

Tollgrade's expertise, objectivity, methodology and ROI-focus help reduce financial stress and create a strong position for tomorrow's growth.

Tollgrade customers have experienced up to a 20% reduction in unnecessary dispatches.

Company Overview

Tollgrade Communications, Inc. (NASDAQ:TLGD) is a leading provider of network assurance solutions for the global telecommunications industry. Tollgrade products enable communication service providers (CSPs) to efficiently manage their access networks in an age of increased competition, continually evolving technology, and ongoing pressure to reduce costs. Our customers include more than 60 of the world's telecommunications operators, which equates to over 250 million subscriber lines being tested by Tollgrade solutions.

Whether you are driving bulk subscriber pre-qualification, verifying service provisioning, or isolating multi-layered IP-based triple play troubles, Tollgrade's test solutions play a crucial role in profitably managing the installation and maintenance of broadband access networks globally.

PROFESSIONAL SERVICES

The Tollgrade professional services team specializes in identifying, preventing and fixing problems that add to the cost of customer services. Outsourcing service assurance provides budget flexibility. CSPs can purchase only the support products necessary to maintain critically important business systems or their entire access network. The Tollgrade professional services team will improve operations efficiency by creating an intelligent and predictive preventative maintenance program with the following service options:

- » Remote Support
 - » General administration
 - » Help desk
 - » Proactive network monitoring and improvement
- » General system maintenance
 - » On-Site support
 - » Central site equipment support
 - » Central office and remote test head repair



Software & Hardware Solutions

Tollgrade solutions can help you gain a competitive advantage in delivering advanced services.

End-to-end next-gen access network monitoring.

Tollgrade's innovative network assurance solutions enable customers to **competitively** deploy, manage and maintain voice, video and data broadband services; **improve** their **customer satisfaction** through quick, accurate response to network faults; and **cost-effectively introduce** new service offerings by pre-qualifying their customers.

Stratum™

Triple Play Service Assurance Platform

Tollgrade's latest innovation seamlessly collects data from the access network, the customer home network and existing test systems to provide a complete end-to-end diagnostic capability for voice, video and data services. Stratum integrates multiple data sources available from the network, intelligent customer premises equipment, and remote test probes; and inputs them to its expert analysis system for fault identification and dispatch decision making. A standard web browser GUI supports call center and back office test users; and an open web services interface for northbound OS integration to repair handling databases and Workforce Management Systems (WFMS). Stratum is capable of supporting automated on-demand test sequences and analysis for reactive test handling; as well as future prequalification, provisioning and proactive maintenance applications.

Stratum is a forward-looking software platform architecture that can migrate with networks as they transition from the legacy network to next generation FTTx. The platform supports multiple data inputs from the network and test resources (including 4TEL® and LoopCare™ and test probes), and performs combinational expert system analysis of the access network.



Pre-qualification and loop testing for triple play services.



LoopCare™ Test OSS

This software directs highly automated test operations for efficient and effective installation of services and maintenance of the network. It is highly scalable with a wealth of southbound and northbound interfaces. Testing can be requested through an easy-to-use web-based GUI in a call center, via Interactive Voice Response (IVR) from a field technician, or driven automatically from customer care systems using an open API.

DigiTest® product family

The DigiTest product family, includes the LoopCare software and DigiTest ICE™, DigiTest EDGE® and DigiTest HUB™ hardware. These products perform physical and logical measurements to verify the connection performance of lines and circuits and report those measurements to the LoopCare OSS. LoopCare can generate a dispatch to a work center so that a repairman can fix the problem. LoopCare and the DigiTest hardware are also used to pre-qualify, verify installation, and remotely isolate troubles for xDSL services, including testing the logical layers to verify modem synchronization 'in' to the DSLAM or 'out' to the customer.

4TEL® and Celerity® Test OSS

These software solutions provide automated copper loop testing for broadband and voice services. They provide DSL data and IP services qualification, provisioning and performance testing. These solutions are currently being used for qualification and service assurance for 70 million broadband lines and support the LDU 50™ Measurement Head product family.

LDU 50™ Measurement Head product family

The LDU is an advanced DSP-based test head designed to meet the requirements of central office and exchange installations and remote node (RT, MSAN, etc.) installations, providing both copper line test and wideband services test capability (optional plug-in). The LDU product family helps the network operator reduce the costs of maintaining and provisioning voice and broadband data services over a complex copper plant.

LDU 50+™ and LDU 50W™

The LDU 50+ provides best-in-class physical loop testing and pre-qualification for triple-play services served from traditional switched networks, broadband DSLAMs or IP-based Fiber-To-The Node (FTTN) networks. It has all of the features of the LDU 50 and also enables high-frequency measurement and extended wideband tests. The LDU 50W product takes this one step further by providing best-in-class physical loop and higher layer xDSL service testing for triple-play services. It supports full Tollgrade Test OSS physical loop and broadband DSL layer 1-7 test functions all in a single test head.



*Tried and True Loop
Testing for Voice Services*

MCU® Channel Units

Patented MCU technology provides a “digital” by-pass pair for centralized loop testing through Digital Loop Carrier systems. The MCU extends the reach of switch-based test access via a simulated “metallic channel” supported over universal or integrated DLC configurations. By extending the reach of switch-based test heads, MCU channel units maintain testability and dispatch efficiency for DLC-served subscribers.

About Tollgrade

With over 20 years of experience in network assurance, trust the experts to help you improve operational efficiency and customer satisfaction.

Tollgrade employs 200 people around the world. Our corporate headquarters are located in Cheswick, PA. Offices are also located in Piscataway, NJ; Bracknell, U.K.; Kontich, Belgium; and Wuppertal, Germany. For more information, contact Tollgrade at +1-412-820-1400 or via the web at www.tollgrade.com.

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