Document about A/P and Compiler for SDK(for 5864)

(I).The Description of A/P

Under DVR A/P, there are 4 directories, isilsdk、netsdk、filesdk、app as shown at Figure 1.

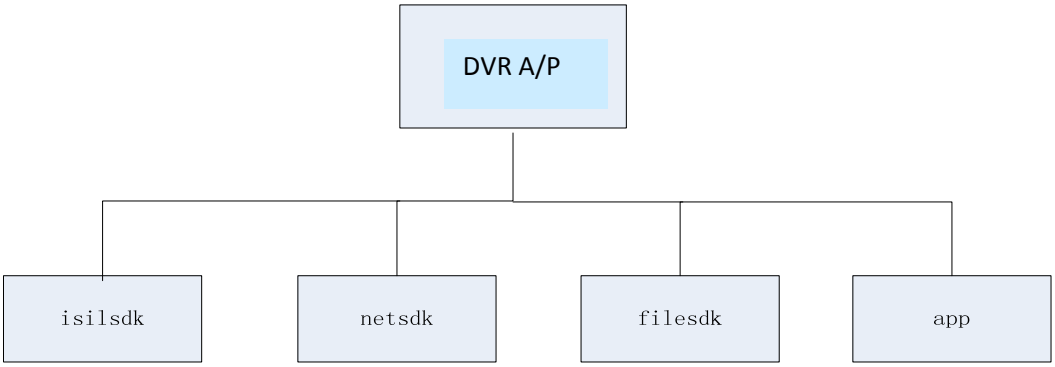

Figure 1: The Structure of DVR A/P

One directory is for one module

a. All of SDK about audio and video encoding are packaged in isilsdk. Header files and source codes are included in it. It will need libevent (1.4.x). It Provides API for development(Please reference MediaSDK API(V1.2)_20111207). It can be compiled by developer.

b. All of SDK about network are packaged in netsdk. TCP and UDP are supported. Header files and source codes are included in it. It will need libev (version：4.04). It Provides API for development.

c. All of SDK about file access and file format are packaged in filesdk. It supports functions of read/write for audio/video files. Header files and source codes are included in it.

d. All of A/Ps to implement the above functions, associated source codes and header files, compiled executable files are stored in app.

compiled executable files are put under the directory, src which is under app. All of executable files are with the name, dvr in the beginning.

(II).How to Compile libevent

Download libevent -1.4.x from http://libevent.org/ , decompress it, cd to the directory, libevent and key in：

./configure --prefix=the directory(under which all of the files will be installed) --target=prefix of compiler

Prefix of compiler is the name of the tool for cross compiler, for example:

If the name of the tool for cross compiler is powerpc, the name of the tool for cross compiler, gcc is powerpc-linux-gcc. Prefix is powerpc-linux.

If the platform is x86, you do not need specify target. The default path for installation for libevent is /usr/local/. Also, you can change parameter to specify other path for installation. If you want to specify the directory for installation, you add the directory after —prefix

After executing the command, configure, both of Makefile and config.h will be generated.

At config.h, there are some definitions, for example,

#define

You can mark or unmark them to support or disable select，epoll，pool

on linux platform. Please reference config.h which is under the directory of source codes of libevent.

Now, key in,

make &&make install

Until now, the steps for compiling libevent have been completed. Under the directory of installation, there are 2 libraries, include and lib. Under them, you can find needed header files and libraries.

(III).How to Compile libev

Download associated files from http://software.schmorp.de/pkg/libev.html, do the compression, cd to the directory of libev, key in

./configure --prefix= the directory(under which all of the files will be installed) --target=compiler prefix

Prefix of compiler is the name of the tool for cross compiler, for example:

If the name of the tool for cross compiler is powerpc, the name of the tool for cross compiler, gcc is powerpc-linux-gcc. Prefix is powerpc-linux.

If the platform is x86, you do not need specify target. The default path for installation for libev is /usr/local/. Also, you can change parameter to specify other path for installation. If you want to specify the directory for installation, you add the directory after —prefix

Now, key in,

make &&make install

Until now, the steps for compiling libev have been completed. Under the directory of installation, there are 2 libraries, include and lib. Under them, you can find needed header files and libraries.

Please be noted, header files for libev and libevent after compiling, should not be put under the same directory.

(IV).How to Compile DVR A/P

Under DVR, there are 2 files, Makefile和rules.make. All of parameters about make, are included in rules.make

The description of key parameters is as follows:

PLATFORM it is to specify target platform, for example, powerpc、arm.

PREFIX It is to specify the prefix of the name of compiler.

LIBEVINCPATH The path for header files of libev.

LIBEVLIBPATH The path for libraries of libev.

LIBEVENTINCPATH The path for header files of libevent.

LIBEVENTLIBPATH The path for libraries of libevent.

After changing the parameters, under the root directory of A/P, key in,

make

Until now, the steps for compiling DVR are completed. The generated files are under the directory, src, which is under the directory, app.

The name of the executable file is dvr-PLATFORM.

(V).How to Compile isilsdk

Compiling isilsdk only is ok. It needs libevent. After compiling, static and dynamic library will be generated. The name of the library is libisilmediasdk.a(so). Now, only static library will be generated. Under isilsdk, there are 2 files, Makefile和rules.make. All of the parameters about make are included in rules.make.

The description of key parameters is as follows:

PLATFORM it is to specify target platform, for example, powerpc、arm.

PREFIX It is to specify the prefix of the name of compiler.

LIBEVENTINCPATH The path for header files of libevent.

LIBEVENTLIBPATH The path for libraries of libevent.

After changing the parameters, under the root directory of isilsdk, key in,

make

Until now, the steps for compiling are completed. The generated 3 libraries are under the directory, lib, which is under the directory, isilsdk. The library, libisilmediasdk (-lisilmediasdk) is needed if you want to run only isilsdk. The header files for isilsdk are included in the directory, include. One example about how to run isilsdk api is under the directory, test.