

LMU München - Excellence Cluster Universe

PS and Slowcontrol

Stefan Rummel

**Belle 2 PXD Slow Control Meeting
23.9.14-24.9.14**

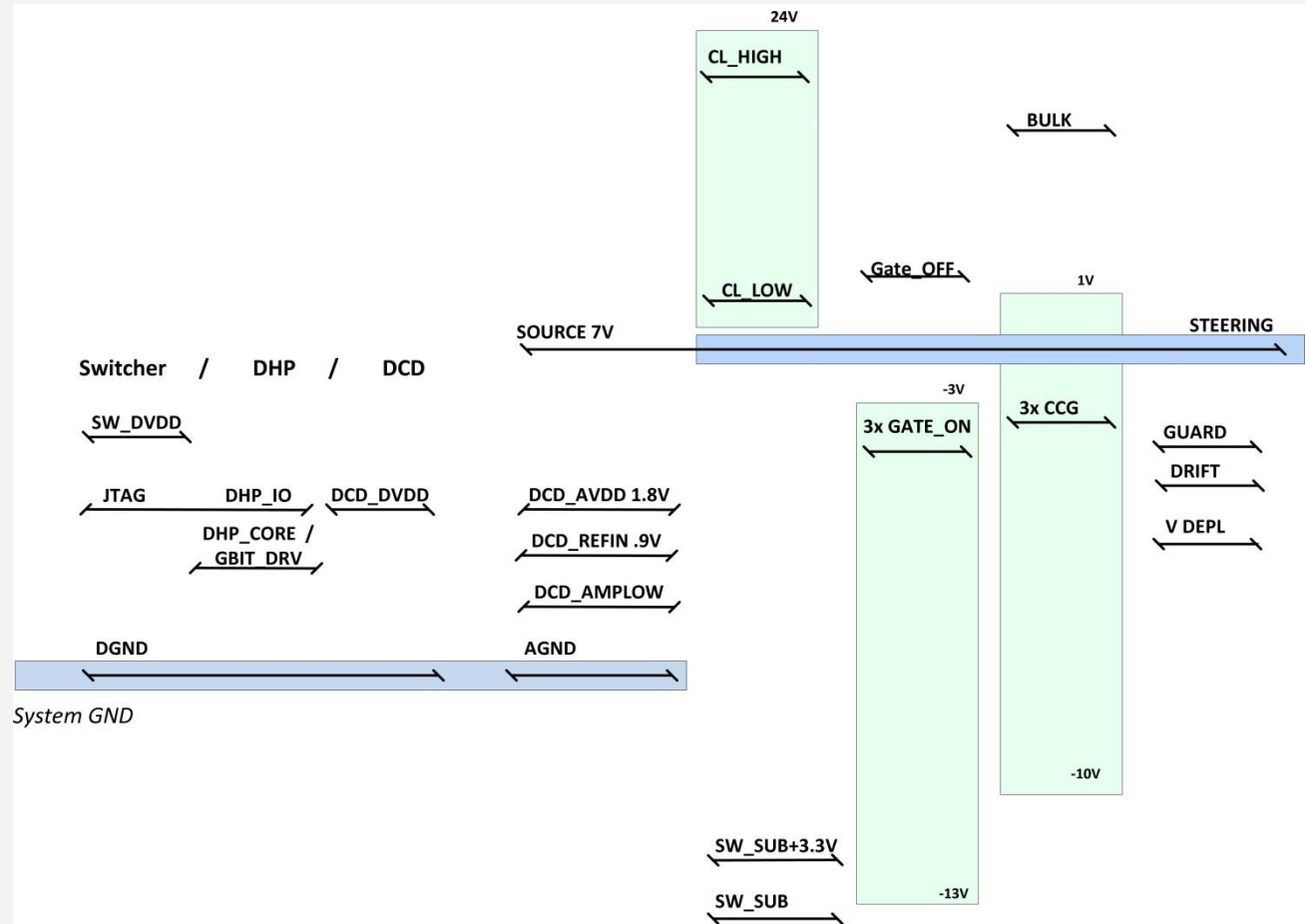


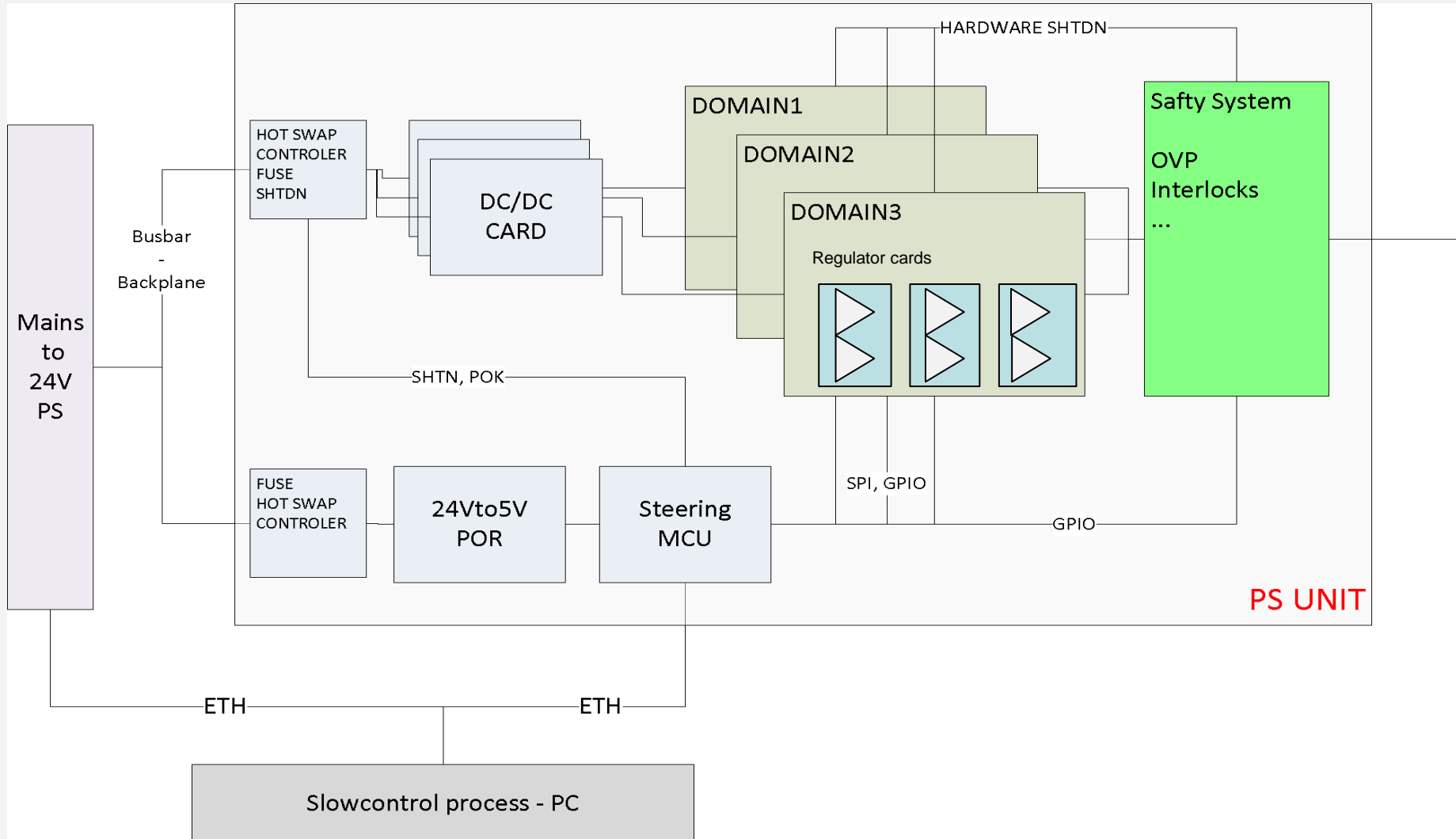


- PS overview and requirements from operation
- PS Software overview
- Functionality needed



- ASIC supply voltages
- DEPFET biasing
- 22 voltages total
- Elaborate scheme for powering up
- Some voltages are crucial for operation and/or have potential for severe damage

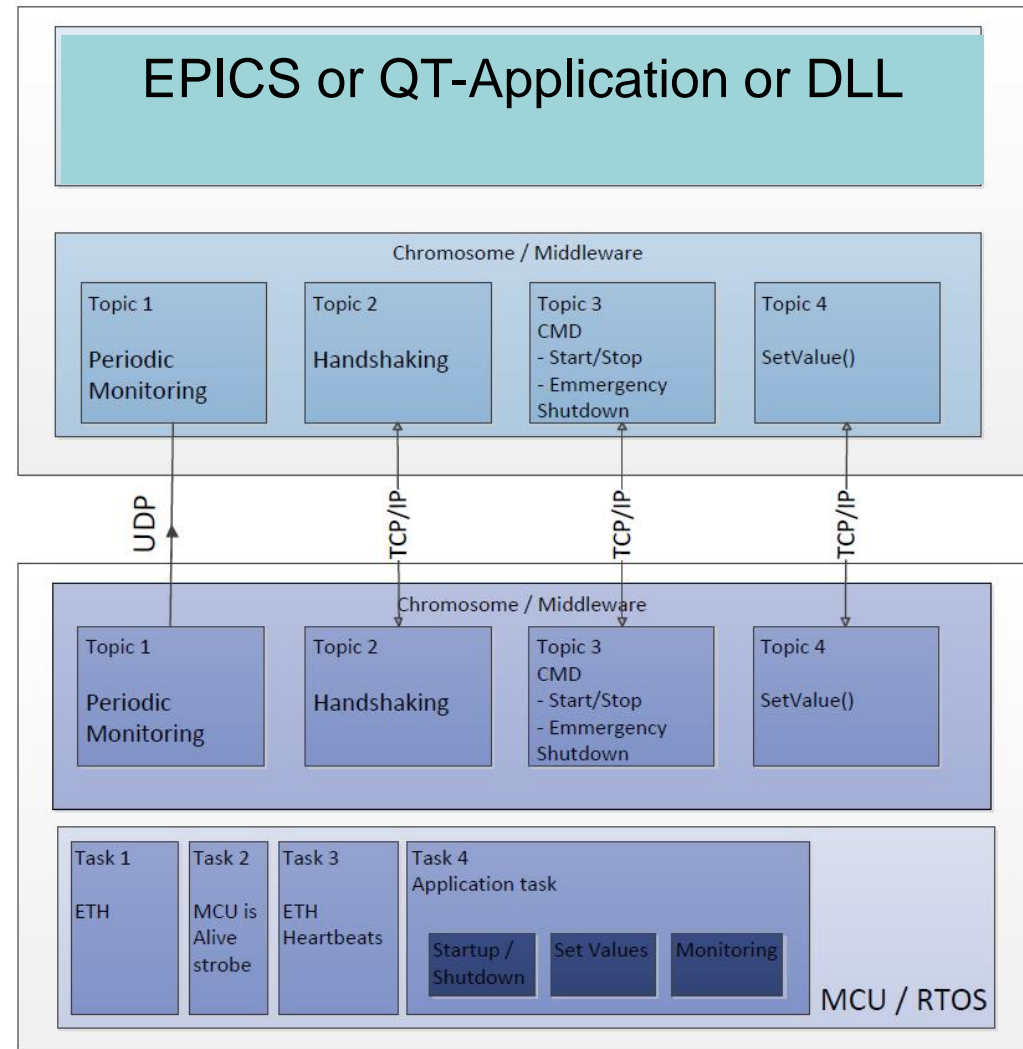






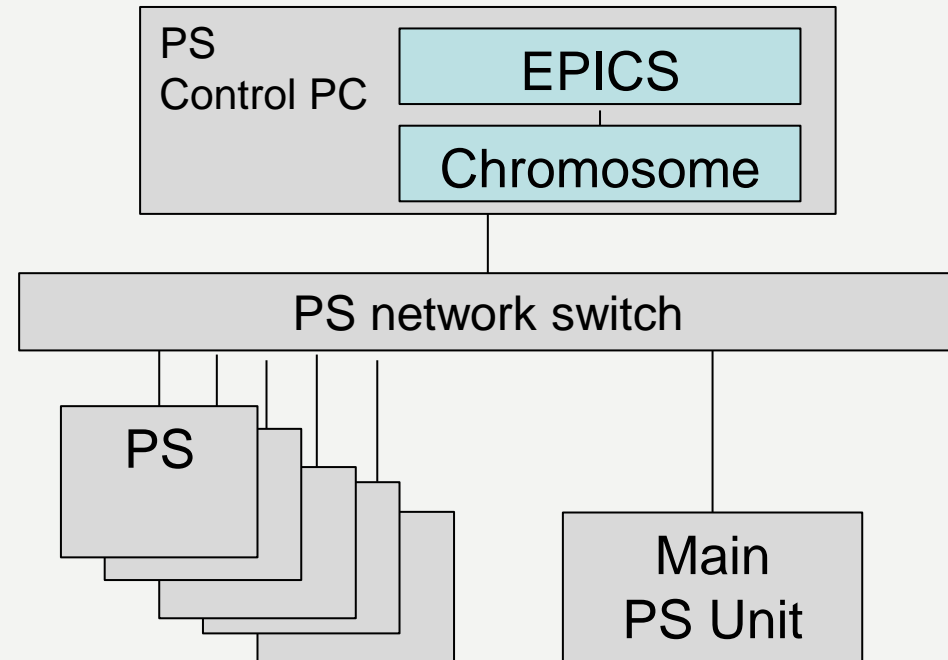


- PS SC interface physically based on Ethernet
- Middleware on MCU and Control PC based on Chromosome
- Several wrapper for Chromosome available:
 - DLL and QT-Application
 - **EPICIS**
- **PS Systems offers EPICIS interface**





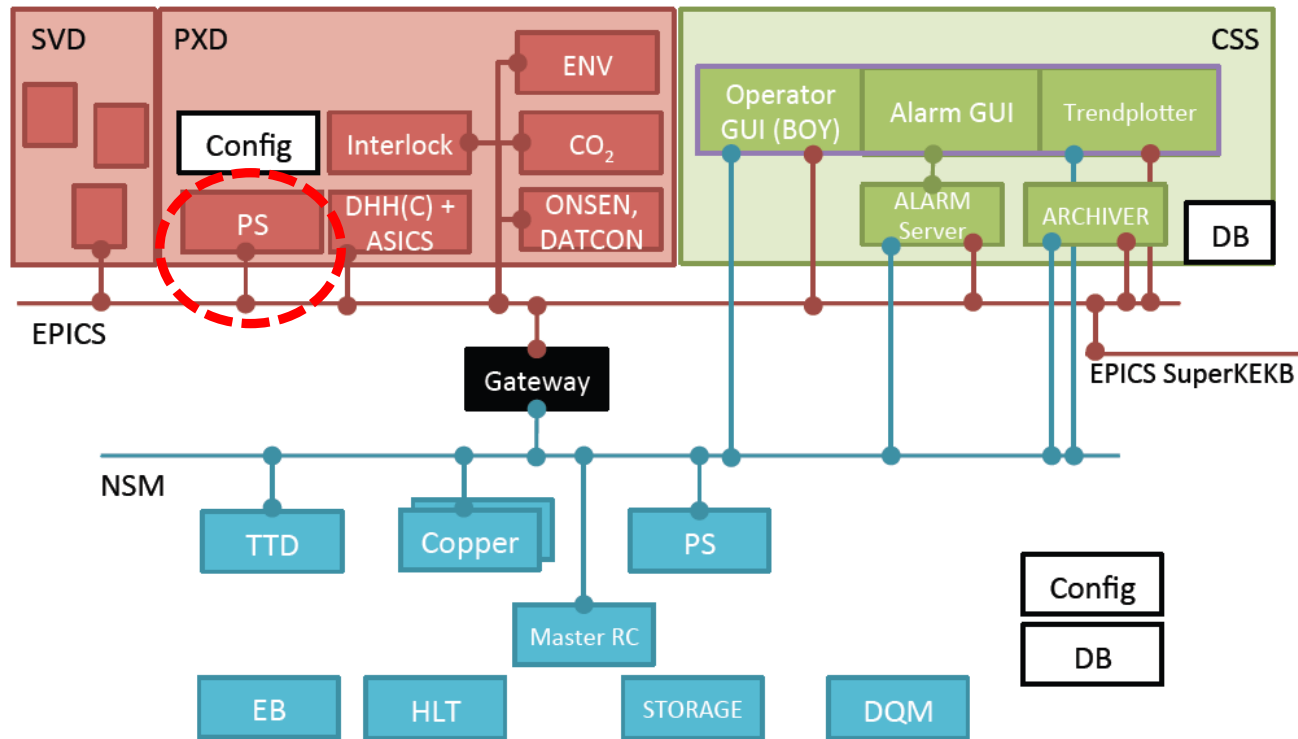
- Physically separated network for PS system
- Keeps traffic away from PS's





from Thorsten

Joining our Control Systems CSS + EPICS + NSM (early draft)





- Automatic power up and power down, interaction with ASIC configuration via DHH
- Need of robust algorithms 40 units with more than 800 channels
- Voltages and currents offer valuable information on system state – configuration of ASICs, failures on Matrix, radiation damage via characteristics
 - Logging
 - Monitoring and Visualization
 - Alarms in case of deviations from nominal parameters, Software Interlocks
- Separation between different kind of users
 - Shifter – limited privileges on changes voltages/currents
 - Expert User – access on all parameter→ Dedicated panels