Accessibility for Qt and KDE

1.7.2012 - Akademy
Frederik Gladhorn <gladhorn@kde.org>
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About me

Frederik Gladhorn
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KDE
(Parley, ghns, accessibility)

Qt
(accessibility, touch handling)
About me
Outline

why-what accessibility
the easy stuff (do it!)
assisitive technology and apis
qt-at-spi
libkdeaccessibilityclient
conclusion
Accessibility

degree to which a product, device, service, or environment is available to as many people as possible
Why?

Rules

Laws

Requirements

...
because we can
because we care
enable people
inform
participate
KDE Accessibility

Font and color settings
KMouseTool
Magnification KMag (KWin)
Simon
Screen readers and APIs
YOUR app

Colors

Fonts

Keyboard navigation

→ hig guidelines
Keyboard navigation!
KMouseTool
Magnification

KMag updates

LibKdeAccessibilityClient
Simon
Assistive Technology

Virtual Keyboards

Screen Reader

Braille
Accessibility APIs

- MSAA (IA)
- IAccessible2
- AT-SPI
- AT-SPI 2 (DBus)
- UI Automation
- Apple Accessibility API
Accessibility APIs

- MSAA (IA)
- AT-SPI
- IAccessible
- AT-SPI 2 (DBus)
- Qt
- UI Automation
- Apple Accessibility API
Why now?
How to get it running?
qt-at-spi

Available in most distributions now

Qt 4: projects.kde.org/qtatspi

Qt 5: pending review to be integrated in QtBase
Getting our hands dirty
Now do the **keyboard** thing again
Let's fix it!
We did it
designer
code
code

widget->
    setAccessibleName(i18n("next"));
Do this at home

Have AT-SPI-2 running
(bug your distro if not)

Grab Qt 4.8

Get qt-at-spi

projects.kde.org/qtatspi
QAccessiblePlugin
(for your custom widgets)
LibKdeAccessibilityClient
(yes, for clients, like the name says!?!)

KAccessible/Orca/KAccessible2
(better name anyone?)
Challenges

Plasma
Qt Quick 2
Qt WebKit
Virtual keyboard
Input methods and touch
Qt Quick 2

```plaintext
verticalScrollBar.value = verticalScrollBar.maximum
}

Accessible.role: Accessible.EditableText
Accessible.name: text

TextEdit {
    MouseArea {
```
Feedback and help appreciated

Go ahead, test with Orca
Check your app!

Colors, fonts

Keyboard navigation

Run with screen reader
Questions?

Frederik Gladhorn <gladhorn@kde.org>
Client (Screen Reader) \rightarrow\text{DBus} \rightarrow \text{QAccessible-BridgePlugin} \rightarrow \text{Qt} \rightarrow \text{QAccessible-Plugin} \\
\text{AT-SPI 2 Registry} \rightarrow \text{notifyAccessibilityUpdate} \rightarrow \text{queryAccessibleInterface}