

How to use Smart Cards as a Medical Assistant

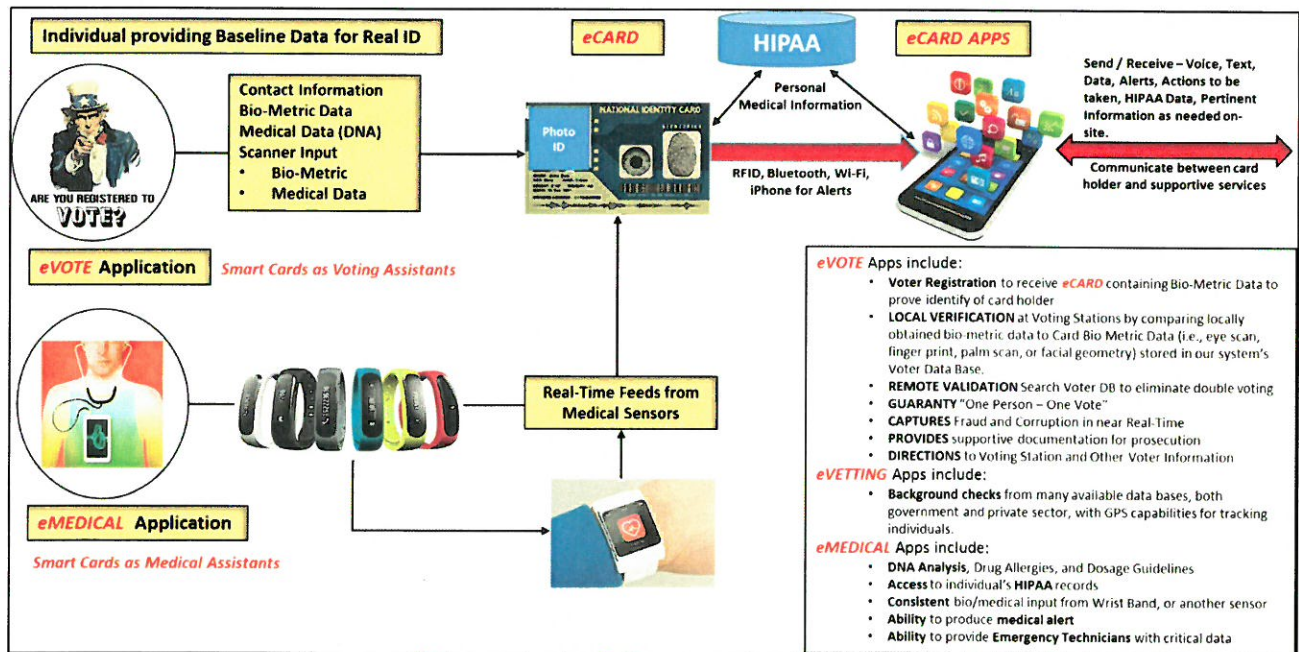
A White Paper by Thomas Bronack

The Real ID Act of 2008

In 2005 congress enacted the “Real ID Act of 2005” from a recommendation the 911 Commission made to insure that people can be recognized through their Personal ID Card. The Act laid out Minimum Requirements which were basically the individual’s name and address contact information and a digital picture capable of supporting Facial Recognition. This Act was made the responsibility of States to implement and a “due by date” of January 22, 2018 was set as the completion date beyond which extensions will no longer be issued. If non-compliant, then State issued picture IDs will not be sufficient to pass TSA security and you will not be allowed to fly commercial airlines unless you have a federally issued ID card like a Passport. There is a funding assistance clause in the Act that will help States implement standards that meet the Act’s Minimum Requirements. The approach described within this White paper will certainly meet and exceed the Act’s Minimum Requirements.

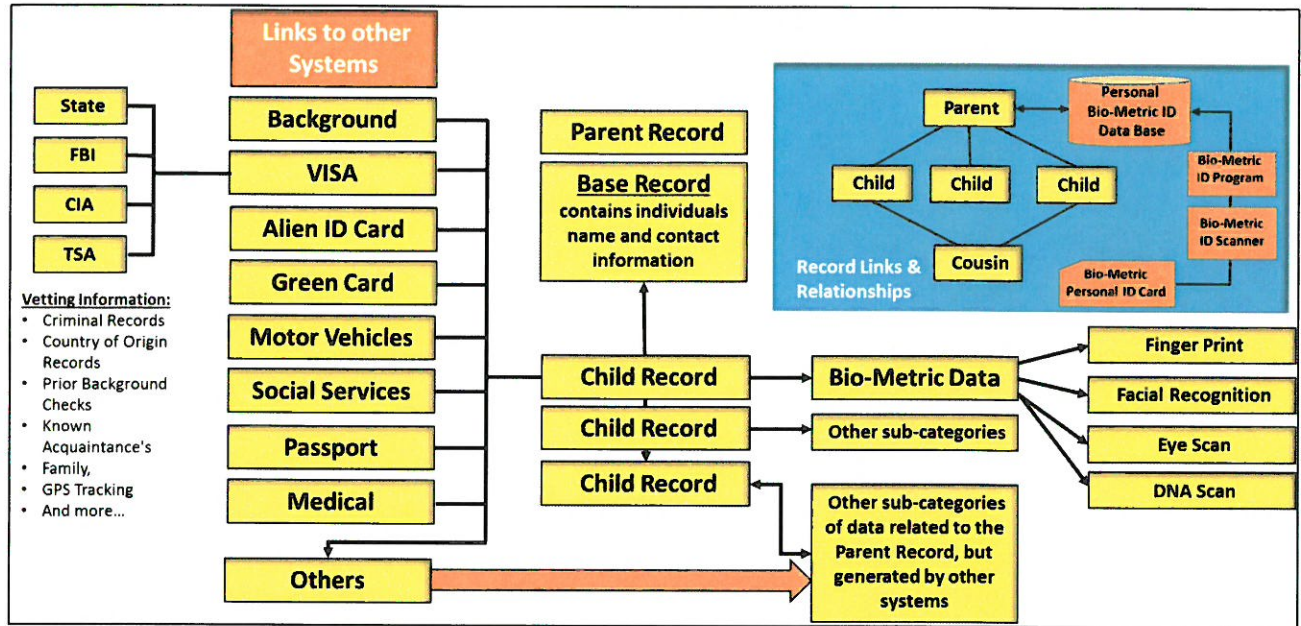
Where we are today

Today, Smart Cards can enhance the information contained in a Personal ID Card beyond the Minimum Requirements established by the Real ID Act of 2005. This additional information can be used to support a wide-range of needs, addressed within this White Paper showing how a **Universal Personal ID Card** can be populated with Bio-Metric and Medical Data (including DNA) to assist the card holder in the event of a Medical Emergency, or to validate their entry to sensitive services (i.e., **eVETTING**, Voting, Driver’s License, etc.), or to even eliminate Passwords going forward.



To begin with, the Individual will have to obtain a Universal Personal ID Card created through a process that would enter their Name and Contact information as a Parent Record, and then create Child Records

for Bio-Metric Data, Medical Data, and other categories of sensitive information all connected to the parent as a Child record. This structure will allow the Child Records to be examine without revealing who they belong to unless a legal document grants access. This Parent / Child data structure is depicted in the Blue Area of the below illustration. There is even a Cousin Record (think “Known Associate”, or “Family Member”) that would allow law enforcement to track terrorist or gang members as a group.

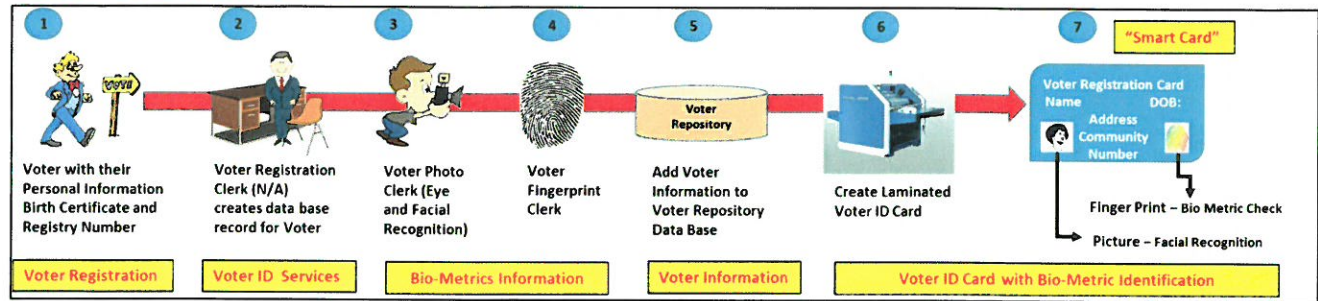


eCARD

We have developed a system that creates a Universal Personal ID Card based on Bio-Metric Information (i.e., Eye Scan, Finger Print, Palm Print, Facial Geometry, and even DNA) that can guaranty you are who you claim to be. We use this card to support our **eVOTE** electronic voting system and our **eMEDICAL** medical assistant system. As you can see from the first exhibit, it is possible to utilize a medical Wrist Band to provide constant medical sensor information that can be combined with the **eCARD** to identify medical emergencies and issue an Alert Call via RFID, Bluetooth, and Wi-Fi through your cell phone. A Smart App can be loaded onto your cell phone to support this activity and more. For example, your medical information has already been digitized and stored in a data base system associated with your doctor(s). Unfortunately there are many medical data base systems and they are not all connected. In order for your records to be consolidated into a single medical data base you must provide permission to an agency or private company to achieve this goal. Once achieved, you and your doctors should be allowed access to your medical records via a smart app (**eCARD APPs**) or PC / Server based system.

Should you be in a medical emergency like a car accident and you’re unconscious, how will the emergency medical technicians (EMT), or First Responder, know what you’re allergic to, or the recommended dosage guideline amounts, or other critical information contained in your **HIPAA** medical record. The **eCARD** and **eMEDICAL** Application will address that problem by recognizing the medical emergency, issuing an alert call, and notifying your personal physician of the event. The EMT can use the information in your **eCARD** and **eMEDICAL** application to obtain critical information that would assist them in diagnosing and treating your ailment, while your personal physician can be easily contacted.

eCARD Creation Process



Although the above process is related to creating a Voter ID Card, it illustrates how **eCARD** Universal Personal ID Smart Card is created, including the following steps:

1. An individual enters a location where **eCARD** Smart Cards are created (i.e., Voter Registration, DMV for a Driver's License, Department of state, Treasury, and Justice, etc.),
2. They provide a Clerk with their personal name and contact information,
3. Their digital picture is taken,
4. Their finger print(s) and other bio-metric information is collected (DNA can be digitized and added to the card along with the bio-metric information, thereby providing both bio-metric and medical information all stored within the chip of the **eCARD** Smart Card),
5. All of the individual's information is added to the Voter Data Base, or other sensitive file associated with a specific application,
6. The individual's information is downloaded to a smart card machine where the **eCARD** Smart Card is created (think of this card as a Universal Personal ID Smart Card), and
7. The **eCARD** Universal Personal ID Smart Card is produced and provided to the individual.

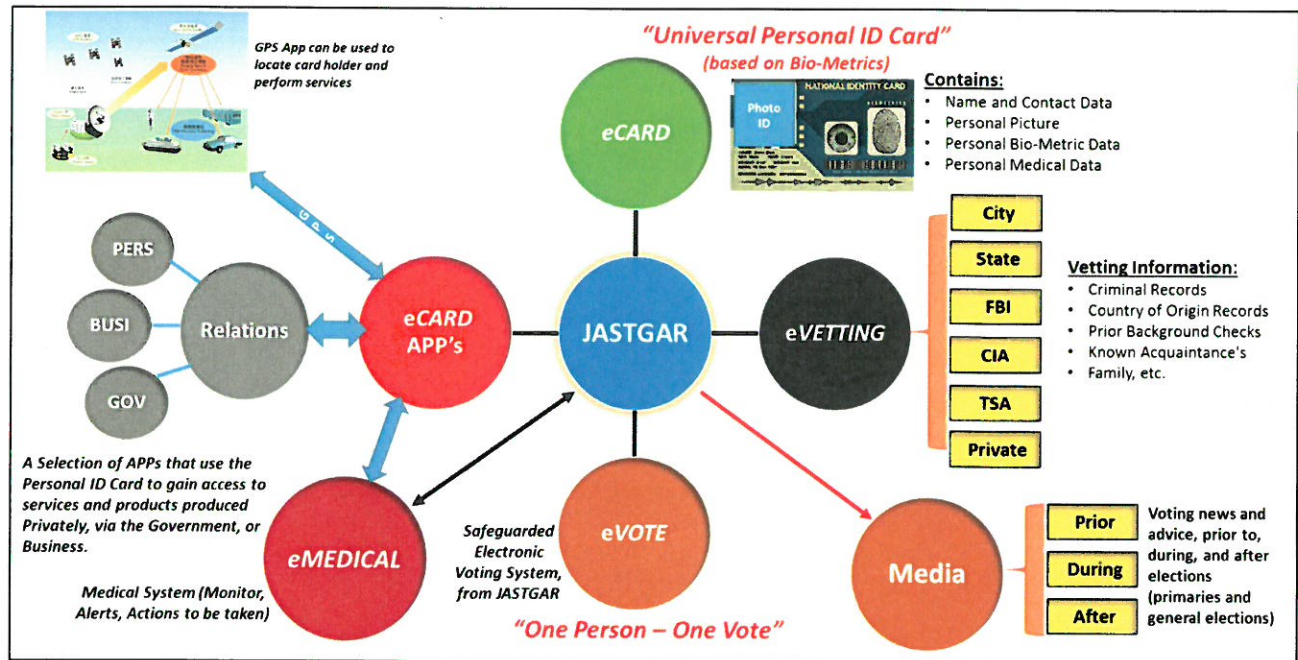
Many uses from a single eCARD Smart ID Card

The **eCARD** Smart ID Card can be used for many functions and services, like:

1. **eVETTING** – to validate a person's background and to establish baseline identification for individuals entering the USA without any information from their country of origin due to war-time or terrorist activities. This application can be used by government and private sector enterprises to vet personnel they employ, contract, or are entering their premises for delivery or work assignments.
2. **Immigration and Naturalization** – can utilize the **eCARD** as a means for identifying, tracking, and locating aliens entering the United States for a predetermined period of time, or for visiting a specific location or area. The **eCARD** can serve as a VISA, Alien Card, or even a Green Card.
3. **Government Services** – ranging from Social Services, through Homeland Security, to Motor Vehicles Licenses can all utilize the **eCARD** to support their present identification methods.
4. **Private Sector Enterprises** – can use the **eCARD** as an employee ID that can support Entitlements, and physical access to restricted areas.
5. **Cashless Society** – the **eCARD** can be used to support a cashless society where cash is replaced with Electronic Funds Transfer (EFT) as a currency, which would eliminate / reduce crimes related to the theft of money.
6. **Improved Personal Services** – through Mobile Apps and Server / PC based applications requiring guaranteed identity prior to receiving / transmitting sensitive data.

The JASTGAR family of products

The relationship of our products is shown in this diagram and it includes *eCARD*, *eCARD APP's*, *eVETTING*, *eMEDICAL*, and *eVOTE*.



The JASTGAR family of products are based on the *eCARD* to identify users and provide them with authority to enter the applications and services we provide. It is important to us that we know our customers and that we safeguard their data and identity from unauthorized access. We could not achieve this goal if we were not absolutely sure that we knew the identity of an authorized user. You can't give a friend your bio-metric information to log on with, only you can.

Benefits derived from using the *eCARD* and *eCARD APP's*

1. The first benefit received is that you will have a **Universal Personal ID Card** that can be accepted by the Public and Private sector alike which will reduce / eliminate the need to have many cards for work and your private life (think one card for all services).
2. **Security** can be enhanced by maintaining an encrypted Password on the card that can be universally accepted to gain access to your accounts, while data at rest and data in motion would be encrypted with a unique key that can be generated from your bio-metric information, thereby guarantying data protection.
3. **Protection** against ID Theft because nobody could duplicate the information on your *eCARD*.
4. Ability to **respond to emergency situations** through sensors, alerts, and actions to be taken guidelines and services.
5. **Ability to monitor** your medical status and surrounding area for conditions that may be dangerous (i.e., Law Enforcement Alerts, Extreme Weather, Pollen, Pollution, etc.).
6. **Ability to provide critical medical information** to your physician and emergency medical staffs, including access to your medical history and guidelines contained in HIPAA and DNA Analysis records.

A scenario on how *eMEDICAL* can help in a crisis



Bringing all of the uses of *eCARD* and *eMEDICAL* together into a scenario like the one illustrated above would provide individuals with the best medical assistance possible by combining baseline medical and bio-metric information contained within the eCARD chip with real-time medical sensor information to monitor fluctuations crossing Thresholds (i.e., pulse rate, blood pressure, sugar level, or other indicators related to the patient's needs), initiating Alerts (medical, family, etc.), and taking pre-defined Actions to respond to a medical crisis (like a stroke, or a heart attack, or an accident like the one depicted above).

The *eCARD* guaranty's the person's identity and can be used to gain access to critical medical data by authorized personnel (EMT's, Emergency Room Physicians, Primary Care Physician, etc.). The *eMEDICAL* process will insure that medical practitioners have the information they need to quickly and accurately diagnose a patient's condition, via medical information and the DNA Analysis. *eMEDICAL* also provides the patients history and drug allergies, along with dosage guidelines. Through this process, the doctor / patient relationship is maintained and all relevant information needed by the physician to best diagnose and treat the patient is readily available.

Moving forward

Technology has advanced rapidly in the past few years, and it is anticipated to move even faster in the future, providing breakthroughs every day. There is no reason that the services outlined in this White Paper cannot be delivered in the short term. When delivered *eMEDICAL* will promote a healthier and happier life going forward.

We can eliminate many problems related to drug allergies and reactions resulting from prescribing the wrong drug or dosage. We can also improve personnel security and help people avoid dangerous areas and/or conditions through warnings and alerts.

People can safeguard their medical condition through monitors, alerts, and action directives that can be used by emergency medical technicians and first responders should you be involved in an accident. Sensor levels passing defined thresholds (either up or down) can be used to provide alerts and to initiate pre-defined "Actions to be taken" like adjusting a drug dosage.

Access to your HIPAA medical records can be performed in times of emergency as well, or you can examine your records to better understand your medical history and status. Perhaps taking advantage of new service offerings that can examine your medical records and provide guidance in terms you can understand, all leading to a better and healthier lifestyle.

We are very excited about the future and how bio-metrics and medical information can be used to better your conditions and ease many burdens that presently exist. Should you want to further explore this path, feel free to contact me at bronackt@gmail.com.

Tom Bronack