02152016 - Ring Door Bell App. (Frank’s idea)

A couple weeks ago Frank emailed a few of us saying that he had found a door bell alert app/system - that “lets you answer your door from anywhere” -

<https://ring.com/how-it-works> (for a cost of $199).. How can we do this for little or nothing.

Well as it turns out it looked a lot like what I did a few years ago (Oct 2013) using an app called Airdroid, and Skype.

<https://www.youtube.com/watch?v=3SQmb0rCouw>

At the time, I saw something on kickstarter that was “repurposing” old cell phone and pretty much doing the same thing, being a front door camera/monitor. I think those devices where in the $200 dollar range. Unfortunately I can not remember the name of that project or if it was successful or not.

But at the time I thought surely there is away anyone can do this for nothing. And of course there is...in fact there are many many different ways to get this done for as little as a few dollars ($15.)

Airdroid is still around, it’s changed a bit over the years, and honestly I think it was better then vs now. But Airdroid can still be used to do a lot of this. (the company may have been bought by someone, I’m not sure thou)

My main idea is still to repurpose old Android devices, if you don’t have any old phones, you can find them on eBay pretty reasonable, I’d get something that is running at least 4.4.4 now thou. But even an old Android 2.x device will still work (don’t expect it to be easy to install the required software now thou - as google play and most alternative app stores and developers have stopped updating the 2.x apps)

Luckily I keep a few old phones just because I knew I could use them for something else :-)

(Arduino Shields anyone? Seriously, think about all of the sensors that are in most phones. But I’m going slightly off topic)

But for this demo, I used my Moto X and Nexus 7 (both of which are still very much being used in real life, but really would make great security cameras after they are retired.)

I have also added a push button that will notify the phone when it’s pushed stating - “Front Door”, a 2nd or 3rd (unlimited number really) could be added as well all stating which door they are. I am using a combination of pushingbox.com, pushbullet, newtifry to do the notifications. The microcontroller is a Node MCU (ESP8266 - ESP12E) board - this has built in wifi for a direct link to pushingbox.

So why two push services for notification - well, lets say one is slow, or one is down for maintenance you don’t want to mess around reload another version of software or change a lot of api calls just for the front door. So it’s built in redundancy, that still could fail.

Pushingbox is a Iot site that acts as a inbetween with sites that require a little more secure connection or something that the arduino doesn’t provide for, it also is what let’s me make one call and trigger two push services.

I’ve done a couple of demos with newtifry before I think, it’s a free push service, that talks to it’s own app - they have started to limit how many “calls” you can make for free per day, (800 is the current limit) which for this project is more than enough. But it’s not as reliable as it could be, and at times it’s just down right slow. Still over all, Free beats slow, and it does work and is pretty easy to use.

<https://play.google.com/store/apps/details?id=com.newtifry.android>

<https://newtifry.appspot.com/>

Here is a generic(ish) setup for newtifry:

<https://docs.google.com/document/d/1ARqeeWjys4SXrwqLpq4Oxq-_wTVet9GqbPgJ1InR1-4/edit?usp=sharing>

Pushbullet is a similar type of thing, with a twist (and honestly I don’t get the twist, but whatever) - you can subscribe to other peoples pushes, or to community pushes.

They also have a paid monthly service (really, seriously, I have no idea why you’d want to pay, but..) The app has a way for you to send small files to each other for free, I am not real sure why you’d want to do this either, but ok. As well as sent text from a browser window (Ok this one might be handy, if pushbullet was my default sms app, but it is not.)

I think one thing I do like about pushbullet is that I can send a “text” message to another device on my network, or I can get all the messages sent “on my network” (Notice the quotes, so it’s not a network like you’d think it should be).

Pushbullet also just seems to work, thou from some of the reviews I’ve read it doesn’t work so well using the browser/computer interface.

I also may have missed the point to some of what pushbullet does. For what I want as a backup - it simply just works.

<https://play.google.com/store/apps/details?id=com.pushbullet.android>

<https://www.pushbullet.com/>

I am almost positive I’ve done demos of pushingbox before. But just to be on the safe side of things. Pushingbox is really a very simple way to have many things happen at once. It’s one API call that can trigger many events, it’s free and for the most part easy to use. They provide Arduino code in their github repositories. It was that code that I used/modified for use on the ESP8266/NodeMCU board

<https://www.pushingbox.com/>

(official they support the Wiznet ethernet shield, and Unofficially support the ENC28J60 ethernet shield. Also the official Arduino WIFI shield.

I think I’ll email them a copy of my modified Wiznet code for the ESP8266 and see if I can get listed as unofficially supported)

<https://github.com/Clement87/PushingBox-for-Arduino>

They also support the Spark Core Device, Python, C# and Powershell.

Also you’ll want to install at minimum Skype on both your “current” phone, and your “old” phone or tablet. On the “old” or one that is going to be the front door monitor, you’ll want to setup a new/different skype account, and then in the skype setting, have that account unlisted, only take calls/sms from people in the contact list. Add your other account to the it, so it knows who you are. And set it up to auto answer only from people in the contact list.

<https://play.google.com/store/apps/details?id=com.skype.raider>

I also have my tablet going to sleep after a while, so the screen is not always on.

So here is the overall usage notes:

1. Someone walks up to front door
2. that some hits the “door bell” button
3. That triggers - pushingbox to send two notifications to the phone (or tablet or both)
4. At which time, you use skype to call the “front door” - you’ll be able to see and talk to the

person.

But wait you say what if you want to see the person without them knowing you can see them?

What if you just want to see who is at the door without talking to them?

You don’t want them to see video of you but you want to see video of them?

Never fear, There is an app for that. And that app is called Alfred.

Alfred really was built with the idea of repurposing old phones, in fact they even show a really old phone being used to do just that. Alfred even has 2 way voice (but not two way video from what I can tell). It has a low power (screen almost off mode) and can be used (at least in my case) with skype as well.

<https://play.google.com/store/apps/details?id=com.ivuu>

Alfred can be used from a webpage or a second device running the Alfred app in view mode.

It says it has motion detection, but that didn’t seem to do anything when I tried it (?)

What I can say is Alfred is another of those apps that just seemed to work. And just seemed (for the most part) to work the way we want it too.

<https://play.google.com/store/apps/details?id=com.ivuu>

<http://www.my-alfred.com/>

So, push button, “Door Bell” notification on phone, start Alfred and see what is going on, maybe talk if you want.

As I said at the beginning there are now many to do this, and I am sure there will be many more in the years to follow, this is just the beginning.

My Arduino NodeMCU code:

<https://github.com/kd8bxp/pushingbox-buttonpush-nodemcu-arduino-esp8266>