

OpenOffice.org:  
Integration with GNOME



**XIMIAN™**

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*He who hears my words and puts them into practice is like a man building a house who laid the foundation on rock: Luke 7:48*

**XIMIAN™**



# Overview

*Or how to easily predict where you are now and when the pain will end*

- **Gnome**
  - What it is, and why that's interesting
  - History, relating to OO.o, how we met
- **'Community'**
  - What we did to help 'nurture' it
  - Freedom – the hard reality of the world
- **Unix**
  - The problems – why it sucks for us
  - Gnome: the solution – a better way
- **Ximian OO.o**
  - New feature sketch – some of the funky new bits
  - Areas for future work – where we need to go next



# Gnome – what is it

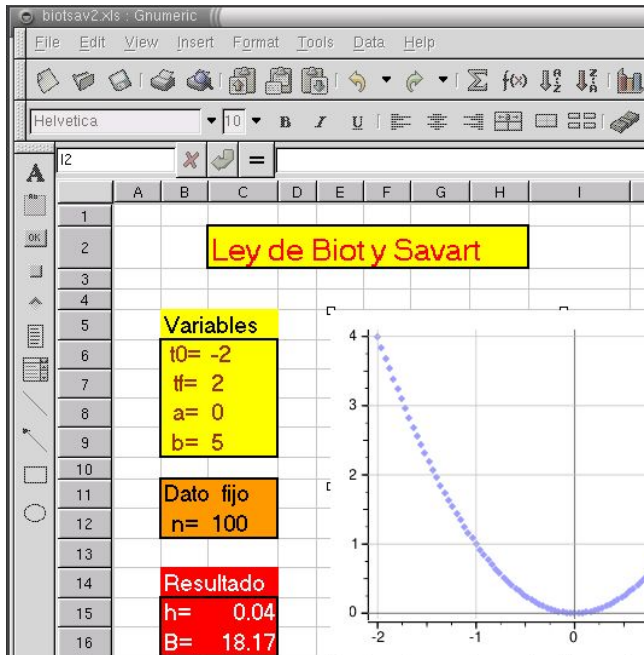
*For any laymen that may have crept in today ...*

- **Free Software**
  - 'Free software on every desktop' (not 'Open')
  - Libraries free for commercial use LesserGPL
  - vendor neutral; Ximian, Sun, Wipro, Red Hat
    - CodeFactory, Mandrake, HP, IBM, OMG, Debian, Red Flag, etc.
- **Business friendly**
  - API / ABI compatible - forever ?
  - meeting government accessibility requirements
  - multi-OS, GNU/Linux, GNU/Solaris, AIX, HP/UX
- **No 'official' office suite**



# Gnome / OO.o history

*Ich bin ein Hamburger – (in memorium JFK)*



- Gnumeric – the office testbed
  - Excel I/O + OLE file unwinding
  - Dep. engine – documented, faster (hash/range bucket), 64k+ rows etc.
- Talks / meetings with Sun
  - Common component model ?
  - Research on OO.o, C-onlyize UNO ?
  - Stymied by schedule & flexibility worries

OpenOffice.org – the only workable Free software office suite

Sheer depth and wealth of features, LGPL license, etc.

A well integrated OO.o – a personal goal since then

2 developers on OO.o for 6 months + artist support

Lots of bang for buck, the future for Gnome office and core devel.

Outstanding changes to be free: LGPL/SISSL soon.



# 'Community' engagement

*Or how the problems with OpenOffice.org are a reflection of the lack of participation*

- <http://ooo.ximian.com/>
  - Hackers guide – thousands of hits per day
    - nowhere was it mentioned that OO.o does not build
  - LXR – hundreds of queries per day
  - Bonsai – hundreds of hits per day
  - Tinderbox – ~15 or so slave setups
    - Irix, W32(tcsh,native), RH 8.0 clean, Solaris, OSX(X11), Debian (misc. gcc)
    - 65% permanantly broken
    - the rest are user-patched builds
  - 9/11 non-Ximian admins, have met only 1
    - Trust in action, freedom, non-'official'
- Encouraging first time hackers



# Free software and development

*Or how to make your software attractive to the random soup of developers*

- There is no community
  - OO.o a particularly acute case
  - Chemical analogy
    - Entropically favorable to work on OO.o
    - Rate is very, very low
    - Reaction barrier too high
- How do we fix it ?
  - Barrier to entry must be low etc.
  - Catch and treasure passing people
  - Sustain interest
  - Give responsibility fast



# Desktop Unix Sucked ...

*The state of the Free world in 1995, and the commercial Unix world until recently*

- No common file manager / utilities
- Desktop API non-standard / atrophied
  - eg. font location ( / rendering )
    - Ask X, hard-coded paths, a few guesses, fork 'chkfontpath'
  - eg. printing
    - Fork lpq, parse output, fork lpr etc.
  - eg. MIME associations, GUI LAF, recent-files etc.
- But far, far worse
  - Lack of coherency and integration
    - eg. setup my MIME bindings 3 times
  - Love of over-exposed complexity
- Code re-use necessitates API sharing



# Why Gnome on Unix

*Where I conveniently conclude that it can be the only solution on Unix for now*

- Gnome – Freedom
  - LGPL platform libraries
  - Open development, public discussion
  - ABI/API stability
- Qt ( KDE ) - less so
  - GPL platform (for X only)
  - Substantially closed development
    - Hefty cost per developer
    - We want to see 5000+ coders join us

Professional Qt (X11/Windows/Mac)

1	\$3.100
10	\$26.000
5000	< \$13.000.000 (?)

<http://www.trolltech.com/products/qt/pricing.html>

*License: Qt Commercial License: ( QT3 FAQ )*

- Can we use the Free Edition while developing our non-free application and then purchase commercial licenses when we start to sell it?
- No. The Free Edition license applies to the development phase – anything developed without Professional or Enterprise Edition licenses must be released as free/open source software ...





# Selected featurelet walk-through

*Pulling out a few little things to highlight our overall direction*

- Not just yet another re-branding exercise
- Splash doesn't block the user for ~30seconds
- “It starts up much faster” ... perception vs. reality

A relatively small change, requiring only some knowledge of X pixmap handling, and a new API. **3 hacker hours.**

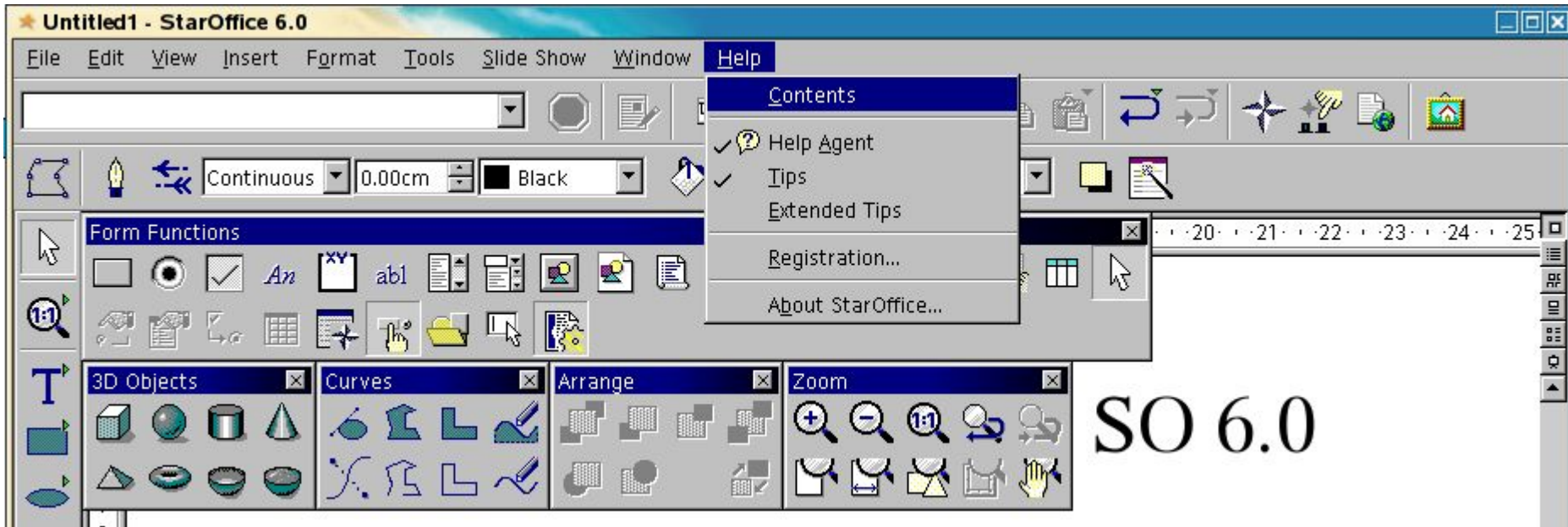
Enterprise with 1000 users; 15 seconds per day saving:  
**4 man hours per day.**





# StarOffice 6.0 – LAF

*The amazing way a little rendering can hide those cracks:*

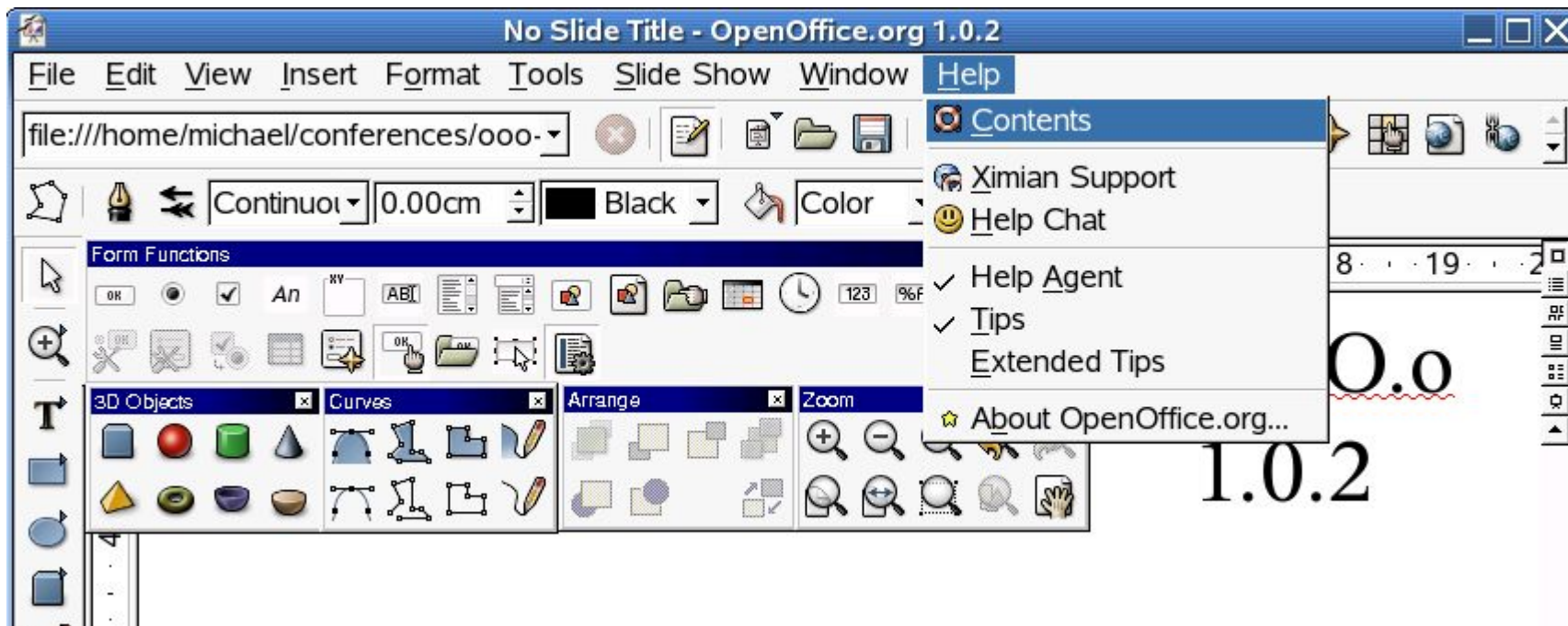


- UI font – non AA
- Weird menu spacing / padding
- 8 bit 26x25 low-color icons (cf. Undo, stop)



# Ximian OpenOffice.org 1.0.2

*The amazing way a little rendering can hide those cracks:*

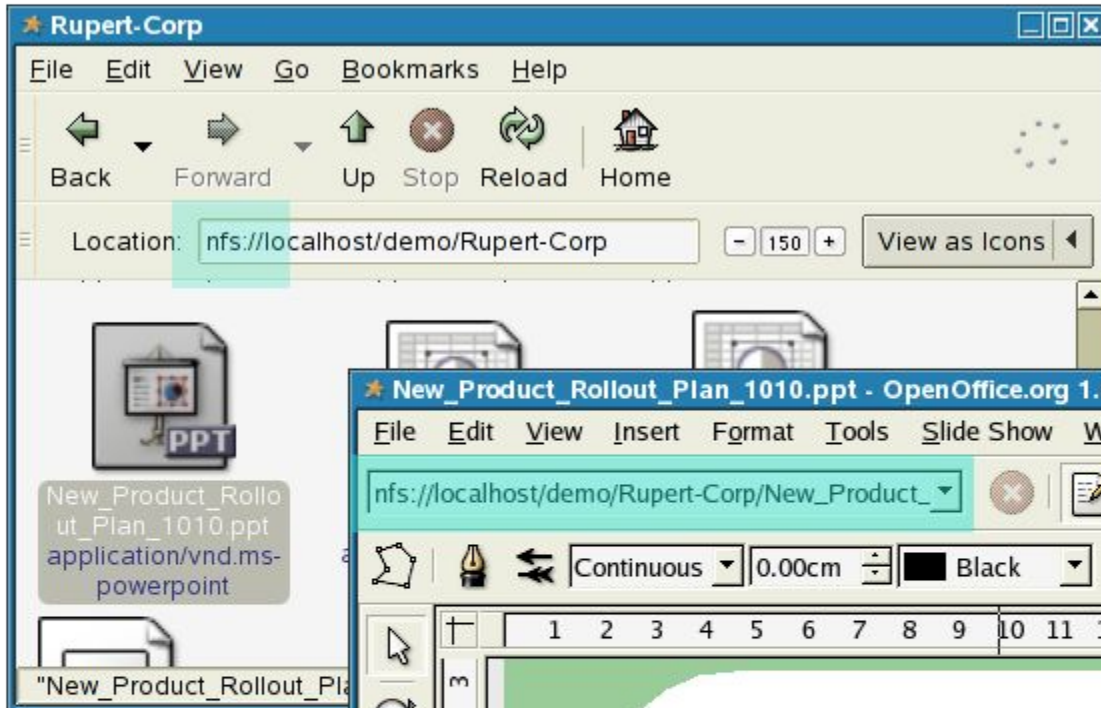


- pretty AA UI font
- more sensible menu layout
- 32 bit 24x, alpha blended, high-color, Gnome, icons
- Once seen – not forgotten cf. Typography.



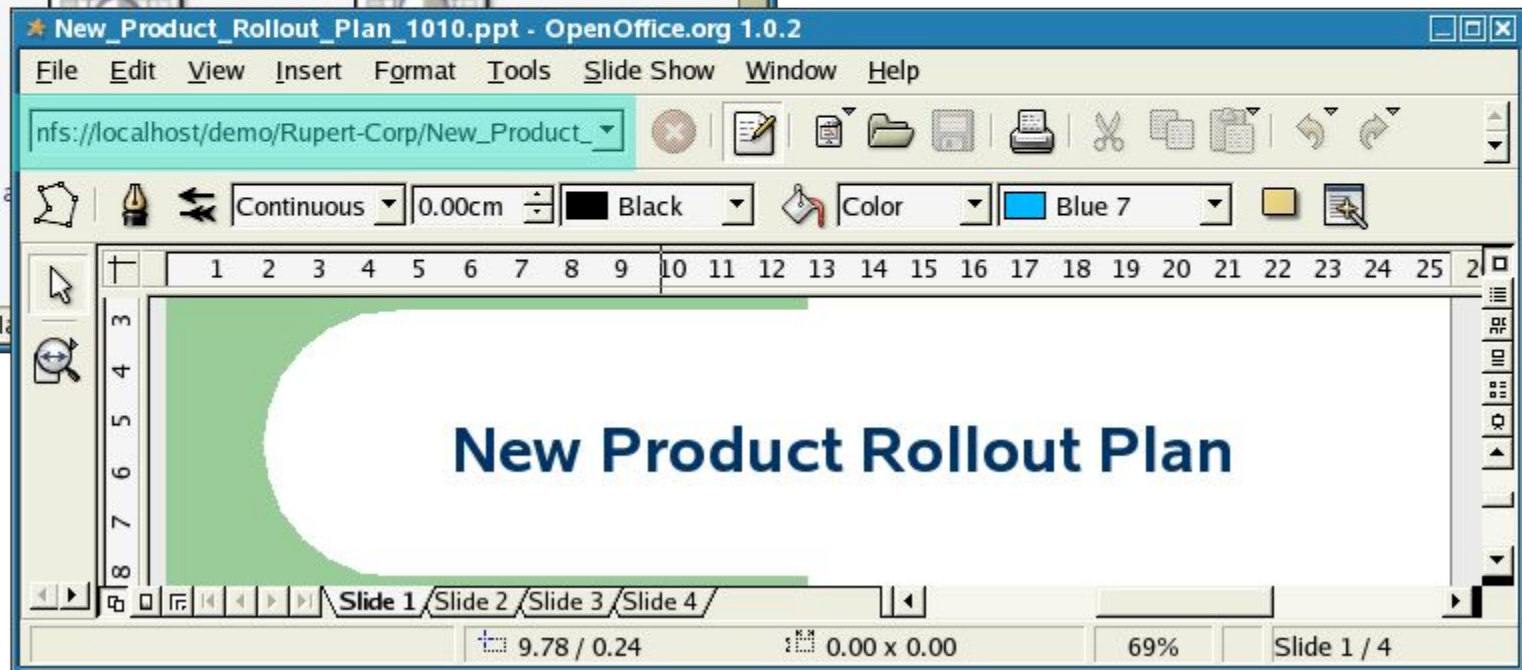
# Samba / NFS integration

*The real world is (sadly) not a homogeneous Unix environment – Interoperability is key*



Full gnome-vfs integration

- authentication
- seekability



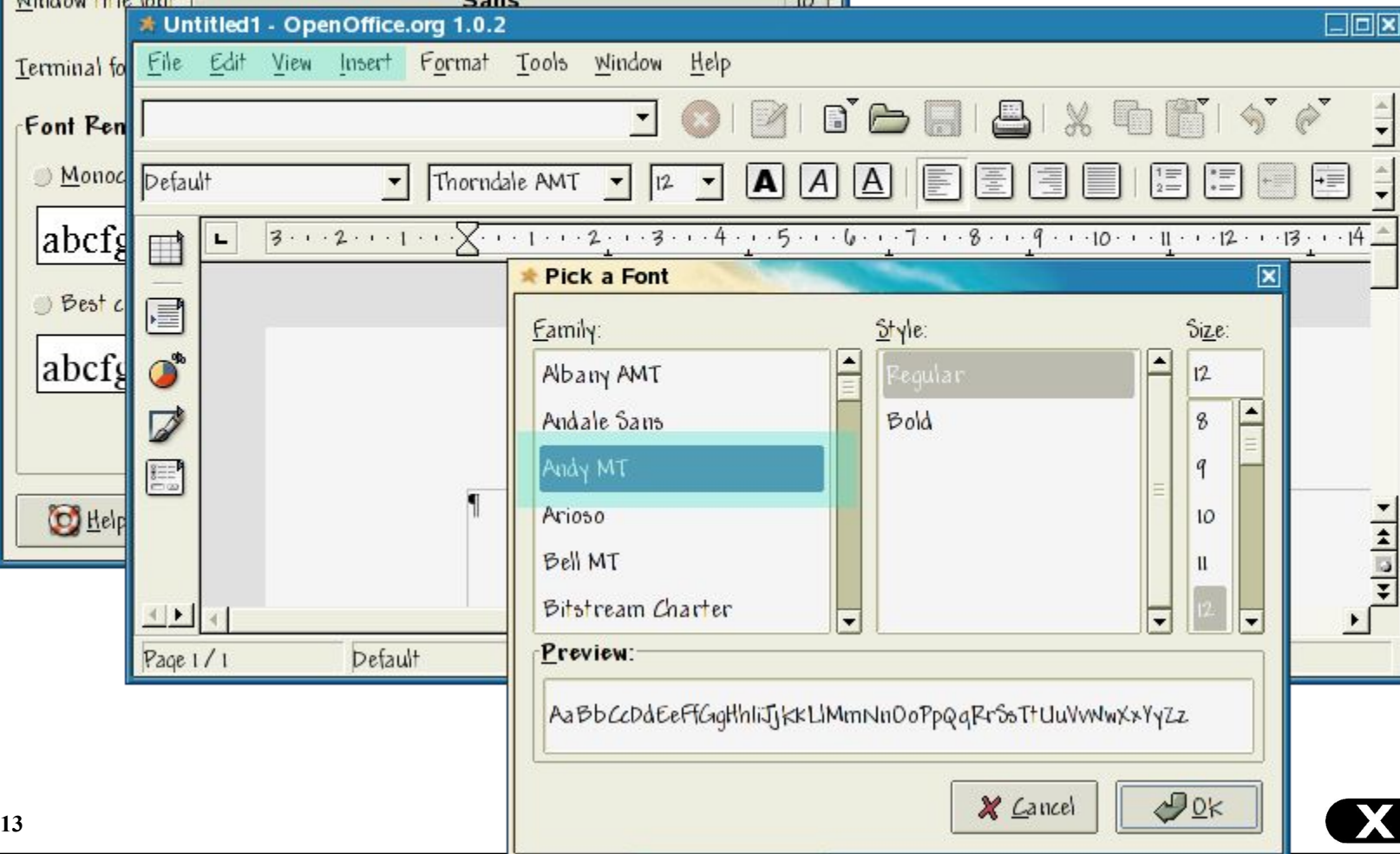
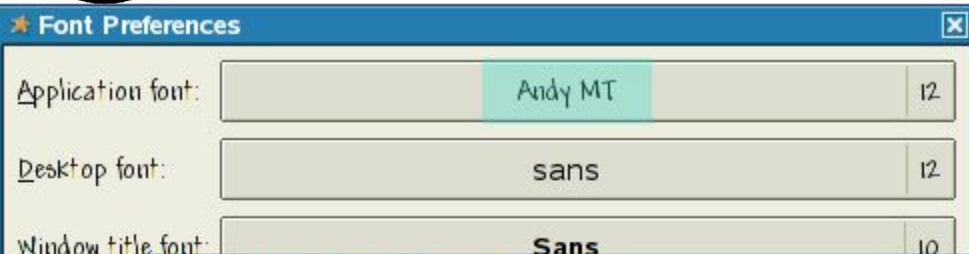




# Font synchronization

*Rather more than just using the same font name as gtk+*

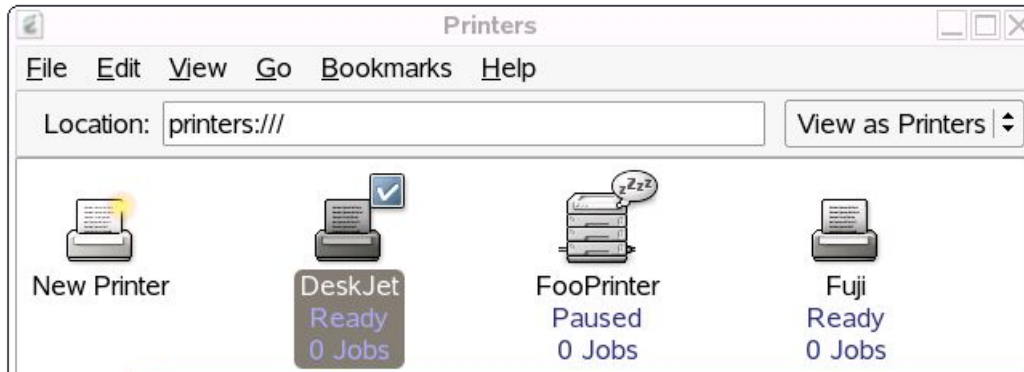
- Fontconfig integration
- shared DPI / hints
- gtk+ theme integration



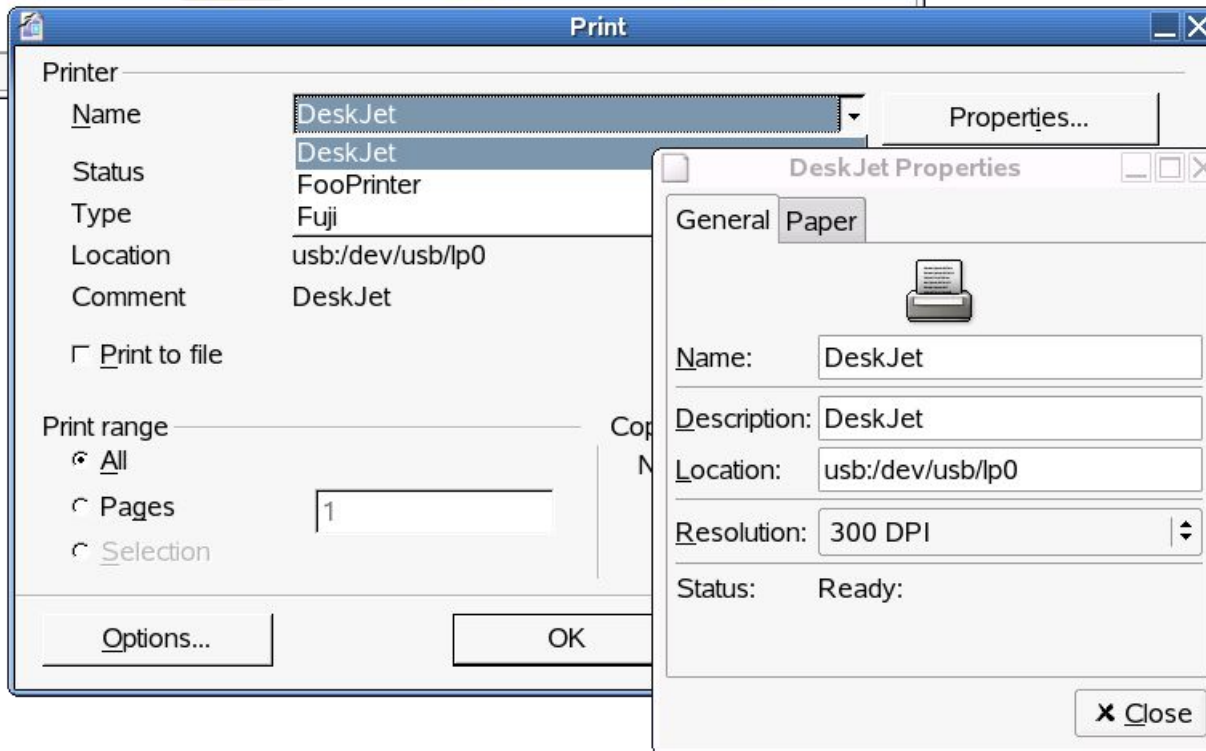


# Integrated printing ...

*CUPS – the unpleasant truth of the Unix printing standard*



Integration with system / network printer discovery and properties





# What we have done to OO.o (1.0.2)

*Adde parvum parvo magnus acervus erit (OVID)*

- Build – 25%
  - Make it build – eg. mozilla
  - Make it package – eg. distdir
  - Make it run – eg. Asm fixes
- Look & feel – GUI / fluff – 30%
  - preserving training investment
  - pretty splash / misc. artwork
  - Industrial icon theme ~500 icons
  - 32 bitmap alpha transparency
  - Gtk+ theme integration
  - myriad ergonomic / gui improvements
  - mouse cursor, menu bloat,
  - insert symbol, delete key,
  - menu popdown, toolbar defaults,
  - no 1st time pain, startup + ...
  - metric fonts, rendering hints
  - integrated Ximian help
- Hard-core - integration & more – 45%
  - Evolution integration
  - CUPS - standard IPP network printing
  - Gnome VFS - NFS / SMB shares
  - Fontconfig - standard, fast, system-wide font-caching
  - cut / paste improvements
  - agree on the dpi, share UI font settings
  - well configured out of the box
  - ~/.recent-files integration
  - MS the default format
  - LGPL, libart based gpc re-write
  - And more ...



# Interesting things to do next

*When everything has been folded back in, and the dust has settled*

- **Gtk+ integration with mainloop**
  - Deeper theme / icon integration
  - Evolution addressbook integration
  - Yet more shared printing code
  - Direct Accessibility CORBA bridge - performance
- **GUI polish – 2 man years**
  - Talk to a professional UI designer
  - UI Design tool
  - Containment based widget set
  - Ergonomic fixes
- **Misc**
  - Bug-buddy integration
  - IIOP / CORBA integration
  - Deeper fontconfig integration - bin custom mappings
  - Idle ~/ setup
  - Shared configuration source





# Conclusions / Thanks

*What I spent the last minutes saying – nudge your neighbour it's nearly over*

- Hacker encouragement
  - 75% barrier to entry, 25% accurate, useful docs
- Gnome the Unix API pain-killer
- Ximian work:
  - Federico Mena, Jakub Steiner, Tuomas Kuosmanen
  - XD2 – the most advanced Unix desktop yet, coming soon
  - Mostly just glue tying together the incredible work from the Sun / OO.o and Gnome teams over so long.

*Oh, that my words were recorded, that they were written on a scroll, that they were inscribed with an iron tool on lead, or engraved in rock for ever! I know that my Redeemer lives, and that in the end he will stand upon the earth. And though this body has been destroyed yet in my flesh I will see God, I myself will see him, with my own eyes - I and not another. How my heart yearns within me. - Job 19: 23-27*