



(U) Language Analysts: A Voice Enhancement Tool Is Here!

FROM: Adolf Cusmariu

Applied Research Mathematician, HLT Operational Technologies (S24211)

Run Date: 12/07/2006

(U//FOUO) NanoSES is an automated speech-enhancement tool recently acquired for testing and evaluation; ten licenses are available to selected language analysts for trial use in daily operation.

(S//SI//REL) Language analysts: Have you ever wished some SIGINT voice cuts could be made less noisy, so listening and transcription could become less stressful? Or perhaps extract a few more words out of a really corrupted cut that might mean the difference between reportable intelligence and ambiguous content? A tool that may help is here for evaluation. Thanks to the [InnoVisions Program](#), a very limited number of licenses of an automated speech-enhancement software have been purchased from Intelligent Devices in Owings Mills, MD. The software called NanoSES has been undergoing testing in S24211 and shows real promise.

(U//FOUO) The NanoSES GUI (see below) is intuitive and features a single-screen control panel, allowing easy loading of acoustical audiofiles in a wide variety of digital formats.



(U//FOUO) Once an audiofile has been loaded, algorithms immediately begin the enhancement process; the "NOISE REDUCTION" button at left turns "ON," as does the "UPDATE" button, and progress is displayed in the adjacent learning window as the striated ribbon attempts to reach 100, indicating optimal enhancement. The before-and-after frequency analysis windows above the main controls show rising-raster and spectral density detail in vertical split-screen mode as the audiofile is processed. At completion, the "SAVE" button allows saving in a digital format matching the input audio.

(S//SI//REL) NanoSES has been tested on dozens of voice intercepts from CT targets with encouraging results, according to the language analysts involved; mitigation of corruption by broadband noise sounded particularly impressive. **S24211 has ten licenses of NanoSES available for demonstration purposes; any language analyst who wishes to participate in an evaluation should contact this writer directly.** We do request an informal assessment from all users at the end of a trial period - say, six months - to help determine if this product would be useful within NSA's broader architecture.

POC: Adolf Cusmariu (██████████)

"(U//FOUO) SIDtoday articles may not be republished or reposted outside NSANet without the consent of S0121 ([DL sid comms](#))."