

Implementing biometrics



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Biometrics is a way of identifying individuals based on biological and behavioral traits. Although biometric systems have been tested for a few decades, only until recent has the technology entered public awareness due to its increased usage amongst government programs and corporations. Biometrics are primarily implemented for identity access management for information system purposes, and access control such as unlocking a vehicle or entering a secured location in a building. Examples of characteristics measured by biometric systems include: face, fingerprints, hand geometry, handwriting, iris, retinal, vein, and voice.

When implementing a typical biometric system, one thing to note are five components which include a sensor, signal processing algorithms, data storage, matching algorithms, and decision processing. Biometric standards are being developed on national and international levels. The purpose of creating these standards is to create a simpler environment for deployment of biometric systems across organizations. Standards will also help reduce the cost and enable interoperability. Standards are being developed for technical interfaces, data interchange formats, testing and reporting, and societal issues. Some of the organizations developing biometric standards include InterNational Committee for Information Technology Standards (INCITS) M1, National Institute of Standards and Technology, and Organization for Advancement of Structured Information Standards (OASIS).

Like anything, there are advantages and disadvantages to biometrics. Some of the challenges organizations face when implementing a biometrics system is due to the lack of understanding of the technology and the environment in which the system will be implemented. The overall goal of the system is to

uniquely identify based of physical or behavioral traits. However, because the system relies on what should be a constant, there should be a contingency measure because there are many scenarios in which a person can no longer be identified by the system. Other challenges could include the systems error rate and user acceptance. If the challenges can be overcome, biometrics can bring great benefits such as ordering items online, purchasing gas, groceries, and much more, all by use of a finger print.