

Tape Experts Say It May Be Possible To Restore Gaps

By John Hanrahan
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Two former CIA employees skilled in computer and recording work say the technology exists to possibly restore portions of the 18 minutes of President Nixon's June 20, 1972, tape that Mr. Nixon's secretary, Rose Mary Woods, says she may have accidentally erased.

One of the former CIA men said that the humming noise on the erased portion could conceivably have been caused by a tensor lamp the White House says was near Miss Woods at the time of the erasure.

He also said the hum could have been caused by passing the tape through "some kind of strong magnetic field." Use of a magnetic field, both sources said, would almost certainly have been deliberate, done to ensure that the erased portion can never be restored.

The restoration process in ordinary erasures is made possible through the use of a digital computer.

George O'Toole, a former CIA computer specialist, and another former CIA employee in the field of signal processing who did not wish his name used, said in telephone interviews that the CIA and other intelligence units, particularly the National Security Agency (NSA), regularly engage in such "signal enhancement."

O'Toole said this involves both recordings that are of poor quality and must be made more audible, as well as recordings that have been erased or have been recorded over.

A taped conversation that is erased or recorded over on the tape machine, O'Toole and the other source said, continues to give off a latent signal that it is possible to restore in whole or in part.

"By careful filtering, processing and amplifying," with the assistance of computers, "it is possible to restore some or all of the original conversation" if it was not erased by being passed through a magnetic field, the unnamed source said. He cautioned that the restoration process is difficult and by no means a sure thing.

O'Toole said that the process of recapturing "lost" tapes involves eliminating any buzzing sounds from the

recording until you can hear only a hiss. This hiss, which may contain the vestiges of the original conversation, then can be fed into the computer, which enhances the weak signal and makes audible all or part of the original conversation, he said.

O'Toole and the other source said that in any conversation restored by computer, it might be possible only to identify some words, and that it probably would be difficult to identify the speaker in most instances because of the distortion that occurs to the voices as the tape goes through the restoration process.

"You usually get something that sounds worse than an early Caruso recording," the anonymous source said. O'Toole, however, noted that even if you can only identify some words, you might be able to establish the subject matter and the gist of a particular conversation.

In the June 20, 1972, conversation at issue, Mr. Nixon maintains he never discussed the Watergate affair at the time with his then top White House domestic aide, John D. Ehrlichman.

In his sworn testimony last summer to the Senate select Watergate committee, Ehrlichman said he was sure "there must have been some discussion" of the Watergate affair with Mr. Nixon in that conversation.

Both sources said it was unlikely the 18 minutes of the June 20, 1972, conversation are completely lost, unless a magnetic field was used.

The German-made Uher Universal 5000 tape recorder used by Miss Woods "does not have tremendously powerful erase heads," O'Toole and the other source said.

This means, they said, that when that machine is used to record over a portion of tape that already had a conversation on it, the original conversation can no longer be heard but it probably has not been totally wiped out.

O'Toole and the other source said that intelligence agencies, in erasing their own classified tape recordings, realize that the erase features of even the most sophisticated tape recorders are not usually sufficient to eliminate the latent signals.

For their own tapes, intelligence agencies require "an elaborate degaussing (erasure) procedure of passing the tapes through a magnetic field" because they realize that a computer could be used to restore the latent signal, which would be harmful if the tape fell into the wrong hands, they said.

Most tapes of the type Miss Woods used have two tracks, the anonymous source said, and if it is shown that both sides of the tape in question have been erased, that would almost definitely indicate that the tape went through a magnetic field, he said.

The source said he preferred not to have his name disclosed in the newspaper because he is now in private business and did not want "to get into trouble" or to appear to be "taking a swipe at the government or the agency, as a lot of former agents have done recently."

O'Toole cautioned that the more times an erased tape is played back on the machine, then the more the latent signal of the original conversation fades away. The anonymous source added, however, that only a few such playings would make little difference, and that it would take many playings to decrease the signal significantly.

O'Toole said that most private firms with expertise in tape recordings are unfamiliar with the process of restoring erased tapes. Most of the expertise in that area is held by NSA, CIA and a few private firms doing business with the intelligence community, he said. That a panel of six experts

The other source said chosen by Chief Judge John J. Sirica, of the U.S. District Court, who is handling the tapes, contains at least some members who are aware of the procedure for restoring "lost" tapes.