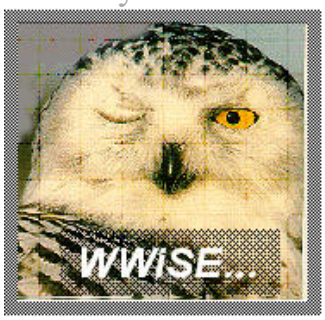
The Wayback Machine - https://web.archive.org/web/20050406073808/http://www.wwis…




# Press Release - February 24

Up

## "WWiSE" Consortium and Motorola Team to Offer Enhanced Proposal for IEEE 802.11n

### Industry Support Surges for WWiSE's Straightforward, Spectrum-Efficient, Rapid Time-to-Completion Approach for Next Generation Wi-Fi Standard

DALLAS (February 24, 2005) — The World Wide Spectrum Efficiency (WWiSE) consortium, a group of 12 companies which developed a complete proposal for the IEEE 802.11 Task Group N (TGn), today announced a merger of technical proposals with Motorola, Inc. Motorola had previously developed a separate proposal but will now work as part of the WWiSE consortium on an enhanced proposal that will be submitted to the IEEE 802.11 TGn for consideration. TGn is chartered with developing a next-generation Wi-Fi standard capable of sustaining data throughput in excess of 100Mbps. The other members of the WWiSE consortium are Airgo Networks, Broadcom Corporation, Buffalo, Conexant Systems, Inc., ETRI, Hughes Network Systems, Ralink Technology, Realtek, STMicroelectronics, Texas Instruments, TrellisWare Technologies and Winbond Electronics.



INTEL-1037
9,614,566

"Motorola believes the IEEE 802.11n standard is an important building block for offering connectivity to high bandwidth services in the home and enterprise environment," said Miguel Pellon, vice president technology-standards, Motorola, Inc. "We believe our experience in making applications such as mobile VoIP and mobile multimedia streaming operate in handheld devices and our expertise in power saving mechanisms strengthen the WWiSE proposal for 802.11n."

The updated WWiSE proposal will continue to build on the existing and globally adopted 20MHz channel format of the tens of millions of Wi-Fi devices already in use. This approach ensures support for the existing worldwide installed base, while improving the performance of Wi-Fi networks within the designated RF spectrum. Motorola's contributions to the revised WWiSE proposal will enhance the pre-existing specification by improving range, reach and robustness for the various operating modes.

**Highlights of the Enhanced WWiSE proposal**

Key features of the combined WWiSE proposal include:

1. Mandatory use of the approved, pre-existing, worldwide 20MHz Wi-Fi channel width, assuring immediate applicability and deployment in all regulatory jurisdictions.
2. Enhanced MIMO technology that enables a maximum data rate of 135 Mbps in the minimum mandatory 2x2 configuration and a single 20MHz channel to keep implementation costs low, while greatly improving upon simple antenna additions or channel bonding schemes.
3. Mandatory modes affording backwards

compatibility and interoperability with existing Wi-Fi devices in the 5 GHz and 2.4 GHz bands to ensure strong support of legacy deployments.
4. Enhancements that improve robustness and range for all modes of operations and data rates.
5. Modes of operation specifically intended for mobile, battery-powered applications and devices such as handsets and cell phones.
6. Advanced forward-error-correction coding option to facilitate maximum coverage and range, applicable in all MIMO configurations and channel bandwidths.
7. Rates up to 540 Mbps, accomplished with a 4x4 MIMO structure and optional 40MHz channel width (where permissible by regulatory bodies), provide a clear and extensible roadmap for future devices and applications.
8. Provisions for advanced features that improve data rate and range such as beam-forming and closed loop methods.

"Motorola's joining with WWiSE is a strong endorsement of the fundamental technical direction adopted by WWiSE to improve spectral efficiency and improve range and robustness. Their contributions enrich the proposal in a manner consistent with these objectives," said Jim Zyren, WWiSE spokesperson and director of marketing, wireless networking business unit, Conexant Systems, Inc. "The updated WWiSE proposal is now in a state that can be quickly adopted as the baseline draft standard for 802.11n."

**Next Steps**

The WWiSE proposal is one of two remaining proposals set to be considered by IEEE 802.11 Task Group N at its next meeting during the week of March 14 in Atlanta, GA. At this session, one

proposal could be selected as the baseline for the new standard. With momentum growing for the WWiSE proposal, more companies are soon expected to join the effort and help support its acceptance at upcoming meetings.

WWiSE has recently updated its Intellectual Property offer for essential patents embodied in the WWiSE proposal. It remains fully consistent with IEEE requirements known as RAND (Reasonable and Non-Discriminatory). WWiSE companies will offer their essential IP under RAND terms, the basic requirement for anyone wishing to participate in IEEE standards setting processes. Likewise, any company may join and support WWiSE so long as they adhere to the IEEE IP rights policies and procedures. Further information about WWiSE and the updated WWiSE proposal to IEEE 802.11 TGn may be found at http://www.wwise.org.

# # #

About Airgo Networks, Inc.
The founders of Airgo Networks have pioneered a wireless communication technique known as Multiple Input Multiple Output (MIMO) Orthogonal Frequency Division Multiplexing (OFDM). A breakthrough in wireless, MIMO OFDM has been adopted as the foundation for defining the new IEEE 802.11n standard for next generation Wi-Fi(r). Airgo is first-to-market with 802.11a/b/g-compliant MIMO enhanced chipset, software and reference design solutions. Airgo's True MIMO(tm) technology substantially improves performance and reliability, enabling the most bandwidth-intensive applications and eliminating the need for wires at home, at work, and in public places. Founded in January 2001, the company is headquartered in Palo Alto, California, USA. More information is available at www.airgonetworks.com.

About Broadcom
Broadcom Corporation is a global leader in wired and wireless broadband communications semiconductors. Our products enable the convergence of high-speed data, high definition video, voice and audio at home, in the office and on the go. Broadcom provides manufacturers of computing and networking equipment, digital entertainment and broadband access products, and mobile devices with the industry's broadest portfolio of state-of- the-art system-on-a-chip and software solutions. These solutions support our core mission: Connecting everything®. Broadcom is one of the world's largest fabless semiconductor companies, with annual revenue of more than $2 billion. The company is headquartered in Irvine, Calif., with offices and research facilities in North America, Asia and Europe. Broadcom may be contacted at 1-949-450-8700 or at www.broadcom.com.

About Buffalo Technology
With offices in Japan, USA, Germany, Sweden, UK, Ireland, Taiwan and Korea, Buffalo Technology is a global leader in the design, development and manufacture of wireless networking solutions. Providing wireless, broadband and LAN networking solutions for the SME, SOHO and home markets, Buffalo Technology is the second largest wireless networking hardware vendor in the world. Buffalo's strong international industry alliances with companies including Intel, Texas Instruments, Agere and Microsoft have allowed Buffalo to continue to lead the industry in the development of the latest technologies into practical, easy to use tools for business and the home. With Global manufacturing facilities accredited to ISO9002, Buffalo Technology is a world class provider of IT solutions. Buffalo Technology is a wholly owned subsidiary of Melco Inc. Group.

About Conexant
Conexant's innovative semiconductor solutions are

driving broadband communications, enterprise networks and digital home networks worldwide. The company has leveraged its expertise and leadership position in modem technologies to enable more Internet connections than all of its competitors combined, and continues to develop highly integrated silicon solutions for broadband data and media processing networks. Key products include client-side xDSL and cable modem solutions, home network processors, broadcast video encoders and decoders, digital set-top box components and systems solutions, and dial-up modems. Conexant's suite of networking components includes a leadership portfolio of IEEE 802.11a/b/g-compliant WLAN chipsets, software and reference designs, as well as solutions for applications based on HomePlugSM and HomePNA™. The company also offers a complete line of asymmetric and symmetric DSL central office solutions, which are used by service providers worldwide to deliver broadband data, voice, and video over copper telephone lines. Conexant is a fabless semiconductor company that recorded more than $900 million in revenues in fiscal year 2004. The company has approximately 2,400 employees worldwide, and is headquartered in Newport Beach, Calif. To learn more, please visit us at www.conexant.com.

About ETRI
Established in 1976, ETRI (Electronics and Telecommunications Research Institute) is a non-profit government-funded research organization that has been at the forefront of technological excellence for more than 25 years. Our research institute has successfully developed information technologies such as TDX-Exchange, High Density Semiconductor Microchips, Mini-Super Computer (TiCOM), and Digital Mobile Telecommunication System (CDMA). As a recognized leader in the information and telecommunication research institute in Korea, we will strive to be the best in the fields of information and telecommunications. In the 21st century, by

combining knowledge and information with computer and telecommunication, we will open the door to the future multimedia and telecommunication age. For more information, visit us at www.etri.re.kr.

About Hughes Network Systems
Hughes Network Systems, Inc. (HNS), a wholly owned subsidiary of The DIRECTV Group, Inc., is the world's leading provider of broadband satellite network solutions for businesses and consumers, with more than 800,000 systems ordered or shipped to customers in 85 countries. HNS pioneered the development of high-speed satellite Internet access services, which it markets globally under the DIRECWAY® brand. Headquartered outside Washington, D.C., in Germantown, Maryland, USA, HNS maintains sales and support offices worldwide. The DIRECTV Group, Inc. (NYSE:DTV) is 34 percent owned by Fox Entertainment Group, which is approximately 82 percent owned by News Corporation Ltd. For additional information, please visit www.hns.com.

About Motorola
Motorola is a Fortune 100 global communications leader that provides seamless mobility products and solutions across broadband, embedded systems and wireless networks. In your home, auto, workplace, and all spaces in between, seamless mobility means you can reach the people, things and information you need, anywhere, anytime. Seamless mobility harnesses the power of technology convergence and enables smarter, faster, cost-effective and flexible communication. Motorola had sales of US $31.3 billion in 2004. For more information: www.motorola.com.

About Ralink
Ralink Technology is a leading developer of wireless chipsets dedicated to the IEEE 802.11x standards, with emphasis on high performance, low cost,

strong support and fast delivery. Its product portfolio includes 11b, 11b/g and 11a/b/g complete chipset solutions, which propel a broad range of networking devices and notebooks globally. Currently, the company is offering adaptive antenna chipset that achieves MIMO performance in stability and range with legacy devices. In addition, the company is working with industry alliance to develop advanced 11n and 11n SoC solutions that will incorporate its MIMObilityTM technology to raise wireless speed to wireline levels. The headquarters is in Hsinchu, Taiwan, and its R&D is jointly performed in Hsinchu and Cupertino, California. For more information, visit www.ralinktech.com.tw or send email to info@ralinktech.com.

About Realtek
Realtek Semiconductor Corp., located in the Hsinchu Science-based Industrial Park — Taiwan's "Silicon Valley" — began with a small group of young, devoted engineers in 1987. In nearly two decades, these young founding engineers built Realtek into one of the world's largest and most successful IC design houses. Realtek's efforts to provide the ultimate in pioneering IC technology — along with its firm commitment to creating unique and innovative designs for a broad range of high-tech applications — have won the company a worldwide reputation and made possible a favorable and consistent growth rate in the years since its establishment. We attribute this achievement to Realtek's tradition of excellence. Please visit us at www.realtek.com.tw

About STMicroelectronics
STMicroelectronics is a global leader in developing and delivering semiconductor solutions across the spectrum of microelectronics applications. An unrivalled combination of silicon and system expertise, manufacturing strength, Intellectual Property (IP) portfolio and strategic partners positions the Company at the forefront of System-

on-Chip (SoC) technology and its products play a key role in enabling today's convergence markets. The Company's shares are traded on the New York Stock Exchange, on Euronext Paris and on the Milan Stock Exchange. In 2004, the Company's net revenues were $8.76 billion and net earnings were $601 million. Further information on ST can be found at www.st.com.

About Texas Instruments
For OEMs developing broadband communications solutions, TI's advanced signal processing-based silicon and software platforms deliver the optimal performance, lower power consumption, and system-level integration required to rapidly deploy differentiated next-generation products for cable modems, digital subscriber line (xDSL) modems, integrated access devices (IADs), Voice over Internet Protocol (VoIP) gateways, carrier infrastructure, and home and office wireless networking. See www.ti.com/broadband.

About TrellisWare Technologies
TrellisWare Technologies, Inc. is an innovative communications technology company that produces superior digital designs for leading-edge communication applications. Founded as a spin-off from ViaSat, Inc. (VSAT) in July 2000, with the vision of enabling robust broadband wireless and wireline communications systems, we deliver "physical layer" processing solutions for complex, dynamic environments that enhance voice and data communication systems and significantly increases system capacity. We are headquartered in the community of Rancho Bernardo in San Diego, California, USA. See www.trellisware.com.

About Winbond Electronics
Winbond Electronics Corporation, the largest IDM (Integrated Device Manufacturer) in Taiwan, was established in 1987 in the Hsinchu Science-Based Industrial Park. Winbond's product lines include

micro-controller-based consumer products, PC and peripheral ICs, network access products, memory IC products and so on. In Taiwan and Eastern Asia, Winbond is the leading supplier of Logic Products, such as Motherboard related I/O Controllers, Speech ICs, in the global market. Winbond currently has three wafer fabs with around 4,000 employees worldwide, and possesses the most advanced 0.11-micron DRAM process technology. Winbond's headquarter is located in the city of Hsinchu in Taiwan and has subsidiaries located in the United States, Hong Kong, Mainland China and Japan. Further information about Winbond is available at www.winbond.com.

Trademarks
All registered trademarks and other trademarks belong to their respective owners.

**Safe Harbor Statement**

Statements contained in this press release regarding adoption of the WWiSE proposal and the 802.11n standard, and other statements of management's beliefs, goals and expectations may be considered "forward-looking statements" as that term is defined in the Private Securities Litigation Reform Act of 1995, and are subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied by these statements. The following factors and the factors discussed in the most recent Forms 10-K of the WWiSE participants (as applicable) could cause actual results to differ materially from the statements contained in this press release: actual adoption of the WWiSE proposal. We disclaim any intention or obligation to update any forward-looking statements as a result of developments occurring after the date of this press release.

Copyright ©2005 WWiSE
For problems or questions regarding this website contact [info@wwise.org].
Last updated: 03/15/05.