



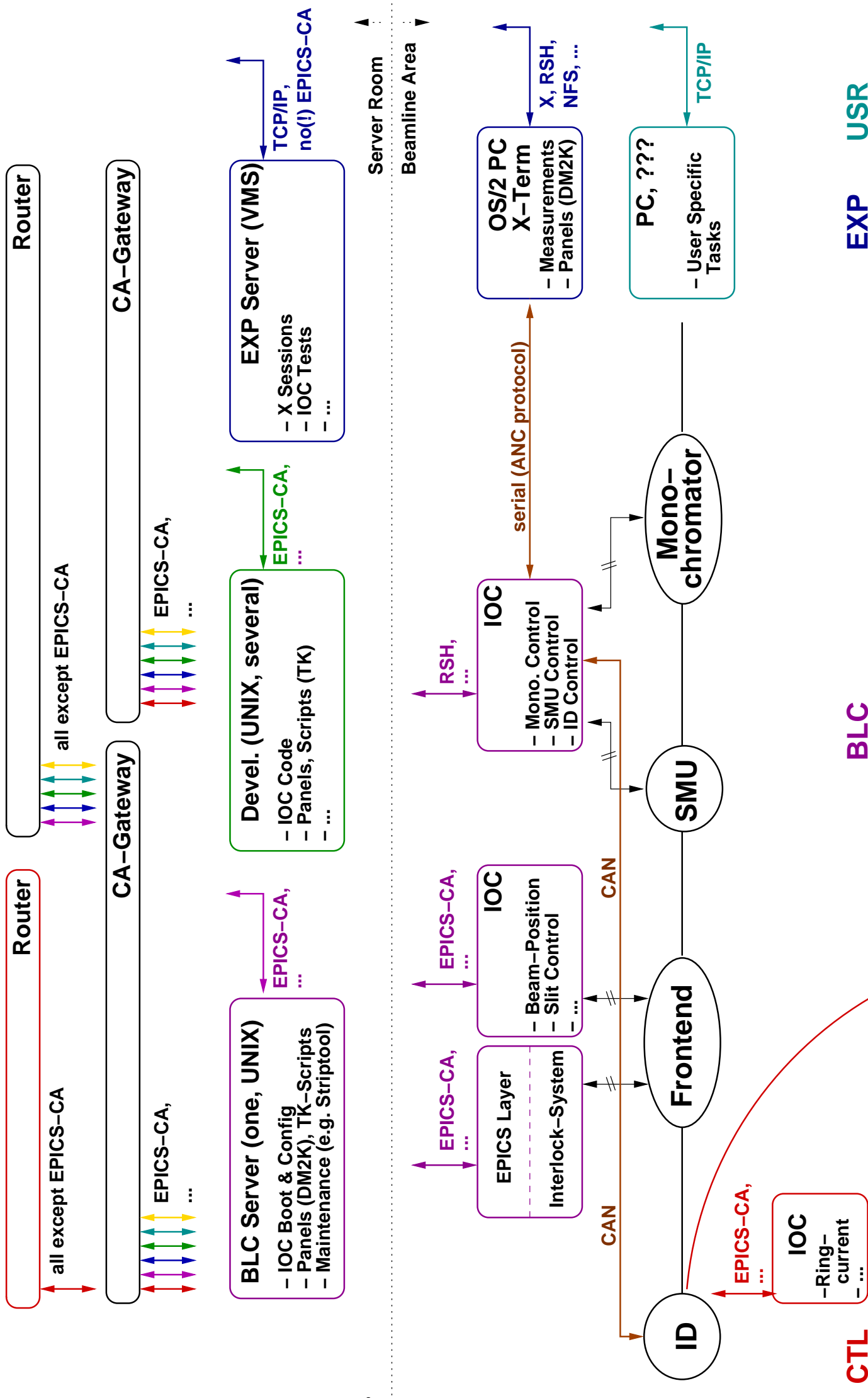
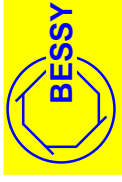
BESSY II Beamline Control Status



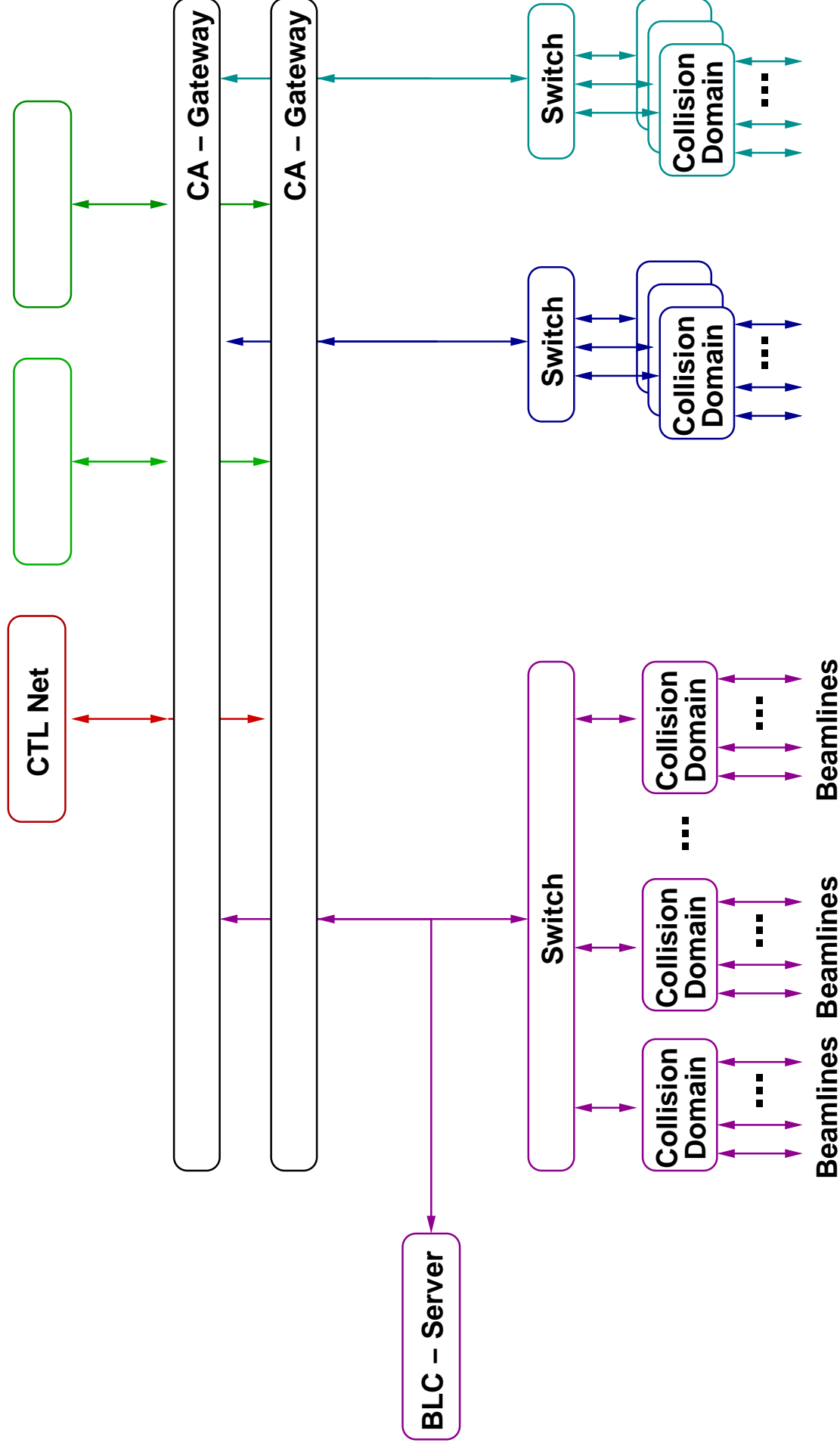
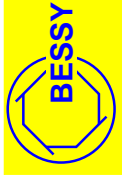
EPICS in a Complex Network Environment

**Dietmar Herrendörfer
BESSY II
EPICS Collaboration Meeting, PSI 2001**

Beamline Control – Overview



Beamline Control – current EPICS CA model



BLC

EXP

USR

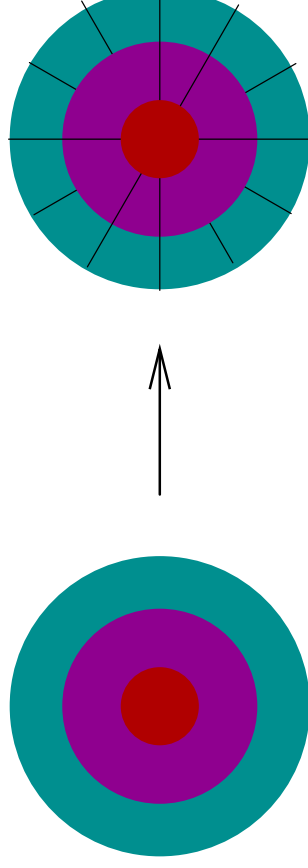
Current Beamline Control Status

- + Modular design: Separate systems for measurement and beamline-control (IOCs + data acquisition system).
 - ↳ Flexibility for the measurement system (user interface)
 - ↳ Otherwise standard beamline control design.
- + Different subnets for machine-control, beamline-control and measurement.
 - One user network subnet for all beamlines (=> reliability and security problems).
- Monochromator control only via BESSY-specific protocol and only over a serial (RS232) link.
- Single beamline control server:
 - ↳ No redundancy (other than backup).
 - ↳ Single hostname + generic beamline user account limits EPICS security.

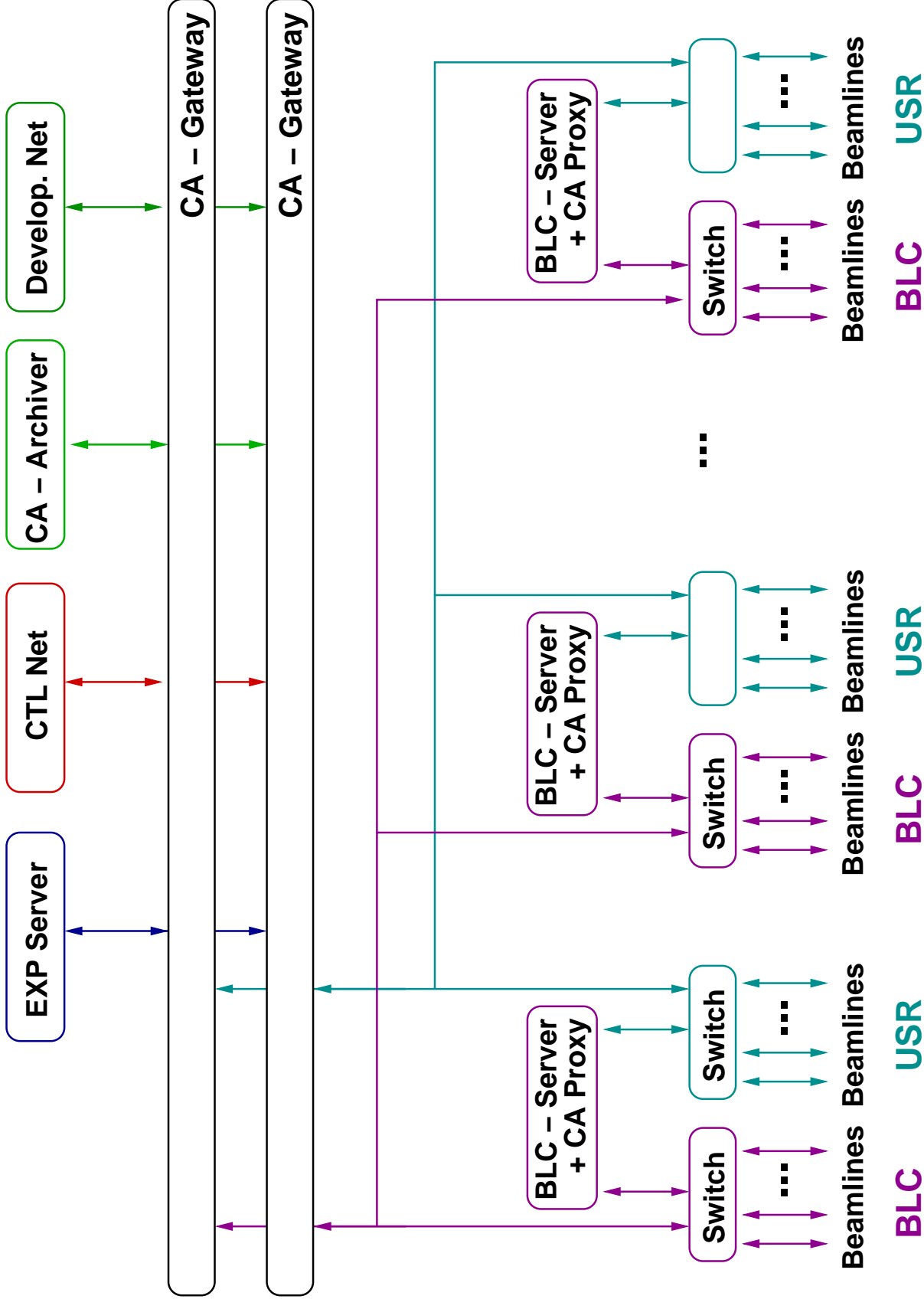
To Do – Wishlist



- Use EPICS–CA as standard protocol (between measurement system and control systems).
 - ↳ Port monochromator control to EPICS–CA.
 - ⚡ Measurement over IP a sensible thing to do?
- Several (redundant) beamline control server hosts.
 - ↳ Implementation of a more coordinated software development environment.
 - ↳ Use of hostnames and beamline specific user accounts to enable control of (write) access permission on IOCs.
- Divide user subnet area in (ID specific) domains. Keep network traffic local. => Less dependency on central services, better shielding of user activities.



Beamline Control – another new EPIICS CA model



Beamline Control – potential new EPICS CA model

