PL610 scheduling system

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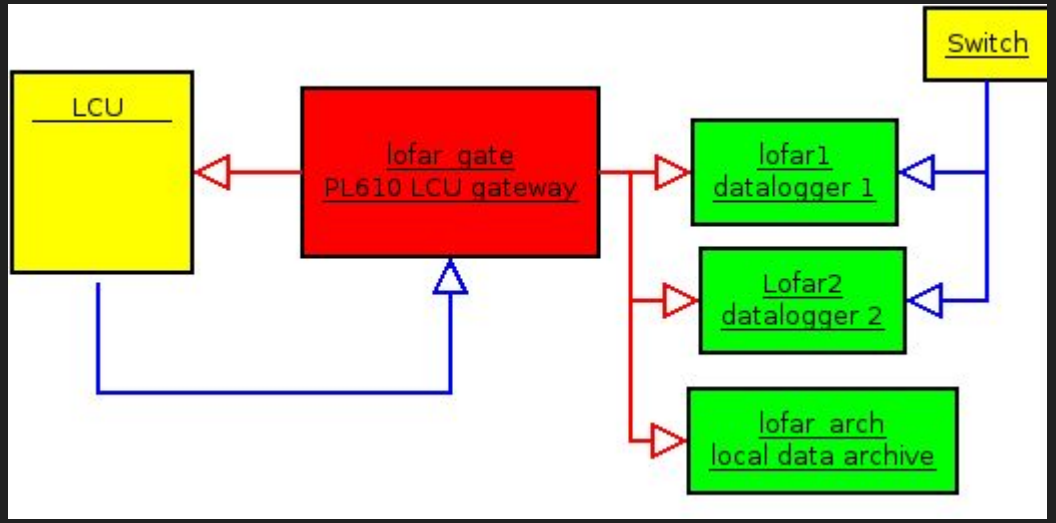
Station management - requirements

- continuous observations
- require controlling several components
- autonomous work
- logging
- measurement planning according to: object visibility, priority of observation
- support for different observation modes
  - bitmode 4/8/16
  - 4 substations, each: different beam, different pipe

Station structure

- 4 independent computers to handle data stream
- 3 separate networks



BURST - borowiec UDP Recording and Scheduling System (version 7)

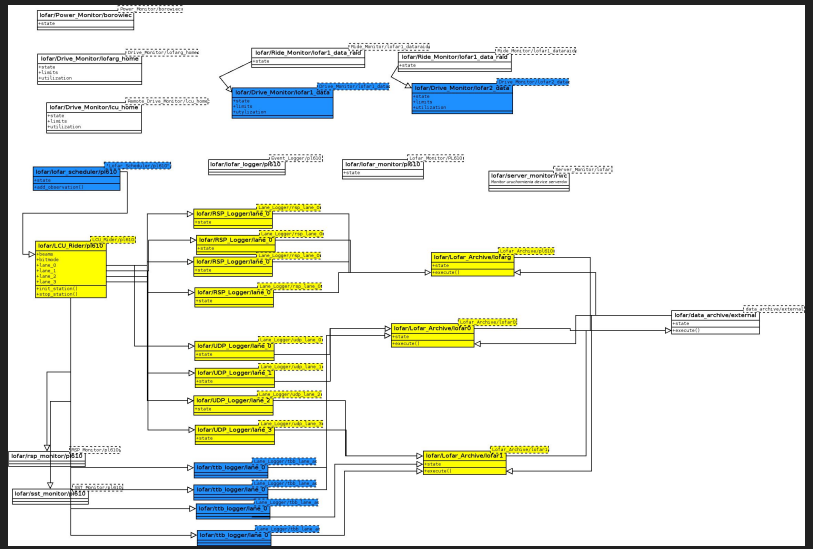
- independent program on each computer
- logging system for station pointing- independent
- time based process management
- no interconnections between computers
- whole system based on postgres-sql database
- log beamletstatistic file
- log crossletstatistic file
- log UDP data - raw or computed Stokes parameters in RT (10,100Hz)

Development direction (version 8)

- use SCADA to control the station (use Tango - Controls)
- switch postgres-sql to mongodb for logging system
- ilisa - better/easier way to manage station
- VESPA - virtual observatory - method of sharing and finding observations
- VO-event, MQTT to share schedule and information about event between instruments

BURST (v8)

- SCADA system to communicate (TANGO-Controls)
- iLisa driver for station-LCU
- high level of process insulation
- using TANGO communication mechanism to control (attribute, attribute subscription)
- direct control only for station



Sharing operational Information

- some way to inform about scheduling - current form of email is problematic for the automatic scheduling system
- common observation program - some way to share program
- reaction to event
- information to others about our observation program and data sharing

Solutions

- VESPA (Virtual European Solar and Planetary Access) http://www.europlanet-vespa.eu/
- vo-event- https://en.wikipedia.org/wiki/VOEvent -widely used in astronymy, a bit complicated
- MQTT - MQ Telemetry Transport - need common format of messages, simple to handle