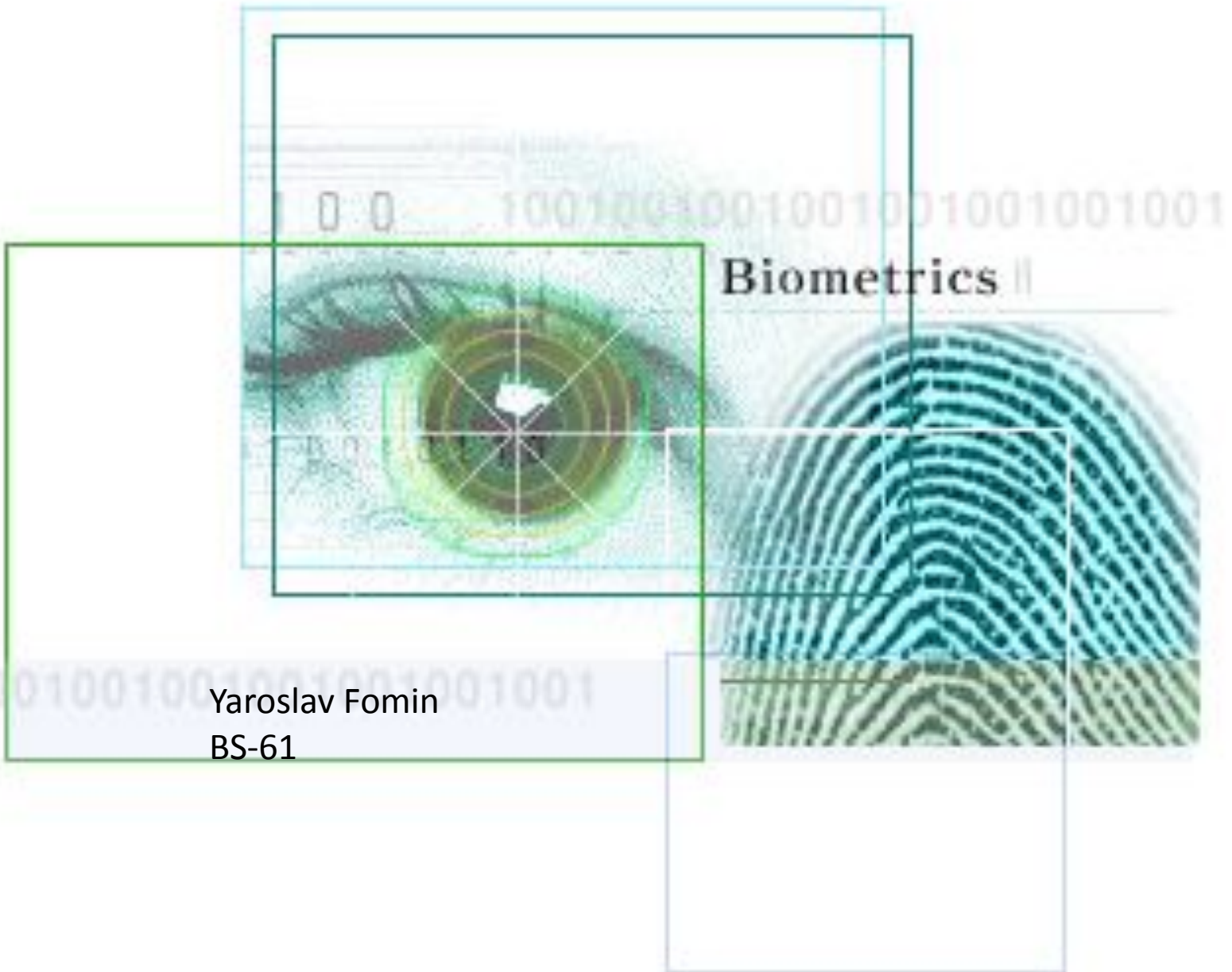


Biometrics II

Yaroslav Fomin
BS-61





ROADMAP

- Biometrics Definition
- Different types
- Future
- Advantages
- Disadvantages
- Common Biometric Report
- Current Issues



BIOMETRICS DEFINITION

-In the terms of computer security, biometrics refers to authentication techniques that rely on measurable physiological and individual characteristics that can be automatically verified.

-Biometrics authentication, also known as realistic authentication, 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.



DIFFERENT TYPES OF BIOMETRICS

DNA Matching

Chemical Biometric The identification of an individual using the analysis of segments from DNA.

Ear

Visual Biometric The identification of an individual using the shape of the ear.

Eyes - Iris Recognition

Visual Biometric The use of the features found in the iris to identify an individual.

Eyes - Retina Recognition

Visual Biometric The use of patterns of veins in the back of the eye to accomplish recognition.

Face Recognition

Visual Biometric The analysis of facial features or patterns for the authentication or recognition of an individual's identity. Most face recognition systems use local feature analysis.



DIFFERENT TYPES OF BIOMETRICS

Fingerprint Recognition

Visual Biometric The use of the ridges and valleys found on the surface tips of a human finger to identify an individual.

Finger Geometry Recognition

Visual/Spatial Biometric The use of 3D geometry of the finger to determine identity.

Typing Recognition

Behavioral Biometric The use of the unique characteristics of a persons typing style for establishing identity.

Hand Geometry Recognition

Visual/Spatial Biometric The use of the geometric features of the hand such as the lengths of fingers and the width of the hand to identify an individual.

Signature Recognition

Visual/Behavioral Biometric The authentication of an individual by the analysis of handwriting style, in particular the signature.

Voice - Speaker Verification / Authentication

Auditory Biometric The use of the voice as a method of determining the identity of a speaker for access control.



FUTURE OF BIOMETRICS

Odor

Olfactory Biometric The use of an individuals odor to determine identity.

Vein Recognition

Vein recognition is a type of biometrics that can be used to identify individuals based on the vein patterns in the human finger or palm.

Body Geometry Recognition

Visual/Spatial Biometric The use of 3D geometry of a persons body type to determine identity.

Gait

Behavioral Biometric The use of an individuals walking style or gait to determine identity.



Source: Fujitsu Limited

ADVANTAGES

- Huge increase in overall security
- No longer have to deal with lost ID Cards or forgotten passwords
- Lower password administration costs
- Helps allow a company to see where everybody is at a certain time when something might have happened that needs reviewed
- Passwords and ID Cards can no longer be shared or stolen



DISADVANTAGES

- As some people age, their voice may change and may no longer be recognized by the system
- Some people who have diabetes deal with changes in their eyes that the system won't recognize
- Biometrics are very expensive at the moment
- Some people in different industries may no longer have matching fingerprints because of burns, using chemicals, or any other incident that might affect the fingertips



CURRENT ISSUES WITH BIOMETRICS



- Personal Privacy
- Unauthorized collection
- Unnecessary collection
- Usage as unique identifier

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