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High-end Processor design in Advanced CMOS Technologies

Leon Stok, VP, IBM

Abstract:

In IBM we have dramatically shortened the time to market for our High-end Processor and System design. By looking at the entire design process from concept design to final test and validation, many of the steps have been improved and the complete development schedule shortened by 35%. In this presentation we will look at the lessons learned and methodologies and tools applied to accomplish this. However, many opportunities for improvement remain and new challenges are emerging when looking at 14nm technologies and beyond. We will address the type of innovations that will be necessary to keep us on this fast pace.

Speaker Bio:

Leon Stok is Vice President of IBM's Electronic Design Automation group. Prior to this he held positions as director of EDA and executive assistant to IBM's Senior Vice President of Technology and Intellectual Property and executive assistant to IBM's Senior Vice President of the Technology group.

Leon Stok studied electrical engineering at Eindhoven University of Technology, the Netherlands, from which he graduated with honors in 1986. He obtained a Ph.D. degree from Eindhoven University in 1991. Leon Stok worked at IBM's Thomas J. Watson Research Center as part of the team that developed BooleDozer, the IBM logic synthesis tool. Subsequently he managed IBM's logic synthesis group and drove the development of PDS, IBM’s Placement Driven Synthesis tool. From 1999-2004 he lead all of IBM's design automation research as the Senior Manager Design Automation at IBM Research.

Mr. Stok has published over sixty papers on many aspects of high level, architectural and logic synthesis, low power design, placement driven synthesis and on the automatic placement and routing for schematic diagrams. He holds 6 patents in the area of EDA. He was elected an IEEE fellow for the development and application of high-level and logic synthesis algorithms.