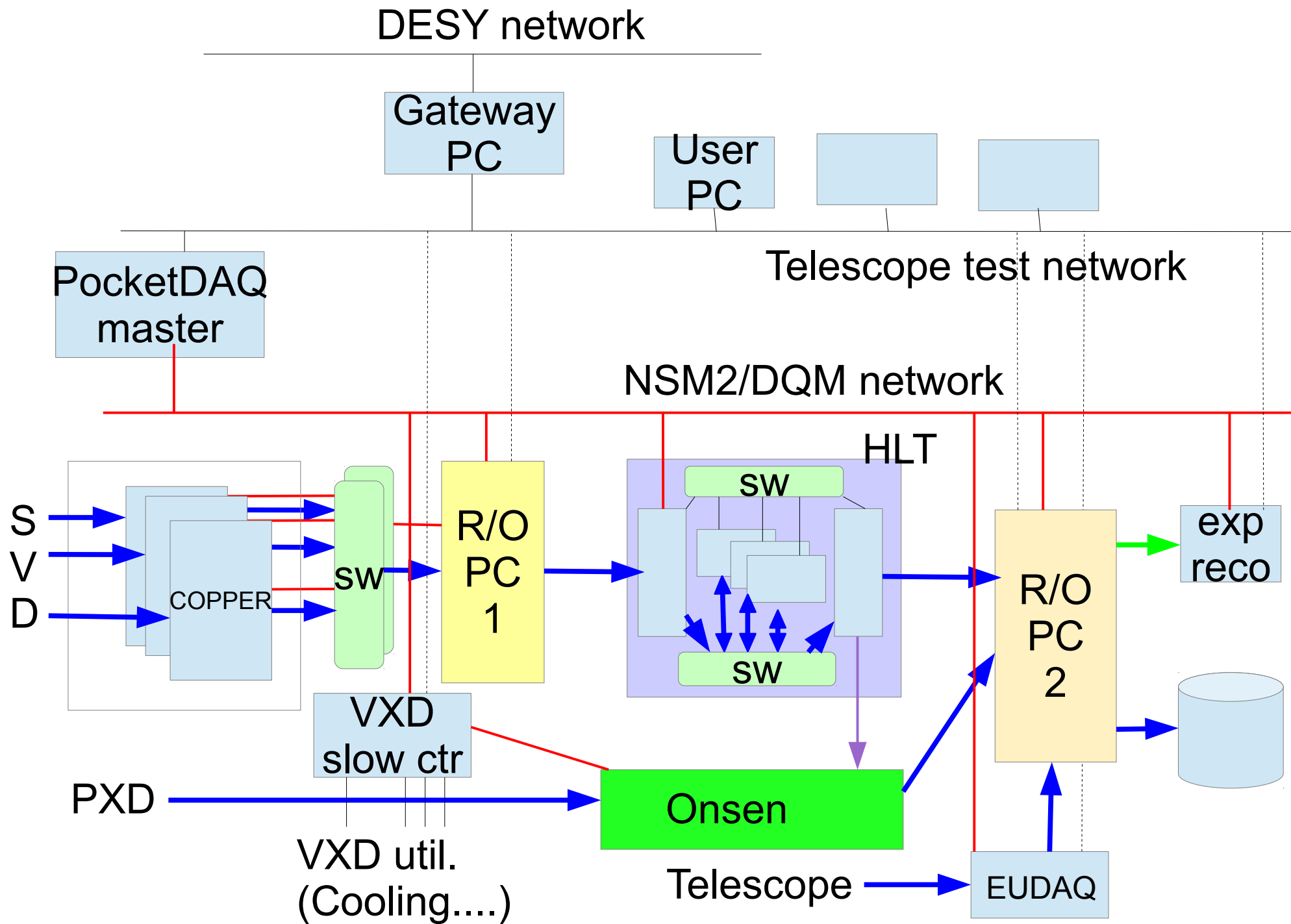# Issues to be discussed on DAQ for telescope test (recompiled from list assigned to me by Higuchi-san)

R.Itoh, KEK

1. Gereral layout of VXD-DAQ for telescope test
   * How to migrate EUDAQ (for Mimosa) in Pocket DAQ?
     - Data flow from Mimosa (and other beamline detectors)
     - Slow control
   * Network topology
2. Prospect for Pocket DAQ
3. DQM implementation
   * DQM for SVD (PocketDAQ)
   * DQM for Onsen
   * DQM at mini-express reco
4. HLT
5. Procurement of PC equipments for test
6. Dry-run test bench
   * At DESY
   * At KEK

Network Topology

DESY network

Gateway PC

User PC

Telescope test network

PocketDAQ master

NSM2/DQM network

S

V

D

COPPER

sw

R/O PC 1

HLT

SW

SW

exp reco

R/O PC 2

VXD slow ctr

PXD

VXD util. (Cooling....)

Onsen

Telescope

EUDAQ

5. Procurement of PC equipments for Telescope test

   - Possibilities:
      1: Purchase by DESY : Alan <- discussed at Tokyo meeting
      2: Offer by Markus : Vienna can provide a set of blade servers
      3: By KEK : KEK purchased a set of PC servers to have a
                local test bench system at KEK (for KEK dry run)

   - Shipping KEK's system to DESY is a little bit difficult.
     (many formalities, needs long time to ship....)

   - Duplicating the system developed using KEK test bench to
     DESY (built by possibility 1 or 2) is realistic.

   - List of equipments : no change from those discussed at Tokyo
                                    meeting

- Pocket DAQ master (Desktop PC)
  * Quad core@>3GHz, 4xGbE NIC, 4GB mem
- Gateway PC
  * Quad core@>3GHz 4xGbE NIC, 4GB mem
- Readout PC 1   1
  * Quad core@>3GHz, 4xGbE NIC, 4GB mem.
- HLT servers
  Event server PC   1
    * Quad core@>3GHz, 4xGbE NIC, 4GB mem.
  Worker node PC   >=3
    * >=8 core@>3GHz,   2xGbE NIC, 2GB/core
  Output server PC   1
    * Quad core@>3GHz, 4xGbE NIC, 4GB mem.
- Readout PC 2   1
    * Quad core@>3GHz, 8xGbE NIC, 4GB mem., Storage I/F
- Mini express reco
    * Quad core@>3GHz, 4xGbE NIC, 8GB mem.
- 24port GbE switch
    * HLT (2), Slow control (1), DAQ net (1)
- Storage disk
    * Portable USB3 disk? Rigid RAID? ~10TB?
- File server (PC + a few TB RAID?)

Summarizing....

- 2 Desktop PCs : DAQ control and DESY gateway
   (Quad core@>3GHz, 4xGbE NIC, 4GB mem)
- 3 rack mount PCs (1U) : Readout PC 1, HLT input/output
   (Quad core@>3GHz, 4xGbE NIC, 4GB mem)
- 3 rack mount PC (1U) : HLT worker nodes
   (>=8 cores@>3GHz, 2xGbE NIC, >2GB/core)
- 1 rack mount PC (2U) : Readout PC 2
   (Quad core@>3GHz, 8xGbE NIC, 4GB mem, Storage I/F)
 - 1 rack mount PC (1U) : mini express reco PC
   (Quad core@>3GHz, 2xGbE NIC, 8GB mem)
   -> mini express reco
 - 1 Storage disk (USB3 portable? Rigid RAID?)
 - 1 File server PC with a few TB RAID
                          +
- 4 x 24port GbE switch, Wireless AP(?)
- 1 Rack
- NICs for EUDET PCs
- Network cables (optical, metal)