

Smart Digital Door Bell

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Abstract— The Digital Doorbell App puts front door at user's fingertips no matter where they are. This is very advanced approach to normal door bells. It has achieved the next layer of security which makes home smarter and advance. This system will create a smart doorbell notification on house owners mobile so that when a guest clicks on the button, it makes a ring, a camera takes a picture and sends a notification with some message to notify that a guest has arrived. In this we have been developing and perfecting the Digital Smart Doorbell. Digital Doorbell making your home smarter and safer.

Key words: Image Compression Technique, GCM (Google Cloud Messaging), Automatic Image Capturing Function

I. INTRODUCTION

Android become too much popular and get available in very low cost. So we are proposed a system which will modify existing door bell to more advantage concepts. In the proposed concept the door bell get replace by Digital Bell Button on which visitor will press the button once any one will press it the bell will automatically capture the image and send to house owner. Once it gets send to the owner the reverse calling can be perform by user and will give the message to the visitor. Proposed can also send the message to the owner by using the messaging functionality provided over the Digital Bell. Whether you're home or outside home, feel confident that you can put your doorbell at your fingerprints. Data suggests that burglars ring your doorbell to find out if you're home or away. The proposed system will modify existing door bell to more advantage concepts. This will help us to make the bell system more technical and advance, we can achieve the next layer of security which make our home smarter and advance. We can achieve the things more advance in android. With the increased use of Smartphone around the world, there has been enormous application development serving a large number of operations. For almost every profession now, this App exists for some sort of help and support.

The Smart Doorbell is equipped with proprietary security screws that keep the device securely mounted, which makes it difficult to take. However, if you're Smart Doorbell does get stolen, the outdoor camera will not function without the security checks are provided in it, so it'd be useless for the thief. If this happens, owner should contact with a police report, and we'll be happy to replace your device with new one. Smart Digital Doorbell works with wooden door of thicknesses ranging from 35 mm to 110 mm, it will not work properly on the glass door.

II. RELATED WORK

In 2014, Saurabh Malga on karand et. al. Proposed about the various techniques and methods used for pushing or notification of messages using various Android connectivity methodologies on Android devices & applications. The concept of Google Cloud Messaging, C2DM & Xtify is explained in brief with their applications, procedure and

working. The current application and usage of these technologies is also discussed with their future scope. We have implemented a basic notification application using Google Cloud Messaging where we were able to analyze and document results of the application developed in order to have a brief idea of the technology and study it in terms of future research to be carried out in the same domain.

In 2001, A. Subramanya proposed that Digital images generally contain significant amounts. Image compression (coding) techniques reduce the number of bits required to represent an image by taking advantage of these redundancies. while keeping the resolution and the visual quality of the reconstructed images as close to the original image as possible. The decoding steps for most of the coding schemes are quite intuitive and are usually the reverse of the encoding steps.

In 2006, Muhammad Kamran et.al. Proposed that Digital circuits are designed and implemented with respect to time and area optimization. Particularly in the field of image processing, data is to be transmitted from source to destination with optimum conditions of quality and transmitting speed. These objectives are achieved in diverse schemes under different circumstances. This paper describes a method to deal with image compression techniques to explain various aspects of image quality improvement associated with quality controlling factors. Huffman algorithm is utilized by developing pyramid of data for encoding and decoding process. This algorithm is applied on pre and post processing architecture which operates efficiently in varying system

In 2017, M.A. Kader et.al. says that term 'Home Security' numerously growing as a major concerning issue in today's life. The challenge of developing a home security device is to make it user friendly which can reduce human effort as well as ensure safety and security of people and their home. In this paper, a security device is proposed which is developed from the concept of conventional calling bell. the person as home member or known guest or unknown guest. When it detects a home member the entrance door automatically opens. In case, the person categorize as known guest, the device sounds a tune but don't open the door automatically rather people inside home can open the entrance door from anywhere of the home. As guest is known people don't need to walk towards door to open it. And when device detects the person as unknown guest, it generates a tunes which is different from previous one making aware the people inside that an unknown person wish to enter your home.

III. PROPOSED WORK

The proposed Smart Digital Doorbell is fully wireless it requires no wiring and this is very perfect for the apartment homes. Owner can place this doorbell on the existing place of wired doorbell or the place where no doorbell is installed

Digital Doorbells works on batteries as this is the screen that is mounted on front of the door. We know the

problems of batteries there is need to change batteries periodically. Some time we found on our mobile that sound or apps misbehave or hangs up then there is need to change batteries accordingly. We can change batteries as we usually do in our mobile.

Smart Digital Doorbell works on same technology as same in our mobile phone it speaks(it makes sound as our mobile does),captures the images and it performs the reverse calling that works according to setting given in admin settings.

Digital Doorbell Silent Mode allows you to turn your home's doorbell chime on or off from the app. This is found in the individual device settings area of the app.

There are inside house and outside house option provided for more convenience. If owner is inside house then he will set the app on inside house setting and the working will based on the inside house setting. In this there is no need to do the audio call to owner when he will inside house. Yes! The message alert will be there and the visitors snap will be in the entries database.

In the outside house setting the app will be in outside setting mode .All functioning will be as outside house setting. When owner will be outside the house and visitor has come to the door, there will be message alert and snap of visitor will be saved in visitor's entry. There will be the reverse calling for contacting with the person who is come to the home. The user will not miss the person (visitor) and get known of all important work with the person.

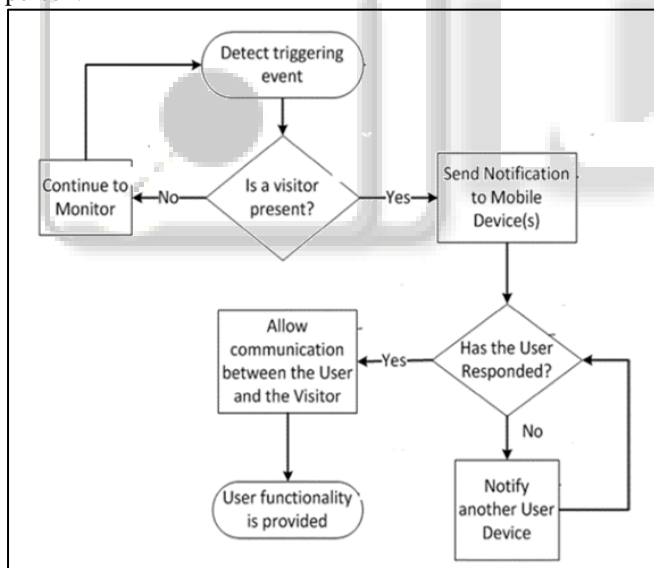


Fig. 1: Flow of work of Digital DoorBell

Above shows the workflow of Smart Digital doorbell .This allows to receive feedback from users who interact daily with android phones. This service aims to offer powerful searching and tagging options. Also Smart Doorbell intends to fit in an existing workflow capture screenshots and customs. Algorithm for image capturing, based on principal of image compression, is programmed and implemented on the platform. This proposal incorporates technologies image capturing with notifications to users and management of their responses. GCM server is used to develop Android applications where two major processes are involved in the development of client Android applications; these processes include finally, testing the effectiveness of the model, three scenarios were simulated,

each one was composed by different households over which the recognition of known and unknown individuals is analyzed.

In 2016 Andrew Thomas and Lucas M. Alvarez Hamann The front camera, automatic image capturing, onboard memory, and Wi-Fi are all in the digital doorbell enhance the overall working of Smart Digital Doorbell. There are similar improvements to the , which will trigger the system to turn on, and infrared lights, which let you see in the dark. But the biggest change on the outside or in recordings that is the snap of the visitor. It works efficiently on a new Wi-Fi. Chip. Author Andrew Thomas says dramatically trims the time from when you get a notification on your phone to when you're seeing what's on the other end. Where the first model could take up to a full minute to connect, the new one promises to do that in less than five seconds.

This proposal incorporates technologies that are GCM and Image compression Technique that does image capturing with notifications to users and management of their responses. GCM server is used to develop Android applications where two major processes are involved in the development of client Android applications; these processes include finally, testing the effectiveness of the model, three scenarios were simulated, each one was composed by different households over which the recognition of known and unknown individuals is analyzed.

The systems goal is to design and implement a home security system by integrate smart phone and home network service in the absence of residents. With visitor pressing the doorbell, the device records and sends the snap of the visitor to the user. Our system provides a convenient user interface for the user to view the snap and take appropriate action accordingly. This is implemented by interlocking with the real time2.SMS server that sends warning message to user when the doorbell is pressed

IV. CONCLUSION

The goal of this system is to design and implement a home security system by integrate smart phone and home network service in the absence of residents. With visitor pressing the doorbell, the device records and sends the photo of the visitor to the user. The system provides a convenient user interface for the user to view the visitor and take appropriate action accordingly. This is implemented by interlocking with the real time SMS server that sends warning message to user when the doorbell is pressed.

In daily life, people have the need to know the identity of a visitor who comes to their homes, regardless of whether they are there at that time. This need is even greater for people who suffer from some kind of disability that prevents them from meeting the visitor. To provide a solution in this sense, this system proposes a smart model that performs the task of a doorbell, which should recognize the visitor and alert the user. To achieve that, this proposal incorporates technologies like image compression technique, notifications to users and management of their responses. So here is the best solution to secure our home with automatic photo capturing of visitor and which allows to view and monitor home main door. Can receive visitors and view and talk to them through smart devices from anywhere in the world.

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