Archived:Improving the usability of spin boxes on Qt for Symbian touch devices

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Qt Quick should be used for all UI development on mobile devices. The approach described in this article (based on QWidget) is deprecated.

Overview

This article shows how to the usability of Qt spin boxes (`QSpinBox`) on Symbian touch devices.

Description

Qt provides `QSpinBox` and `QDoubleSpinBox` widgets that allow the user to input integer and double values, respectively. The value can be modified by clicking the up and down buttons, or by clicking on the line edit field of the spin box and entering a new value manually.

When clicking on the line edit field on Symbian devices, the user has to remove the old value either by using backspace or by selecting the entire contents of the edit field before a new value can be entered. In Symbian devices with a keyboard, this is not so much a problem as pressing up or down on the navigation keys will auto-select all the text in the edit field.

On Symbian touch devices, this additional step can be avoided by automatically selecting all text when receiving a mouse press event in the line edit (`QLineEdit`) widget of the spin box field; the user can proceed to input new numbers directly after touching the edit field of a spin box.

Solution

Create a custom spin box class by inheriting from `QSpinBox` or `QDoubleSpinBox`, and install an event filter to intercept mouse press events:

```
#include <QDoubleSpinBox>
#include <QLineEdit>
#include <QTimer>
#include <QEvent>


class MySpinBox : public QDoubleSpinBox
{
  Q_OBJECT
public:
  explicit MySpinBox( QWidget *parent = 0 );
  ~MySpinBox() {}

protected:
  bool eventFilter( QObject *obj, QEvent *event );
};


MySpinBox::MySpinBox( QWidget *parent ) :
  QDoubleSpinBox( parent )
{
#ifdef Q_OS_SYMBIAN
  lineEdit()->installEventFilter( this );
#endif
}


bool MySpinBox::eventFilter( QObject *obj, QEvent *event )
{
  if ( event->type() == QEvent::MouseButtonPress ) {
    // select all content in line edit widget after 250ms
    QTimer::singleShot( 250, lineEdit(), SLOT( selectAll() ) );
  }
  // standard event processing
  return QObject::eventFilter( obj, event );
}
```


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