



Fraunhofer Institut
Integrierte Schaltungen

Press Release

Erlangen, Germany /
Cleveland, Ohio, USA
September 4, 2007

Telos Showcases New IP Codec at IBC based upon Fraunhofer IIS Innovations

Visit us at IBC Amsterdam (Netherlands):
Fraunhofer booth 8.381
and Telos booth 8.239

Zephyr/IP provides MPEG audio, high-reliability connections for IP remotes

Telos introduces the newest member of its award-winning Zephyr family of broadcast codecs: Zephyr/IP.

An advanced codec designed just for IP links, Zephyr/IP incorporates audio codecs and IP transport technologies developed by the Fraunhofer Institute for Integrated Circuits IIS. Zephyr/IP uses an enhanced version of MPEG-4 low-delay AAC (AAC-LD) and High Efficiency AAC v2 coding for excellent audio quality, combined with sophisticated new technology that ensures successful operation over IP links such as the public Internet and mobile IP services.

“Broadcasters have been waiting for a bulletproof, reliable codec that will deliver truly superior audio quality over the Internet,” says Telos CEO Steve Church. “Zephyr/IP makes remotes over today’s IP networks a reality.”

To ensure that those remotes are smooth and error-free, Zephyr/IP incorporates ACT – Agile Connection Technology – jointly developed by Telos and Fraunhofer IIS. ACT offers sophisticated error detection and concealment routines, dynamic buffering and other techniques that work together to provide stable, reliable audio connections over IP. Full fidelity is maintained with up to 5% packet loss, and usable audio is achieved at up to 30% packet loss.

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* Fraunhofer USA Digital Media Technologies, a division of Fraunhofer USA, Inc., promotes and supports the products of Fraunhofer IIS in the U. S.



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"Zephyr/IP from Telos is the first product on the market that brings together both the advanced audio codecs and the error-robust IP transport technologies designed at Fraunhofer IIS," says Harald Popp, head of the Multimedia Realtime Systems department at the institute. "The codec even supports Fraunhofer's implementation of AAC-LD with low delay SBR (Spectral Band Replication). It guarantees high-quality low-delay audio at bitrates as low as 32kb/s."

Obtaining reliable, low-delay audio from the Internet is a greater challenge than transmitting over a closed LAN or a network with guaranteed Quality of Service, since Internet connections give users no control over packet latency or bandwidth fluctuations. Zephyr/IP's ACT adapts to these changing conditions to deliver excellent IP remotes.

IP remotes present other challenges too, such as connecting to codecs that are behind firewalls, have dynamically assigned IP addresses, or are subject to LAN Network Address Translation (NAT). To solve these problems, Telos Z/IP Server technology keeps track of users' online status and IP address information, making connections to other Zephyr/IP codecs as simple as selecting from an onscreen "buddy list."

Already the winner of a Radio World "Cool Stuff" award at this year's NAB, Zephyr/IP will be unveiled in Europe at IBC 2007 in the Telos / Omnia / Axia display, booth 8.239. For more information, contact Angi Roberson at Telos via email at angi@Telos-Systems.com, or by phone at +1-216-241-7225, and visit www.Telos-Systems.com.

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Visit Fraunhofer IIS at IBC 2007 booth 8.381 (hall 8) and obtain further information on Fraunhofer IIS technologies from www.iis.fraunhofer.de/amm.

Fraunhofer Institute for Integrated Circuits IIS

Founded in 1985 the Fraunhofer Institute for Integrated Circuits IIS in Erlangen, today with 480 staff members, ranks first among the Fraunhofer Institutes concerning headcount and revenues. With the development of the audio coding method MP3, Fraunhofer IIS has reached worldwide recognition.

It provides research services on contract basis and technology licensing.

The research topics are: Audio and video source coding, multimedia realtime systems, digital radio broadcasting and digital cinema systems, integrated circuits and sensor systems, design automation, wireless, wired and optical networks, localization and navigation, imaging systems and nanofocus X-ray technology, high-speed cameras, medical sensor solutions and communications technology in transport and logistics.

The budget of 58 million Euro is mainly financed by projects from industry, the service sector and public authorities. Less than 20 percent of the budget is subsidized by federal and state funds.

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Telos Systems

Telos Systems, headquartered in Cleveland, Ohio with offices in Europe and Canada, is a leading manufacturer of ISDN, coded audio and telephone interface products for talk-shows, teleconferencing, audio production, remote broadcasts, and intercom applications.

Omnia, a Telos company, is world-renowned for its digital audio signal processing expertise. Omnia audio processors for FM, AM, TV, HD Radio & DAB, Internet, and audio production are setting new standards for professional audio quality.



Photo: Telos Systems

New Telos Zephyr/IP incorporates audio codecs and IP transport technologies developed by Fraunhofer IIS.

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