

How GNOME Obsolated its “Enable Accessibility” Setting

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Topics

- Accessibility vs. Accessibility Support
- Phase 1: Getting Started
- Phase 2: Rebuilding What We Had
- Phase 3: Achieving “Always On” Accessibility
- How Does This Affect Me?

Accessibility vs. Accessibility Support

An extremely quick introduction

Accessibility: removing barriers

- Themes and fonts
- Keyboard shortcuts
- Visual bells
- Assistive Technologies

Accessibility support: enabling access via ATs

- Screen Reader
- Screen Magnifier
- Navigation by on-screen keyboard
- Navigation by voice

Phase 1: Getting Started

Creating an Accessible, Free Desktop

Starting GNOME Accessibility

- Mar 1999: GNOME 1.0 release
- Oct 2000: “GNOME Accessibility Summit”
 - Sun, IBM, and others
 - How to make an accessible Free Desktop
 - Focus on GNOME 2.0
- Jun 2002: GNOME 2.0 released

Bolted on; not built in

- Allowed to evolve independently
- Implemented as gmodule plugins
 - gail
 - atk-bridge
- Loaded conditionally at run-time based on an Accessibility “on/off” user setting

Plugin pros

- Support won't interfere when it is not needed
- No additional memory/CPU overhead

(i.e. Hide the problems rather than fix them)

Plugin cons

- Tied to the session
- Loaded only at application start time
- Users need accessibility enabled in order to enable accessibility

Enabled by default in GNOME 2?

- Nov 2005: Accessibility enabled by default for development releases: **ACCEPTED**
- Jul 2008: Accessibility enabled by default for stable releases: **REJECTED**

“Still we have the problem that our current accessibility technology just sucks too much for being enabled by default.”

-- desktop-devel-list commenter

Wait a moment ...

- Still “sucks too much” after eight years?
- Accessibility was seen as an optional add-on.
- The Accessibility Team was always small.
- And then ...

Perfect storm

- Corporate accessibility development stops
 - Corporate “change of direction”
 - Layoffs followed by takeovers
- GNOME 3 development starts

Phase 2: Rebuilding What We Had

And taking the opportunity to make it better

2010: Rework existing support

- Bonobo deprecation
- AT-SPI over DBUS (AT-SPI2)
- GObject Introspection
- GSettings vs GConf

2010: Implement new support

- New toolkits like Clutter
- New widgets in existing toolkits like Gtk+ 3
- New desktops like GNOME Shell

2011: Make improvements

- Fix regressions in the new and reworked code
- Improve toolkit a11y support, e.g. GtkTreeView
- Improve performance and stability

2010-2011: Integrate modules

- Cally becomes part of Clutter
- Gail becomes part of GTK
- ATK implementations are now built-in
- But atk-bridge remained a plugin

Phase 3: Achieving “Always On” Accessibility

It takes a community to obsolete a setting.

2012: “Year of Accessibility”

- Hackfest to plan further work, including accessibility enabled by default
- Developers to focus on significantly improving the accessibility stack
- Friends of GNOME Campaign to support additional development

What changed?

- Stability improvements
- Performance improvements
- Accessibility framework not sending/getting messages unless an AT is listening

Enabled by default in GNOME 3?

- Apr 2012: proposed again
- tl;dr: **ACCEPTED**

The conservative approach

- Proposed by the Accessibility Team
- Just change the default value of the setting
- Approved by the GNOME Community

The no-turning-back approach

- Proposed by Benjamin Otte & Bastien Nocera
- Make atk-bridge a library which toolkits link to
- Embraced by the community (who pitched in)
- Implemented as the solution

What's the difference?

- Not an add-on but an add-in
- For users: It JustWorks™
- For developers:
 - App accessibility is tested by everyone
 - The atk-bridge is compiled by more developers

Is it working?

- Accessibility is always on as of GNOME 3.6.
- Distros are shipping it, users are using it.
- Developers have not suggested we undo it.
- We're finding and fixing bugs here and there.
- But... Yeah, it's working.

How Does This Affect Me?

As a developer who wants to make my application or environment accessible

Are you using GTK?

- If you are using GTK \geq 3.6:
 - GTK depends on the new library
 - Your app should be accessible out of the box
- If you are using GTK2:
 - These changes were not backported
 - The setting was kept in GNOME 3 for such apps

Any other toolkit/application?

- Assuming that you already have an ATK implementation for your widgets ...
- You only need to use at-spi2-bridge library
 - Add the dependency
 - Call an init method
- GNOME Shell's patch:
 - 16 insertions, 199 deletions

Questions?

