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THE INSIDER'S GUIDE TO MICROPROCESSOR HARDWARE



THE EDITORIAL VIEW

MICROPROCESSOR FORUM CHINA

By Tom R. Halfhill {4/24/06-03}

On March 23, In-Stat and *Microprocessor Report* hosted our first-ever Microprocessor Forum in mainland China. It was a condensed one-day version of the three- or four-day events we've been hosting in Silicon Valley for more than 15 years. To help with logistics,

we partnered with IDG China, an offspring of International Data Group, one of the first U.S. companies to establish a publishing business on the mainland. IDG's people worked closely with our Chinese analysts at In-Stat China, based in Beijing.

Our joint venture was a test-the-waters experiment, not necessarily a commitment to regularly host Microprocessor Forums there. Our objectives were to gauge the interest for such an event and gain a better understanding of how the semiconductor industry is progressing in the world's most populous nation. As you probably know, China is now the world's leading consumer of ICs. Although China exports many of those ICs inside products destined for other markets, more of those chips are finding their way into products for the Chinese domestic market, too.

As part of our China experiment, I traveled to Shanghai and Beijing to participate in our forum and meet with Chinese engineers and executives. At the forum, which was associated with a large trade show in Shanghai, I gave a presentation about multicore processor architectures. Among the other presenters were Sir Robin Saxby, chairman of ARM, and representatives of U.S. companies like IBM, Tensilica, and Zilog. The program also included local speakers.

Results were mixed. Attendance exceeded expectations—we scrambled to find more chairs to accommodate the standing-room-only crowd. But we weren't sure what kind of presentations would appeal to a Chinese audience, so we tried a variety of things. If we host another forum in

China—a likely possibility, given the growing importance of the Chinese semiconductor industry—we will tighten up our program and focus on topics that Chinese engineers tell us they want to learn about.

One certainty is that *MPR* cannot ignore China. Today, many engineers in the U.S. and Europe think of China as a place where their companies outsource jobs to low-wage labor. But China is becoming a source of original chip designs, too. Last year, I wrote about the Godson-2, a new 64-bit processor that has much in common with the MIPS64 architecture, albeit without the sanction of a MIPS license. (See *MPR* 7/25/05-01, "China's Emerging Microprocessors.") That article triggered a controversy in the mainstream press when some reporters thought I implied the Godson-2 is merely a MIPS clone. On the contrary, my analysis concluded that Chinese engineers are capable of designing sophisticated microprocessors.

The day after our Microprocessor Forum in Shanghai, I met with the Godson-2's creator, Weiwu Hu. Weiwu is a professor at the Institute for Computing Technology (ICT) at the Chinese Academy of Sciences in Beijing. He's also chief technology officer for BLX IC Design, a Chinese startup that is marketing the Godson-2. I had worried that Weiwu might avoid me after the trouble my article inadvertently caused him, but he welcomed me and was eager to talk. He showed me around his lab, and we conversed for hours—so long that I was seriously late for my lunch

appointment with his corporate boss, Ming Zeng, CEO of BLX IC Design.

Most of my conversation with Weiwu was off the record, because he's not ready to publicly reveal his plans. In general terms, we talked about the future of microprocessor design in China.

Weiwu showed me his latest concept for the Godson-3, which I briefly described in my Godson-2 article last year. His new concept is bold and startling. To me, some aspects also seemed unrealistic. I kept my opinion to myself until he asked for it. Then I told him what I thought, without pulling any punches—just as we don't withhold criticism when analyzing a new design in *MPR*. Weiwu accepted my feedback graciously, then countered with some interesting facts he gathered while analyzing other CPU architectures. Although he didn't entirely convince me that his approach will work, I understand his reasoning, and I can't wait to see how the Godson-3 turns out. You'll read about it in *MPR* as soon as he's ready to publicly disclose his design.

My other meetings in China were equally fascinating. We met with a startup in Shanghai that has a surprising new idea for digital-rights management. We met with a DSP vendor facing new challenges from customers demanding

“reference designs” that, in fact, are nearly finished product designs. We met with a quasi-government organization that's working with U.S. and European companies to help enforce intellectual-property rights in China. You'll read more about these things in future issues of *MPR*.

Through it all, our Chinese colleagues at In-Stat China and our partners at IDG were extremely helpful. They arranged meetings, provided translation, treated me to some fabulous food, and were greatly amused by my clumsy attempts to read and write Chinese. Maybe I'll share some stories with you at our Spring Processor Forum in San Jose on May 15–17 (register now!). If you want a good laugh, find me at the Tuesday night expo and party, and ask me about the Chinese name of the hotel where I stayed. ♦



—Tom R. Halfhill
Senior Analyst, *Microprocessor Report*

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