Let’s make GNOME a collaborative desktop

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Telepathy
  Introduction
  D-Bus API
  Implementation
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  Tube integration
  Deeper Telepathy integration
  Get more from XMPP

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Collaboration in Sugar

Sugar

- OLPC User interface
- Sugarlabs\(^1\)
- Education Plateform
- Collaboration Oriented

\(^1\)http://www.sugarlabs.org/
Sugar Activity

- Sugar Application
- Shareable
- Invite friends
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Mesh View

- Friends
- Shared Activities
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Collaboration in Sugar

Journal

- Previous activities
- Participants
- Share entry (File Transfer)
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— Collaboration in Sugar

Write Together

Telepathy: Flexible Communications Framework

The Telepathy project is building a unified framework for any 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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Read Together
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Collaboration in Sugar

Browse the Web Together
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Collaboration in Sugar

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
Plan

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Telepathy

http://telepathy.freedesktop.org
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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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Collaboration in GNOME

Telepathy in GNOME

- Empathy
- Since GNOME 2.24
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- Collaboration in GNOME
- Tube integration

Easy Desktop Sharing

- Vino
- Vinagre
- Share-my-Desktop
Collaborative Editing

- Abiword
- Gedit
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Collaboration in GNOME

Tube integration

pyHalebarde

- https://launchpad.net/pyhalebarde
- 0.3 released
- Clutter
- 1-1 D-Bus tube
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- Collaboration in GNOME
- Tube integration

**GNOME games**

- Multi player Sudoku
- SoC by Zhang Sen
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- Collaboration in GNOME
- Tube integration

Music Sharing

- Banshee SoC by Neil Loknath
- Plugin for Rhythmbox
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Collaboration in GNOME

Tube integration

Evince

- PDF sharing
- Collaborative annotation?
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Collaboration in GNOME

Tube integration

Collaborative Web Browsing

➤ As the Sugar Browse activity
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- Collaboration in GNOME
- Tube integration

Zeitgeist integration

Mockup
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Collaboration in GNOME

Deeper Telepathy integration

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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
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- Collaboration in GNOME
- Deeper Telepathy integration

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
Geolocation Integration

- clock applet
Calendar Integration

- clock applet
- Evolution calendar
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Collaboration in GNOME

Get more from XMPP

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
Chat in web pages

- XEP-0151: Virtual Presence
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- Collaboration in GNOME
- Get more from XMPP

Shared bookmarks

- XEP-0048: Bookmarks

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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
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Questions? Stickers?