

GNOME Mobile SDK Simple Note

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1 Introduction

GNOME Mobile will advance the use, development and commercialization of GNOME components as a mobile and embedded user experience platform. The GNOME Mobile & Embedded Platform is a subset of the proven, widely used GNOME Platform. In addition to the core user experience toolkit (GTK+), the platform includes crucial functionality such as multimedia support (GStreamer), instant messaging and presence (Telepathy), Bluetooth (BlueZ), contacts and calendaring (E-D-S), and network service discovery (Avahi). APIs are available for developers using C, C++ or Python.

2 Build Procedure

2.1 Preparation

You must have one ubuntu server to build Gnome mobile. The ubuntu version had better be 9.04. You may need to install some host development packages in order to pass the compiling required by LTIB. So please use following command to ensure you have the permission of the installation (Note: ensure http_proxy is set rightly):

```
sudo apt-get update
```

If the source list can update successfully, that means you have the permission to install packages on the server.

2.2 Install host development packages

To pass the GNOME Mobile compile, you need install some development packages on the server:

```
sudo apt-get install libgtk2.0-dev  
sudo apt-get install libdbus-glib-1-dev  
sudo apt-get install liborbit2-dev  
sudo apt-get install intltool
```

2.3 Build Command

Now you can run ltib command to build the GNOME Mobile rootfs. Take IMX51 as an example:

```
./ltib --preconfig config/platform/imx/imx51.cf --profile  
config/platform/imx/release_gnome.profile
```

2.4 Start Procedure

Starting GNOME Mobile includes three parts, X- server, X-client and D-Bus. You can see the start script in the rootfs/etc/rc.d/init.d/fslgnome.

3 Q & A

1. If you met "pushd and popd command: not Found" error, which is due to your working shell didn't support the pushd/popd command, you can do as follows:

```
sudo rm -f /bin/sh
sudo ln -s /bin/bash /bin/sh
```

2. Encounter '-Bsymbolic-functions flag not recognized' issue, You can resolve it by: remove or rename the /usr/bin/krb5-config file.

3. Why the touch screen is not supported in default MX51 gnome mobile release when using WVGA panel?

The default of MX51 gnome mobile rootfs only enables USB mouse and USB keypad as the input devices. To support the touch screen, please modify /usr/bin/startx:

```
IS_BABBAGE=NO
grep Babbage /proc/cpuinfo > /dev/null 2>&1
if [ $? = 0 ]; then
    IS_BABBAGE=YES
    Xfbdev -keybd keyboard,,device=/dev/input/keyboard0 -mouse
mouse,2,device=/dev/input/mice -mouse tslib,2,device=/dev/input/ts0 &
else
    Xfbdev -mouse tslib,2,device=/dev/input/ts0 &
fi

.....
# Calibrate when using the rootfs the first time
if [ $IS_BABBAGE = NO ]; then
    ls /usr/etc | grep pointercal > /dev/null 2>&1
    if [ $? = 1 ]; then
        ts_calibrate
    fi
fi
```

4 Known issue or limitations

- The default gnome-mobile rootfs built via `release_gnome.profile` is above 100M. So please ensure the storage is enough to install rootfs before you program rootfs on the storage. You can also de-select unnecessary packages in LTIB according to your need to reduce rootfs size.
- Performance issue:
 - MX37 and MX23 use SPI Ethernet, the speed to launch gnome mobile is slower if mounting NFS.
 - Sometimes the Close button at the right corner is hard to click correctly.
 - X-server start time will vary on different SoC. (normally from 3 to 8 seconds, and currently we set the wait time is 8 seconds) If you see console log: "matchbox: unable to open DISPLAY ", that is due to the X-server didn't complete its start procedure. You may run "matchbox-desktop -d :0 &" to start Gnome desktop manually. Anyway, this scenario happens occasionally for we have done the test on MX31, MX37, MX25, MX35, MX51 SoC.

5 Enabled applications

Although we put more applications on Gnome Mobile environment, the test plan for this SDK release is only totem. That means only audio/video playback will be the test cover.

6 Reference Link

<http://www.gnome.org/mobile/>