



Health, Medicine and Biotechnology

HeartBeatID

Patent Only, No Software Available For License.

One or more biometric indicia, such as fingerprints, voice-prints, retinal scans, and facial features are often proposed to be used to identify, or to authenticate the asserted identity of a user who seeks access to a given resource. This invention provides a method and associated system for authenticating or declining to authenticate an identity asserted by a candidate person. The heartbeat system is a new biometric technique to verify someone's identity. It can be used in everything from replacing an individuals PC passwords to access a bank account.

BENEFITS

- Physiological parameters
- Living biometric characteristics
- Accuracy and precision
- Ability to identify if a subject is already in the database
- Friendly Graphical User Interface
- High speed due to C++ code
- Portability to mobile platforms
- Highly secure High universality
- High Uniqueness

technology solution



THE TECHNOLOGY

Cardiac muscle is myogenic and is capable of generating an action potential and depolarizing and repolarizing signals from within the muscle itself. An intrinsic conduction system (ICS), a group of specialized cardiac cells, passes an electrical signal throughout the heart. This technology is a method and associated system to identify a person based on the use of statistical parameters, peak amplitudes and/or time interval lengths and/or depolarization-repolarization vector angles and/or depolarization-repolarization vector lengths for PQRST electrical signals associated with heart waves. The statistical parameters, estimated to be at least 192, serve as biometric indicia to authenticate or to decline to authenticate an asserted identity of a candidate person. There are three on-line modes of operation enrollment, verification, and identification as well as two off-line modes statistics and settings. In enrollment the raw electrocardiography (ECG) signal is processed and the results in the form of parameters are serialized and saved. Verification and Identification procedures use the feature parameters for recognition (classification) of subjects based on the same kind of parameters (features) of heartbeats extracted from the ECG signal of a person to be verified or identified.



Internet security - one of the key applications of the technology

APPLICATIONS

The technology has several potential applications:

- ➔ Identity Verification
- ➔ Justice/Law Enforcement
- ➔ Mobile Biometrics
- ➔ Banks and financial institutions
- ➔ Network Login Solution
- ➔ PC/Laptop Security
- ➔ Time and Attendance
- ➔ Healthcare Biometric
- ➔ Logical Access Control
- ➔ E-commerce and Web Applications
- ➔ Homeland Security / Airports / National ID Documents

PUBLICATIONS

Patent No: 8,489,181

National Aeronautics and Space Administration

Agency Licensing Concierge

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