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T-Synergy Corporation

Overview

Managing the service quality of the new converged network is a significant challenge for the traditional telecommunication service providers. The major issues for the service providers are the need to maintain the same quality of services as the legacy network while keeping the same size of supporting staff or less, and the need to manage the transition from legacy to the new more efficient IP network. T-Synergy provides Operation Support Systems (OSS) for automating the service work centers of the telecommunications industry. The Universal Test and Control Platform (UTCP) is the infrastructure for automated monitoring, testing and control of any type of voice or data network, both traditional and next generation. UTCP accepts a variety of combinations of network elements, network test equipment, and network endpoints. It can easily handle the mixed-technology situation and therefore provides the solution for managing the converged network.

The modular structure of UTCP makes it easy to integrate with Customer Relationship Management (CRM) systems so that the CRM interface can become a single-point-of-contact for provisioning and trouble reporting. UTCP can be extended for provisioning and trouble ticketing systems, or it can interface to existing back-office systems. Network performance data from UTCP is available to other systems for enterprise resource planning.

Marketplace

Traditionally, work center infrastructure platforms and applications for common carriers and enterprises were developed and supported through in-house IT organizations. There were no off-the-shelf products addressing network maintenance problem identification and resolution. After the recent downturn in the telecommunication sector, in-house IT organizations were trimmed or outsourced altogether resulting in a severe inability to update and modernize communications networks to capitalize on new demands of enterprise clients. T-Synergy's products will enable the incumbent carriers to rapidly and economically meet these new demands through automated management of their traditional and newer IP networks, in one converged network solution.

There are two primary marketplace drivers for the new class of Operation Support System products:

- Businesses are migrating mission critical data from legacy TDM-based networks to today's IP based LAN/WAN networks. Minimizing network downtime through rapid trouble isolation and repair translates into millions of dollars in annual savings due to lost revenue or lost productivity. The ability of a single OSS to work with legacy networks, evolving networks, and future networks allows an orderly transition at a pace consistent with corporate needs.

- Companies in all businesses demand higher bandwidth and faster connectivity for e-commerce, videoconferencing, multimedia, and other applications. The need for testing and monitoring the local area networks (LANs) and wide area networks (WANs) is rapidly becoming critical.

The current OSS platforms used by the incumbent carrier need to be totally upgraded to handle the converged network and the growth in demand in the next few years. UTCP is the first off-the-shelf OSS that is vendor neutral for network nodes, endpoints, and test equipment. It is the first off-the-shelf multi-user OSS that controls mixed-vendor and multiple-unit test equipment.

The rapid proliferation of enterprise networks should further boost demand for test equipment and OSS. Recent analysis from Frost and Sullivan reveals that this industry generated revenues of $854 million in 2001, and is expected to offer significant opportunities. Growth in demand for LAN/WAN test equipment used for network installation and maintenance, research and development, and manufacturing is expected to push total revenues to $1.45 billion by 2008. The overall OSS market is in excess of $10 billion in 2003.

Competition

Most of the industry is characterized by customized, in-house developments that attempt to integrate disparate vendor equipment into a single, labor-intensive solution. There are no successful products on the market today that fully integrate and automate the maintenance and trouble resolution for large networks with traditional and IP elements. T-Synergy's UTCP is the first product that has the flexibility and capability to fully automate the management of various elements on a vendor neutral basis.

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- Most test equipment vendors do not have systems that allow multiple users to control multiple test units. The ability to integrate and control other vendors' testing components is highly unusual for competitive reasons.

- Most test equipment is specialized to provide very specific test data, it requires test engineers with in-depth knowledge and a wealth of experience in testing automation and telecommunications network testing to provide practical test automation and results interpretation. Network testing is not inherently user-friendly.

The UTCP platform is simple to use and typically requires the loading of a device driver to incorporate any new test gear developed in response to rapidly changing network technology. Analysis of test results provides plain English answers to network problems. The degree of knowledge and experience required by the support staff is reduced so that less skilled personnel can provide the same or better level of service that previously required network engineers.

Currently, the strongest and closest competitor for T-Synergy's products is Forgent. Forgent produces a comprehensive video network management system. However, the Forgent system does not offer network test diagnostics that span the scope of the network or provide as detailed information as UTCP. Forgent's products do not have the same capabilities as UTCP and would need substantial development to become a serious competitor. However, Forgent's considerable market share in the videoconferencing market is a significant advantage.

Polycom and Tandberg offer video network management systems but are not direct competitors. Their systems focus on end-point control and have very limited (or no) test capability. They are complimentary to the UTCP product line.

Companies such as Spirent, who have acquired a variety of test equipment manufacturing companies, are potential direct competitors. Today, Spirent does not offer a solution that integrates testing across its product lines. If Spirent perceives T-Synergy's approach as successful, then Spirent would be in a strong position to, and would have strong motivation to, develop similar products, use and market T-Synergy products, or enter into a strategic relationship with T-Synergy.

Any of T-Synergy's potential competitors could just as easily become marketing partners and work on a cooperative basis. UTCP is a flexible, vendor neutral platform.

Management Background

Robin Ying, Ph. D (co-founder)

Dr. Ying has over 18 years of experience in telecommunications with AT&T. He started with Bell Laboratories in the early 80's after obtaining a Ph.D. in Electrical Engineering and Computer Sciences from University of California, Berkeley. At AT&T, he managed several technology development groups providing technical support and developing software systems for AT&T service centers. He was AT&T's voting delegate on the National ISDN User Forum (NIUF), the Treasurer of the Vendor ISDN Association (VIA), and was on the Board of Directors of the Global ISDN Industry Forum (GIIF). Dr. Ying served four years as the Chief Technical Adviser of the United Nations for the China Telecommunication Modernization Development Program. Dr. Ying is responsible for overall direction and management of the company.

Steven Akers (co-founder)

Mr. Akers has 14 years of experience with AT&T Labs (formerly Bell Laboratories) as a Network Performance Analyst. He was responsible for Network Validation Testing required for the expansion of AT&T's Global ISDN Services. He led the systems engineering work for several of AT&T's ISDN Basic and Primary Rate Operation Support Systems, and has been active in a variety of ISDN industry forums and standards bodies. Mr. Akers is responsible for the technical direction of the company.

Joe-E Hu, Ph. D (co-founder)

Dr. Hu started at AT&T Bell Laboratories in 1995. He was a project leader for both internal and external AT&T projects, and earned distinguished awards for his leadership and contribution to those projects. He led the development team for the AT&T WorldPartners Trouble Tracking System (WPTTS) and the AT&T Electronic Business Networks project. These products run on a fully automated, hot-swap, fault-tolerant platform that supports 7 x 24 operation. They were deployed to 15 countries and 30 work centers around the world. WPTTS won an AT&T software excellence award in 1998. Dr Hu's team also won the Capability Maturity Model (CMM) Level-2 Certification in the same year. Dr. Hu is responsible for product development.