

Forum:[Hack Forums](#)

Thread: [CCTV solution?](#)

Mr. Tycoon - July 31, 2015, 5:31 am

Hi,

My granddad is suffering from late onset Alzhiemers and is in the very last stages of his life - I am more involved in Psychiatry than general practise and so I cannot take his word to what he is doing in the day or night.

My solution was to install discrete cameras in his mobile home (caravan unit) however because they are old fashioned, they have no internet. I was wanted to stream the cameras live but cannot think of a way to do it?

Any suggestions?

Jokeh - July 31, 2015, 5:41 am

You could stream the cameras live by using a portable wifi hotspot which uses a cellular connection, you can find them anywhere, they use a mobile phone sim card and turn the data into a wifi connection

Mr. Tycoon - July 31, 2015, 5:46 am

(Jul 31, 2015 05:41 AM)Jokeh Wrote: [\[CITE\]](#) You could stream the cameras live by using a portable wifi hotspot which uses a cellular connection, you can find them anywhere, they use a mobile phone sim card and turn the data into a wifi connection

[Like this?](#)

We aren't on a massive budget, just want to be able to monitor him.

TheGrayAviator - August 1, 2015, 2:10 am

(Jul 31, 2015 05:31 AM)Biotechnology Wrote: [\[CITE\]](#) Hi,

My granddad is suffering from late onset Alzhiemers and is in the very last stages of his life - I am more involved in Psychiatry than general practise and so I cannot take his word to what he is doing in the day or night.

My solution was to install discrete cameras in his mobile home (caravan unit) however because they are old fashioned, they have no internet. I was wanted to stream the cameras live but cannot think of a way to do it?

Any suggestions?

- 1) What's your budget?
- 2) How many cameras do you want to have installed?

There are a couple of ways to do this, but I need to know your budget...

Mr. Tycoon - August 2, 2015, 2:36 am

(Aug 1, 2015 02:10 AM)TheGrayAviator Wrote: [\[CITE\]](#) 1) What's your budget?

2) How many cameras do you want to have installed?

There are a couple of ways to do this, but I need to know your budget...
Just the one since the camera can easily see the entire van, and it's a 16ft van.
Budget is only about \$100.

TheGrayAviator - August 2, 2015, 5:58 pm

(Aug 2, 2015 02:36 AM)Biotechnology Wrote: [\[CITE\]](#) Just the one since the camera can easily see the entire van, and it's a 16ft van.

Budget is only about \$100.

Here's something that you could do, with a raspberry PI, an USB webcam and a 3G dongle.

[Video: <https://www.youtube.com/watch?t=124&v=WNKbZsrsKVs>]

datguy.dev - August 3, 2015, 5:47 am

I also think 3/4G is the way to go. But I think you would need a rather large data plan as streaming video consumes a lot of bandwidth. In turn, an almost limitless data plan costs a lot of money. Maybe you can upgrade your current plan or you can be really strict and short about checking in. Given your budget in all.

You also have power issues and opens a windows for 'blackouts.' for instance, if you can't leave the headlamp on in your car overnight - you'll end up with a car dead battery. than you can't run a 5v 700mA Rpi in standby mode either. The blackout I was talking about is when you have to wire the rpi to mobile home. If you don't want this then you would have to install a battery system as well for the rpi to run on while the key isn't turned.

TheGrayAviator - August 3, 2015, 6:05 am

(Aug 3, 2015 05:47 AM)datguy.dev Wrote: [\[CITE\]](#) I also think 3/4G is the way to go. But I think you would need a rather large data plan as streaming video consumes a lot of bandwidth. In turn, an almost limitless data plan costs a lot of money. Maybe you can upgrade your current plan or you can be really strict and short about checking in. Given your budget in all.

You also have power issues and opens a windows for 'blackouts.' for instance, if you can't leave the headlamp on in your car overnight - you'll end up with a car dead battery. than you can't run a 5v 700mA Rpi in standby mode either. The blackout I was talking about is when you have to wire the rpi to mobile home. If you don't want this then you would have to install a battery system as well for the rpi to run on while the key isn't turned.

The raspberry pi doesn't consume a lot of power at all. You could even power it up using an external 12v portable battery and have it running for a few days, before a recharge would be required.

datguy.dev - August 3, 2015, 2:14 pm

(Aug 3, 2015 06:05 AM)TheGrayAviator Wrote: [\[CITE\]](#) The raspberry pi doesn't consume a lot of power at all. You could even power it up using an external 12v portable battery and have it running for a few days, before a recharge would be required.

A change in voltage has very little effect in terms of battery life as it doesn't change the amount of current being drawn from the battery.

Here we're looking at about a 3 amp requirement in work conditions. Considering the additional draw of the cam and dongle as compared to just running the pi. The web cam and dongle can draw a max of 500mah through the on board usb ports. Though the device are probably more fluctuate around 250mA.

Battery wise, for instance, if you use a premium battery such as the Optima's Yellow Top. It is rated

at 75 Ah (75000 mah). $75\text{Ah}/3\text{A draw}=25$ hours. hence my previous comment about leaving the headlamp on in a car.

Even given that, it doesn't deter this monitoring system from being dependent on the alternator running. Maybe the Op can do solar charging in combination. But that doesn't guarantee anything when it comes to human behavior.

TheGrayAviator - August 3, 2015, 7:52 pm

(Aug 3, 2015 02:14 PM)datguy.dev Wrote: [\[CITE\]](#) Even given that, it doesn't deter this monitoring system from being dependent on the alternator running. Maybe the Op can do solar charging in combination. But that doesn't guarantee anything when it comes to human behavior.

Solar charging would probably be the way to go, you don't need a very big and expensive panel. Plus you can use MPPT controllers to maximize the charge current.

Running off the alternator is not a bad idea, but that would mean that the car's engine will have to be running, for the alternator to provide power. Which doesn't sound very fuel efficient.

That is just my observation.

datguy.dev - August 4, 2015, 8:13 am

(Aug 3, 2015 07:52 PM)TheGrayAviator Wrote: [\[CITE\]](#) Solar charging would probably be the way to go, you don't need a very big and expensive panel. Plus you can use MPPT controllers to maximize the charge current.

Running off the alternator is not a bad idea, but that would mean that the car's engine will have to be running, for the alternator to provide power. Which doesn't sound very fuel efficient.

That is just my observation.

The problem with all of this is who would let you monitor them in their private quarters? Even if for your own good it's intrusive. So i bet the application for the OP has to be manageable in size/stealth as well. But would you want your grand children to have footage of your death?

What about do some kind of heartbeat monitor and alarm system instead? Like a bracelet they could wear. I'm sure they sell a retail system somewhere. Would be a fun DIY project, but not too sure I'd want that responsibility. Make a few out of a Microduino and ninjaflex filament with a base Arduino that has a GSM shield. The difference here would be immediate notification and response and it doesn't have to be constantly monitored. May even prevent death and it's not intrusive to private space. You could even send yourself texts of the battery level of the bracelet and provide another if needed.