

EDA Challenges in New Generation Mobile Communications SoCs

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Abstract

The general trend of silicon technology shrink in technology nodes below 28 nm, the extremely dense integration to minimize the product area/cost, and the design concept to make analog/RF operations using digital architectures, render EDA tools availability as one of the most crucial problem. Especially in wireless communications SoC designs and in the case of technology multi-sourcing, this becomes even more severe and will become a blocking point to millimeter wave IC design, moving from the 4G/ LTE mobile communications to the 5G design era. This presentation is focused on the EDA tools gaps, always in relation to mobile communications ICs and in future trends at needs in terms of design automation and modeling, and in relation to the FinFET process technology shift, in the 16 and 14nm technology nodes.

Short Bio

Thomas Noulis is a Faculty member of the Aristotle University Physics Department, at the Electronics Lab. Previously from 2012 to 2015 was as staff RFMS engineer with Intel Corp., in the Mobile & Communications Group in Munich, Germany. Before joining Intel, he was with HELIC, Inc., (2008 to 2012) initially as analog/RF IC designer and then as R&D engineer. He earned his B.Sc, M.Sc, and Ph.D from the Aristotle University of Thessaloniki, Greece, in collaboration with LAAS, Toulouse, France. From 2004 to 2009, he participated as principal researcher in multiple European and national research projects. Between 2004 and 2010, he also collaborated with numerous universities and technical institutes as visiting-adjunct professor. Dr. Noulis has more than 30 publications in journals, conferences, and book chapters. He holds one French and one world patent. His work has received more than 50 citations. He is an active reviewer of international journals and has given multiple invited presentations. In addition, his research activity has been awarded by various conferences and research organizations. He is the editor of the Book "Mixed Signal Circuits" by CRC Press.

