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Tolly Group Confirms HughesON Technology Transforms Best Efforts Broadband to Enterprise-Grade

"In every case, the response time of the critical application improved dramatically when optimized by the Hughes 'Active' technologies" -- Tolly Group

GERMANTOWN, Md., Aug. 19, 2013 /PRNewswire/ -- Extensive testing by the [Tolly Group](#) has proven that [HughesON™](#) Performance Optimization from Hughes Network Systems, LLC (HUGHES) delivers high capacity, end-to-end QoS, and superior application performance over ordinary broadband networks. HughesON Network Solutions deliver a next-generation, high-performance, secure, managed WAN solution ideally suited for distributed organizations.

(Logo: <http://photos.prnewswire.com/prnh/20110112/NE29456LOGO>)

The Tolly Group, a leading global provider of third-party validation services for network and IT products and services, performed validation testing on three Hughes Active technologies -- ActiveBonding™, ActiveQoS™, and ActiveCompression™. Tolly published its findings in a commissioned report entitled [HughesON Network Solutions with Hughes Active Technologies](#), which is free to download from Hughes, the global leader in broadband satellite solutions and services, and a leading provider of managed network and application services.

The report is significant for multi-branch organizations such as retail, restaurant, hospitality, financial services, and government agencies that are looking for a next-generation, wide area network delivering higher capacity, strong security, and better performance. The Tolly Group confirms that HughesON transforms best efforts broadband into a cost-effective, enterprise-grade network that can meet an organization's burgeoning network capacity and application performance demands at all their locations.

Key findings from the report include:

- **Scalable high capacity access** — ActiveBonding delivers scalable, high-capacity WANs of up to 12 Mbps by aggregating, through intelligent IP bonding, multiple, lower-cost broadband lines into a single, virtual "big pipe."
- **Higher VoIP/video quality** — ActiveQoS delivers true end-to-end QoS over broadband, improving VoIP and video performance, achieving a *Mean Opinion Score* (MOS) of 4.0 (toll-quality voice) and reducing video delay factor to just 19.3 milliseconds.
- **Better application performance** — ActiveQoS and ActiveCompression averaged a 5X improvement in application performance, and a 7X improvement across multiple web applications.

"HughesON Managed Network Solutions integrate sophisticated QoS, data compression, and link bonding technologies to provide broadband customers with enterprise-class application performance," said Kevin Tolly, founder of the Tolly Group. "Tolly found that Hughes ActiveQoS technology effectively prioritized transaction traffic even on an oversubscribed link. Coupled with Hughes ActiveCompression, this resulted in excellent application performance for latency-sensitive traffic. In addition, Tolly found that Hughes ActiveBonding broadband aggregation provided a cost-effective method of delivering high capacity to branch sites."

Test Details

For application performance, Tolly benchmarked the response time of eight different latency-sensitive traffic types including business transactions, VoIP, streaming video, and remote desktop access running on oversubscribed links with and without ActiveQoS and ActiveCompression. HughesON delivered 75 percent faster response times than the non-optimized network. "In every case, the response time of the critical application improved dramatically when optimized by the Hughes Active technologies," Tolly said.

For capacity, Tolly benchmarked ActiveBonding-enabled network configurations of up to four broadband circuits. It confirmed scalable capacity of 1.8 Mbps uplink and of 11 Mbps downlink.

"We have developed these new solutions so that multi-branch organizations such as retailers, restaurants, and government agencies can enjoy greater network and application performance at a very attractive price point—all delivered as part of a managed service," said Ricardo Belmar, senior director, Product Management at Hughes. "Whether deploying cloud services, guest WiFi, VoIP, video training, or mobile POS, HughesON transforms conventional broadband into a world-class enterprise

network capable of delivering excellent application performance as verified by the Tolly Group."

The HughesON Tolly Group report is also available on the [Tolly Group web site](#).

About The Tolly Group

The Tolly Group is the industry's leading provider of third-party testing and validation services for IT products, services and components. Tolly's expertise spans wireless, storage, virtualization/ thin clients, switching, security (including but not limited to: endpoint security, NAC, mobile security, backup and recovery and deduplication), networking, and cloud services. For more information, please visit www.tolly.com.

About Hughes Network Systems

Hughes Network Systems, LLC (Hughes) is the world's leading provider of satellite broadband for home and office, delivering innovative network technologies, managed services, and solutions for enterprises and governments globally. HughesNet® is the #1 high-speed satellite Internet service in the marketplace, with offerings to suit every budget. To date, Hughes has shipped more than 3.3 million systems to customers in over 100 countries, representing over 50 percent market share. Its products employ global standards approved by the TIA, ETSI and ITU organizations, including IPoS/DVB-S2, RSM-A, and GMR-1. Headquartered outside Washington, D.C., in Germantown, Maryland, USA, Hughes operates sales and support offices worldwide, and is a wholly owned subsidiary of EchoStar Corporation (NASDAQ: SATS), a premier global provider of satellite operations and digital TV solutions. For additional information about Hughes, please visit www.hughes.com.

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