

## Lab5 Document

- 設定編譯環境

mkdir libz

當前目錄底下會有 : libz Zlib libid3tag libmad

進入 sudo mode: sudo su

- 編譯 Zlib (1.2.3)

到 [Index of /repo/pkgs/zlib/zlib-1.2.3.tar.gz/debc62758716a169df9f62e6ab2bc634](https://pkgs.fedoraproject.org/zlib/zlib-1.2.3.tar.gz/debc62758716a169df9f62e6ab2bc634)  
([fedoraproject.org](https://pkgs.fedoraproject.org)) 下載 Zlib 1.2.3

首先配置 configure 文件 :

```
AR=${AR-"/opt/EmbedSky/gcc-linaro-5.3-2016.02-x86_64_arm-linux-gnueabi  
bihf/bin/arm-linux-gnueabi-hf-ar rc"}
```

```
RANLIB=${RANLIB-"/opt/EmbedSky/gcc-linaro-5.3-2016.02-x86_64_arm-lin  
ux-gnueabi-hf/bin/arm-linux-gnueabi-hf-ranlib"}
```

```
cc=${CC-"/opt/EmbedSky/gcc-linaro-5.3-2016.02-x86_64_arm-linux-gnueab  
ihf/bin/arm-linux-gnueabi-hf-gcc"}
```

```
./configure --prefix=/home/chungminyu/Desktop/madplay/libz
```

```
make
```

```
make install
```

- 編譯 libid3tag (0.15.1b)

```
sudo apt-get install zlib1g-dev
```

```
./configure --host=arm-linux-gnueabi  
--prefix=/home/chungminyu/Desktop/madplay/libz --disable-shared  
CPPFLAGS=-I/home/chungminyu/Desktop/madplay/libz/include  
LDFLAGS=-L/home/chungminyu/Desktop/madplay/libz/lib
```

```
make
```

```
make install
```

- 編譯 libmad (0.15.1b)

出現錯誤: cc1: error: unrecognized command line option “-fforce-mem”

```
sed -i '/-fforce-mem/d' configure
```

出現錯誤:

```
/tmp/ccf2FxyW.s:1299: Error: selected processor does not support Thumb  
mode `rsc r0,r0,#0'
```

```
/tmp/ccf2FxyW.s:1435: Error: selected processor does not support Thumb  
mode `rsc r8,r8,#0'
```

```
/tmp/ccf2FxyW.s:1857: Error: selected processor does not support Thumb  
mode `rsc r0,r0,#0'
```

```
/tmp/ccf2FxyW.s:1996: Error: selected processor does not support Thumb  
mode `rsc r0,r0,#0'
```

→ 加 --enable-speed

```
CC=arm-linux-gnueabi-gcc ./configure --host=arm-linux-gnueabi  
--prefix=/home/chungminyu/Desktop/madplay/libz --disable-shared
```

--disable-debugging --enable-speed

CPPFLAGS=-I/home/chungminyu/Desktop/madplay/libz/include

LDFLAGS=-L/home/chungminyu/Desktop/madplay/libz/lib

make

make install

- 編譯 madplay

./configure --host=arm-linux-gnueabi CC=arm-linux-gnueabi-gcc

CPPFLAGS=-I/home/chungminyu/Desktop/madplay/libz/include

LDFLAGS=-L/home/chungminyu/Desktop/madplay/libz/lib

make

make install

到 madplay-0.15.2b 資料夾, 找到 madplay 執行檔移植

- 編譯 aplay

到 <https://www.alsa-project.org/files/pub/lib/> 下載 alsa-lib-1.2.2

./configure --host=arm-linux-gnueabi CC=arm-linux-gnueabi-gcc

--prefix=\$PWD/\_install

make

make install

到 <https://www.alsa-project.org/files/pub/utils/> 下載 alsa-utils-1.2.2

```
./configure --host=arm-linux-gnueabi CC=arm-linux-gnueabi-gcc  
CPPFLAGS=-I$(pwd)/../alsa-lib-1.2.2/_install/include/  
LDFLAGS=-L$(pwd)/../alsa-lib-1.2.2/_install/lib  
--prefix=$(pwd)/../alsa-lib-1.2.2/_install --disable-alsamixer --disable-xmlto
```

make

make install

到 alsa-lib-1.2.2/\_install/lib 資料夾, 整包資料夾移植過去  
到 alsa-lib-1.2.2/\_install/bin 資料夾, 找到 aplay 執行檔移植

- 在板子上執行:  
madplay -o wav:- music.mp3 | LD\_LIBRARY\_PATH=./lib ./aplay
- Reference
  - [讓終端支持播放mp3, 移植mp3解碼庫libmad和madplay到嵌入式linux - 台部落 \(twblogs.net\)](#)
  - [madplay移植-交叉编译\\_madplay交叉编译-CSDN博客](#)
  - [imx6ul上mplayer的移植](#)
  - [嵌入式linux下Alsa的移植和使用 alsa 移植-CSDN博客](#)