ENHANCEMENTS FOR POWER MANAGEMENT OF INTERDEPENDENT DEVICES

DANIEL BALUTA
Problem description

- devices partitioned across multiple power domains
  - DSP integration into i.MX8 boards
  - Nvidia Tegra 124/210 X-USB system

dsp: dsp@5a190000 {
  power-domains = <&pd IMX_SC_R_DSP>,
  <&pd IMX_SC_R_DSP_RAM>,
  <&pd IMX_SC_R_IRQSTR_DSP>;
}
Problem solution

- [PATCH 0/9] **PM / Domains: Add support for multi PM domains per device**
  - Introduced by Ulf Hansson
  - almost complete solution
    - A driver needs to “manually” attach each of the PDs with dev and create the links between devices
    - Lots of duplicate code
  - Proposed enhancements
    - [RFC PATCH v2 1/2] **PM / domains: Introduce multi PM domains helpers**
      - drivers still needs to call PM helpers
        - dev_multi_pm_attach / dev_multi_pm_detach
        - Not ideal. Can we put this into PM core?