Archived:Listening for accelerometer sensor data events on Symbian

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Overview

This snippet demonstrates how to listen for data events produced by the accelerometer sensor of the device.

In practice, the control implements the `MRRSensorDataListener` interface which enables it to listen to the data events. Whenever a data event occurs, the `MRRSensorDataListener::HandleDataEventL()` function is called.

Note: In order to use the code, you need to install the sensor plug-in for your SDK.

This snippet can be self-signed.

MMP file

The following libraries are required:

```
LIBRARY RRSensorApi.lib
```

Header file

```
#include <RRSensorApi.h>
```

```
// Accelerometer sensor UID
const TInt KAccelerometerSensorUID = 0x10273024;
```

```
class CMyControl : public CCoeControl, public MRRSensorDataListener
    {
    // ...

    private:  // Functions from base classes
        /**
         * From MRRSensorDataListener.
         * Callback function for receiving sensor data events.
         *
         * @param aSensor identifies the sensor that created the event.
         * @param aEvent contains data about created event.
         */
        void HandleDataEventL(TRRSensorInfo aSensor, TRRSensorEvent aEvent);

    private:
        /**
         * Initializes and registers accelerometer sensors.
         */
        void RegisterSensors();

        /**
         * Unregisters accelerometer sensors.
         */
        void UnregisterSensors();

    private:  // Data
        CRRSensorApi* iAccelerometerSensor;
    }
```

Source file

```
#include <RRSensorApi.h>
```

```
void CMyControl::ConstructL(const TRect& aRect)
    {
    // ...

    // Initialize and register accelerometer sensors
    RegisterSensors();

    // ...
    }
```

```
CMyControl::~CMyControl()
    {
```


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```
    // ...

    // Unregister accelerometer sensors
    UnregisterSensors();

    // ...
    }
```

```
/**
 * Initializes and registers accelerometer sensors.
 */
void CMyControl::RegisterSensors()
    {
    RArray<TRRSensorInfo> sensorList;
    CleanupClosePushL(sensorList);

    // Retrieve list of available sensors
    CRRSensorApi::FindSensorsL(sensorList);

    // Get number of sensors available
    TInt sensorCount = sensorList.Count();

    for (TInt i = 0; i < sensorCount; i++)
        {
        // We are interested only in the accelerometer sensor now
        if (sensorList[i].iSensorId == KAccelerometerSensorUID)
            {
            iAccelerometerSensor = CRRSensorApi::NewL(sensorList[i]);

            // Register this control as accelerometer data listener
            iAccelerometerSensor->AddDataListener(this);

            break;
            }
        }

    CleanupStack::PopAndDestroy();  // sensorList
    }
```

```
/**
 * Unregisters accelerometer sensors.
 */
void CMyControl::UnregisterSensors()
    {
    // Unregister accelerometer data listener
    iAccelerometerSensor->RemoveDataListener();
    delete iAccelerometerSensor;
    iAccelerometerSensor = NULL;
    }
```

```
/**
 * Gets called whenever a data event occurs.
 */
void CMyControl::HandleDataEventL(TRRSensorInfo aSensor, TRRSensorEvent aEvent)
    {
    // A data event occurred. Handle it.
    // ...
    }
```

Postconditions

Whenever a data event occurs, `CMyControl::HandleDataEventL()` function is called.

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