Strigi Desktop integration

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Why choose Strigi

Strigi's main features

- fast and lightweight
- portable
- extensible
- next KDE4 desktop searching engine
- can be easily accessed from external programs
Strigi's capabilities

- perform fast searches across heterogeneous data collections
- extract metadata informations from files
- index compressed archives contents
- create/recreate/discover relations between different data
Strigi communication interfaces

socket

DBus
Socket interface

Benefits:
- well known mechanism
- can be accessed from different languages / OS

Drawbacks:
- actually has less priority --> it isn't fully tested
How to interact with Strigi

DBus interface

The best way to access Strigi features:

- simple and fast to use
- IPC protocol used by KDE4 and Gnome
- there are lots of DBus bindings
- actively developed
Available functions

Everything can be performed through the socket and DBus interfaces:

- start/stop Strigi daemon
- add/remove filters
- force index updates
- index a specific resource
- perform searches (and retrieve results ;)

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Available classes for C++ developers

Existing C++ classes for playing with Strigi:

- AsyncSocketClient: access socket interface
- DBusClientInterface: access DBus interface

Automatically shipped with Strigi installation
“main” clients

Their code can be taken as example:

- **StrigiClient:**
  - written in C++
  - uses Qt4
  - connection through DBus interface

- **StrigiApplet:**
  - written in C++
  - uses KDE3 libs
  - connection through socket interface
Strigi's Gnome DeskBar handler
Strigi's Gnome DeskBar handler

Features:

- written in python
- communicate using DBus interface
- only 95 lines of code

Strigi integration is easy
Really short description

What are JStreams:

- a C++ “transposition” of Java InputStream childs

```java
public StreamDemo(URL url) throws IOException {
    InputStream filestream = url.openStream();
    ZipInputStream zipstream = new ZipInputStream(filestream);
    ZipEntry entry = zipstream.getNextEntry();
    while (entry != null) {
        handleEntry(zipstream, entry);
    }
}
```
The power of JStreams

- flexible: can be extended for supporting new file types
- really fast (especially while accessing compressed archives)
- easy to use
- code reuse: can be used by other programs with ease
JStreams actual status

More relevant file types:

- compressed archives: tar, gzip, bz2, ar,...
- linux distribution packages: deb, rpm,...
- pdf files
- email
- ...
A simple example
QClient

Simple Qt4 program that uses JStreams:

- navigate through archive files
- can open archive file contents

How can be done?
Use JStreams

QArchiveEngine Class

QAbstractFileEngine

ArchiveEngineBase

Access archive files as directories

ArchiveEngine
QArchiveEngine Class

For accessing compressed files as directories:

- create a new QAbstractFileEngine child
- use JStreams inside it
- register the new engine

All Qt classes that provides file system access will use it whenever it's possible
JStreams and KDE

Also KDE programs can use JStreams functionalities:

- **JStreams KIOSlave**
  - Available for KDE3
  - Already into KDE4 trunk
Use JStreams into KDE

JStream KIOSLAVE
Interact with Strigi

- use Strigi's features is really simple
- it can be done from:
  - different programming languages
  - different window managers
  - different OS
- you can use Strigi for:
  - desktop searching tasks
  - fast and simple access to a large set of file types
Strigi's integration

Actually we cover a good set of possibilities:

- StrigiClient: generic window manager
- StrigiApplet: kde client
- Gnome DeskBar handler: self-explaining

In the near future:

- a KDE4 Plasmoid client
Conclusions

Strigi's integration: the future...

There is a lot of work to be done on the client-side:

- keep improving actual interfaces
- improve usability & integration
- create a better user experience

create a better user experience
Help needed!

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