



NATEA SIG Wireless Seminar

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Date/Time: **Monday**, March 27, 2006 / 6:00 - 8:30 PM
Place: Mountain View City Library (free basement parking, see the map below)
585 Franklin St., Mountain View, CA 94041

Subject 1: **ZigBee – The Next Big Thing in Wireless?**

Speaker: **Dr. Kuor-Hsin Chang, Sr. SoC Platform System Architect
Wireless Connectivity Operations, Freescale Semiconductor, Inc.**

Abstract

ZigBee is a wireless PAN (personal area networking) technology intended for applications of low data rate under lower power consumption. While Bluetooth has been widely accepted in the marketplace, will ZigBee be the next big thing in wireless technology? The presentation will first look into the market trends and the current development status for ZigBee/IEEE-802.15.4 based devices and products, followed by a discussion on the application space of ZigBee. We will also review ZigBee's perspective on its technology roadmap, standardization activities in IEEE-802.15, and the future applications.

Speaker Biography

Dr. Kuor-Hsin Chang is a Sr. System Architect, working on Freescale's next generation ZigBee platform. He has more than ten years of development and application experience in the wireless semiconductor industry focusing on emerging wireless standards in cellular, fixed-point wireless (WiMAX), WPAN, and WLAN.

Earlier, Dr. Chang served as a project lead at Quicksilver Technology, developing wireless multimedia applications based on ACM (Adaptive Computing Machine) architecture. Prior to that, he was a Staff Engineer for VLSI/Philips, and a Sr. System Engineer for NEC, both specialized in CDMA baseband technology. Dr. Chang also held various management and business development positions in several start-ups focusing on cutting-edge wireless products. He earned his Ph.D. (EE) from Texas A&M University and B.S. (EE) from National Chiao-Tung University in Taiwan.



Dr. Chang's current interests are in flexible hardware architecture for wireless baseband, efficient platform for various wireless applications, and wireless applications of improving the quality of human life.

Subject 2: **UWB (Ultra-Wide-Band) Radio: A Rising Star in Wireless World**

Speaker: **Mr. Ssu-Pin (Simon) Ma, Member of Technical Staff**
TZero Technologies, Inc.

Abstract

The UWB (Ultra-Wide-Band) radio has several different wireless standards in this family. Because of their unique physical behaviors, they have some special advantages over traditional radio systems. We will briefly go through an introduction of them.

The MB-OFDM (Multi-Band Orthogonal Frequency Division Multiplexing) of UWB, also known as WiMedia, is one of the UWB radio standards. We will use a case study to describe its RF requirements and test results of a radio chip on a UWB transceiver, based on the 0.18 μ m CMOS process. Its antenna diversity and selective receiver-combination collectively provide more interference immunity, and hence better throughput and adaptability. Other key features and broadband / high-speed performance will also be reviewed and discussed.

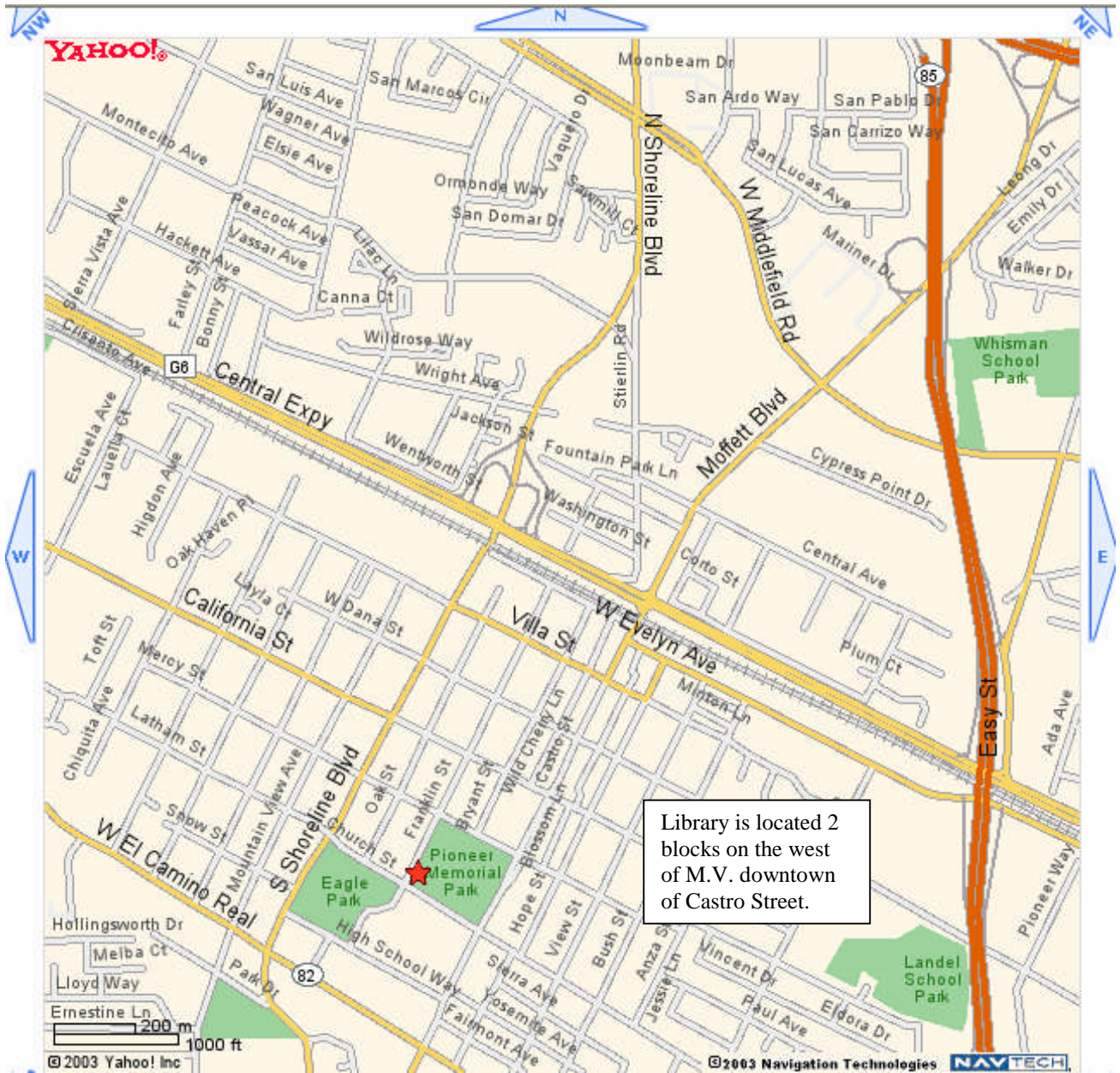
Speaker Biography

Mr. Ma has 10-year experiences in RF industry. In TZero Technologies, he designed for an MB-OFDM UWB (Ultra-Wide-Band) radio chip on the 0.18 μ m CMOS process. And now he is designing UWB SOC single chip on the 0.13 μ m process. Before TZero, Mr. Ma was an RF manager of Ali USA, and helped form a cross-Pacific multi-site RF IC design team. Prior to that, he worked for SIGNIA in US, and TSMC and CCL/ITRI in Taiwan.



His experiences cover the 802.11 families, GSM, Bluetooth and UWB. He has been granted 12 US patents, with several others pending. He received B.S. (Physics) and M.S. (E.E.) degrees from Nation Tsing Hua University.

(See below for the map)



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