



Boot Animation Customization Guide

Technical Overview

Requirements

MT6000

Doc No: ABV
Version: V1.0
Release date: 2017-02-17
Classification: Internal

© 2008 - 2017 MediaTek Inc.

This document contains information that is proprietary to MediaTek Inc.

Unauthorized reproduction or disclosure of this information in whole or in part is strictly prohibited.

Specifications are subject to change without notice.

Keywords
Technical Overview

MediaTek Inc.

Postal address

No. 1, Dusing 1st Rd. , Hsinchu Science
Park, Hsinchu City, Taiwan 30078

MTK support office address

No. 1, Dusing 1st Rd. , Hsinchu Science
Park, Hsinchu City, Taiwan 30078

Internet

<http://www.mediatek.com/>



Document Revision History

Revision	Date	Author	Description
V1.0	2016-12-27	A Vijayan	Initial Release from DS6000-D2A-DMT-V1.1EN

MediaTek Confidential

© 2016 - 2017 MediaTek Inc.

Classification: Internal

This document contains information that is proprietary to MediaTek Inc.
Unauthorized reproduction or disclosure of this information in whole or in part is strictly prohibited.

Table of Contents

Document Revision History.....	3
Table of Contents.....	4
Lists of Tables	6
Lists of Figures	Error! Bookmark not defined.
1 Introduction	7
1.1 Purpose	7
1.2 Scope	7
1.3 Who Should Read This Document.....	7
1.4 How to Use This Manual	7
1.4.1 Terms and Conventions.....	8
2 References.....	9
3 Definitions.....	10
4 Abbreviations.....	11
5 Overview	12
5.1 Background	12
5.2 Architecture	12
5.2.1 How to modify resource settings.....	Error! Bookmark not defined.
6 OPTR_SPEC_SEG_DEF.....	Error! Bookmark not defined.
6.1 General Description	13
7 ro.operator.optr.....	Error! Bookmark not defined.
7.1 General Description	14
8 Where to add operator resource	15
9 Make file for resource customization.....	18
10 Boot and Shut animation zip file.....	Error! Bookmark not defined.
10.1 Folder1.....	Error! Bookmark not defined.
10.2 Folder2.....	Error! Bookmark not defined.
10.3 desc.txt.....	Error! Bookmark not defined.



11 Verification..... 22

12 Requirement Error! Bookmark not defined.

12.1 Screen Resolution.....Error! Bookmark not defined.

12.2 Bootanimation FileError! Bookmark not defined.



Lists of Tables

Table 1-1. Reference Information beyond Scope.....Error! Bookmark not defined.

Table 1-2. Chapter Overview 7

Table 1-3. Conventions 8

Table 4-1. Abbreviations 11

Table 10-1. Sample Table.Error! Bookmark not defined.

Table 10-2. Sample Register TableError! Bookmark not defined.



1 Introduction

Customers have their own animation.

1.1 Purpose

It need do some configure settings and add their own animation resource by customers.

1.2 Scope

The scope of this document is customer usage guide i.e. how customer will configure the different aspects of the feature.

1.3 Who Should Read This Document

The customer should read this document before customizing the feature to suit its requirements.

1.4 How to Use This Manual

This segment explains how information is distributed in this document, and presents some cues and examples to simplify finding and understanding information in this document. Table 1-1 presents an overview of the chapters and appendices in this document.

Table 1-1. Chapter Overview

#	Chapter	Contents
1	Introduction	Describes the scope and layout of this document.



1.4.1 Terms and Conventions

This document uses special terms and typographical conventions to help you easily identify various information types in this document. These cues are designed to simply finding and understanding the information this document contains.

Table 1-2. Conventions

Convention	Usage	Example
[1]	Serial number of a document in the order of appearance in the References topic	Look up Chapter 2: System Architecture in [1]
void xx(zz)	Source code	static int __stdcall cb_download_bloader_init(void *usr_arg){}
⚡	Important	

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- [1] MTK Company Profile, http://brandclips.mediatek.inc/uploads/Company-profile-1H-2016_0418-Lite-final.pptx
- [2] MTK Word Template, <http://brandclips.mediatek.inc/uploads/Microsoft-Office-Word-Oct-2014.rar>
- [3] The Android Multimedia Audio Driver, <http://dms.mediatek.inc>

3 Definitions

For the purposes of the present document, the following terms and definitions apply:

Enhanced Network Service Access Point Identifier (Enhanced NSAPI): integer value in the range [128; 255], identifying a certain Multimedia Broadcast/Multicast Service (MBMS) UE Context. G-PDU: is a user data message, It consists of a T-PDU plus a GTP header

GTP Tunnel: in the GTP-U plane is defined for each PDP Context or each MBMS service in the GSNs and/or each RAB in the RNC. A GTP tunnel in the GTP-C plane is defined for all PDP Contexts with the same PDN Connection (for Tunnel Management messages and UE Specific MBMS message), for each MBMS service (for Service Specific MBMS messages) or for each MS (for other types of messages). A GTP tunnel is identified in each node with a TEID, an IP address and a UDP port number. A GTP tunnel is necessary to forward packets between an external packet data network and an MS user.



4 Abbreviations

Please note the abbreviations and their explanations provided in Table 4-1. They are used in many fundamental definitions and explanations in this document and are specific to the information that this document contains.

Table 4-1. Abbreviations

Abbreviations	Explanation
MTK	MediaTek, Asia’s largest fabless IC design company.

MediaTek Confidential

© 2016 - 2017 MediaTek Inc.

Classification: Internal

This document contains information that is proprietary to MediaTek Inc.
Unauthorized reproduction or disclosure of this information in whole or in part is strictly prohibited.

5 Overview

This chapter first gives a brief description of the bootanimation usage guide for customer.

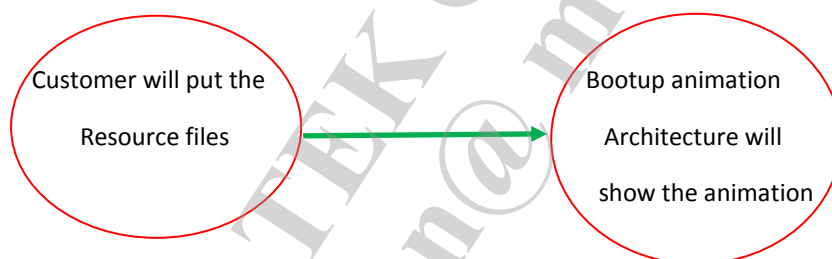
- How to set the various attributes and definitions also where to add resources for bootanimation to get the customized sequence of images to show as bootanimation.
- Customer can define its own boot animation resource files to get the logo of there company etc.

5.1 Background

It need do some configure settings and add their own animation resource by customers.

It need use your project named replace the “\${PROJECT}” in the following demo to change your project settings.

5.2 Architecture



5.2.1 How to modify the resource settings.

Example:

1. Modify “OPTR_SPEC_SEG_DEF = NONE” value to “OPTR_SPEC_SEG_DEF = OP01_SPEC0200_SEGC” in the Projectconfig.mk
 - a. alps\mediatek\config\\${project}\Projectconfig.mk
 - b. alps\device\mediatek\\${project}\Projectconfig.mk(KK AOSP && above)
2. Add System property “ro.operator.optr=CUST” into system.prop file
 - a. alps\mediatek\config\\${project}\system.prop
 - b. alps\device\mediatek\\${project}\system.prop(KK AOSP && above)

6 OPTR_SPEC_SEG_DEF:

6.1 General Description

This setting will ensure the operator, spec & segment which is going to be active for the current project.

7 ro.operator.optr:

7.1 General Description

The value ro.operator.optr=CUST to notify the build system that the project at hand is operator's.

The change needs to be done in the following files:

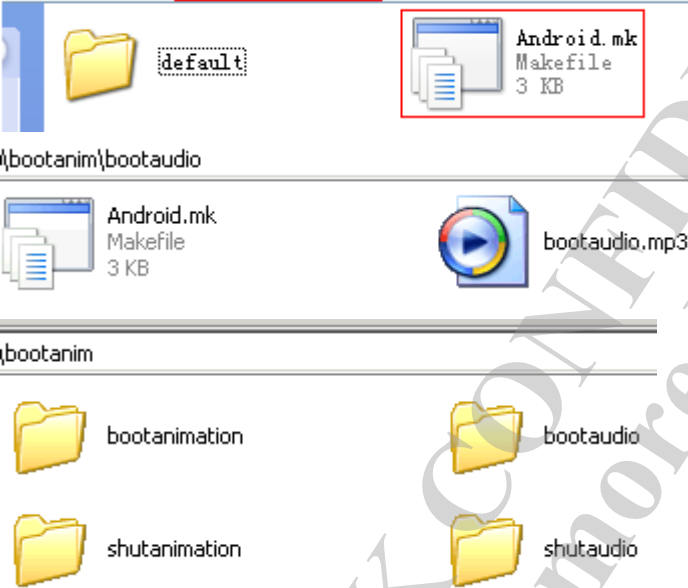
- alps\mediatek\config\\${project}\system.prop
- alps\device\mediatek\\${project}\system.prop(KK AOSP && above)

8 Where to add operator resource:

KK:

Write make file to copy Customer’s bootanimation.zip /shutanimation.zip files from the below path to system/media when build load. E.g place the resource under project(custom/ “\${PROJECT}”) for KK.

\\alps\\mediatek\\custom\\\${project}\\system\\bootanim\\bootanimation



L above:

vendor/mediatek/proprietary/operator/<<OPXX>> /prebuilt/bootanim/bootanimation/

9 Make File For Resource Customization:

Make file for bootanimation.zip demo

```

1 # Android.mk in out will be enumerated in mediatek/build/android
2
3 LOCAL_PATH := $(call my-dir)
4
5 include $(CLEAR_VARS)
6
7 ifdef OPTR_SPEC_SEG_DEF
8     ifeq ($(OPTR_SPEC_SEG_DEF),CUST)
9         LOCAL_PATH := $(LOCAL_PATH)/default
10
11         ifeq ($(LCM_HEIGHT), 800)
12             LOCAL_PATH := $(LOCAL_PATH)/WVGA
13         else
14             LOCAL_PATH := $(LOCAL_PATH)/HVGA
15         endif
16
17     LOCAL_MODULE := bootanimation.zip
18     LOCAL_MODULE_TAGS := user
19     LOCAL_MODULE_CLASS := media
20     LOCAL_MODULE_PATH := $(TARGET_OUT)/media
21     LOCAL_SRC_FILES := $(LOCAL_MODULE)
22     include $(BUILD_PREBUILT)
23 endif
24 endif

```

Change the “bootanimation.zip” to “shutanimation.zip” for shut animation make file.

Make file for bootaudio.mp3 demo

9 Make File For Resource Customization:

```

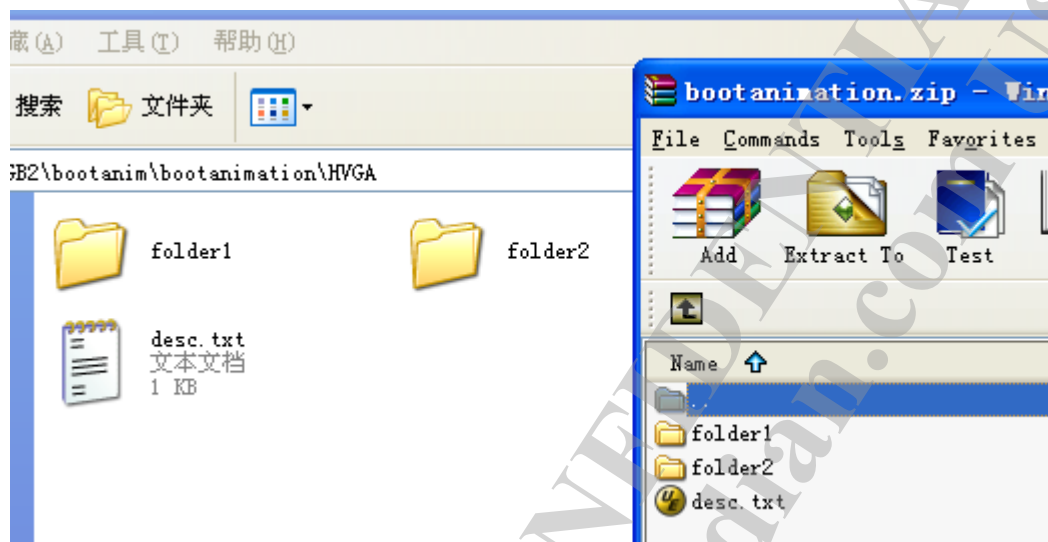
36 # barrier for searching Android.mk
37 # Android.mk in out will be enumerated in mediatek/
38
39 LOCAL_PATH := $(call my-dir)
40 include $(CLEAR_VARS)
41
42 LOCAL_MODULE := bootaudio.mp3
43 LOCAL_MODULE_TAGS := user
44 LOCAL_MODULE_CLASS := media
45 # your prebuilt file (must be relative directory )
46 LOCAL_SRC_FILES := $(LOCAL_MODULE)
47 # the path your prebuilt file will be installed
48 LOCAL_MODULE_PATH := $(TARGET_OUT)/media
49 LOCAL_CERTIFICATE := platform
50 include $(BUILD_PREBUILT)

```

Change the "bootaudio.mp3 " to "shutaudio.mp3 " for shut audio make file.

10 Boot & shut animation zip file

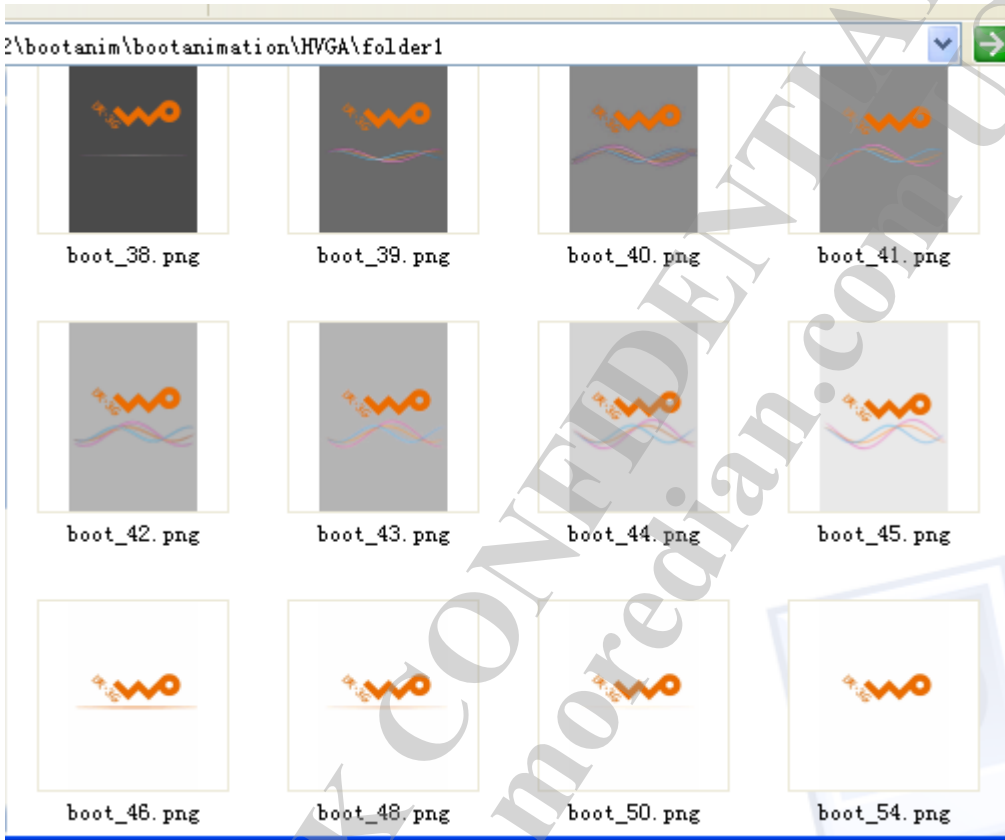
There are two folders and one desc.txt configure file in the zip





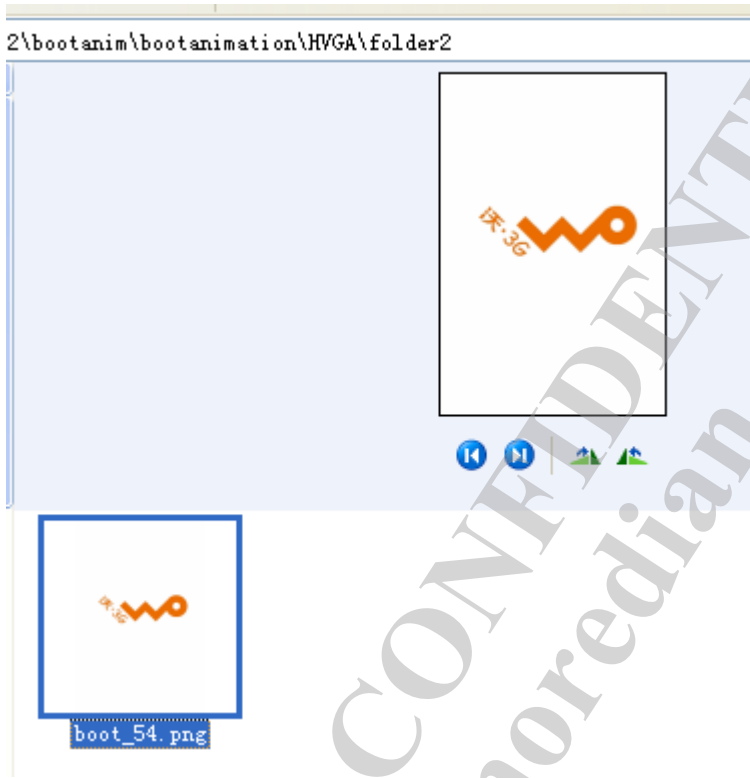
10.1 Folder1

- Place all the png in the folder1



10.2 Folder2

- Only place the last frame of the animation

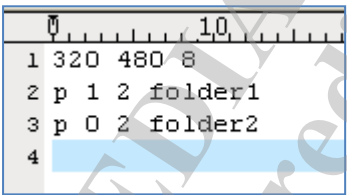


10.3 desc.txt:

Modify the below three parameter if needed

320x480 is for HVGA

8 is to play 8 frame image every second

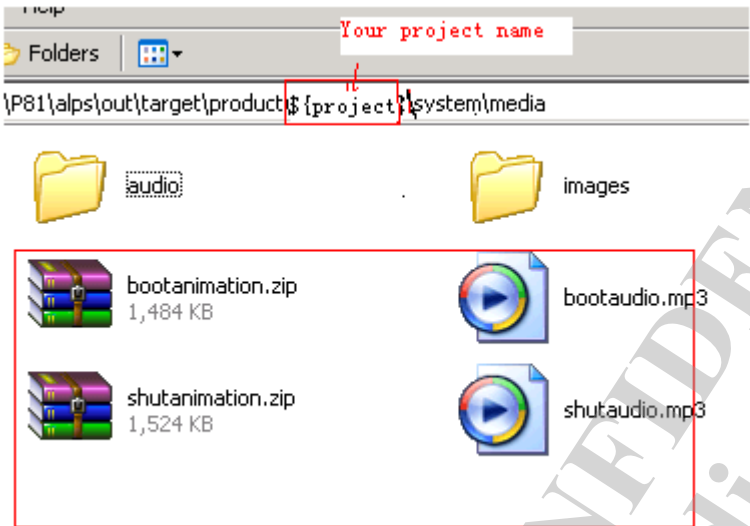


Note: To reduce Boot up time cost. We use smaller resolution images to instead of real size. WVGA(use 240*400 image instead of 480x800) . Qhd(use 270x480 instead of real size 540x960)

Boot/Shut animation.zip is store.

11 Verification:

After build completed, It's successful to configure your project If you can find resource in the below path.



12 Requirement:

The audio type is mp3 or ogg. However the audio must be named as "bootaudio.mp3" or "shutaudio.mp3".

12.1 Bootanimation file:

- alps/mediatek/operator/<OPERATOR>/prebuild/bootanim/bootanimation/<RESOLUTION>/bootanimation.zip
- alps/vendor/mediate/proprietary/operator/<OPERATOR>/prebuild/bootanim/bootanimation/<RESOLUTION>/bootanimation.zip (KK AOSP)

Demo file :

```
alps/mediatek/operator/<OPERATOR>/prebuild/bootanim/bootanimation/Android.mk
```

```
alps/vendor/mediate/proprietary/operator/<OPERATOR>/prebuild/bootanim/bootanimation/Android.mk (KK AOSP)
```

```
ifeq ($(LCM_HEIGHT), 960)
```

```
    ifeq ($(LCM_WIDTH), 720)
```

```
        LOCAL_PATH := $(LOCAL_PATH)/USER
```

```
    endif
```

```
endif
```