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Mobile device data fixing systems analysis

Abstract — **The article represents information about applications for different operation platforms (Android and Windows Phone) which we can use when we need to record information from a group of sensors inside of a tablet or a cell phone as a measurement device.**

Keywords — sensors; tracking applications; application; programs.

I. INTRODUCTION

Each mobile phone has a large number of different sensors [1, 2]. This sensors are using for different purposes: rotation of images on device, turning off the display while approaching the phone to your ear and many others. What if we can use these sensors for the useful purposes that we need.

II. THE MOST POPULAR APPLICATIONS

For example: we need to measure parameters of magnetic field [1] on some local area or measure orientation parameters of quadcopter. First of all we need to fix all measured data, then save it and after that make some processing [2]. What is required for recording and saving of recorded data:

- Mobile phone or tablet, or other device.
- Some application on this device.

Let us consider two operating systems for mobile phones (Android and Windows Phone) and the most popular applications for them. Let's start from Android:

1. **Advanced Sensor Recorder (ASR)** shows the available sensors of your smartphone or tablet, plot graphics and allows to record sensor data for future use. Using of Google Maps API allows to show your GPS data on the map [3].
2. **AndroSensor** is the absolute all-in-one diagnostic tool. View in a single screen the data from all device's sensors in real time. Graphical and text output available for each sensor.
3. **Sensor Kinetics Pro** is an advanced viewer, recorder and monitor for all of the standard sensors available in Android device. In the use of accelerometers and gyroscopes within the modern smartphone, the app provides a comprehensive view of the total dynamics of the combined operations of all the sensors.
4. **My Sensors.** This application is a very simple utility which allows you to explore each sensor available. This application displays both static and real-time information about each sensor available. Additionally it allows real-time logging of sensor data to a file stored on your device.

Windows Phone platform:

1. **Sensor Emitter** captures data from the sensors integrated in Windows Phone terminal. At each run, it can be selected the acquisition rate, the sensors to be acquired and for how much time you want to grab the data. Data acquired are stored in a text file or connect to PS and have live sensors data.

Fig.1. Graphical representation of recorded data from accelerometer.

2. **Sensor Check** allows the user to send sensor data wirelessly. Users can use this sensor data for a wide variety of motion tracking applications, or simply read-out the sensor data from their phone.

III. CONCLUSIONS

These programs are the most popular and they can display, record and share information which we need. They use all possible sensors which can be useful. So, now we can use our pocket devices more widely and with greater benefit.

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