



Overview of the GNOME stack of technologies

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GNOME is a Free and Open Source
desktop environment

Governance

GNOME is governed by the GNOME Foundation

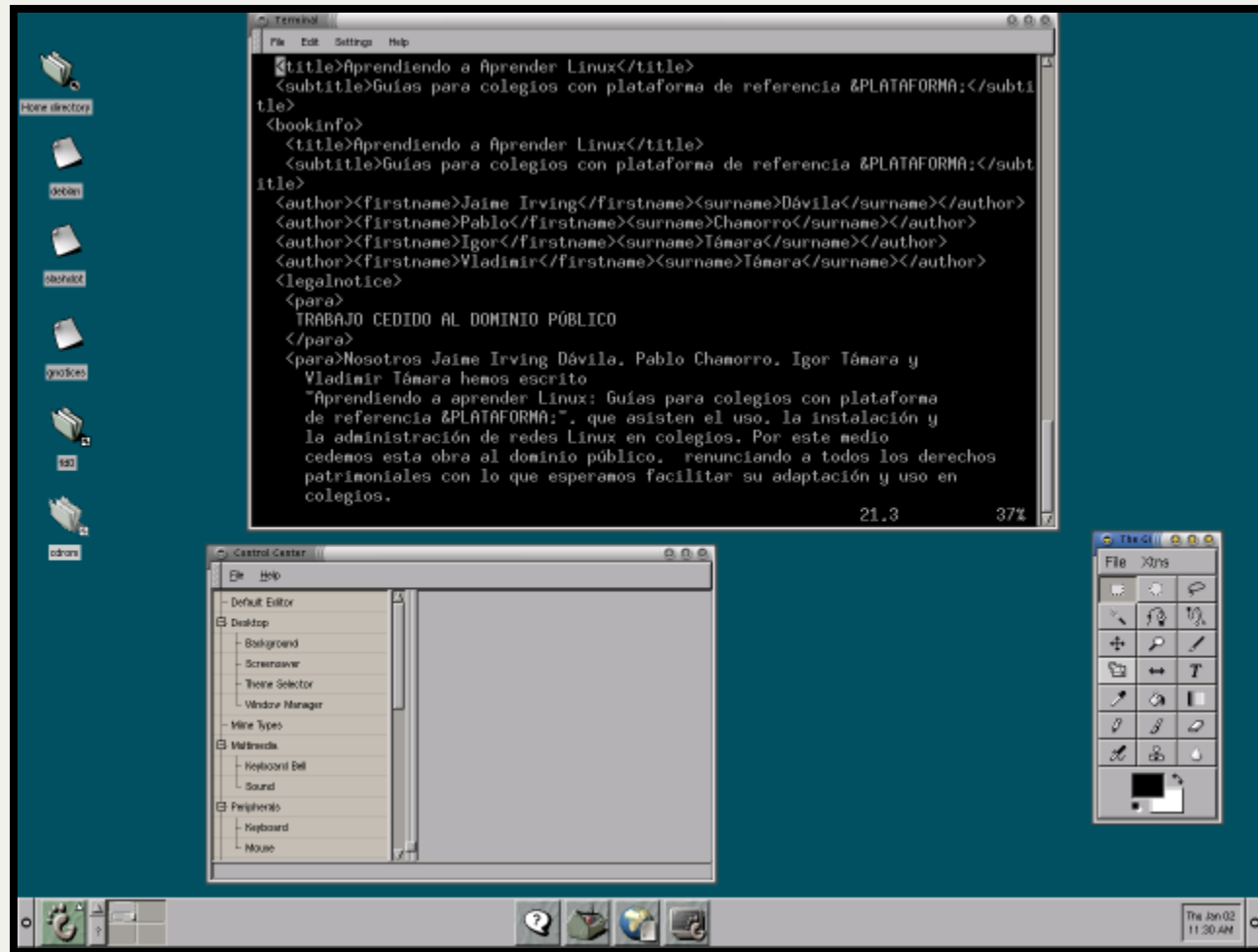
- Represents the project and provides guidance to it
- The Foundation Board is elected every year by the Foundation's members
- Part of the Foundation's job is to defend the GNOME trademark (<https://www.gnome.org/groupon/>)

The desktop

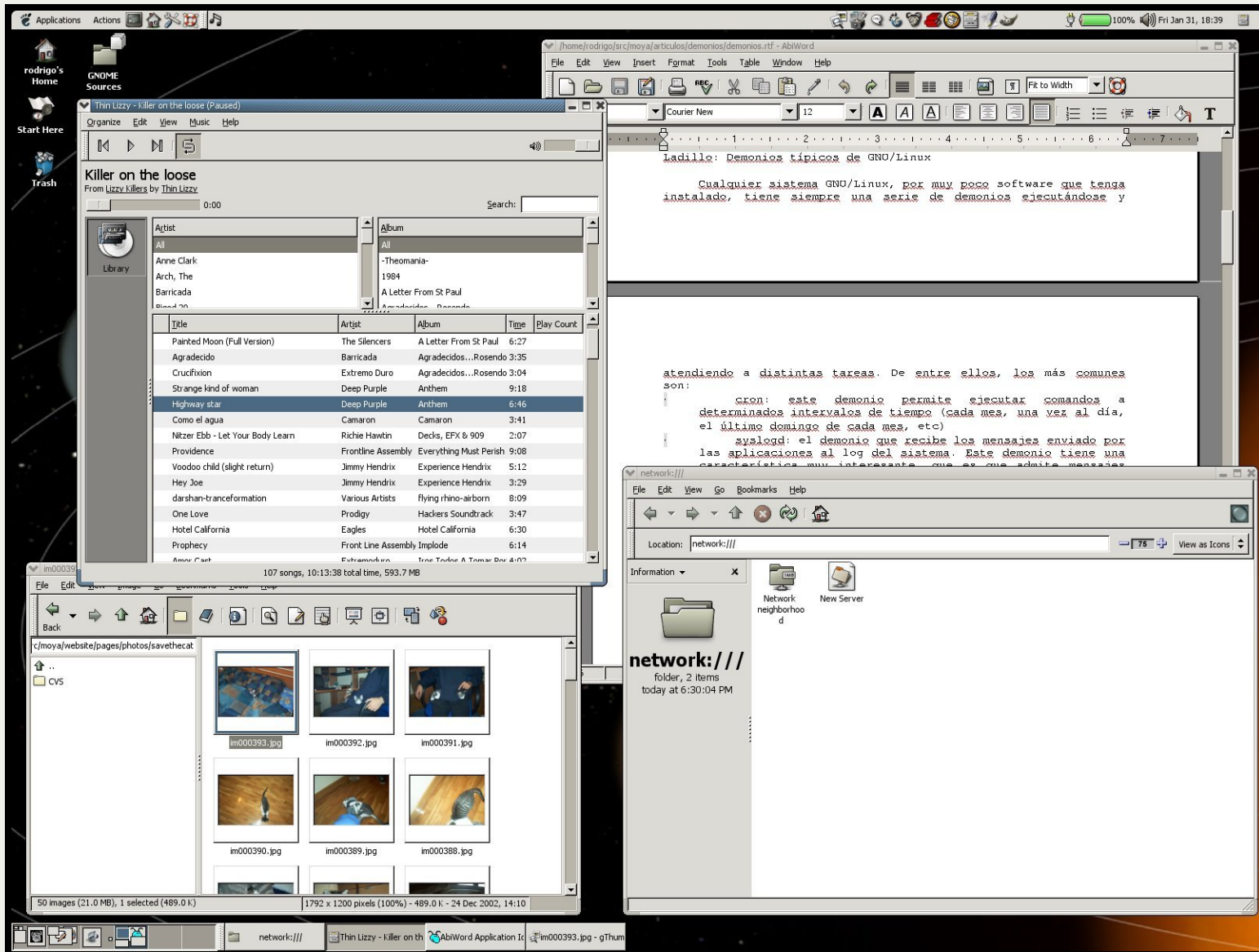
- Releases every 6 months
- The most popular distros using it are Fedora, openSUSE, Debian and Ubuntu GNOME

Evolution of the desktop

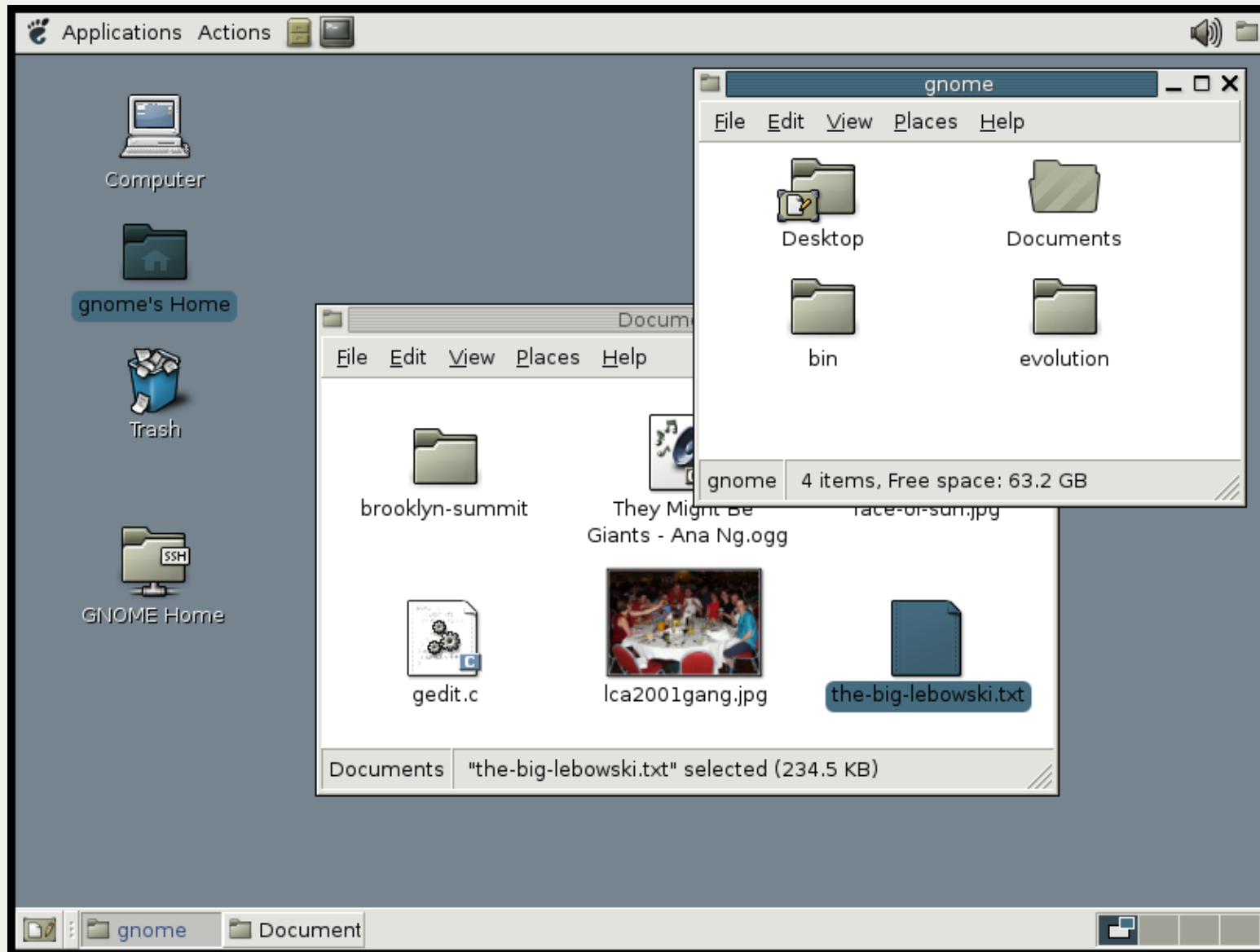
GNOME 1 (1999)



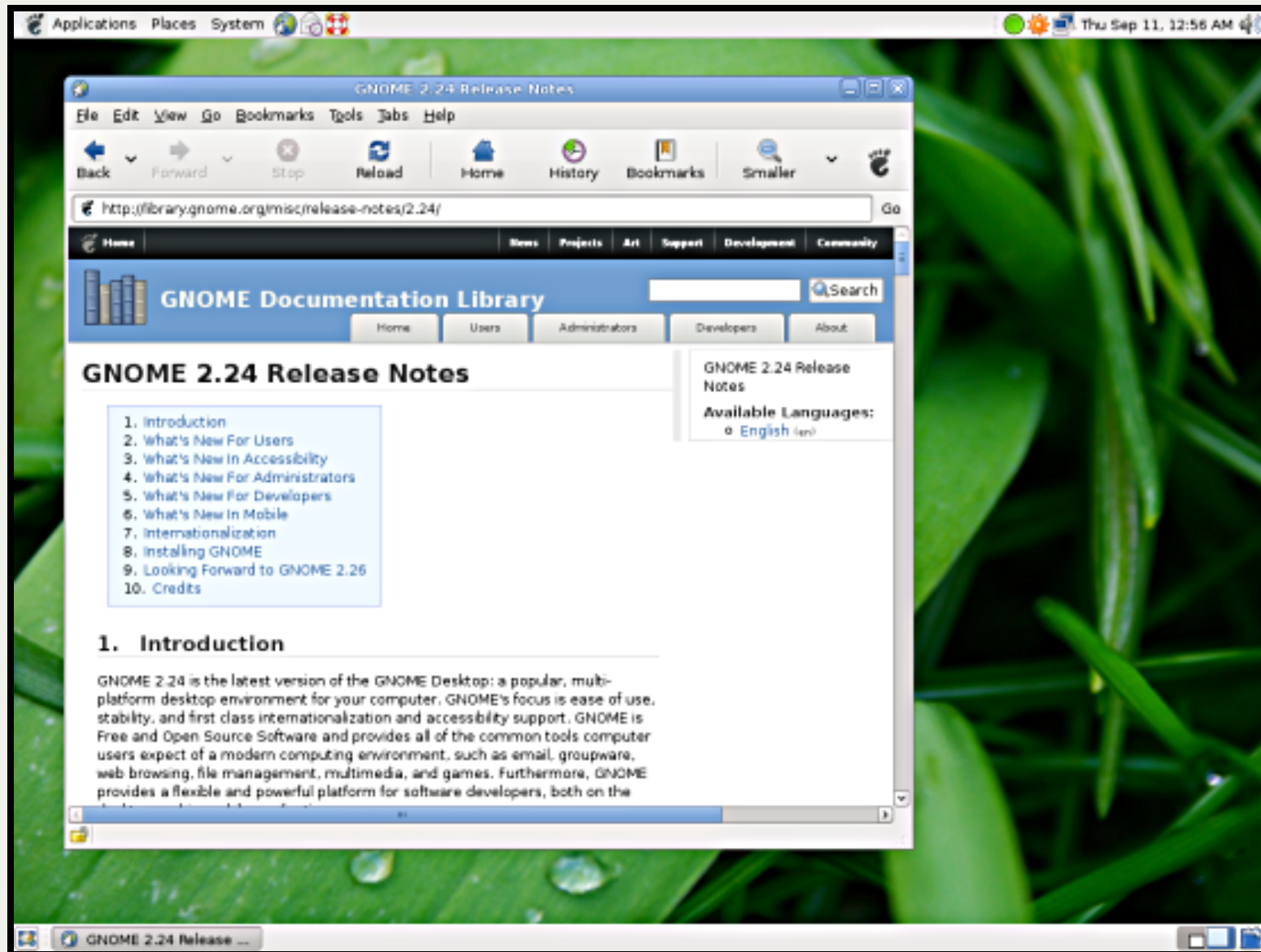
GNOME 2 (2002)



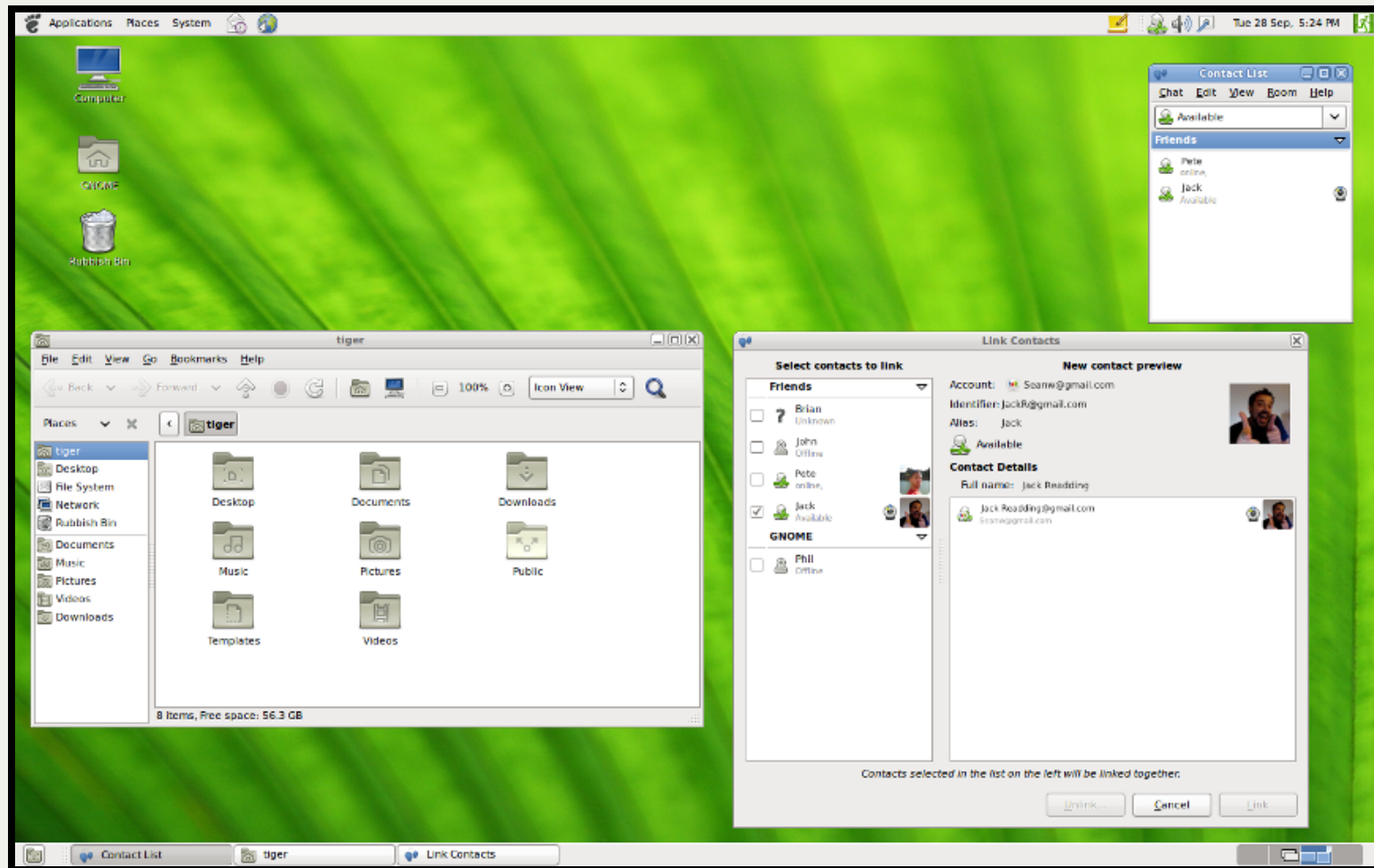
GNOME 2.4 (2004)



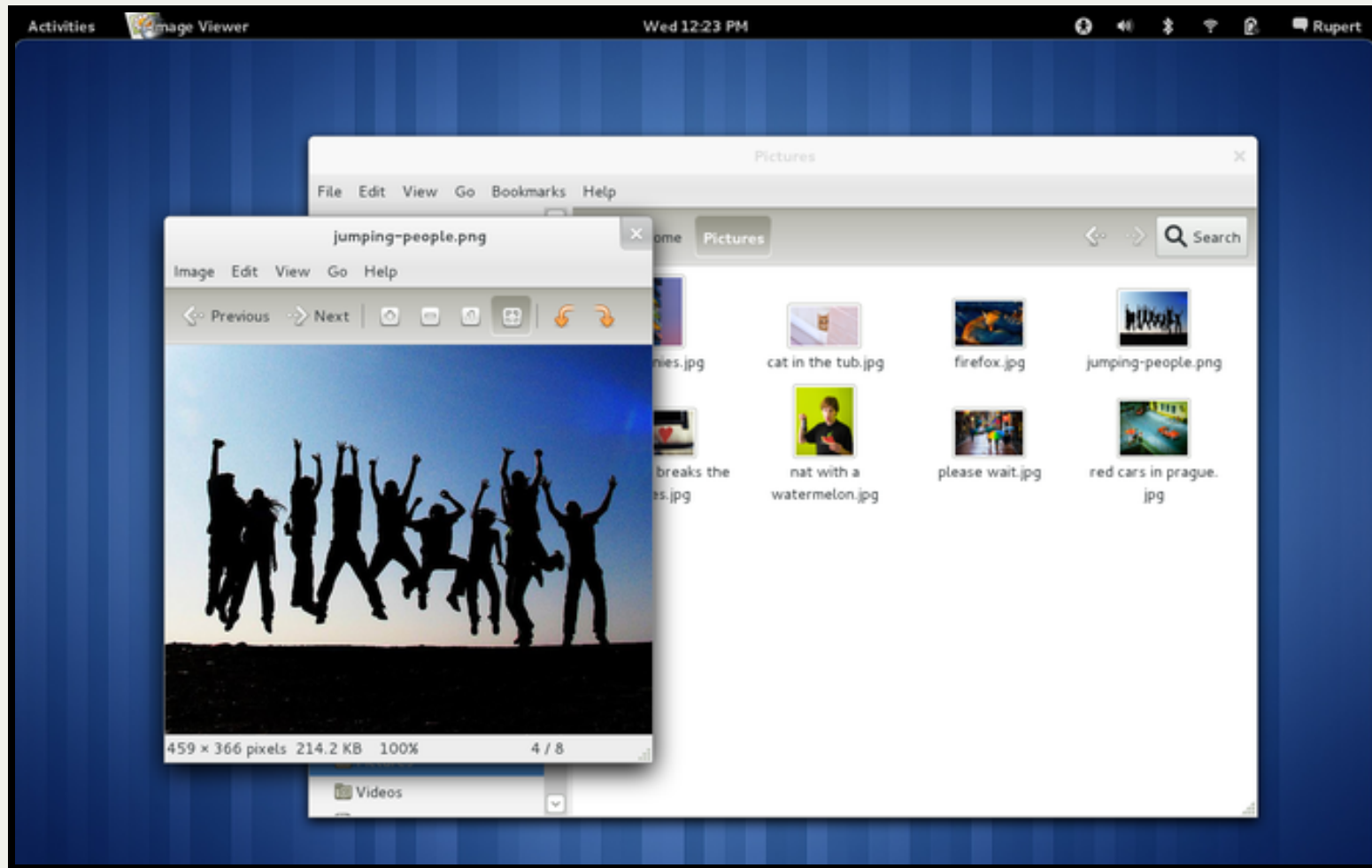
GNOME 2.24 (2009)



GNOME 2.32 (2010)



GNOME 3.0 (2011)



Technologies

(or at least some of them)

<https://git.gnome.org/>

Glib

Glib is the base foundation of the GNOME stack

- It's an OOP portable library built with C
- Provides GObject, the base object of all main classes in Glib-based libraries
- Implements the main loop
- Provides many data structures, functions for strings and other useful features

GTK+

The GIMP ToolKit is used for building graphical applications

- Contains a set of common widgets like GtkWidget, GtkButton, GtkEntry, etc.
- It's an event driven toolkit (based on signals and callbacks)
- Ships with a demo that shows all the basic widgets' use and their code

Clutter

A toolkit for creating dynamic and HW-accelerated graphical interfaces

- It provides an interactive canvas with 2D objects on a 3D space.
- Can be integrated with GTK+.
- It's the basis of GNOME Shell.

GObject Introspection

Middleware that allows to dynamically use libraries from different languages

- It's done via special documentation annotations
- Only an interpretation module is needed per language
- This means basically "free" bindings
- Supported for Python, Js, Perl, etc.

WebKitGTK

Fork of WebKit that integrates with GTK+

- Allows to embed a webview in a GTK+ application

GStreamer

A framework for multimedia handling

- Allows to play, record, stream and edit many media types
- Abstracts details about formats, codecs, etc.
- Used by many projects both open and proprietary ones
- Available also on Android, iOS, OS X, Windows, ...

Grilo

A framework for media retrieval

- Abstracts the APIs of different content providers
- Has pluggins for Flickr, YouTube, Vimeo, UPnP, ...

D-BUS

A message bus for IPC and RPC

- Provides a daemon for system-wide events (HW added, etc.)
- ... and a daemon for a user session (for user apps' IPC)
- D-Feet can be used to inspect and debug D-BUS interfaces

Coding

Environment?

- JHBuild: a way to build and try GNOME modules from upstream

Docs?

- DevHelp: a documentation browser from local packages

Editors?

- Builder: a powerful and modern IDE
- Anjuta: a more traditional IDE
- GEdit: a simple text editor
- Glade: an user interface designer

Demo

Demo: GNOME Shell

Demo: Tweaking GNOME

Demo: Apps

Getting involved

- Mailing lists: <https://mail.gnome.org/mailman/listinfo>
- IRC: <https://wiki.gnome.org/Community/GettingInTouch/IRC>
 - Bugzilla: <https://bugzilla.gnome.org>
 - Planet GNOME: <http://planet.gnome.org>
- GUADEC the GNOME Users and Developers European Conference takes place annually in a different location

Thank you!