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Biometrics

Biometrics is the technology of authenticating a person's identity by verifying a personal characteristic. Biometric devices give users access to programs, systems, or room-by-room analyzing some biometric traits (Schmidt 54-62). A biometric trait is a physical of behavioral cartelistic. Examples include finger prints, facial features, hand geometry, voice patterns, signatures and eye pattern.

A biometric device translates personal characteristics into a digital code that is compared with a digital code stored in a computer. If the digital code in the computer does not match the personal characteristic's code the computer denies access to the individual.

The most widely used biometric device today a fingerprint scanner. A fingerprint scanner captures curves and indentations of a fingerprint. With the cost of fingerprint scanners less than $100, experts believe the technology will become the user's authentication device for e-commerce transactions. To conduct a credit-card transaction, the Web site should require users to hold a finger to the scanner. External finger print scanners usually plug into a parallel or USB port. Businesses use fingerprint scanners to authenticate users before they can access a personal computer. Grade schools use fingerprint scanners as an alternative to lunch money. Students' account balances adjust for each lunch purchased.

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According to Carter and Juarez, newer keyboards and notebook computers have a fingerprint scanner built into them (42-53).

Law enforcement, surveillances, airport delays, day-care centers, financial intuitions, the military, and other organizations that deal with highly sensitive data use other types of biometrics. A face recognition system captures live face images and compares it to stores images. A hand geometry system measures the shape and size of a person's hand (*Computers and Biometrics*). A voice verification system compares with a person's live speech with his or her stored voice pattern. A significant verification system recognizes the shape of a handwritten signature, as well as measuring the pressure exerted and the motion used to write the signature. Finally, and iris recognition system reads the patterns in the iris of the eye.

Carter, Donnell W., and Louis C. Juarez. *Securing Confidential Data Entered into a Computer*. Boston: Thomas Publishing, 2005.

Computers and Biometrics. Shelly Cashmen Series®. Course Technology. 3 Oct. 2005. http://www.scsite.com/wd2003/pr2/wc.htm

Schmidt, Karl J. "Biometrics and Authenticating Systems Users" *Computers and the Internet* Aug. 2005:54-62