

Methods for Spoofing Caller ID with TrueCaller

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Abstract - Each day TrueCaller is being installed by someone new and is getting popular day by day. According to Play Store there are over 2.5 billion active users on TrueCaller. It is used as a caller ID which lets us know the name of the person who is trying to contact us with the approximate location where the person is calling from, which is a very useful feature as someone would not be interested in answer to an unknown person or to a spam call. However, there are people who might misuse some of its features for their personal benefit or someone else's loss. As we all know there was an attack on TrueCaller on 17 July 2013 by a group called as SEA (Syrian Electronic Army). The group claimed to possess 459 GBs of database due to an older version of WordPress installed on servers. similarly, TrueCaller can be attacked again in the future and their user's data can be at risk.)

Keywords - Vulnerabilities, Caller-id, SEA, Syrian Electronic Army, database, WordPress.

I. INTRODUCTION

In this modernized time, everyone has and uses a smartphone which include adults, teenagers and the older generation as well. These phones and their applications help us to make our life easier and helps us to do things faster. One of the great examples are Phone Book which helps us saving contact numbers instead of learning all of them, learning everyone's number could be impossible but saving all of them could also be difficult. This is where TrueCaller comes in picture by helping people simply create a user-id and then save the name with the contact number into their database. Whenever someone receives a call from someone unknown to the user the TrueCaller gives a small pop-up on the screen displaying the name of the user. However, some teenagers and some of the other people like to play around and give pseudo names which can be a huge problem because it can be misused in a lot of different ways.

II. FAULTS WITH VERIFICATION AND NAME UPDATION

A. Failures in verification - Social Engineering is one of the basic and most common attacks happening these days, which helps them to gather information by exploiting the human itself. The smartphones are a goldmine for the attackers, they use each and every application which can be used to help them gather information about someone's lifestyle.

TrueCaller is a huge opportunity for the attackers to do so as they can spoof someone else's identity and call someone because the verification process of TrueCaller is not as secure as it should be.

While signing into TrueCaller the application would ask the user's name, phone number, email address and some other personal details. The verification of the details work as TrueCaller would send an OTP to the user, which is to be given to the application, if the OTP given is same as sent to the given phone number then the phone number gets verified that it is a valid user. however, it does not verify whether the given name is correct or not, which is a great issue these days. Someone can spoof else's name and using Social engineering can either gather information or make them do some unethical tasks.

B. Failures of name updation - TrueCaller has many more features than just popping a user's name during a call, it can also undo SMS, flash message and many more. One of them is also updating someone else's name if they think it is not the person who is calling and they know the actual name so they can suggest the user's actual name and the TrueCaller's team would decide if the name should be changed on not on the basis of number of requests for changing the name or else they would check whether the given name is valid or not.

This is a very helpful feature but can be misused to change someone's name and that person might not get any answers on his/her calls. For a businessman, student or employee communication can be a very crucial part and without communication, it can cause problems.

III. PROPOSED SOLUTION

The common solution for both the issues can be that the team of TrueCaller to use the Aadhaar's data which is a 12-digit UID (unique identity) number that is obtained by almost everyone in India. The data given in Aadhaar is completely verified with biometric and document proof of a person's presence. With the ongoing movement Digital India, Indian government would most likely agree and share the database with the data which is required.

Once this the process take place, the problem of verification of a phone number with a name would not be a problem because when someone buys a phone number, it requires that person's Aadhaar card and it registered with it. So, with the help of the database they would be able to provide someone's true and verified name. On the other hand, if the name is already verified by the government then there is no need for changing or updating the names of their users.

As we can see in the following screenshots of the application. Fig 1 is the actual sign up page where the users have to submit their First name, Last name and Email address, whereas in fig 2 if TrueCaller adds registering users on basis of Aadhaar as Aadhaar number

its primary key, two of their problems would be solved and it would be much more secure.