

How Voice Analysis Enhances the Pre-Employment Screening process

Hiring decisions have an immense effect on a company's smooth operation. The good ones result in finding the most compatible candidate for the job, trustworthy personnel and a decrease of employees' turnover. All these generate increased productivity, company strength and significant cost reduction.

Inaccurate information provided by job candidates can lead to wrong hiring decisions and cause numerous negative outcomes including loss of business, law suits and an unsafe working environment. Determining the accuracy of information provided by job candidates and having the ability to minimize risks involved when recruiting new staff members, is a constant challenge human resources professionals are faced with.

Insights into a candidate's ethical inclinations

LVA-i is an assessment tool based on automated interactive questionnaires for pre-employment screening and employees' periodical checks, providing an unprecedented level of perception of the integrity and risk potential of employment candidates and employees. LVA-i uses voice analysis in order to estimate a candidate's liability potential, by analyzing the emotional content of his or her voice when responding to specifically designed questions, divided into categories.

By detecting and analyzing emotions, LVA-i provides insights into a candidate/employee's ethical inclinations, identifies what portions their response they are uncertain about, what questions require more of their mental attention, and what topic areas appear to be sensitive issues. This information is further processed by the LVA-i engine to calculate a risk potential score for each topic area, highlighting any specific areas which may be of concern to an employer.

Measure candidates' potential for dishonesty, theft, fraud, bribery and drug use

LVA-i for pre-employment screening measures, based on emotion detection in a person's voice, an employment candidate's potential for dishonesty, theft, fraud, bribery, drug use or other unacceptable behavior and provides an integrity risk analysis. The Integrity Risk score, as shown by LVA-i, reflects the probable risk of the candidate, acting in a manner counter productive to the workplace.

The LVA-i test results include a clear and easy to understand final Integrity Risk score and report for each topic of a questionnaire, as well as additional indications and warning signs that can be used as supportive indicators for follow-ups.

LVA-i for pre-employment screening integrates voice analysis with carefully designed sets of investigative questions to produce its assessments. The questions are specifically designed to scan candidates' history, test the consistency of their opinions in the present and determine the level of their commitment to the future.

LVA-i for pre-employment screening is designed for use by HR personnel and/or security managers, and requires no specific technical or theoretical expertise for operation. The results and reports provided by LVA-i are normally valid for a period of up to one year.

A security level technology designed for truth verification and detection of deceit

LVA-i is based on Nemesysco's core technology LVA (Layered Voice Analysis), a security level technology designed for truth verification and detection of deceit. 129 vocal parameters are utilized in order to detect and measure minute, involuntary changes in the speech waveform and create the foundation for identifying the speaker's emotional profile.

LVA-i for pre-employment is a unique application of Nemesysco's LVA-i interactive multi-lingual automated integrity testing platform based on voice analysis technologies. Using emotion detection, truth assessment techniques and carefully crafted questionnaires, LVA-i enables you to evaluate a person's integrity risk.

LVA-i test results screen shot

Test report of Smith, Alan (01/02/1980) - 08/10/2007 16:21:51

General Info
Details
Summary Report

Applicant Details

Name: Smith, Alan (01/02/1980)

Test Type:Default (English)

Test Date: 08/10/2007 16:21:51

Tested for: TeleShos, Field Technician

ID Number: 900800700

Phone: 214 555 70800

Mobile:

E-mail: SlanS@temp.com

Gender: Male

Years of experience in former position: 4-7

Address:

Risk Analysis Results

Test ID: 0710-0000010

Confidentiality and secrecy	<div></div>
Honesty	<div></div>
Loyalty	<div></div>
Theft from the workplace	<div></div>
Criminal record and credibility history	<div></div>
Bribery and kickbacks	<div></div>
Fraud and deceit	<div></div>
Drug usage	<div></div>
Alcohol consumption	<div></div>
Gambling <High S.O.S>	<div></div>

Warning Log Report

- > High Risk in question: Credibility history - general
- > High Risk in question: Reaction to a co-worker taking bribe
- > High Risk in question: Personally receiving kickbacks
- > High Risk in question: Reason for gambling
- > High Risk in question: Overall gambling activity

Close

Nemesysco Ltd. is a 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 financial 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.

Contact information:

Yossi Pinkas, VP Sales & Marketing

yossi.p@nemesysco.com

+972-9-8853864

LVA-i STATISTICAL DATA BASE

This study was carried out during the years 2004-2005. The reason for doing the study was to provide a statistical anchor for building the LVA-i questionnaire. All the polygraph examinations were done by 5 of the leading polygraph examiners. These examiners are members of the Israeli Polygraph Association as well as being members of the American Polygraph Association.

Two hundred and sixty six subjects (N=266) were used in building the data base. Also the subjects were job candidates for several large high and low tech firms in Israel.

Population: Age range from 19 to 49. Subjects were Israelis from various socio-economic, ethnic backgrounds. 70% of the subjects were males whilst, 30% were female.

All 266 subjects were given the LVA-i test in its entirety. 195 subjects also underwent a polygraph examination (3 charts). 27 subjects were interviewed by a trained criminal investigator with over 20 years of experience in the field of interviewing and interrogation.

All of the 195 job applicants who scored Low Risk were hired by their respective employers. These same individuals underwent a polygraph examination (3 charts) 8 to 12 months after they had already started working.

The 27 High Risk job applicants were immediately interviewed. These individuals were not accepted.

There was also a third group of Medium Risk (N=44). The employers made their own decision whether or not to hire or not. In most instances, work requiring low security clearances, simple warehouse work, etc. the applicants were accepted. However, very few Medium Risk people were accepted for sensitive positions. No statistics available for the Medium Risk group. They were not interviewed nor were they given polygraph examinations. There was, however, an informal follow-up (no stats available).

The results were as follows:

- 195 subjects were designated as Low Risk by the LVA-i. 1.
- 27 subjects were designated as High Risk by the LVA-i. 2.
- 44 subjects were designated as Medium Risk by the LVA-i and no software recommendation was made. The decision to hire or not 3.

was left to the discretion of the employer himself. The Medium Risk category is somewhat of a gray area. The purpose was not to make extreme differentiations between Low and High Risk groups, therefore, the Medium Risk is skewed toward the subject.

The Low Risk group (N=195) underwent a polygraph exam 8 to 12 months after having been hired and the results were that 96% of the subjects were designated as NDI whilst only 1% was designated as DI.

The High Risk group (N=27) underwent a very structured interview immediately following the LVA-i test and 89% were found to be deceptive (DI) and made full admissions whilst 11% of the subjects were designated as INC (inconclusive) because they refused to cooperate and simply left the interview room. None of the High Risk group was hired.

No ethnic or socio-economic differences were found in any of the groups.

Post-test results indicated the following:

90% of all the subjects expressed the feeling that the “test” was fairer than other tests.

84% of the subjects felt that the test very appropriate and “right on the mark”.

The overall weighted reliability score was 92% accuracy. This predictive score is valid for one (1) year.

HIGH RISK (N=27) LVA-i RESULTS	LOW RISK (N=195) LVA-i RESULTS
Structured interview. 89% admitted lying and wrong doing (N=24)	Polygraph test 8 to 12 months after starting work. 96% were NDI (N=187)
11% refused to cooperate further and left the room (N=3)	Polygraph test 1% were DI (N=2), and 3% were INC (N=6)

WEIGHTED RELIABILITY SCORE OF THE LVA-i WAS 92% ACCURACY.

