DTV Course – Basic

About Course

Goal

This course introduces students to DTV standards, iWedia Middleware implementation and Android TV stack on Android based STB devices.

Environment setup and day 1 goal

- Download development tools:
  - Android NDK: https://developer.android.com/ndk/downloads
  - Android ADB (*install on Ubuntu 20.04*)

    sudo apt install android-tools-adb
    sudo apt install android-tools-fastboot
    - ***Alternatively download adb:***
      https://developer.android.com/tools/releases/platform-tools#downloads

- Setup target device
- Compile and test exercise
- Introduction with software architecture

Software arhitecture

Dtvplayer_cli

libdtvplayer_native

native

| **comm** | **tuner** | **demux** | **pipeline** | **av** |

libchal

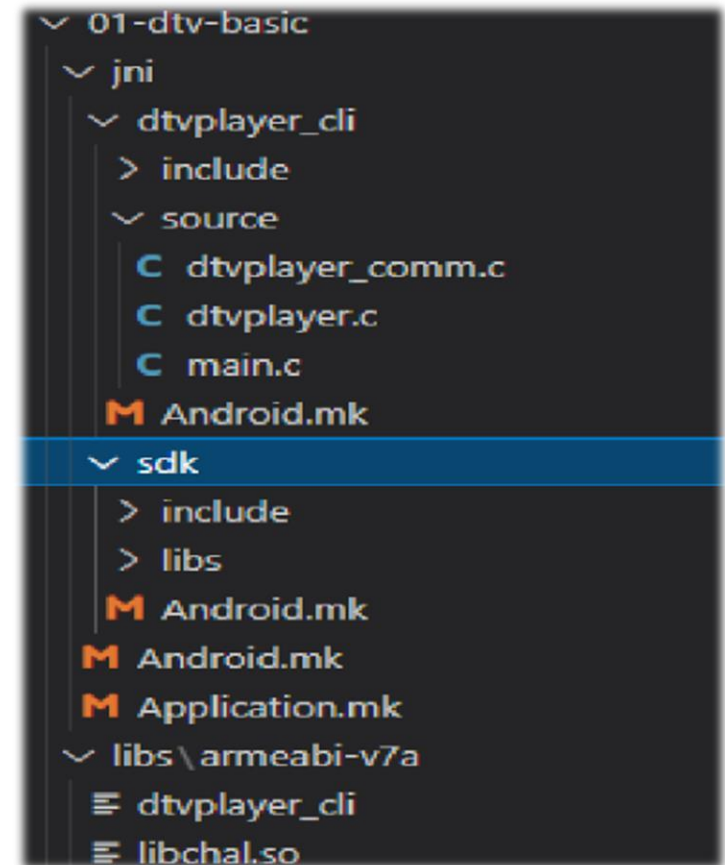| **...** | **tdal_dmd** | **tdal_dmx** | **tdal_ts** | **tdal_av** |
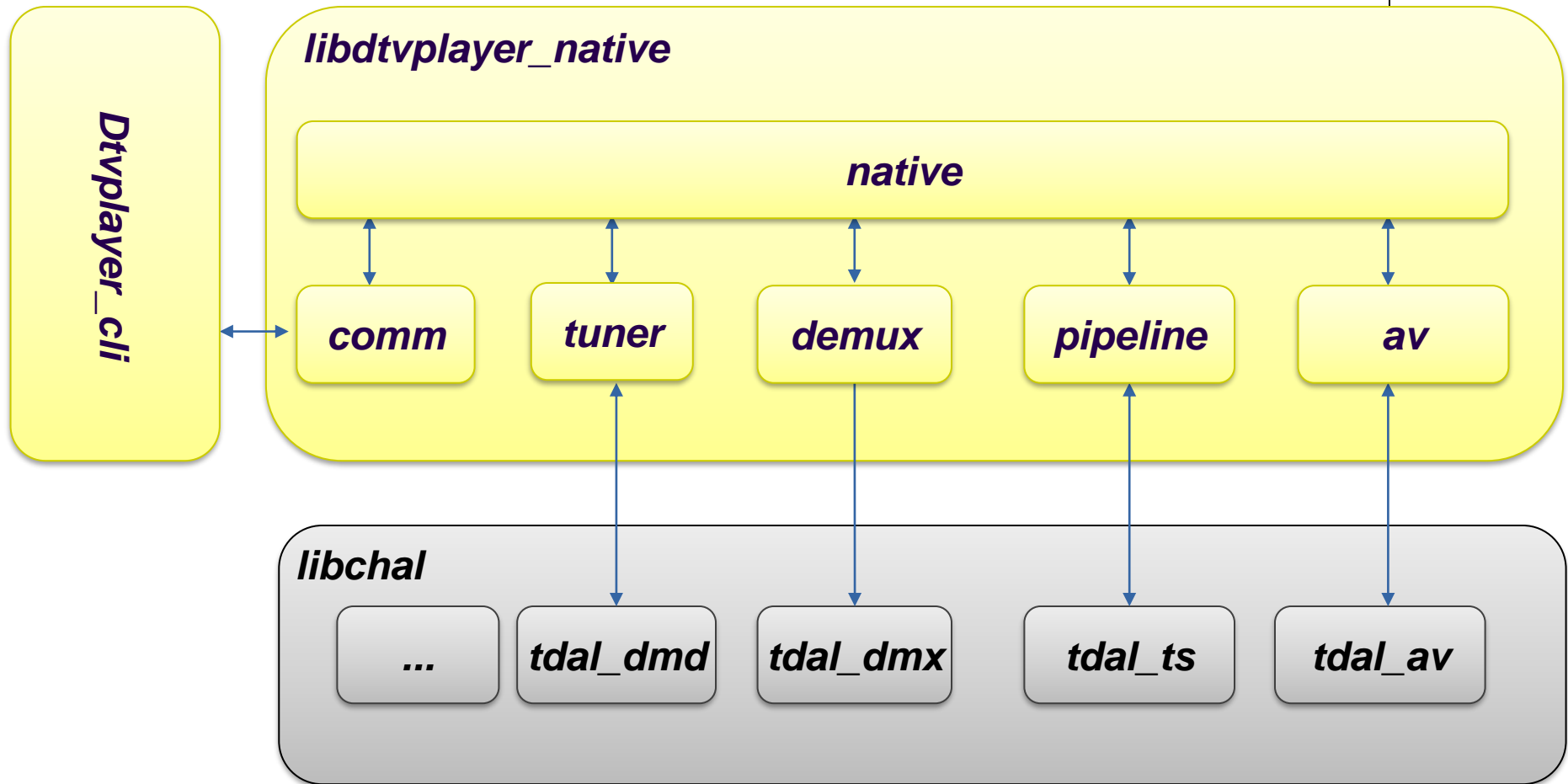
Code structure

- jni\dtvplayer_cli
  - Main code location
- jni\sdk
  - SDK library and header location
- libs\armeabi-v7a
  - Compilation output location

Useful commands

- Connect to STB
  - adb connect IP_ADDRESS
- Remount STB everytime after reboot
  - adb remount
- Compile code
  - cd jni
  - ndk-build
- Push compilation result to STB:
  - cd libs\armeabi-v7a
  - adb push libchal.so ./system/product/lib/.
  - adb push dtvplayer_cli ./system/bin/.

Instructor(s)

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