# 分享

isLowPowerModeInternal原理

AutomaticBrightnessController原理，分段调试

Art虚拟机

areDefaultRuntimePermissionsGrantedLPr原理

*// Layout debugging***boolean** layout = SystemProperties.getBoolean(View.DEBUG\_LAYOUT\_PROPERTY, **false**);

android-7.1.1\_r1/frameworks/av/media/libmediaplayerservice/MediaPlayerService.cpp

android-7.1.1\_r1/frameworks/base/services/core/java/com/android/server/pm/DefaultPermissionGrantPolicy.java

分享要实用为主

LOCAL\_PATH:= $(call my-dir)

include $(CLEAR\_VARS)

LOCAL\_SRC\_FILES :=$(call all-java-files-under, src)

LOCAL\_PACKAGE\_NAME := FirstSystemApp

LOCAL\_CERTIFICATE := platform

include $(BUILD\_PACKAGE)

所有的系统周期

编码

编译

安装（升级）

运行

DEBUG

书写文档

Android分享：

0.什么叫系统应用？

1.RM500系统应用AS环境搭建方案/实现

3.系统app家族图

附件技术：

hide暴露方法

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图传分享：2）服务设计；input子系统+组合键设计原理

通讯原理；AMS；四大组件原理

1）APP编译原理（APK如何打包，虚拟机如何加载到内存中，生命周期）；

主要分享业务吧，技术作为附件，一张图就好了

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1.分析按键抖动问题，查看内核修改原理

1.完成selinux，数据备份机制

1.分析时间问题

2.分析

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系统FW特性，config化！

1.

Merge:rd-39:18.2.25

自动化测试控件ID

getActiveStreamType原理

WallpaperManagerService AMS

**WallpaperManagerService**

# LOCAL\_PROGUARD\_ENABLED

1.INCREMENTAL\_BUILDS定义/LOCAL\_JACK\_FLAGS

ifneq ($(INCREMENTAL\_BUILDS),)

LOCAL\_PROGUARD\_ENABLED := disabled

LOCAL\_JACK\_ENABLED := incremental

LOCAL\_DX\_FLAGS := --multi-dex

LOCAL\_JACK\_FLAGS := --multi-dex native

endif

2.混淆的原理：LOCAL\_PROGUARD\_ENABLED禁用逻辑

解释下面这两个的问题

LOCAL\_PROGUARD\_ENABLED := disabled

LOCAL\_JACK\_FLAGS := --multi-dex native

3.混淆的语法

ok的实例

##ok

#-keep class org.msgpack.core.buffer.\*\*{\*;}

-keep class org.msgpack.core.buffer.MessageBuffer{\*;}

-keep class org.msgpack.core.buffer.MessageBufferU{\*;}

-keep class org.msgpack.core.buffer.MessageBufferBE{\*;}

BUTTTTT----------------------------------

下面为何不生效呢？

#-keep class org.msgpack.core.buffer.\*

###XXXX111

###-keep class org.msgpack.core.buffer.MessageBuffer

###-keep class org.msgpack.core.buffer.MessageBufferU

###-keep class org.msgpack.core.buffer.MessageBufferBE

###XXXX222

# Keep class (extends) MessageBuffer which are used by reflection.

# -keepclassmembers class org.msgpack.core.buffer.MessageBuffer{

# public <init>(byte[], int, int);

# }

# -keepclassmembers class \*\* extends org.msgpack.core.buffer.MessageBuffer {

# public <init>(byte[], int, int);

# }

###XXXX33333

#-keepclassmembers class

###-keep class org.msgpack.core.buffer.MessageBuffer {

### public <init>(byte[], int, int);

###}

###-keep class org.msgpack.core.buffer.MessageBufferU {

### public <init>(byte[], int, int);

###}

###-keep class org.msgpack.core.buffer.MessageBufferBE {

### public <init>(byte[], int, int);

###}

###XXXX555

###-keepclassmembers class \* {

### @org.msgpack.core.buffer.MessageBuffer <methods>;

### @org.msgpack.core.buffer.MessageBufferU <methods>;

### @org.msgpack.core.buffer.MessageBufferBE <methods>;

###}

# 4.模块重复包含

including ./frameworks/opt/kpad-core/Android.mk ...

build/core/base\_rules.mk:183: \*\*\* frameworks/opt/kpad-core: MODULE.TARGET.JAVA\_LIBRARIES.kpad-core already defined by frameworks/opt/kpad-core.

make: \*\*\* [out/build-rm500.ninja] Error 1

#### make failed to build some targets (46 seconds) ####

TARGET\_BOARD\_PLATFORM=rk3399

TARGET\_PRODUCT=rm500

原因：#include frameworks/opt/kpad-core/Common.mk

--------------------------------------------------------------------------

5.classes.jack'找不到？

build/core/base\_rules.mk:319: warning: ignoring old commands for target `out/target/product/rm500/system/lib64/libjpeghwdec.so'

Starting build with ninja

ninja: Entering directory `.'

ninja: error: 'out/target/common/obj/JAVA\_LIBRARIES/kpad-core\_intermediates/classes.jack', needed by 'out/target/common/obj/JAVA\_LIBRARIES/services.core\_intermediates/classes.jack', missing and no known rule to make it

make: \*\*\* [ninja\_wrapper] Error 1

#### make failed to build some targets (46 seconds) ####

原因：jar模块未定义

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service包含:

Starting build with ninja

ninja: Entering directory `.'

ninja: error: 'frameworks/opt/kpad-core/java/com/android/server/EventLogTags.logtags', needed by 'out/target/common/obj/all-event-log-tags.txt', missing and no known rule to make it

make: \*\*\* [ninja\_wrapper] Error 1

---06-02 20:12:39.265 2531-2839/system\_process D/KJIA: update from reportid in ('57167c8cd2cf7d4956da55fdbb54c1a9c6ca','f85cbe14df05cd41dad9e12deba1d86cb8d2','9a099c5ed8a90d42f5d92e0ded23166c70e5','938d810fd27a2d4a85dacbed8aa04c3f243f','86dc83cdd0b96d4e33d81bbde27856728cd5') null into kji\_analytics\_reports state=1

06-02 20:12:39.265 2531-2839/system\_process D/KJIA: SenderService handler id is 0 data len is:5

--------- beginning of crash

06-02 20:12:42.356 4355-4355/system\_process D/KJIA: KJIA initialised.

06-02 20:12:42.356 4355-4355/system\_process D/KJIA: DebugUtils is start init.

06-02 20:12:42.357 4355-4355/system\_process E/Environment: Path requests must specify a user by using UserEnvironment

java.lang.Throwable

at android.os.Environment.throwIfUserRequired(Environment.java:913)

at android.os.Environment.getExternalStorageDirectory(Environment.java:449)

at com.kpad.core.analytics.util.DebugUtils.init(DebugUtils.java:41)

at com.kpad.core.analytics.KJIA.enableDebug(KJIA.java:57)

at com.kpad.core.KpadReportUtil.initKJIReport(KpadReportUtil.java:27)

at com.kji.KjiServicesHelper.initKJIReport(KjiServicesHelper.java:259)

at com.android.server.SystemServer.run(SystemServer.java:349)

at com.android.server.SystemServer.main(SystemServer.java:226)

at java.lang.reflect.Method.invoke(Native Method)

at com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run(ZygoteInit.java:957)

at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:825)

06-02 20:12:42.364 4355-4355/system\_process D/KJIA: getExternalStorageDirectory = /sdcard

06-02 20:12:42.365 4355-4355/system\_process W/System.err: java.io.FileNotFoundException: /sdcard/kjia.test.data.txt (Permission denied)

06-02 20:12:42.365 4355-4355/system\_process W/System.err: at com.kpad.core.analytics.KJIA.enableDebug(KJIA.java:57)

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out\target\common\obj\APPS\framework-res\_intermediates

proguard\_options 是哪里定义的，作用是什么？

APK打包原理一定要懂得哦

public\_resources.xml

私有资源的ID：src\com\android\internal.R.kji\_lable其实是有的啊

拿到是要重新连接才能编译生效？？

1.INCREMENTAL\_BUILDS定义/LOCAL\_JACK\_FLAGS

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###}

###-keep class org.msgpack.core.buffer.MessageBufferBE {

### public <init>(byte[], int, int);

###}

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###-keepclassmembers class \* {

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4.模块重复包含

including ./frameworks/opt/kpad-core/Android.mk ...

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make: \*\*\* [out/build-rm500.ninja] Error 1

#### make failed to build some targets (46 seconds) ####

TARGET\_BOARD\_PLATFORM=rk3399

TARGET\_PRODUCT=rm500

原因：#include frameworks/opt/kpad-core/Common.mk

--------------------------------------------------------------------------

# 5.classes.jack'找不到

build/core/base\_rules.mk:319: warning: ignoring old commands for target `out/target/product/rm500/system/lib64/libjpeghwdec.so'

Starting build with ninja

ninja: Entering directory `.'

ninja: error: 'out/target/common/obj/JAVA\_LIBRARIES/kpad-core\_intermediates/classes.jack', needed by 'out/target/common/obj/JAVA\_LIBRARIES/services.core\_intermediates/classes.jack', missing and no known rule to make it

make: \*\*\* [ninja\_wrapper] Error 1

#### make failed to build some targets (46 seconds) ####

原因：jar模块未定义

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service包含:

Starting build with ninja

ninja: Entering directory `.'

ninja: error: 'frameworks/opt/kpad-core/java/com/android/server/EventLogTags.logtags', needed by 'out/target/common/obj/all-event-log-tags.txt', missing and no known rule to make it

make: \*\*\* [ninja\_wrapper] Error 1

# 为何aar依赖需要中间变量res等文件，并且只能通过mkanroid来更新

# 编译bug

之前为何编译没有问题

Error 101 Unresolved link/see tag “原理”

## 日志

cannot be resolved or is not a field

1.原理

2.修改overlay为何都是，server.jar寻址不到资源，解压framework-res.apk其实是有的

资源编译原理，怎么去排查问题，佳节资源编译原理，怎么去排查问题，佳节

[ 22% 1035/4563] Building with Jack: out/target/common/obj/JAVA\_LIBRARIES/framework\_intermediates/with-local/classes.dex

FAILED: /bin/bash out/target/common/obj/JAVA\_LIBRARIES/framework\_intermediates/with-local/classes.dex.rsp

ERROR: /home/key/work/rk3399\_android7.1\_v1.00/frameworks/base/core/java/com/kji/KjiCoreHelper.java:120: kji\_browser\_lable cannot be resolved or is not a field

ERROR: /home/key/work/rk3399\_android7.1\_v1.00/frameworks/base/core/java/com/kji/KjiCoreHelper.java:140: kji\_browser\_lable cannot be resolved or is not a field

[ 22% 1035/4563] target Prebuilt: webview (out/target/product/rk3399\_excavator/obj/APPS/webview\_intermediates/package.apk)

Archive: out/target/product/rk3399\_excavator/obj/APPS/webview\_intermediates/package.apk

inflating: out/target/product/rk3399\_excavator/obj/APPS/webview\_intermediates/uncompressedlibs/lib/arm64-v8a/libwebviewchromium.so

inflating: out/target/product/rk3399\_excavator/obj/APPS/webview\_intermediates/uncompressedlibs/lib/armeabi-v7a/libwebviewchromium.so

deleting: lib/arm64-v8a/libwebviewchromium.so

deleting: lib/armeabi-v7a/libwebviewchromium.so

adding: lib/arm64-v8a/libwebviewchromium.so (stored 0%)

adding: lib/armeabi-v7a/libwebviewchromium.so (stored 0%)

[ 22% 1035/4563] target Java: framework (out/target/common/obj/JAVA\_LIBRARIES/framework\_intermediates/classes)

FAILED: /bin/bash out/target/common/obj/JAVA\_LIBRARIES/framework\_intermediates/classes-full-debug.jar.rsp

frameworks/base/core/java/com/kji/KjiCoreHelper.java:120: error: cannot find symbol

appInfo.labelRes = com.android.internal.R.string.kji\_browser\_lable;

^

symbol: variable kji\_browser\_lable

location: class string

frameworks/base/core/java/com/kji/KjiCoreHelper.java:140: error: cannot find symbol

info.labelRes = com.android.internal.R.string.kji\_browser\_lable;

^

symbol: variable kji\_browser\_lable

location: class string

Note: Some input files use or override a deprecated API.

Note: Recompile with -Xlint:deprecation for details.

Note: Some input files use unchecked or unsafe operations.

Note: Recompile with -Xlint:unchecked for details.

2 errors

ninja: build stopped: subcommand failed.

分析：回退版本都不行，显然是缓存导致的

模块编译时正常的呢

主要是Jenkins脚本机制有问题吧，忽然不支持overlay

但是此时copy到framework也不行啊。。删除kji\_browser\_lable，hdmi之类的新增文案也报fial

就是Jenkins脚本改了东西！！！非常影响效率了现在

## 分析

### 报错点

Building with Jack:

out/target/common/obj/JAVA\_LIBRARIES/framework\_intermediates/with-local/classes.dex FAILED:

/bin/bash out/target/common/obj/JAVA\_LIBRARIES/framework\_intermediates/with-local/classes.dex.rsp

ERROR: /home/key/work/rk3399\_android7.1\_v1.00/frameworks/base/core/java/com/kji/KjiCoreHelper.java:120

用Jack来编译framework\_intermediates/with-local/classes.dex，无法引用到新加的资源

com.android.internal.R.string.kji\_browser\_lable

3.编译失败原理

ninja: build stopped: subcommand failed.

make: \*\*\* [ninja\_wrapper] Error 1

#### make failed to build some targets (01:07 (mm:ss)) ####

Build android failed!

4.misc现在通过了，之前为何没有通过

com.android.settings

不混淆为何类的数量变多了

LOCAL\_DX\_FLAGS := --multi-dex --main-dex-list=$(mainDexList) --minimal-main-dex

LOCAL\_JACK\_FLAGS += --multi-dex native