Android ANT+ BikeDisplayDemo
Posted by bakshi - 2011/05/05 17:41

The ANT+ BikeDisplayDemo was updated to Version 2.2 on May16, 2011. Please leave any questions or comments about the application here.

WHAT:
The BikePowerDemo application showcases receiving and displaying information from Bike Cadence, Bike Power and Bike Speed ANT+ Sensors.

UPDATES:
Version 2.2 -> Decodes Acknowledge Messages, decodes pages other than Pages0-3, ignored Common Pages

Version 2.0 -> Supports Claim/Release functionality of latest ANT Radio Service to work smoothly with other installed ANT Applications.

Regards,
Vipin

LINK:
https://market.android.com/details?id=com.dsi.ant.bikepowerdemo&feature=search_result

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Re:Android ANT+ BikeDisplayDemo
Posted by gmngueko - 2011/05/09 08:42

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hi,

where is the link to that v2.0 ?
can we have the source code as for the 1.2 version ?

thanks

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Re:Android ANT+ BikeDisplayDemo
Posted by gmngueko - 2011/05/09 08:46

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hi ,

can we have the source code too ?

thanks

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Re:Android ANT+ BikeDisplayDemo
Posted by bakshi - 2011/05/09 10:15

Hi,

The Marketplace link has been added to the original post.

For the source code, we do not plan to release it yet but that may change in the future. It is very similar to the released ANT+ Demo with the same design structure. For decoding Bike Data please refer to the Bike Power and Bike Speed & Cadence profiles found here: http://www.thisisant.com/pages/ant/ant-device-profiles.

Thanks,
Vipin

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Re:Android ANT+ BikeDisplayDemo

Posted by gmngueko - 2011/05/09 11:12

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ok, actually I already modify the original antdemo v1.2 to decode my bike cadence and speed sensor :-),

I was curious to compare it with your code to see how you handle the case where the pedal stop turning. Because what you will see is the last cadence read and not zero :-(, given that data are transmitted only if the pedals turns and trigger the sensor (at least that's my observation).

thanks.

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Re:Android ANT+ BikeDisplayDemo

Posted by bakshi - 2011/05/09 14:42

Hi Again,

Here is what I did to display "Stopped" when stopped:

It is a good obervation when you state : "given that data are transmitted only if the pedals turns and trigger the sensor (at least that's my observation)"

However what is actually happening is that Data is still being transmitted when no pedalling takes place. The two values of BikeSpeedEventCount and CumulativeSpeedRevolutionCounts are of interest to us. These values only increment when pedalling takes place and stay the same when pedalling stops. To implement my "Stopped" funcitonality, I check these values for 12 message periods. If the same value is decoded for 12 message periods, I display "Stopped". Therefore, there is still a ~3s delay due to our ~4Hz Message Period. However, it is still better than displaying the last valid data when stopped.

Hope this helps and goodluck with your application,

Regards,
Vip

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Re:Android ANT+ BikeDisplayDemo

Posted by alejandra - 2011/05/09 16:13

You can also refer to the source code of the ANT+ Simulator to see how it implements detection of stopping/coasting. Note that this is application specific, so there may be differences between implementations.

Generally, if you are receiving data from a speed sensor, and the event count is not increasing, you can assume the wheel is not turning, and therefore, the bike has stopped. If you are receiving data from a cadence sensor, and the event count is not increasing, the pedals are not turning, so the bike could either have stopped or be coasting. Combining information from both speed and cadence can give you a better idea on what is happening.

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Re:Android ANT+ BikeDisplayDemo

Posted by gmngueko - 2011/05/10 03:50

Hi,

I see that you end up using the same logic as me ;) to detect
the pedal or wheel is not turning (basically if nothing has changed in 4 sec then it has stopped).

ps: do you know if a ant+ weather/temperature sensor exists ?

thanks

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Re:Android ANT+ BikeDisplayDemo

Posted by bakshi - 2011/05/11 10:59

Hi,

No device profile for and ant+ weather/temperature sensor exists at this point.

Regards,
Vipin

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Re:Android ANT+ BikeDisplayDemo

Posted by Bikeage - 2011/06/01 10:12

I am testing with the SRM Powermeter. The demo detects my powermeter, but displays "Calibrate" in the Power/Torque/Torq Freq fields.
How does the calibrate function work with SRM?

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Re:Android ANT+ BikeDisplayDemo

Posted by bakshi - 2011/06/02 10:26

Hi Bikeage,

Have you tried using the "Calibrate" button from the drop down menu? If you havent, you will observe that the textview displays "Calibrating..." for a short time and will then receive the data. Please let me know if you have already tried this.

Regards,
Vipin

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Re:Android ANT+ BikeDisplayDemo

Posted by Ross - 2011/06/16 10:31

The calibrate request from the power display will put the SRM into a mode where it sends the raw offset value needed to calculate power accurately.

One feature to note about new SRM's is that after 5 seconds of coasting, they will go into this mode automatically and will send the calibration page. The intention of this feature is that when you are coasting, the display can check the offset value without requiring a manual calibration from the user.

I think that what you are seeing is that the ANT+ Display simulator is properly receiving from your power meter. But if you are testing at your desk with no load, the SRM is sending calibration messages, which are interpreted and shown as "Calibration"

Does the "Calibration" change for power if you start pedaling with load on the crank?

Cheers,
Ross

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Re:Android ANT+ BikeDisplayDemo

Posted by Mark - 2011/08/10 03:26

Hi All,

Now I try to implement ANT app in my android phone.
I have a Cadence device now, but can't connect to ANT+ demo app.

Then I download the Bike display app from market, and I can connect to the Cadence device after I set "combined SPD+CAD" (the option in "SPD and CAD Sensor type" in menu). If I set to "Seperate SPD+CAD", the Cadence device can't be connected.

What's "combined SPD+CAD"? What's the difference between these? How to set it in my program?

Thanks a lot

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Re:Android ANT+ BikeDisplayDemo

Posted by alejandra - 2011/08/12 10:58

The ANT+ Bicycle Speed and Cadence device profile describes the differences between these. You will need to register as an ANT+ Adopter to access the profile.
http://www.thisisant.com/pages/ant/ant-device-profiles

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