Open Embedded Development

Requirements

Install necessary packages to run OpenEmbedded and Bitbake:

```
sudo apt-get install git-core build-essential help2man diffstat texi2html texinfo cvs
subversion gawk chrpath
```

Use Dash instead of Ubuntu's default Bash:

```
sudo dpkg-reconfigure dash
```

Bitbake

Delete the Open embedded configuration file, if it already exists:

```
rm –r .oe/
```

Rerun the beagleboard configuration:

```
sh angstrom-setup-scripts/oebb.sh config beagleboard
```

Download / update OpenEmbedded:

```
sh angstrom-setup-scripts/oebb.sh update
```

Build base image for beagle board:

```
source ~/.oe/environment
bitbake base-image
```

Bitbake can be stopped. It will resume later on and just build new packages. The whole procedure can take up to 7 hours. Once down, you can rebuild the image in about 10 minutes.

If some packages *(makeinfo, chrpat)* are still missing …

`apt-file search makeinfo` > reveals that makeinfo is part of texinfo

Install apt-file and update the repository list.

Make info is available in texinfo:

```
sudo apt-get apt-file
sudo apt-file update
```

Beagleboard

Connect the beagleboard with the USB cable to the computer running Linux or and Virtual machine using Linux. Assign the USB Network to the virtual machine and configure it in Linux using the console or a network GUI.

Ofono

Install ofono and ofono-phonesim and adjust */etc/ofono/moden.conf* and restart with

```
/etc/init.d/ofono restart
```

List all the files in the ofono-phonesim package

```
dpkg –L ofono-phonesim
```

Copy the configuration file to the angstrom folder

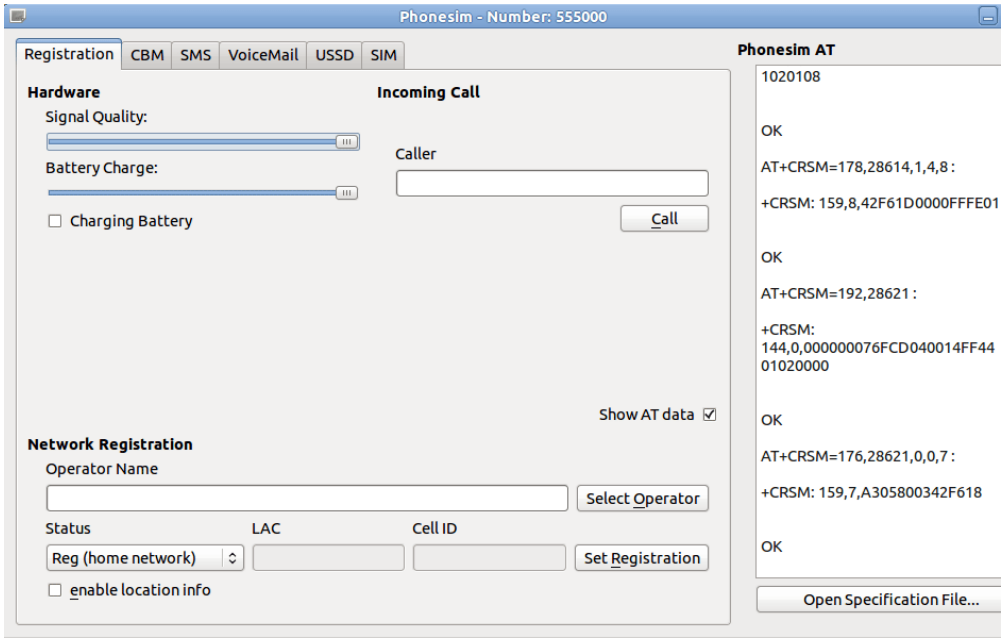
```
cp /usr/share/doc/ofono-phonesim/default.xml.gz .
```

Start ofono-phonesim

```
ofono-phonesim –p 12345 –gui default.xml
```

Open another terminal and enter the following command, which opens the phone-sim application

```
dbus-send --print-reply --system --dest=org.ofono /phonesim
org.ofono.Modem.SetProperty string:"Powered" variant:boolean:"true"
```

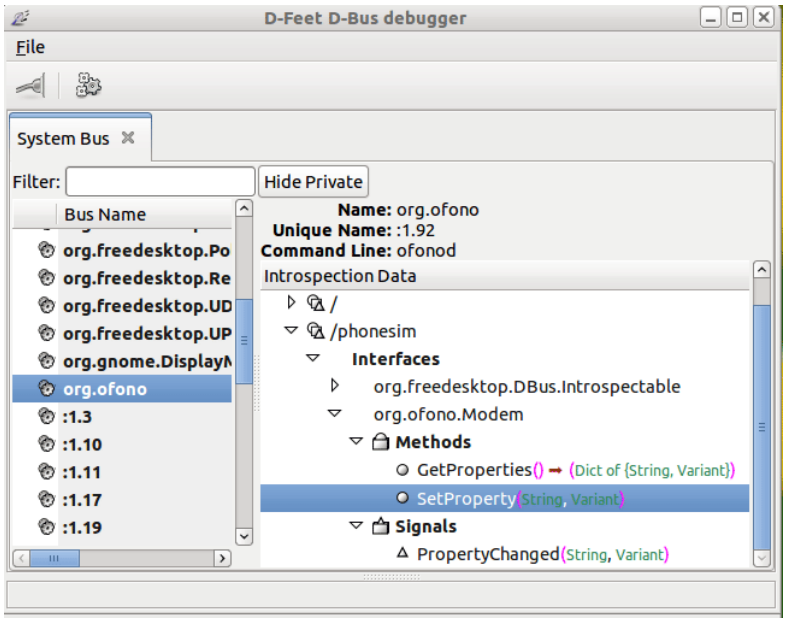


Dial a number:

```
dbus-send --print-reply --system --dest=org.ofono /phonesim
org.ofono.VoiceCallManager.Dial string:"012345" string:"default"
```

D-feed

Install d-feet the D-Bus debugger and create a System Bus to check the org.fono connection:



Create CPP files out of the XML files

See *Group-Project.pdf page 14* and following.

1.) Power up the “phone”:

sudo dbus-send --print-reply --system --dest=org.ofono /phonesim
org.ofono.Modem.SetProperty string:"Powered" variant:boolean:"true"

2.) Enter:

dbus-send --print-reply --system --dest=org.ofono /phonesim
org.freedesktop.DBus.Introspectable.Introspect > fileName