

**Présents :**

Nicolas Dosme, Xavier Grave, Eric Legay (CSNSM)  
Frédéric Saillant, Bruno Raine (GANIL)

**Agenda :**

Define the work to be done to integrate AGATA in the GANIL Run Control and more generally in the GANIL data acquisition context.

## Use Case

- Ganil Acqmenu scripts
  - launch RCC
  - launch GEC
  - launch Narval VAMOS
  - launch Narval AGATA (remote)
- Topology manager
  - activate used crystals
  - generate configuration files for RCC (Topology) , digitizers, others... Push RCC configuration files in a shared directory
- Run Control
  - open AGATA configuration
  - merge with VAMOS configuration
  - init
  - start/stop

## Run Control

- AGATA topology description

The description of the topology available in the Run Control GUI is not well adapted to describe and easily modify the topology of a complex multidetector. It has been decided that the AGATA Topology Manager (TM) will automatically generate the xml topology file needed by the RC. This will make a secure description in adequation with the available ressources described in the TM data base.

- Multi detectors description

AGATA will be associated with other detectors like VAMOS, EXOGAM,... To facilitate the description of the different detectors in the RCC, it has been decided to add the possibility to have an include tag in the rcc.xml files; this enables to describe the topology of the different detectors in different xml files. This functionality is very important as the topology file of AGATA can change several times during an experiment, depending on the active clusters.

- It has been discussed to have several NARVAL systems or subsystems (one per detector). This is already implemented in the GANIL RC.
- Set the Run\_Number parameter in the Narval subsystem coordinator

## Topology Manager (TM)

- Create button to enable/disable a crystal
- generate topology file for RCC

## RCC <-> GEC communication

- Add Transition attribute in the class ecc\_\_ResponseState
- SOAP ECC communication to be implemented in GEC with associated state machine. No problem as the state machine and transitions of GEC are very similar to those defined by GANIL/SP2 protocol.

GEC answers without waiting end of transition; returns ok

- RCC loops on State request to wait for the end of transition before sending a new one if needed
- Centralized message logger

GEC will have to send messages to the RCLOG process by using log4ada message mechanism.

## GANIL acq menu

Adapt the GANIL perl scripts to AGATA specificity

- launch several NARVAL basic processes when needed
- add launch of remote NARVAL
- add launch of GEC

## Shared disk

A shared data zone is needed between AGATA and GANIL computers to exchange description files like the rcc.xml topology file.

## Data storage

- Associate configuration information with run data

Run data will be stored on the AGATA disk. This disk is in the AGATA network and not visible from the GANIL computers. Some configuration files coming from GANIL context have to be stored with the run. Study how to do that....

One solution could be to store this information in a directory (one per run) accessible by the RCC. In this case, the total set of files describing a run will be the data run directory on AGATA disk + information run directory on GANIL disk.

- Before starting a run, on the AGATA disk, automatically create a directory whose name contains run\_number:date:hour and set a symbolic name to this directory to store the data directly in the good directory.

## GTS

- One AGAVA board located in a dedicated VAMOS VME crate will be included in the

AGATA GTS tree. This board must be in the AGATA GTS network. This VME crate can be reset independently of the other VAMOS VME/VXI crates.

- If several GTS tree are needed one solution could be to have several AGAVA boards in the dedicated VME crate and to have a periodic common trigger on all the AGAVA boards to get a special event containing the date of each tree at the same time. This doesn't solve the problem of having a common trigger between the detectors.

## PDU

PDU are needed not only for computers but also for electronics. To be verified if this is planned in the GANIL installation.

## Todo list

- Topology Manager (AGATA)
  - create button to enable/disable a crystal
  - generate topology file for RCC
- Run Control (GANIL)
  - Add a functionality to easily include the topology of a detector
  - Associate several predefined topologies
  - Associate detector configuration files with each run
- GEC (AGATA)
  - SOAP ECC communication to be implemented in GEC with associated state machine.
  - send messages to the Run Control message handling (RCLOG) by using log4ada message mechanism.
- GANIL acq menu(GANIL)
  - Adapt the GANIL perl scripts to AGATA specificity
  - launch several NARVAL basic processes when needed
  - add launch of remote applications (NARVAL, GEC, ...)
- Shared disk (AGATA + GANIL)
  - Define a shared disk zone between AGATA and GANIL computers to exchange description files like the rcc.xml topology file.
- Data storage (GANIL + AGATA)
  - Associate configuration information with run data
  - On the AGATA disk, automatically create a directory whose name contains run\_number:date:hour and store data directly in it.
- GTS (GANIL + AGATA)
  - Locate VAMOS AGAVA board in a dedicated VME crate. This board will be included in the AGATA GTS tree and must be in the AGATA GTS network. This VME crate can be reset independently of the other VAMOS VME/VXI crates.
  - Think on how associate several GTS trees if needed
- PDU (GANIL)
  - Verify if there are PDUS on all electronics