NATEA SIG Wireless Seminar

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Date/Time: Tuesday, Sept. 21, 2004 / 6:00 - 8:30 PM (6-6:30 regis. & networking)
Place: Mountain View City Library (free basement parking, see the map below)
                    585 Franklin St., Mountain View, CA 94041

Subject 1:   **UWB Technology for Location-Aware Networking**

Speaker: **Mr. Vincent Coli, VP of Marketing, Æther Wire & Location, Inc.**

Abstract

There are many commercial and military applications that require knowledge of precise location. Applications vary widely, and include finding children, lost pets, and luggage, tracking search-and-rescue personnel or fire fighters, locating inventory in large warehouses or cargo containers, rescuing military personnel in hostile territory, etc.

Ultra-wideband technology can be used to make transceivers which provide precise position location and low data rate communication. These transceivers determine location by sharing range information within a network of units distributed in the environment. The range between pairs of transceivers is determined by cooperatively exchanging ultra-wideband signals consisting of coded sequences of impulses. As the transceivers are activated, each acquires as many contacts as possible. As local groups of nodes form into clusters, nodes in one cluster link with one or more nodes in other clusters, forming bridges between the clusters. Range information is constantly shared so that all transceivers are aware of all other transceivers in the network. Using precise timing techniques, the transceivers are able to establish these ranges to an accuracy of about a centimeter.

The advantages of CMOS Ultra-Wideband transceivers, described in this talk, are:
- Accurate position
- Low cost, low power units, potential for single-chip CMOS system
- Minimal interference with other communications systems due to UWB technology and low energy.
- With their wideband spread spectrum nature, the units are more tolerant to interference and multipath, and offer inherent privacy.
- UWB penetrates most substances, and can operate effectively in RF-hostile environments.
- The network approach allows units to be great distances apart without requiring the power to directly reach that distance.

Speaker Biography

VINCENT COLI has 20 years of experience in the IC and EDA tool (Electronic Design Automation) industry doing applications engineering and marketing for user-customizable ICs and related design and prototyping software tools. Mr. Coli has been associated with Æther Wire since 1993. Prior to Æther Wire, he has held management positions at Advanced Micro Devices, VLSI Technology, and Aptix Corporation. He has published several technical articles and holds three patents. Mr. Coli received an MBA and M.S. in Electrical Engineering from Santa Clara University and a B.S. degree in Chemical Engineering from Rensselaer Polytechnic

Subject 2:   How Sun's RFID Test Centers help global customers such as Wal-Mart suppliers for RFID compliance & real-world deployments

Speaker: Mr. Vijay Sarathy, Group Marketing Manager, Sun Microsystems

Abstract

RFID and the Electronic Product Code (EPC) form the basis for the EPC Network. This Network will ultimately enable real-time asset visibility throughout the global supply-chain, driving business efficiencies by improving product safety and integrity across the supply chain. The potential benefits of such efficient RFID systems are numerous and exciting, yet confusion regarding the customer benefits and deployment requirements, standards, architecture, costs, etc. still exists in the marketplace today.

Sun Microsystems is helping take the confusion out of RFID deployments by working with its partners and customers to run pilots and proof of concepts in a test center environment (at the Sun RFID Test Center in Dallas.)

In order to best understand how to achieve specific desired business benefits using Sun's own technology and services, Sun also led a pilot of its own at its California manufacturing facilities. In this talk, Sun will share some of its learnings and best practices in the test centers, providing critical feedback for CIO/CTO's as they approach an RFID pilot or deployment scenario of their own.

The talk will also briefly introduce Sun's end-to-end RFID solutions strategy, product and service offerings.

Speaker Biography

Vijay Sarathy is the Group Marketing Manager for Sun's RFID Infrastructure Solutions. In this role he is helping define and drive Sun's overall RFID strategy as it pertains to solutions for EPC and non-EPC applications. Just prior to this current role, Vijay was a Product Manager in the Java Marketing organization where he helped drive overall J2EE adoption and was responsible for J2EE integration technologies.

Vijay is a Mechanical/Industrial Engineer by training with 14+ years of experience with software technology. He has an MS from Texas A&M University and an MBA from Santa Clara University, CA.

(See below for the map.)

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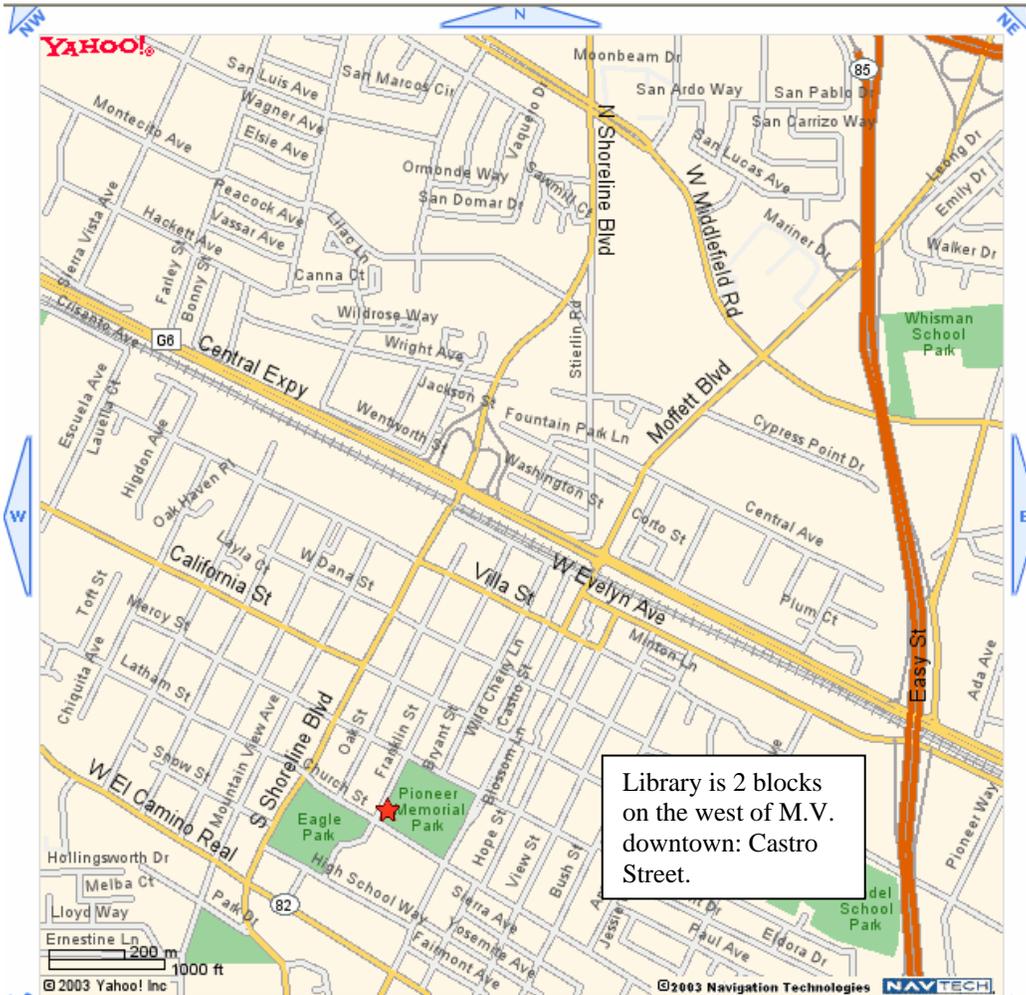
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