

Voice Analytics for Department of State Vetting

Every type of organization and government needs to accurately and cost-effectively vet individuals to identify risk levels and advance trust. Despite the extensive vetting solutions and processes on which the U.S. Department of State (DoS) relies, the organization is still highly vulnerable to insider threats, fraud, and abuse.

Clearspeed Verbal™ voice analytics technology delivers a powerful vetting solution for fraud, security, and safety risk assessment. By providing unique risk alerts based on an individual's vocal responses, Clearspeed can quickly and effectively clear the low-risk majority, while identifying potential high-risk responses. By stratifying risk early, the DoS can focus resources on the most critical people often missed by the current vetting process, while also lowering costs.



The Problem

The DoS is currently operating from a vulnerable position when vetting personnel and participants for a multitude of programs across the agency. The DoS currently relies on existing risk management and vetting solutions and processes that are primarily based on historical data, criminal databases, self-disclosure, and past references. These solutions and processes have proven to be imprecise, time and labor intensive, and costly.

Programs exposed to this vulnerability range from vetting local embassy employees to funding offices working to combat drugs and criminal activity, provide humanitarian assistance, counter terrorism, and many other U.S. national security interests.

Following traumatic events, the DoS is often tasked with vetting individuals who speak rare language dialects and have unreliable or missing background information. These vetting procedures are often performed by DoS and interagency personnel who must rely on databases that track historical criminal and threat-related histories. This presents significant issues related to cost, human bias and limitations, and intelligence deficiencies.

Without an effective vetting solution, the DoS continues to face insider threats, fraud, and abuse. There is a clear need for an affordable, flexible and scalable technology solution to accurately screen for unique risk factors specified by the DoS and establish trust in multiple DoS arenas and processes.

Another significant area of concern is fraud and abuse related to Defense Base Act (DBA) insurance. DBA insurance must be included as a separate CLIN in all applicable solicitations and premiums. Reimbursement is paid directly to contractors in the event of employment-related illness, injury, or death. The cost of this program to the U.S. government is very high with an average premium between 12–15% of top-line revenue.

Currently, the DoS lacks a cost-effective, reliable screening program to ensure that contractor personnel deploying to countries where DBA insurance is required are healthy, provide accurate information, and are a low risk for threatening behaviors. DBA costs would certainly decrease if more effective investigative procedures were put into place. However, the financial burden and bureaucratic red tape needed to instigate such procedures presents significant difficulty.

The Solution

Clearspeed™ recognizes the challenges its government and commercial customers face in vetting large numbers of individuals, especially in high-stakes scenarios faced daily by the DoS.

Unlike determinative tools that are used to make binary, credibility decisions, Clearspeed Verbal provides a powerful vetting solution based on analysis of vocal responses to a short, automated phone questionnaire. Clearspeed Verbal is built on our Remote Risk Assessment (RRA®) software technology. RRA is an AI-enabled technology that uses validated voice analytics, proprietary technical processing, and large volumes of unique, real-world data – none of which are available elsewhere in the market today. Our system has advanced security and encryption, is unbiased, and is language, culture, and dialect agnostic.

Clearspeed Verbal analyzes responses to a custom questionnaire and a low-to-high risk rating is assigned to each response. Results are provided within 24 hours, enabling the DoS to save time and money triaging, flagging, and clearing the low risk majority to make faster and more informed front-end decisions. The DoS can focus resources on verifying high-risk responses where individual risk exists, and additional attention is warranted, to minimize the threat impact.

The Technology

An enormous quantity of information is available in the human voice, the outputs of which may reveal the speaker’s physical and emotional state, as well as any risk to specific issues. This information is embedded at such fine levels in the vocal signal that it’s mostly indiscernible by humans. However, there are technologies available that can objectively recognize and interpret such signals. Standing out as one of the paragons among these technologies is RRA. Changes due to the association of real-world jeopardy and consequence to questionnaire topics are measurable in characteristics of the voice. Anatomical and electrophysiological evidence reveal that particular mid-brain and brain stem areas also assist in coordinating control of the cranial nerves and muscles that change the vibratory (phonation) and resonating aspects of speech. The latter’s downstream effects are detectable by RRA.

RRA technology is not based on the micro signal-level measurements that have been traditionally used for voice stress analysis. Rather, RRA measures macro-level stylistic vocal changes elicited in the voice production process through voluntary and involuntary neurological pathways. Some of the macro-level changes are measurable within spectrographic representations of the voice signal, as well as prosodic and other quantifiable voice characteristics, which have been found to be language agnostic. The specific features evaluated by RRA and the methodology used to analyze these features are a Trade Secret.

In Practice

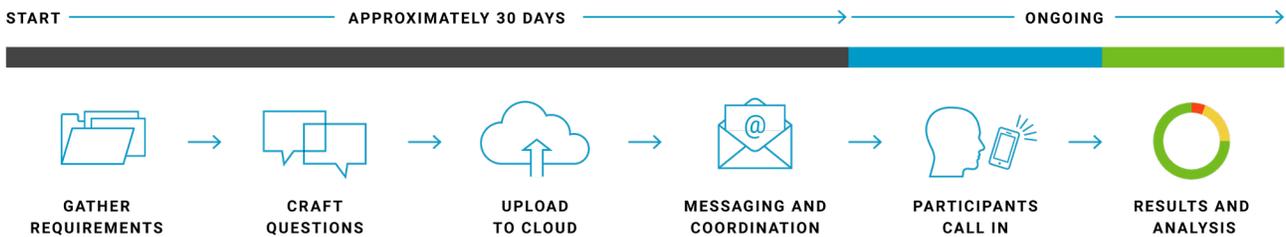
The Clearspeed solution accelerates the process of screening and vetting while also helping experts address potential blind spots regardless of the circumstances, language or operational environment.

APPLICATIONS FOR DOS	ADDITIONAL CAPABILITIES
Defense Base Act (DBA) suitability and investigations	Counterintelligence screening and vetting operations
Security clearance process	Insider threat detection
International pre-employment security screening	Third party audits and due diligence
Visa screening	Military screening operations and counter Green-on-Blue
Refugee and immigration screening	Intelligence and security operations
Fraud detection	Corruption screening
Workplace Safety	External threat identification

Clearspeed Verbal is a highly precise, efficient solution that can easily be deployed in weeks, in a controlled environment or in the field. Our solution is language, dialect, and culture agnostic – questions can be translated into any language. No additional Personally Identifiable Information (PII) such as race, ethnicity, age, etc. is required or collected, nor are baselines or biometrics required.

Prior to vetting personnel, Clearspeed works with customers to craft custom questions that address specific areas of risk according to the needs of the organization. Once questions are formulated, they are automated (text-to-voice) and stored in preparation for the questionnaire process. The automated questionnaire is delivered over a simple telephone call where participants answer 3–7 Yes/No questions in their native language.

Clearspeed analyzes vocal responses and delivers a risk assessment report within a 24-hour period based on each individual's risk profile and the questions asked. These results provide customers with new, valuable data points to identify the risk level for each response and for the overall interview. Based on this data, DoS personnel may proceed with confidence in the next step of their decision-making processes.



Importantly, Clearspeed solutions work alongside existing technology, processes, and data to provide new insights into an individual's undisclosed associations and intentions. These insights enable investigative teams to prioritize resources and focus on individuals that would not have otherwise been identified. Based on the questions and the risk assessment report, investigators have clear follow-on actions regarding how they engage further with high risk personnel.

Below are sample results from a standard risk report:

AFFINITY BANK | Powered By RRA

Reporting > Call Log

Results | Call Log

Select Account / Project: [Select Account] [Select Project] [Select Timezone] | Display Timezone: [Select Timezone] | Filter by Date Range: From 01/01/2020 To 01/07/2020 | Table Options: [Data Options]

Overall Risk Filter:

- High
- Potential
- Average
- Low
- Countermeasure
- Admission
- Not Complete

Search: [Search...IRN or Name]

IRN	NAME	POSITION	DATE	OVERALL	1	2	3	4	5	6	7
456983456		Application Developer	08/16/19	L	L	L	L	L	L	L	L
685309628		Cloud Architect	08/17/19	L	L	L	L	L	L	L	L
942069564		Technical Specialist	08/17/19	L	L	L	L	L	L	L	L
205879992		Application Developer	08/18/19	L	L	L	L	L	L	L	L
889835849		Software Engineer I	08/19/19	L	L	L	L	L	L	L	L
279686784		Application Developer	08/20/19	L	L	L	L	L	L	L	L
692213734		Senior Engineer	08/22/19	A	L	A	L	A	L	L	L
152839952		Software Engineer II	08/25/19	A	L	A	L	L	L	L	L
373409519		Java Level III	08/27/19	A	HC	L	L	L	L	L	L
718880347		Director of Engineering	08/29/19	P	P	L	L	L	L	L	L

Case Studies

AFGHANISTAN

Problem: Insider attacks have been a deadly and demoralizing reality for U.S. forces operating in Afghanistan. Afghans who are hostile to the U.S. presence in the country try to gain acceptance to military training and employment as an opportunity to attack U.S. personnel.

The Clearspeed solution supported the Special Operations Joint Task Force in Afghanistan by screening 715 Afghan soldiers in Dari and Pashto questionnaires alongside the existing vetting process. This crucial process sought to identify Green-on-Blue (hostile partner) threats prior to the Afghan soldiers working alongside U.S. forces.

Results: After the results were independently obtained and compared by government personnel, the Clearspeed solution identified 100 percent of the risks flagged by the legacy system, PLUS it identified an additional 11 counterintelligence-confirmed high-risk soldiers not detected by the existing systems, processes, and data.

SOMOLIA

Problem: Reed Inc. won the contract to provide security guards for one of the compounds in Garowe, Somalia, housing personnel from the United Nations Assistance Mission in Somalia (UNSOM). Reed searched for an insider vetting process that:

- Operated reliably and affordably in the field
- Provided insights not available through other vetting methods
- Lowered the risk of hiring or retaining personnel involved in insider threat

Reed selected the Clearspeed solution to screen the guard candidates. Clearspeed was used to screen an existing guard force of 110 local nationals in two days over several shifts using a mobile screening laptop with four telephones.

Results: Analysis of questionnaire responses identified 16 high risk individuals, who were given follow-on interviews. Where risk could not be mitigated, personnel were removed from the re-hiring process.

About Clearspeed™

Clearspeed™ voice analytics technology provides unique risk alerts based on an individual’s vocal responses. It can be quickly and effectively applied for fraud, security, or safety risk screening to clear the low-risk majority while identifying potential high-risk responses that are often missed. We are a Veteran-led team with offices in Napa and San Diego, CA (DUNS 080478606, CAGE 7TAR0).

Our capabilities have been validated in over 15,000 questionnaires, in 12 countries, and in 13 languages. Leading global corporations and government organizations use Clearspeed to build trust in their people and vetting processes in hiring, claims, applications, insider threats, compliance, and workplace safety. www.clearspeed.com

“This tech has been proven in identifying risk our current system misses - there’s nothing else like it.”

COMMANDING OFFICER
U.S. Security Assistance Office, Afghanistan

CLEARSPED CAN WORK IN TANDEM WITH:

- DNA Swabs
- Facial Recognition / Iris Scans
- Cell Phone Monitoring
- Fingerprints
- Background Checks
- Investigative Interviews

CLEARSPED FEATURES AND BENEFITS:

- Automated questions and analysis
- Uniform questions for all participants
- Culture and language agnostic
- Unbiased
- No literacy or reading skills required
- Anonymous - no PII required
- Implementation in weeks, not months
- Evaluation results within 24 hours
- Advanced security and encryption
- Customized results and delivery