PS Slowcontrol Integration
(STATUS UPDATE)

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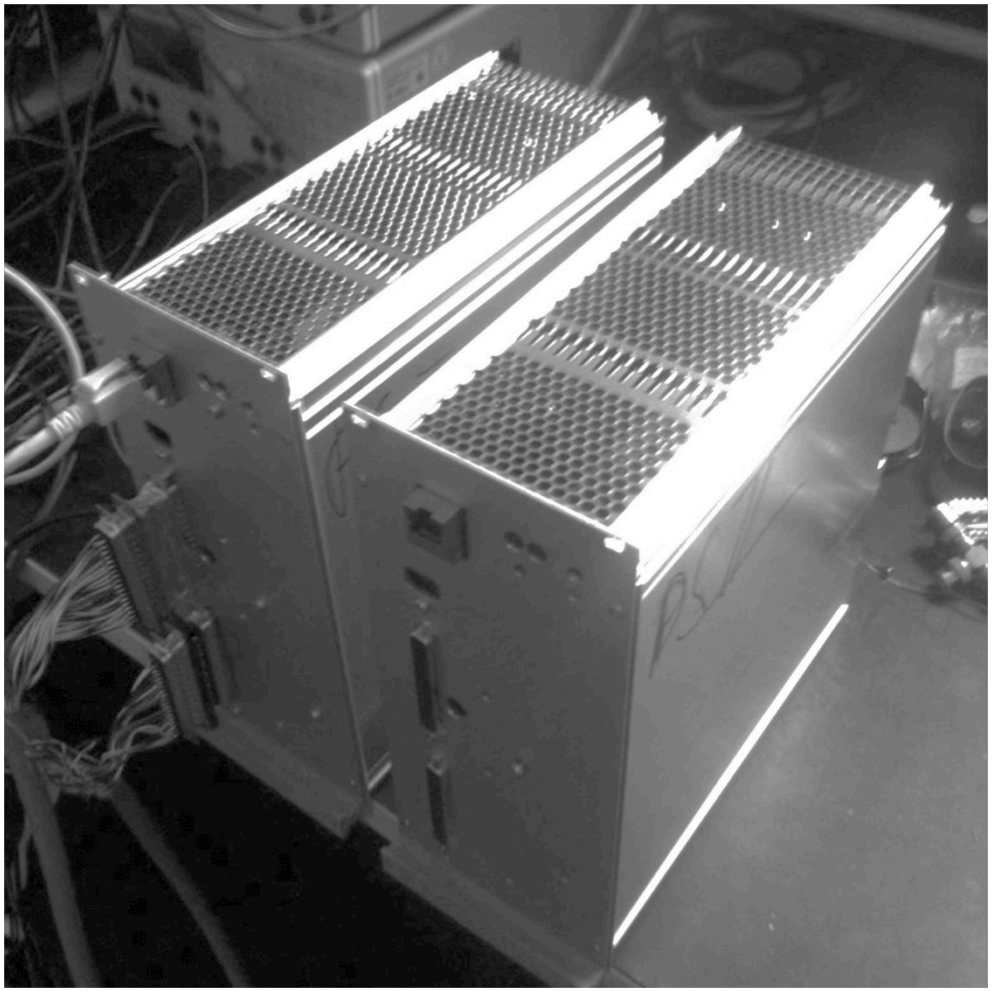


4th Belle II PXD/SVD workshop
22nd October 2013

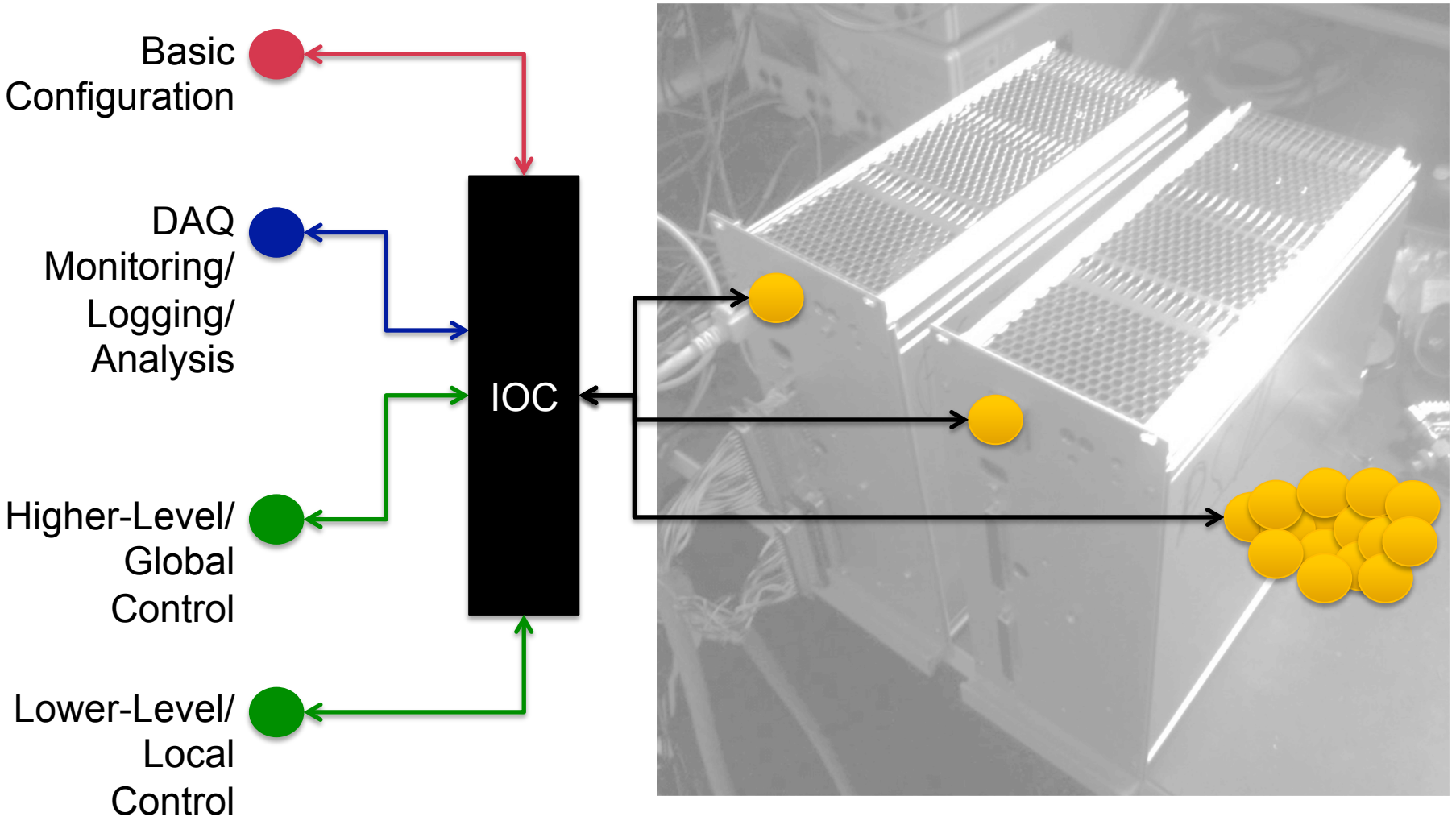
Belle II

CHROMOSOME Middleware

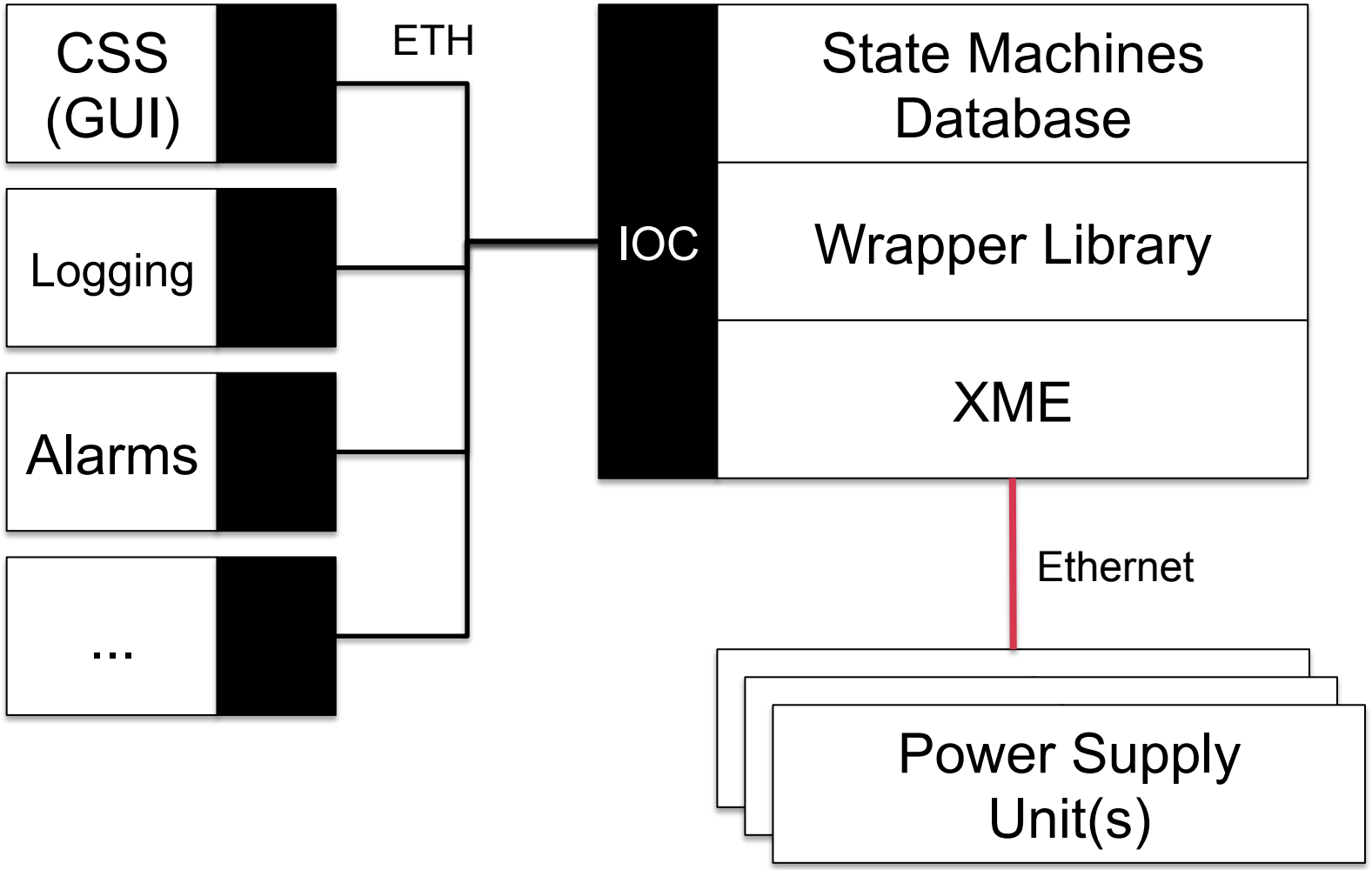
control system studio

EPICS

EPICS and CSS Integration for SLOW Control



Power Supply IOC: Layers and Interfaces



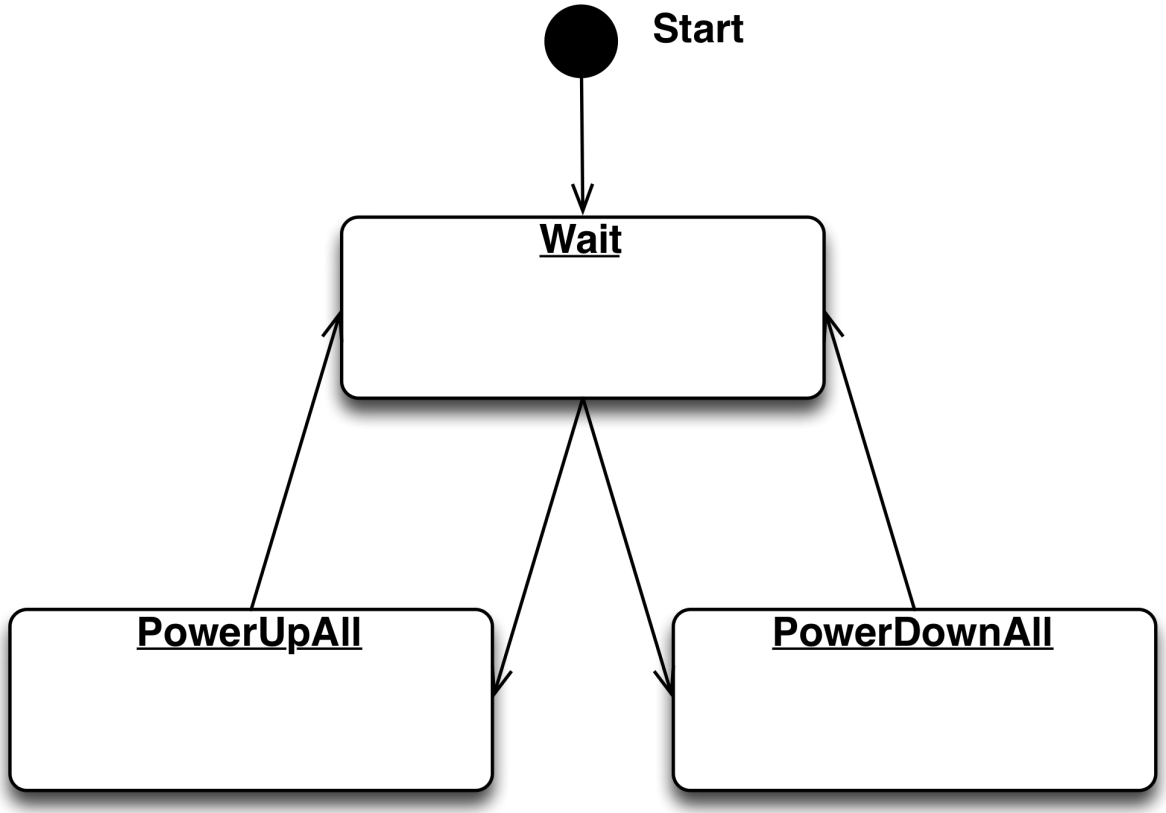
Progress Status

- PS ⇔ XME ⇔ EPICS Integration
- Preliminary CSS GUI Layout

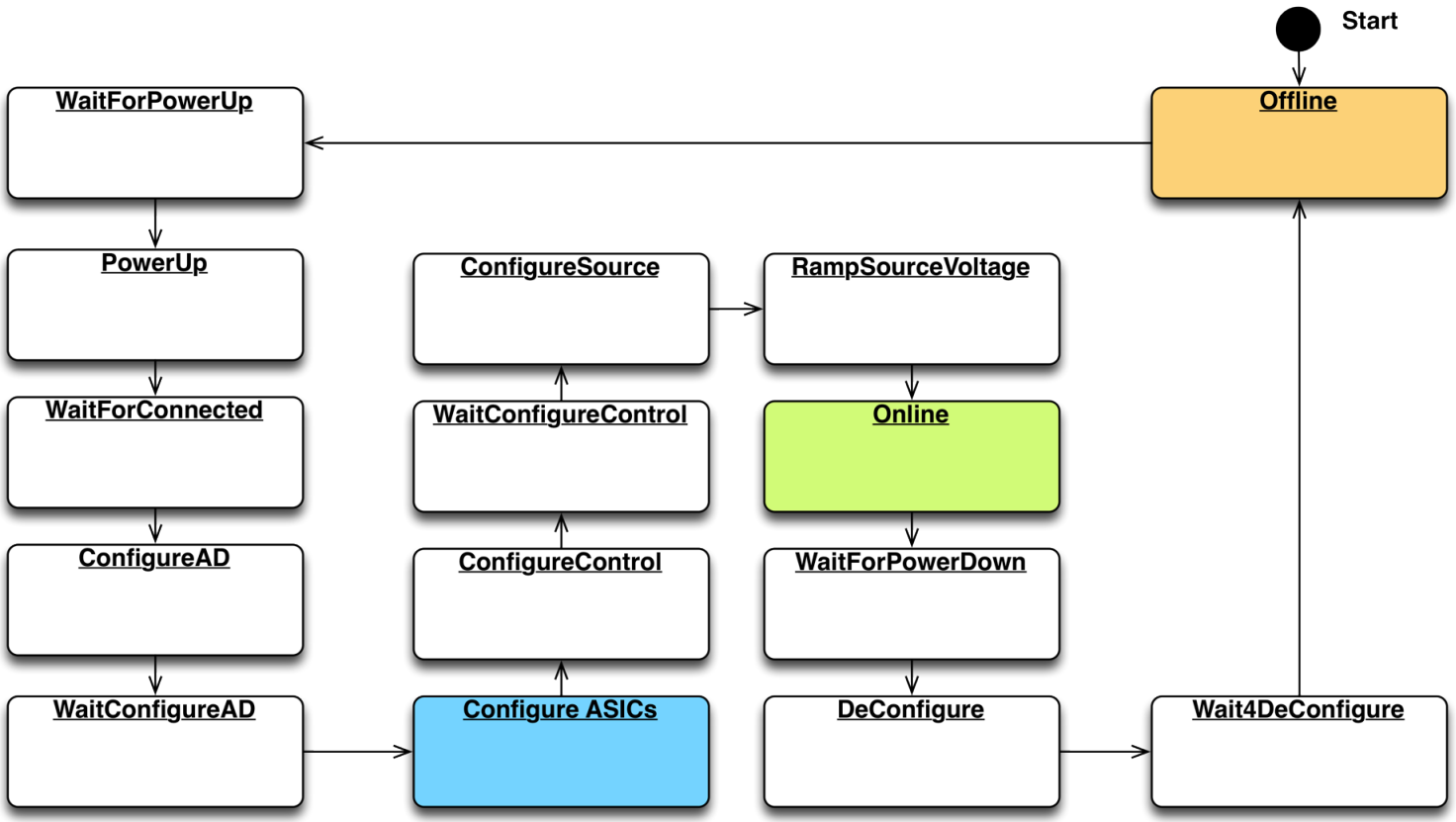
- Robustness Improvements and Fixes
  (FW IP Stack, Multi-Homed Configuration, …)
- Preparations for Integration into PXD EPICS Environment
- Setup of Testing Environment in Munich
- Software Installation at DESY (belle-pxd machine)
- Power up && Power down Sequences

Global Manager for Group Control

EPICS Power Supplies Manager
Manager Sequence (smunitmanager.st)
V20130725/01



Power Up / Down Sequence for a Single PS



ConfigureAnalogDigital

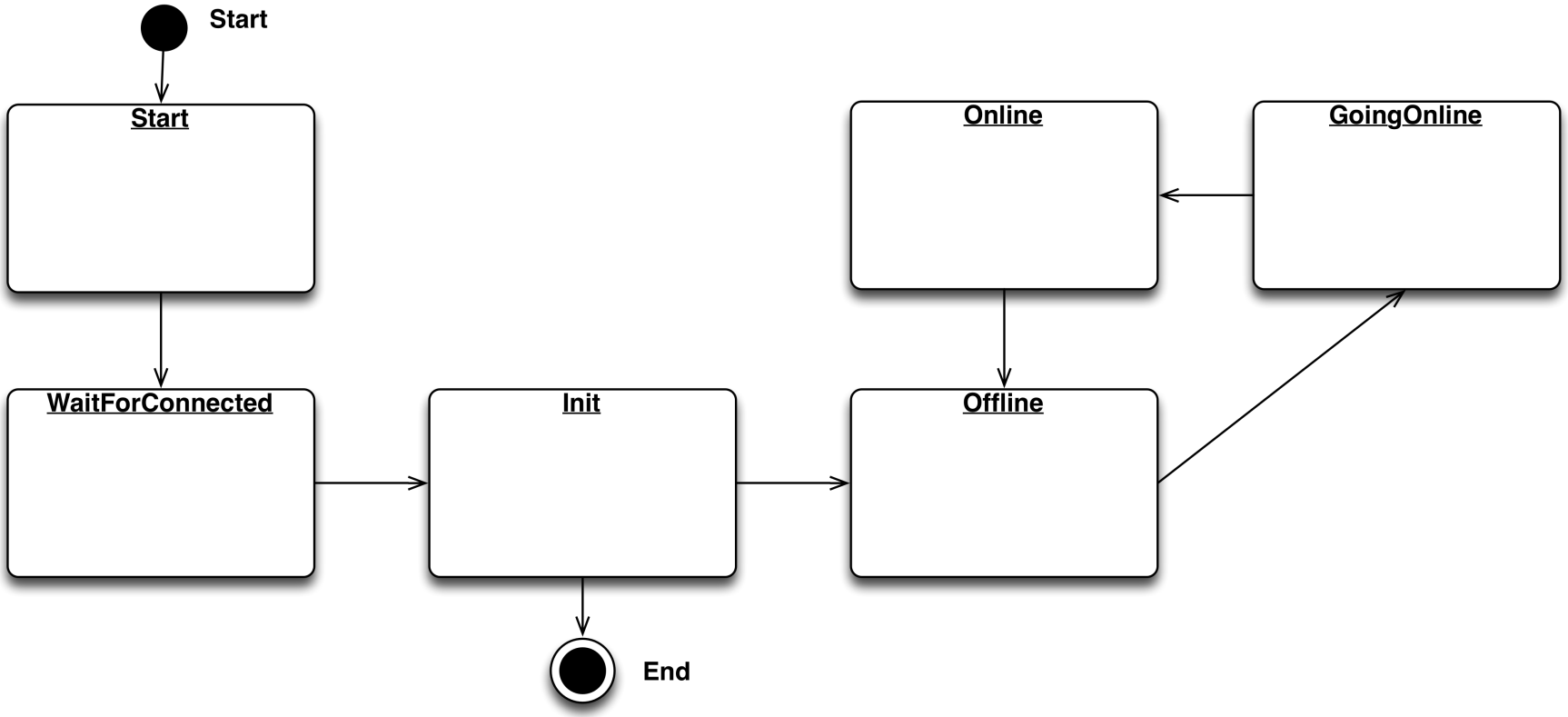
- Enable unit
- Set all Currents
- Set voltages in this order (DCD_DVDD, SW_DVDD, DHP_IO, DHP_CORE)
- Set voltages in this order (DCD_AVDD, DVD_REFIN, DCD_AMPLOW)

ConfigureControl

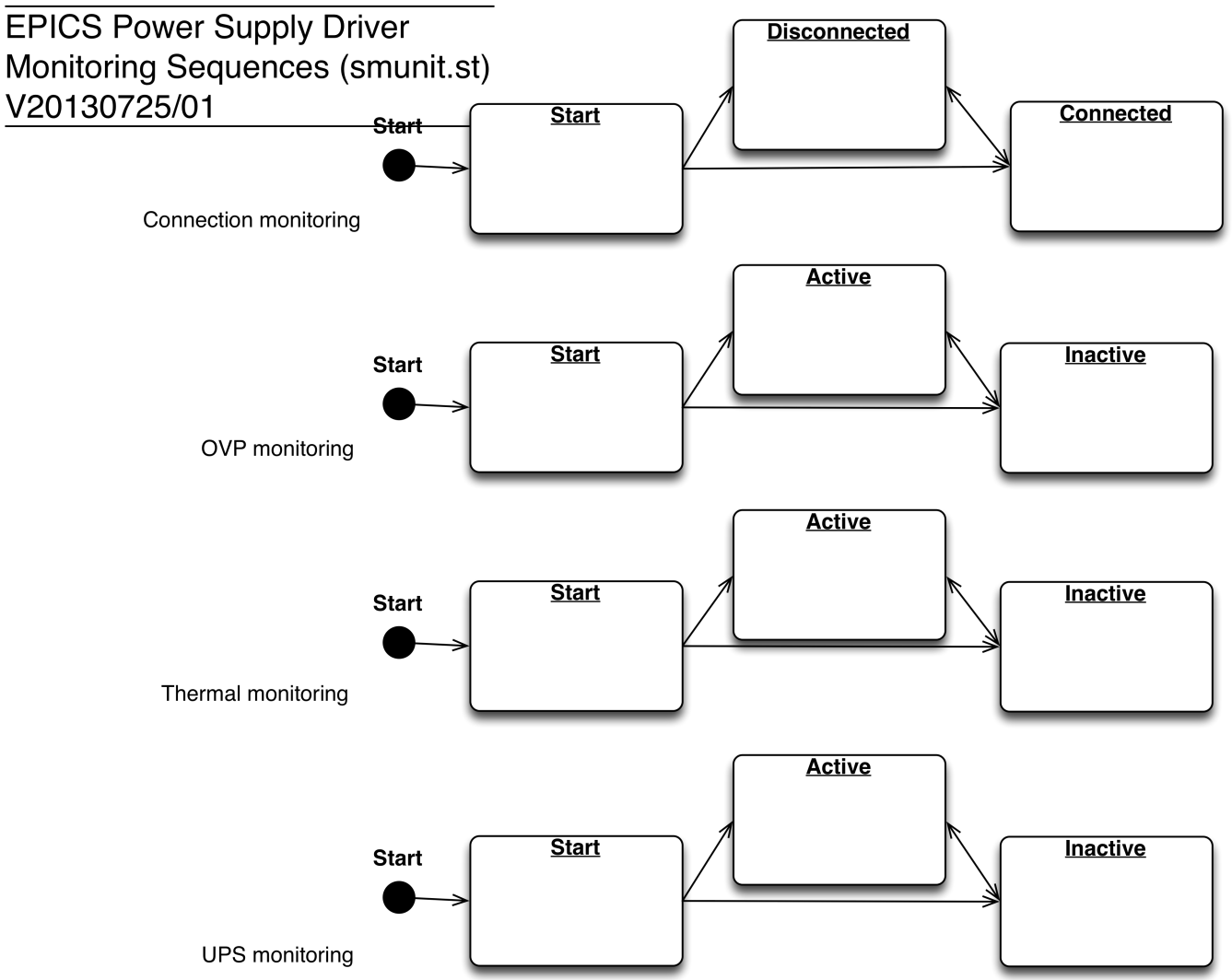
- Set all currents
- First set voltage Switcher Substrate
- Set voltages in this order (SW_VREF, CCG1-3, BULK, Source, ClearHigh, ClearLow, GateOff. GateOn, Drift)
- Last Set Voltage (HV/BP)

Local State Machine (Operation-Modes)

Pre-Condition(s):
Hardware is powered on.
Unit is disabled.



Local State Machine(s) for (Soft-)Event Handling



Planned Progress for TB

- Integrate with DHH and EPICS configuration database

- Adapt PVs to naming scheme
- Alarms and Failure-Handling

- Derive Testing Plan (Timing, Robustness, Multi-PS, Performance, Latency, Update Rates, …)
- Extensive Testing

- Decide on CSS GUI Layout
- Improve Documentation