Device Tree Lifetime
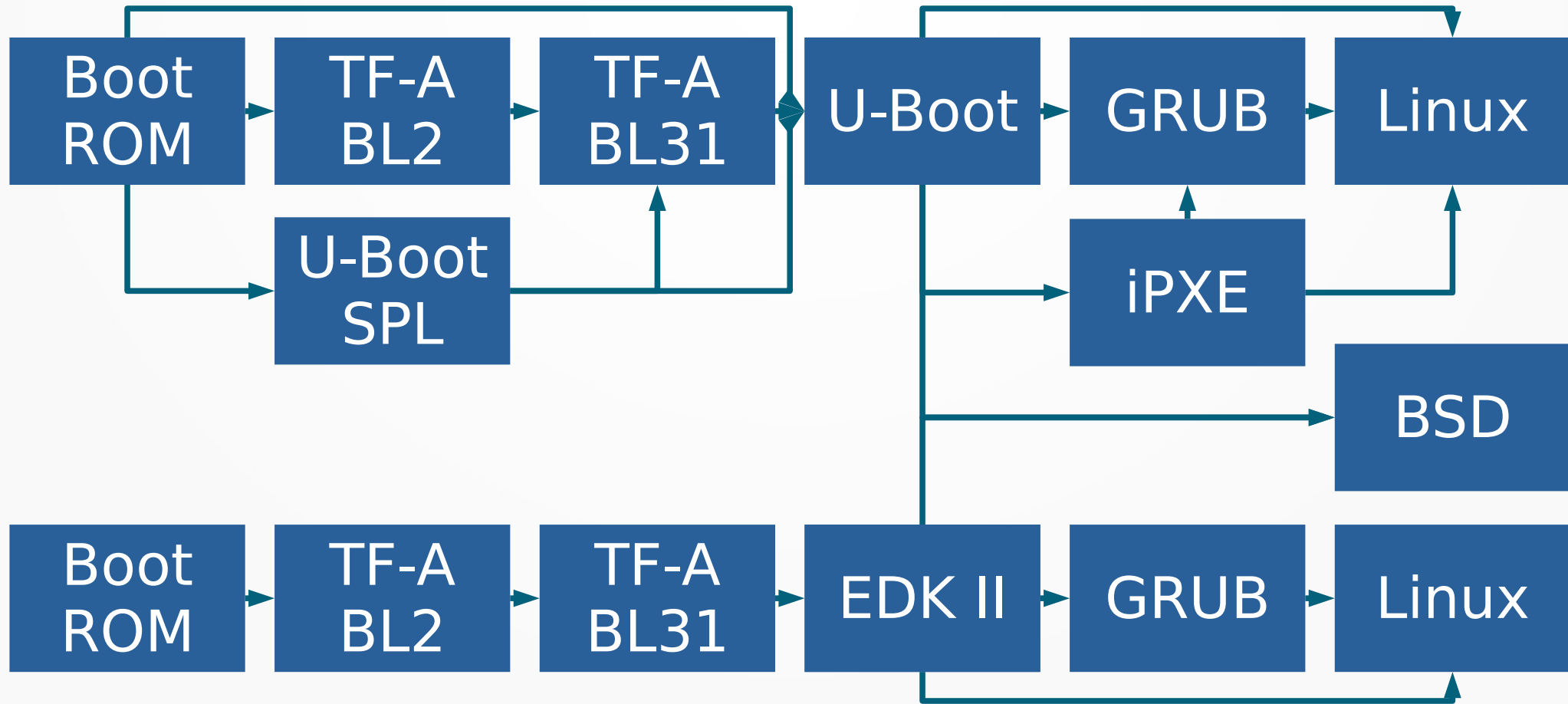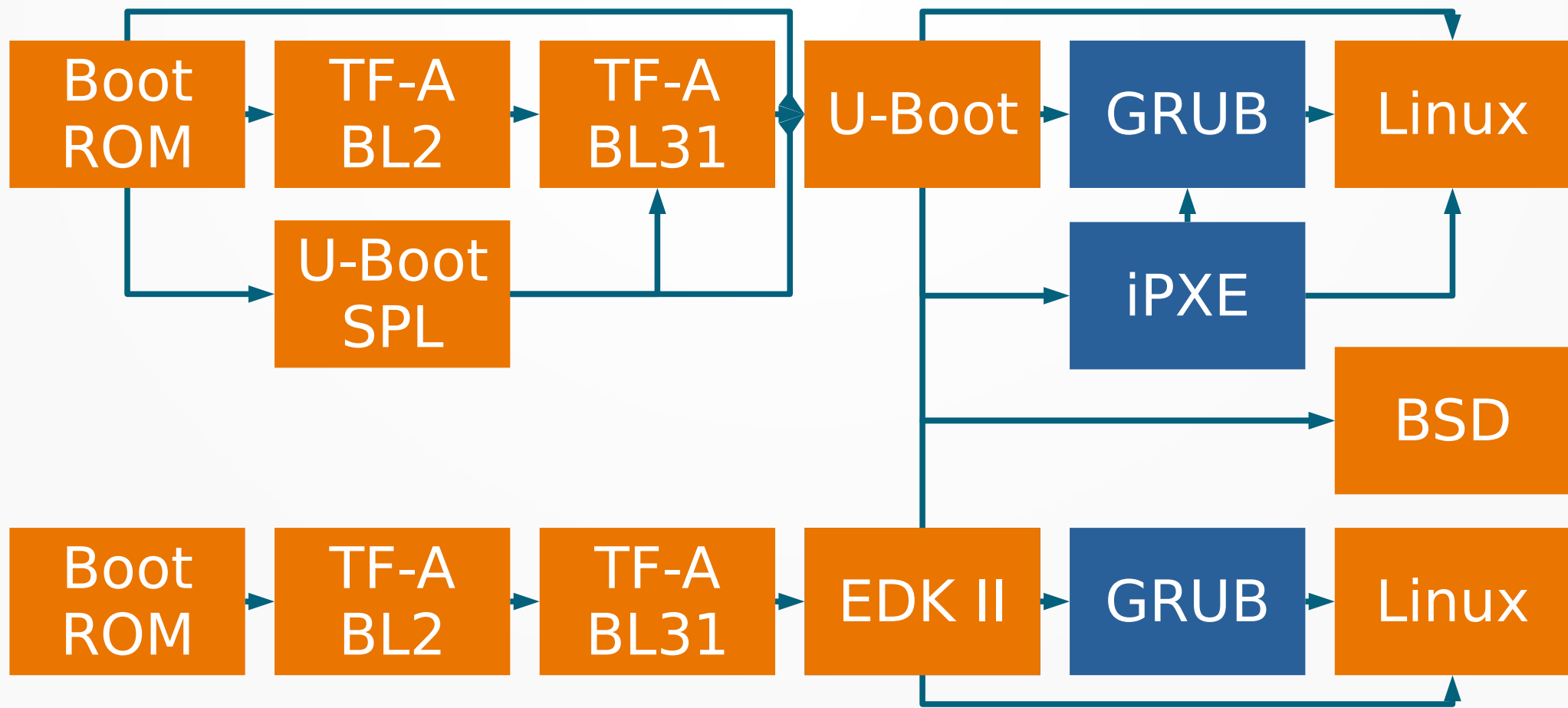
Heinrich Schuchardt, 2020-05-26

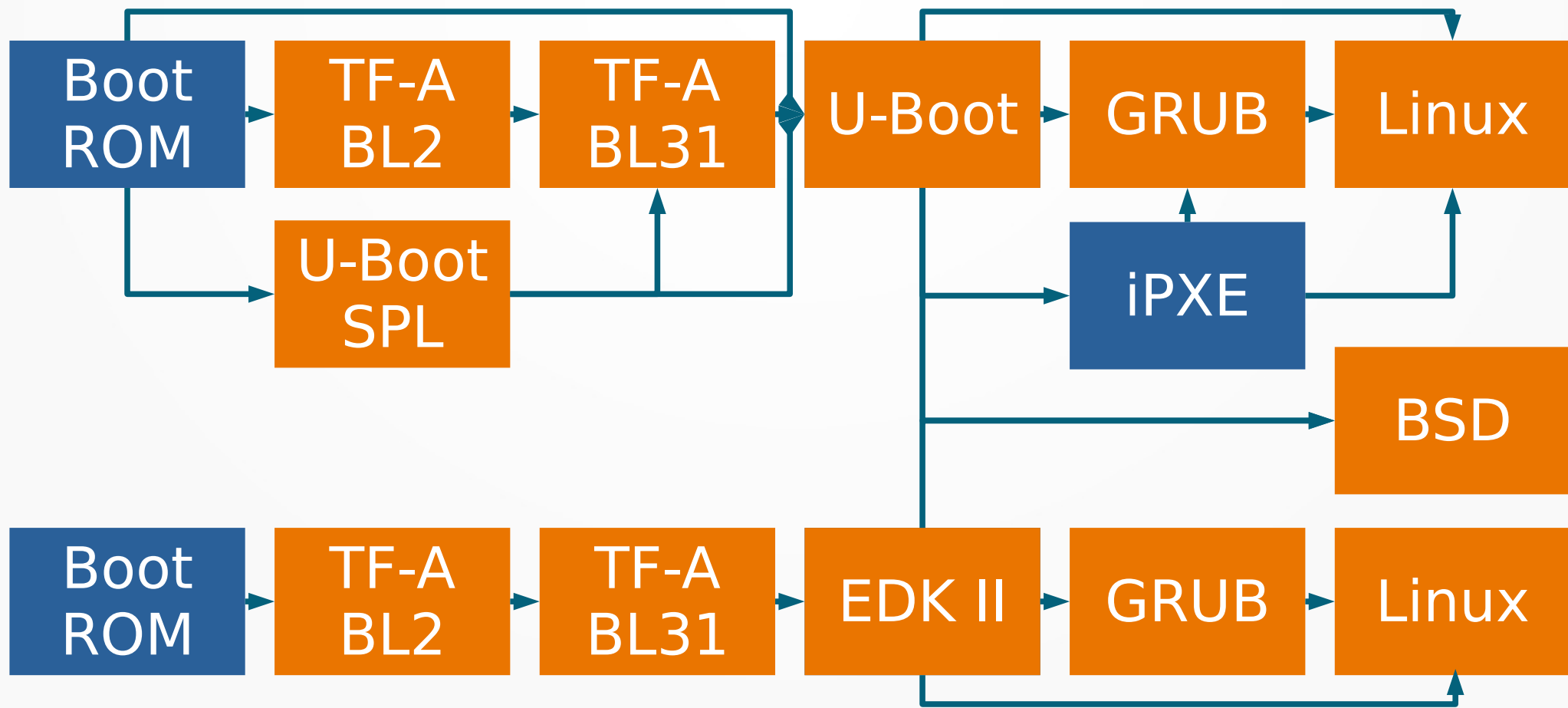# Boot Flow Examples

Device Tree Sources

Device Tree Modification

TF-A BL2

- Add PSCI node (QEMU)
- Add 'lossy-decompression@' node (Renesas)

TF-A BL31

- Set 'stdout-path' in '/chosen' node (RPi4)

- Add PSCI node (RPi4)

- Add reserved memory (RPi4)

- Set 'interrupts' properties on "arm,gic-400" compatible node (RPi4)

EDK2

- Set 'linux,initrd-start', 'linux,initrd-end' (Android)
- Disable 'arm,pl031' compatible node (QEMU)

OP-TEE OS

- Global
  - Add OP-TEE node with invocation parameters.
  - Add a reserved memory node for secure world memory
  - Add a PSCI description node if none found.
- Platform specific
  - GPIO configuration (STM32)
  - 'secure-status' of CAAM node (NXP crypto engine)
  - 'tpm_event_log_sm_addr' property (TPM)

U-Boot SPL

- Hardware discovery to determine relevant FDT (e.g. Wandboard)

U-Boot

- Available memory
- Reserved memory
- /chosen node:
  - 'linux,initrd-start', 'linux,initrd-end', 'bootargs'
  - 'boot-hartid' on RISC-V
- 'enable-method' of CPU nodes, e.g. 'spin-table'
- PSCI node if provided by U-Boot
- Hardware configuration, e.g. MAC address

GRUB

- "linux,initrd-start", "linux,initrd-end", "bootargs"
- multiboot command parameters via /chosen node (Xen)