

1. Motor Vehicle SMS System

The Centre for Electronic Governance, IIM Ahmedabad has implemented the Motor Vehicle SMS System for the office of the Superintendent of Police, Ahmedabad Rural. This system was launched on October 29, 2004. The system allows an individual to obtain information pertaining to the recovery status of a vehicle, which may have been stolen, by sending a query through an SMS (Short Message Service) from a mobile handset. This information also enables the potential buyer of a second hand vehicle to verify whether the vehicle he intends to purchase is a stolen one or has been involved in any crime.

The system accesses data pertaining to vehicles which have been recovered by the police or been reported stolen from any part of the country. This data is made available to the system through a database maintained by the National Crime Records Bureau (NCRB), located at New Delhi. The NCRB was created in 1986, on the recommendation of the National Police Commission, with the objective of collecting and disseminating information on crimes and criminals and promoting the use of this information for effectiveness of law enforcement agencies and public service delivery. The NCRB has installed 740 server-based computer systems at District Crime Records Bureau (DCRB) and State Crime Records Bureau (SCRB) across the country. This helps NCRB maintain secure sharable national databases of crimes, criminals and property connected to or involved in crime.

The Motor Vehicle SMS System has been implemented in keeping with the objective of the NCRB to promote knowledge based pro-active policing with the use of Information Technology. An individual can obtain information pertaining to a recovered/stolen vehicle, at a nominal charge of Rs. 26, by sending an SMS to the number 1090.

2. Usage

The format of the SMS query should be:

<Type of Number> space *<Registration Number / Chassis Number / Engine Number>* where *Type of Number* could be R for Registration Number, C for Chassis Number or E for Engine Number. E.g. C 123456, where 123456 is the Chassis Number of the vehicle that an individual wishes to obtain information about. The SMS must be sent to the number 1090.

- If data corresponding to the vehicle number is available, the system would respond by sending an SMS with FIR details of the subject vehicle, to the mobile number from which the query had originated. The format of the response would be:

"FIR Details: No=<FIR Number> Date=<FIR Date> PS=<Police Station Name>,<District>,<State> Status=<Current Vehicle Status> Reg=<Registration Number> Chassis=<Chassis Number> Engine=<Engine Number>" where *Current Vehicle Status* could be RECOVERED, STOLEN, INVOLVED or SEIZED.

- If no record is available in the database for the subject vehicle, the response would be:

"The subject vehicle whose <Type of Number> is <Registration Number / Chassis Number / Engine Number> is not a stolen vehicle as per the data available with us. Supdt. of Police, ABAD RURAL".

- In case of a query sent in an invalid format, the response would be:

"Sorry. Your enquiry is invalid. Please resend as 'R/C/E space RegNo/ChassisNo/EngineNo'. Supdt. of Police, ABAD RURAL".

Figure 1: Functioning of the Motor Vehicle SMS System

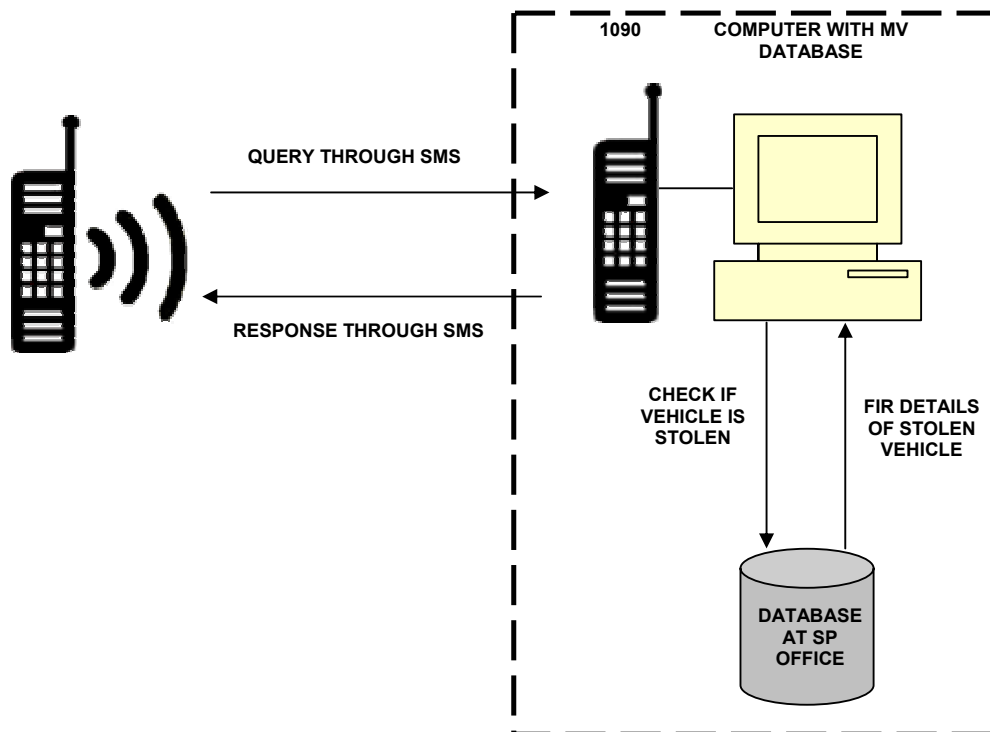
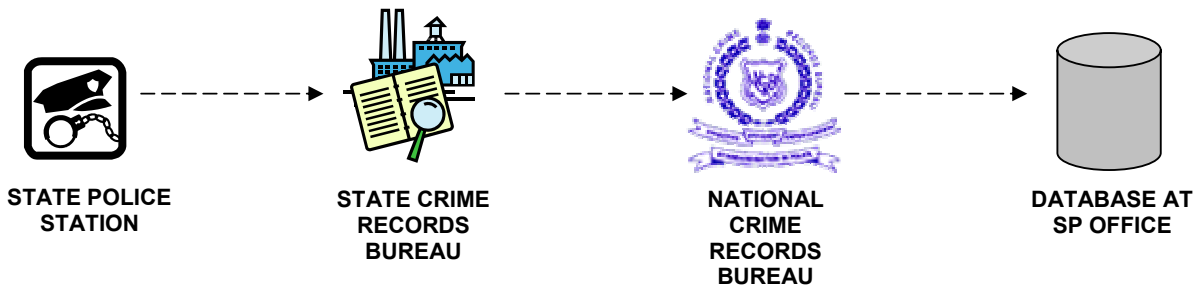


Figure 2: Current Flow of Data



3. Functional Details

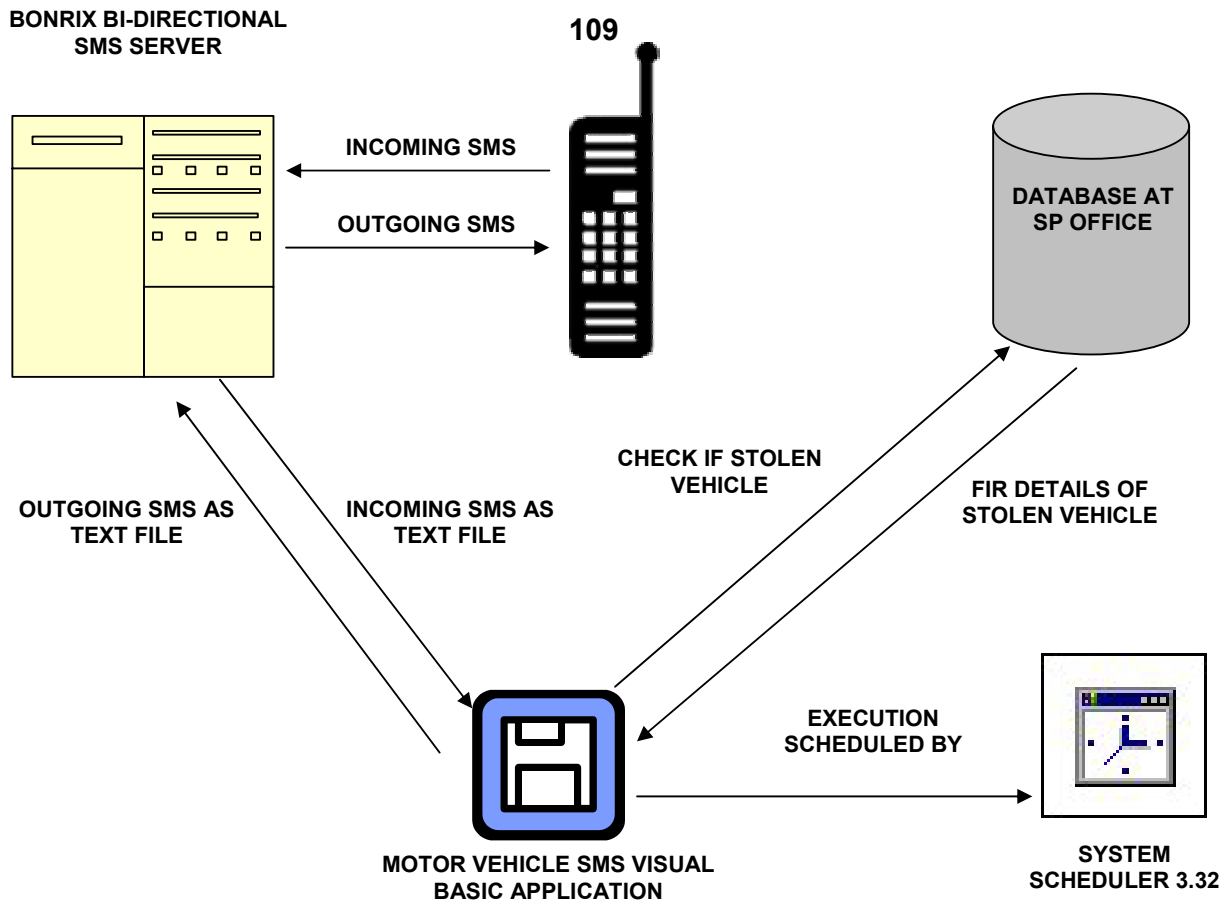
The application has been developed using Visual Basic 6.0 with Microsoft SQL Server 2000 as the database management system. Other software packages that form a part of the Motor Vehicle SMS System are the Bonrix Bi-Directional SMS Server, a product of [Bonrix Software Systems](#) and System Scheduler 3.32 from [Splinterware Software Solutions](#).

When an SMS is received on the mobile handset connected to the computer on which the Motor Vehicle SMS System is running, the Bonrix Bi-Directional SMS Server (also running on the same system) converts the incoming SMS into a text file. This text file contains information relevant to the query, like the mobile number from which the query was received, the date and time when the SMS was received, the type of number (R for Registration Number, C for Chassis Number or E for Engine Number) and the vehicle number.

The Visual Basic application records this information in a database residing on the Microsoft SQL 2000 Database Server. It then searches for the vehicle number in the database provided by NCRB, which resides on the same database server, and generates a text file containing the text of the outgoing message. The outgoing message could be as per any of the three formats defined earlier (Refer to Section 2).

The Bonrix Bi-Directional SMS Server transmits the text file thus generated, as an SMS to the mobile handset connected to the computer. The response SMS is then sent to the mobile handset from which the query had originated. The System Scheduler is used to schedule the continuous execution of the Visual Basic application.

Figure 3: Components of the Motor Vehicle SMS System



4. Future Scenario

At present, each SCRB collects and compiles information regarding stolen and recovered motor vehicles from the district police stations through wireless messages and periodical reports. This information is updated in the database maintained at the SCRB and then sent to the NCRB periodically for updating in the national database. NCRB compiles the information received from each SCRB and resends the updated data to every SCRB.

However, with better connectivity established between the various SCRBs and district police stations/DCRBs, it is expected that the flow of data would be as shown in Figure 4 below. Instead of routing the data as shown in Figure 2, the SCRBs, DCRBs and police stations from all the states could directly exchange information with the central database. This would bring down the cost of providing the same information to citizens as well as decrease the time lag

between an FIR being filed at a police station and the information being received at every SCRB.

The proposed system would also enable the potential buyer of a second hand vehicle to verify if the vehicle is stolen, whether the vehicle has been reported stolen or not. This would be possible by integrating registration details of vehicles, which would be obtained from the RTO office, with the central database. An individual would be able to obtain a vehicle's registration details from the Motor Vehicle SMS System and verify these details against those of the vehicle that he wishes to buy.

Figure 4: Proposed Flow of Data

