LibreOffice
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# LibreOffice Accessibility on Linux, Windows and macOS

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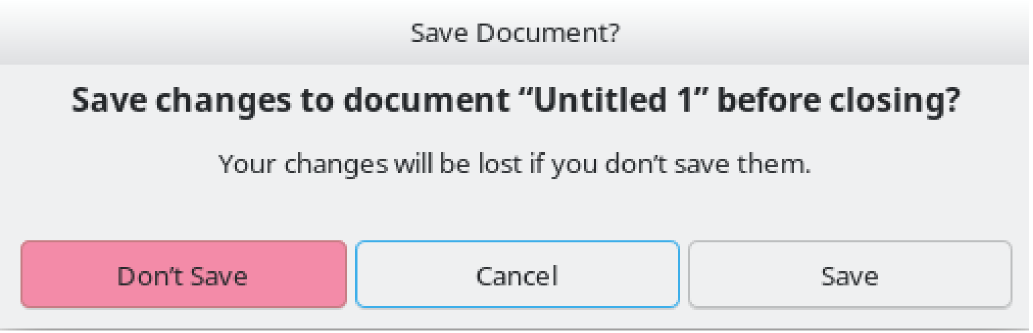
# Definition: Accessibility (a11y)

Wikipedia: “**Accessibility** is the design of products, devices, services, vehicles, or environments so as to be usable by people with disabilities. The concept of accessible design and practice of accessible developments ensures both "direct access" (i.e. unassisted) and "indirect access" meaning compatibility with a person's assistive technology (for example, computer screen readers).”

https://en.wikipedia.org/wiki/Accessibility, 2025-01-30

# Sample scenario: Screen reader

- user moves focus in dialog to next control using Tab key
- application sends focus event via platform a11y protocol
- screen reader receives that event
- screen reader requests additional information about the object via platform a11y API
- screen reader announces the object (e.g. “Cancel, Button”)

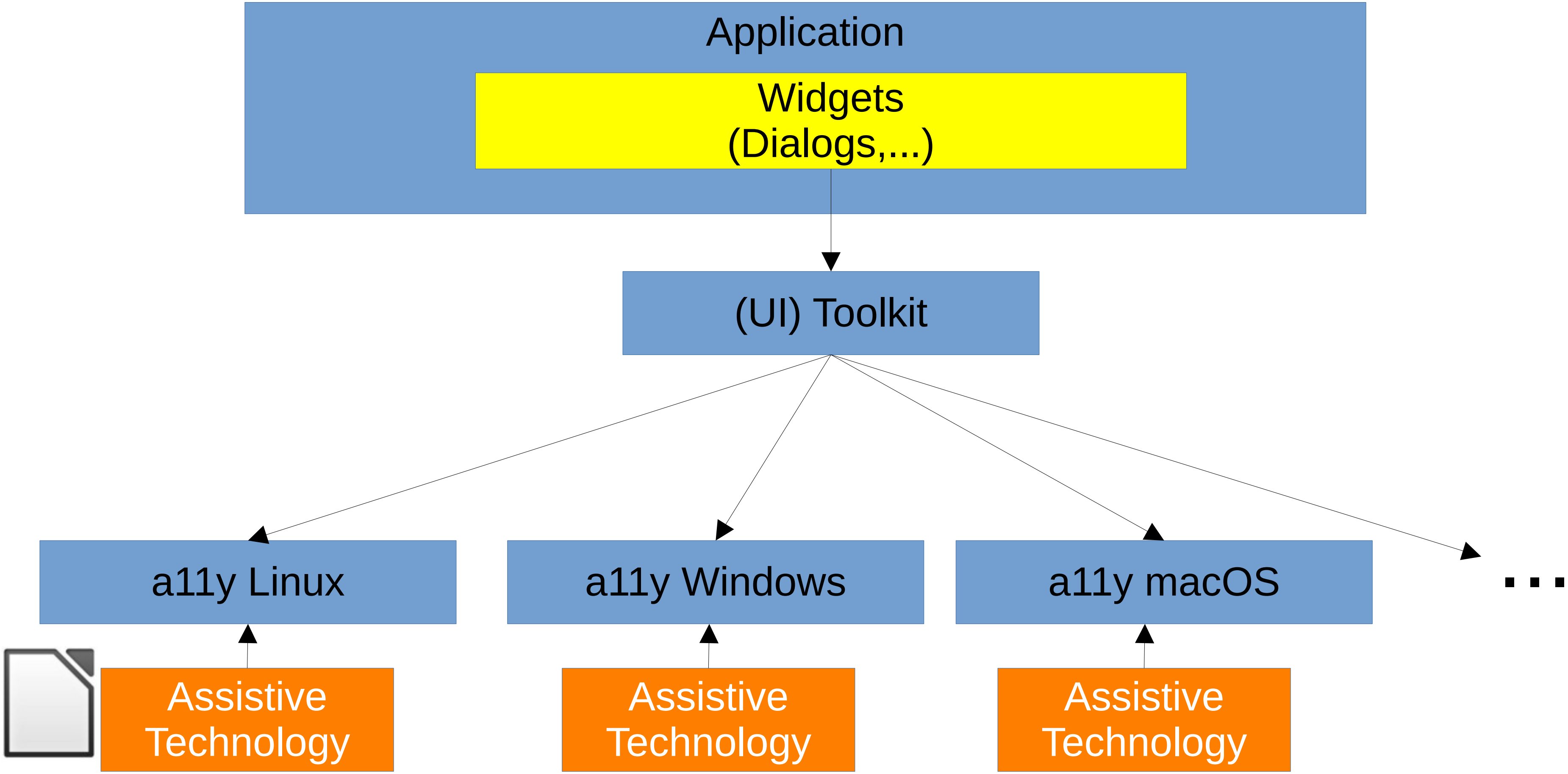


Save Document?

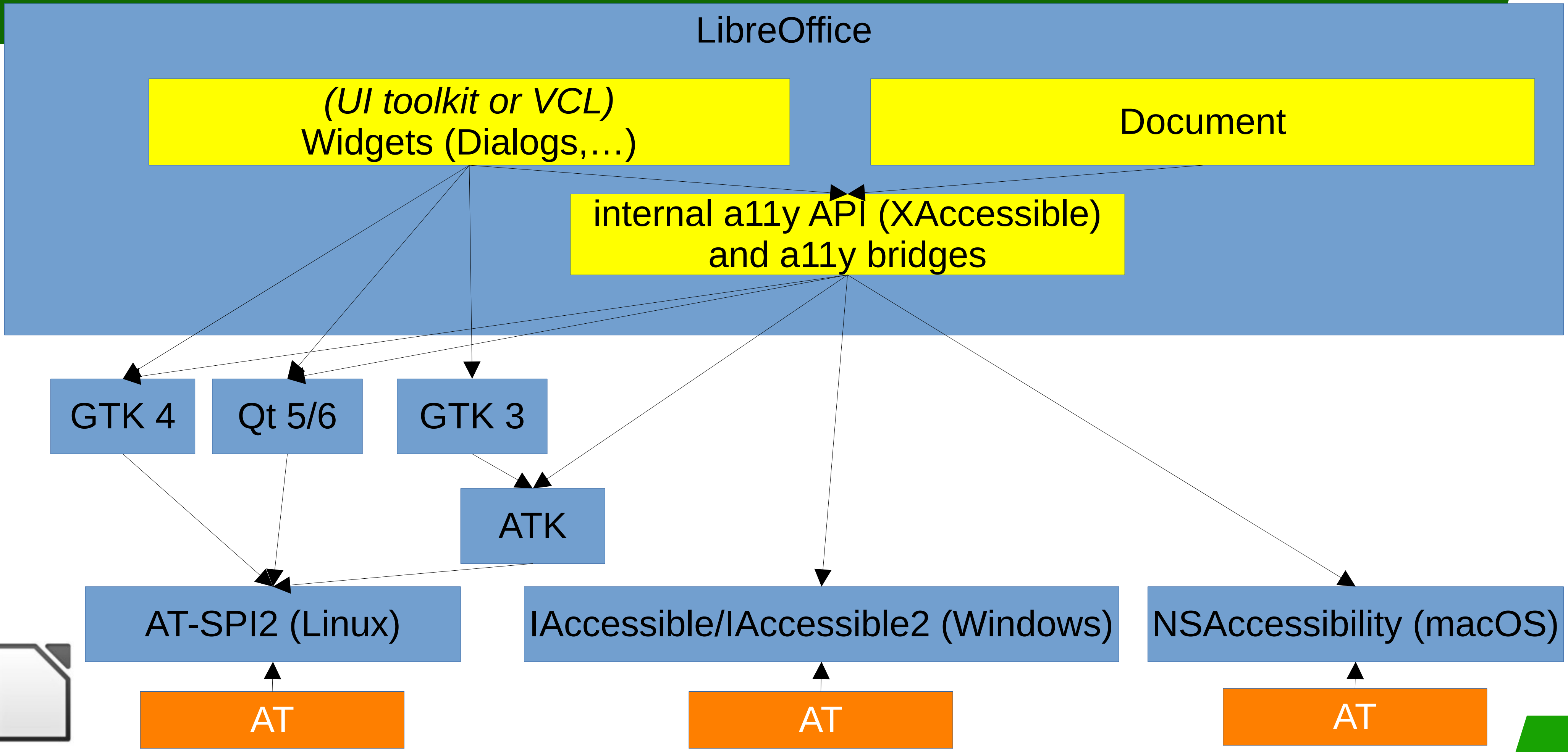
**Save changes to document “Untitled 1” before closing?**

Your changes will be lost if you don’t save them.

# Simple case (not LibreOffice)



# LibreOffice (simplified)



# Windows and macOS

- LO bridges directly implement platform protocol/API
- **Windows**:
  - support for IAccessible/MSAA (Microsoft Active Accessibility) and IAccessible2
  - currently no native support for UIA (User Interface Automation)
  - basic UIA support via MSAA to UIA Proxy (included in Windows)
- **macOS**: NSAccessibility/NSAccessibilityProtocol

# Linux – gtk3 VCL plugin

- AT-SPI2 a11y protocol on Linux
- internal a11y bridge uses ATK
- UI mostly uses native GTK widgets
- GTK 3 uses ATK as well
- currently the most accessible variant on Linux

# Linux – gtk4 VCL plugin

- UI mostly uses native GTK widgets
- GTK no more uses ATK, but implements AT-SPI2 directly (or alternatively via AccessKit)
- GtkAccessible API for applications
- experimental/incomplete due to lack of upstream GTK a11y API (e.g. gtk#6272, gtk#6269, gtk#6195, gtk#6196)
  - Widgets/Dialogs are generally accessible, but document content is not
- gtk3 remains default VCL plugin on GNOME for now

# Linux – Qt-based VCL plugins

- Qt 5 (qt5/kf5 VCL plugins) and Qt 6 (qt6/kf6 VCL plugins),
  - improvements in Qt 6 essential for LO a11y
- Most of the UI currently uses VCL widgets
  - use of native Qt widgets is WIP ("Qt weld", tdf#130857)
- QAccessible API for applications, bridged to AT-SPI2 on Linux
- some upstream Qt API still missing (at least Hyperlink)
- not as accessible as gtk3 VCL plugin yet, but slowly getting closer

# Misc

- Newton: New proof-of-concept accessibility stack on Linux
- Good user experience depends on all components (LO, toolkits and libraries, assistive technology) in the accessibility stack interacting well with each other
- working together with contributors from other projects
- Big thanks to everyone involved! ☺

# Wiki, Mailing List, Bugzilla

- Wiki: https://wiki.documentfoundation.org/Accessibility
- Accessibility mailing list: accessibility@global.libreoffice.org
  - s.a. https://www.libreoffice.org/get-help/mailing-lists
- Bugzilla:
  - Accessibility meta bug tdf#101912
  - Tickets with keyword “accessibility”

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# Thank you!