Listening activation changes in Qt

Overview

This snippet shows how to listen application activation changes in Qt. Activation changes means when application moves into foreground or background.

When incoming call is coming in Symbian and Maemo is native phone application opened on top of your application. In this case you can listen your application activation changes and for example pause the game when incoming call occurs.

This snippet was used in the Nokia Developer example QuickHit

Qt Event filter class

The filter event filters `QEvent::ActivationChange` event that occurs when your application moves into foreground or background.

```
#include <QObject>
#include <QKeyEvent>

class MyEventFilter : public QObject
{
    Q_OBJECT
public:
    MyEventFilter(QObject *parent = 0);
    ~MyEventFilter();
protected:
     bool eventFilter(QObject *obj, QEvent *event);
signals:
    void activationChangeFiltered();
};
```

```
MyEventFilter::MyEventFilter(QObject *parent) :
    QObject(parent)
{
}

MyEventFilter::~MyEventFilter()
{
}

bool MyEventFilter::eventFilter(QObject *obj, QEvent *event)
{
    if (event->type() == QEvent::ActivationChange) {
        // QEvent::ActivationChange
        // The application has been made available to the user
        emit activationChangeFiltered();
        return false;
    } else {
        // standard event processing
        return QObject::eventFilter(obj, event);
    }
}
```

Using event filter

Creating and installing event filter

```
// Create filter
MyEventFilter* eventFilter = new MyEventFilter(this);
// Listen filter signal
QObject::connect(eventFilter,SIGNAL(activationChangeFiltered()),this,SLOT(activationChangeFiltered()));
// Install filter into QApplication
qApp->installEventFilter(eventFilter);
```

Define slot into your application code to listen signal. In this example the game engine is paused when event occurs

```
void MainWindow::activationChangeFiltered()
{
    // for example
    m_gameEngine->pauseGame();
}
```


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Postconditions

Incoming call, application hiding into background pauses the game.

See also

- QEvent
- QuickHit

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