Meeting protocol

time: 20191014, 20:00-22:00,

Participants: Yang, Ta, Wang

first meeting:

1. measurement mode, all filename in English
2. some files for planning
3. layers
4. data structure, very detailed one
5. synchronization
6. hardware: initialization, each hardware got its own interface for setting up
7. additional functionalities
8. how to send feedback to company server and listed in a database for response
9. scanning:

Complicated concepts need examples, maybe in Chinese.

Measurement mode:

File is there in the github.

layers:

4 layers: hardware interface, low level interface (good documents), high level interface(good documents), graphic interface level (extendable): idea, when the adaptor from hardware interface to low level interface is written. The layers above work directly, no need to change anything.

Data output and input are in different process,

data output need also a Cache to save time and space for generating big scanning wave front as well for the hardware (limited resources).

 data structure, check the one from picoquant and abberior,

tempfile and result file?

md5 check for the data integrity.

additional interface, math operation, 3d visualization, zoom in, shortcuts vs. all measurement …

some setting lock while measurement.

special for the software

hardware initialization, some of them are slow, therefore, multi-threaded (to speed up) and error (wait) return, in software initialization.

hardware: laser, shutter (eom aotf), power tuning, scanner, slm, focus lock, spectrometer, TCSPC, scanner, detector gating, fast gating,

Hareware tend to stop working or be occupied, therefore, there should be a mechanism to handle it. hardware response handling class is needed.

potential functionalities: calibration, camera (same as the others)

hardware is associated with the properties of parameters. parameters are element of the parameter list. each element shares standard properties, which is extendable (property numbers). find a way to extend property. (Check my Matlab parameter list, + hardware typical response time, last response time (time or -1 means failed). + axis can across multiple scanning axis. one function to check the integrity of the scanning. display should be able to handle it as well. scans can be also axis, but is a node, and cannot extended to a normal scan but only a loop like scanning. scanning level, low or high.

low level scanning axis, high level scanning axis: low level need additional hardware to sync better. high level scanning axis will be synced in different thread in software.

A hardware list and then be linked by the parameter list. incase multiple scanscheme need to access the same hardware and get messed up. Hardware status, can be set by different scanscheme and set to different state?

synchronization ?????

exception handling? I have no experiences.