Smart Card Driving License System in Gujarat

To avoid corruption and mismanagement of driving licence, in the year 1999, Gujarat State Government launched the smart card driving license system, which has become the success story for different states of India and overseas countries such as USA.

Introduction

Gujarat was the first state in India which introduced the smart card license system in 1999. It was the first place in the world which introduced this innovative system and, thus, its implementation was a real challenge. As of now, Gujarat Government has issued 5 million smart card driving licenses to its people. This card is basically a plastic card having ISO 7810 certification and integrated circuit, capable of storing and verifying information according to its programming.

This smart card has been designed jointly by the office of the transport commissioner, M/S Smart Chip Ltd., New Delhi and ORGA of Germany. The total cost in implementing this project was 257 lakh. It covers 25 districts and is having 172 driving license issuing units, besides 192 handheld terminals. Handheld terminals are used to read smart card driving licenses on the road for off-line checking.

USA also got the technical assistance from Gujarat State Government to implement this system after 9/11 attack. In 2002, P Pannervel, the then transport commissioner of Gujarat State Government, helped the technical consultant of USA, Dr. Don Davis in formulating this innovative project.

Paper-based Driving License System

Before 1999, Gujarat had the paper-based license system, which is still there in many Indian states but it has the practical problems in:

- Issuing the manual driving license,
- Cancelation of the driving license,
- Avoiding duplication of licenses,
- Checking forgery of licenses, and
- Tracking the total revenue collected on daily basis by the penalties.

Thus, the paper-based license system has no effective control mechanism to cross-check and to monitor corrupt practices and fake licenses. It also takes a long time to communicate any illegal affairs to the transport department.

Smart Card Driving System

To avoid all these corruption and mismanagement, Gujarat State Government launched smart card driving license system. It contains a small memory chip of 1 kb. It contains both permanent and dynamic data. These data are encrypted and is readable by the handheld and centralized RTC system.

- The permanent data is related to name, sex, date of birth, address, blood group, thumb impression, photograph, etc.
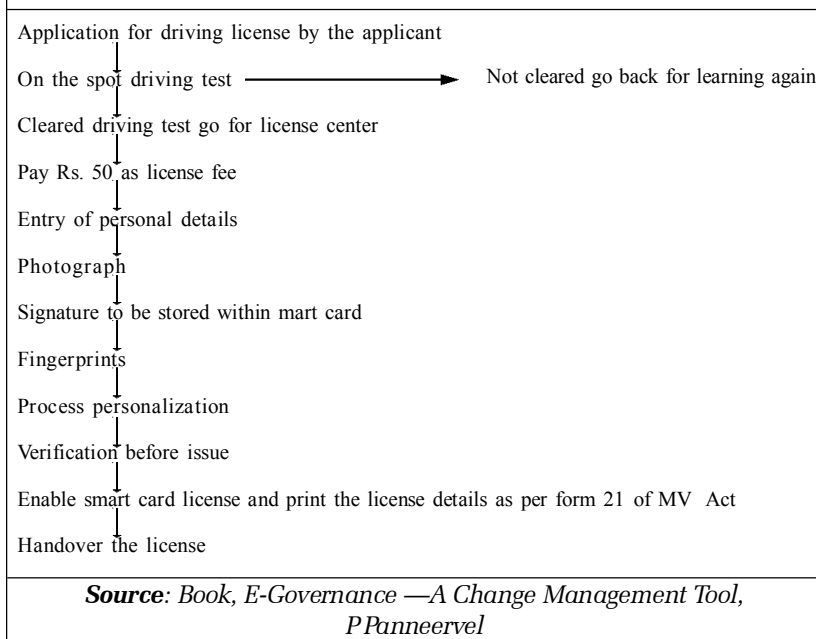- The dynamic data is related to the penalties, accidents records and violation of traffic rules, etc.

This smart card is unique in the way that it is based on biometric identification. The biometric identification such as thumb impression is unique to each person and, thus, it avoids any duplication of driving license and avoids any forgery applications.

While implementing this project, there was much reluctance among officials as such a project was not implemented anywhere in the world. Now, when it has already been implemented, it avoids the misuse and frauds by any second person and is a unique model to other states and countries.

Issuing Smart Card Driving License

This was the first project of its kind in the world, where the paper-based driving license was replaced with a smart card. This innovative system is really beneficial to the State Government in checking the frauds and malpractices as in no case an individual can have two driving licenses as seen in case of paper-based driving license. Electronic monitoring ensures a check on basic malpractice and frauds.

Figure: Issuing of Smart Card-based Driving License

Application for driving license by the applicant

On the spot driving test ——————————————▶ Not cleared go back for learning again

Cleared driving test go for license center

Pay Rs. 50 as license fee

Entry of personal details

Photograph

Signature to be stored within mart card

Fingerprints

Process personalization

Verification before issue

Enable smart card license and print the license details as per form 21 of MV Act

Handover the license

Source: Book, E-Governance —A Change Management Tool,
P Panneervel

In this system, a person has to be present physically at the license center to clear the driving test. The spot driving test ensures whether the person is comfortable in driving motor vehicles or not. If he doesn't clear the driving test, he has to go through the process of learning driving again till he passes the test. It is quite different from some northern states where a person gets the driving license through nexus with the agents at a minimal cost. Issuing the driving license card to a person who doesn't know how to drive also increases the number of accidents. As per one data, because of this smart license system, the number of persons affected by road accidents in Gujarat has decreased to 25,000 in 2002 from 35,000 in 1999.

Once the person clears the driving test, he/she pays Rs. 50 at the spot as the license fee and provides the personal details, which are fed into a PC located at the center and the photograph is taken there only. The signature and fingerprints are captured through the scanners. The personal information is verified and all information is stored in the memory chip. The details of person are minutely observed. As the issuing of the license by such system takes few minutes, the security is undertaken as the prime concern in the whole system.

Now the license is ready to handover the person with the details such as validity period, signature of license authority person, issuing date, unique number of card, etc. These details are in addition to the personal details already encrypted there.

The card is so light that it is easy to carry than the paper-based driving license, where there is always a chance of smudging the papers, which can lead to mistaken identification.

Benefits

The advantages of smart card-based driving license may be listed as follows:

- It is mapped to carry the health-based conditions, allergic details, blood group. Updates are possible without replacing the existing card.
- It carries all the details of traffic

offence and the license holder can't drive further once the fifth offence is recorded. This record is updated by the headquarters.
- Issuing this card is cost-effective and a time-saving exercise. Manual operations have been eliminated because of this system. The intermediaries are also removed and no agent comes in between while issuing this smart card.
- It can be used in any other states or countries as interface and address proof.
- Duplicate license can be issued by the retrieval system through fingerprint verification.

One of the important things of this system is that each traffic person is given hand-held terminals which checks the speed limits of drivers and records the traffic offence in the chip itself. When the traffic offence is fifth times, the person can't drive anymore. The record is sent to the headquarters and the driving license is automatically ceased. However, this is not fully implemented, as there are many constraints in doing so.

Conclusion

In sum, because of smart card-based driving license, the central monitoring system at the state level is possible, which can list out offenders instantly and decreases the corruption and increases the state revenue. It is almost impossible to forge the smart card-based driving license with biometric identification, and controls any traffic offenses by the cardholders. Thus, this system provides foolproof, tamperproof, speedy and a deterrent solution in the transport operational activities. ◄◊►

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