

INSIDE TCON 09/05/2019 - Commissioning, certification and clinical trial preparation

Update:

- Status of INSIDE system
- Status of certification
- Status of INSIDE control room (CAP1)
- Status of software
- Status of clinical documentation for INSIDE trial

Next steps

Status of INSIDE system

Mounted the new covers on PET detectors

→ approved by F. Gerardi (CNAO)

Open/missing points electrical check of the entire system by F. Generani (CNAO)

Covers of the PET electronics: fixed with small windows to access to FPGAs, holes on top and bottom surfaces

Cover of the cart body: to be placed when the cart is open inside the treatment room with a utensil



Status of INSIDE system

Mounted the new power supplier in the body of the cart

→ problem on FPGAs: 2 broken, now replaced with spares

Open/missing points S. Alpegiani (CNAO) is investigating the cause of failure, Voltage absorption and current measurements done: nothing to be reported.

Possible “safe” solutions use old power supplier during commissioning whereas evaluate different solutions for the clinical trial (2 power suppliers in the body of the cart?)

Warning: do we need spare components for clinical trial?

Status of INSIDE system

Mounted the safety button on the rack to be placed into the technical room

→ done by CNAO personnel, approved

Open/missing points (1) Safety button to be installed into the treatment room: location chosen. (2) Installation of plugs able to be connected to transformers: not need for commissioning but necessary for electrical check.

Status of Certification

Internal audit of the INSIDE project done

→ approved by A. Serra

Open/missing points (1) Report of the tests on each INSIDE sub-system: draft almost completed. Signs needed. (2) DAQ SW certification: account on Jira provided by A. Serra with instruction. Collaboration needed to compile the documentation (validation tests for both PET and DP). Volunteers? (3) final commissioning report before starting with patients.

Status of INSIDE Control Room (CAP1)

First test for the network in the CAP1 with Samba (Etesam), CNAO Windows PC installed with 2 ETH ports

→ approach approved by CNAO IT

Open/missing points (1) Treatment scheduling monitors: available but not yet installed. (2) Pager to communicate with the local control room: to be bought. (3) Linux PC: request to A. Frigerio (CNAO) for commercial offers.

Status of Software

Analysis, simulation and database

→ object of clinical trial: NOT included in SW certification!

Open/missing points (1) Install SW in the PCs in CAP1 and standard version for trial (2) Final tests when the final infrastructures and connections in CAP1 will be set

Status of clinical documentation for INSIDE trial

Patient documentation and pre-treatment controls

→ informed consent already approved by ethical commitment

Open/missing points (1) define who and when has to inform the patient (doctor, TSRM, one or two steps?) (2) coordination with Biomedical Engineers and Medical Physicists.

June 2019

Proposal, to be discussed

| SUN | MON | TUE | WED | THU | FRI | SAT |
|-----|---|--------------|-----|-----|------------------|-------|
| 26 | 27 | 28 | 29 | 30 | 31 | Jun 1 |
| | PET calibration (1 night) | | | | | |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | Commissioning (2 nights) | FOOT meeting | | | | |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | PTCOG | | | | | |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| | Select the patient starting from simulation CT... | | | | | |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | | | | | Treat plan ready | |
| 30 | Jul 1 | 2 | 3 | 4 | 5 | 6 |
| | Treatment start | | | | | |