



**(U//FOUO) NSA Georgia Opens New Audio-Forensics Lab**

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*(S//SI//REL) New lab aims to help analysts fully capitalize on intercepted voice communications from our targets.*

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(S//SI//REL) The start of the new year also saw the start of a powerful new capability at NSAG - a new audio-forensics lab funded through the Senior Language Technology Authority (SLTA). The lab -- the first of its kind anywhere within the Extended Cryptologic Enterprise -- initially will serve NSAG, with a vision toward expanding to accommodate external requests. It aims to help solve critical language processing problems confronting Language Analysts. As envisioned, the lab will provide dedicated, on-site, state-of-the-art solutions to address the problems that impair the processing of critical foreign language voice intercept.

(S//SI//REL) The intent is to provide a capability to language analysts as quickly as possible and support them in the evaluation of that capability. According to [REDACTED] the lab's audio engineer, the lab is in the "early walking" phase of a crawl-walk-run approach. As the audio forensics lab at NSAG succeeds, the SLTA hopes to build similar labs at the other major regional cryptologic centers.



*(S//SI//REL) [REDACTED] in the audio-forensics lab*

(TS//SI//REL [REDACTED] directly supports NSAG language analysts by enhancing hearability and intelligibility of audio intercepts. He does this by performing audio restoration or audio forensic analysis to help language analysts determine the content and context of high-priority GWOT\*-related audio intercepts. [REDACTED] Also works on fundamental problems associated with speech, speaker identification, age and gender determination, psychological stress in voice, speech intelligibility/comprehension, speech signal enhancement, and masking the effects of noise on speech. Specific goals of the lab are to:

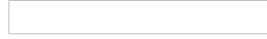
- Filter and enhance unintelligible/poor-quality voice intercept;
- Assist NSAG language analysts or tactical forces with voice/speaker identification to aid in recognition of high value individuals or detainees;
- Identify, isolate, and extract background speakers and audio sounds;
- Develop signal databases containing speaker, context, background, and other information with the ability to index, sort, and retrieve in real time;
- Collaborate in the analysis and processing of complex voice intercept.

(S//SI//REL) The audio lab provides an unparalleled opportunity to support prototype testing and spiral development. In addition, the lab acts as a test-bed for language processing capabilities developed elsewhere. The lab will partner with the SLTA, the Research Directorate, the Human Language Technology Program Management Office, and Speech Services -- the providers of operational speech technologies ( [BABBLEQUEST](#) ) to customers across the Enterprise -- to test capabilities developed from these organizations before placing them in an operational environment.

(U//FOUO) The audio lab has an open architecture so that it can readily accept new capabilities, tools, and technologies as they are developed. In addition, the lab will be net-centric so that

language analysts will be able to collaborate with the lab virtually. Further, if and when similar audio labs are set up elsewhere throughout the SIGINT Enterprise, they can be networked together to leverage and utilize existing capabilities.

(U//FOUO) Finally, in addition to being a fully functioning audio forensics lab, the room itself is designed to be a showcase for NSAG. Consequently, it reflects an impressive, high-tech, visually appealing environment that is pleasant to work in. [REDACTED] is very much looking forward to working with language experts throughout the Enterprise in order to increase the lab's capacity to improve the Agency's capabilities. As a plaque in the lab states, "Supporting the mission never sounded so good."



*(S//SI//REL) At work in the lab*

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(U) Notes:

\* (U) GWOT = Global War on Terrorism

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