



AIUB DSpace Publication Details

Title	Enhancing Smartphone Lock Security using Vibration Enabled Randomly Positioned Numbers
Author(s) Name	M. Monjirul Kabir, Nasimul Hasan, MD Khalid Hassan Tahmid, Tanjil Ahmed Ovi, Victor Stany Rozario
Contact Email(s)	stany@aiub.edu
Published Journal Name	ICCA 2020: Proceedings of the International Conference on Computing Advancements
Type of Publication	Conference
Volume	_____ Issue _____
Publisher	Association for Computing Machinery, New York, NY, United States
Publication Date	10 January 2020
ISBN	978-1-4503-7778-2
DOI	https://doi.org/10.1145/3377049.3377099
URL	https://dl.acm.org/doi/10.1145/3377049.3377099
Other Related Info.	Article No.: 44, Pages 1–7





AIUB DSpace Publication Details

Abstract

In this age of information, we can't think a day without our cell phone which is a very important component in storing data which is mostly personal. In recent times we are using E-banking, E-shopping and personal messaging photo sharing, we use many social media applications etc. So it is a basic understanding that our mobile phone security system is very important. Now a days it's very common to have patterns, pins and gestures-based security options. Since it is very common to have one these systems on devices, attackers are always developing new ways to bypass these security systems using attacks like smudge detection, shoulder surfing, gesture recognition and using a dictionary attack (brute force method) any pattern or PIN can be exposed with given time. In our proposed model through randomizing PIN number position on the phone screen and use of vibration as pin input we have sufficiently secured the user's password from smudge attacks, shoulder surfing and gesture recognition also we have delayed the chance of being successful in a brute force attack as we have used vibration as a variable (and by limiting the attempt). In our proposed model we also designed the lock system app interface where the input buttons size and distance between two buttons are more than standard so that will help to reduce the human error and provides more comfort in use.

