

GNOME 3.0 Accessibility: State of the Union

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Let's introduce it ...



Accessibility?

- Means helping people with disabilities to participate in any life activity
- Like computer stuff. That involves
 - ... programmatic access
 - ... keyboard navigation
 - ... themes

AT ?

- AT == Assistive Technologie
 - Screen readers
 - On screen keyboards
 - Magnifiers
 - Ok

what needs an AT ?

- Know which apps are running
- Know the active app
- Know the focus object
- Be able to interact with the app

AT-SPI ?

- “Assistive Technologie Service Provider Interface”
- Daemon providing the functionality that requires those ATs
- “out of the process”
- Using CORBA/bonobo on the old times

And the apps?

- How they expose the data?
- Direct CORBA calls to AT-SPI?
- It would be doing stuff really similar ...
- But apps are heterogeneous ...

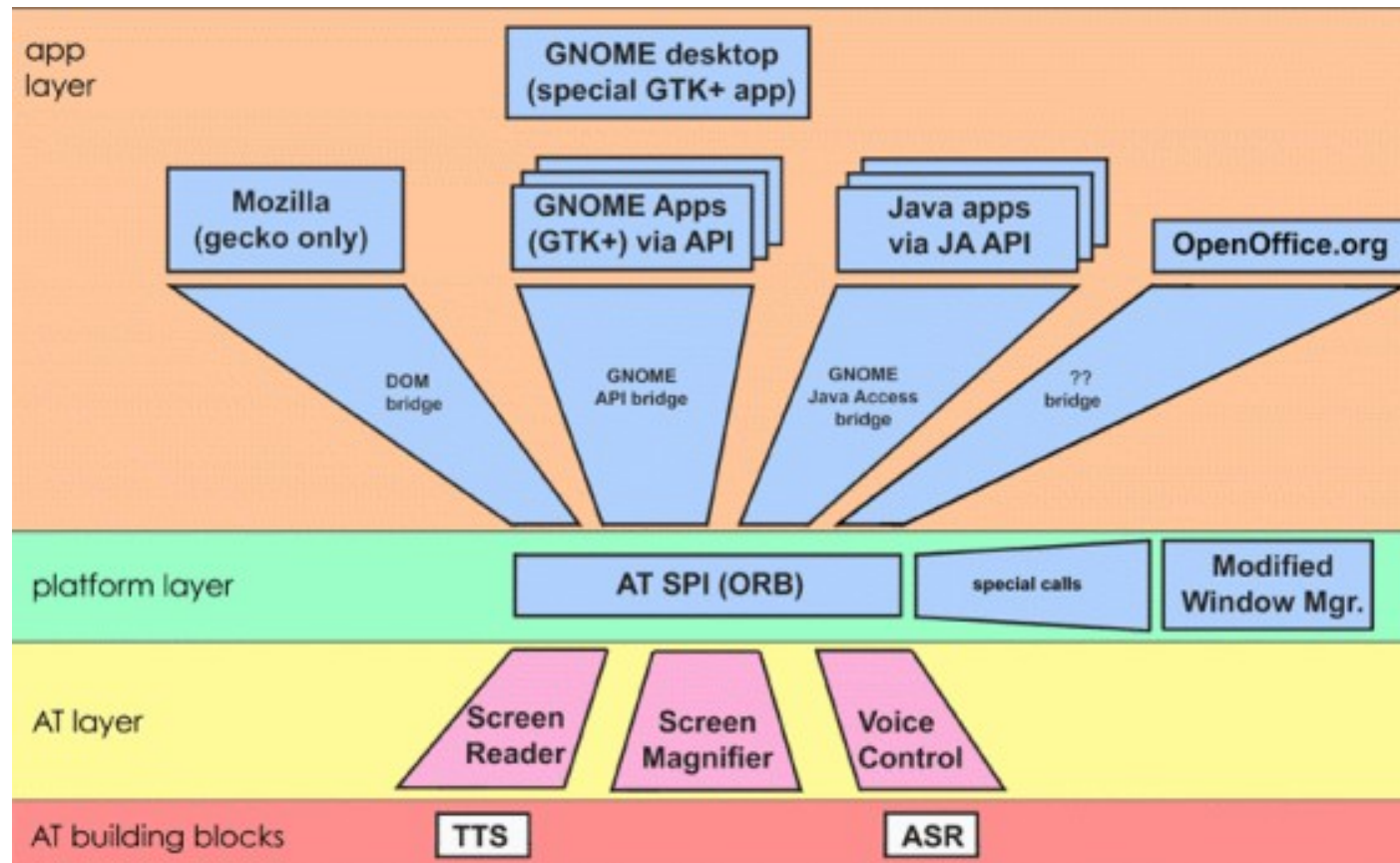
ATK

- ATK = Accessibility ToolKit
 - Common interface
 - The atk-bridge uses ATK calls to know that to expose to AT-SPI
 - Toolkits and apps implement ATK
 - “in process”

How this stuff was implemented?

- Not in time for GNOME 2.X
 - Isolated on runtime loadable modules
 - At-spi provided at-bridge
 - Gail provided an ATK implementation
 - Isolated since the beginning
 - Extension and access to private data nightmares

That old GNOME 2.0



Stories from the past

- Bill Haneman, March Mulhany,
- GUADEC 2004: “Where we are today”
- 8 critical bugs, ~50 serious bugs
- Assessment:
 - 2.6 : Can be made to work, with some effort
 - *Need some HEAD components for better results*
 - 2.8 : Reasonable level of functionality “out of the box” :
(still at risk)
 - *GOAL: disabled users can do all key tasks*
 - *Depends on regression control and attention by packagers, community*

GNOME 3.0 is coming!

(First introduced at Istanbul 2008)



Changes, changes!

- CORBA is dead, long live DBUS
 - AT-SPI (major piece) CORBA based
 - Nokia fund initial move on 2008
- Gsettings VS GConf
- Desktops: GNOME Shell, Unity
- Clutter, Gtk3
- **CSUN 2010 Accessibility Summit**

Hey, why so serious?

- We worked to get the a11y pieces on GNOME 2.0
- Why just keep sync with GNOME 3.0 is so a big problem ... ?
- Lets talk about that later ...

GNOME 3.0 is here!

(April 2011)





GNOME 3.0.1 improved

- A11y community started to use a testing distro based on Frederic Crozat one
- Major functionality issues were solved
- GNOME “classic” is still the solution for a11y users

So, what we have here?

- Infrastructure: ATK, AT-SPI
- Toolkit implementations: GAIL, Cally, Java
- Apps: LibreOffice
- Ats: Orca, Caribou, GNOME Voice Control, VEDICS, Dasher, OpenGazer, MouseTrap
- **A lot of things, right?**

Really?

- At-spi just ported, no new features
- ATK still 1.0 after 10 years.
- Less than 5 commits in last two years for GVC, Dasher, MouseTrap, etc

What we really have?

- Infrastructure requires to be updated
- Some first citizens: Orca, Caribou, GNOME Shell built-in magnification
- Several A11ys on their own
- **Whats the difference?**
 - Orca has a real community behind

Some history - good times

- 16 Oct 2000, “GNOME Accessibility Summit”
 - Sun, IBM and others joined the party
 - A11y had a really big push
- A lot of new stuff between 2000-2005:
 - ATK, AT-SPI, GAIL, Gnopernicus, LSR,

Some history - bad times

- 1 Jun 2007, IBM “change strategies”
 - LSR dies, Orca survives
- 27 Jan 2010, Sun is acquired by Oracle
 - Sun decreasing workforce is mostly removed
 - Willie Walker stops to be a11y leader and Orca co-maintainer

First conclusion?

- If GNOME a11y wants to survive requires to maintain a healthy community
- But a11y applies to all GNOME.
- Why “GNOME a11y”?, why not “GNOME”?
- **And talking about that**

That mail ...

- 2011-06-01

<snip>

>From my perspective, the ally team is far too happy to be in its own little corner, working on its 'testing distro' and its own little tools that need to work on every OS and thus end up working properly on none of them. Yet, when I try to run accerciser in a jhbuild tree on my system, it locks up solid after a few minutes every single Time...

<snip>



A11y had opposite feeling

- Some IRC examples:

Jan 22 21:31:37 <anonymous> API: aha...yeah. We need support for users who don't use the mouse at all.

Jan 22 21:32:14 <anonymous> Seems as though that would just be a fundamental thing to build in

Jan 22 21:35:08 <anonymous> As we all know, designing for a11y helps *everyone*, not just stupid disabled chumps that nobody cares about.

Jan 22 21:38:35 <anonymous> API - heh - just joshing. I wasn't poking at you. I was poking at mainstream developers who haven't embraced accessible design yet.

Jan 22 21:39:33 <API> yeah, I supposed that, but sometimes there are some strange situations

Jan 22 21:40:06 <API> for example, at Boston, there are some presentations, and then the time of the "complainers from ally"

Communication breakdown

- A11y “folks” thing that the others prefer them to be isolated, and the others thinks that they are happy with that ...

- Other extract from “that mail”:

“I think that we have to be honest about the fact that a11y is not a first-class feature of GNOME until it is fully integrated”.

Current work and future



ATK/AT-SPI2 Hackfest

- Analysis of current status and future
- A lot of things to do now on ATK2
- A lot of things would require an API breakage

ATK/AT-SPI2 Hackfest (2)

- A lot of ATK implementors to be updated
 - GTK
 - Clutter
 - LibreOffice
 - Unity
 - Etc.
- AT-SPI2 would also require some changes

GailEctomy

- Benjamin Otte and Matthias Clasen are merging GAIL and GTK
- First Benjamin conclusions about ATK were really more radical ;)

Performance and stability

- Target: being able to have a11y running by default without affecting performance and stability
- Mike Gorse working on that, made some changes
- Require to measure the changes

GNOME Shell

- Awesome built-in Magnifier
 - by Joseph Scheuhammer
- On screen keyboard based on Caribou
 - by Nohemi Fernandez
- GNOME 3.0 included some ATK patches
 - Still not really usable with Orca
 - Work in progress

A summary?



Current status



Current status

- An accessibility framework
- Bad: Not enough ATs or people
 - Bus factor of one in several cases
- Good: GTK+ developers are taking care of GAIL

- What we need: improve the base, more ATs, more people

Questions?

