

MONEYPAD, THE FUTURE WALLET



SATISH VERMA

WHAT IS MONEYPAD ?

Money Pad - A form of credit card or smart card similar to floppy disk, which is introduced to provide, secure e-cash transactions.

The Money Pad introduced here uses the biometrics technology for Finger Print recognition. Money Pad is a form of credit card or smartcard, which we name so.

Every time the user wants to access the Money Pad he has to make an impression of his fingers which will be scanned and matched with the one in the hard disk of data base server. If the finger print matches with the user's he will be allowed to access and use the Pad otherwise the Money Pad is not accessible. Thus providing a form of security to the ever-lasting transaction currency of the future "e-cash".

HOW IT WORKS ?

Biometrics

Biometrics comprises methods for uniquely recognizing humans based upon one or more intrinsic physical or behavioral traits. In computer science, in particular, biometrics is used as a form of identity access management and access control. It is also used to identify individuals in groups that are under surveillance.



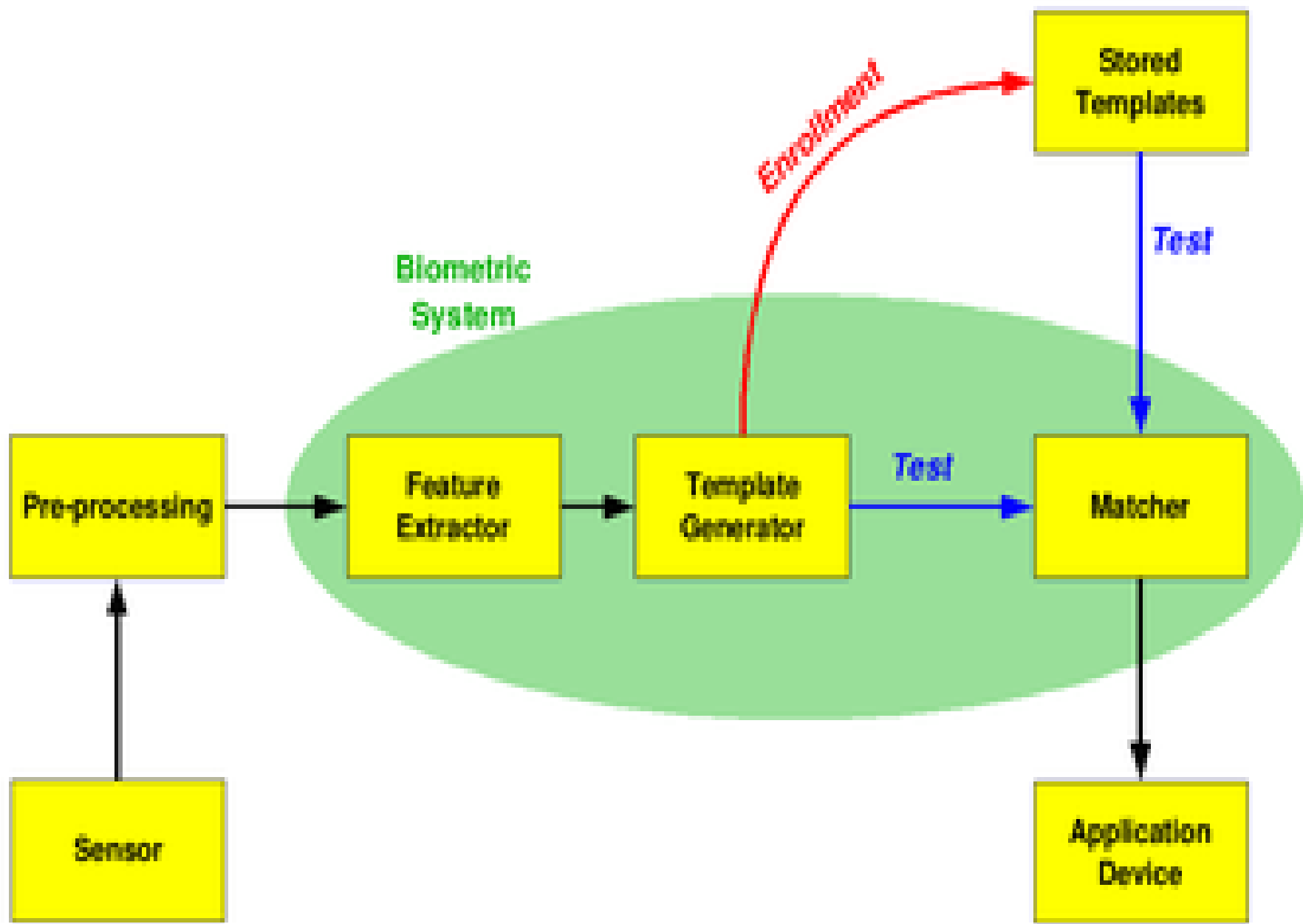
BIOMETRIC CHARACTERISTICS CAN BE DIVIDED IN TWO MAIN CLASSES:



Physiological



Behavioral



A BIOMETRIC SYSTEM CAN OPERATE IN THE FOLLOWING TWO MODES:



Verification



Identification

PERFORMANCE

- false accept rate or false match rate (FAR or FMR)
- false reject rate or false non-match rate (FRR or FNMR)
- receiver operating characteristic or relative operating characteristic (ROC)
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- equal error rate or crossover error rate (EER or CER)
- failure to enroll rate (FTE or FER)
- failure to capture rate (FTC) template capacity

IDENTITY ENABLED BIOMETRICS

"Biometric information exhibits an inherent reliability, whether it is collected overtly or covertly. Biometric identity data is readily indexed, sorted, and stored. Intelligence analysts and law enforcement personnel use it as the central criteria to establish identity and as a basis to recommend action." Identity Enabled Biometrics seeks "to turn disparate pieces of data into meaningful analytics and substantive intelligence". To do this "raw biometric information is fused with contextual information to produce useful and actionable intelligence." For example, Booz Allen claim it can be used to answer questions such as:

- "How can faces in the crowd be linked to other intelligence information?"***
- "Is the presence of multiple people in the same location an event of interest?"***
- "Can the anticipated presence of an individual be exploited?"***

ISSUES AND CONCERNS

- Privacy and discrimination
- Danger to owners of secured items
- Cancelable biometrics
- Governments are unlikely to disclose full capabilities of biometric deployments

COUNTRIES APPLYING BIOMETRICS

➤ UNITED STATES

The United States government has become a strong advocate of biometrics with the increase in fear of terrorism since September 11, 2001.

The FBI is currently spending \$1 billion to create a new biometric database, which will store DNA, fingerprints, and other biometric data. The computers running the database will be contained in an underground facility about the size of a football field.

Both the Department of Homeland Security and DARPA are heavily funding research into facial recognition systems. The Information Processing Technology Office, ran a program known as Human Identification at a Distance which developed technologies that are capable of identifying a person at up to 500 ft by their facial features.

President Bush issued a presidential directive (NSPD 59, HSPD 24)¹ in 2008 which requires increased capability for sharing and interoperability in "collection, storage, use, analysis, and sharing of biometric and associated biographic and contextual information of individuals" among the departments and agencies of the executive branch of the U.S. federal government. Starting in 2005, US passports with facial (image-based) biometric data were scheduled to be produced. Privacy activists in many countries have criticized the technology's use for the potential harm to civil liberties, privacy, and the risk of identity theft. Currently, there is some apprehension in the United States (and the European Union) that the information can be "skimmed" and identify people's citizenship remotely for criminal intent, such as kidnapping.

➤ GERMANY

The biometrics market in Germany will experience enormous growth until 2009. “The market size will increase from approximately 12 million € (2004) to 377 million €” (2009). “The federal government will be a major contributor to this development”. In particular, the biometric procedures of fingerprint and facial recognition can profit from the government project. In May 2005 the German Upper House of Parliament approved the implementation of the ePass, a passport issued to all German citizens which contain biometric technology. The ePass has been in circulation since November 2005, and contains a chip that holds a digital photograph and one fingerprint from each hand, usually of the index fingers, though others may be used if these fingers are missing or have extremely distorted prints. “A third biometric identifier – iris scans – could be added at a later stage”. An increase in the prevalence of biometric technology in Germany is an effort to not only keep citizens safe within German borders but also to comply with the current US deadline for visa-waiver countries to introduce biometric passports

Germany is also one of the first countries to implement biometric technology at the Olympic Games to protect German athletes. “The Olympic Games is always a diplomatically tense affair and previous events have been rocked by terrorist attacks - most notably when Germany last held the Games in Munich in 1972 and 11 Israeli athletes were killed”.

Biometric technology was first used at the Olympic Summer Games in Athens, Greece in 2004. “On registering with the scheme, accredited visitors will receive an ID card containing their fingerprint biometrics data that will enable them to access the 'German House'. Accredited visitors will include athletes, coaching staff, team management and members of the media

Since the beginning of the 20th century, Brazilian citizens have had user ID cards. The decision by the Brazilian government to adopt fingerprint-based biometrics was spearheaded by Dr. Felix Pacheco at Rio de Janeiro, at that time capital of the Federative Republic. Dr. Pacheco was a friend of Dr. Juan Vucetich, who invented one of the most complete tenprint classification systems in existence. The Vucetich system was adopted not only in Brazil, but also by most of the other South American countries. The oldest and most traditional ID Institute in Brazil (Instituto de Identificação Félix Pacheco) was integrated at DETRAN^[25] (Brazilian equivalent to DMV) into the civil and criminal AFIS system in 1999.

By the end of 2005, the Brazilian government started the development of its new passport. The new documents started to be released by the beginning of 2007, in Brasilia. The new passport included several security features, like Laser perforation, UV hidden symbols, security layer over variable data and etc. Brazilian citizens will have their signature, photo, and 10 rolled fingerprints collected during passport requests. All of the data is planned to be stored in ICAO E-passport standard. This allows for contactless electronic reading of the passport content and Citizens ID verification since fingerprint templates and token facial images will be available for automatic recognition.

Biometrics are being used extensively in Iraq to catalogue as many Iraqis as possible providing Iraqis with a verifiable identification card, immune to forgery. During account creation, the collected biometrics information is logged into a central database which then allows a user profile to be created. Even if an Iraqi has lost their ID card, their identification can be found and verified by using their unique biometric information. Additional information can also be added to each account record, such as individual personal history.



India has planned an ambitious mega project to provide a unique identification number to each of its 1.25 billion people. The Identification number will be stored in a central databases. consisting the biometric information of the individual. If implemented, this would be the biggest implementation of the Biometrics in the world. India's Home Minister, P Chidambaram, described the process as "the biggest exercise... since humankind came into existence". The government will then use the information to issue identity cards. Officials in India will spend one year classifying India's population according to demographics indicators. The physical count will begin on February 2011



Italy has standardized protocols in use to police forces. Specialist and University Faculty *[Enrico Manfredi d'Angrognà Luserna v. Staufen](#) Rome University Tor Vergata - Siena University

➤ UNITED KINGDOM

Fingerprint scanners used in some schools to facilitate the subtraction of funds from an account financed by parents for the payment of school dinners. By using such a system nutritional reports can be produced for parents to surveil a child's intake. This has raised questions from liberty groups as taking away the liberty of choice from the youth of society. Other concerns arise from the possibility of data leaking from the providers of school meals to interest groups that provide health services such as the NHS and insurance groups that may end up having a detrimental effect on the ability of individuals to enjoy equality of access to services.

➤ AUSTRALIA

Visitors intending to visit Australia may soon have to submit to biometric authentication as part of the Smartgate system, linking individuals to their visas and passports. Biometric data are already collected from some visa applicants by Immigration. Australia is the first country to introduce a Biometrics Privacy Code, which is established and administered by the Biometrics Institute. The Biometrics Institute Privacy Code Biometrics Institute forms part of Australian privacy legislation. The Code includes privacy standards that are at least equivalent to the Australian National Privacy Principles (NPPs) in the Privacy Act and also incorporates higher standards of privacy protection in relation to certain acts and practices. Only members of the Biometrics Institute are eligible to subscribe to this Code. Biometrics Institute membership, and thus subscription to this Code, is voluntary.



Canada has begun research into the use of biometric technology in the area of border security and immigration. Citizenship and Immigration Canada and the Canada Border Services Agency will probably be the first government institutions to fully implement the technology in Canada.



The Israeli government has passed a bill calling for the creation of a biometric database of all Israeli citizens; the database will contain their fingerprints and facial contours. Upon enrolling, a citizen would be issued a new form of an identification card containing these biometrics. The law is currently in its trial period, during which enrollment is optional; pending on successful trial, enrollment would be mandatory for all citizens.[[] Opponents of the proposed law, including prominent Israeli scientists and security experts, warned that the existence of such a database could damage both civil liberties and state security, because any leaks could be used by criminals or hostile individuals against citizens

SmartGate was launched by the New Zealand government at Auckland International Airport on Thursday 3 December 2009. It will begin operating in Wellington and Christchurch from next year.

The kiosk and gate system will allow all New Zealand and Australian electronic passport holders over 18 to clear passport control without needing to have their identity checked by a Customs officer.

Deputy comptroller of customs John Secker said SmartGate represented probably the biggest single development in border processing in New Zealand in the past two decades. People will have a choice whether they want to use the system or go through normal passport control.

