

CASE STUDY

UNITED STATES GREEN CARD US BORDER SECURITY CANADIAN PERMANENT RESIDENT ITALIAN IDENTITY CARD

Summary

ID Data plc, the UK smart card manufacturer, has a teaming agreement with LaserCard in the US for the supply of its optical memory cards. ID Data can therefore offer the option of chip card, laser card or a combination of both.

A major application for laser cards is identity and security. The cards have now replaced the previous US Green Card and is used as a border control card to secure borders with both Canada and Mexico.

Recently the card has been adopted by the Italian government and will be issued as a national Identity Card using both a standard chip and optical memory.

Some of the key reasons for adopting the technology are

- High level of security
- Ability to verify cardholders very quickly
- Durability of the card

The technology is now well established and is achieving all its goals.

Details

The Green Card

In 1996, the U.S. Immigration and Naturalization Service (INS) (now known as U.S. Department of Homeland Security) issued a tender to create a new version of their Permanent Resident Card, commonly known as the "Green Card." The sole objective was to develop the most counterfeit-resistant document possible, while implementing machine-readable biometric elements and secure media.

LaserCard Corporation proposed a solution based on optical memory, and won this tender. To date, more than ten million Green Cards have been issued, at an annual rate of approximately two million cards per year.

Mexico Border Control

Following the Green Card's introduction, the U.S. Department of State (DOS) selected the same optical card technology to secure the U.S./Mexico border. To date, more than eight million Border Crossing Cards (Laser Visas) have been issued to Mexican citizens. Approximately one million Border Crossing Cards are issued annually.

Canada

In 2002, Canada joined the U.S. in adapting the use of optical cards for its Permanent Resident Card, in compliance with the U.S. Department of Homeland Security (formerly known as the INS)/Canadian government Smart Border Action Plan.

The LaserCard® optical memory card was selected for these applications, based primarily on the following advantages:

1. Counterfeit Resistance: Data cannot be altered or erased once recorded. The data recording process is physically irreversible once written, thereby creating a permanent audit trail, and preventing fraudulent alteration of the data. Additionally, a link is created by recording the eye-visible personal information such as photographs (Embedded Hologram) to the media. In combination, these safeguards eliminate any realistic attempt to counterfeit the card.

2. High data capacity: The 2.86 megabyte optical stripe holds all required demographic and biometric information, and can be updated as needed. During the initialization process, each Green Card and Border Crossing Card has over 600,000 bytes (600 KB) of data (including the Embedded Hologram) written to the card, including high resolution colour photographs, digitised signature image, and full gray scale fingerprint images. With biometric and demographic data already written to the card, over 1 megabyte of storage capacity remain.

3. Durability: The LaserCard optical memory card met all stringent durability evaluations, as tested by independent laboratory, Battelle Test Labs of Ohio. These results prompted the U.S. Government to select the LaserCard in order to meet the card 10-year lifetime requirement.

4. Low cost solution: Durability, long-life, data capacity, and application flexibility result in a maximum return on investment.

5. Speed of use: Information on the card can be read in about 3-4 seconds. This includes all demographic data, colour photograph, and fingerprint files, and allows a full biometric match to be made against the card data set.

6. Updateable: The cards can be securely updated, allowing new biometrics or personal data to be added to the card in the future by authorized personnel. This helps prevent obsolescence and provides a shield against fraud attempts.

7. Cross Border Compatibility: There are currently more than sixteen million optical cards in the hands of people in the United States, Mexico, and Canada. Secure data sharing between countries is made available by the design of an ISO standard data zone.

The U.S. government selected the LaserCard optical memory card because it is, according to a spokesperson for the INS, "one of the most sophisticated, counterfeit-resistant documents produced by the federal government." The U.S. Permanent Resident Card and Laser Visa Card applications have enabled the U.S. government to automate the border crossing process, using machine-readable cards, and ensure the highest levels of security at the borders. The U.S. government has issued more

LaserCard optical memory cards than any other advanced card technology for use in a secure ID card environment.

Italy

In 1997, the Bassanini Law mandated that all Italian citizens be issued a new ID card. The new law was enacted as a result of the Italian Government's need for positively identifying its citizens, protecting them from identity theft, and enhancing government service levels, while ensuring future expansion capability in a secure, tamperproof environment.

LaserCard Corporation contracted with an Italian card manufacturer to meet the challenge by building on the combined strength and security of both optical memory and IC chip card technologies. The IC chip, well known in Europe for the certification of on-line transactions, controls access to e-government services. Optical memory is the most widely used advanced card technology for government ID programs, and ensures the strongest counterfeit resistance, data integrity and authentication – both visual and automatic.

The LaserCard® was selected for this ID Card application, based primarily on the following advantages:

1. High Data Capacity: The 1.1 megabyte optical stripe holds all required cardholder information and can be updated as needed. Information stored on the IC chip is backed up securely on the optical media.

2. Cost effective: The LaserCard provides true multi-application capability, future flexibility and growth, tamperproof data storage, durability, and long life.

3. Secure Issuance Process: The demanding production, initialization, personalization and issuance of a multi-application, multi-technology card require the highest levels of security and control. This is especially critical with a distributed card issuance system involving up to 8,000 local communities.

4. Durability: Due to the success of the U.S. Green Card and Border Crossing Card programs and because of its 5-year lifetime requirement, the Italian government selected the LaserCard for its new CIE Card.

5. Compatibility/Interoperability: The LaserCard complies with a full suite of international technology and application standards, including those defined by the International Civil Aviation Organization (ICAO).

6. Security & Coexistence: The card contains a polycarbonate substrate with an optical memory stripe that coexists with an IC chip. Security features include security printing, both overt and covert: e.g. micro images, digital authentication data, and unique digital serial numbering.

7. e-Government Services: The combined technology card allows, at selected service provision points, access to health clinics, social services, and border entry.

8. Flexibility: Optical memory provides certain card authentication, positive ID, and a future growth path.

The usage of the new Italian National ID Card will simplify citizen's everyday business transactions through new levels of service and security in their interaction with all levels of business, and government, including national, regional and municipal.

Further Information

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