BIOMETRICS TECHNOLOGY

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AGENDA

- Overview
- Definition
- History
- Current State
- Future State

OVERVIEW

- This presentation will be focusing on the use of Biometrics Technology and it's role in today's society along with how this technology is helping to combat our war with cyber crimes and terrorism.
- This technology offers us new options on how we want to secure our current and future Information Technology (IT) Infrastructure for both commercial and government clients.
- The use of this technology is needed now more than ever considering that everything we do is tied to a technology device which connects us online in one way or another.

DEFINITION

What is Biometrics Technology?

- Biometrics refers to the identification of humans by their characteristics or traits. Biometrics is used in computer science as a form of identification and access control. It is also used to identify individuals in groups that are under surveillance.
- The common biometrics used in majority of Biometric solutions today are use of:

* Iris – the use of one or both of the **irises** of an individual's eyes, whose complex patterns are unique, stable, and can be seen from some distance.

* facial –measures and matches the unique characteristics for the purposes of identification

* Voice- Voice recognition, also commonly referred to a voiceprint, is the identification and authentication arm of the vocal modalities.

* Finger Prints - methods of recognizing a person based on a physiological or behavioral characteristic.

- Biometrics technology in a primitive form first start showing up back in the 1800's where a Persian anthropologist and police known as Bertillonage.
- This system was developed using measurements of the body are taken for classification and comparison purposes. This system recorded markings on the skin such as birth marks, scars, tattoos and other identifying marks which are unique to the persons being used as part of this process.
- Finger printing is probably the most common biometrics identifier which started back in 14th century China. Fingerprints were first used as a method of identifying criminals.
- The use of IRIS and Voice for Biometrics didn't evolve until the 2k era when Intelligence agencies and governments were looking to expand their capabilities for tracking people with these additional technology options.

HISTORY

CURRENT STATE

- We need to think about Biometrics as the future to replace password technology, There are lot of benefits using biometrics, I see that we will integrate all computing devices with biometric readers of some kind to capture fingerprint, optical, voice or facial . These can be as simple as using a laptop , mobile device to capture that information and send over to the corresponding accepting system you need to get access to.
- 1. Ecommerce or In person shopping (validate identity to complete purchase)
- 2. Credit Applications and Inquires (Applying for credit , biometrics will validate identity of requester so they can complete a credit application or inquiry on line or in person at a store, Eliminates the risk to cyber thieves stealing your identity to open credit with your identity).
- 3. Job application or Interviews can require biometrics which can validate the identity of the candidate with the appropriate government agencies to further validate (citizenship status, education,court records,). We hear of so many cases of a person being interviewed by phone and then someone else shows up on face to face interview, This is more in IT area you find this).
- 4. Testing Centers can use this to validate testers who may be taking a test like SAT,ASVAB, GMAT, PMP or any other professional certification).
- 5. Work and School Access via use of Biometrics instead of card key access, This can be helpful to ensure employees are actually at work when they are suppose to and not having someone clock them in or using their card key access card.
- 6. Banking and Mortgage Industry can use Biometrics as well to have customers validate identity for all transactions that are being done why should we still be using driver's license and 100 year old technology for identity verification, You see it in movies and hear about in the news that someone used a fake id to steal someone's identity.
- 7. Healthcare can also benefit from this so patients identities are validated with biometrics where we don't have to keep asking for their last 4 numbers of their SSN (Social Security Number).
- 8. Genealogy matching birth parents with kids who they lost through adoption or family members who for one reason or another were separated and are seeking to reconnect.

- The future state of using Biometrics needs to embraced and we need to move away from old school technology of key cards, passwords, pins and toggle id cards.
- The challenges we will face to implement these new technologies will be costs and governmental opposition of asking or requiring someone's unique biometrics such as iris, voice, fingerprints and facial.
- The concerns for future Implementations are how can we integrate our security and technology infrastructure to use biometrics as the primary driver for authentication and access controls.
- We need to make sure that the data captured for biometrics are encrypted and secured locally and in a cloud solution so can be access by multiple locations at any given time.

FUTURE STATE

REFERENCES

- http://www.globalsecurity.org/security/systems/biometrics-history.htm
- http://searchsecurity.techtarget.com/definition/biometrics
- http://www.biometricsinstitute.org/pages/types-of-biometrics.html
- http://www.makeuseof.com/tag/the-history-of-biometric-security-and-how-its-being-used-today

THANK YOU!