Generic Kernel Image
Linux Plumbers Conference 2020
Android Microconference
Android Kernel Hierarchy

- Long Term Supported (LTS) (eg. 4.19.y)
- AOSP Common Kernel (eg. android-4.19)
- Vendor Kernel (one per SoC vendor)
- OEM/Device Kernel (one per device!)

Clone → Merge → Cherry-Pick
Cost of Kernel Fragmentation

- Security updates are labor intensive
- Difficult to merge long-term stable updates
- Inhibits Android Platform release upgrades
- Difficult to contribute kernel changes back to upstream Linux
GKI is About Fixing Kernel Fragmentation
GKI Deployment

Android 11 (2020)
- Devices continue to ship with device kernel
- Project Treble compatibility testing done with GKI
  - VTS, CTS-on-GSI

Android 12 (2021)
- Devices ship with GKI
- All testing done with GKI