Building Bridges

Making Qt and KDE Accessible
About me

Frederik Gladhorn

Qt (Nokia)

KDE
Accessibility

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

magnifier
font and color settings
Jovie
Simon
You and your app

colors

fonts

keyboard navigation
Keyboard Navigation
Assistive Technology

Screen Reader

Braille
KAccessible

a built in screen reader
Qt and AT-SPI

February: start... hack hack hack hack

1 Sprint

Now: almost
(real really soon now) release
now do the **keyboard** thing again
Setting Accessible Properties

![Qt Designer screenshot showing accessible properties](image)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>accessibleName</code></td>
<td>Zoom Slider</td>
</tr>
<tr>
<td><code>accessibleDescription</code></td>
<td></td>
</tr>
<tr>
<td><code>layoutDirection</code></td>
<td>LeftToRight</td>
</tr>
<tr>
<td><code>autoFillBackgroundColor</code></td>
<td></td>
</tr>
</tbody>
</table>
Accessible Properties

• Name: Short, when the widget doesn't provide it by default or the label is misleading when spoken

• Description: More elaborate explanation
QWidget

QAccessiblePlugin

QAccessibleAccessibleInterface
Qt Quick (QML)

Accessible.role: Accessible.Button

No plugin needed
Qt Quick (QML)

Accessible.role : Accessible.Button

No plugin needed
Do this at home kids

Have AT-SPI-2 running

Grab Qt 4.8

Get the QAccessibleBridge

gitorious.org/qt-at-spi
Conclusion:
check your app!
colors, fonts
keyboard navigation
run with screen reader
Challenges

Input methods – touch

Screen Reader integration

QML/Qt Quick
Meet and talk
Simon, Accessibility in general, Gnome, KDE, everyone.
Today 16:05
find us in front of Audimax

Accessibility BoF
Wednesday 10:00
room 1.404/1
Questions?

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Client (Screen Reader) \[\text{AT-SPI 2 Registry}\] \[\text{QAccessible-BridgePlugin}\] \[\text{Qt}\] \[\text{QAccessible-Plugin}\] 

- DBus
- notifyAccessibilityUpdate
- queryAccessibleInterface
Accessibility APIs

- MSAA (IA)
- AT-SPI
  - IAccessible2
  - AT-SPi 2 (DBus)

Additional APIs:
- UI Automation
- Apple Accessibility API
QDBusVirtualObject
Efficient structure now
memory efficient

overhead almost 0