



COMPUTERWORLD

 Print Article  Close Window

Office technology: Productivity boost or time sink?

Gadget-enabled multitasking is so addictive, it might actually be damaging the economy.

Lamont Wood

March 30, 2010 ([Computerworld](#))

That mini-tower by your desk, that tablet by your bedside, the netbook you use on the commuter train, the 3G smartphone that's always within reach -- they're powerful, essential tools of the office, right? They do for white-collar productivity what the assembly line did for factory productivity -- isn't that obvious?

Well, maybe. Or maybe not.

The dirty little secret of office technology is that no one can agree on how exactly to measure white-collar productivity. That means, in turn, that no one can prove definitively that PCs and other technologies contribute anything to productivity.

What the experts *have* figured out is how to track what office workers actually [spend their time doing](#). The results indicate that -- contrary to any assumptions about their usefulness -- personal computers, smartphones, notebooks, netbooks and associated gadgets can be such massively beguiling, addictive time sinks that they materially damage the economy -- draining it by one-sixteenth, [according to one calculation](#).

There was a time when "interruption" meant an unexpected phone call or visitor. Mail was delivered only once daily. Now office workers are continually barraged with e-mail, instant messages, texts, BlackBerry traffic, blog updates, news feeds, Tweets, Web sites with enticing links and calendar reminders -- and the phone still rings, people still drop by and paper mail is still delivered.

Simply dealing with the deluge gives people the illusion of productivity. But statistics indicate that might be all it is -- an illusion.



No one is advocating flipping the switch back to precomputer days. What they are saying is that the computer's potential for undermining productivity should be understood -- and countered.

There are easy ways to do that, efficiency experts say -- sometimes by turning off seemingly innocent features that serve mostly to distract us, sometimes by using overlooked features that eliminate time-wasting tasks, and sometimes by simply steeling our resolve against the siren song of endless digital distraction.

Simply dealing with the deluge gives us the illusion of productivity. But statistics indicate that might be all it is -- an illusion.

From factory floor to office door

Computers were introduced wholesale into offices in the 1980s to boost white-collar productivity through what was then called office automation. The effort was inspired by previously successful projects to boost blue-collar productivity through factory automation. Experts tried to gauge the impact of the computers, treating the office as if it were a factory of paper-pushers.

It didn't work, but it wasn't for lack of trying.

"The problem is not on the input side, since there are a lot of ways of measuring the cost of white-collar activities," explains Clinton Longenecker, business professor at the [University of Toledo](#) in Ohio. "The problem is measuring the deliverables, since there are no effective metrics of output. They are still debating how to measure white-collar productivity."

In other words, if an office produces invoices and periodic financial reports for an [enterprise](#), how much are those worth? After all, they have no market value. You can calculate how much it cost to produce them, but that's no help if you don't know their value. Do they contribute to the success of the enterprise? If so, exactly how much do they contribute?

"We are borrowing management science from the industrial age and using it in the knowledge economy," says Jonathan Spira, chief analyst at [Basex Inc.](#), a New York research firm. "Most of the time, it is the same as putting a square peg in a round hole."

It took 150 years for the industrial age to produce an adequate management science, he notes, and the knowledge economy is only a couple of decades old. Spira doesn't think it will take 150 years for a management science for knowledge work to arise, but he admits that he has no clue as to what it might look like.

Meanwhile, having been waylaid in their quest to value output, modern efficiency experts instead spend their time examining what office workers [spend their time actually doing](#) -- and assume that the output, whatever it is, amounts to productivity. But what they find is not always pretty.

The multitasking illusion

In particular, efficiency experts are alarmed by the effects of computer-enabled multitasking on office work and office workers. "I used to say that multitasking made a task take 15% longer. Now I say 50%," says Bary Sherman, head of [PEP Productivity Solutions Inc.](#), a Fallbrook, Calif.-based management consultancy that specializes in helping organizations become more efficient.

"Multitasking, as a term applied to people, did not exist before [Microsoft Windows](#)," points out Dave

Crenshaw, a Saratoga Springs, Utah-based executive coach. But now, he says, "we use the term thinking we can multitask like computers."

The problem is that human multitasking involves interrupting one task with another. "We found in our research that something very interesting happens when I interrupt you," says Basex's Spira. "First there is the interruption itself, and then there is what we call the recovery time, which is the time it takes you to get back to where you were."

"We found that the recovery time is 10 to 20 times the length of the interruption," Spira continues. "The phone call that interrupted you may have lasted 30 seconds, but getting back to where you were may take five minutes."

By Spira's calculations, about 28% of an office worker's time is lost to interruptions and recovery time. Taking into account the size of the U.S. knowledge worker workforce (more than 65 million) and the average knowledge worker's salary (more than \$21 per hour) and other data that's proprietary, he figures interruptions [cost the U.S. about \\$900 billion per year](#), out of a gross domestic product of approximately \$14.5 trillion.

In other words, interruptions stunt the economy by about one-sixteenth.

How workers spend their time

Experts may not agree on what constitutes white-collar productivity, but they do agree that the majority of office workers' time is spent on distractions.

PEP Productivity Solutions is one research firm that conducts periodic surveys on the subject of how office workers spend their days. Its [latest survey](#), from May of 2008, found that they spend multiple hours per week per person on non-essential tasks, including meetings they deemed "inefficient."

PEP's most recent total of 27.3 hours per person per week devoted to non-essential tasks is actually down by nearly one-third from a 2006 survey's total of 34.9 hours, leading the firm to speculate that U.S. office workers are getting a better handle on their technology.

Tim Stansfield, president of [IET Inc.](#), a consulting firm in Toledo, Ohio, estimates that 50% of the tasks office workers spend their time on are unrelated to their job descriptions. Much of it is just disruption and interference, and is often a product of the environment of their specific organization.

A common goal among his clients, says Stansfield, is to raise their productive time from 50% to 75%, often by reining in meetings.

You did *what* all week?

Handling e-mail	7.3 hours
Handling paper mail	1.0 hours
Attending "ineffective" meetings	2.2 hours
Working overtime	4.4 hours
Delegating work	3.0 hours
Being interrupted	3.8 hours
Looking for information	1.3 hours
Working on backlogs	2.2 hours
Planning work	2.1 hours

Source: PEP Productivity Solutions Inc.,
Fallbrook, Calif.

Crenshaw agrees with the Basex estimate that 28% of an office worker's time is lost to interruptions and recovery time; his own findings range from 25% to 30%. "That amounts to an entire work week every single month," notes Crenshaw, who says he was moved to write the book [The Myth of Multitasking: How 'Doing It All' Gets Nothing Done](#) after seeing clients who were in a permanent state of multitasking.

"The majority of people are caught in a constant round of task-switching, going from site to site, e-mail to e-mail, conversation to conversation. At the end of the day they'll say they were really busy all day long, but if you ask what they did they can't think of anything. That feeling comes from being constantly busy but not accomplishing anything."

Edward Hallowell, a physician in Arlington, Mass., also wrote a book, [CrazyBusy: Overstretched, Overbooked, and About to Snap](#), based on what he'd seen in his practice. "The modern search for stimulation invites multitasking, but the brain can't do it; we don't have the neurological equipment," he says.

"The use of an interactive screen, where you can go back and forth, plugs into the same dopamine circuits that drive most addictions," Hallowell says. "I call the result 'screen sucking' -- you go online to check e-mail and you're still there two hours later. You get a little squirt of dopamine and you want more, like a rat pushing a lever over and over."

He recalls one client who reported she was trying to do three things at a time -- talking on the phone, conversing face to face and answering e-mail -- and not accomplishing any of the three tasks in the course of an hour. Handling the tasks separately, she finished all three in 13 minutes.

Multitasking takes a toll not just on productivity but also on interoffice relationships. "People will interrupt [face-to-face] conversations to answer the phone. It hurts employee morale and customer service," Crenshaw says.

Faceless face time

Perhaps as a result, "people constantly do work while talking, talking to people in their presence while also talking on the phone, or working on the computer while talking on the phone," Crenshaw says.

"I have come across many employees who feel neglected by their managers, since the boss won't fully pay attention to them, or when they do get to talk to the boss they cling as tightly as they can since they don't know when the next opportunity will come."

While Hallowell acknowledges that multitasking is a great way to make boring tasks like data entry seem more tolerable, he counsels employees to reserve time in their business day to interact with colleagues face to face and

Taming the e-mail beast

E-mail is by some accounts the single most potent interruption generator.

Experts agreed on one way to counter that problem: turn off the notification feature and check mail only at intervals. "Anyone can do that, and it will save you hours in a week," notes Dave Crenshaw, a Saratoga Springs, Utah-based executive coach.

Bary Sherman, head of [PEP Productivity Solutions](#), urges users to learn the "rules" feature in Microsoft

to map out uninterrupted time for concentrating on important tasks one at a time.

"If you make better use of your attention, it is a gift you give yourself," he says. You'll get your work done, and as a bonus, he says, "you will feel more energetic, refreshed and alert."

Fewer tools, more rules

Most experts agree it's not the electronics, but the ways people use them, that cause productivity problems.

"A lot of corporations give people tools and don't teach them how to use them," says PEP's Sherman. "If they are demanding more work, they are obligated to show [employees] how to use their tools more effectively," he continues. "People are stealing time from themselves by not using tools that are available."

One big case in point? E-mail, which most employees now regard as essential to their business lives. "E-mail has gone from promise to plague," Sherman says. "It is a lousy collaborative tool, since conversing by e-mail takes 10 times longer than by phone."

To regain control, he suggests that IT should show office workers how to turn off new-mail notifications and set their preferences to check for mail at set intervals only. (See [Taming the e-mail beast](#) for other productivity tips).

Biggest time-wasters

Aside from e-mail, the worst distractions are IM, voice mail, smartphones and, of course, the World Wide Web itself.

"The most abused form of communications is instant messaging," Sherman says. "No one gives people rules for using it. They'll send messages asking if you got their e-mail." As an antidote, Sherman suggests that users master the "presence" notification settings of their IM system so that their correspondents can see whether they are willing to receive instant messages.

As for voice mail, users need to manage expectations by being specific about response times,

Outlook or Lotus Notes, which can categorize incoming e-mail according to its contents and send it to the desired subfolder. "That can clear half your in-box," he says.

Beyond that, with so much business being conducted by e-mail, for a lot of users their in-box constitutes their office archive. Office workers spend significant amounts of time [looking for documents](#), which these days mostly reside in their in-boxes.

Various search tools can be used to probe an in-box's contents, but Sherman dismisses them as inadequate, since they can generate an unworkable number of hits. Instead, he says, users should create a system of e-mail folders and subfolders to classify and store their e-mail, using a naming convention that matches their thought processes and work methods.

"What would you think about if you had to find it six months from now?" Sherman asks. "Naming should reflect how you think, and the better job you do now, the easier it will be to find something later."

"Too often we find people with thousands of e-mails in their in-boxes, because they think it's a good place or they don't know how to create an effective folder system," he adds. "They think they can rely on their sorting system, but they can't, and end up spending hours weekly looking for things.

"If there's no scroll bar at the end of the day in your in-box, you're in good shape; otherwise you need subfolders," Sherman says.

Crenshaw notes. "If your recording says you will get back 'as soon as possible,' that may mean a day to you, but five minutes to someone else, and they will start interrupting you more and more. You should choose a time interval and stick to it."

Meanwhile, efficiency experts agree that the use of BlackBerries and other PDAs in meetings is bad form -- one even suggests that participants be required to park them in hanging shoe holders at the door.

Hallowell tells the story of a lawyer who was able to negotiate a surprisingly good deal for his client during a meeting with opposing lawyers. Later, when he was asked how he managed it, he said, "I was the only one at the meeting not working on a BlackBerry."

Finally, of course, there is the Web and its endless chain of time-sucking links. To keep themselves on track at work, Crenshaw encourages workers to use personal whitelists and blacklists of Web sites, just as corporate security systems do. If users are reminded that they're linking to an off-topic site during business hours, they can perhaps short-circuit another lapse into an open-ended series of task switches. (Crenshaw himself uses the [LeechBlock](#) add-on for Firefox to control his surfing impulses.)

The upside of the PC revolution

Of course, there is a corresponding upside to this productivity downside. The ultimate usefulness of personal computers to the business world is undeniable -- especially when compared to previous paper-based methods.

"At one point, in order to achieve a workgroup consensus, you had to pass around a draft document for everyone to mark up until everyone agreed," points out Michael Liebhold, senior researcher at the [Institute for the Future](#), a think tank in Palo Alto, Calif. "These days, you can do that very quickly with digital documents."

White-collar employees with a digital library at their fingertips find it's easier to do research and to do more of it themselves, he adds. Moreover, "the workforce is more agile due to the ability to stay in contact pervasively, regardless of location," he notes.

At the corporate level, the cost of financial management as a percentage of revenue has been dropping for more than 15 years, thanks to computerization, says Honorio Padron, a consultant in the Atlanta office of [The Hackett Group Inc.](#), a strategic consulting firm.

"With technology, [companies] are able to improve tremendously the way they forecast; they are able to cut inventory levels, maximize their cash flows and meet customer demands in a more satisfactory way," Padron says. And those improvements are all enabled by employees with computers.

In this recession Padron notes, many enterprises have cut back on various departments while demanding the same output. They often ask IT to make up the difference by applying automation. And that puts more pressure than ever on IT to give rank-and-file employees the tools and training they need to ensure that they use their computers productively, and don't simply sit in front of them, entranced.

Lamont Wood is a freelance writer in San Antonio.

