



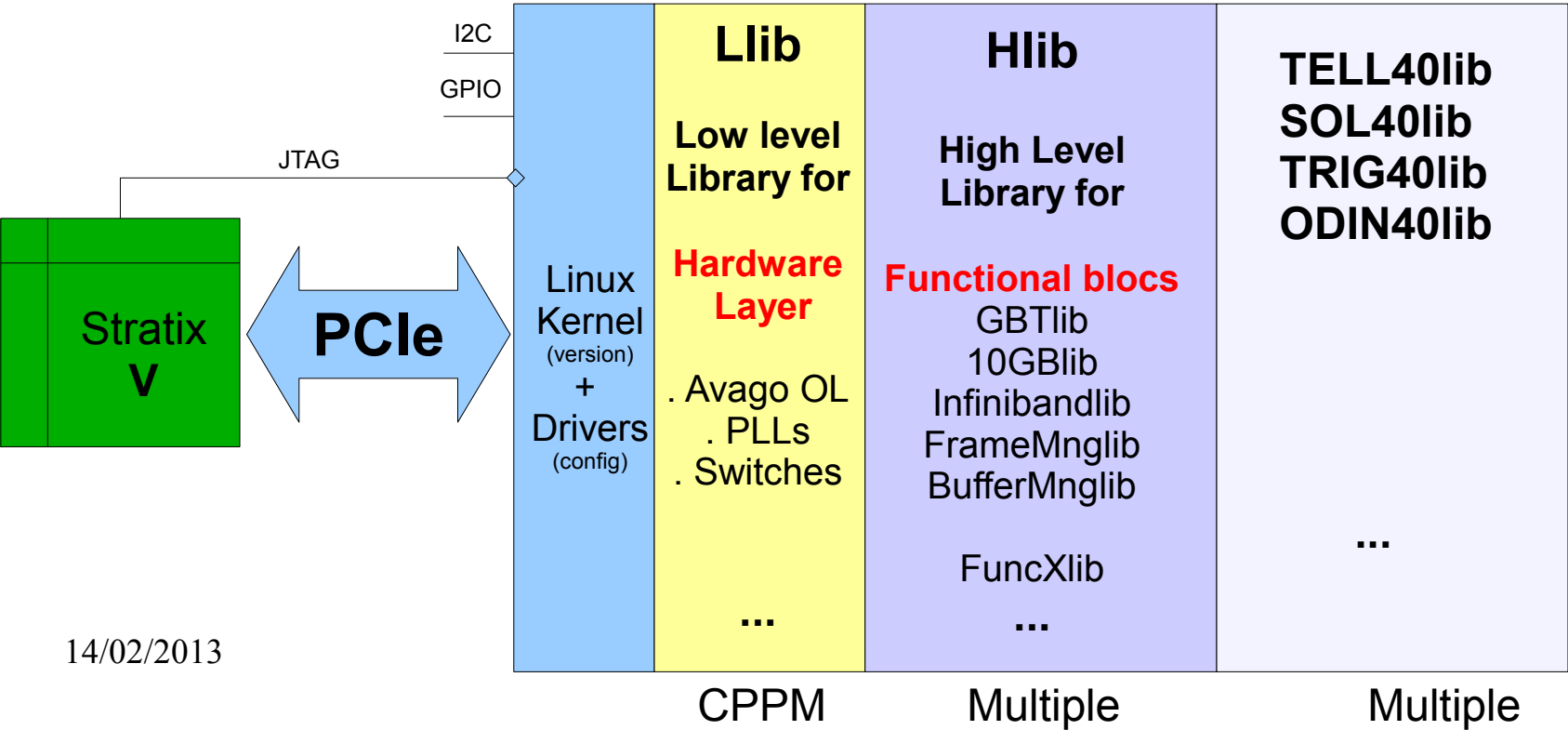
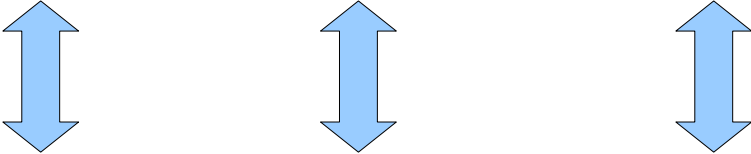
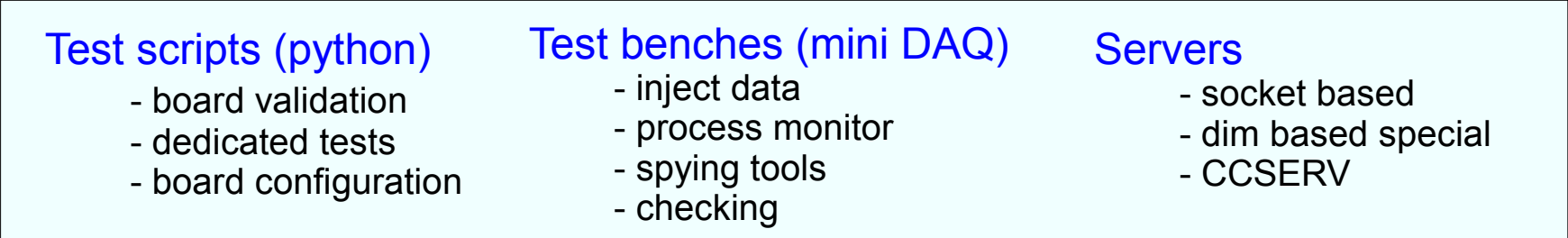
Software organisation for the readout boards support



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Programs and software layers

CCPC applications



Main software deliverables

The Llib is based upon the [LLI MM Registers Control](#) (see JPC presentation)

C libraries with some Python wrapping

Python scripts

WinCC-OA libraries and projects

For early users mainly simple python scripts and Clib

Later in the project after a better identification of the packages

For each package

Functional description of the blocs to control

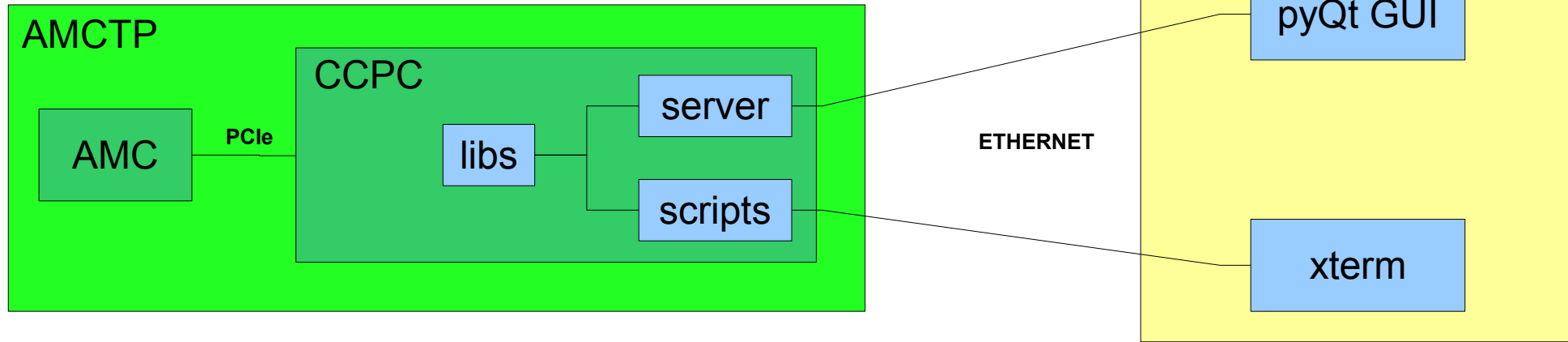
Registers memory mapping

Specification of the Clib functions signatures

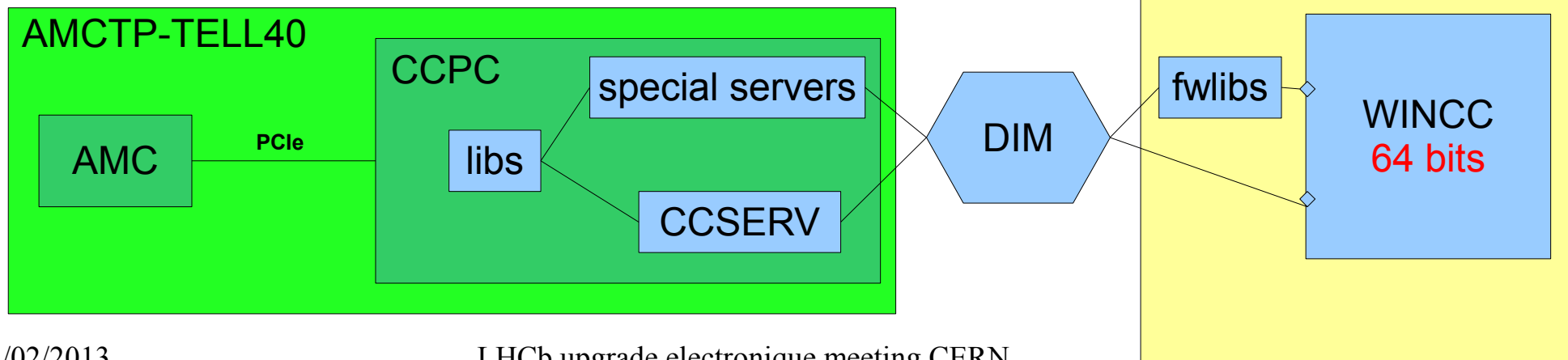
Some coding pattern to demonstrate how to use them

Setups and programs mapping

First development setup



Advanced test setup



Collaboration platforms

What to share:

- Documentation (specifications, setup guides, guidelines, coding conventions)
- Firmware modules (quartus projects, user specifications)
- Software libraries, python scripts and applications
- Code, repositories, bugs and remedies
- Enhancement proposals

Possible solution using two platforms

Main collaborative platform : **REDMINE**

- Documentation/Wiki

- Information files

- Packed distribution (tar files, rpm, qar, WinCC projects)

- Possible link to code repositories

- Ticketing/requests/traceability

Code sharing : **Git**

- Software projects

- Quartus projects (analyse which files to share)

Start with REDMINE @ LHCb and GIT @ CCIN2P3

- REDMINE just installed in LHCb
- GIT available as a centralized service in the CC
- Accept members of experiments from external institutes.
- Start with those two tools and get experience to get the most of them
- See if we need external tools to complete: Most powerful wiki, external WEB site ??
- Make an evaluation next year and decide whether to keep or quit for a new organization

Time schedule

- Test the forge and remote repository within one week
- Lib published in June

Conclusions

- ▶ The software layers are clearly identified
- ▶ We have a Forge and git environment services available to start with
- ▶ Evaluation will have to be done next year
- ▶ Most of the work has still to be done to identify middle layer packages
- ▶ We will need more than one existing software developer to cover all the needs