

Nemesysco's Voice Analysis Technology Helps Detect Mental Stress

A Study, presented at the 2007 World Conference of Stress, finds Nemesysco's LVA reliable for detecting mental stress

Netanya, Israel – September 10, 2007 - **Nemesysco** Ltd., a leading provider of voice analysis technologies for the defense and civilian markets, announced today that its unique Layered Voice Analysis (LVA) technology has been found to be a reliable and valid tool for detecting mental stress through speech, according to a study conducted by **Psycholosoft**, a research group belonging to Department of Psychiatry at the **University of Tsukuba** in Japan and **Alegria Corporation**, Nemesysco's distributor in Japan. The study, conducted on a group of 106 healthy participants in Japan, indicates that LVA helps detect if an individual is under stressful condition or not. The findings were presented at the 2007 World Conference of Stress in Budapest, Hungary.

Speech has been known to reflect one's emotions and state of mind regardless of what one is talking about. Nemesysco's advanced technology, used for emotion detection through voice analysis in various commercial and security industries across the world, is now proving to be a useful solution for medical purposes.

LVA provides extensive indications to a speaker's mental condition by sampling voice wave spectrums on millisecond time scales, and then analyzing the waves through acoustic analysis combined with unique voice analysis technologies, to calculate various parameters indicating levels of stress.

The study, aiming to investigate if LVA can detect people under stress was conducted on 48 males and 58 females. First, stress was assessed by using Spielberger State-Trait Anxiety Inventory (STAI) and blood pressure measurements. Then, subjects were randomly assigned to the stressful task group and the control group. Before the task began, all of the subjects were asked to answer 10 questions vocally, and they were all recorded. After answering the questions, the task group underwent a stressful quiz whereas the control group just read aloud words. Once the tasks were completed, STAI-S and blood pressure were measured again. As a result, the same fundamental parameters of LVA along with STAI-S and systolic blood pressure changed significantly in the stressful task group, concluding that LVA can detect whether a person is experiencing mental stress.

"To date, several technologies for detecting stress using voice analysis have been recognized, though the findings with regard to their validity remain controversial. The current study examined the reliability and validity of Nemesysco's Layered Voice Analysis technology and found that it can be useful for assessing stress from the human voice", said **Hirokazu Tachikawa**, Chief Researcher of Psycholosoft research group.

"The study conducted by the research group is of extreme importance to us, as it indicates that LVA technology can be used to reliably identify people suffering from stress. In today's work-driven world, the ability to detect stress and depression in a non-intrusive manner – through an ordinary, easygoing conversation - can literally help save lives", commented **Amir Liberman**, CEO and founder of Nemesysco.

About Nemesysco

Nemesysco Ltd. is a leading provider of voice analysis and emotion detection technologies, for defense and civilian markets. Nemesysco's LVA (Layered Voice Analysis) technology detects the emotional content of a conversation, in real-time or from recorded materials, enabling analysis of different types of stress, cognitive processes and various emotional reactions. Nemesysco's products are implemented in a wide variety of applications for law enforcement, homeland security, insurance and banks fraud prevention, employee screening, call center quality monitoring, healthcare and entertainment. Nemesysco is a privately held company, founded in 2000 and is headquartered in Netanya, Israel. For more information please visit www.nemesysco.com.

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About Alegria

Alegria Corporation is Nemesysco's exclusive representative in Japan and partner in Asia. Throughout the long and intimate partnership with Nemesysco, Alegria has established its own research center, having many medical authorities as its members, and now Alegria plays an active role in research and development of medical software solutions, based on LVA technology.

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