




Elematics, Inc.

Instant multi-carrier, multi-vendor connectivity

Overview

Today's global telecommunication networks are comprised of islands of narrow functionality and limited intelligence, bounded by vendor, technology, and proprietary operational processes. These islands - or domains - each require proprietary management and provisioning tools, and can only be linked through painstaking, manual configuration. The result: limited connectivity, high operational expenses, forklift upgrades, reduced capital budgets, slow service turn-up, and service offerings restricted to low-margin static connections. In an era of high competition for bandwidth services and limited capital resources, global carriers can no longer afford to sustain these inefficiencies.

The challenge facing carriers is to cost-effectively establish network control and manage interoperability across domains while offering unparalleled performance and service enhancements. They have spent billions of dollars for both hardware and software solutions over the years without any success. This is due in large part to the inability of third party vendors (software and hardware) to create such a solution that meets the needs of carriers. Most software vendors have taken a niche approach to the OSS layer only solving various aspects that the carriers face (i.e., billing, inventory, alarms, etc.). Similarly, the hardware vendors have virtually created islands of interoperability because of their embedded software, which does not allow for cross vendor connectivity.

Elematics, Inc. was founded to assist global carriers eliminate these extreme inefficiencies associated with the mix of legacy and next generation hardware and software technologies developed by myriad vendors dispersed across multiple networks. The Elematics vision is of unified access to - and control over - resources and services across multiple network domains at the physical layer. Unlike traditional approaches that are restricted to a specific technology or vendor, the Elematics solution embraces both next generation and legacy equipment, deploying new functionality on multi-vendor

equipment without disrupting existing operations or requiring forklift upgrades.

To reduce operational complexity and costs, speed provisioning, and accelerate time to revenue - all while limiting CAPEX - carriers need a system to consolidate the management of hybrid networks and unify collective network resources. A viable solution must offer:

- Full utilization of existing assets through the reintegration of "stranded" legacy equipment
- Auto discovery and real-time inventory of network elements, topology, and services
- Fast and accurate physical layer provisioning across multiple network domains
- Simplified integration with existing OSS applications

Elematics has developed a state-of-the-art solution to the aforementioned problems, without forcing carriers to abandon existing investments in equipment and management applications. The resulting technology delivers dramatic benefits with a demonstrable return on investment.

Flagship Platform - Intelligent Network Control Plane™

Elematics' flagship software solution is the Intelligent Network Control Plane (INCP™). The Intelligent Network Control Plane delivers instant multi-carrier, multi-vendor connectivity that is compatible with legacy and next generation equipment, integrates with existing management applications, and provides comprehensive, real-time operations management of the network. For the first time, carriers can fully realize a return on their investment in network infrastructure. The Intelligent Network Control Plane will help carriers realize operational efficiencies, avoid or defer capital expenditures, and power new, higher-margin services across networks and vendors.



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When deployed in an existing network, the Intelligent Network Control Plane creates a common control plane that consolidates management, signaling, and provisioning across multiple domains, analyzes and optimizes collective network resources, and presents a common interface to management and OSS applications, as well as to individual network elements. By providing a common signaling and control mechanism across multiple vendors' Layer 1 next generation and legacy network equipment (for example, OEO and OO switches, DCS, OADM, DWDM, Transport, and MSPP), the Intelligent Network Control Plane powers the discovery and inventory of network elements and services, real-time provisioning, end-to-end connectivity, and unified communication between the optical transport network and northbound OSS applications.

Fully automated provisioning capabilities are supported via programmatic interfaces (TL1, CORBA, and XML) and signaled machine-to-machine interfaces (OIF UNI/NNI, GMPLS), thereby enabling provisioning and establishing true end-to-end connectivity without user intervention. To enable real-time, multi-carrier provisioning, the Elematics solution includes sophisticated inventory, policy management, and security mechanisms, which protect each carrier's confidential topology information while honoring the business policies established in pre-defined interconnect agreements.

A Layer 1 VPN is a dedicated optical sub-network owned and operated by one or more wholesale carriers, but under the control of a retail carrier. The wholesale carrier(s) can "partition" specific network resources to be under direct control of the retail carrier. Layer 1 VPNs require additional administrative and security policy configuration when provisioning, but facilitate the wholesale carrier's offering of customized, premium, managed services to their retail carrier customer base. The Intelligent Network Control Plane enables Layer 1 VPNs with configuration, management, and security mechanisms to enable partitioned network views and management, inter-carrier "off-net" provisioning and restoration capabilities, automated bi-lateral service agreement management, and security and authentication services.

In summary, the benefits to carriers from deploying the Intelligent Network Control Plane are profound. The Intelligent Network Control Plane's real-time inventory of multi-domain network resources and services can discover stranded assets, allowing carriers to defer or avoid

additional capital expenditures by fully utilizing existing equipment. Furthermore, real-time, automated provisioning eliminates inefficient, manual processes and powers new sources of revenue, such as short-term and pre-scheduled services. These and other benefits can be measured through a comprehensive ROI tool provided by Elematics that demonstrates financial payback, typically within six months.

History

Elematics, Inc. was founded in December 2000 in New York City. The company closed an \$11 million Series A round of funding in August of 2001 led by global private equity firm Warburg Pincus, LLC and is in the process of closing its Series B round of funding. QOptics also received approximately \$4 million in debt. The executive team has an established track record of developing companies from initial concept to become industry-leading, profitable organizations that provide the telecommunications industry with high-performance, successfully-deployed solutions. Elematics employs 50 people and has moved all operations to Beaverton, OR, where the R&D center has been located since 2001.

Executive Team

Clive Cook, Co-Founder and Chief Executive Officer
 Alex Mashinsky, Co-Founder and Chairman
 Daniel Wang, Vice President, Engineering
 Chris Lawrence, Vice President, Finance and Operations
 Dale Quick, Vice President, Sales and Business Development
 Christine Fulton, Vice President, Organization and Development
 Robert Lane, Vice President, Product Management and Marketing

Headquarters

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