Frost & Sullivan Identifies Lantos Technologies’ Pioneering ERLIF-Based 3-D Digital Ear Scanner as a Key Enabling Technology

Scanner is expected to become the default standard for audiology practices

MOUNTAIN VIEW, Calif. — May 5, 2011 — Based on its recent analysis of the 3-D ear scanning market, Frost & Sullivan recognizes Lantos Technologies with the 2011 North American Frost & Sullivan Award for Enabling Technology. Lantos brings to market a completely new way of capturing 3-D imaging for the hearing aid market with its first product—the emission re-absorption laser induced fluorescence (ERLIF)-based 3-D digital ear scanner. This technology addresses a key unmet need by optimizing the fit and comfort of custom hearing aids.

Around 28 million people suffer from hearing loss in the United States alone and this number is expected to double by 2030. Currently, the manufacturing process of hearing aids relies heavily on the manual process of taking ear canal molds using impression materials. These physical impressions are then digitized using desktop scanners. However, due to inaccuracies occurring because of movement during casting and the inherent dynamic nature of the inner ear, the mould may not closely fit the user's ear canal, which directly affects the device's performance.

Lantos’s simple, quick and accurate 3-D digital imaging technique will, for the first time, take direct real-time 3-D intra-aural scans. Unlike desktop scanners, which only digitize an existing mold, the Lantos scanner provides both direct digitization and accurate 3-D image information to hearing aid manufacturers. This allows for the creation of custom designed hearing aids with the best possible fit, thereby enhancing their performance and allowing the patients to wear them for extended hours.

"While customers often complain about ill-fitting hearing aids, high return rates that arise from poor impressions have been the complaints from the manufacturer’s side," said Frost & Sullivan Industry Analyst Sangeetha Prabakar. "Lantos Technologies’ method significantly eliminates the uncertainties associated with manual fit, which in turn improves the performance of hearing aids."

The Lantos Technology delivers a 3-D map of the ear canals in 60 seconds or less, providing the audiologist and hearing aid manufacturers with a completely new class of data on ear canals as well as time and cost savings. The technique takes into account the compliance of the tissue in the ear and how the ear canal distorts with jaw motion—in essence, providing a dynamic picture of the ear canal overlaid with the compliance data.

"We are honored to be presented with this distinguished award which provides further validation of our leadership and innovation within 3-D imaging technologies for the hearing aid market," said Shahid Azim, founder and CEO of Lantos Technologies. "Lantos represents the next major disruptive technology for the hearing aid market which stands to revolutionize fit, comfort and patient experience for hearing aids and subsequently open up the consumer market for custom fit earphones for iPods."

The Lantos scanner is also expected to drive new product innovation in the industry. In addition to the hearing aid market (estimated at $11 billion globally), industrial and military applications are possible for optimum hearing protection in extreme noise fields using deep-insert ear-molds that fill the ear canal slightly past the second bend. There is already a big re-emergence of custom fit deep-in-the-canal devices that leverage “invisibility” of such devices. Lantos’s 3-D scanner has the ability to scan as close as the tympanic membrane to enable the designing of smaller invisible devices.

Other markets that the Lantos 3-D ear scanner could impact include custom earphones for personal media players, such as iPods and Bluetooth devices for mobiles (estimated 100 m units
globally) and for the treatment of temporomandibular joint disease (TMJD) with custom stents. ERLIF-based 3-D imaging is also well suited for integration with endoscopic procedures and for cost-effective dental scanning.

“Though the product is in a pre-market stage currently, the initial market results are extremely positive and Lantos expects that its ERLIF-based 3-D scanner could be widely deployed based on demand, market dynamics, channels and a competitive price point,” said Prabakar. “The company has also connected well with all five hearing aid manufacturers who represent more than 90 percent of the market shares in hearing aids globally and the audiology community at large.”

The company is trying to keep a close eye on user experience as well as market and customer needs and will be exploring partnership opportunities in their primary markets later this year for commercialization. Lantos Technologies, with multiple patents around its core technology, is planning to file the device under FDA Class II 510K application.

Each year, Frost & Sullivan presents this award to a company that has developed a pioneering technology that not only enhances current products but also enables the development of newer products and applications. The award recognizes the high market acceptance potential of the recipient’s technology.

Frost & Sullivan’s Best Practices Awards recognize companies in a variety of regional and global markets for demonstrating outstanding achievement and superior performance in areas such as leadership, technological innovation, customer service and strategic product development. Industry analysts compare market participants and measure performance through in-depth interviews, analysis and extensive secondary research in order to identify best practices in the industry.

About Lantos Technologies, Cambridge, MA

Lantos Technologies, based out of Cambridge, Massachusetts, is a university spin out of Massachusetts Institute of Technology (MIT), cofounded by professor Doug Hart. Hart and his team’s research have resulted in a novel 3-D imaging technology based on ERLIF principle which enables quick and extremely accurate scans of small, complex surfaces. Professor Hart has a proven track record, having developed earlier scanning technology for dental impressions that was subsequently acquired by 3M for $95 million, and is presently a founder and member of the board of directors of Lantos Technologies. The company has long been searching for solutions to design the perfect fitting ear aids and the Lantos Technologies scanner is the game changing result of their pioneering work behind this pursuit. For commercializing its unique technology the company has been awarded with $1.6 million in venture capital funding. www.lantostechnologies.com

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best-practice models to drive the generation, evaluation, and implementation of powerful growth strategies. Frost & Sullivan leverages 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from more than 40 offices on six continents. To join our Growth Partnership, please visit http://www.awards.frost.com.