Ecma demonstrates multi-gigabit radio

60 GHz radio implements Standard for Multi-Gigabit wireless applications

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The single-chip 60 GHz digital low-power radio in CMOS technology with embedded 60 GHz antenna was a key element in the demonstrations in ISO/IEC networking plenary in early November.

The 60 GHz radio transferred 200 Mega byte sized data and image files - literally in less than a second - whereas up to now other wireless technologies took minutes. The same 60 GHz radios demonstrated High Definition uncompressed video streaming (also known as 720p/1080i) at multi-Gigabit data rates.

The Georgia Electronic Design Center (GEDC) single-chip 60 GHz CMOS radio, consumes less than 100 milliwatts, combines an embedded antenna array, 60 GHz font-end and multi-gigabit baseband signal processing into a standard QFN package. It implements the Ecma Standard that provides a host of opportunities in many Consumer Electronics applications scenarios.

Ecma members, including GEDC, ETRI and Philips, demonstrated the prototypes showing multi-Gigabit per second file transfer and 1080i uncompressed HD video streaming in Montreux, where the international networking experts in the ISO and IEC’s Joint technical Committee 1, Subcommittee 06, enthusiastically responded to the demonstrations by posing many questions on this exiting technological and standards achievement.

Ecma International finalised their standard for 60 GHz short range unlicensed communications. The standard provides high rate wireless personal area network (including point-to-point) transport for bulk data transfer and multimedia streaming; consult this whitepaper for its main features.

The Ecma International members General Assembly is planning to approve the 60 GHz standard for publication and for subsequent submission for fast-track balloting by ISO and IEC members on 4 December 2008.

“A complete and scalable WPAN/WLAN standard solution is required to radically change today’s user experience, by eliminating the hassle of multiple and different wired interconnect” said Dr. Wooyong Lee, technical leader at ETRI for 60 GHz technologies.

“The combination of a very low power multi-gigabit 60 GHz CMOS wireless solution and the enormous unlicensed bandwidth makes the imminent application of 60 GHz technology in the consumer electronic marketplace possible. It enables a whole range of new consumer and business applications at the intersection of gaming and connectivity” said Dr. Joy Laskar, Director of the Georgia Electronic Design Center.
“Ecma International is pleased to help spur the innovation of the next generation low-cost, multi-giga-bit wireless technology that will spur the development of personal applications. Seeing that small and large industry members along-side with leading academia institutes from Asia, Europe and the US are actively developing this technology is a promising sign for global application,” said Onno Elzinga, Ecma International’s CTO.

About Ecma International

Since its inception in 1961, Ecma International (Ecma) has developed standards for Information and Communication Technology (ICT) and Consumer Electronics (CE). Ecma is a non-profit industry association of technology developers, vendors and users. Experts from industry and other organizations work together at Ecma to develop standards. Ecma submits its work for approval as ISO, IEC, ISO/IEC JTC 1 and ETSI standards and is a frequent practitioner of “fast-tracking” of specifications through the standardization process in international standards organizations. Ecma publications can be downloaded free of charge from the Ecma International website www.ecma-international.org.

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