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TDK Corporation Establishes US based Regulatory Test Services

TOKYO JAPAN and Austin, TX, September 29, 2004–TDK Test Services Division Established within U.S. R&D Subsidiary. Evaluation and Measurement Services of UWB Communications Devices Started.

TDK Corporation announced today that it has launched evaluation and measurement services for ultra wideband (UWB) communications devices. TDK Test Services (TTS) was established within TDK R&D Corporation, TDK's U.S. based R&D subsidiary, to provide evaluation, regulatory compliance measurement, and agency submissions for companies that are developing UWB communications devices. Customers can bring their UWB equipment to TTS in Austin, Texas for management of the complete process of regulatory agency submission.

TDK Test Services uses methods that comply with the Federal Communications Commission (FCC) Part 15 Rules, for which registration of UWB communications devices is required. TDK constructed an evaluation system that employs TDK's internally developed measurement antennas for broadband evaluation, radio wave absorbent materials for high performance anechoic chambers, and customized software for performing precise measurements of the very weak emissions of UWB devices in the broad 9 kHz to 40 GHz spectrum.

The primary measurement and evaluation categories of this service are:

- (1) UWB frequency bandwidth;
- (2) unintentional emissions from 9 KHz to 40 GHz;
- (3) measurement of peak emissions in a 50 MHz bandwidth; and
- (4) AC mains disturbance.

TDK is developing total solutions that include compliance testing to the FCC rules, consulting on various UWB communications evaluation services, and development of more efficient UWB communications systems.

TDK will be displaying information about this service at its booth at the CEATEC Japan 2004 exhibition, which is scheduled to open at the Nippon Convention Center, Makuhari Messe on October 5, 2004.

Background

TDK is developing UWB communications evaluation systems at TDK R&D Corporation, its U.S. based R&D subsidiary, and has already performed EMC evaluations of numerous devices that employ both Multiband OFDM and pulsed waveform modulation. TDK has developed its UWB measurement technologies and expertise through its work within the standardization activities in UWB related organizations including IEEE 802.15.TG3a, the WiMedia Alliance, and the Multiband OFDM Alliance.

About UWB

UWB is the next-generation communications technology that is expected to achieve data rates in excess of 100 Mbps over short distances by using radio waves over an extremely broad bandwidth. Because of its ability to transmit multiple streams of high-definition video, it is expected that UWB will be employed in a wide variety of electronics devices including digital audio-visual equipment, and PCs using wireless USB and wireless 1394. The FCC authorized low-level RF communications over the 3.1 GHz to 10.6 GHz bandwidth in February 2002, and the International Telecommunications Union, Japan, and European countries are now developing regulations for the use of UWB transmitters outside of the US.

About the FCC

The FCC issued the report and order establishing rules for commercial use of UWB in 2002. Title 47 of the U.S. Code of Federal Regulations deals with wireless radio devices. Part 15, Subpart F specifies the rules concerning UWB. For more information visit the FCC website at <http://www.fcc.gov>.

About IEEE 802.15

The 802.15 Wireless Personal Area Networks (WPAN) effort focuses on the development of consensus standards for Personal Area Networks or short distance wireless networks. These WPANs address wireless networking of portable and mobile computing devices such as PCs, Personal Digital Assistants (PDAs), peripherals, cell phones, pagers, and consumer electronics; allowing these devices to communicate and interoperate with one another. The goal is to publish standards, recommended practices, or guides that have broad market applicability and deal effectively with the issues of coexistence and interoperability with other wired and wireless networking solutions.

The IEEE 802.15 Working Group is part of the 802 Local and Metropolitan Area Network Standards Committee of the IEEE Computer Society. The IEEE-SA is an international membership organization serving today's industries with a complete portfolio of standards programs. The IEEE has more than 368,225 members in approximately 150 countries. Through its members, the IEEE is a leading authority on areas ranging from aerospace, computers and telecommunications to biomedical engineering, electric power and consumer electronics

The IEEE 802.15 High Rate Alternative PHY Task Group (TG3a) for Wireless Personal Area Networks (WPANs) is working to define a project to provide a higher speed PHY enhancement amendment to 802.15.3 for applications which involve imaging and multimedia. For more information visit the web site at <http://www.ieee.org>

About WiMedia Alliance

The WiMedia Alliance is a not-for-profit open industry association formed to promote wireless personal-area network (WPAN) connectivity and interoperability for multiple industry-based protocols. The WiMedia Alliance develops and adopts standards-based specifications for connecting wireless multimedia devices, including application, transport, and control profiles; test suites; and a certification program to accelerate wide-spread consumer adoption of "wire-free" imaging and multimedia solutions. For more information visit the Web site <http://www.wimedia.org>

About MultiBand OFDM Alliance

The Multiband OFDM Alliance (MBOA) was formed in June 2003 and now numbers over 170 member companies. These companies support a UWB specification that is based on an OFDM approach, originally introduced by Texas Instruments in March 2003, which will enable the broadest possible range of applications and satisfy the requirements of consumers and regulatory agencies worldwide. The MBOA has been working closely to leverage its collective expertise in the creation and publication of a Multiband OFDM specification for UWB PHY technology and will work in harmony with other UWB standards bodies such as IEEE, WiMedia, Wireless USB Promoter Group, 1394 TA, CEA, and others as appropriate. The MBOA continues to conduct exhaustive testing to ensure a solution with the maximum coexistence characteristics possible with future and incumbent wireless services. The MBOA will work with worldwide regulatory agencies to promote and seek specific approval for MBOA-based devices worldwide. The MBOA has also created a forum for collaboration with and by all UWB ecosystem players including antenna vendors, test and measurement vendors, upper layer protocol applications, and interfaces. Dozens of engineers are active in various MBOA technical subcommittees developing and improving the specification in areas ranging from system definition, MAC, MAC-PHY interface, scalability, regulatory, and ranging. For more information visit the web site at <http://www.multibandofdm.org/index.html>

About TDK Corporation

TDK Corporation (NYSE: TDK) is a leading global electronics company based in Japan. It was established in 1935, and today offers a broad range of advanced mobile connectivity solutions, antennas and test systems, ferrite materials, electronic components and ICs, magnetic heads for HDD, digital recording hardware and advanced digital recording media. Net sales in FY2004 were US \$6.2 billion. For more information about TDK, please visit <http://www.tdk.com> or <http://www.tdk.co.jp>.

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