E-BUSINESS

Biometrics: E-Commerce Security For the New Economy

By Ari Kaplan

Now that e-commerce is the hottest thing since sliced bread, every retailer around is rushing to set up a virtual shop in cyberspace; however, consumers do not want to buy your product until they are sure they can trust your Web site. That means security and biometrics is one of the most sophisticated (not to mention cool) forms of e-commerce security available today.

Biometrics involves electronically checking the identity of a person by measuring one of his or her unique physical or behavioral characteristics. Typical biometric equipment verifies an individual's identity using fingerprints, voice prints, iris patterns in the eye, hand vein patterns, and other exclusive human features.

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Today, most electronic transactions are secured through the use of a personal identification number (PIN) and sometimes a card with a magnetic strip known as a “smart card”. This is and will continue to be inadequate for many types of e-commerce transactions because cards and PINs can be transferred easily.

21st Century Crime

The absence of an improved method of personal identification will likely lead to a further lack of trust in e-commerce. Additionally, an inability to accurately identify individuals may encourage new forms of e-crime.

These days when someone gets a hold of your social security card, they can assume your identity and damage your credit for years. If that person obtains your credit card or bankcard password (e.g., your mother’s maiden name), the damage could be catastrophic.

But, what if your credit card company verified the patterns in your voice before giving you any information over the phone? Or, what if your bank required you to place your hand on your computer screen before conducting business over the Net to verify your fingerprints or the vein patterns in your hand?

These methods would surely provide consumers with the improved personal security they are searching for. In addition to PC users, those engaging in Mobile Commerce (m-commerce) over their cellphones and Palm VIIIs may also someday use and derive comfort from these techniques.

Though individuals stand to derive great benefits in the area of personal security from biometrics, commercial institutions can also join the club. Like the states using fingerprint scanning to prevent welfare and Medicaid fraud, banks, credit card companies and merchants can reduce instances of repudiation of electronically “signed” documents by using biometrics for verification.

The use of biometrics also has great potential for enhancing e-commerce and m-commerce because these forms of conducting business are still developing, and implementing biometrics in their infancy could aid in directing their long-term growth.

Nothing is Sacred

The use of this technology, however, does have significant drawbacks, particularly a severe and additional loss of privacy. As you may know, the loss of personal privacy is a significant issue in e-business today.

Although biometrics has the potential to reduce insecurity over conducting business through the Internet, it strips away yet another layer of our privacy. With biometrically-supported security on the Web, not only will there be a database

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"out there" with your income level, your interests, and your Internet use preferences, it also will contain your fingerprints and blueprints of your retina.

Additionally, developing a central system through which individuals can be identified will enhance the government’s ability to regulate e-commerce. Today, the government is still in a state of confusion over Internet regulation. Much of the confusion comes from the difficulty in regulating a network that is built on anonymity.

If someone using an alias is buying something through the Internet or is engaged in a chatroom discussion, verification of his or her identity may be difficult, and, therefore, regulation of his or her activities is very complicated. But with the ability to identify this individual, and to strip him or her of the anonymous cyber persona, comes an increased ability to regulate and control.

So while biometrics offers individuals and institutions great advantages in conducting business over the Internet, it has the potential of further eroding personal privacy and enhancing government control.

Whether this is an inevitable result of increased e-commerce, I do not know. Nor, do I opine on whether it is positive or negative. I merely note that biometrics is “cool” and you will certainly be seeing more of it, for better or for worse.

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