

September 14, 2009

**NOTICE**

To

The General Insurance Council  
All General Insurers  
All Transport Commissioners  
The Ministry of Road and Transport, Delhi

**Re: Draft on Design and VISSS**

The Insurance Regulatory and Development Authority is in the process of setting up database of all the vehicles which are insured. The exposure draft on **Design and Development of Vehicle Insurance Status SMS System (VISSS)** is enclosed.

I request you to provide your comments and suggestions, if any, for improvement of the draft which may be submitted on or before 25<sup>th</sup> September 2009.

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**Draft**

**Design and Development  
of  
Vehicle Insurance Status SMS System  
(VISSS)**

**A PROJECT REPORT**

## INTRODUCTION

Insurance Regulatory & Development Authority of India (IRDA), is a body corporate constituted under Insurance Regulatory and Development Authority Act, 1999 (Act) having its Head Office at Hyderabad. In exercise of the powers vested with the IRDA to seek information and returns under section 14 (2) (h) of the IRDA Act and under sections 14, 21 and 110C of the Insurance Act direct insurers to submit information as per data formats specified by the Authority within the time limits fixed by the Authority. The main function of Authority is to regulate, promote and ensure orderly growth of the insurance business and re-insurance business.

Motor Insurance is one of the port-folio of insurance business. In Motor mainly two types of policies are issued, 'Package' Policy and 'Liability only' policy. Package policy covers 'Own Damage' and 'Third Party Liability' where as 'Liability only' policy covers 'Third-party liability' only. Under the provisions of Motor Vehicles Act all the vehicles which are plying in public places shall have an insurance policy at least to cover third party liability as specified under the Act.

The Certificate of Insurance issued by the insurers in relation to every vehicle is the only evidence acceptable to the police authorities to show that valid insurance exists. This document has to be produced when demanded by an authorized police officer.

- This VISSS will provide an additional facility to the police authorities to verify insurance status of the vehicle.

As per provisions of the Motor Vehicle Act, all 'hit and run' death cases are paid from a 'Solatium fund'. To this extent insurers are already paying for some of the losses caused by uninsured vehicles.

- As part of developing the market, VISSS will provide insurers with a facility to locate uninsured vehicles and bring them into the insurance net.

Transaction level insurance data is already collected by IRDA for all lines of business including Motor Insurance. The periodicity of data collection is one year. The time lag between the issuance of policy to insured and data received by IRDA on an average is one year. Around 5 crores of motor policies are issued every year by the 17 general insurance companies operating on different systems having around 5000 operating offices.

- VISSS will collect up-to-date information from all these offices to one central place and disseminate information to all stakeholders instantly.

## **OBJECTIVES**

The objectives of the proposed system are briefly stated below:

- Instant and easy availability of insurance status of the vehicle.
- Providing the authorities with additional proof of non-insurance for taking action against uninsured vehicles.
- Discourage use of forged policy documents
- Bringing more vehicles into the insurance net.
- Real time availability of micro figures of motor insurance with the Regulator which can be used for other regulatory purposes.

## **Benefits**

Uninsured vehicles will come under insurance net, which will increase the total premium receipts of insurers and reduce the claims ratio.

## **Proposed System**

The web based data collection system will use available technology to expedite collection of data from the insurance companies.

The query and reply by SMS system would avoid manual errors and enable instant responses.

The system will be having two parts:

**Part 1:** Collection of data from insurance companies and

- A web portal will be created at the Data center. **All the underwriting offices will directly** login to the portal and upload the vehicle details in XML format into the common database on daily basis.
- A small **utility tool will be created which will check the data for format and logical errors before the data** is accepted by the portal. Error free data only will be accepted.
- Once the data is accepted into the system, a confirmation will be sent by mail.
- Submission of data by each underwriting office will be monitored on daily basis and report will be generated.

**Part 2:** Replying to the query sent by any stake holder.

- Anybody who wants to know the insurance status of any vehicle plying in India has to SMS the Registration number of the vehicle to a Telephone number connected with the portal. The vehicle registration number will be searched in the system and insurance status of the vehicle with period of cover will be sent through SMS.
- In case of new vehicles, insured for the first time, instead of Registration Number, Engine Number or Chassis Number of the vehicle needs to be sent.

## Computer Environment

### ***Hardware platform***

- A robust web server ( Initially placed with VSNL)
- Leased line connectivity between VSNL and Data center for maintaining the server

### ***Software platform***

- Operating System - Windows 2008
- Server software - ASP.Net & Internet Authentication Server
- Other technology used - XML
- RDBMS - ORACLE

### ***Application:***

Application has to be developed for online collection and verification of data from insurers and receive and reply SMS queries. The application will enable to collect and store the data received from insurers as well as the details of queries received.

## Data Flow Diagram

Figure 1.0 gives an overview of the Data Flow. Figure 1.1 shows the different phases of the Data Flow from the insurer's (user's) point of access to the web page till generation of reports.

### FIRST LEVEL – CONTEXT DIAGRAM

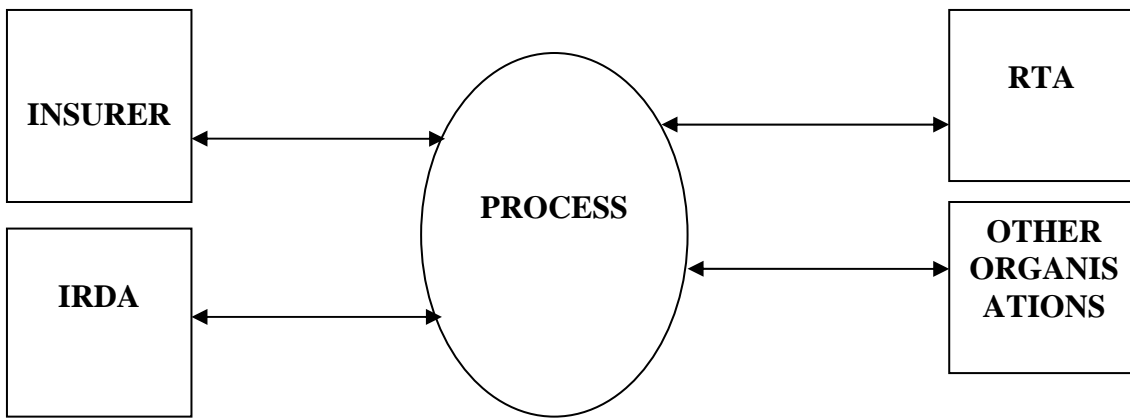


Figure 1.0

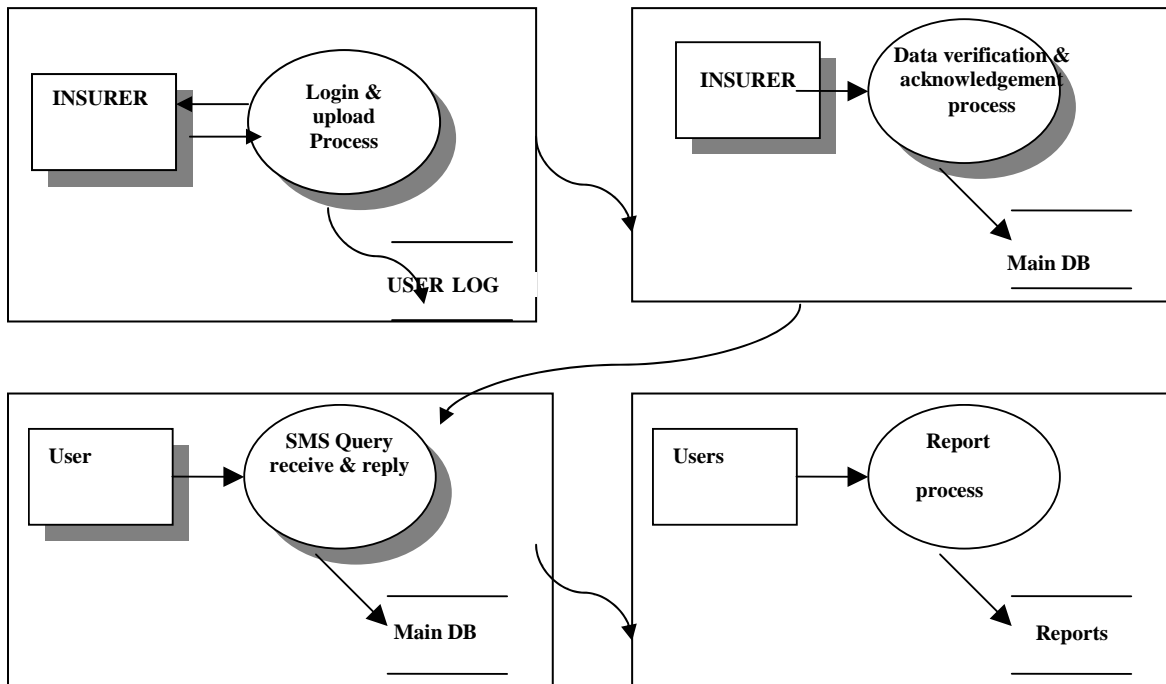
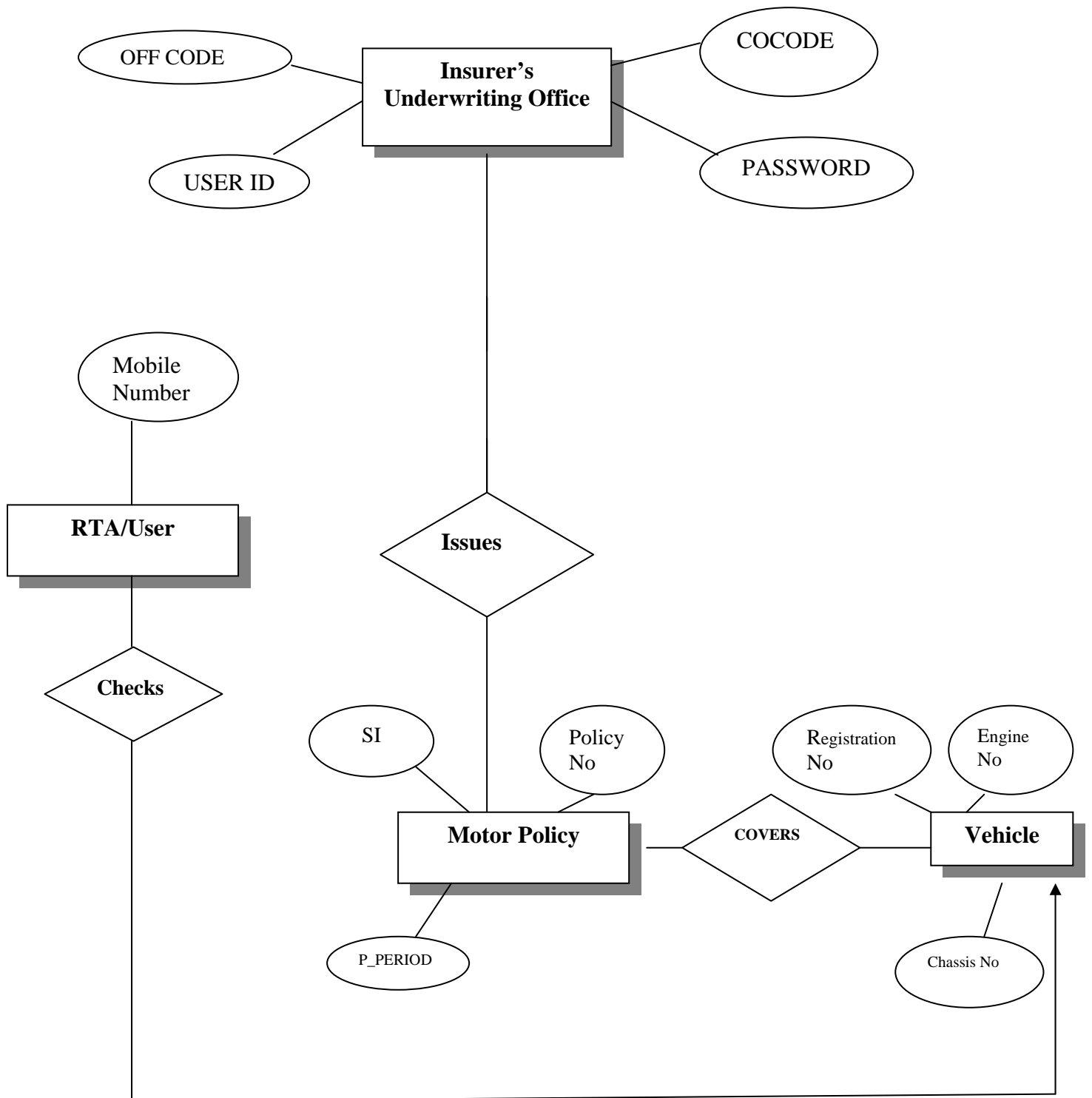


Figure 1.1

# Entity Relationship Diagram



## **Transactions of VISSS**

### **Login Process**

The insurer accesses the website through login page, keys in the user name and password assigned to the company. After authentication, the user will be directed to the transaction page.

If the user name and password match with the system, the user will be permitted to go to the file upload page. Otherwise it will show an error message and direct the user to login page.

### **Verification/ File upload Process**

The user office code current date, last date of data upload etc will be displayed in the webpage. The user will choose the file from their system and click the upload button, to send the file to the web server. The verification tool will check for format compliance and check for any logical errors. If the file is accepted, a confirmation message that the file has been accepted for upload will be displayed. Otherwise error message specifying the nature of error will be displayed.

### **Database updating Process**

The accepted files will be appended with the main database through a server side programme. Auto entry will be made in the log file.

### **Query process**

Any stake holder can send SMS to the specified giving the Registration Number or Engine Number or Chassis Number

The format of the SMS query will be

<Type of Number> space <Registration Number/Chassis Number/Engine Number>

Type of Number is R for Registration Number, C for Chassis Number and E for Engine Number.

Example: R AP04W1977 – For sending Registration Number

C BAMBPF11392 – For sending Chassis Number

E MD2AABAZZPWF31700– For sending Engine Number

In case of record found in the database the reply SMS will be

“Insurance – Yes, expires on 31/3/2010”

In case of non availability of record reply will be

“Insurance – details not available”

In case of query sent in invalid format, the reply will be

“Query is invalid, please send as per format”

## **Implementation Feasibility**

### **Technical Feasibility**

The technology suggested for implementing the project is database server (Oracle) with web server (Internet Authentication Server) and SMS server. The data will be collected in XML format through web using Asp.net technology.

The site will be hosted through a Web Server. The hardware requirements are a robust server and leased line connectivity.

The project proposed will involve procurement of one robust webserver. The database also can be stored in the same server. Other requirements are Leased line connectivity for internet, development of Webpage with ASP.net technology for checking and uploading data to database and a SMS server to receive and reply SMS queries.

## **Operational Feasibility**

Initial development of application needs to be done through external agency with annual maintenance contract. Further improvements to the system and maintenance could be done internally.

A few days' orientation training on the new system will be sufficient to enhance the operating skills of the users.

## **Software design - outline**

### **Internal Access**

#### **User Details Updation Module**

The basic details about the insurer are entered using this module. The existing insurer details also can be edited and saved through this module. The Login page will enable the Administrator to login and update the insurer master.

#### **USER UPDATE PAGE**

After login, the Administrator will be directed to the subsequent insurer/user update page.

ADD: Allows user to add new insurer details

EDIT: Allows user to edit the existing information

DELETE: Deletes the existing records

EXIT: Exit the module

### **External Access (Data Donors)**

#### **Insurer Login/File Uploading Module**

#### **LOGIN PAGE**

The Insurer login module will display the empty boxes for user name and password. The insurer will enter the details and press the submit button. In case there is any change to be made, cancel button can be pressed so that the details entered already will be cleared.

## **MODULE SELECTION PAGE**

After login, the User will be directed to the subsequent 'module selection page'. The links provided in this page are

1. File Upload link and
2. Reports link.

## **FILE UPLOADING/VERIFICATION PAGE**

The uploading file details are selected from the combo boxes provided in the page.

If file is of XML, the Oracle XML\_SQL Utility (XSU) will be triggered and the file schema will be automatically checked and appended with the main database.

### **External Access (Data Users)**

#### **Query Access:**

SMS server will receive the SMS and convert it into Text file and send to the application for searching in the database server, the reply text file received will be converted into SMS and sent to the User

## **MIS Reports**

### **Reports Module**

The reports module will give IRDA, Office Code-wise Data submission reports. Alert on delay in submission of reports.

The following are the standard reports suggested

1. Data submission status report.
2. Transaction report – giving details of number of SMS received, reply sent etc. on daily basis.
3. The IRDA user also would be provided with the option of generating reports for any period.
4. Insurers also would be allowed to view certain specified reports.

## DATABASE DESIGN

The Database used for designing this software is Oracle.

The Oracle database is accessed through Asp.net technology

### Description of Tables used in the system

#### User\_Log

Field Name	Data Type	Field Width	Definition
Txt_Insurer_Code	Text	20	Licence No given by IRDA
Txt_User_Name	Text	10	User name
Txt_Password	Text	10	Password

#### Upload\_Log

Field Name	Data Type	Field Width	Definition
Txt_Office_Code	Text	20	Office code
Txt_User_Name	Text	10	User name
Date_of_Submission	Date	10	Date of submission
Date_Data_Start	Date	10	Data from the date
Date_Data_End	Date	10	Data up to the date
Txt_File_Name	Text	10	Auto Generated

#### Insurer\_Master

Field Name	Data Type	Field Width	Definition
Txt_Insurer_Code	Text	20	Licence No given by IRDA
Txt_Office_Code	Text	20	Office code
Txt_Address1	Text	15	Address
Txt_Address2	Text	15	Address
Txt_City	Text	15	City
Txt_State	Text	15	State
Txt_Pincode	Text	6	Pin code number
Txt_Email_ID	Text	15	Email address

#### Vehicle\_Insurance\_Details

Field Name	Data Type	Field Width	Definition
Txt_Insurer_Code	Text	6	Licence No given by IRDA
Txt_Office_Code	Text	10	Office code
Txt_Vehicle_Reg_Number	Text	20	Vehicle Registration Number
Txt_Vehicle_Chassis_Number	Text	20	Vehicle Chassis Number
Txt_Vehicle_Eng_Number	Text	20	Vehicle Engine Number
Date_Policy_Start_Date	Date	10	Start date of policy
Date_Policy_End_Date	Date	10	End date of policy
Date_of_Cancellation	Date	10	Date of cancellation of policy

## **Implementation of the project**

The implementation of the system shall be done in following parts.

1. Installation of Oracle database at central location (on server).  
Configuring and starting of database connectivity services on the server.
2. Installation of web server. Starting the services, hosting the web page.
3. Creation of database for Vehicle details and administration
4. Collection of data online.
5. Installation of SMS server and reply to SMS queries.

## **Future scope of the project**

The software developed can be extended for submission of transaction level data of all departments of insurance companies/ Modules for data mining and analytical reports can be added. It can be further developed to ready sources of data for creating decision supporting tools for insurers.