

MEDIATEK

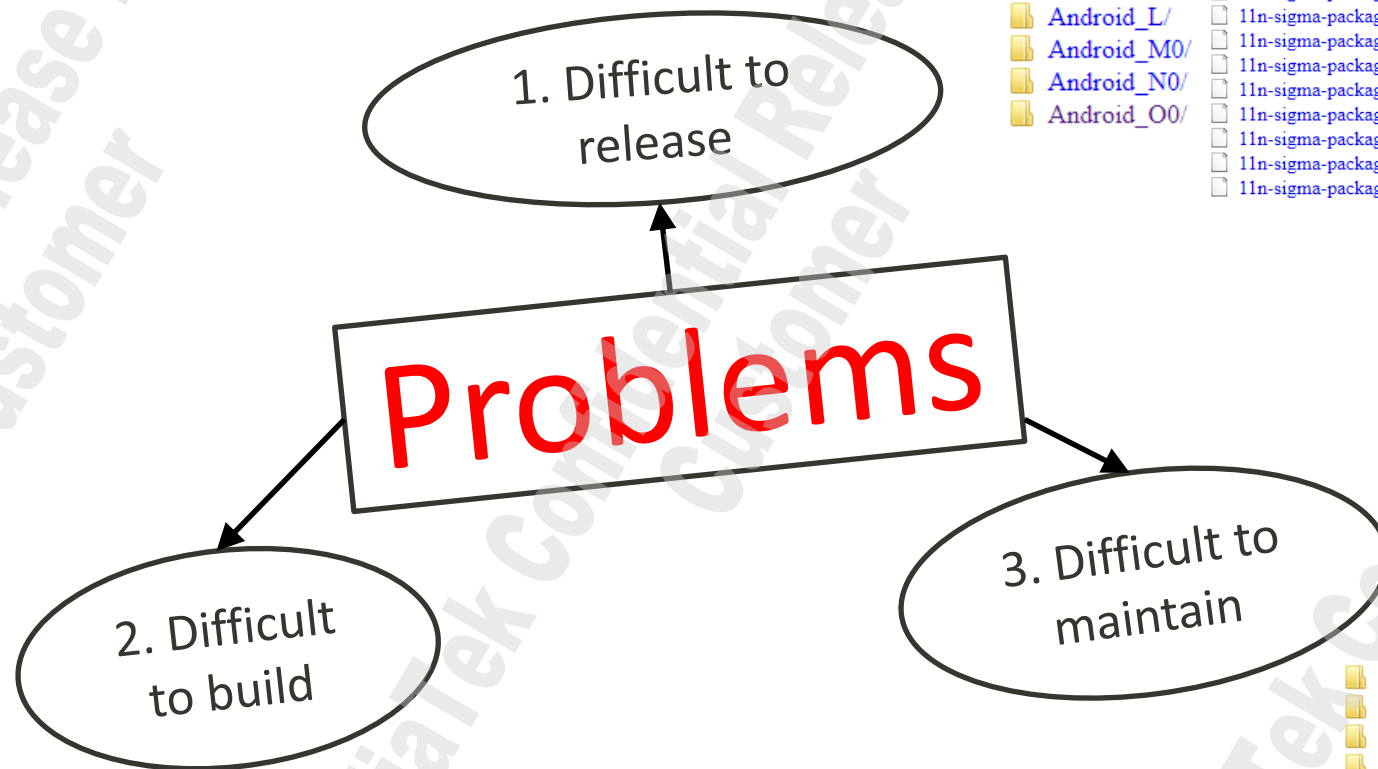
CONFIDENTIAL A

[Workshop] Sigma One

CTD/SE5/CS1
Herman Yang



Sigma Tool



Build CA

Install **cygwin** tool in windows PC

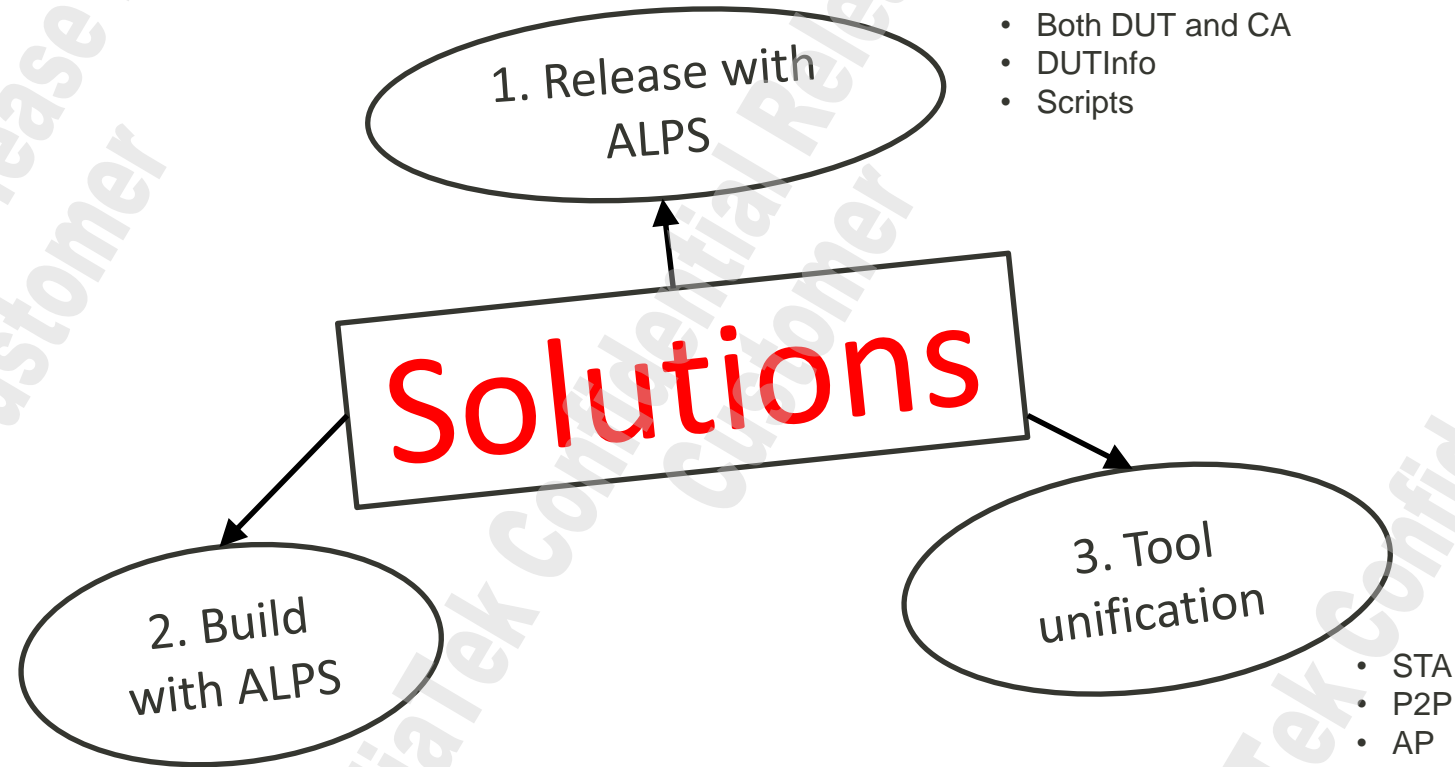
- Do not forget to install **MAKE** package during installation
- Also update **PATH** windows system environment variable of your computer – adding

Android P0/
Android_L/
Android_M0/
Android_N0/
Android_O0/

11n-sigma-package-2018.08.23.zip
11n-sigma-package-2018.10.19.zip
11n-sigma-package-2018.10.30.zip
11n-sigma-package-2018.11.29.zip
11n-sigma-package-2018.12.20.zip
11n-sigma-package-2018.12.25.zip
11n-sigma-package-2018.12.28.rar
11n-sigma-package-2019.01.17.zip
11n-sigma-package-2019.02.27.zip
11n-sigma-package-2019.03.04.zip
11n-sigma-package-2019.04.04.rar

AP/
P2P_STA/
PasspointR2/
TDLS_STA/
TGac_PMF_STA/
TGn-WMMPS_AP/
TGn_STA/
WMMAC-VoE_STA/
WMMPS_STA/
WPS_STA/

Sigma One

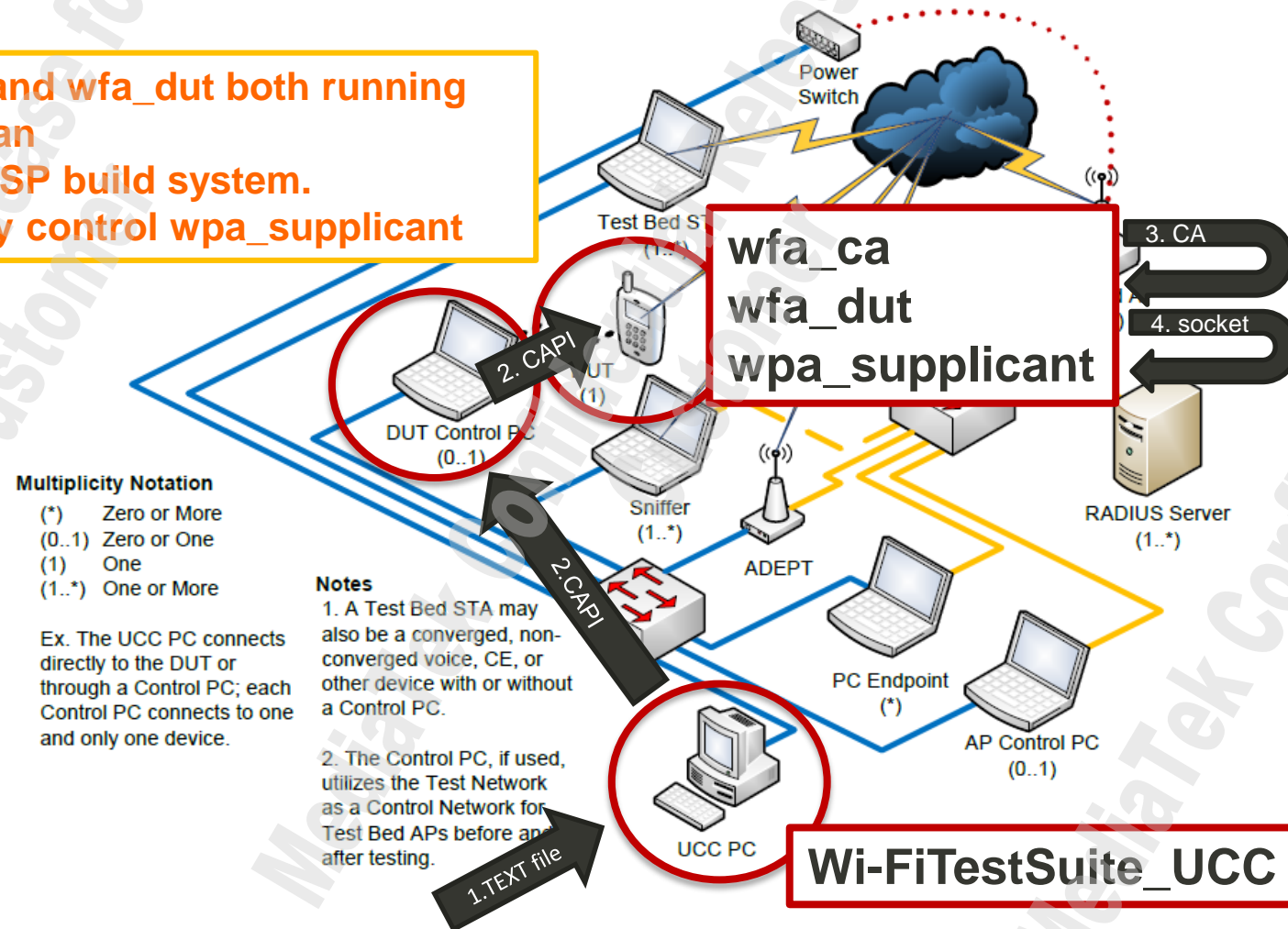


- SOURCE: vendor/mediatek/proprietary/hardware/connectivity/wlan/sigma
- [make mtk_testcases](#)
- OUT: \$(PRODUCT_OUT)/testcases/sigma

Control Flow

With wfa_ca and wfa_dut both running on DUT, we can

1. Reuse AOSP build system.
2. Accurately control wpa_supplicant

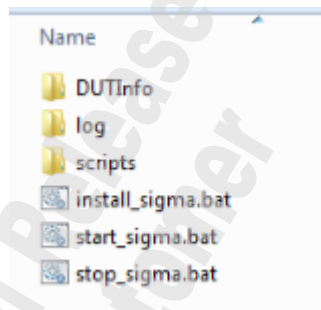


Tool Unification



How to Use

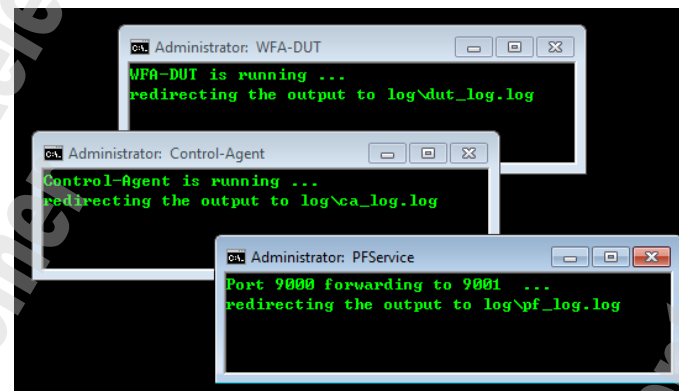
testcases\sigma



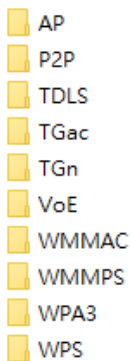
install_sigma.bat

```
#####
##      Sigma Certification tool      ##
#####
0: AP
1: P2P
2: TDLS
3: TGac
4: TGn
5: VoE
6: WMMAC
7: WMMPS
8: WPA3
9: WPS
Enter program number:4
Install for <<TGn>>
```

start_sigma.bat



sigma\scripts\CertProgram



sigma\scripts\config.txt

```
LISTEN_PORT=9000
CONNECT_PORT=9001
BIN_DIR=/data/bin
PROGRAM_DIR=scripts\CertProgram
BUSYBOX=awk less more ipaddr arp route
NEED_WLAN0=TGac TGn P2P TDLS VoE WMMAC WMMPS WPA3 WPS
NEED_P2P0=P2P
PORT_FORWARD=false
DUT_IP_ADDRESS=192.168.43.120
DUT_IP_NETMASK=255.255.255.0
PCENDPOINT_IP_ADDRESS=192.165.100.99
PCENDPOINT_IP_NETMASK=255.255.0.0
```

sigma\readme.md



Use Cases

~~~ [ Configuring DUT ] ~~~~

```
2019 14:53:14 INFO DUT (192.168.250.99:9000) ---> ca_get_version
2019 14:53:15 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE version,alps-mp-q0.mp1-of.p16
2019 14:53:15 INFO DUT (192.168.250.99:9000) ---> device_get_info
2019 14:53:17 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE vendor,MediaTek Inc.,model,sys_mssi_64_cn_armv82-userdebug,version,alps-mp-q0.mp1-of.p16
2019 14:53:18 INFO DUT (192.168.250.99:9000) ---> device_list_interfaces,interfaceType,802.11
2019 14:53:20 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE,interfaceType,802.11,interfaceID,wlan0
2019 14:53:20 INFO DUT (192.168.250.99:9000) ---> sta_preset_testparameters,interface,wlan0,supplicant,ZeroConfig
2019 14:53:21 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE
2019 14:53:21 INFO DUT (192.168.250.99:9000) ---> sta_get_info,interface,wlan0
2019 14:53:22 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE,interface,wlan0,vendor,Mediatek Inc.,cardtype,802.11a/b/g/n/ac
2019 14:53:22 INFO DUT (192.168.250.99:9000) ---> sta_set_encryption,interface,wlan0,ssid,5.2.29,encpType,none
2019 14:53:24 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE
2019 14:53:24 INFO DUT (192.168.250.99:9000) ---> sta_set_ip_config,interface,wlan0,dhcp,0,ip,192.165.100.99,mask,255.255.0.0
2019 14:53:25 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE
2019 14:53:25 INFO DUT (192.168.250.99:9000) ---> sta_associate,interface,wlan0,ssid,5.2.29
2019 14:53:29 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE
2019 14:54:13 INFO DUT (192.168.250.99:9000) ---> sta_is_connected,interface,wlan0
2019 14:54:14 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE,connected,1
2019 14:54:14 INFO DUT (192.168.250.99:9000) ---> sta_get_bssid,interface,wlan0
2019 14:54:15 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE,bssid,8c:fd:f0:0f:90:5f
2019 14:54:15 INFO DUT (192.168.250.99:9000) ---> sta_get_ip_config,interface,wlan0
2019 14:54:17 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE,dhcp,0,ip,192.165.100.99,mask,255.255.0.0,primary-dns,,secondary-dns,
2019 14:54:17 INFO DUT (192.168.250.99:9000) ---> traffic_agent_reset
2019 14:54:18 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE
2019 14:54:18 INFO DUT (192.168.250.99:9000) ---> traffic_send_ping,destination,192.165.180.30,framesize,1000,frameRate,1,duration,10
2019 14:54:20 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE,streamID,33
2019 14:54:40 INFO DUT (192.168.250.99:9000) ---> traffic_stop_ping,streamID,33
2019 14:54:45 INFO DUT (192.168.250.99:9000) <-- status,COMPLETE,sent,10,replies,10
```

Tool version

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Device version

~~~~~ [ Configuring DUT ] ~~~~~

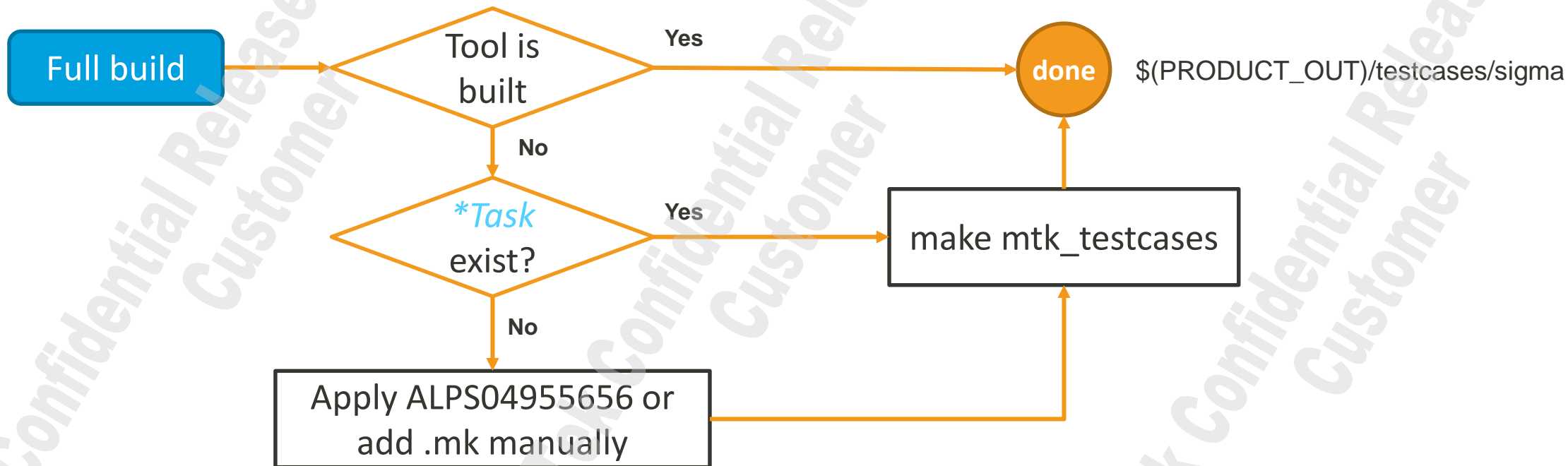
```
-13 21:49:31.088 - INFO - DUT (192.168.250.99:9000) ---> ca_get_version
-13 21:49:33.101 - INFO - DUT (192.168.250.99:9000) <-- status,COMPLETE version,alps-mp-q0.mp2-of.p1
-13 21:49:33.115 - INFO - DUT (192.168.250.99:9000) ---> device_get_info
-13 21:49:35.160 - INFO - DUT (192.168.250.99:9000) <-- status,COMPLETE vendor,MediaTek Inc.,model,sys_mssi_64_cn_armv82-userdebug,version,alps-mp-q0.mp1-V1.1
-13 21:49:35.394 - INFO - DUT (192.168.250.99:9000) ---> device_list_interfaces,interfaceType,802.11
-13 21:49:37.405 - INFO - DUT (192.168.250.99:9000) <-- status,COMPLETE,interfaceType,802.11,interfaceID,wlan0
```

Tool version

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Device version

Build Sigma Tool



**: device/mediatek/build/tasks/mtk_testcases.mk*

```
1 .PHONY: mtk_testcases
2 mtk_testcases: $(filter $(TARGET_OUT_TESTCASES)/%, $(ALL_DEFAULT_INSTALLED_MODULES))
```