



## NATEA SIG Wireless Seminar

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Date/Time: Tuesday, May 17, 2005 / 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:** **Wi-Fi MIMO: A New Multi-Dimensional Approach That Multiplies Capacity**

**Speaker:** **Mr. Dave Borison, Director of Product Management, Airgo Networks**

### **Abstract**

Delivering Significant Throughput-at-Range Improvements in Real-World Wireless LAN Communications.

Multiple-input, multiple-output (MIMO) is a compelling new approach that addresses the wireless communication challenges of signal fading, increasing interference and limited spectrum. MIMO multiplies data throughput, and provides for a simultaneous increase in range and reliability all without consuming extra radio frequency.

With the advent of MIMO technology, a wireless LAN can accommodate latency-sensitive, bandwidth intensive multimedia applications such as HDTV streaming, provide the throughput-at-range for reliable coverage throughout a business or residence, and fully take advantage of increasing high-speed Internet connections. Users no longer have to be frustrated by slow connection speeds, spotty coverage or unreliable links.

MIMO has been adopted as the foundation for defining the new IEEE 802.11n standard for next generation Wi-Fi. In the near future, MIMO will be found in a wide array of Wi-Fi enabled devices from entertainment systems and multimedia servers in the home, to handheld computers and VoIP phones. The spectral efficiency and significant performance benefits of MIMO can be applied to, and are ideal for, wide area and cellular wireless markets and applications as well. Today, MIMO systems are a powerful and fully interoperable extension to the existing 802.11a/b/g standards-offering users the best wireless performance on the market and complete functionality with existing Wi-Fi systems.

### **Speaker Biography**

Dave Borison is Director of Product Management for Airgo Networks, the pioneer and worldwide leader in Multiple Input Multiple Output (MIMO) wireless technology. His responsibilities include developing the company's product strategy, and driving new business in the Retail, PC OEM, Enterprise, and Consumer Electronics market segments. Before joining Airgo, Dave was Product Line Manager at Atheros Communications where his responsibilities included chipsets, reference designs and software solutions for wireless applications in a variety of market segments. Prior to Atheros, he was Product Line Manager for 3Com Corporation's Server Connectivity Division where he was responsible for Fast Ethernet, Gigabit Ethernet, and InfiniBand products. Dave also spent



several years with EMC Corporation in Manufacturing Engineering and Production Management positions, as well as a number of years with Andersen Consulting providing information systems consulting services to clients in the manufacturing and finance industries. He holds a BS in Mechanical Engineering from the Massachusetts Institute of Technology and an MBA from MIT's Sloan School of Management.

**Subject 2: Overview of Hybrid AGPS\* and Wireless Positioning for Location-Based Services (\*AGPS = Advanced GPS)**

**Speaker: Mr. Len Sheynblat, Director of Engineering, QUALCOMM**

### **Abstract**

During 2001/2002, several major CDMA-based wireless network carriers deployed Location Based Services (LBS) in Japan, Korea and the USA. The carriers chose Qualcomm's wireless-assisted gpsOne™ end-to-end system solution for these deployments. The applications range from gaming and personal navigation services to commercial security and Enhanced 911 (E9-1-1). It is anticipated that once major North American carriers deploy LBS the number of future applications will expand to include a wide range of value added services (VAS). This presentation will describe the wireless network architectures, messaging protocols, and positioning measurements used to support these applications.

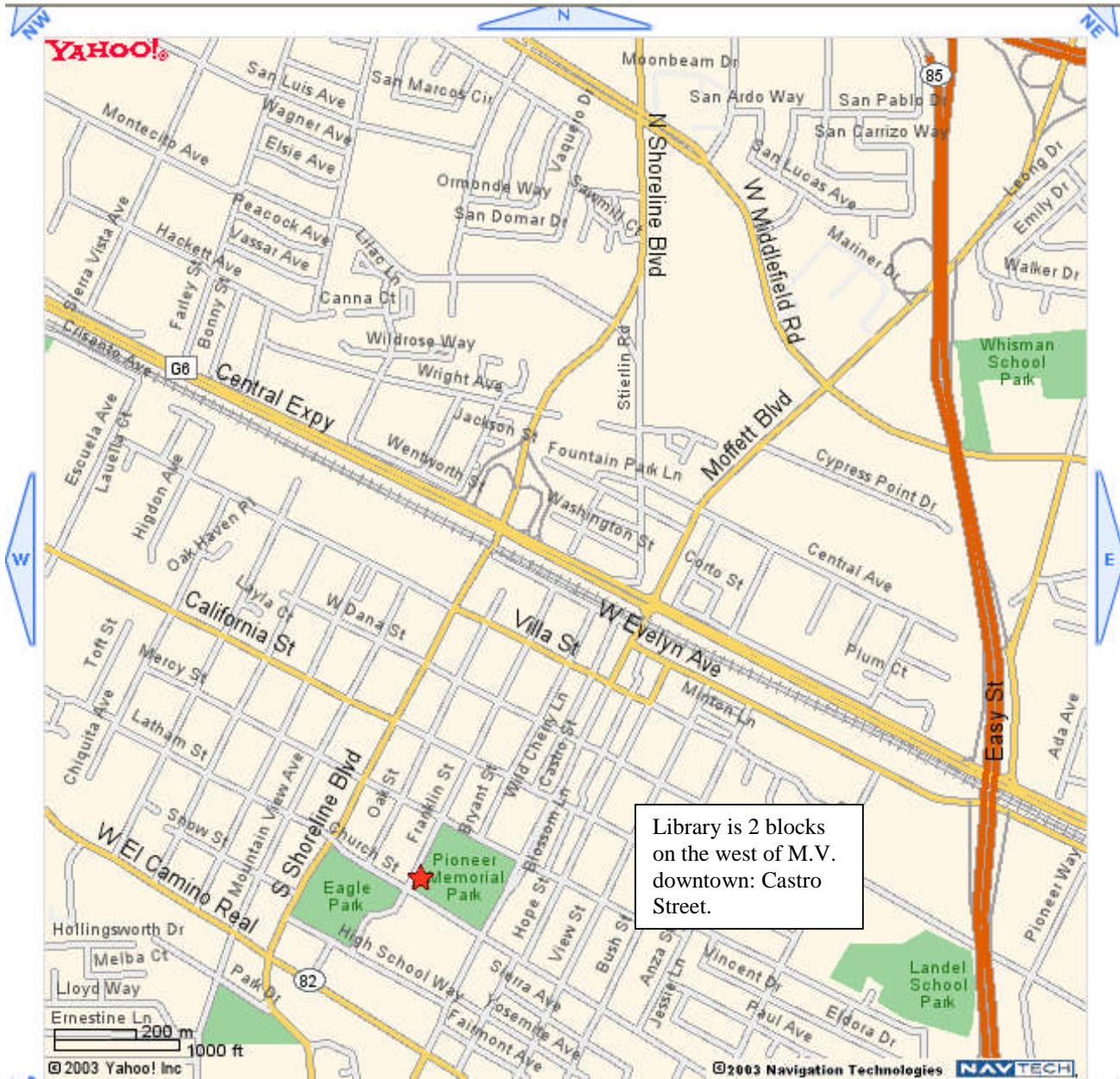
Processing GPS, terrestrial and other measurements concurrently presents several challenges. These complexities and the characteristics of the various measurement types will be discussed. In particular, the presentation will focus upon improvements upon LBS service availability due to the use of wireless assisted GPS and hybrid GPS/cellular ranging systems.

### **Speaker Biography**

Mr. Sheynblat is currently a Director of Engineering at QUALCOMM. He received his B.S. in Computer Engineering and M.S. in Systems Engineering from Boston University in 1985 and 1987. Starting with his research in the graduate school, Mr. Sheynblat has been involved in the development of various radio-location systems. He has authored and co-authored 32 patents and published numerous papers related to positioning technologies and their applicability to the Location Based Services (LBS). In 1996 Mr. Sheynblat was honored as an Inventor of the Year by the Peninsula Intellectual Property Law Association. Mr. Sheynblat was one of the key contributors to the standardization of Location Based Services in both 3GPP2 and 3GPP in support of E9-1-1 and Value-Added Services.



**(See below for the map)**



Library is 2 blocks  
on the west of M.V.  
downtown: Castro  
Street.

**Library Address: 585 Franklin St., Mountain View, CA 94041**