

SURF Successfully Trials ECI's Apollo TM1200 to Connect Amsterdam and the CERN Supercollider Campus in Geneva

Live trial over long-haul network achieves supreme spectral efficiency

PETACH TIKVA, Israel – October 23, 2019 – [ECI](#), a global provider of ELASTIC Network® solutions, and SURF, the Dutch National Research and Education Network, announced today a successful trial of the company's TM1200 1.2T dual channel, programmable blade. The companies established a super high speed, 1650km link connecting SURF's main facility in Amsterdam with CERN's communication center in Geneva. The trial demonstrated Apollo's ability to support live traffic of 300 Gbps per wavelength over predominantly old (G.655) fibers, traversing 22 intermediate nodes without any signal regeneration or RAMAN amplification. Link capacity was increased by roughly 150% by optimizing line-rate modulation.

CERN, the European Organization for Nuclear Research, is one of the world's most respected research institutes. Established in 1954, it operates the world's largest particle physics laboratory just North of Geneva. The CERN supercollider generates many terabits of data per day, which SURF collects and distributes to Dutch research and education facilities for analysis, investigation and learning. However, CERN is but one of the nearly 200 institutions and more than 1 million users SURF caters to, today.

SURF's optical backbone, SURFnet 8, was upgraded a couple of years ago to address the astonishing rate of growth in the demand for bandwidth. The search for a new vendor encompassed nine candidates, from which ECI was selected. Based on the Apollo family, SURF continues rebuilding its optical backbone for the future, achieving super-high performance, economic scalability, ease of operations, and a seamless migration from the previous infrastructure. The latter exemplifies an Open Line System (OLS) by carrying both ECI and alien lambdas.

"The TM1200 adds yet another layer of flexibility and programmability to our optical capabilities. With the TM1200 we can now optimize modulation schemes in line with our requirements and the distances transmitted, ensuring optimal use of our fiber capacity," said Rob Smets, Network Architect at SURF. "We were pleased to discover we could improve link capacity and efficiency by approximately 150% just by replacing the card, even on our 'old' (G.655) fibers. With ECI's help and our continuously updated network capabilities, we will continue to provide our millions of users with the levels of performance and service to which they've become accustomed."



In its efforts to continually reduce cost per bit without affecting performance, SURF is constantly trialing new developments, including the Apollo TM1200. The TM1200 delivers unmatched spectral efficiency and elasticity through software-controllable, continuous modulation. However, the TM1200 is only one building block in ECI's Apollo optical platforms. Carriers can also programmatically control additional aspects of their optical performance, including spectrum, client and line interfaces, ROADMs and more. This enhanced programmability ensures carriers are operating at maximum efficiencies, guaranteeing end-to-end service availability, and generating new revenue streams.

"We understand that today's operators are under pressure to squeeze the most out of their network infrastructures. Optical backbones will forever be required to support, and exceed, simple low cost per bit transport," said Christian Erbe, VP Sales EMEA at ECI. "However, there are increasing requirements for openness, programmability and interworking with the packet layer. ECI has a very strong relationship with national research and education networks (NREN) worldwide, and we are proud of our long-lasting partnership with SURF."

For more information about ECI's open, programmable capabilities, download the application note [here](#). Or visit: <https://www.ecitele.com/productcat/apollo/>.

ABOUT ECI

ECI is a global provider of ELASTIC network solutions to CSPs, critical industries, and data center operators. With the advent of 5G, IoT, and smart everything, traffic demands are increasing dramatically, and network operators must make smart choices as they evolve their infrastructure. ECI's Elastic Services Platform leverages our programmable packet and optical networking solutions, along with our service-driven software suite and virtualization capabilities, to provide a robust yet flexible solution for any application. ECI solutions are tailored for the needs of today, yet flexible enough to meet the challenges of tomorrow. For more information, visit us at www.ecitele.com.

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ABOUT SURF

SURF ensures that students, lecturers and researchers in education and research have access to the best possible ICT resources on favorable terms for the purpose of top-level research and talent development in national and international collaboration. SURF therefore develops, innovates and operates an advanced, federated e-infrastructure in conjunction with the institutions. SURF also organizes demand aggregation, collaboration and knowledge sharing in relation to ICT themes for the member institutions.

SURF has grouped its activities into three working companies: SURFmarket, SURFnet and SURFsara. For more information about SURF, visit: www.surf.nl/en/surfnet



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