

Introduction to Plasmate



Giorgos Tsiapaliwkas
KDE Plasma Developer
terietor@gmail.com

Antonis Tsiapaliokas
KDE Plasma Developer
kok3rs@gmail.com

Plasma Vocabulary



- **Plasma Applets or Plasmoids**
- **Plasma Dataengines**
- **Plasma Runner**
- **Plasma Theme**

Plasma Libraries



- Before Qt 4.7.x
 - QGraphicsView Framework
- After Qt 4.7.x
 - QGraphicsView Framework
 - Qt Quick
 - QML

Plasma Package Structure





\$PackageName-\$PackageVersion/

- **metadata.desktop**
- **contents/**
 - **code/**
 - 1)files containing scripting code
 - 2) the main file that will be loaded at plasmoid start (unless you specify a different name in metadata.desktop)
 - **images/**
 - 1)image files in svg, png or jpeg format
 - **locale/**
 - 1)translation files in a standard localization hierarchy; e.g. German translation would appear in locale/l10n/de/
 - **ui/**
 - 1)user interface files, such as Qt Designer layouts
 - 2)config.ui the main configuration dialog layout
 - **config/**
 - 1)KConfigXt files describing the configuration
 - 2)main.xml the main configuration description

Plasmate



Plasmate is the Plasma IDE

Plasmate

Create and Share Plasma Addons

With Plasmate, you can easily create your own Plasma Addons, for example Plasma written in Qt Quick, JavaScript, Python or Ruby. Plasmate guides you through the process of importing an existing Addon or creating a new one from scratch, implementing your functionality, and exporting ready-to-install Plasma Packages, either to your computer, or publishing to the world using the Get Hot New Stuff






Get started with Plasmate...

Plasmate provides all the tools you need to learn creating new Plasma Widgets.







- Follow a **Tutorial** to gather inspiration and find out how to turn your ideas into reality.
- Browse the online **Documentation** for information about the scripting API.
- Work on your project in the **Editor** edit scripts and add resources.
- **Preview** your widget as you work on it.
- **Export and Install** the result as a Plasma package.
- **Publish** your creation via *Get Hot New Stuff*.

Have fun creating!


Create a new Addon...


-  Plasma Widget
-  Data Engine
-  Runner
-  Theme
-  Window Switcher

Continue working on...

-  RSSNow (QML)
-  Dictionary (QML)
-  imamasiderwni
-  xml
-  saddsads
-  More projects...

Import an existing project...

Local folder: 

Local package file: 

Download:

Plasmate



file:///home/tsiapaliwkas/sources/kde/kdesrc/playground/base/declarative-plasmoids/rssnow/package/contents/ui/main.qml - Plasmate

File View Edit Bookmarks Tools Settings Help Help

Create Save Point Publish Preview Install Project Notes Files Timeline Documentation Undo Redo

Files

- Animation scripts
 - New...
- Configuration Definitions
 - New...
 - Default configuration
 - main.xml
- Data Files
 - New...
- Images
 - New...
- Executable Scripts
 - New...
- Translations
 - New...
- User Interface
 - New...
 - Main Config UI File
 - DropRssEntry.qml
 - ListItem.qml
 - ListItemEntry.qml
 - main.qml
- Main Script File
- Metadata

```
20
21 import QtQuick 1.1
22 import org.kde.plasma.core 0.1 as PlasmaCore
23
24 Item {
25     id: mainWindow
26
27     property string source
28     property variant individualSources
29     property int scrollInterval
30     property int minimumHeight: 200
31     property int minimumWidth: 200
32
33     Component.onCompleted: {
34         plasmoid.addEventListener('ConfigChanged',
35             configChanged);
36         plasmoid.busy = true
37     }
38
39     function configChanged()
40     {
41         source = plasmoid.readConfig("feeds")
42         scrollInterval = plasmoid.readConfig("interval")
43         var sourceString = new String(source)
44         print("Configuration changed: " + source);
45         feedSource.connectedSources = source
46
47         individualSources = String(source).split(" ")
48         repeater.model = individualSources.length
49     }
50
51     PlasmaCore.DataSource {
52         id: feedSource
53         engine: "rss"
```

Preview

Yuppy, SHP format is rendered properly!

Plasmate GsoC 2012 Projects



- **Project: Make Plasmate Ready For Release**
- **Mentor: Sebastian Kügler(sebas)**
- **Student: Giorgos Tsiapaliwkas(terietor)**

- **Project: Intergrade KWin with Plasmate IDE**
- **Mentor: Martin Graesslin(mgraesslin)**
- **Student Antonis Tsiapaliokas(kokeroulis)**

Intergrade KWin with Plasmate IDE



Task 1

Add Window Switcher Support to Plasmate

Problem

- On slower systems, running 3-4 applications together, might turn the system very slow

Solution

- A fake embedded previewer

Intergrade KWin with Plasmate IDE



Task 2

Add Kwin Scripting support for QML/Javascript based KWin Scripts

Problem

- Since Kwin Scripts doesn't have a previewer, we needed to create a konsole previewer, for debug purposes.

Solution

- Terietor's GsoC involves to add a konsole previewer

Benefits

- Reuse of code between the two GsoC Projects

Intergrade KWin with Plasmate IDE



Task 3

Add Kwin support for Javascript based KWin Effects

Problem

- Kwin effects must to be reload at some point, and in order to reload them we need to use the dbus. So we needed to create a konsole previewer, for debug purposes, in case that something goes wrong

Solution

- Terietor's GsoC involves to add a konsole previewer

Benefits

- Reuse of code between the two GsoC Projects

Intergrade KWin with Plasmate IDE



Task 4

Add support for QML based Window Decorations to Plasmate

Make Plasmate Ready for Release



Task 1

Plasmate's editor doesn't support actions.(Like undo/redo,etc)

Problem

- “Save” and “Save us” action

Make Plasmate Ready for Release



Task 2

Install remotely a plasma package

Problem

- Plasmapkg used KApplication(replaced with QCoreApplication)
- Plasma::Package::install() used to depend on Ui libraries

Make Plasmate Ready for Release



Task 3

Add a console which will contain the output from the debugger

Problem

- **Doesn't filter the output**

Make Plasmate Ready for Release



Task 4

Fix KconfigXt editor

Make Plasmate Ready for Release



Task 5

- Move Plasma SvgViewer
- Read the elements of each svg

Make Plasmate Ready for Release



Task 6

- Merge plasmoidviewer with plasma-previewer
- Add support for the KDE_PLASMA_COMPONENTS_PLATFORM environmental variable

Make Plasmate Ready for Release



Task 7

Move the SDK tools into Plasmate

Plasma Contact



- Mailing List: plasma-devel@kde.org
- Irc: #plasma at irc.freenode.org
- Wiki: Community.kde.org/Plasma

Kwin Contact



- Mailing List: kwin@kde.org
- Irc: #kwin at [#kwin at irc.freenode.org](https://irc.freenode.org)
- Wiki: [Community.kde.org/KWin](https://community.kde.org/KWin)