



SOUND MASKING

For Military Facilities

Efforts to prevent unauthorized access to classified information typically focus on securing documents and computers. However, steps also need to be taken to protect verbal communication.

Even if sensitive conversations occur in closed offices or meeting rooms, doors and walls typically aren't enough to ensure speech privacy. Often, the budget isn't available to construct rooms with high sound attenuation. In any case, even minor gaps or penetrations in their structure can provide clear paths for conversations to travel into adjoining spaces, where they can be overheard.

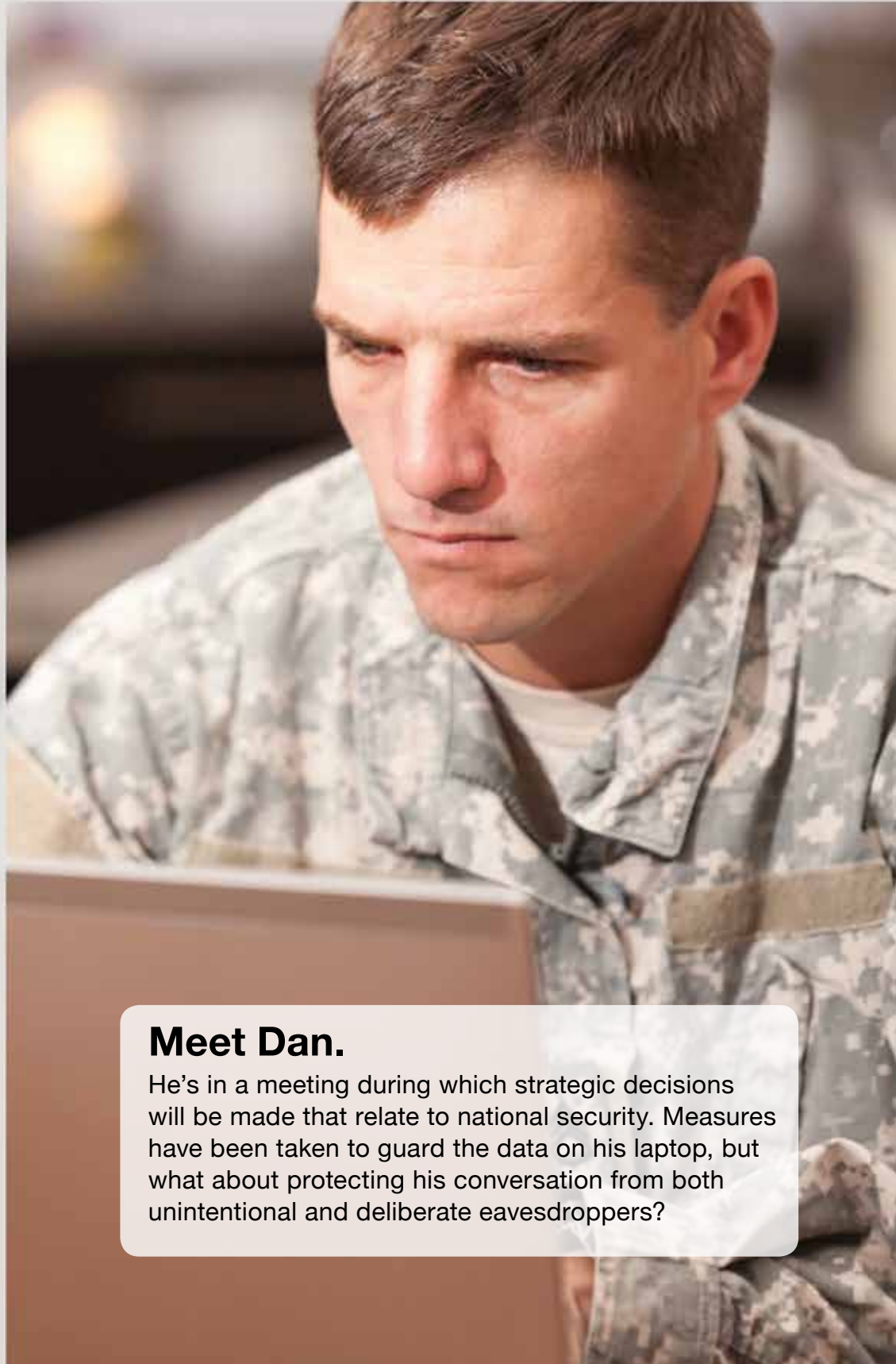
And no matter what their Sound Transmission Class (STC), these traditional methods won't protect against electronic speech surveillance.

Without the proper treatment, windows, doors, ducts, pipes, floors, ceilings and walls present various opportunities for eavesdropping. Speech causes vibrations on these structures, which can be picked up by probes or microphones and translated into intelligible speech. These types of listening devices are difficult to detect because they can be used at a considerable distance from the target facility.

These considerations are of particular concern in military facilities, where conversations occur that relate to national security.

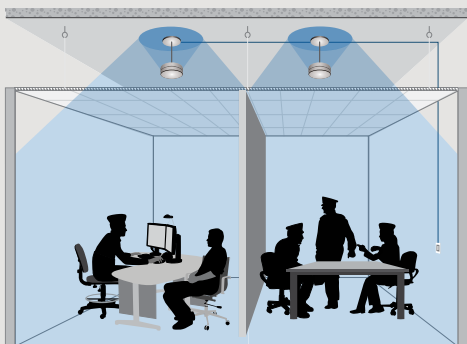
Such a facility may also house office and administrative areas that require not only speech privacy, but noise control. Numerous studies show that noise not only lowers employee productivity and increases error rates, but also reduces overall workplace satisfaction. Personnel using libraries, health clinics and counselling offices will also benefit from improved acoustic control.


LogiSon[®]
ACOUSTIC NETWORK[©]



Meet Dan.

He's in a meeting during which strategic decisions will be made that relate to national security. Measures have been taken to guard the data on his laptop, but what about protecting his conversation from both unintentional and deliberate eavesdroppers?



The LogiSon® Solution

Closed offices and meeting rooms are built with the intention of providing visual and acoustic privacy. While the first goal can easily be achieved, the second often proves elusive.

That's because walls only address part of the audio security equation. A person's ability to clearly understand a conversation is actually dependent on two factors: the volume of the speaker's voice and the volume of background sound. The relationship between the two is called the *signal-to-noise ratio*.

Traditional construction attempts to provide privacy simply by reducing the *signal*. Deck-to-deck walls increase a room's effectiveness in this regard; however, they also raise costs and reduce flexibility. Furthermore, constant vigilance must be maintained because even minor penetrations can allow sounds to transmit into adjoining spaces. If the background sound level in those areas is too low, conversations will still be heard and potentially intelligible.

The LogiSon Acoustic Network establishes an effective background sound level throughout the area. This sound is engineered to mask the frequencies in speech, increasing privacy. It also covers up incidental noises that would otherwise impact concentration.

Installing this technology at a project's outset can cut material costs while affording the same or greater acoustic protection. It also increases protection against various forms of electronic surveillance, and provides paging and music functions where needed.

For more information about the system's advanced features, see our brochure or contact your local LogiSon Representative.

Helps maintain sound attenuation

By adding a continuous, engineered masking sound to the space, the LogiSon Acoustic Network can dramatically reduce the distance over which verbal communications can be heard. The exact distance will be determined by the masking's volume and the other acoustic treatments used within the space, including physical barriers and absorptive materials. Though masking can reduce the requirement for these treatments, it isn't sufficient to provide speech privacy by itself. Security should be achieved using a well-designed combination of these tactics.

Masks electronic eavesdropping techniques

The LogiSon Acoustic Network's ability to protect the privacy of verbal communications can be augmented by connecting the hubs to transducers. These components transfer the masking sound to windows, doors, ducts, pipes, walls and other physical structures, impeding the use of audio surveillance equipment. Because the LogiSon Acoustic Network features multiple independent sound generators, each transducer's frequency and volume can be modified to ensure it's appropriate for the surface to which it's applied. The LogiSon Acoustic Network is the only masking system to provide a truly random (nondeterministic) digital masking generation process, making it exceedingly difficult to filter. Furthermore, the components cannot be modified to act as listening devices.

Additional security measures

It's critical to protect such a system from unauthorized access, so the LogiSon Acoustic Network is secured using both physical and electronic methods. Its performance is also monitored to help ensure that the system is 100 percent operational 24/7. Various notification methods can be employed so that issues are evident and can be swiftly addressed. For more information, see our *Security Features* brochure.



Case Study

UNITED STATES ARMY Medical Information Technology Center • San Antonio, Texas • USA

The U.S. Army Medical Information Technology Center (USAMITC) is the information technology execution arm of the Army Medical Department (AMEDD). Through its sophisticated IT solutions, USAMITC provides complete lifecycle management support for AMEDD, the Military Health System, and other government clients, and enables the U.S. Army Medical Command (MEDCOM) to provide the best healthcare possible for U.S. soldiers.

Problem

The USAMITC facility was remodeled and several different divisions were located within close proximity to one another on the two main floors of the building. Privacy became an issue and security regulations dictated the need for a paging system to be installed throughout the three-story structure.

Solution

The LogiSon Acoustic Network was installed



on all three floors of the facility. The Network aided in achieving the privacy required between the divisions. Because it also functions as a paging system, the LogiSon Network provides USAMITC with immediate priority page notification capabilities in all areas of the building. The LogiSon Network operates 24/7 "and has worked as we had hoped," states the USAMITC Facility Manager.