Advances in VLSI Design and Product Development Challenges

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Abstract

Low product life cycle, high non-recurring expenses and increasing development costs is forcing product makers to design more and more complex chips. Today's product market demands hardware with high performance, higher functionality, smaller form factor and lower power consumption. This has led to adoption of rapidly changing technologies such as systems-on-chip with multiple core architectures, multiple architectures within a single device, multi-layered bus architectures, higher clock frequencies to name a few. The challenge for VLSI and System designers is to optimise the hardware-software integration for lowest total cost of acquisition of products. Need for the use of right processes and methods is much more today than ever before when the cost of system design is becoming higher and the cost of re-work even higher. What does it take for design service companies to meet the challenges of embedded product development?

Mr. A. Vasudevan is a Masters degree holder in Electronics Engineering from IIT, Kanpur and has over 16 years of VLSI design experience. He started his career in the R&D team of Wipro specialising in hardware design for high end servers developed by Wipro for the domestic market in the early 80's. When Wipro ventured into the global design service market in 1991, Mr. Vasudevan was part of the VLSI design team that worked on system design for global majors. He has worked on a large number of VLSI and system designs as part of the Technology Design Service Division (Global R&D) of Wipro. As a Vice-President of VLSI & Systems design Group, he has been heading this group for over 3 years now.

Wipro's VLSI design group, with approximately 600 VLSI & systems design engineers developing complex ASIC, SoC, FPGA and Board Designs, is one of the largest VLSI design groups among Indian Design Service companies.