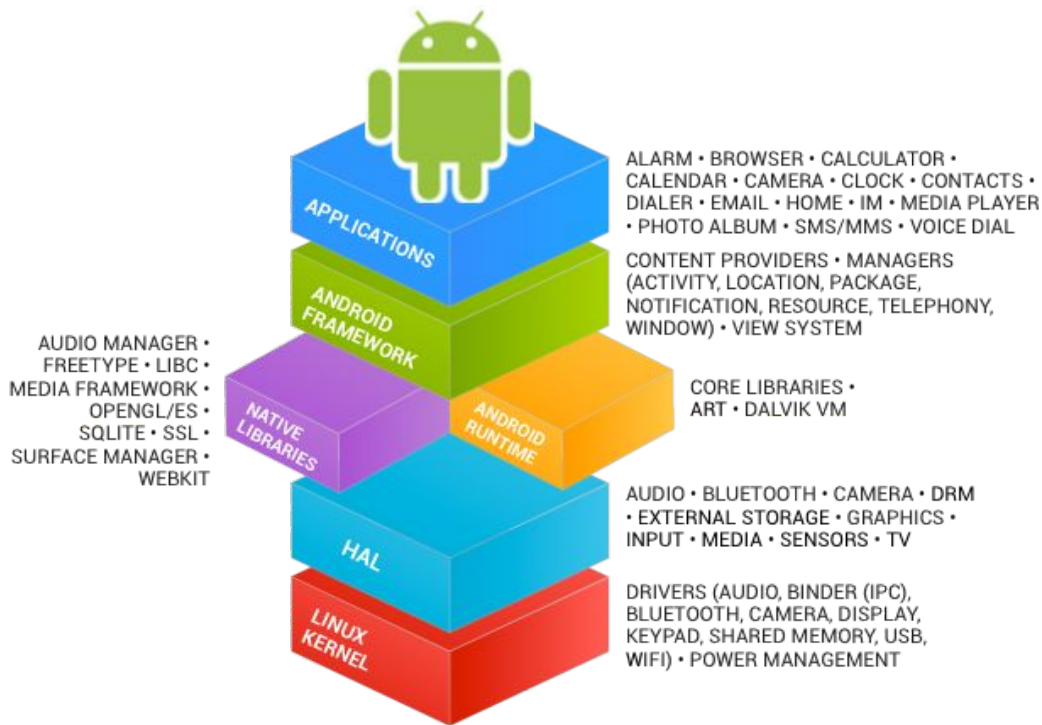# AOSP and Project Treble

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Agenda

- Android Architecture
- What is AOSP ?
- What is Fragmentation ?
- Solving Fragmentation with Project Treble

Android Architecture

APPLICATIONS
ALARM · BROWSER · CALCULATOR · CALENDAR · CAMERA · CLOCK · CONTACTS · DIALER · EMAIL · HOME · IM · MEDIA PLAYER · PHOTO ALBUM · SMS/MMS · VOICE DIAL

ANDROID FRAMEWORK
CONTENT PROVIDERS · MANAGERS (ACTIVITY, LOCATION, PACKAGE, NOTIFICATION, RESOURCE, TELEPHONY, WINDOW) · VIEW SYSTEM

NATIVE LIBRARIES
AUDIO MANAGER · FREETYPE · LIBC · MEDIA FRAMEWORK · OPENGL/ES · SQLITE · SSL · SURFACE MANAGER · WEBKIT

ANDROID RUNTIME
CORE LIBRARIES · ART · DALVIK VM

HAL
AUDIO · BLUETOOTH · CAMERA · DRM · EXTERNAL STORAGE · GRAPHICS · INPUT · MEDIA · SENSORS · TV

LINUX KERNEL
DRIVERS (AUDIO, BINDER (IPC), BLUETOOTH, CAMERA, DISPLAY, KEYPAD, SHARED MEMORY, USB, WIFI) · POWER MANAGEMENT

APPLICATION FRAMEWORK

BINDER IPC PROXIES

ANDROID SYSTEM SERVICES

MEDIA SERVER
- AudioFlinger
- Camera Service
- MediaPlayer Service
- Other Media Services

SYSTEM SERVER
- Search Service
- Activity Manager
- Window Manager
- Other System Services & Managers

HAL
- Camera HAL
- Audio HAL
- Graphics HAL
- Other HALs

LINUX KERNEL
- Camera Driver
- Audio Driver (ALSA, OSS, etc.)
- Display Drivers
- Other Drivers

What is AOSP ?

- Android Open Source Project
  - http://android.googlesource.com
- Devices Supported
  - Pixel/XL
  - Pixel2/XL
  - Devboards
    - HiKey/HiKey960
  - Xperia devices
    - https://developer.sony.com/develop/open-devices/
- Custom Roms (Details on xda-developers)
  - Lineage OS
  - Paranoid Android

Fragmentation
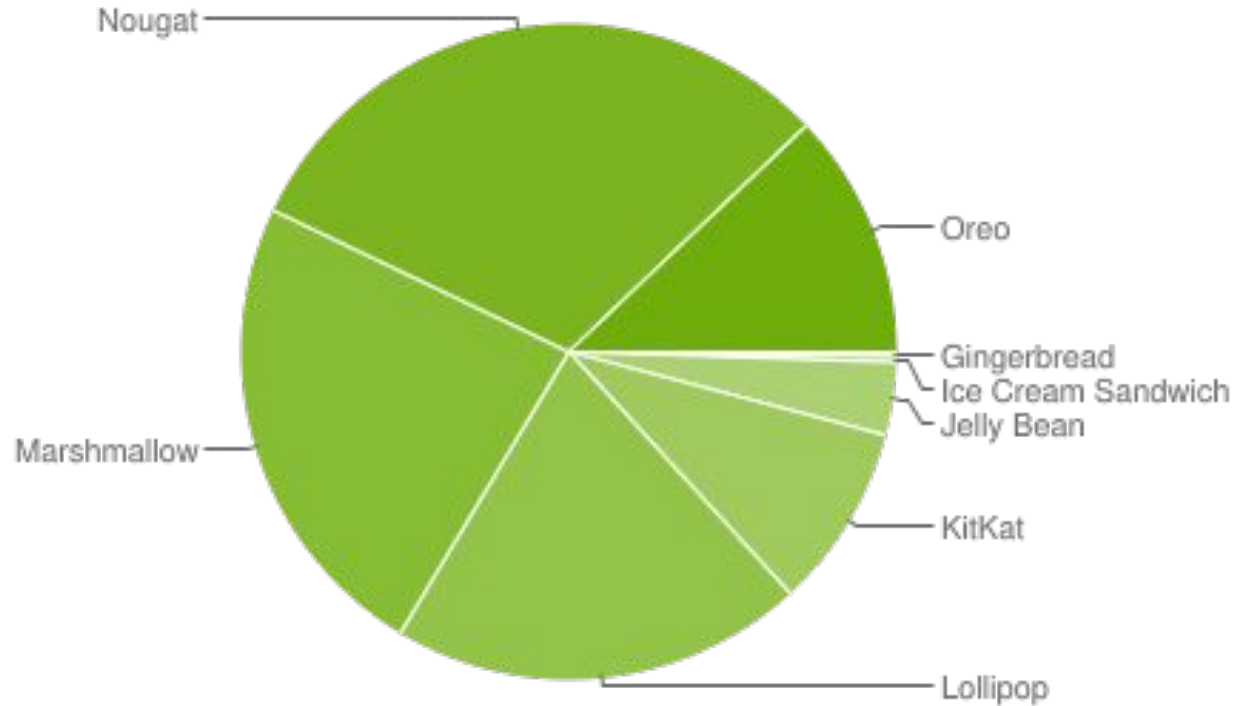
Android Architecture Pre-O
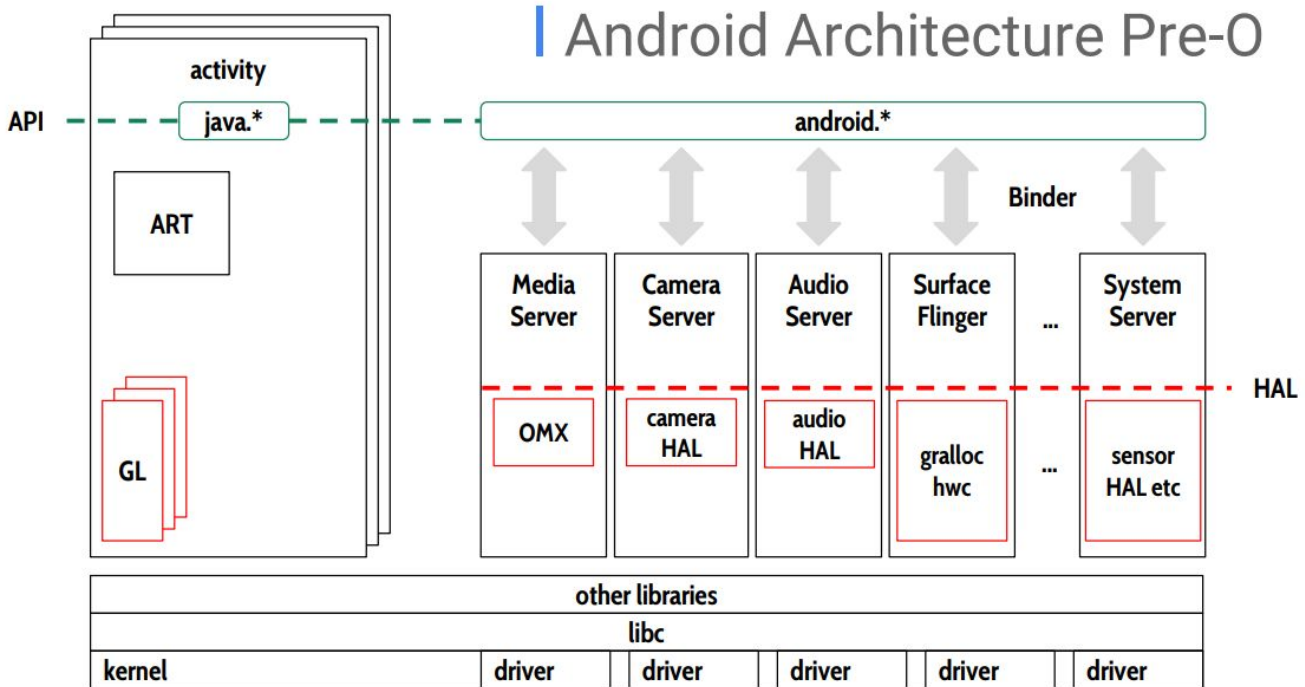
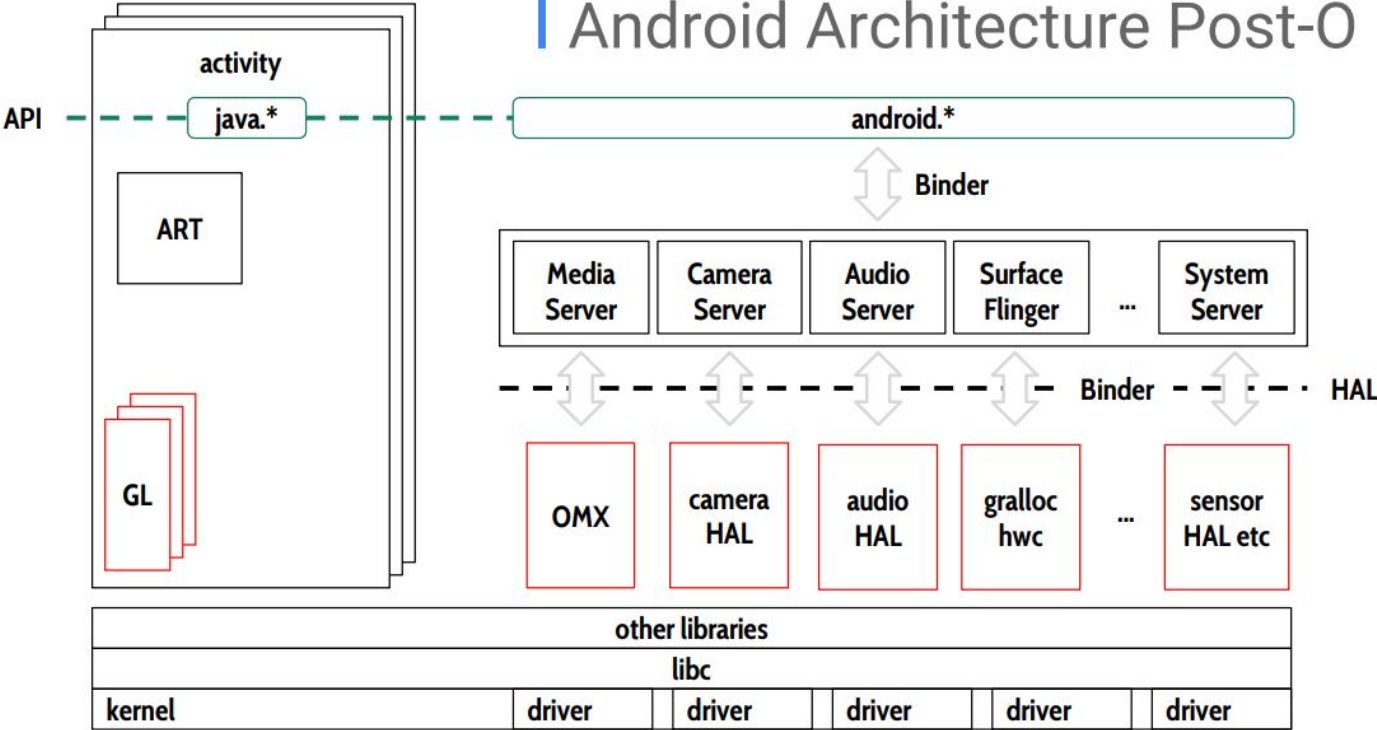# Updates in Pre Oreo
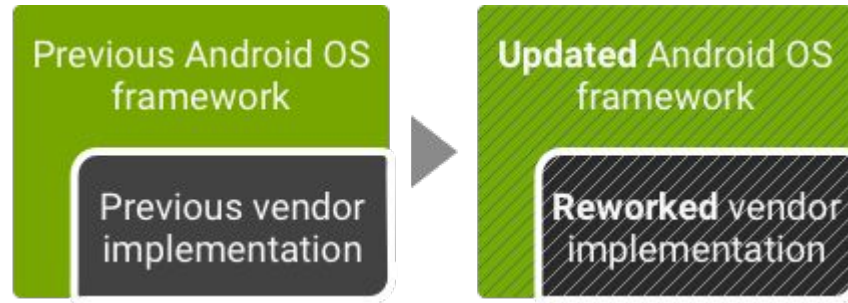
Project Treble (Android O +)

Project Treble (Android O +)

Compatibility Requirements

- CTS (Compatibility Test Suite)
- VTS (Vendor Test Suite)

Thank You !