

Frost & Sullivan Award for Market Leadership



AWARD DESCRIPTION

The Frost & Sullivan Award for Market Leadership is given to the company that has exhibited market share leadership through the implementation of market strategies. The recipient should have displayed excellence in all areas of the market leadership process, including the identification of market challenges, drivers, and restraints, as well as strategy development and methods of addressing these market dynamics. Furthermore, the award recipient should have continually demonstrated solutions for monitoring market changes and for implementing superior market strategies. By utilizing these strategies for success, the company must have established itself as the market share leader in its respective industry.

RESEARCH METHODOLOGY

To choose the recipient of this award, the analysts track competitor revenue and market share within the industry. This is achieved through interviews with all market participants and extensive secondary research of proprietary data sources. Finally, the competitors are compared and ranked for relative position. Frost & Sullivan then presents the award to the company that has received the number one industry rank.

MEASUREMENT CRITERIA

In addition to the methodology described above, there are specific criteria used to ascertain final competitor ranking in this industry. The recipient has excelled by substantially increasing one or more of the following criteria:

- Market share
- Revenue growth rate
- Profitability
- Market and technology innovation

AWARD RECIPIENT: EMPIRIX, INC.

Empirix, Inc. has been conferred the Frost & Sullivan Award for Market Leadership in the VoIP Test Equipment Market in 2004. Empirix had a market share of 22 percent in the VoIP test equipment market in 2003. The company has retained its position as the market leader for the third year in a row, which is a commendable performance. Empirix has been awarded the market leadership award due to its ability to maintain the highest market share in the dynamic VoIP test equipment market. Empirix's



achievement is the result of a very focused product line addressing VoIP testing.

Empirix has a very strong focus on the R&D and manufacturing application segments of the VoIP testing market. It focuses its product solutions on addressing the needs of the NEMs (Network Equipment Manufacturers) and SP&Cs (Service Providers and Carriers), who form a share of almost 83.5 percent of the market revenue currently. Empirix provides a series of test solutions that address the VoIP test market space. Empirix maintains its strong position in the area of VoIP application performance and feature testing by offering two testing platforms, which are the:

Hammer NXT (TDM/IP load testing) - With the convergence of TDM and IP networks worldwide, it has become imperative for the NEMs and the SP&Cs to stress test these networks before deployment. The challenge for the test equipment vendors has been to deliver a cost-effective and a comprehensive testing platform for verifying converged networks. Empirix's Hammer NXT addresses that very challenge by providing an integrated and scalable test platform. The Hammer NXT provides the ability to test media gateways in end-to-end or isolated test scenarios, verify maximum call rates, verify media path confirmation, and measure voice quality under load or with real world network impairments.

Hammer FX (TDM/IP feature testing) - The Hammer FX is designed to test the functionality of VoIP applications and Next Generation Enhanced Services. NEMs and service providers need to make sure that the quality and reliability of the applications are maintained so that the end-users can justify their investment in next-generation applications. Empirix's Hammer FX precisely addresses the above challenge and provides a complete feature testing system for VoIP applications.

Available on both the Hammer NXT and the Hammer FX is Empirix's industry leading Hammer Voice Quality Test Suite (VQTS). The Hammer VQTS provides a highly scalable VQ test solution for both measuring and analyzing VQ scores from both TDM and IP endpoints. With the breadth of functionality on the Hammer NXT and FX for testing converged networks and next-generation applications, Empirix is consolidating its place as the market leader in the highly competitive VoIP test equipment market.

Empirix has also taken the lead in the area of VoIP call debug and analysis with the Hammer Call Analyzer. The Hammer



Call Analyzer is industry's first VoIP application-aware call analysis tool and is designed to boost productivity in debugging VoIP equipment and networks in both TDM or IP environments. Empirix recently released a new version of the Analyzer, which added support for G.723 and G.729 codecs and jitter buffer emulation to the already existent media analysis capabilities. The Hammer Call Analyzer product is more than traditional protocol analyzers in the sense that it enables the end-users visualize and debug signaling or media problems on a per call basis - issues that are unique to VoIP networks and not seen in traditional data-oriented analyzers. Empirix's Hammer Call Analyzer addresses the monitoring application segment and is well positioned to garner market share in the market, when the VoIP services are likely to gain wider acceptance in the market worldwide.

Another key component in the Empirix portfolio of VoIP test solutions is the Hammer XP, a Gigabit packet processing board that works in conjunction with the Hammer Call Analyzer to process, filter, and analyze thousands of streams of VoIP traffic.

For complete VoIP testing, Empirix also provides the Hammer PacketSphere, a network processor based platform that delivers three value added test applications: a wire-speed network emulator, a high-density media streaming engine called the RealStreamer, and a performance measurement tool for IP storage area networks. The network emulation process is necessary for the NEMs and SP&Cs for testing the components under real world network conditions (e.g. packet loss, packet corruption or latency) before they can be deployed for usage. The Realstreamer application is used to generate sufficient real VoIP traffic for stress testing the network and applications under test. The third application is the Hammer PacketSphere STP (Storage Test Platform) that can emulate and analyze the effect of real world network impairments on storage area networks and devices.

With a plethora of products addressing different testing needs, Empirix is one of the best-positioned participants in the market to increase its revenue and grab market share when the VoIP deployment increases worldwide. When analyzing Empirix's current product offering, it is evident that the range of products the company offers in the VoIP test equipment market is comprehensive and focused towards customer requirements in this space. A very high visibility in the market due to its presence in the TDM testing arena for a long period and good brand equity due its Hammer product line strengthens its position in the market place as a market leader. Empirix is a very formidable force in the R&D and manufacturing application segments, and it intends to forge a dominant position in the I&M (Installation and Maintenance) application segment as well. Empirix's Hammer Call

Analyzer is a product that is targeted towards the monitoring and the troubleshooting applications. With the I&M segment estimated to grow at a compounded annual growth rate of 29.4 percent from 2003 to 2010, Empirix has the opportunity to fortify its position in the VoIP test equipment space. The I&M segment will have the largest share among all the segments in the year 2010, and it is expected to be very important for test vendors to offer solutions in that space if they desire to be dominant participants of the VoIP test equipment market.

Since Frost & Sullivan awarded Empirix the Market Leadership Award in the world VoIP test equipment market, the company has made a significant move in the installation, maintenance and monitoring market introducing the Hammer XMS VoIP Service Monitoring & Remote Troubleshooting platform. Through this product, Empirix leverages its expertise in the VoIP space to meet the emerging monitoring and troubleshooting needs of service providers and carriers. The VoIP monitoring market is expected to undergo significant growth in the future. Empirix, with the Hammer XMS, is now in the position to capitalize on this market opportunity.

Empirix's Future

Empirix's strength lies in the fact that they have been a major force in the circuit switching side of the market for a considerable period. They have made a transition to the VoIP side of testing the networks and have managed this transition really well. As a company, Empirix is focusing increasing energies towards the installation, maintenance, and monitoring side of the market, which Frost & Sullivan believes is the right approach to grow in the market. The I&M segment will be the fastest growing application segment among all the three application segments during the forecast period. Empirix is therefore expected to retain its strong position in the market by focusing towards the I&M segment. Empirix also has constantly developed products that address end-user concerns and challenges and this aspect of the company has consolidated its position as a market leader. As an example, it offers the Hammer NXT and Hammer FX for the converged networks and next-generation applications. The company also is a leader in the voice quality testing arena, for which it offers the Hammer VQTS solution.

Focused products, good geographical reach, a high brand equity and consistent performance have ensured that Empirix keeps hold of the highest market share in the VoIP test equipment market. All of these aspects make Empirix a worthy recipient of the Frost & Sullivan Award for Market Leadership in the VoIP Test Equipment Market in 2004.

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