Working with QSystemNetworkInfo - System Information API - Part 1

Tip:
- Please read this article before moving forward: Archived:Setting up environment for Qt Mobility API
- Setup Carbide.c++ IDE as explained in this article: Working with Carbide.c++ IDE for Qt Mobility APIs

Overview

This is a part 1 of the ***QSystemNetworkInfo API*** which is a part of the ***System Information API*** from ***Qt Mobility project***. The part 2 of this article can be read from here

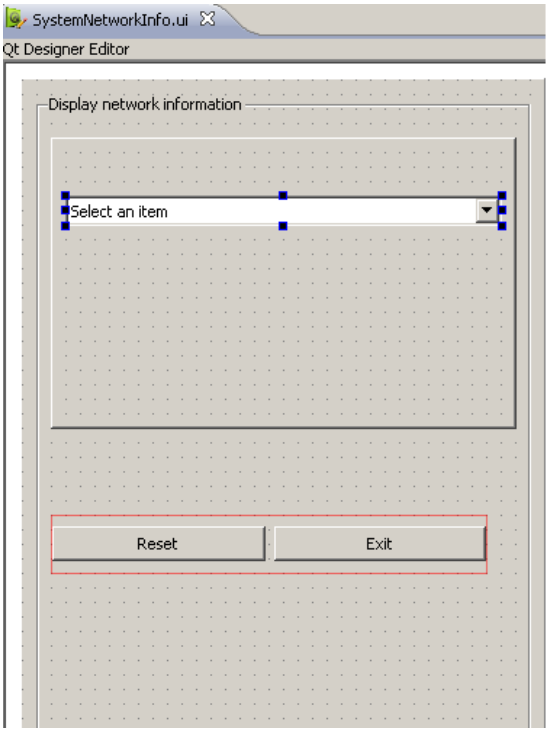
What is covered in QSystemNetworkInfo API Part 1

- It is a part of the System Information API.
- This article covers information about
  - Cell ID of the network
  - Mobile Country code
  - Mobile Network code
  - Home Mobile Country code
  - Home Mobile Network code
  - Location Area code
  - Network name
  - Network Signal strength

Capabilities required

- ReadDeviceData

UI design (.ui file)



Project configuration file (.Pro file)

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- Add the Qt Mobility project configuration option in the .Pro file as shown below

```
CONFIG += mobility
MOBILITY += systeminfo
```

- Add required capability in .pro file as shown below:

```
symbian:TARGET.CAPABILITY = ReadDeviceData
```

Implementing QSystemNetworkInfo API

- QSystemNetworkInfo API is a part of the QtMobility namespace. So declare the QtMobility namespace as shown below:

```
using namespace QtMobility;
```

Header file

```
#ifndef SYSTEMNETWORKINFO_H
#define SYSTEMNETWORKINFO_H

#include <QtGui/QWidget>
#include "ui_SystemNetworkInfo.h"
#include <qsysteminfo.h>

using namespace QtMobility;
class SystemNetworkInfo : public QWidget
{
    Q_OBJECT

public:
 SystemNetworkInfo(QWidget *parent = 0);
    ~SystemNetworkInfo();
public slots:
 void displayNetworkInfo(int aIndex);
 void resetAllFields();

private:
    Ui::SystemNetworkInfo ui;
    QSystemNetworkInfo* networkInfo;
};

#endif // SYSTEMNETWORKINFO_H
```

Source file

```
#include "SystemNetworkInfo.h"

SystemNetworkInfo::SystemNetworkInfo(QWidget *parent)
    : QWidget(parent), networkInfo(NULL)
{
 ui.setupUi(this);
 networkInfo = new QSystemNetworkInfo();
 QObject::connect(ui.comboBox,
   SIGNAL(currentIndexChanged(int)),
   this,
   SLOT(displayNetworkInfo(int)));
 QObject::connect(ui.resetButton,
   SIGNAL(clicked()),
   this,
   SLOT(resetAllFields()));
}

SystemNetworkInfo::~SystemNetworkInfo()
{
 delete networkInfo;
 networkInfo = NULL;
}

void SystemNetworkInfo::displayNetworkInfo(int aIndex)
{
 if(! aIndex)
 {
  ui.resultLabel->clear();
  return;
 }

 QString result;
 switch(aIndex)
 {
  case 1:
  {
   result = QString::number(networkInfo->cellId());
   break;
  }
  case 2:
  {
   result = networkInfo->currentMobileCountryCode();
   break;
  }
  case 3:
  {
   result = networkInfo->currentMobileNetworkCode();
   break;
  }
  case 4:
  {
```

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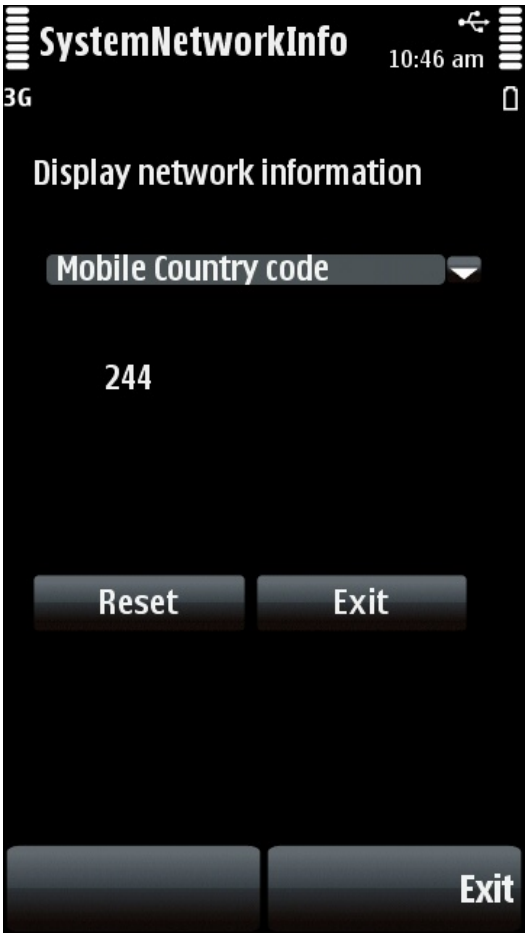
```
    result = networkInfo->homeMobileCountryCode();
    break;
   }
   case 5:
   {
    result = networkInfo->homeMobileNetworkCode();
    break;
   }
   case 6:
   {
    result = QString::number(networkInfo->locationAreaCode());
    break;
   }
   case 7:
   {
    result = networkInfo->networkName(QSystemNetworkInfo::GsmMode);
    break;
   }
   case 8:
   {
    result = QString::number(networkInfo->networkSignalStrength(
        QSystemNetworkInfo::GsmMode));
    break;
   }
   default:
   {
    break;
   }
  }
  if(! result.length())
  {
   result = ("Not available");
  }
  ui.resultLabel->setText(result);
 }

 void SystemNetworkInfo::resetAllFields()
 {
  ui.resultLabel->clear();
  ui.comboBox->setCurrentIndex(0);
 }
```

Output



Useful functions

- int cellId ();
- QString currentMobileCountryCode ();

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- QString currentMobileNetworkCode ();
- QString homeMobileCountryCode ();
- QString homeMobileNetworkCode ();
- int locationAreaCode ();
- QString networkName (QSystemNetworkInfo::NetworkMode mode);
- int networkSignalStrength (QSystemNetworkInfo::NetworkMode mode);

Keywords

Headers

- #include <qsysteminfo.h>

Classes

- QSystemNetworkInfo
- QString
- QButton
- QLabel
- QComboBox

Example Application

- A working example application is available to download from here: QSystemNetworkInfo part1.zip

Related articles

- Getting started with Qt Mobility APIs
- Archived:Setting up environment for Qt Mobility API
- Working with Carbide.c++ IDE for Qt Mobility APIs
- Working with QSystemInfo - System Information API - Part 1
- Working with QSystemInfo - System Information API - Part 2
- Working with QSystemDeviceInfo - System Information API - Part 1
- Working with QSystemStorageInfo - System Information API
- Working with QSystemDisplayInfo - System Information API
- Working with QSystemNetworkInfo - System Information API - Part 2

Reference links

- Qt - cross-platform application and UI framework
- Qt Mobility API
- New Qt APIs Beta - Mobility Project
- SDK help

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