Opening a network connection in Qt

This code snippet demonstrates how to open a network connection in Qt using the Bearer Management module. In Symbian this will prevent the native IAP dialog from opening every time an application does a network request.

In Qt 4.7, the Bearer API has been migrated to the QtNetwork library. For Qt earlier than 4.7, the Bearer API is part of Qt Mobility.

Qt project file

```
# Qt libraries
QT += core gui network

# Link Bearer Qt Mobility module into project, for Qt earlien than 4.7. If the Qt version is 4.7, this step is not necessary.
CONFIG += mobility
MOBILITY = bearer
```

```
symbian: {
TARGET.CAPABILITY = NetworkServices ReadUserData
}
```

Header

```
#include <QtGui/QMainWindow>
#include <QPointer>
#include <qnetworkinterface.h> // have to be "QT += network" in pro file

#include <QTimer>
#include <QMessageBox>

// QtMobility
#include <qnetworkconfigmanager.h>
#include <qnetworksession.h>

// this is not necessary for Qt 4.7
QTM_USE_NAMESPACE

class qtSnippets : public QMainWindow
{
    Q_OBJECT

public:
    qtSnippets(QWidget *parent = 0);
    ~qtSnippets();

private slots:
    // Open network connection
    void openConnection();

private:
    // Session of the connection
    QPointer<QNetworkSession> m_session;
};
```

Source

```
#include <QTimer>
#include <QMessageBox>

qtSnippets::qtSnippets(QWidget *parent)
    : QMainWindow(parent)
{
    // Let application to startup fully and then
    // open connection to the network
    QTimer::singleShot(0, this, SLOT(openConnection()));
}

qtSnippets::~qtSnippets()
{
    // Remeber to close connection
    if (m_session)
        m_session->close();
}

void qtSnippets::openConnection()
{
    // Set Internet Access Point
    QNetworkConfigurationManager manager;

    const bool canStartIAP = (manager.capabilities()
        & QNetworkConfigurationManager::CanStartAndStopInterfaces);

        // Is there default access point, use it
    QNetworkConfiguration cfg = manager.defaultConfiguration();
    if (!cfg.isValid() || !canStartIAP) {
        // Available Access Points not found
        QMessageBox::information(this,"Bearer","Available Access Points not found");
        return;
    }

    // Open session
    m_session = new QNetworkSession(cfg);
    m_session->open();
    // Waits for session to be open and continues after that
```


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```
    m_session->waitForOpened();

    // Show interface name to the user
    QNetworkInterface iff = m_session->interface();
    QMessageBox::information(this,"Network opened",iff.humanReadableName());
}
```

Postconditions

A network connection has been opened.

See also

- Setting up Qt Mobility
- http://doc.qt.nokia.com/qtmobility-1.0/bearer-management.html
- User guide: Symbian Signed
- http://www.symbiansigned.com/

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