

Technical Vitality Seminar

Semiconductor Reliability and Vector Processing for Software Defined Radio in Handsets

By Pascal Nsame, IBM

Please, Come Join Us On
Tuesday, April 22, 2008

At The College of Engineering and Mathematical Science, University
of Vermont Campus, Votey 207

6:00 pm - 7:00 pm for the Technical Talk

Abstract – Each day we are faced with challenges. These challenges may require problem solving skills and/or technical solutions to overcome. This presentation describes the semiconductor reliability challenges and solutions for software defined radio (SDR) applications. Wireless radio standards (for cellular, broadcast, connectivity, and positioning) are reported as evolving toward multi-standard and multi-channel solutions (short term) and SDR and cognitive radio (long term), while programmable vector processing (SIMD) is considered a key enabler for SDR. However, the required base-band signal processing involves many giga operations per second, at a power budget of only a few hundred mW. Specific examples on SDR applications will be used to review the principles of high-quality and reliable systems.

Bio – Pascal Nsame is an active IEEE member. He is currently responsible for all aspects of semiconductor quality from development through qualification and manufacturing as well as quality in the field at the System and Technology Group of IBM. He lives with his family in Essex Junction, Vermont. He graduated from University of Quebec with a Bachelor of Science in Microelectronics and a Master of Science in Physics. In parallel, he pursued his Ph.D. Thesis in Electrical Engineering. He started his microelectronics career in 1996 when he joined the Canadian Microelectronics Corporation as a CAD/CAE/System Design Engineer. He joined IBM in 1999 as an Engineer/Scientist where he has focused his interests and contributions on semiconductor products. He has authored and published 10 technical papers and holds 20 patents issued or pending. He is active in K12 STEM outreach.



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