Detecting accelerometer sensor on Symbian C++ (Hourglass)

This code snippet shows how to detect device sensors in Symbian C++.

Overview

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This code snippet shows how to detect device sensors in Symbian C++.

The example taken from an application in which the device accelerometer sensor is used to simulate a real hourglass on the Nokia N95. Every time you change device's position, an observer updates the acceleration values in each axis, ranging from -360 to 360.

Header

```
//SensorApi header
#include <rrsensorapi.h>

//CGravitation class inherits an interface MRRSensorDataListener
class CGravitationAppView : public CHourglass,...,MRRSensorDataListener
{
 public:
    ...
    //Virtual function inherits from MRRSensorDataListener
    void  HandleDataEventL (TRRSensorInfo aSensor, TRRSensorEvent aEvent);
    ...

 private:
    //Instance of CRRSensorApi
    CRRSensorApi* iSensorApi;
```

Source

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

   //Creating an array of sensors
   RArray< TRRSensorInfo > sensorInfoArray;

   //Using FindSensorsL to find all sensors in the device and
   //fill the array with the available sensors
   CRRSensorApi::FindSensorsL(sensorInfoArray);

   if(sensorInfoArray.Count() > 0)
   {
         //Constructs the iSensorApi with an sensor in the array
         iSensorApi = CRRSensorApi::NewL(sensorInfoArray[1]);
         iSensorApi -> AddDataListener(this);
   }
   else
      User::Leave(KErrNotSupported);
      ...
}

CgravitationAppView::~CGravitationAppView()
{
   ...
   //releases memory allocated
   if(iSensorApi)
   {
      delete iSensorApi;
      iSensorApi = NULL;
   }

   ...
}


//HandleDataEventL's implementation, Callback that updates the acceleration
void CGravitationAppView::HandleDataEventL (TRRSensorInfo aSensor, TRRSensorEvent aEvent)
{

   TInt i;

   for(i = 0; i < iGrains.Count(); i++)
   {
      iGrains[i]->SetAcelXY(-aEvent.iSensorData2, -aEvent.iSensorData1);
   }

}
```

Application

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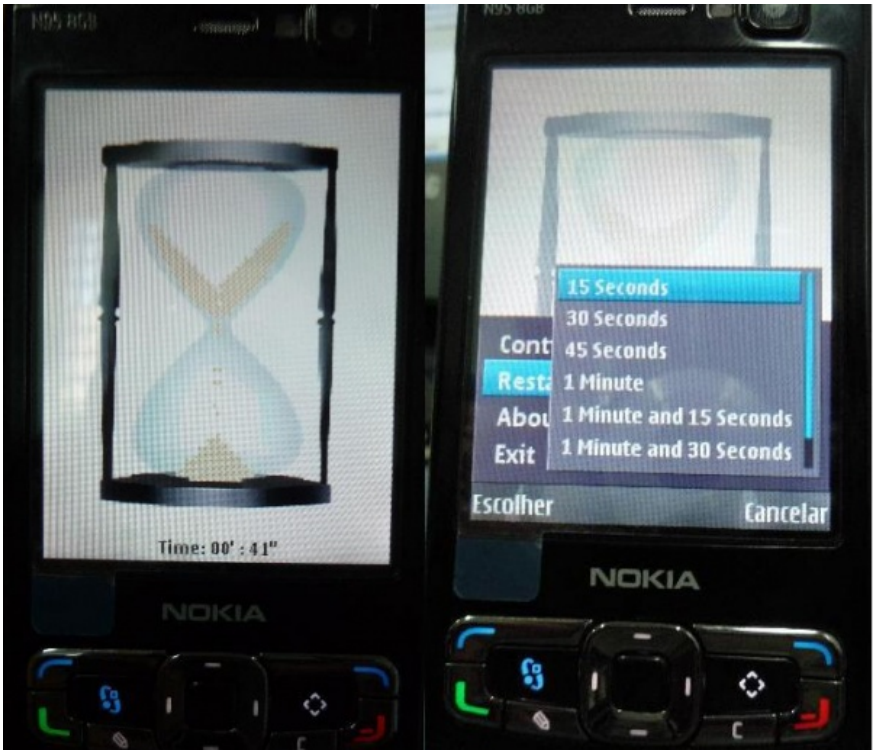

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