

# OpenSync

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- What is OpenSync?
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- Plugins
- Different ways of Syncing
  
- Capabilities and Merger
  
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# Synchronization Today



# Synchronization Today

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- Devices not (fully) supported
- No desktop independent solution
- No “out-of-box” solution
- No Open Source solutions by manufactures

What is OpenSync?



# What is OpenSync

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- Synchronization Framework
- Plugin based
- Platform Independent
  
- Lesser GNU Public License (LGPL)
- Started by Armin Bauer in 2005
  
- Successor of MultiSync (GTK only)

# Synchronization Framework



# Synchronization Framework

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- Comparing Changes
- Conflict Handling
- Object Type Handling
  - Contacts
  - Events
  - Notes
  - Data
  - ...
- ...
- Merge and Capabilities ( $\geq$  OpenSync 0.30)



Plugins



# Synchronization Plugins

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- IrMC
- Gnokii
- GPE
- Moto
- Opie
- Palm
- SynCE
- Evolution
- KDE PIM
- Sunbird
- Google Calendar
- LDAP
- File Backup
- Sun Server Calendar

Some Plugins are **very experimental!**



# Synchronization Plugin: SyncML

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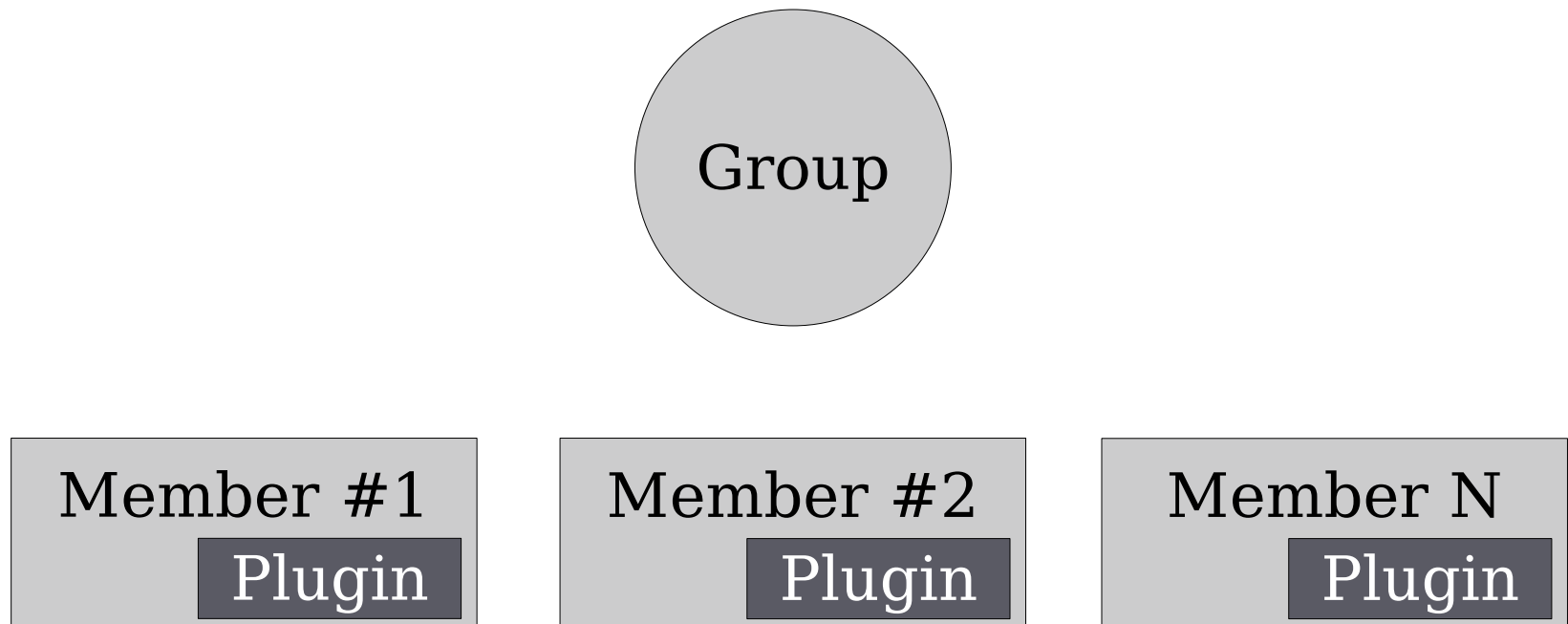
- SyncML via OBEX
    - Client Only
  - SyncML via HTTP
    - Server Only
  - WBXML support
  - SyncML 1.0 / 1.1 (and 1.2)
- 
- Based on libsyncml
  - <http://libsyncml.opensync.org>

# Groups and Members



# Synchronization Groups

- Group based synchronization
- Group consists of at least 2 Members
- Member = Configuration + Plugin



# Format Plugins



# Format Plugins

Convert between different formats

iCalendar



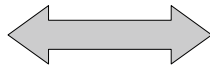
XML Event Format



vCalendar



Palm-Contact



XML Contact Format



Gnokii-Contact





# Converter: iCalendar - XML Event

```
BEGIN:VCALENDAR
VERSION:2.0
BEGIN:VEVENT
UID:libkcal-933.717
SUMMARY:Test Event
CLASS:PUBLIC
DTSTART:20050101T110000Z
DTEND:20050101T120000Z
END:VEVENT
END:VCALENDAR
```

```
<?xml version="1.0" ?>
<event>
  <Class>
    <Content>PUBLIC</Content>
  </Class>
  <DateEnd>
    <Content>20050101T120000Z</Content>
  </DateEnd>
  <DateStarted>
    <Content>20050101T110000Z</Content>
  </DateStarted>
  <Summary>
    <Content>Test Event</Content>
  </Summary>
  <Uid>
    <Content>libkcal-933.717</Content>
  </Uid>
</event>
```

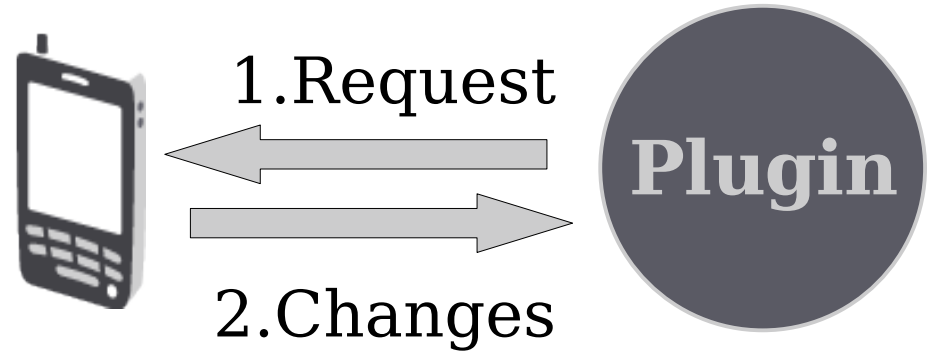


# Different ways of Syncing



# Synchronization: Fast Sync

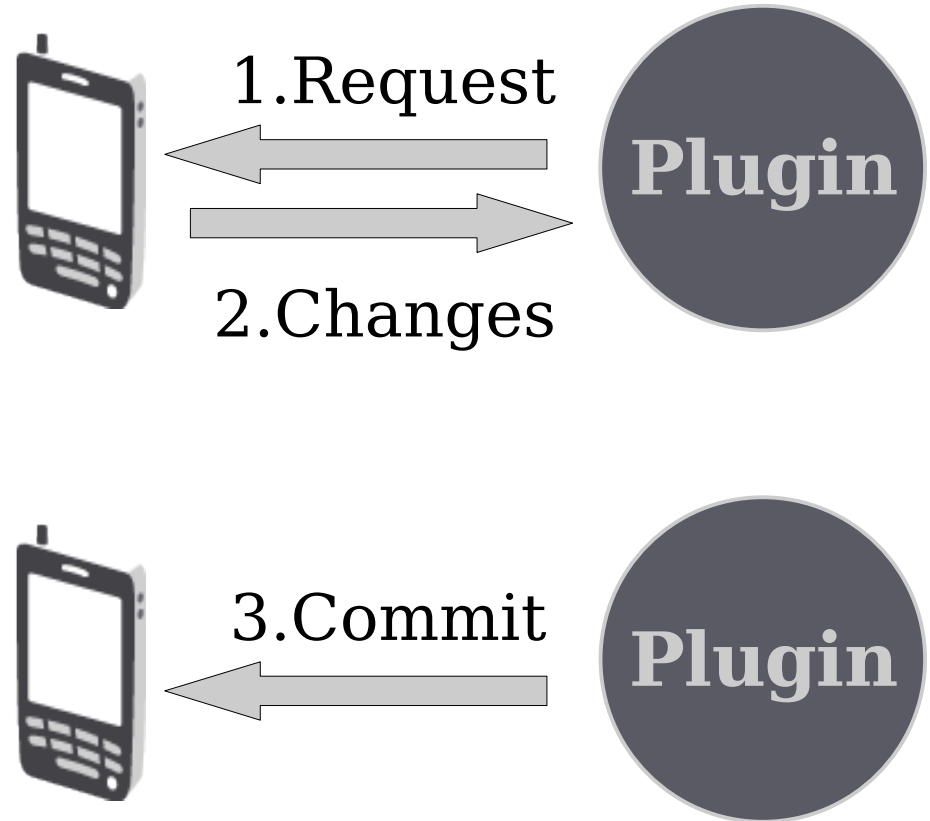
- Connect “device”
- **Request changes**
- Commit changes





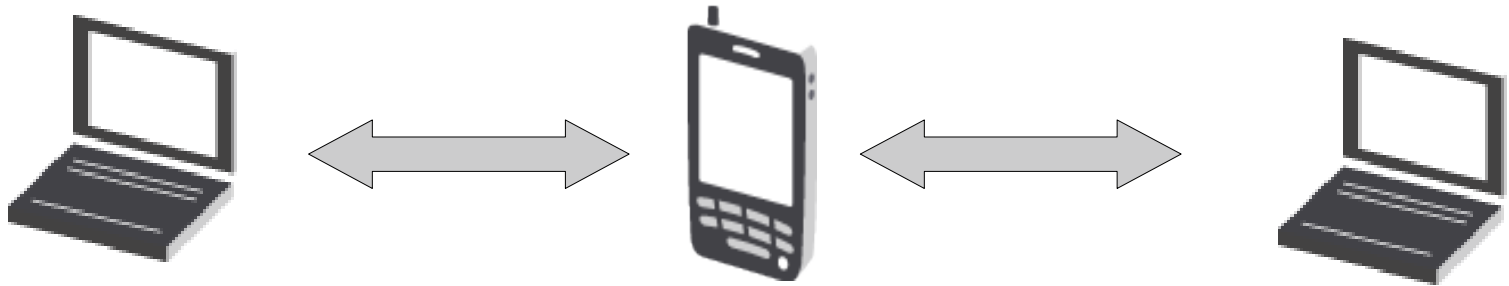
# Synchronization: Fast Sync

- Connect “device”
- Request changes
- **Commit changes**





# Problem: Different Environments



Daniel  
⊗  
⊗  
Timo  
Christian <sup>NEW</sup>

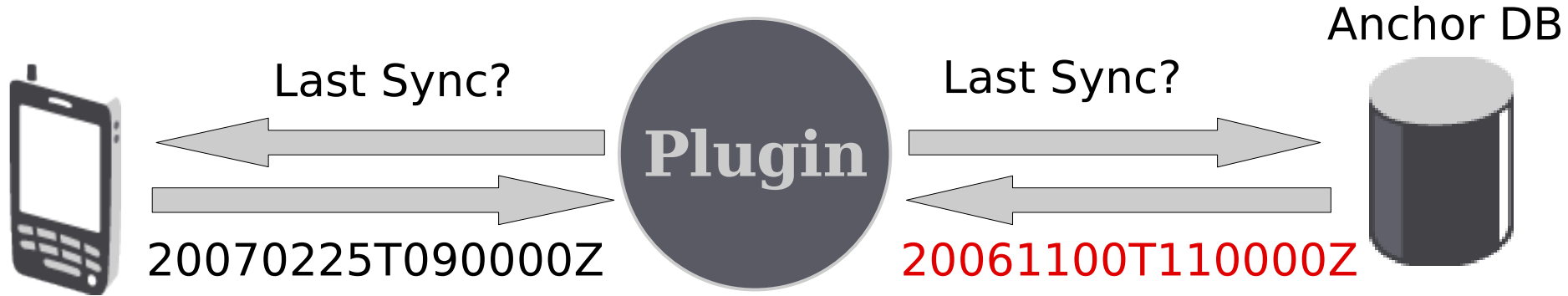
Daniel  
Armin <sup>NEW</sup>  
Christopher <sup>NEW</sup>  
Timo <sup>NEW</sup>  
Christian

Daniel  
Armin  
Christopher  
⊗  
⊗

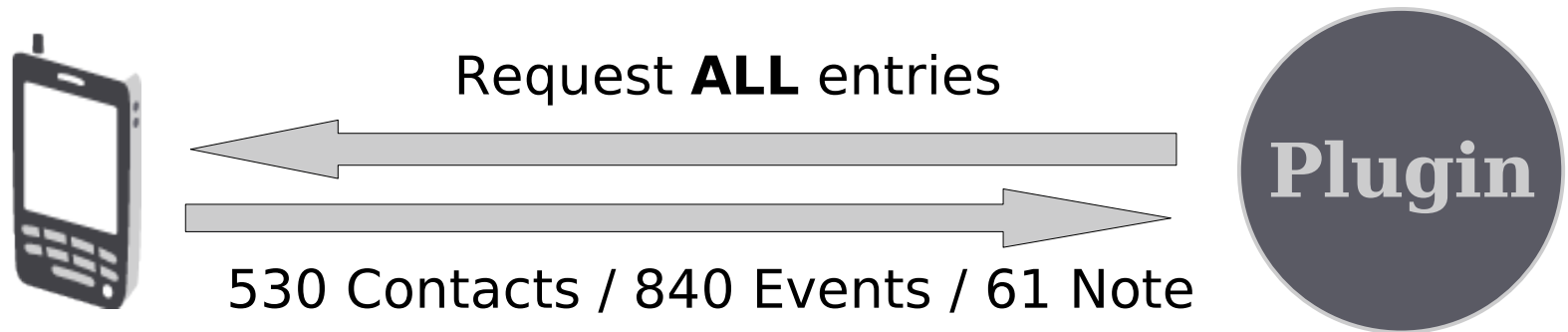
Only latest changes got synchronized!



# Synchronization: Slow Sync



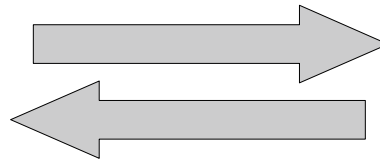
Anchor Compare failed! Trigger a **Slow Sync!**



Capabilities



# Problem: Different Capabilities



Name: **Daniel Gollub**  
Telephone: **666666**  
URL: ~~http://foo.bar~~

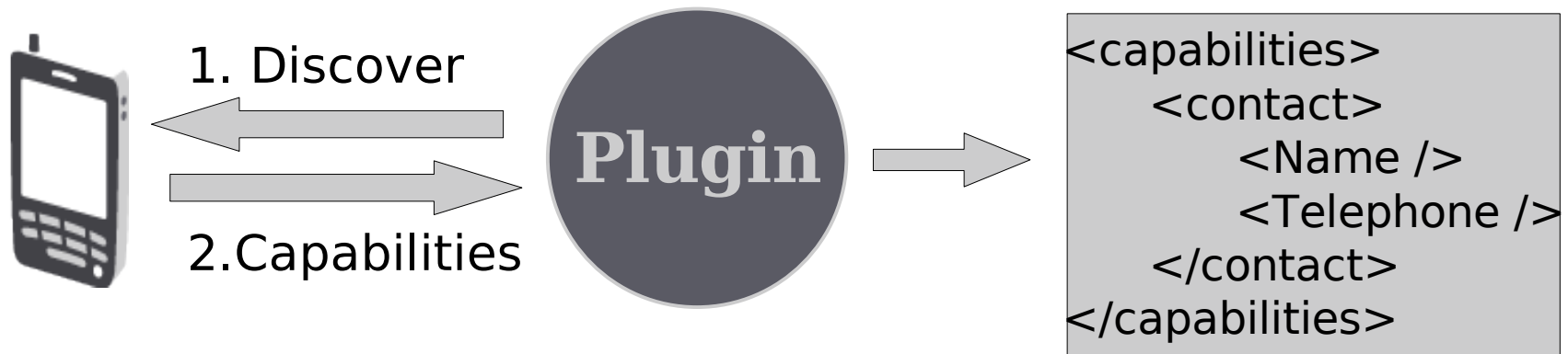


Name: **Daniel Gollub**  
Telephone: **666666**



# Discover Capabilities

- Connect “device”
- **Discover the “device”**

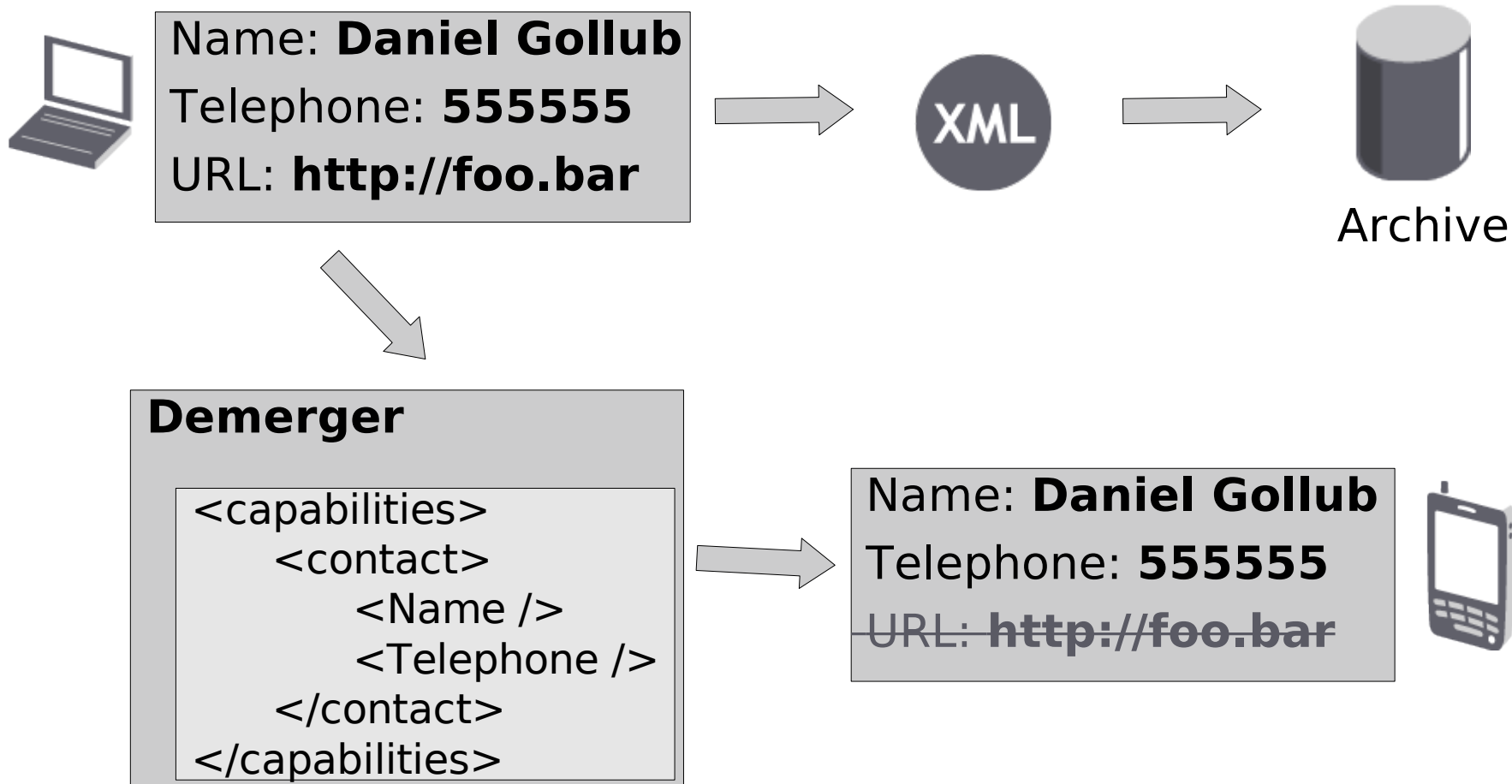




# Merger / Demerger



# Demerger and Capabilities





# Merger and Capabilities

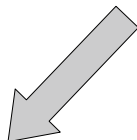
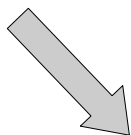


Name: **Daniel Gollub**  
Telephone: **666666**



Archive

Name: **Daniel Gollub**  
Telephone: **555555**  
URL: **http://foo.bar**



## Merger

```
<capabilities>
  <contact>
    <Name />
    <Telephone />
  </contact>
</capabilities>
```



Name: **Daniel Gollub**  
Telephone: **666666**  
URL: **http://foo.bar**

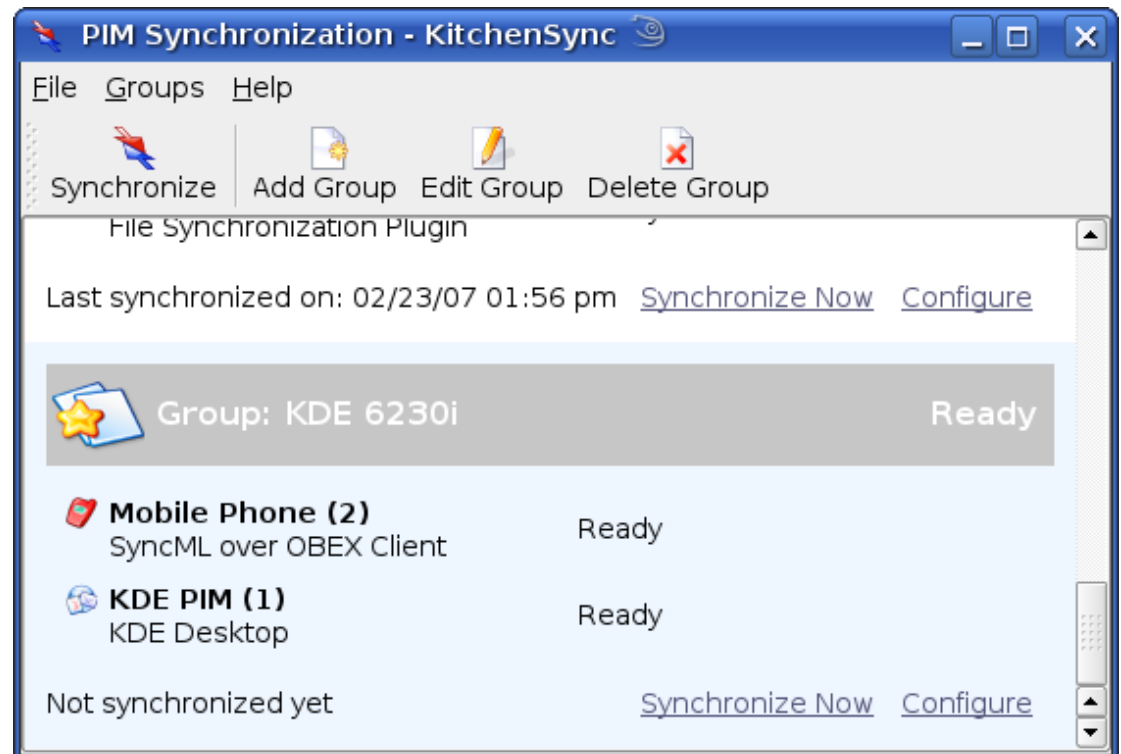


Frontends



# Frontends

- KitchenSync
- MultiSync
- msynctool



# Quick Demonstration



# Conclusion

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- Backups are recommended!
- OpenSync is still not perfect...
- ... but it's quite cool!
  
- OpenSync 0.30:
  - Discover and handle capabilities
  - Merger and Demerger
  
- More developers wanted!!!!!!!!111111



# Further information

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- OpenSync project:  
<http://www.opensync.org>
- libsincml project:  
<http://libsincml.opensync.org>
- [opensync-devel@lists.sourceforge.net](mailto:opensync-devel@lists.sourceforge.net)
- [opensync-users@lists.sourceforge.net](mailto:opensync-users@lists.sourceforge.net)
- #opensync @ freenode
- Daniel Gollub <[dgollub@suse.de](mailto:dgollub@suse.de)>



Questions?



# Credits

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- Armin Bauer (OpenSync and libsincml Maintainer)
- Daniel Friedrich (Merger, Capabilities, XML Format, ...)
- Eduardo Pereira Habkost (IPC, Python Module, KDE PIM...)
- Tobias König (Kitchensync, IrMC Plugin, ...)
- Cornelius Schumacher (Kitchensync, ...)
- Christopher Stender (vCal/iCal, IrMC Plugin, Packaging, ...)
- Matthias Jahn (Packaging, Tons of Bugfixes, Testing, ...)
- Andrew Baumann (moto Plugin, Python wrapper, ...)
- Paul Eggleton (opie Plugin, ...)
- Graham Cobb (GPE Plugin, libsincml bugfixes, ...)
- ...

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