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# ALONE TIME

INCREASING DEMANDS FOR PRIVACY IN THE OFFICE, HEALTHCARE AND GOVERNMENTAL SECTORS SPUR A HOST OF INNOVATIVE DESIGN APPROACHES AND TECHNOLOGIES. BY EILEEN WATKINS

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Workers in open-plan offices have complained for decades about a lack of privacy. A 2001 study by BOSTI Associates concluded that the single biggest impact on both job satisfaction and performance was workers' abilities to focus and get their work done. The design characteristic most affected by that ability was the degree of office privacy.

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—2001 Study: "Disproving Widespread Myths about Workplace Design," Bosti Associates

The lack of privacy has recently been exacerbated through unexpected byproducts of several well-intentioned developments. LEED requirements for sunlight and fresh air combined with management's desire to cut costs have resulted in a general lowering of cubicle walls. More workers than ever now use speaker phones and voice-activated computers. In addition, such improvements as double-glazed windows, carpeted floors, hushed air conditioning and heating units, and ultra-quiet computers have created what some experts have dubbed the "pin-drop syndrome."

A worker overhearing someone in the next cubicle spreading office gossip or glimpsing sensitive data on a neighbor's computer screen is called an "inadvertent" breach of privacy. But many workplaces also have to

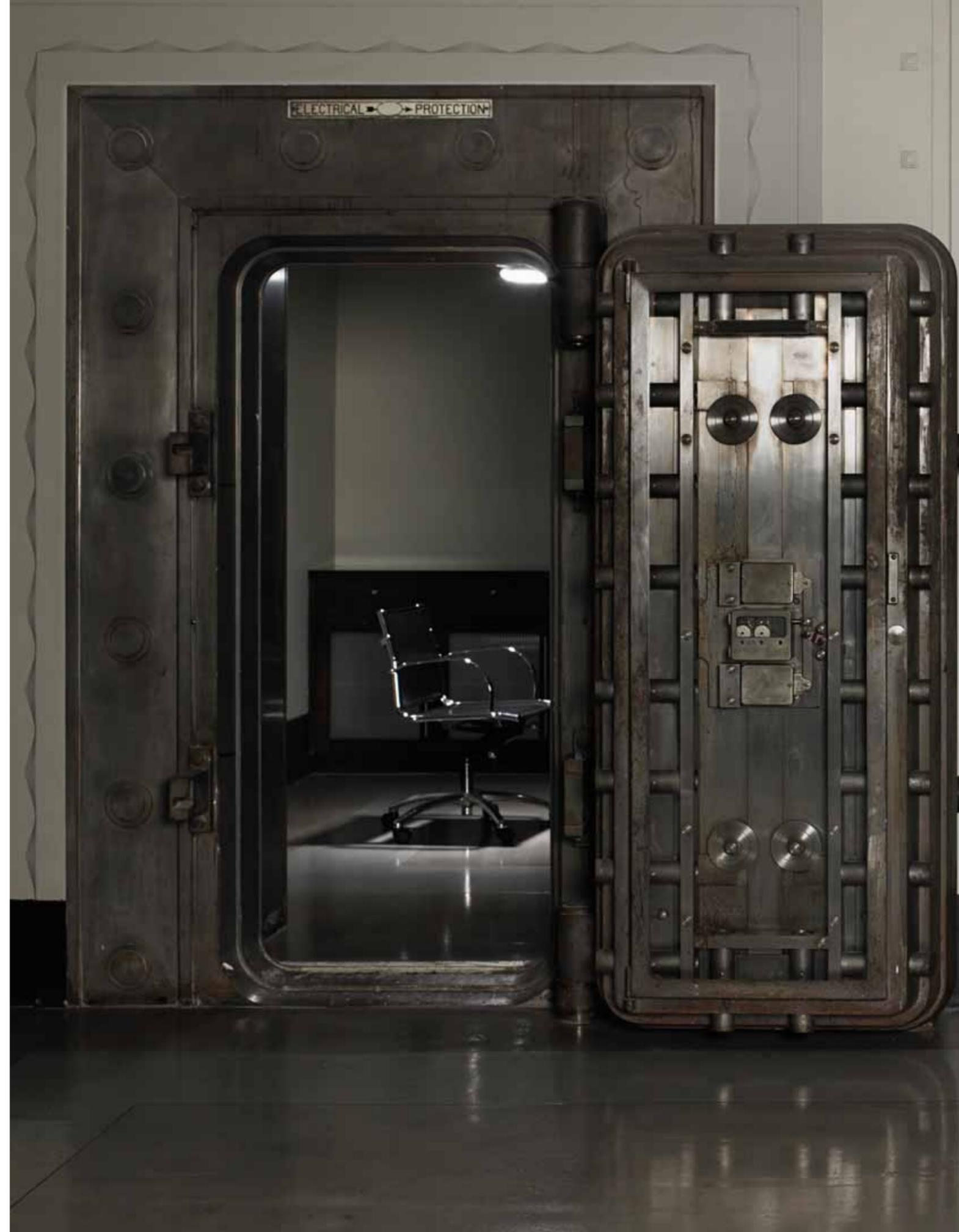
worry about spies who deliberately seek access to confidential material.

New legislation has made healthcare facilities more responsible for shielding patient information. Government facilities today must think about issues of homeland security. Financial institutions must guard their customers against identity theft. Law firms and technology companies worry about leaks that could give competitors an unfair advantage. Yet even with all of this increased awareness, it's difficult to keep everything private all the time. If people are determined to eavesdrop on a conversation or intercept a memo, they might resort to spy tactics such as a laser microphone aimed at the boardroom window. A 2005 study by computer scientists at the University of California, Berkeley, proved that even a recording of someone typing on a computer keyboard can be decoded to reconstruct up to 96 percent of the written message. Visual privacy also becomes an issue when, for example, a cubicle orients workers with their backs to the entrance. Anyone strolling by potentially can read the information on the worker's desk or computer screen.

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#### A HEALTHY RESPECT FOR PRIVACY

Passed in 1996, the Health Insurance Portability and Accountability Act (HIPAA) requires all individually identifiable health information in the United States to be kept confidential. This applies to electronic, paper-based and oral communications. Telephone conversations, discussions between patients and their doctors, registration for procedures and consultations regarding payment must be conducted in a secure environment where they cannot be easily overheard.

Because of this requirement, healthcare facilities have had to explore new ways of safeguarding patient privacy. For example, the nurse's station may have a counter high enough to shield the computer screen from casual view, or might even be completely enclosed by glass.

Regulations are not yet as stringent in the United Kingdom. Alistair Cory heads up global architecture and design firm NBBJ's London healthcare practice. He foresees a similar trend resulting from initiatives recently passed by the National Patient Safety Agency and the Department of Estates and Facilities. These

improvements, he says, include "placing consultation rooms in accessible private locations and taking particular care in the design of windows, doors and ceilings for voice travel."

Healthcare facilities in the United Kingdom also are examining the benefits of closing off cubicles, providing "mini sound booths" for patient reception and reducing noise with acoustically deadening materials.

#### GOVERNMENT AGENCIES

Federal offices find themselves caught between conflicting trends, says Richard Henson. "Many were in the forefront of implementing LEED guidelines for increasing natural light and air circulation," says Henson, Systems

Product Line Manager for Kimball Office. "But the lowering of panel heights has come into direct conflict with acoustical and visual privacy."

Henson says the layouts that Kimball has done for its governmental clients avoid line of sight between workers, aim for a workspace with maximum enclosure and close up the customary U-shaped workstation by providing

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—Richard Henson, Systems Product Line Manager, Kimball Office, Jasper, Ind.

a fourth wall. “Where we have to punch through a panel – or where the panels meet at a corner – we maximize the closure of the holes,” Henson says. “We also provide an interlock system where the panels attach to one another that elimi-

nates gaps and dramatically dampens sound transmission.”

“Acoustical privacy is achieved through the ‘A, B, C’ approach: Absorb, block and cover the noise,” says Kenneth P. Roy, Senior Principal Research Scientist with Armstrong Building Products in Lancaster, Pa. “You can absorb sound on the speaker’s side by using the right materials in the barriers. You also use barriers high enough so that the sound doesn’t travel over them – at least 60 inches. Finally, you cover the noise with electronic masking sounds.”

Even desks have changed to enhance privacy. “Before, you might have your laptop on a back work surface, with the screen facing the office doorway,” says Sandy Horton, Director of Product Line Management for Kimball Office. “Now we offer a desk with a work surface that turns the corner and can be positioned diagonally from the door or work station entrance.”

Horton points out that even with a partition in between, it matters whether two workers are facing each other and how much distance there is between

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them. The ideal is to have the other person facing away from you and close to an absorbent panel, which will intercept his voice.

#### FIGHTING NOISE WITH NOISE

Topping off these construction- and layout-oriented

approaches to privacy are new technologies that “mask” sound. Dynasound, Atlanta, Ga., helps clients deal with both unintentional and intentional breaches of privacy. For the inadvertent breach, the company offers a pseudo random digital generator in a pattern that repeats every so often. “Your brain hears it as a hum and doesn’t recognize the pattern,” says Patrick Gillilan, Dynasound’s Vice President and General Manager.

A different approach is needed for intentional eavesdropping. “In that case, the last thing you want is a repeated system, because it could be filtered out,” Gillilan says. “So we use a system designed to impede adaptive filtering. It would be overkill for an ordinary office, but it will stop a guy with a laser mike.”

Gillilan notes that for either system, the technician must visit the environment where the masking system will be used and fine-tune it. “If it’s well done, you’re not aware of where it’s coming from, and it doesn’t call attention to itself,” he says.

Sonare Technologies, a Herman Miller company, now

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Adapted as an exercise by Heather Jakusz, IIDA Senior Director of Education and Professional Development

## exercise:

- 1) Explain which office layout (open or closed) you believe to be most productive, and provide three supporting examples.
- 2) Suggest ways employers might protect their employees' privacy in an open office plan.
- 3) Describe the advantages and disadvantages of both open and closed office plans.
- 4) What challenges do confidentiality issues pose for healthcare facilities, and how are they required to address them?
- 5) Describe some of the new approaches to protect against breach-of-privacy issues. Do you believe these new ideas can help?

## contact information:

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## instructions:

Individuals who read this article and complete the series of questions above are eligible to receive continuing education credit (CEU), as approved by IIDA. Completed exercises should be returned to IIDA via:

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offers a product called *Babble*, which is intended to protect the privacy of an office worker's telephone conversation in the immediate area where he works. This invention won the gold medal in the Workplace Technologies category at NeoCon in 2005. With *Babble*, the worker records a few phrases from a script into the central unit. Small, separated portions of his speech are then broadcast while he is on the telephone, creating a low-level, unintelligible "babble" that prevents those around from

overhearing the conversation. Unlike an environmental masking noise, *Babble* can be activated only when needed for confidentiality.

Workers and designers differ as to which type of office layout (open or closed) is most productive, but in a world where fully enclosed office spaces are too expensive for most companies, acoustical design elements and devices like *Babble* are stepping in to answer a boisterous call for privacy. 

## ISOLATION VS. COMMUNICATION

Providing fully enclosed and acoustically private spaces for all workers is a dream beyond the budget of most companies — and it may not even be the best solution.

A 2000 survey by the Cornell University International Workplace Studies Program (IWSP) concluded that no one really liked high-walled cubicles. When asked to suggest alternatives, though, the respondents tended to split along generational lines. Middle-aged executives liked their closed offices, feeling they worked more effectively in such an environment, while younger workers favored "team" spaces shared by several people. "They felt they could learn more from their officemates in this kind of office," wrote Frank Becker, who interpreted the results in "Offices That Work: Balancing Cost, Flexibility and Communication."

Becker pointed out that younger workers often join a company to work with people and adds, "Having great people around that you rarely see, and with whom you even more rarely talk, has limited value."

Alex Redgrave, Vice President and head of consulting at HOK International in London, thinks more freedom and mobility actually provides greater privacy. "The reality is, one can never know who is on the other side of a wall listening intently with a glass," he says. "Open plan, on the other hand, allows you to see and feel who is around you at any time, and you can modify your tone of voice of the conversation to compensate. It has often been said that the most confidential place to talk is an airport lobby.

"I recently discussed the benefits of open versus enclosed offices with a government defense occupier who was moving to an open environment. He was excited by the prospect of 'endless corridors,' where experts are accessible and connected to the rest of the practice like never before. Today we need people to interact and share knowledge, so that we can deliver the best results."