

**The Role of Information Technology
in the Congressional Response
to Anthrax on Capitol Hill**

**Report on a Telephone Survey
of California's Congressional Offices**

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Summary

A telephone survey of California's federal congressional delegation appeared to indicate almost no experience with computer-based communications tools widely used in American business and education, and no sense of urgency about exploring alternative methods of maintaining government during biochemical or other terrorist attacks. Email is the only Internet-based technology in general use during normal times, although it has apparently never predominated and did not make huge gains during the shutdowns. The written letter remains the preferred form of communication with constituents, the telephone the most popular tool for staff. In general, there was wide disparity from one office to another in 1) the impact of the shutdowns on the various communication channels, 2) the degree to which communication was maintained at all during the shutdowns, and 3) attitudes toward technology-mediated solutions. However, a lack of understanding of what the options and their benefits might be, was uniformly evident.

Background

The Anthrax Scare and the Congressional Shutdown.

On October 15, 2001, an aide to U.S. Senate Majority Leader Thomas A. Daschle (D-SD) opened a letter tainted with anthrax in the Senate's Hart Office Building. All six major House and Senate office buildings were sealed off and the House itself shut down for two and a half weeks. Most representatives and their staffs moved into shared space elsewhere. Many went home. Hearings were canceled. Important files were locked in quarantined buildings. In the subsequent days and weeks, more anthrax turned up at the Supreme Court, the State Department, Health and Human Services, and elsewhere, and more offices closed. Although Congress has now reconvened, as of this writing many Washington offices still remain locked, and uncertainty prevails about when they will reopen and what will happen next.

The U.S. Congress has 535 members supported by some 20,000 staff members who maintain offices in both Washington and their home states. Until the anthrax scare, mail arrived three times a day in offices around Capitol Hill. As of November 10, an estimated one million pieces of mail were still locked inside the District of Columbia's main postal facility, where some had been piling up for three weeks. An estimated 30 tons of congressional mail had gone to Lima, Ohio, for sterilization.

On November 4, the *San Francisco Chronicle* quoted Rep. Sam Farr (D-Ca) as saying, "Mail is as essential to politics as water is to life....This too shall pass. And we can get on with life."

On November 11, the *San Francisco Chronicle* quoted Senator Dianne Feinstein (D-Ca.) as saying, "We don't have any mail now. Files are not available, stationery is not available."

Days after the FutureU survey was completed, the media started to report that Osama bin Laden was circulating a CD intended to train terrorists in how to kill Americans through the mail.

Federal Commitment to Information and Educational Technology.

Throughout the late 1990s and into the new century, many agents of the federal government expressed a commitment to introducing information technology into American life. The phrase "digital divide" came to represent an undesirable lack of computer access by the disenfranchised, and enthusiasm for "bridging" that divide was heard with some urgency in both houses of Congress. By 2001, it was likely that every federal department had at least one IT initiative. Agency requests for information technology in fiscal 2001 amounted to \$38.9 billion. The Department of Education alone received \$958 million.

Meanwhile, public access to the Internet is apparently now widespread. According to the Associated Press, a Nielsen/Netratings report released the week of November 12 indicated that more than 176 million Americans (62% of the population) now have access to the World Wide Web. The report called this a jump from 57% a year ago.

Computer Industry Developments.

In the past 20 years, the computer industry has developed a range of information technology products intended to facilitate communication across distance. Popular products continue to acquire new features, and entirely new solutions enter the market every year. Experienced computer users now address specific needs by choosing from a menu of tools for communication, file sharing, and knowledge management. An elementary understanding of the various product categories is essential to an interpretation of this survey's results:

Asynchronous conferencing forums

Used for more than two decades in academic classes, corporate training modules, business teams, or whenever members of a group want to contribute to, and track the "thread" of, a multi-participant, multi-topic written discussion without all being present at the same time. AOL, CompuServe, and other commercial services claim millions of subscribers who routinely use conferencing forums.

Synchronous chats and instant messages (IM)

Perhaps most popular among teen-agers but also used inside organizations for time-critical activities. For example, two or more colleagues participating in a large group teleconference may strategize among themselves on the spot by exchanging private instant messages.

Laptops with security protocols

Encryption systems and other measures now promise to make portable computers no more unsafe than any other computer, with the obvious advantage of portability. Workers increasingly use a laptop as their primary tool, rather than as a supplement, plugging it into a desktop "port" for office use. Hundreds of FBI field agents are issued a gun and a laptop.

Remote access software

Provides access (by modem) to any authorized file stored on a computer located elsewhere. Companies such as *Go to My PC* and *PC Anywhere* promise security features that prevent unauthorized entry.

Cassette hard drives

Allow removal of the "brain" from an office computer so it can be plugged into any other compatible unit.

Time and resource management tools

Intended to help a group stay on track with shared projects. Users fill in templates with project milestones and other data, which automatically shift to accommodate changes in the relationship between time and resources.

Knowledge management and collaboration tools

Used whenever an accurate record and speedy retrieval of a group's written history is desirable. All emails, files, recorded conferences and other interactions are captured by or uploaded to the system, which automatically indexes them for search by key word.

Online polling, surveying, and assessment tools

Provide templates for questions and answers, delivery online from an email hot link, and immediate results. Sometimes used even for casual single questions to simplify group planning and consensus building. For example, "Shall we meet Tuesday at noon or Friday at 10?" or "Did you think that yesterday's presentation 1) Went well, 2) Was ok, 3) Needs work before we do it again?"

Secure file sharing and version tracking

Allows members of a group to work together on a document by distributing and editing it electronically. Contributors "highlight" any changes they make, and the group leader accepts or rejects these changes electronically. Changes to edited copy can be accepted or rejected. Document versions are automatically tracked. Used inside law firms for more than two decades.

Video teleconferencing

May have one-way or two-way live feed, sometimes with only one image (e.g., talking head) on the screen, other times with multiple, smaller images from the various locations. Can substitute for frequent meetings requiring expensive travel.

(Note: Background Sources: Associated Press, *New York Times*, *San Francisco Chronicle*, *Washington Post*, U.S. Dept. of Education)

Project Goals

The purpose of this survey was to ascertain how U.S. representatives and senators from California and their staffs have maintained communication during the shutdowns. Of particular interest was the degree to which the representatives, senators, and their staffs have used information technology as a substitute for, or supplement to, the U.S. mail and face-to-face interaction. Of equal interest was the degree to which the anthrax scare and other terrorist threats were stimulating interest in the new tools. For purposes of this survey, these new tools included:

- Email
- Electronic transmission of documents as attachments to email
- Internet meetings and presentations
- Video conferencing
- Chat and instant messaging (also called synchronous conferencing)
- Discussion forums (also called asynchronous conferencing)
- Project management software for teams
- Group calendar or scheduling software
- Full-system collaboration tools that provide all or most of the above features

Individuals and groups in a wide range of contexts currently use some or all of these tools. We wanted to know the extent to which the U.S. Congress was using, or considering, them in light of recent events, especially considering their heavy reliance on paper mail and its sudden newly acquired potential for danger.

Research Method

This was a telephone survey in which an interviewer spoke with one staff member from each of 51 California congressional offices. The state has 54 delegates in all, including 52 representatives and two senators. Forty-five (45) respondents provided useful data, six having declined due to "office policy" forbidding telephone surveys. Two offices did not return calls; a third requested the survey by fax but did not return it. The interviews took place between November 1 and 9.

The survey instrument had seven questions. Respondents were also asked for contact information and whether they would like to see the survey results. The interviewers recorded all responses in an online survey software package that displays results in three forms: 1) bar graph, 2) numerical count, and 3) percentage. Qualitative responses were recorded by the interviewer as typed notes.

The Researchers

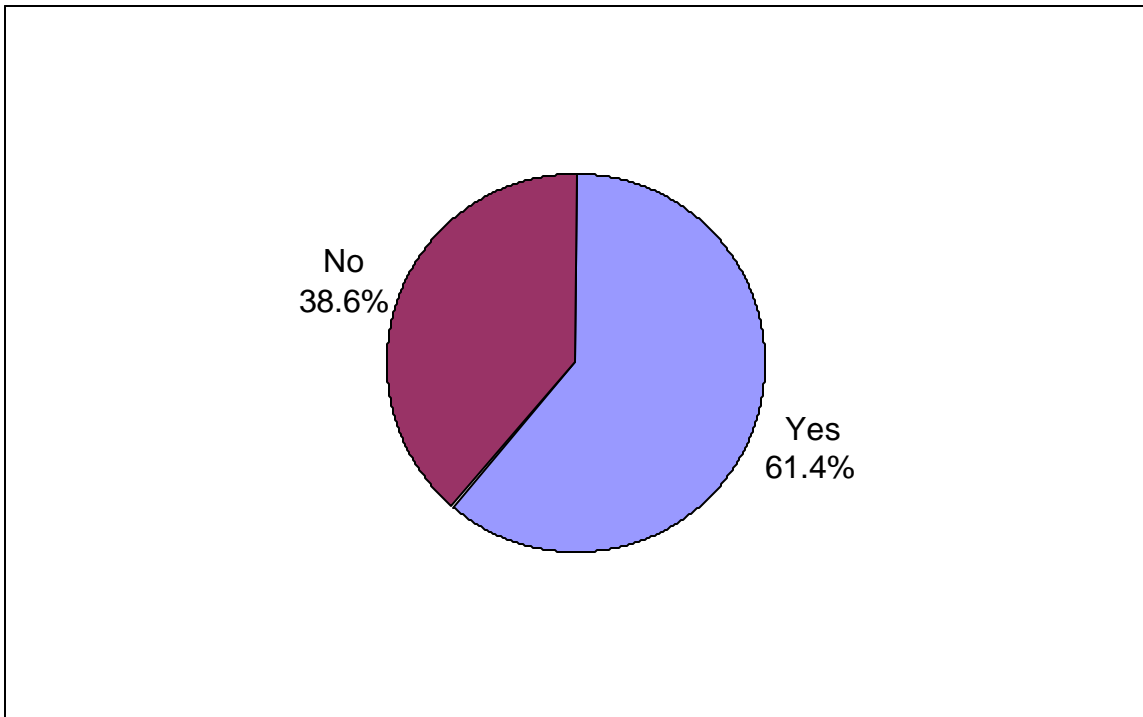
Most of the telephone interviews were conducted by Gail Terry Grimes, chief executive officer of FutureU, a private San Francisco-based firm specializing in research, consulting, training, and web publishing on the topics of virtual communication, e-learning, and leadership. FutureU counts among its clients the American Hospital Association (Health Forum division), the NASA Astrobiology Institute, and the California Virtual Campus. Ms. Grimes also wrote this report. Assisting her with the interviews was Barry Tuchfeld, Ph.D., FutureU Senior Associate.

The Respondents

Telephone numbers for the Congressional offices came from the representatives' and senators' own official web sites. The interviewers made their first 11 calls to California numbers; however, when numerous in-state staff indicated that Washington staffers would likely have more information, the remaining calls went to D.C.. About half of all the interviews were conducted with whatever staff person answered the phone. Otherwise, this person transferred the interviewer to "someone more knowledgeable." Thus, respondents included systems administrators, office managers, district directors, field representatives, legislative aides, staff assistants, one press secretary, one legislative information manager, and one legislative correspondent.

Detailed Analysis by Question

Question: During the shutdown did your use of email increase?



Out of 44 respondents to this question, nearly two-thirds (61.4%) said yes, but most of these qualified their response by saying "somewhat" or "maybe a little" and only two reported a major increase ("definitely") in the use of email. The remaining 38.6% said there had been no noticeable change. No one said email is never or hardly ever used in their office. Several respondents mentioned using the "Blackberry" PDA for email, by name

Sample Comments

"We've always relied heavily on email, so it hasn't exactly changed."

"Everybody on the Hill is using email a lot more than they did."

"The D.C. office was not at a site where they could use email."

"...more email on fewer machines, because we've been displaced... and don't have access to the computers....If we had access we probably would be using it more."

"That was the only way to get members meeting information."

"For privacy reasons we don't receive email from anyone outside of our office."

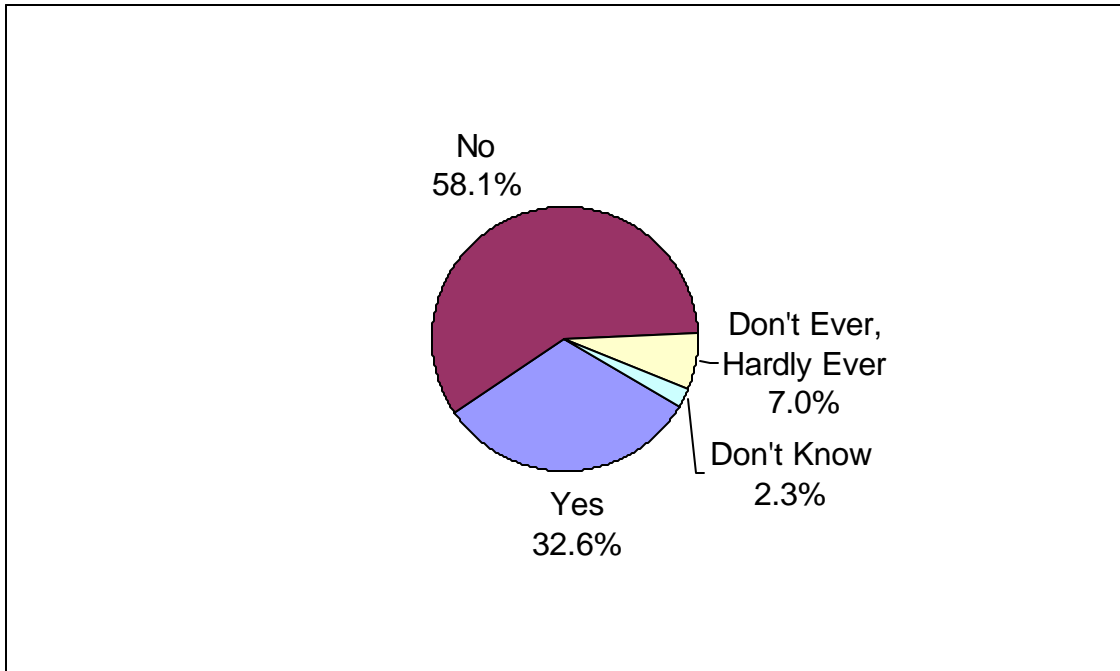
"All our mail is being held so we are emailing more and asking to be emailed."

"Email got suspended from Washington, so there was no communication using the Internet."

"At the first part of the shutdown, the Washington staff didn't have access to computers but as soon as they got into the GAO office...it was the only mode of communication."

"The only thing I know that's changed is they gave me my own Blackberry for email. "

Question: Did you share more documents by email than you usually do?



Out of 43 respondents, most (58.1%) said they had not seen an increase in this practice of attaching documents to email messages. Another third (32.6%) said yes, more documents were indeed being sent this way. One respondent said she didn't know. Three more (7%) said documents are never or hardly ever shared electronically by their office.

"We have a system in place but we hardly ever use it."

"We do two forms of information sharing--fax or email, but we were doing that before."

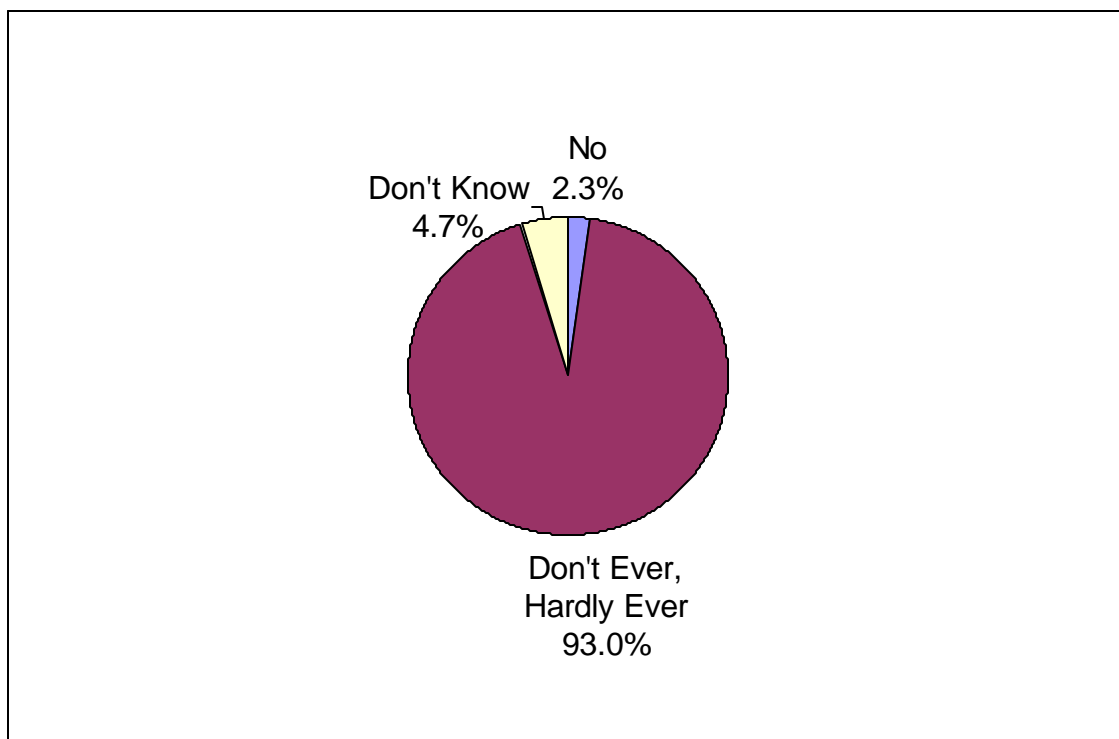
"We don't ever use attachments because of security issues, viruses."

"More faxes but not (this)."

"We dropped back to fax."

"We're sending more attachments, even our news clippings."

Did you hold more Internet presentations or meetings?

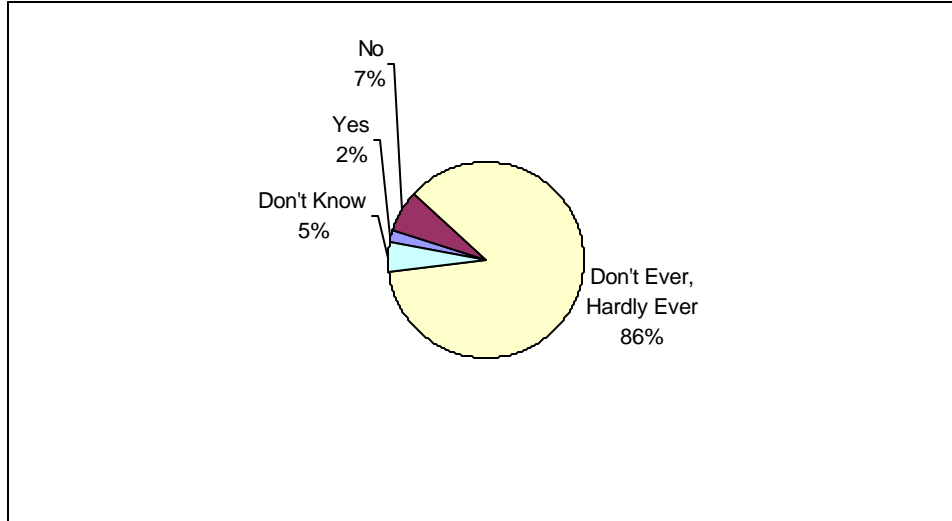


Out of 43 respondents, almost all (93%) said this method of communication is never or hardly ever used. No one (0%) reported an increase. One (2.3%) said Internet presentations or meetings have been used in the past but not since the terrorist attacks. Two (4.7%) said they didn't know.

"We never hold internet meetings but we do sometimes makes videotapes and digital photos available to constituents on the web site."

"The Washington office hardly used the Internet at all. They only had one computer up and running."

What about video conferences --like PolyCom or PictureTel--did those increase?



Out of 43 respondents, only one (2.3%) reported any increase in the use of video conferencing since the terrorist attacks. It was a significant increase according to the respondent, who listed a range of constituency groups participating: "community organizations and businesses...from labor to religious leaders to high school students." Aside from this one report, however, most respondents (86%) said video conferencing is never or hardly ever used by their office. Three others (7%) said the technology had been used occasionally in the past, but that there had been no increase. Two respondents (4.7%) said they didn't know.

"We'll probably do video conferencing in the future."

"Video conferencing is used for certain meetings but not anymore than usual."

"If there were an event she could not attend she might use video conferencing."

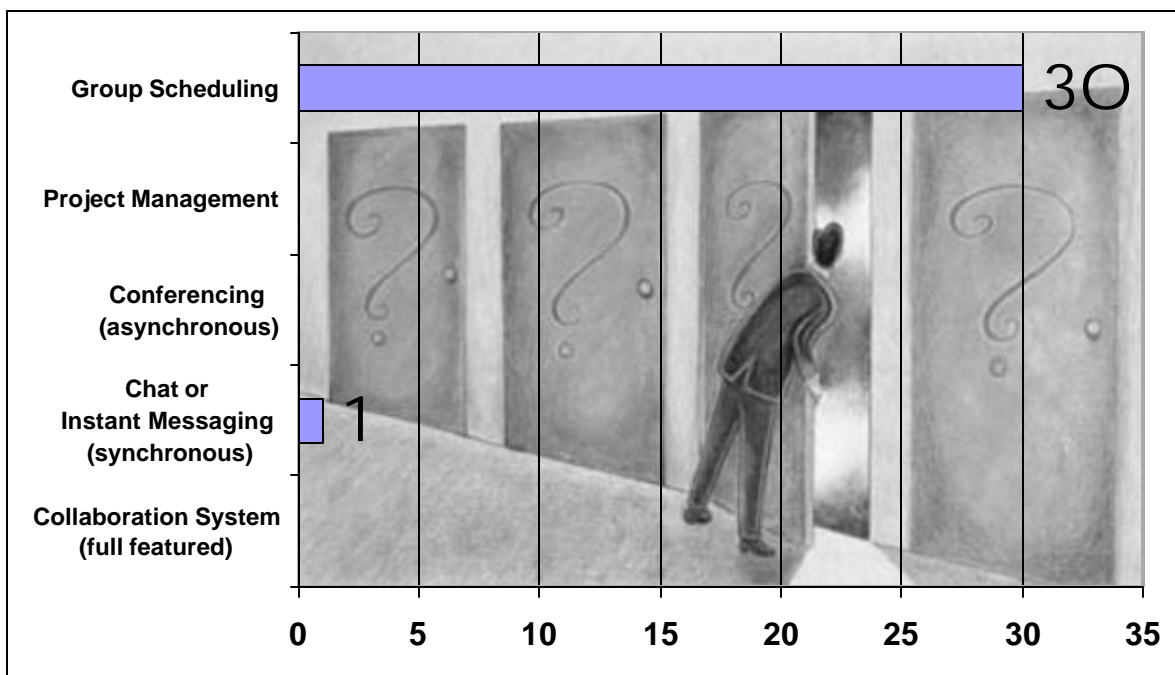
"We had video conferencing but we got rid of it."

"We have the ability but nobody's trained. We have access but it's never used."

"We have PictureTel video conferencing and we used to use it but we had problems with a new connection and it no longer took the program, so we're working on switching."

"We hold (telephone) teleconferences once a week so there's no need for web conferencing."

There are five other tools that some groups use and that I'm wondering if you are using.



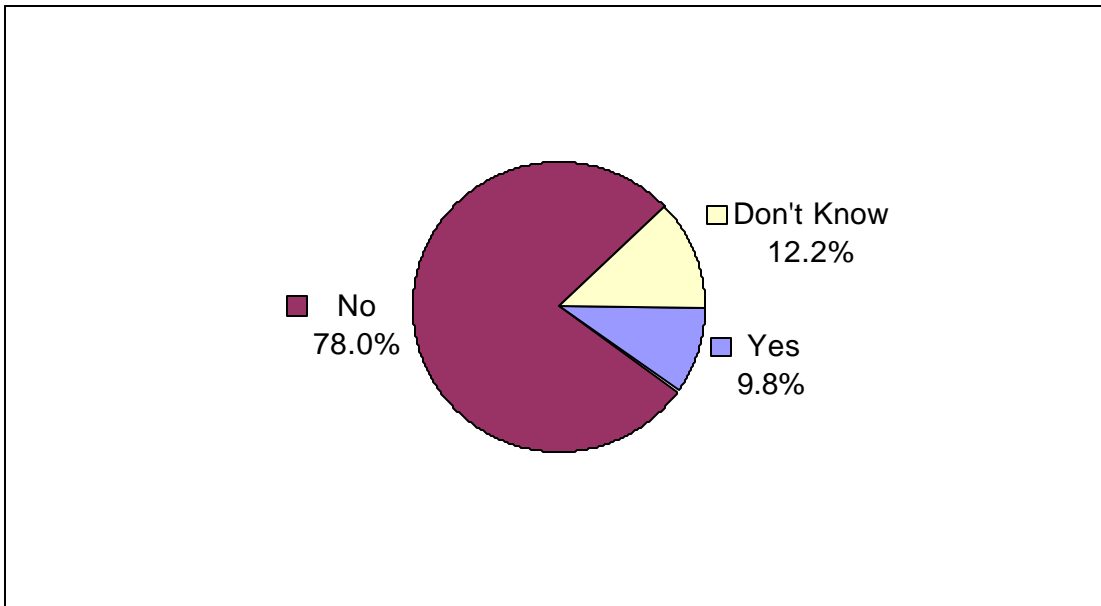
Out of 31 respondents, no one (0%) said their office was using any collaboration tools (full-featured systems like *Lotus Notes* or *Accera*), asynchronous conferencing, or project management software for teams (e.g., *Project Net* or *VirtualTeams.com*). One respondent (3.3%) reported occasional use of instant messaging among staff members. All (100%) said their office employs scheduling software, usually Microsoft *Outlook*, which is provided to them by a central Congressional administration.

"We don't have anything like that."

(Asynchronous conferencing) *"That's new to me. I never heard of it."*

(Asynchronous conferencing) *"I'm not even sure what that is."*

Is there any discussion underway in your office about expanding the use of these kinds of tools as a result of the terrorist attacks?



Most respondents (78%) said there was no such discussion underway. Five (12.2%) said they didn't know. Only four respondents (9.8%) indicated that anyone in their office was discussing such an expansion at all, and only one as a direct result of the recent events.

"We expect the mail to come back."

"I don't think anyone's gotten around yet to thinking about anything long term."

"We have pretty good communications now. Mostly telephone, letters, so I don't see the need."

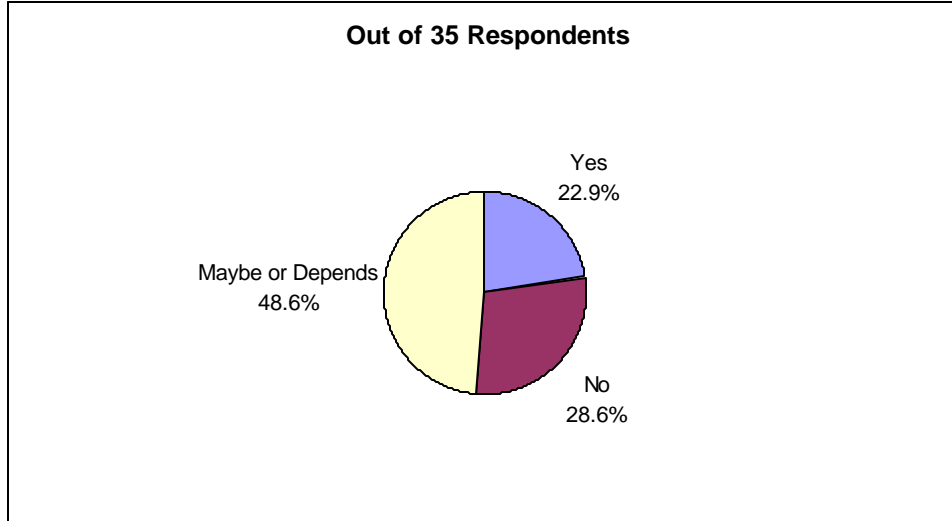
"We're considering options."

"We've been in the process of trying to expand our use of these tools in the last six months. Not necessarily in response to the terrorist attacks."

"I don't think we would use it, no matter what the technology."

"We were already looking into (it.)"

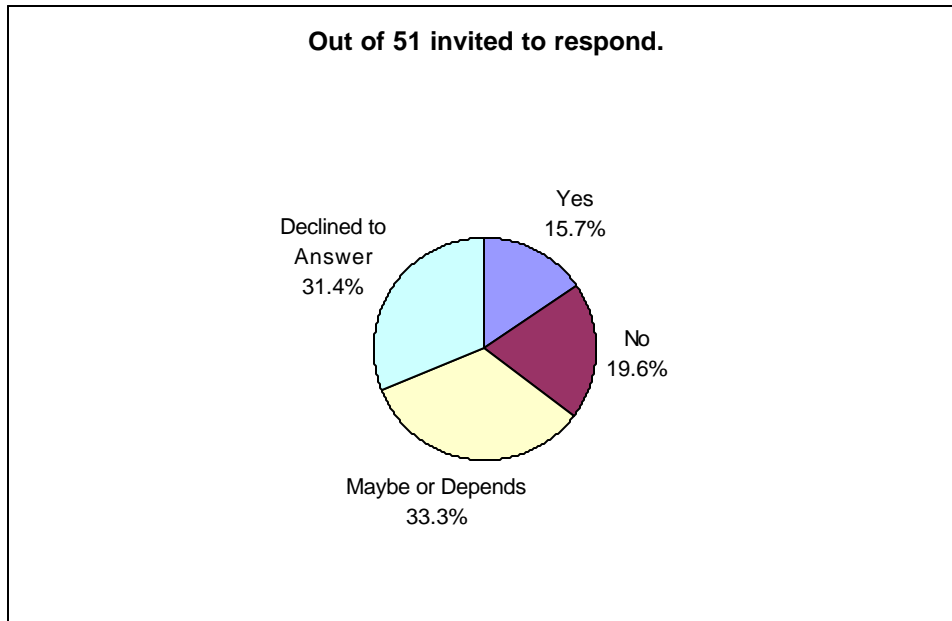
When it comes to using technology for communication, do you think the representative/ senator) would use these kinds of tools if they were available?



Nearly a third (31%) of the 51 respondents declined to answer this question.

Of those who did respond, about half (48.6%) said, "Maybe." Or, "It depends." Only 8 (22.9%) said yes, their boss would likely use technology to communicate if the tools were available.

Ten others (28.6%) said no, they would not, or probably would not, use them.



Sample Comments:

"(My boss) is more for the old-fashioned way. Pick up the phone or in person."

"He's already pretty technologically able--between Blackberries and cell phones."

"My boss is a high-tech guy, so there is an interest to expand."

"We don't have a lot of those capabilities. If we did have them, we would probably use them."

"We wouldn't use them even if they were available because you have to be able to take it with you once you evacuate the building."

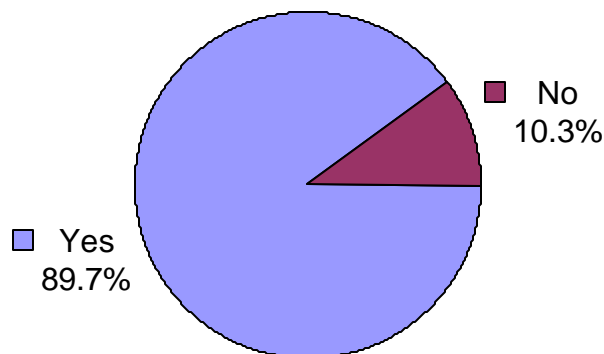
"If someone took the time to show him how it would benefit him."

"He thinks all computers should be tied to the end of a rope and...no, I'm just kidding, but"

"...a lot of the representatives are older guys. They don't trust it."

"We would like to see more staff members set up for virtual private networking. Had everyone been set up, everyone would have had access to shared documents."

Would you like to see the results of this survey when we publish them?



Almost all (89.7%) who answered this question said yes. Four respondents (10.3%) declined.

"No, that's okay. We don't really need to conform to other congressional offices because we're pretty much the leader."

Key Findings

Most respondents expressed no sense of urgency to explore alternative forms of communication in preparation for possible prolonged or repeated shutdowns.

"Nothing has happened that would all of a sudden make us say we have to take care of this."

"All our communication is right here, so there's no further need."

"There's no need."

"They may have concerns but I don't think anyone's gotten around to talking about it yet."

"We need to work out some other things that are going on first."

The shutdown appears to have affected communications differently from one congressional office to another.

Responses fell into four general categories:

1. *"The phone lines were down and cell phones weren't working and the only way we could communicate was email;"*
2. *"Email was shut down, so we couldn't use it at all;"*
3. *"We talked over the phone but that was about it; and"*
4. *"We pretty much shut down. "*

Laptops or remote access to computers are not widely available to congressional staff.

"Because we've been displaced from our office we don't have access to the computers."

Printed mail continues to play a major role in congressional communications, and other forms of communication are generally seen as inferior.

"Our constituency still sends written letters, so we need to respond that way."

Telephones and fax machines saw the greatest increase in use.

About 25% of the respondents specifically mentioned an increase in the use of the phone and phone conference calls. One respondent explained that *"The House has a system where you can conference in 500-plus people."*

"Phone conferences work fine. We were okay."

"We never had the need. We communicated by phone."

"We couldn't communicate except by telephone. We had a couple of telephone conferences but that's all."

"We just used the phones and that worked okay."

"It was harder to do things on the computer than by phone."

"We're mostly using the telephone."

"We're not allowed to give out email addresses but you can fax it to us."

There appears to be a big difference from one office to another in attitudes toward, and understanding of, information technology.

Beyond email and cell phones, most respondents did not appear to know much about IT tools. Some seemed to overestimate their own team's technological sophistication. One said, *"He's already pretty technologically able, between Blackberries and cell phones."* Another said, *"We have everything available that is out there."* Even those who indicated an interest or some experience were puzzled by the question about asynchronous discussion forums (*"I'm not even sure what that is."*), which are used widely in other sectors of society. Only a few respondents indicated that they had been thinking about technology and how it might address specific needs (*"The one big thing that really opened up to us is a desperate need for remote access to documents so that if your office is closed you can still get in to retrieve and share."*). And several respondents indicated that the benefits would not be worth the effort.

"...with email...it can freeze up or you can lose the connection and (you're) back to square one."

"Do we want to make everything so technological that we stop communicating in person or stop having telephone conversations."

"We might use more (if it were available) but it needs to be easy."

A number of respondents seemed to see security concerns as insurmountable.

"I wish there was a way."

Respondents did not demonstrate the technological leadership that might be expected of Californians.

Given the State's association with technological innovation, respondents might have been expected to report a higher level of interest in technological solutions than might occur in a national sample. However, only by broadening the sample beyond California could we be sure that other regions aren't actually embracing the new tools more readily than those where the industry got its start.

There was no evidence that individual congressional offices are involving the information technology industry in planning for future crises in communications.

No respondent mentioned participating in, or hearing anything around the office about, conversations with industry leaders on this or any other subject.

If the information technology industry has made an effort to educate Congress about the benefits of its entire range of products, that knowledge has not filtered down to the staff level.

(Asynchronous discussions?) "I'm not sure what that looks like."

Some staffers seem to expect the central House administration to decide what is needed and provide solutions without any involvement from their own offices.

"All administration is handled by the House as a whole, not individual offices."

"The Committee on House Administration tests and recommends technology."

However, the use of videoconferencing at a handful of offices would indicate some autonomy in decision making. Differences in budget may be the deciding factor, although only one respondent mentioned the cost of information technology as an issue.

The shutdowns did not appear to dampen the spirits of congressional staff members.

Despite the inconveniences, issues of personal safety, and general uncertainty of the times, every respondent was cheerful, cooperative, and optimistic.

Recommendations

Make the use of information technology a top priority throughout government.

As recently as this past summer, experts in bioterrorism never made the front page. Now evidence suggests that Americans have begun to appreciate the threat. They are already using the Internet to shop, study, have fun, and do business. Americans cannot afford widespread, repeated or prolonged shutdowns of communication between government and the people. Congress must move electronic communications to a front burner. Lawmakers and their aides should receive the new tools and learn to use them properly. The public should be encouraged to use the Internet to communicate with congress. Serious support should go to research on computer security. If indeed foreign and domestic terrorists are eyeing mail delivery with enthusiasm, then electronic communications must become a more widespread alternative, or at least a more valued supplement, to the written letter.

Conduct a needs assessment.

Survey lawmakers, staff, constituents. Find out what kinds of information, ideas, and experiences they want to share. Focus on functions, as opposed to product types. (e.g., "Would you prefer online meetings in real time even if some parties cannot attend, or meetings that unfold across a longer time span with the option of contributing to the discussion at any hour?") Also find out what tools are already in use. Get a grasp on how much resistance actually exists in Congress and across America. Ask people what it would take to get them to communicate electronically.

Identify enthusiasts.

With notable exceptions, most congressional offices appeared to have no early adopters-- not even the person assigned to the computers. Identify those few staff members who truly have an interest, regardless of their job title, and ask them to work with central administrative staff to ensure that solutions match actual needs.

Choose the best tools for the job.

Listen to the vendors but also conduct an independent comparison of product features. Make informed choices of products that meet real needs.

Be open to a "menu" of tools.

Be careful not to see technology as all or nothing. *"E-mail will never replace postal mail,"* Bert Hammond, chief of staff to Rep. Diane Watson, D-Los Angeles, told the *San Francisco Chronicle* in early November. This is a new spin on "TV will never replace movies." In reality, new technologies often broaden the palette rather than replace what's already there and this is likely to be the case with the new communication tools.

Invest in remote computer access for every staff member.

("Half the staff don't have computers at home.") Make sure all members of the team are prepared to carry out their duties at all times. If security concerns over routine laptop use feel truly insurmountable, establish a policy whereby laptops are used in place of heavy desktop units and only allow their removal from the office in emergencies.

Discourage cell phone use, especially in emergencies.

Given how easy it is to capture cell phone conversations, this is an ironic preference for an audience hesitant to embrace information technology out of concern for security. Although cell phones are likely here to stay, hard-wire lines should be used where possible to reduce the risk of interception. Sophisticated scramblers do exist for cell phones, but a better solution is to combine this tool with the much broader applications of laptops

Broaden the use of congressional web sites.

One respondent said, *"At some level constituents understood; incoming traffic went down."* This may satisfy as a short-term solution but it does not ensure the continuation of true government in a longer shutdown. A minor investment in software, training, and marketing could transform what are essentially digital brochures into interactive communities designed to keep communications flowing in both directions no matter what happens to the mail.

Commit to best practices.

Participating effectively in a video conference or online discussion isn't like watching TV. It takes some skill and practice. Likewise, effective email, secure use of attachments.

It also takes some understanding to know when and how to use which medium for which purpose. Two respondents mentioned the need for such training ("*...if someone took the time to show him how....*")

Stay abreast of industry developments and changing expectations.

The information technology industry is evolving rapidly. So is public access and sophistication. Technology may not ever provide the ideal solution for every purpose but its potential is already far greater than has apparently been explored by California's lawmakers in Washington.