

Let's make GNOME a collaborative desktop

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Sugar

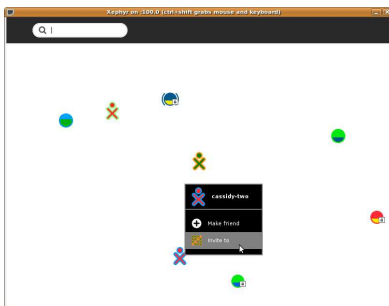
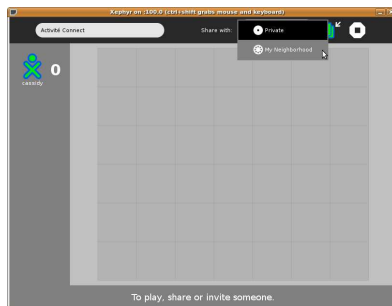
- ▶ OLPC User interface
- ▶ Sugarlabs¹
- ▶ Education Platform
- ▶ Collaboration Oriented



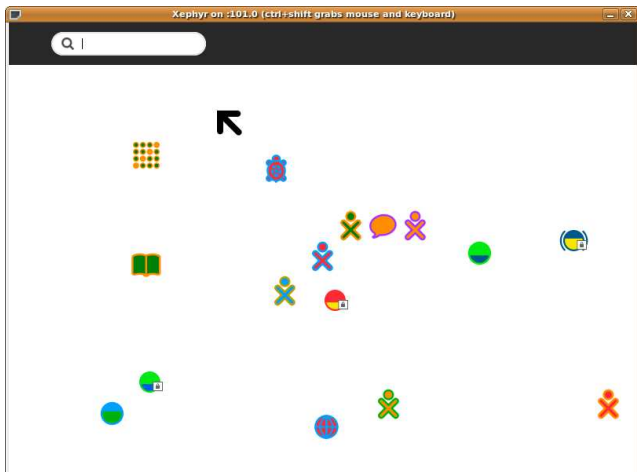
¹<http://www.sugarlabs.org/>

Sugar Activity

- ▶ Sugar Application
- ▶ Shareable
- ▶ Invite friends



- ▶ Friends
- ▶ Shared Activities

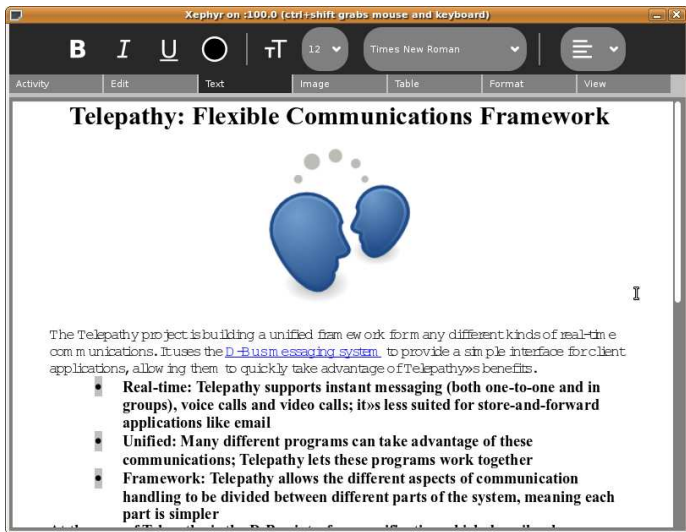


Journal

- ▶ Previous activities
- ▶ Participants
- ▶ Share entry (File Transfer)




Write Together



The screenshot shows a web browser window with the title bar 'Xephyr on :100.0 (ctrl+shift grabs mouse and keyboard)'. The browser's address bar is empty. The page content is as follows:

Telepathy: Flexible Communications Framework



The Telepathy project is building a unified framework for many different kinds of real-time communications. It uses the [D-Bus messaging system](#) to provide a simple interface for client applications, allowing them to quickly take advantage of Telepathy's benefits.

- **Real-time:** Telepathy supports instant messaging (both one-to-one and in groups), voice calls and video calls; it's less suited for store-and-forward applications like email
- **Unified:** Many different programs can take advantage of these communications; Telepathy lets these programs work together
- **Framework:** Telepathy allows the different aspects of communication handling to be divided between different parts of the system, meaning each part is simpler

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└ Collaboration in Sugar

Read Together



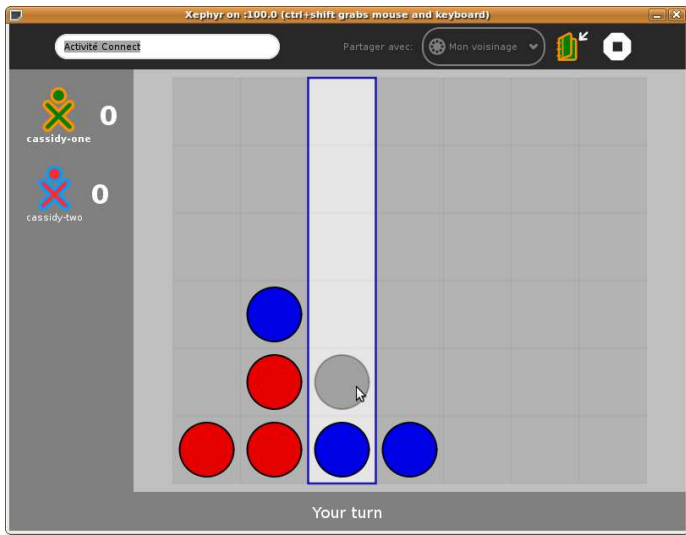
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Browse the Web Together



Play Together



Sugar Collaboration

- ▶ Easy to use
- ▶ Server mode
- ▶ Server less Mode

Sugar Collaboration

- ▶ Easy to use
- ▶ Server mode
- ▶ Server less Mode
- ▶ → Need an abstraction layer

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Telepathy



<http://telepathy.freedesktop.org>

Telepathy

- ▶ Presence
- ▶ Instant Messaging
- ▶ Audio/Video
- ▶ Collaboration
- ▶ ...

Telepathy: D-Bus API

- ▶ Object Oriented D-Bus API
- ▶ API compatible
- ▶ Extensible

Example: Chat with Alice

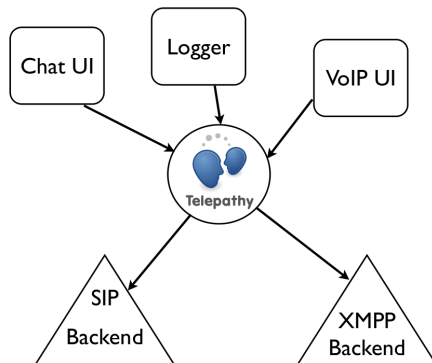
- ▶ *conn = RequestConnection ('jabber', { 'account': 'bob@jabber.org', 'password': 'foo' })*
- ▶ *conn.Connect()*
- ▶ *chan = conn.CreateChannel({ 'ChannelType': 'org.freedesktop.Telepathy.Channel.Type.Text', 'TargetHandleType': HANDLE_TYPE_CONTACT, 'TargetID': 'alice@wonderland.org' })*
- ▶ *chan.Send(MSG_TYPE_NORMAL, "Hi Alice!")*

Telepathy: Implementation

- ▶ Connection Managers: Jabber, SIP, XMPP link-local, IRC, MSN, libpurple
- ▶ Clients: Empathy, Nokia Internet tablets, Sugar, Kopete
- ▶ Library: telepathy-glib, telepathy-python

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- └ Telepathy
- └ Implementation



Telepathy Tubes

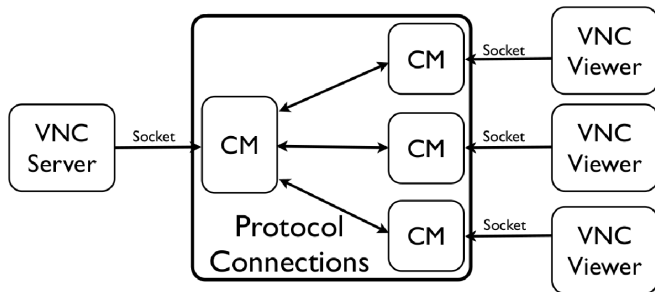
- ▶ Alice and Bob can communicate together
- ▶ Why not their applications?
- ▶ 1-1 tube
- ▶ Multi users tube

D-Bus Tube

- ▶ D-Bus over network
- ▶ Participants expose objects on the (networked) bus
- ▶ Remote method call
- ▶ Catch signals
 - Pure object protocol

Stream tubes

- ▶ Initiator exports a socket
- ▶ Participants connect to CM socket
- ▶ CM relay data
- ▶ Relay / NAT traversal (planned)
- ▶ Transparent for the applications



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Tube integration

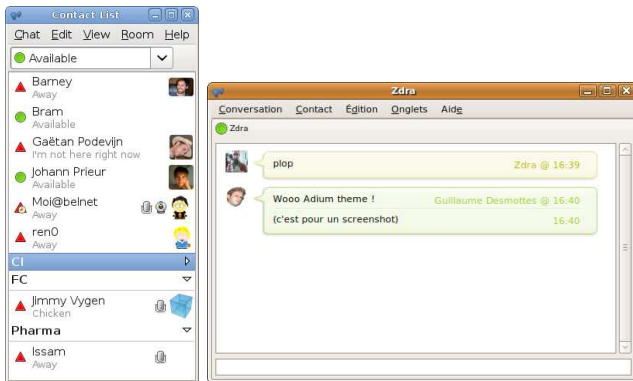
Deeper Telepathy integration

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Telepathy in GNOME

- ▶ Empathy
- ▶ Since GNOME 2.24



Easy Desktop Sharing

- ▶ Vino
- ▶ Vinagre
- ▶ Share-my-Desktop



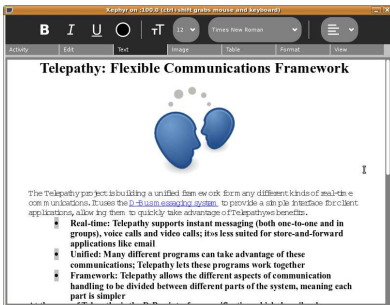
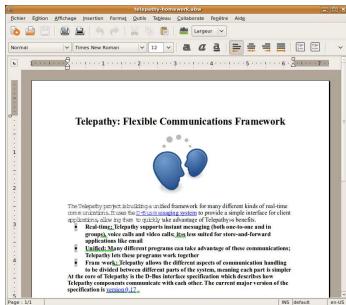
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└ Tube integration

Collaborative Editing

- ▶ Abiword
- ▶ Gedit



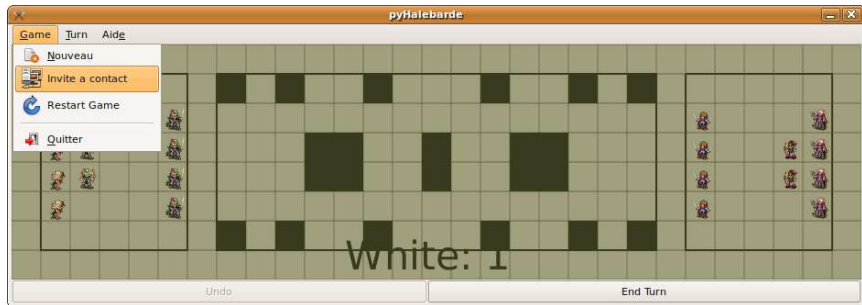
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pyHalebarde

- ▶ <https://launchpad.net/pyhalebarde>
- ▶ 0.3 released
- ▶ Clutter
- ▶ 1-1 D-Bus tube



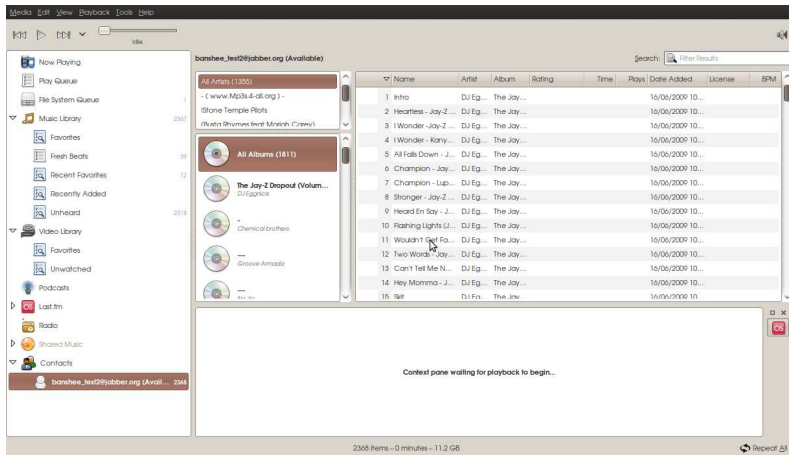
- └ Collaboration in GNOME
 - └ Tube integration

- ▶ Multi player Sudoku
- ▶ SoC by Zhang Sen



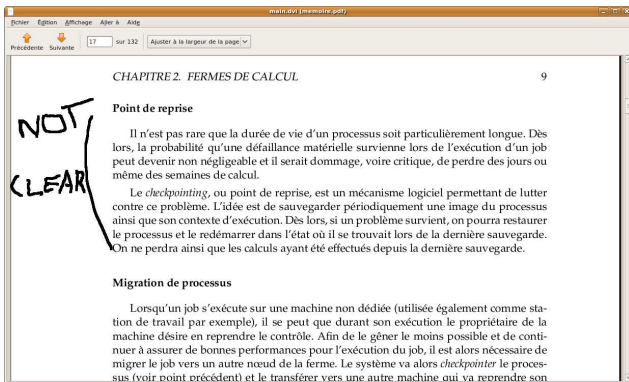
Music Sharing

- ▶ Banshee SoC by Neil Loknath
- ▶ Plugin for Rhythmbox



Evince

- ▶ PDF sharing
- ▶ Collaborative annotation?



Mockup

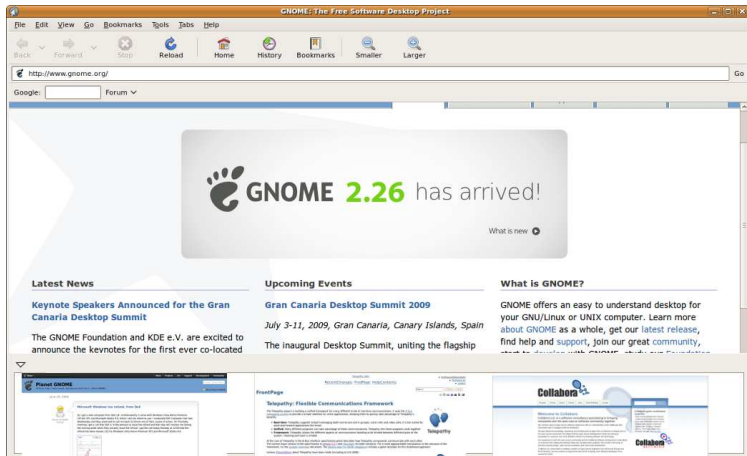
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└ Collaboration in GNOME

└ Tube integration

Collaborative Web Browsing

► As the Sugar Browse activity



Mockup

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└ Collaboration in GNOME

└ Tube integration

Zeitgeist integration



Mockup

Telepathy desktop integration

- ▶ Mission Control 5
- ▶ Planned for Empathy 2.28
- ▶ Flexible channel dispatching
 - ▶ Observer: monitor channels
 - ▶ Approver: accept/reject channels
 - ▶ Channel Handler: handle channels

Notes sharing

- Using only file transfer



Mockup

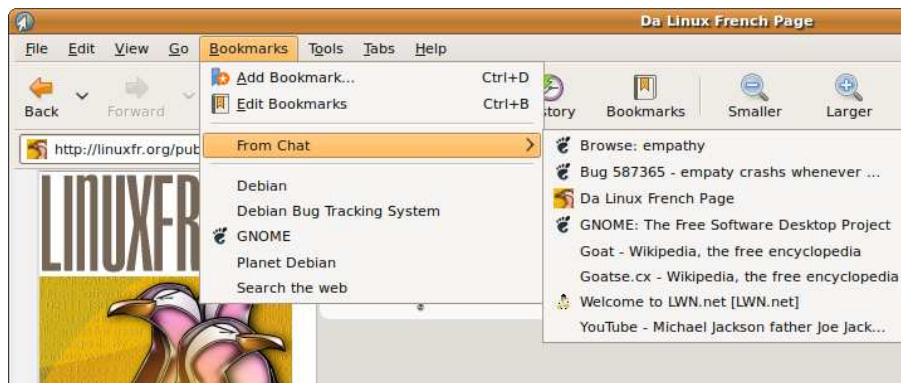
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└ Collaboration in GNOME

└ Deeper Telepathy integration

URL's from conversations

- Automatically added in Epiphany



Mockup

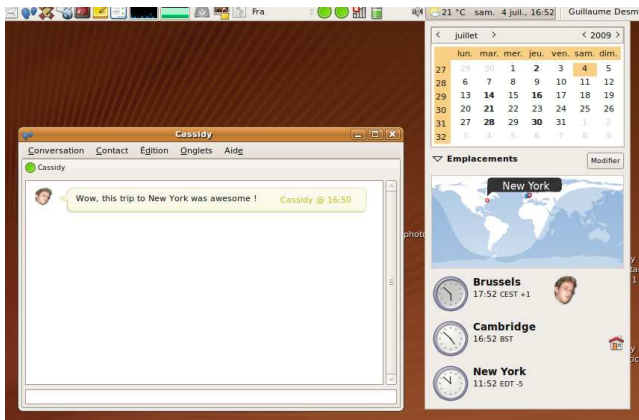
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Geolocation Integration

► clock applet



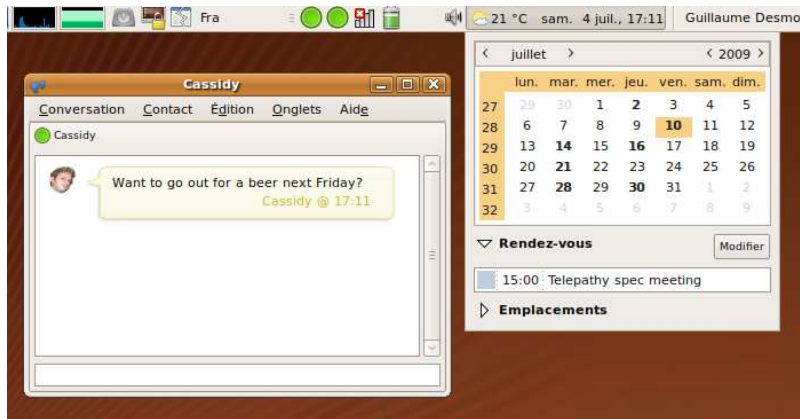
Mockup

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- └ Collaboration in GNOME
- └ Deeper Telepathy integration

Calendar Integration

- ▶ clock applet
- ▶ Evolution calendar



Mockup

Get more from XMPP

- ▶ Presence
- ▶ Chat
- ▶ Audio/Video
- ▶ Much more!

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└ Collaboration in GNOME

└ Get more from XMPP

File Sharing

► XEP-0214: File Repository and Sharing



Mockup

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Chat in web pages

► XEP-0151: Virtual Presence



Mockup

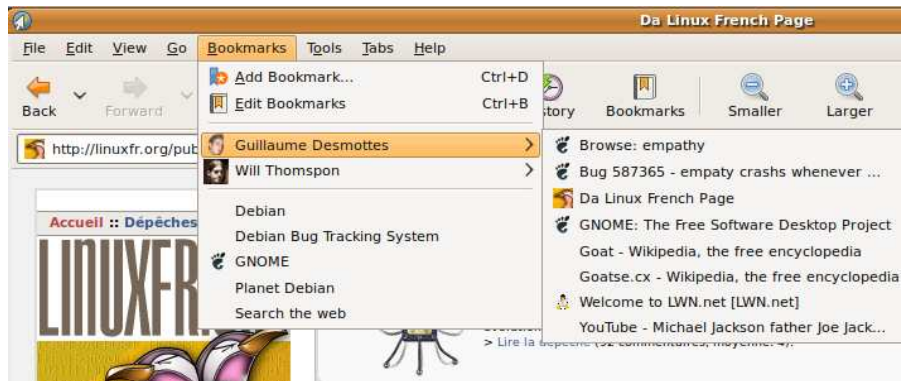
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Shared bookmarks

► XEP-0048: Bookmarks



Mockup

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Muji

► Multi User Jingle



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Conclusion

- ▶ Tubify your app!
- ▶ Mission control 5 is (finally!) coming
- ▶ More and more Telepathy integration
- ▶ `http://telepathy.freedesktop.org`
- ▶ `telepathy@lists.freedesktop.org`
- ▶ `#telepathy@FreeNode`

Questions? Stickers?

