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# Soviets' elaborate bug network makes embassy 'listening device'

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U.S. investigators late last year discovered a sophisticated eavesdropping system in the new U.S. Embassy in Moscow that worked through an elaborate network of acoustic and electronic devices, according to administration officials.

The officials, who spoke on condition of anonymity, said the system includes listening devices in the frame of the new, eight-story chancery building that are difficult to detect with standard sensing equipment.

They said the system may be impossible to neutralize since some of the electronic bugs cannot be removed without permanently damaging the entire support structure.

"We've found a variety of unusual implants or configurations that raise suspicions that they are part of a very elaborate system, interrelated between columns and beams and connected from floor to floor and from room to room," one official said.

The official described the Soviet bugging system as a "very aggressive and capable technological attack."

Without fully understanding the Soviet system, officials said it may be impossible to secure the facility against covert eavesdropping because of the overlapping listening systems built into the structure.

"It's not like you can just go in and rip something out," the official said. "We don't understand the entire system, and many of the special devices are in difficult-to-reach areas, like major load bearings. If you tinker with them, you risk weakening the entire structure."

One element of the system, which officials believe was designed by the Soviet KGB intelligence service, uses "energized," sound-sensitive steel beams that can read embassy messages by picking up slight vibrations produced by code machines.

"The bottom line is that the building was designed as a massive intercept system, as opposed to a limited [microphone] implant system," the official said.

Officials said the first Soviet electronic listening devices were discovered by special imaging equipment in 1982.

But security searches could not be conducted until Soviet construction workers were ousted from the site in August 1982. U.S. security investigators were then given round-the-clock access to the building.



The entire structure of the new U.S. Embassy building in Moscow is so riddled with listening devices that security experts doubt it will ever be used. Reuters

Working full time, security experts obtained the first "hard evidence" late last year when several electronic bugs were removed from concrete columns and floor planks, the official said.

"People keep talking about bugs and buglike things that are implants," said the official. "What we're describing is a whole building — columns, I-beams and floor planks — that was assembled in such a way to attack electronic emanations, like typewriters, or conversations."

The officials said Soviet electronic spying capabilities were revealed in 1983 when listening devices were found inside IBM typewriters in the old U.S. Embassy. The listening devices were able to read typed messages from the noise produced as the characters struck the paper.

The official said some acoustically sensitive steel support beams were placed in strategic locations so that conversations of embassy employees standing above or below the beams could be picked up through a high-tech "vacuum cleaner effect."

Since 1985, security officials also found:

- Electronic listening devices wired inside some of the building's thousands of bricks.

- Some 500 metal frames used to hold bricks to the building's exterior, electronically connected in a network of listening devices.

- Coaxial cables, similar to those used in transmitting video images,

implanted inside prefabricated building support columns.

- Hidden wires running in and out of the building.

- Simple microphones laced throughout the building's thousands of floor planks.

Asked to explain the sound-sensitive bugging system, the official said the Soviet equipment operates much the same way as equipment used by law enforcement and intelligence agencies.

Listening equipment aimed at windows, for example, can pick up conversations from minute glass vibrations.

"Then they enhanced the sensitivity of say, a beam, so that it is not subject to other noises in the building, like people going up or down a set of stairs," said the official.

"It's clearly a very advanced design requiring an awful lot of talent and very special engineering designed into it. The KGB had to put an awful lot of effort and money into this and they had to have a lot of confidence that it would work, not just for a year, but for many, many years."

According to the officials, it will be at least three years before the extent of the Soviet eavesdropping system is known. Once that is accomplished, "it's still speculative if we'll be capable of neutralizing it," one official said.

The Senate Intelligence Committee has recommended that the new chancery building be torn down and rebuilt.