

Web-based computing spurs privacy concerns

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VANCOUVER — Websites that let users edit their resumes, store their photos or even do their taxes from any [Internet connection](#) raise security and privacy concerns as many tasks — and the documents that go along with them — move online, say observers.

The switch to using web-based applications and storage rather than keeping everything on a computer hard drive is part of a growing trend that has been dubbed “cloud computing.”

Examples range from popular services like Google Docs or the web version of QuickTax, which offer software that would normally be used offline, to complex business applications and databases that store information on remote servers.

Google Docs has expanded in the last year, introducing versions in several languages and adding components such as presentation software.

Microsoft is developing an online version of Microsoft Office, which will work in combination with the desktop software, much like Apple's iWork.com. And Adobe's Acrobat.com lets users create PDF documents without special software on their computers.

But the convenience of cloud computing comes with risks, says online security expert Thomas Keenan.

“We're getting into a kind of world where we expect to have everything at our fingertips no matter where we are physically,” says Mr. Keenan, a professor at the University of Calgary.

“When you do this, you have to think about the fact that it's convenient, you can get at your information from anywhere in the world, but so can the bad guys.”

When information is stored on the Internet — in the cloud — it's likely less secure than on a computer hard drive, Mr. Keenan says.

Websites can be targeted by people trying to gain unauthorized access, users sometimes pick insecure passwords, and other users are just plain forgetful, unknowingly leaving their e-mail or banking information open on a public computer.

Another possibility that people don't often consider, Mr. Keenan says, is that the online services that store their e-mail, photos and other documents might not be around forever.

"If Gmail disappeared tomorrow, I would be in a deep mess because I have some information that's stored only in Gmail, and I suspect that 99.9 per cent of the Gmail users are like that," Mr. Keenan says.

"Companies are going bankrupt. I'm not saying Google is going to go bankrupt, but a company could go bankrupt and leave you high and dry."

For their part, the companies that operate cloud computing applications insist their systems — and the information stored on them — are secure.

In fact, Google argues its servers could be more secure than a personal computer.

"We see cloud computing as being at a point similar to when people started realizing their money was safer in a bank than under their mattresses," Google spokeswoman Tamara Micner says in an e-mail.

"Security is built into the DNA of our products."

Ms. Micner says "there will always be security vulnerabilities" with online software, but the company works hard to minimize them.

But privacy expert Greg Elmer at the University of Toronto doubts that people even weigh these issues before using cloud computing services.

And he says many users ignore a larger issue — why companies such as Google offer free software and storage in the first place.

Mr. Elmer notes that firms often mine users' data for market research information or to better target website visitors with advertising.

He says users need to pay attention to who owns or controls that data and what can be done with it — something he will be watching closely as cloud computing becomes more widespread.

"There's questions about who actually ultimately controls these cloud-computing networks. Someone has to ultimately be in control and benefit from them and regulate them," he says.

"I do fear there will only be a select few corporations that are going to be controlling the future of this technology and this trend."

Many online services involve sensitive information, inviting users to submit data such as health or tax records.

A spokesman for Intuit, the company behind the popular QuickTax software, doesn't use the term "cloud computing" for the web version of the program, instead reserving the phrase for larger business applications like Amazon Web Services or Intuit's QuickBase online database.

Even still, Geoffery Morgan says users flocked to the online version of QuickTax, which uses the same security encryption as most banks.

"Online software is growing at a faster rate than the desktop [QuickTax] software," Mr. Morgan says.

"If someone's comfortable with banking online, they should be comfortable doing their taxes online as well."