The Road to Telepathy 1.0

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Telepathy

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Good morning!

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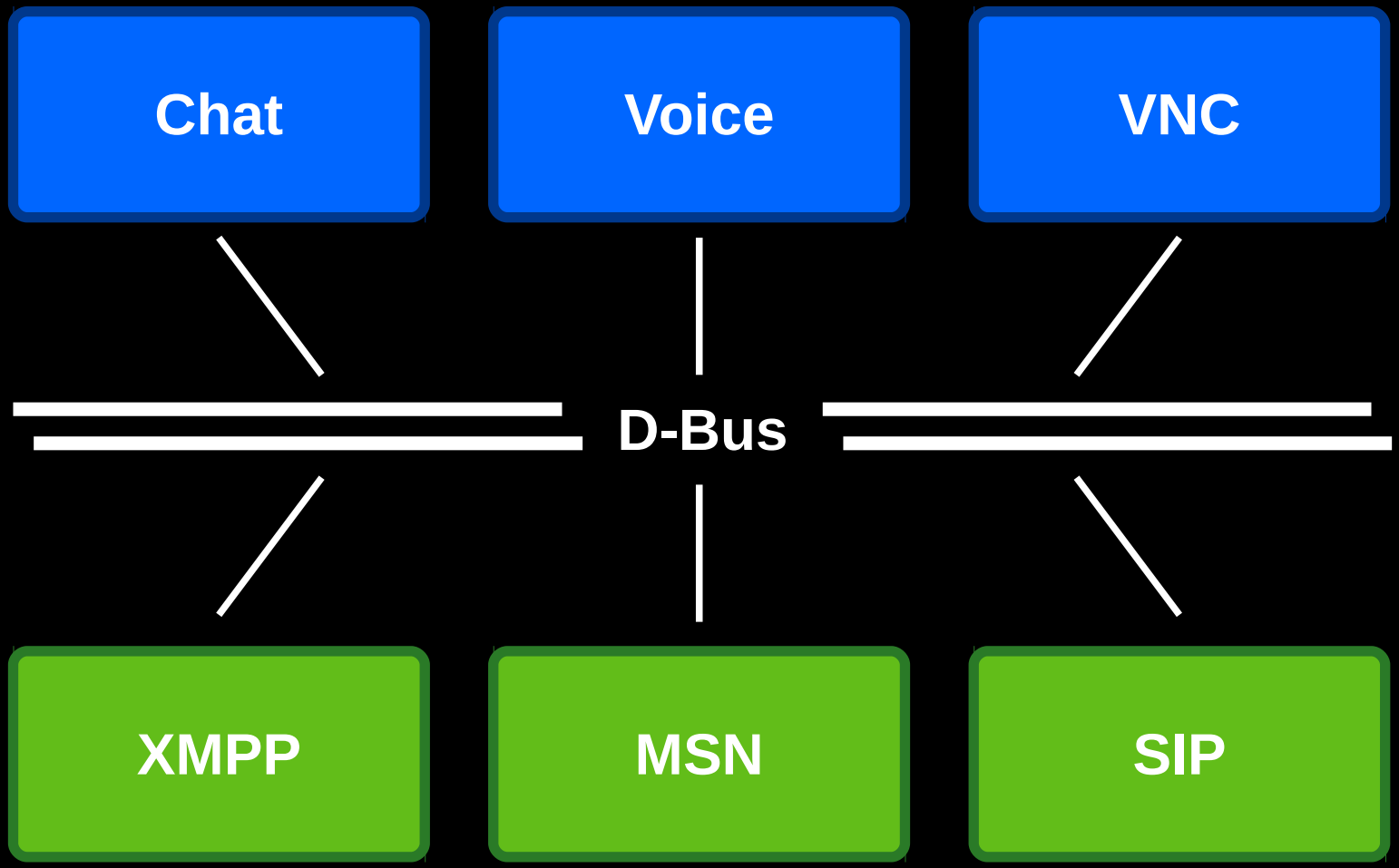
Telepathy 101

- Standard D-Bus API for IM protocol implementation and client applications
- Protocol backends for most IM networks
- Connections are shared between running applications
  - Separate applications for call, chat, file transfer, ...
  - Incoming communication channels handed to appropriate application(s)

Rough architecture



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What does Telepathy 1.0 mean?

- Smaller, cleaner D-Bus API
- Better-organised client libraries
- New features

D-Bus API

Backwards compatibility is great!

(but it has a cost)

Channel.Type.Text

method Send (u: Type, s: Text)
signal Received (u: ID, u: Timestamp, u: Sender,
u: Type, u: Flags, s: Text)
enum MessageType = { Normal, Action, Notice, ... }

But what about:

- Sent time vs. received time?
- Business cards
- Delivery reports
- Formatted text (HTML)

Channel.Interface.Messages

method SendMessage (aa{sv}: Message, u: Flags)
→ s: Token
signal MessageReceived (aa{sv}: Message)

Other superseded API

- SimplePresence replaces Presence
- Call replaces StreamedMedia
- ContactCapabilities replaces Capabilities
- ContactList replaces ContactList
  - ...
- Old API gradually deprecated, but kept

Telepathy D-Bus API 1.0

- Land outstanding additions
- Drop superseded API
- Consolidate what remains
- #include <Quotes/Antoine-de-Saint-Exupéry>
- Timeframe: April-ish

Impact on applications

- Almost all existing API, just rearanged
  - Previous API long-deprecated
- Hopefully just a recompile for code using higher-level bindings
- Mechanical changes to code using up-to-date API via low-level bindings

Telepathy-Qt4

- Started out as purely generated code
- Grew higher-level API
- Not clearly separated

Quick! Which should you call?

- Account::ensureChannel() or Connection::ensureChannel()?
  - For that matter, Account::ensureChannel() or Account::ensureAudioCall()?
- Connection::requestConnect() or Account::setRequestedPresence()?

Tp::Connection simplification

```
TelepathyQt4/connection.h |  171 ++++----------------------------------------
1 files changed, 16 insertions(+), 155 deletions(-)
```

- Low-level API still available via Connection::lowlevel() if needed
- Similar plan for other classes

QMLification

- QML models for contact lists, conversations, etc.
- Even higher-level
- Non-message events in conversation model
  - Call started
  - Status change
  - File offered
- Work in progress; see Telepathy mailing list

Telepathy-Qt4 0.6 (or 1.0?)

- 0.5.0, with API reorganization, out this week
  - Application changes largely mechanical
- More higher-level API over the next few months.
- New stable release early next year.

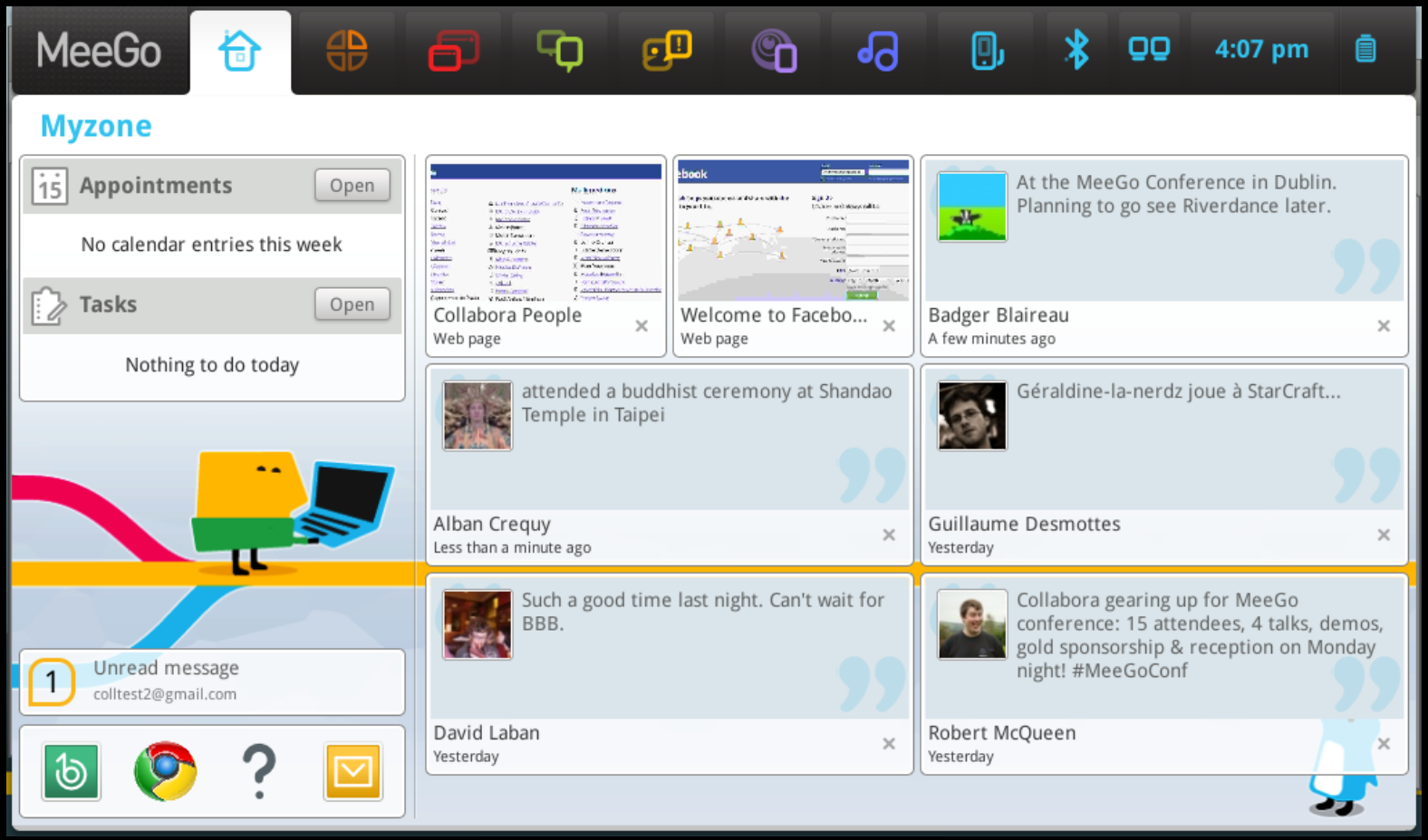
freedesktop.org

- Bugs, wiki, releases, mailing list, D-Bus namespace live here...
- ...but not the Git repositories
- They will move there in the near future

New(ish) framework features

- Standard API for conference calls
- Multi-user audio/video calls on Jabber
- Proxy support
- Custom authentication mechanisms
- Interactive SSL certificate verification
- Mail notification

MeeGo Netbook Myzone



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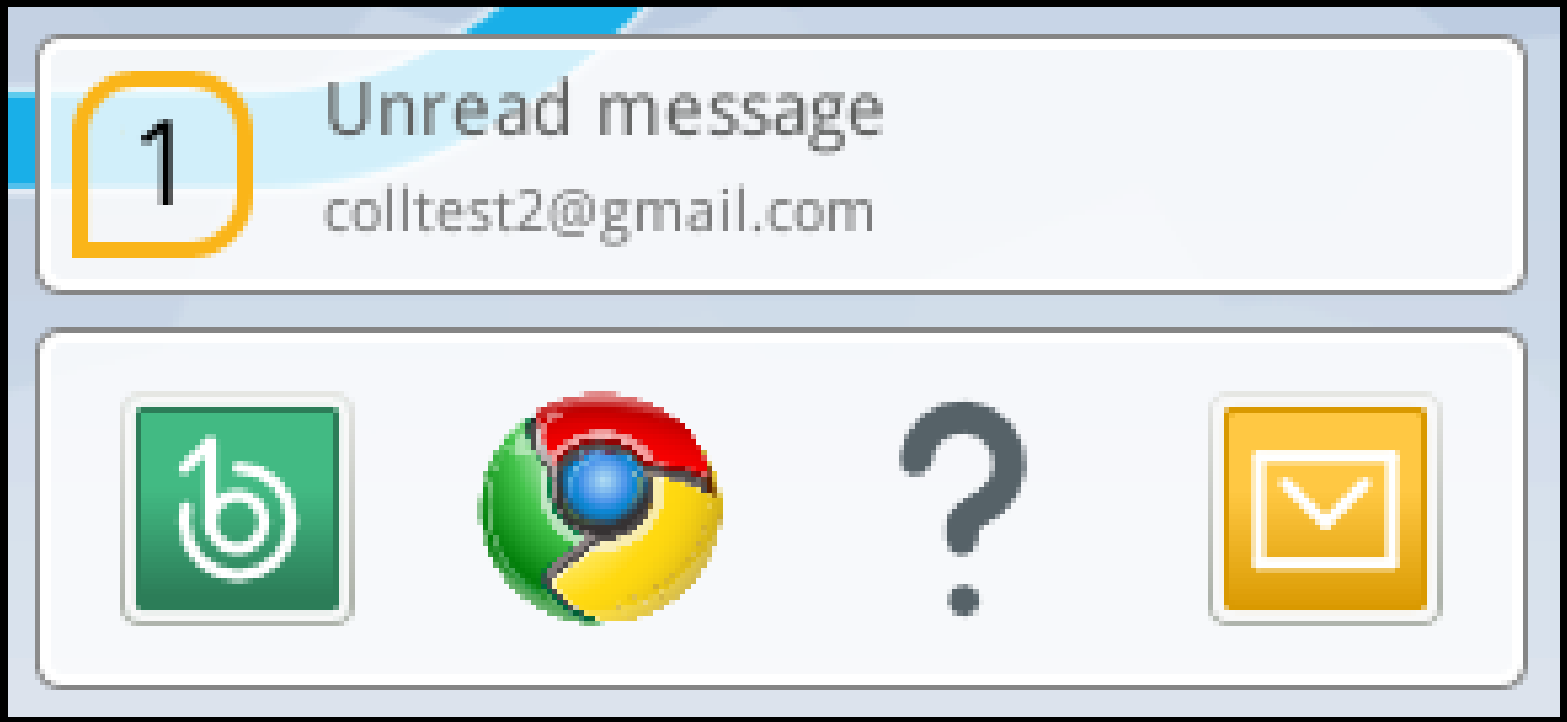

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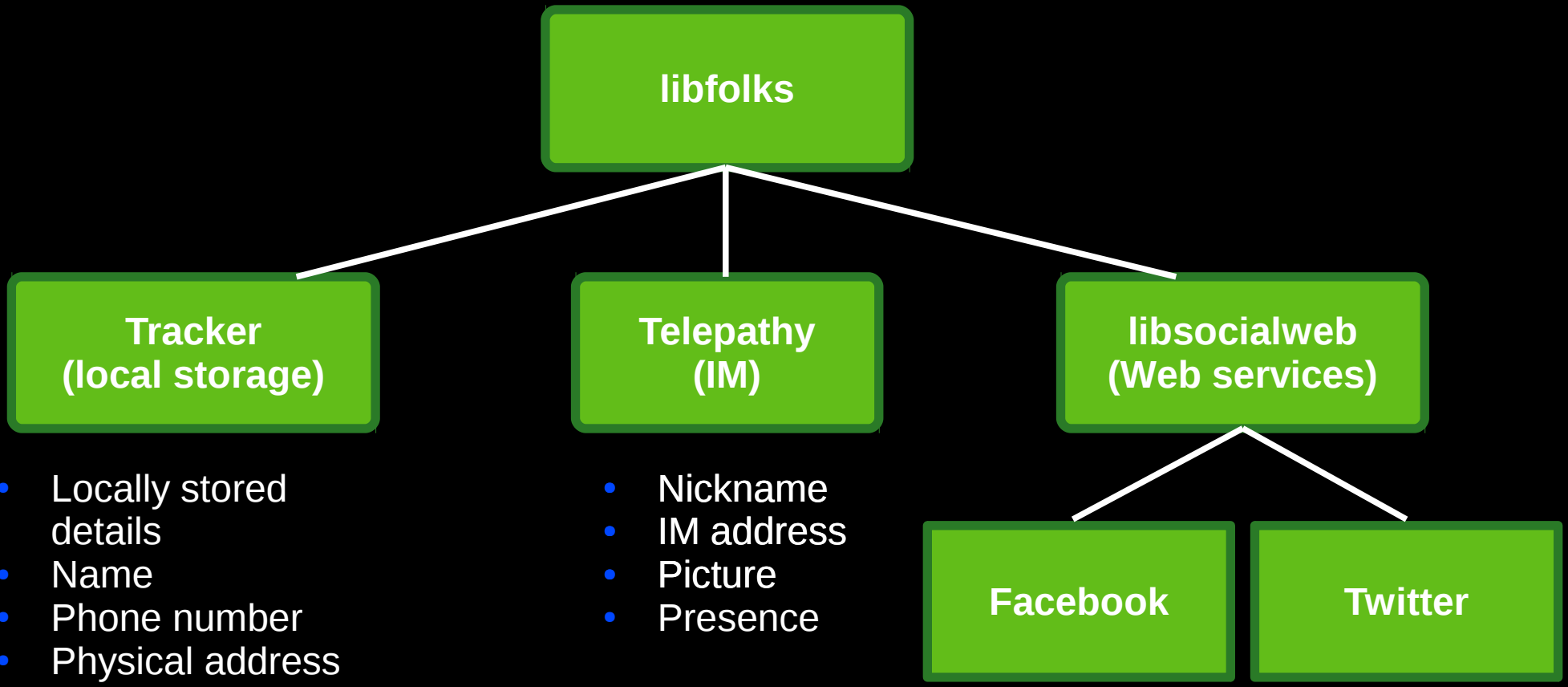
Work in progress

- End-to end encryption
  - Initially XMPP-native
  - API should allow OTR too
- Farsight: video call quality improvement
  - Dynamic bitrate scaling
  - Forward error correction
- Glib binding catching up with TelepathyQt4

libfolks

- Aggregates and links:
  - Contacts from multiple IM accounts
  - Locally-stored contact information (such as from Tracker)
  - Contacts from Facebook/Twitter (using libsocialweb)
- Not part of MeeGo — yet ;-)

Contact sources



- Locally stored details
- Name
- Phone number
- Physical address
- Birthday
- Etc.

- Nickname
- IM address
- Picture
- Presence

- Name
- Web page
- Birthday
- Interests

- Name
- Web page

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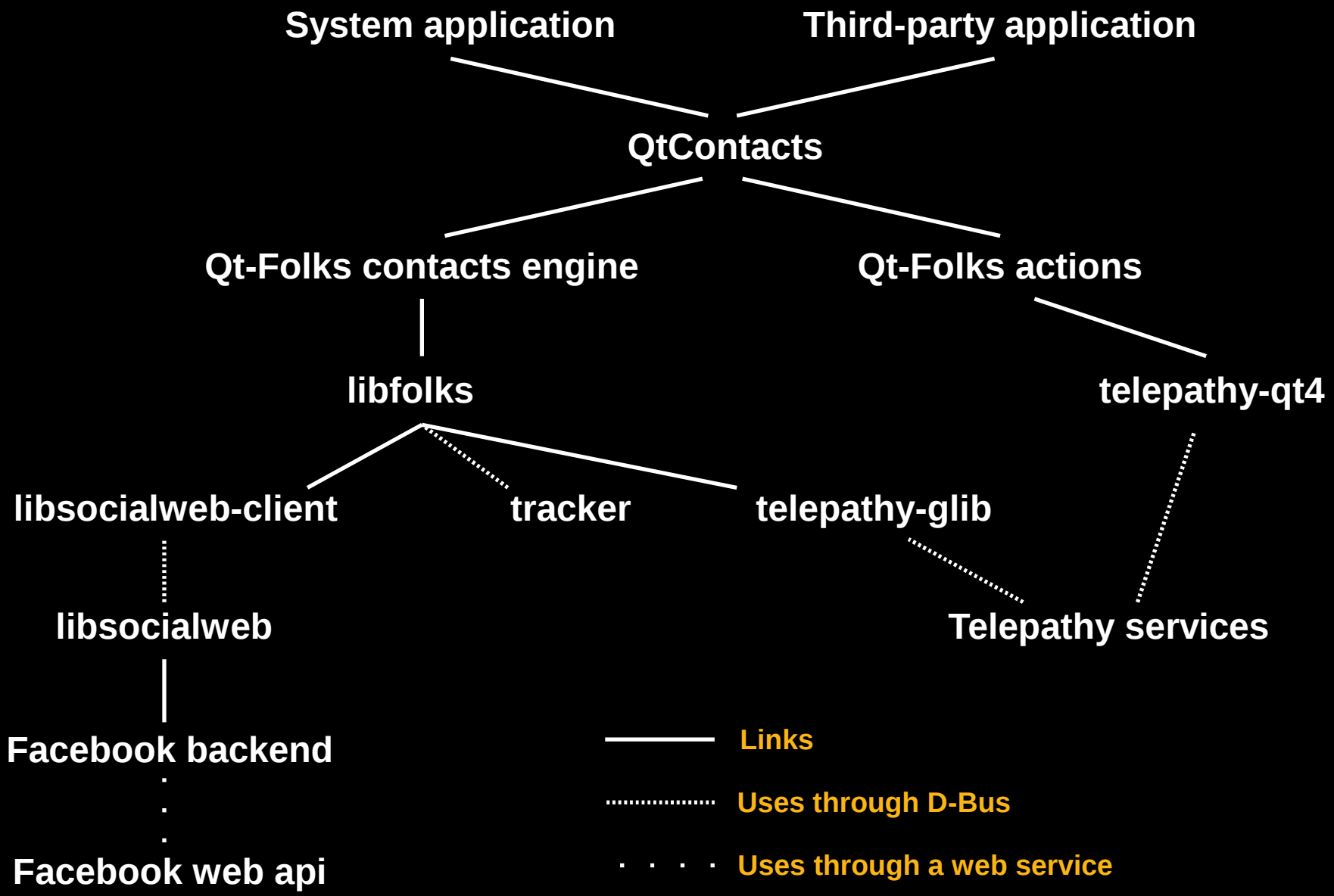
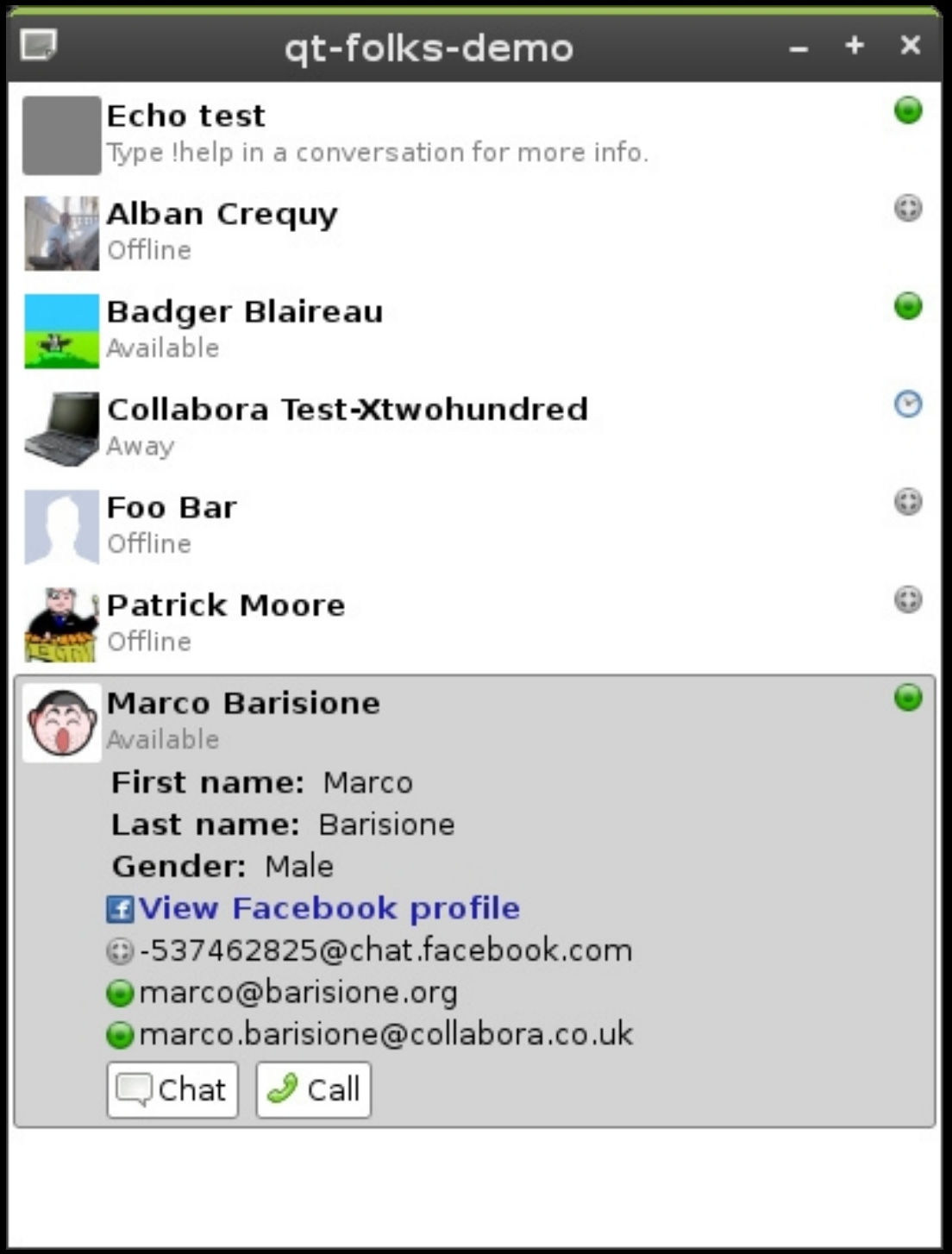
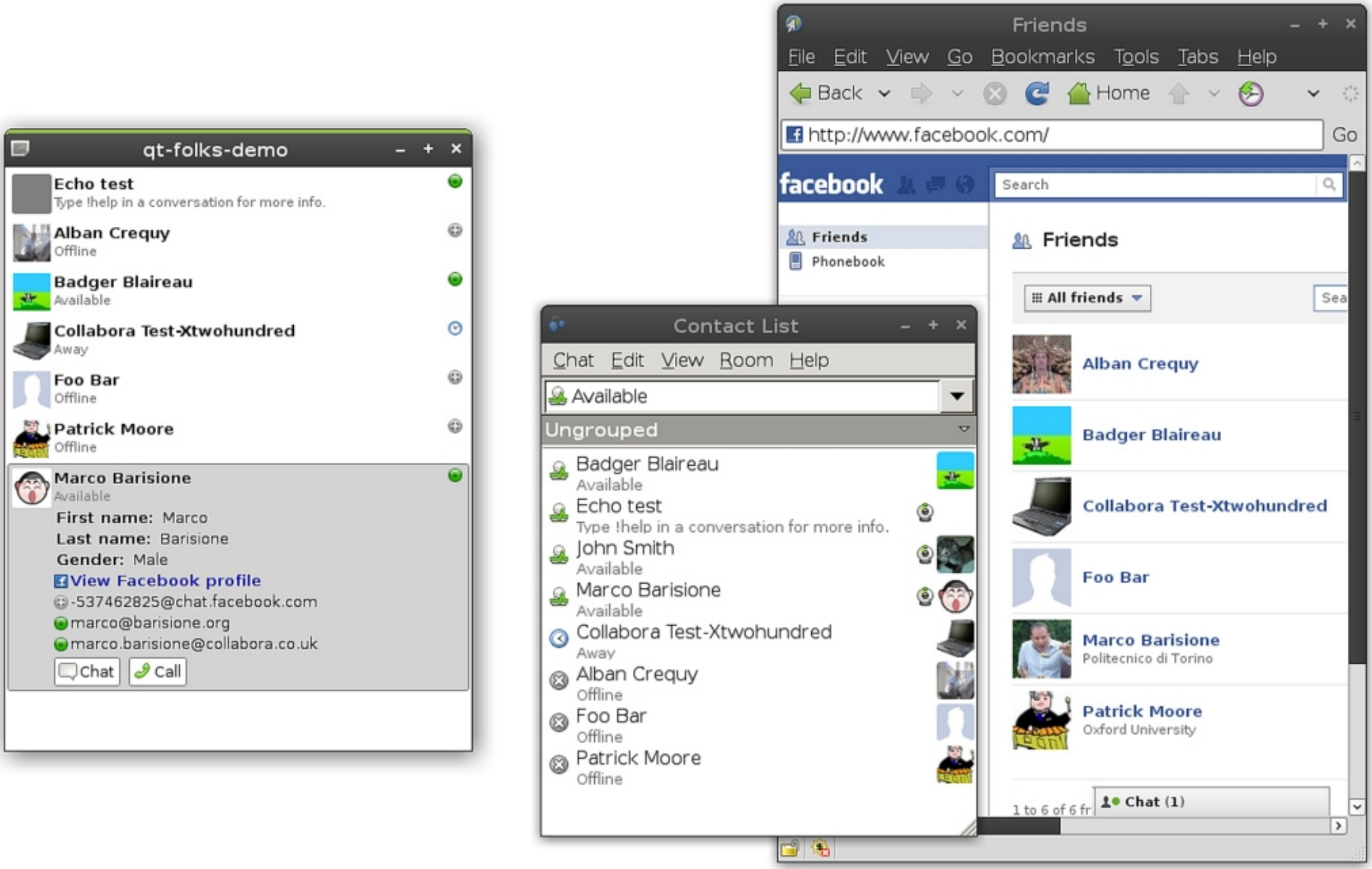
QtContacts

- Experimental backend based on libfolks
- Actions—implemented using TelepathyQt4—to start conversations or calls
- Usable from QML!


System application
Third-party application
QtContacts
Qt-Folks contacts engine
Qt-Folks actions
libfolks
telepathy-qt4
libsocialweb-client
tracker
telepathy-glib
libsocialweb
Telepathy services
Facebook backend
Facebook web api
Links
Uses through D-Bus
Uses through a web service


qt-folks-demo
Echo test
Type !help in a conversation for more info.
Alban Crequy
Offline
Badger Blaireau
Available
Collabora Test-Xtwohundred
Away
Foo Bar
Offline
Patrick Moore
Offline
Marco Barisione
Available
First name: Marco
Last name: Barisione
Gender: Male
View Facebook profile
-537462825@chat.facebook.com
marco@barisione.org
marco.barisione@collabora.co.uk
Chat
Call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Available
First name: Marco
Last name: Barisione
Gender: Male
View Facebook profile
-537462825@chat.facebook.com
marco@barisione.org
marco.barisione@collabora.co.uk
Chat
Call
Contact List
Chat Edit View Room Help
Available
Ungrouped
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Offline
Patrick Moore
Offline
Friends
File Edit View Go Bookmarks Tools Tabs Help
Back
Home
http://www.facebook.com/
Go
facebook
Search
Friends
Phonebook
Friends
All friends
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Badger Blaireau
Collabora Test-Xtwohundred
Foo Bar
Marco Barisione
Politecnico di Torino
Patrick Moore
Oxford University
1 to 6 of 6 fr
Chat (1)

Using Telepathy in applications

- Map application: add contacts' locations?
- Note application: share notes with contacts?
- Multi-player Angry Birds!
  - (Angry Flocks?)

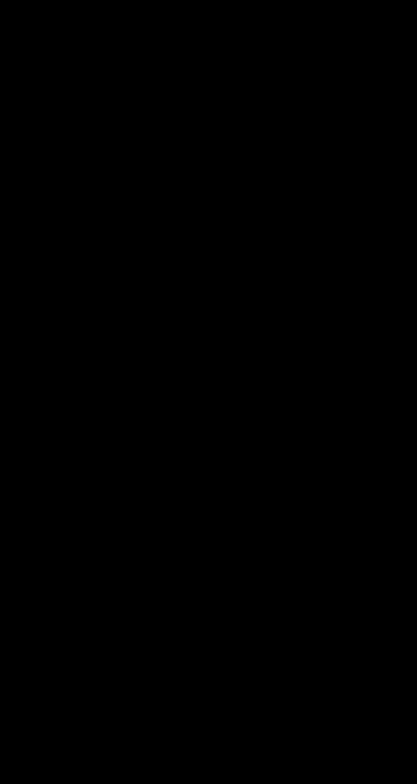
Getting involved

- Let us know what's missing, or hard to use
- Documentation suggestions and patches welcome
  - Qt4 examples for the Telepathy Book very welcome!
- Submit high-level API additions
- Add missing features to your favourite protocol

Thanks!

http://telepathy.freedesktop.org/
telepathy@lists.freedesktop.org
#telepathy on irc.freenode.net
http://git.collabora.co.uk/
(http://cgit.freedesktop.org/)

Come and see our MeeGo Netbook integration and OMAP DSP-accelerated video call demos!
Upstairs in the Atrium.



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