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S E M I N A R

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Power Management for Modern Electronic Designs

by

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Abstract: Power budgets and power network delivery integrity are key targets for integrated circuit designs in many modern applications. Today it is a common requirement that state-of-the-art designs must deliver increasing performance and functionality while meeting reduced power and price targets. Design engineers can reduce their overall design cycle by adopting a comprehensive RTL to gate (R2G) design methodology that treats power as a design goal from early stage development to manufacturing sign-off. Additionally, as designs migrate to lower supply voltages using advanced technology nodes, dynamic power noise impact becomes even more significant. Gerald Garcia from Apache Design will provide an overview of Apache's RTL Design-for-Power solution (PowerArtist), and their industry-standard dynamic power sign-off platform (RedHawk). These products are used to build Apache's R2G methodology which allows designers to meet their complex and competing performance & power targets.

Gerald Garcia received the Bachelor of Science degree in Electrical Engineering from Lamar University, and the Master of Science degree in Electrical Engineering from Texas A&M University. He is currently a Senior Applications Engineer with Apache Design, a subsidiary of Ansys, Inc. His twenty-five year international career in the semiconductor industry includes delivering design and design automation solutions from the transistor level to integration of multi-million System-on-Chip processors. His professional experience spans the entire product development cycle, from product specification to product validation for high performance computing, automotive, mobile, networking, and video solutions. He holds a patent in PLL design, and has been published in both the *Journal of Solid State Circuits* and the *Proceedings of the International Symposium of Circuits and Systems*. Gerald also received the Master of Science degree in Project Management from St. Edward's University and holds a Project Management Professional credential from the Project Management Institute. He is a registered Professional Engineer in Texas, and is a Senior Member of the IEEE.