

# Minutes of the R3B Analysis & Simulation WG meeting (Videoconference)

14/12/2017 16:00 to 17:30

Audience: Hans Tornqvist, Bastian Löher, Marc Labiche, Michael Heil, Jan Mayer, Andreas Heinz, Vadim Wagner, Dmytro Kresan, Igor Gasparic, Héctor Alvarez, Jose Luis Rodriguez

Apologize: Audrey Chatillon, Dolores Cortina, Nasser Kalantar

Program:

- **Procedures for communication and follow-up of the tasks** (Dmytro Kresan, GSI).
- **Reports on ongoing tasks and projects** (one/two slides, please contact me for the program).
- **Short status reports from the detectors:**

Silicon Tracker: Marc Labiche

Fragment/proton trackers: Bastian Löher

CALIFA: Héctor Alvarez

NeuLand: Vadim Wagner

Sofia: Héctor Alvarez

Short summary:

**D. Kresan** reported on the importance of the use of redmine (<https://www.r3broot.gsi.de/redmine/projects/r3broot>) as a tool for organizing the code development. Tasks should be included (at least title and some information on the status or description). Answer to questions on:

- interference/problems on GitHub (not noticeable problem until now, travis-ci tests ongoing),
- importance of using the forum for questions (somehow revived after some months with less activity)
- the various possibilities regarding the connection of the simulation output to the data levels (not mandatory to have a point, depends on the complexity and need of information from simulation)
- no need of additional mails to inform on pull request (from other developers), GitHub configuration allows users to receive information when requested.

There was no report on independent ongoing tasks, they are included in the status reports from the different detectors.

**Marc Labiche** reports on the Silicon Tracker code status (for more detail, see M. Labiche slides):

- Data structure from UCESB 0-level unpacker is ready since a few months.
- New full UCESB unpacker now ready (B. Löher), allowing a complete data structure unpacking.
- Reader class with time stamp reconstruction prepared, with a set of macros.
- Mapped2Cal with time ordering of data and energy calibration.
- Partial implementation of Cal2Hit with position reconstruction, but still not projection from the CALIFA Hits. Part of the work is not available in the git public repository.

**Bastian Löhner** reported on UCESB support and tracking detectors (for more detail, see B. Löhner slides):

- existing unpackers for califa (febex, hector, krakow17), los (vftx, hans/michael, 1718), ptof (tamex, hans/michael, 1718), neuland (tamex, tamex\_multi\_pc\_readout) strawtubes (alexander inglessi), silicon tracker (uTCA, marc labiche), driftchambers (hans, old cros3), psp (febex, ina/sonja), trloii and a few more. Still missing fibers (but clock tdc, similar to tamex or vftx).

- integration to R3BRoot done at mapped level.

**Michael Heil** extends the information on tracking to report the status of support for different detectors:

- LOS (cal level), PSP (cal level), TOF wall (Hit level for both charge and time), proton tracker (cal level).
- parameter finder tasks ready in many cases: TAMEX uses a self calibrated FPGA TDC allowing time and charge calibration

**Héctor Alvarez** reported on CALIFA (for more detail, see H. Alvarez slides):

- UCESB code corrected (califaKrakow17 version), allows to fill Mapped level for different FEBEX3 modes
- ongoing work on Mapped2CrystalCal and associated parameter containers, expected to be ready (PR) next week.
- hit finder based on simple “onion layers” model, as in simulation.
- Drawback: data structure valid for Csl detectors. CEPA data structure, if it differs, not included.

**Vadim Wagner** reported on NeuLAND (please, complete)

- small modifications performed recently in the code, quite complete process for going to lmd to hit and further.
- ongoing work on hits to neutron candidate

**Héctor Alvarez** reported on SOFIA:

- sofia available as a separate folder in R3BRoot, if present R3BRoot will compile it
- sofia code not included in R3BRoot GitHub, but should be forked and cloned independently (<https://github.com/R3BRootGroup/sofia>).
- most of the work done on unpacking the detectors data (A. Chatillon), starting now with calibration and some simulation structure and geometry.

Next meeting of the working group will be fixed using a doodle, approx. at the end of January, starting of February 2018.

To a final question on the possible discussion in the meeting of procedures for implementing performant parameter containers, procedures for parameter finder, ..., the opinion was that this could be better discussed and documented in the forum.