

TRACKING & DATA Security of Stolen SMART Phone

Kewal Krishan Kapoor

Syscom Corporation Ltd

Abstract- In this paper, the new Tracking and Data Retrieval Application of your SMART Phone is purposed and discussed in detail. The idea behind this white paper is to **TRACK** the location of the stolen phone and **HIDE** all the information present or stored in your Phone, which can be used by the criminals to execute their un-fair Plans.

Index Terms- One Time Password (OTP), International Mobile Equipment Identity (IMEI), Secure Digital (SD).

I. INTRODUCTION

Smart Phone are very popular now a days and also replacing the desktop and laptops because they have everything inside it. The chances of grabbing your Mobile Phone are very high but only 2% of them are recovered due to which recovery of phones becomes a matter of chance.

When your Phone is stolen, you also lose your precious data inside it. Following are the options the thief tried out to disable your phone:

- pulling out your battery,
- removing your SIM card,
- switching to Airplane mode,
- turning off your phone.

The Data present in the Phone Memory and in SD card is also not safe even after using the pin or unlock pattern. These locks are easily breakable by the hackers.

The Application which is discussed below will secure your data and is also able to retrieve it.

II. HOW TO TRACK YOUR SMART PHONE

Here the method is proposed (by implementing an Application) to Track your Smart Phone

a) Registration Process

Pre-condition: An Application should be installed on the Mobile Phone.

Following are the Steps for creating an Account:

- Click on Sign-up/Register
- Entered the details like IMEI number, Email ID, Name, Contact Number, Model Number & Mobile vendor, Date of Purchase.
- After submitting the details, an OTP is send to your Email ID.
- Entered the OTP to complete the Registration process.
- For every Login you have to enter the Email ID, IMEI and OTP which will send to your Email ID.

The complete procedure of Registration as shown in *Figure1: Registration Process*

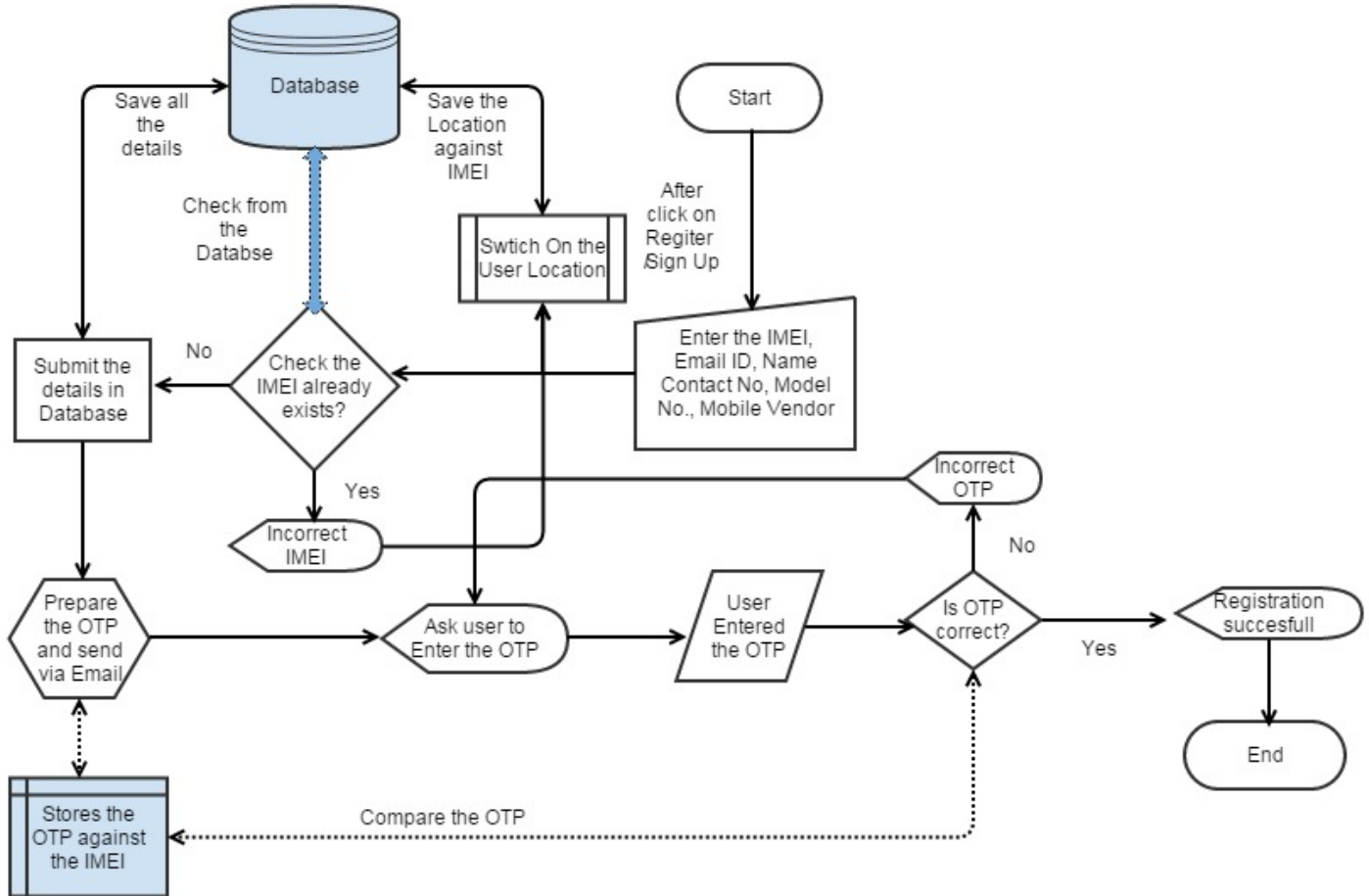


Figure1: Registration Process

b) Tracking of Smart Phone:

For Login to Web Application, use same credentials as given during Registration Process.

After successful Login to Web Application you are able to see the Option of **Track your Lost Phone**.

When you click this option, it will ask for the following details:

- Choose the screen lock type i.e. Pattern Lock or Digit Lock
- As per the type, the application asks to draw the same pattern or enter the digits to unlock it.
- Place where it is last seen.
- Date of stolen
- Version of the Installed Software like for Android (Kit Kat, Lollipop etc.)

Once the details are provided and submitted, it will switch On "**TRACKING**" Flag.

The complete procedure of Tracking of Smart Phone is shown in *Figure2: Tracking of Smart Phones*

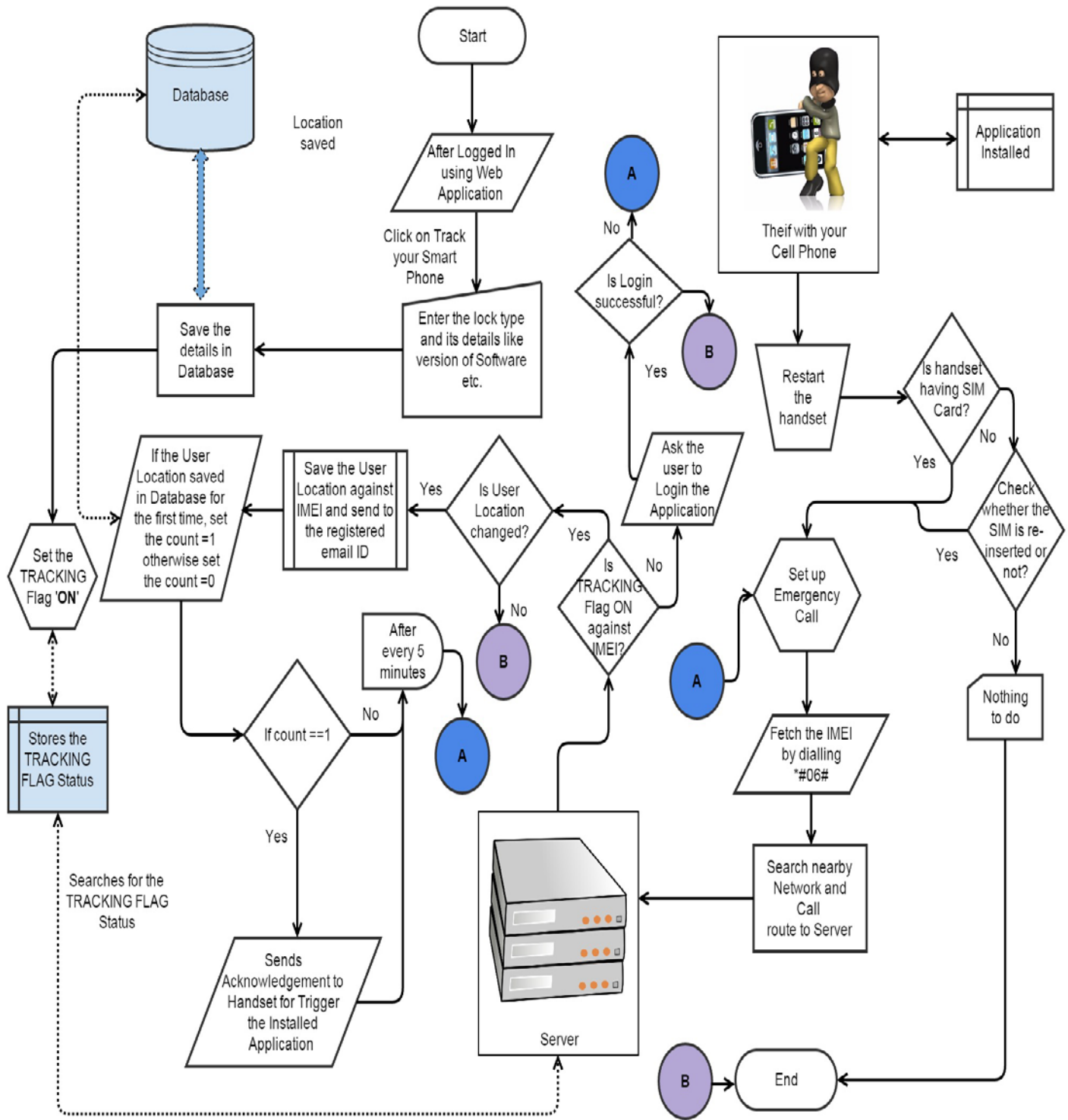


Figure2: Tracking of Smart Phone

III. HOW TO SAVE & RETRIEVE THE DATA FROM YOUR SMART PHONE

The Application which is installed on the Mobile does the following activities:-

- It executes the pre-defined script which take all the back up of data present in the Phone Memory as well as in SD card.

- Once the backup is completed, it will save the data in the phone memory and set the property type hidden.
- It removes all the data along with the installed application except its own.
- It blocks all the activities of the Smart Phone except the internet usage.
- Ask the user to connect with the Internet to continue.
- Once the Internet connection established, it uploads all the backup data to the server.
- This back up is in zipped form and only unzipped after successful verification of Login credentials.
- It will ON the Location of the User and disables the ON-OFF Switch.

Now the Smart Phone has left an Application and OS in it.

The Mobile owner tracks their Location by Login to the Web Application and also received the Email Notification with their Location Status and reports the Police to catch them.

Important Points:

- ✓ Always use a pin or unlock pattern in your phone
- ✓ The Application which is introduced can be installed in Smart Phone and also directly accessed through Web
- ✓ Users have to use the same credentials for Mobile as well as Web Application.
- ✓ When anyone selling their Smart Phone or purchasing the old phone, then don't forgot to update the account details in the Application like Name, Email ID, contact number to be safe from the thieves.
- ✓ To successfully un-install the Application, user has to Login first

IV. CONCLUSION

The above proposed method can be implemented for the SMART PHONES and is really effective than the existing methods. It is very fast way to Track your Phone. This method helps to constantly Track the location of your phone and to recover your Data. It is highly recommended to use the pin or unlock pattern because the hacker will take some time to hack, by keeping your handset ON. At that time this Application Triggers and once it is completed with their work there is nothing left in your phone which could be misuse by hacker.

ACKNOWLEDGMENT

I would like to acknowledge my co-workers for supporting and encouraging me throughout the course work

AUTHORS

First Author – Kewal Krishan Kapoor, **Qualification /Experience:** Currently working with Syscom Corporation Ltd, a leading telecom company dealing in SIM and SMART cards. **Email Address:** kewalkrishankapoor@yahoo.com