ECI TELECOM, WITH THE TERA SANTA CONSORTIUM, PERFORMS SUCCESSFUL TRIAL OF 1TB/S OPTICAL TRANSMISSION OVER DFN'S NETWORK

-- Trial establishes the path to effectively support supercomputing, big data and cloud --

PETACH TIKVAH, ISRAEL –April 16, 2014 – ECI Telecom, a global provider of next-generation network solutions, Finisar (NASDAQ: FNSR), a world leader in flexible optical technology, MultiPhy, a leader in DSP-based CMOS communications semiconductors, and the Technion Israel Institute of Technology have successfully demonstrated 1Tb/s transceiver transmission with the Tera Santa Consortium. In the trial, the consortium transported non-regenerated 1Tb/s coherent super channel signal through the German Research Network - Deutsches Forschungsnetz e.V. (DFN-Verein) optical network.

ECI deployed its Apollo family of packet-optical transport solution across DFN's X-WiN's network in 2012, and has since upgraded it to support the delivery of 100G services, for faster connectivity and increased capacity.

HIGHLIGHTS:

- The trial, which took place at the Technische Universität Dresden, ran over DFN's live X-WiN network, and used the 1Tb/s transceiver developed by the Tera Santa Consortium, as part of its research on 1Tb/s adaptive coherent channel behavior. It demonstrates the advanced capabilities of the Tera Santa 1T transmission system and technologies in compensating for channel impairments and chromatic dispersion utilizing advanced QAM16 and OFDM modulations and algorithms.
- DFN's X-WiN network features ECI's Apollo packet-optical transport solution, with flexible grid technology, which provides operators with additional flexibility when assigning spectrum compared to traditional WDM technology. DFN's network is based on colorless, directionless and contentionless ROADM WDM layers and ODU cross-connect at Layer 1 – thus enabling a dynamic network with the ability to respond quickly to any new service demands.
- Finisar demonstrated the software-defined 1 Terabit optical transceiver, which hosted the different algorithms developed by the consortium, in an end-to-end transceiver platform utilizing Finisar Flexgrid™ - WSS used to add/drop the 200GHz super channel signal. The OFDM algorithms were developed by both MultiPhy (128 OFDM carriers) and the Technion (1024 OFDM carriers), using two different implementation approaches.

The Tera Santa Consortium was established in 2011 as an initiative of the Israeli Chief Scientist Office in the Ministry of Economy, through the Magnet Program which promotes cutting-edge technologies for the future. The Tera Santa Consortium brought together Israeli technology companies and universities to develop the world's first Orthogonal Frequency Division Multiplexing (OFDM)-based optical transceiver. The members of the consortium are ECI Telecom, Finisar Corporation, MultiPhy, Cello, Civcom, Bezeq International, the Technion Israel Institute of Technology, Ben-Gurion University, the Hebrew University in Jerusalem, Bar-Ilan University and Tel-Aviv University.

This trial is one more milestone for the Consortium, which built upon the successful transmission of non-regenerated 100G traffic, via the Jonah international submarine cable, owned by Bezeq International, Israel's leading telecommunications company and member of the Tera Santa Consortium. The data was transmitted by the Apollo OMLT over a total distance of 4,600 km from Tel Aviv to Bari, Italy and back.

The consortium continues to develop the 1T technology and optical transceiver, taking into consideration different scenarios, such as the Jonah International submarine cable.

TECHNICAL SPECIFICATIONS

DFN's production network consists of 88 channels, state-of-the-art ROADM network with colorless, directionless and contentionless functionality, deployed all over Germany with more than 11,000 km of fibers. DFN deployed ECI's Apollo platforms, running 10G and 100G channel. The 1Tbps service was added over the live network without any traffic disruption, proving DFN's robust design for 1Tbps 200GHz Super-Channel carriers based on QAM16 and OFDM modulations. The 1T transceiver card brings significant capacity growth to the optical cable, relieving traffic congestion and enabling new applications while demonstrating the capability of upgrading capacities over existing links.

EXECUTIVE PERSPECTIVES

"DFN strives to be at the forefront of networking to better provide our users with the highest level of connectivity and services over the X-WiN network. The 1T trial with ECI's Apollo platform showed us a nearby future full of possibilities for our members."
Dr. Stefan Piger, DFN Association

"Supercomputing, clouds and big data are increasingly high requirements on communication networks. As a data center with many years of research and development tasks in data-intensive computing, we are pleased to be involved in the Terabit testbed of the DFN-Verein and to support this first step towards terabit technology in Germany."
Prof. Dr. Wolfgang E. Nagel, Director of the Center for Information Services and High Performance Computing at the Technische Universität Dresden

"ECI and our technology partners Finisar, MultiPhy and the Technion, members of the Tera-Santa consortium, demonstrated the power of 1-terabit optical link coherent technology. With such high transmission rates, DFN can exponentially increase its network capacity and provide its users better and more cost effective services."
Shai Stein, CTO, ECI Telecom and Consortium Chairman

RESOURCES

Apollo 100G Coherent Optical Solutions (Solutions brochure)

Apollo Family Brochure (Brochure)

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ABOUT DEUTSCHES FORSCHUNGSNETZ E.V. (DFN-VEREIN)
DFN is the German National Research and Education Network providing communication and collaboration services to universities and research institutions in Germany. Founded in 1984 DFN became soon an essential part in the global community of research and education networks. Today, DFN's service portfolio is constantly being enhanced by innovative applications which are developed in funded projects and piloting ventures. DFN supports its users by conducting training events, workshops or conferences and promotes various competence centres which provide advice in operational and technical matters as well as in legal affairs.

DFN is a non-profit association under German law. For more information, visit www.dfn.de.

ABOUT ECI TELECOM
ECI Telecom delivers innovative communications platforms to carriers and service providers worldwide. ECI provides efficient platforms and solutions that enable customers to rapidly deploy cost-effective, revenue-generating services. Founded in 1961, Israel-based ECI has consistently delivered customer-focused networking solutions to the world's largest carriers. The Company is also a market leader in many emerging markets. ECI provides scalable broadband access, transport and data networking infrastructure that provides the foundation for the communications of tomorrow, including next-generation voice, IPTV, mobility and other business solutions. For more information, visit www.ecitele.com.

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