Accelerometer Sensor

Non-Visible component

Category	Requires	Version
Sensors	API 19, Android 4.4 - 4.4.4 KitKat	4

Overview

Non-visible component that can detect shaking and measure acceleration approximately in three dimensions using SI units (m/s^2). The components are:

- **xAccel**: 0 when the phone is at rest on a flat surface, positive when the phone is tilted to the right (i.e., its left side is raised), and negative when the phone is tilted to the left (i.e., its right size is raised).
- **yAccel**: 0 when the phone is at rest on a flat surface, positive when its bottom is raised, and negative when its top is raised.
- **zAccel**: Equal to -9.8 (earth's gravity in meters per second per second when the device is at rest parallel to the ground with the display facing up, 0 when perpendicular to the ground, and +9.8 when facing down. The value can also be affected by accelerating it with or against gravity.

Events

Acceleration Changed

Indicates the acceleration changed in the X, Y, and/or Z dimensions.

Params	
x Accel	Number
y Accel	Number
z Accel	Number

Shaking

Indicates the device started being shaken or continues to be shaken.

Properties

Available

Boolean — Read - Blocks

Available property getter method (read-only property).

Enabled

Boolean Default: *True* — Read Write - Designer Blocks

If true, the sensor will generate events. Otherwise, no eventsare generated even if the device is accelerated or shaken.

Legacy Mode

Boolean Default: *False* — Write - Designer

Prior to the release that added this property the AccelerometerSensor component passed through sensor values directly as received from the Android system. However these values do not compensate for tablets that default to Landscape mode, requiring the MIT App Inventor programmer to compensate. However compensating would result in incorrect results in Portrait mode devices

such as phones. We now detect Landscape mode tablets and perform the compensation. However if your project is already compensating for the change, you will now get incorrect results. Although our preferred solution is for you to update your project, you can also just set this property to “true” and our compensation code will be deactivated. Note: We recommend that you update your project as we may remove this property in a future release.

Minimum Interval (ms)

Number Default: *400* — Read Write - Designer Blocks

The minimum interval, in milliseconds, between phone shakes

Sensitivity

Number Default: *2* — Read Write - Designer Blocks

A number that encodes how sensitive the accelerometer is. The choices are: 1 = weak, 2 = moderate, 3 = strong.

X Accel

Number — Read - Blocks

Returns the acceleration in the X-dimension in SI units (m/s^2)
The sensor must be enabled to return meaningful values.

Y Accel

Number — Read - Blocks

Returns the acceleration in the Y-dimension in SI units (m/s^2)
The sensor must be enabled to return meaningful values.

Z Accel

Number — Read - Blocks

Returns the acceleration in the Z-dimension in SI units (m/s^2)
The sensor must be enabled to return meaningful values.

Last update: January 26, 2020