particular processors or cores introduced in 2006 were indisputably the best in their fields. The competition was simply too close.

Ambric wins an MPR Analysts' Choice Award for the design concept and architecture of its massively parallel processor, the Am2045. (See MPR 2/20/07-02, "MPR Innovation Award: Ambric.")

ARM and Handshake Solutions share an *MPR* Analysts' Choice Award for the ARM996HS, the first commercially available 32-bit processor core implemented in asynchronous logic. (See *MPR* 2/20/07-03, "*MPR* Innovation Award: ARM996HS.")

Freescale wins an MPR Analysts' Choice Award for MRAM (magnetic random-access memory). Freescale's MR2A16A is the first commercially

available memory chip based on spintronics technology. (See MPR 2/20/07-04, "MPR Innovation Award: MRAM.")

Intel wins an MPR Analysts' Choice Award for the Core microarchitecture, which is dramatically changing Intel's approach to designing x86 desktop, mobile, and

server processors. (See MPR 2/20/07-05, "MPR Innovation Award: Intel Core Microarchitecture.")

Next week, we will announce the final group of winners for 2006. Judging last year's many fine accomplishments

to arrive at these small groups of winners wasn't easy. Often, it required additional research to resolve arguments and reach a consensus. Please join us in congratulating the 2006 winners of our MPR Analysts' Choice Awards.

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