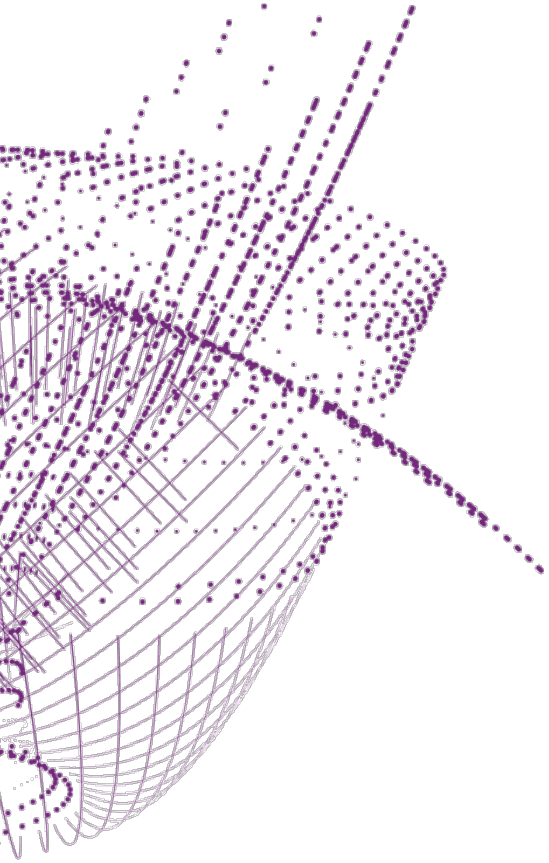


Karol Popławski | CT-PO

CT-PO: Project Ogen

CT-PO Project Support (ProjectOndersteuning)

Section of CT focused on providing Particle Physics experiments with software & control tools. Our current projects are:

- ATLAS
- LHCb
- KM3NeT
- SPIDR4
- PTOLEMY
- White Rabbit
- more to come

Our expertise – including but not limited to:

- Embedded Software (DAQ)
- Control Software (cooling, HV/LV, …)
- Communication protocols
- User & expert tools
- Timing – equipment synchronization

Software engineering ≠ coding

CT-PNO Project Non-Support

We cannot spread ourselves too thin. Therefore there are things with which we cannot help you much e.g.:

- LabVIEW
- Databases
- “The foundations are not stable, but can you build something in 1 month on them?”
- Not certain project goal – hard to validate and test final results
- Etc.

Current projects:

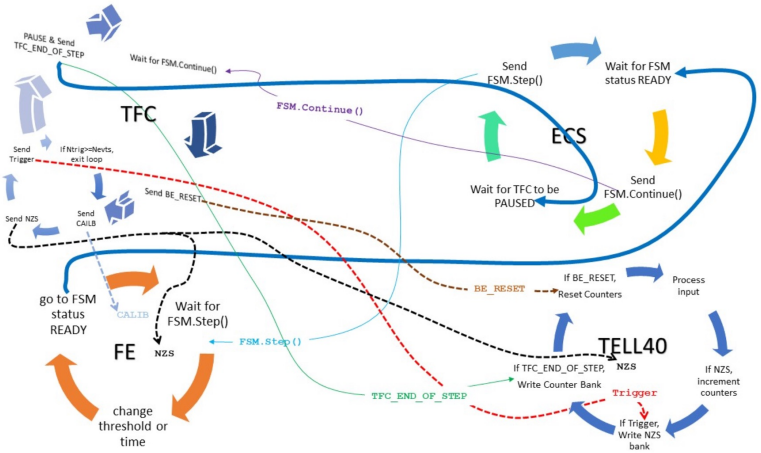
- Quick validation saves time (& €)
- Error during data taking ☞ quick fix

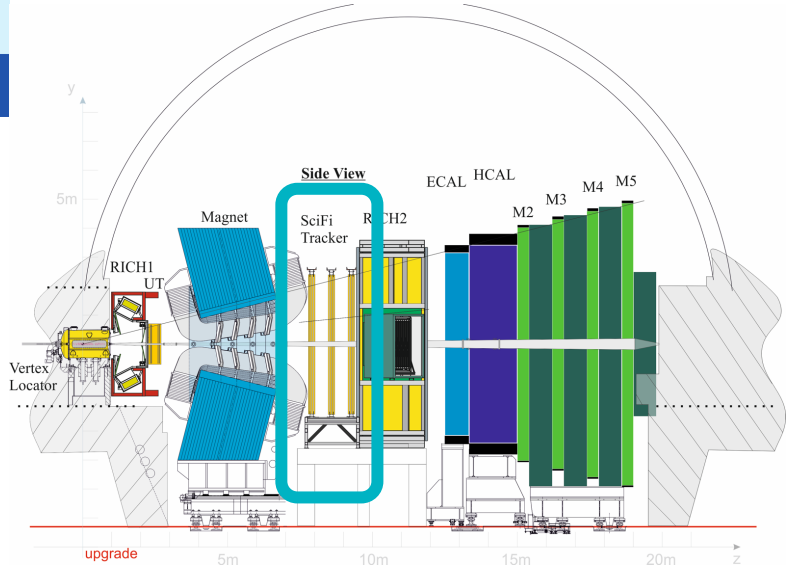
Help us help you

Head-scratcher: SciFi in LHCb Collaboration

SciFi tracker – TD+KP:

- FEE calibration & monitoring
- Datasets are combination of DB & user input
- Individual tuning of i.a. 8192 ASICs with 64 SiPM channels each





Source: SciFi Collaboration

TD – Ton Damen

Heartbeat: PTOLEMY + White Rabbit

PTOLEMY – TD:

- Firmware for Nikhef Embedded Platform sitting on RF controller
- With ET

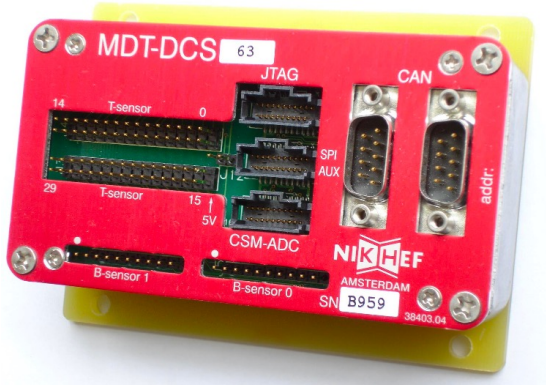
White Rabbit – KA:

- Highly accurate, absolute time distribution
- Demo with Peter Jansweijer during parallel session ET1

KA – Konstantinos Asteriou

Hands-on projects in ATLAS Collaboration

1. MDT DCS Module on each of ~1200 chambers – HB+KP:
- Electronics configuration, temperature & magnetic field monitoring
- Hardware upgrade*
2. Barrel Alignment – KP
- DAQ & maintenance of ~5800 optical channels
3. Control & DAQ projects – HB
- Development, testing & maintenance
- FELIX: next-gen readout for the whole ATLAS



Source: ATLAS Collaboration & FELIX project

*More in ATLAS Muons presentation

HB – Henk Boterenbrood

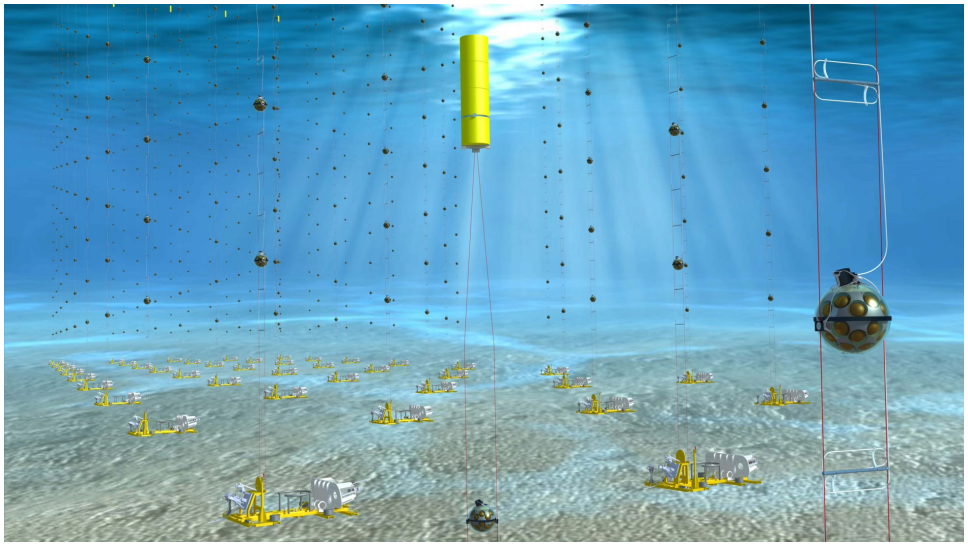
Embedded Software: KM3NeT + SPIDR4

KM3NeT– TD:

- Omnipresent Embedded Software for configuration & DAQ
- Challenge: maintaining different versions of hardware, White Rabbit & communication

SPIDR4 – HB:

- Maintenance of Embedded Software

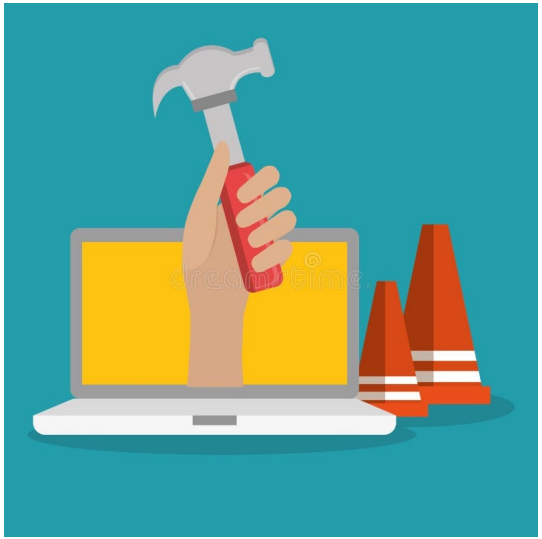


Source: KM3Net Collaboration

CT-PO Strategy

A project has started to establish broader CT-PO Strategy including:

- Portfolio with current knowledge & expertise
- Direction & focus of CT-PO for next 1-10 years
- Current & future physics needs
- Possible (mis)alignment between above



Where to find us?

No pictures – PO vigilantes serve & protect the experiments in the shadows.
You might not have eyes on us, be we do.

Places of occurrence:

- H129 & H130

- Our Batcave/Lab exhibition in Top room (H234d). OP = OP!*

*time limited offer to 13.05 parallel session – code **CT5**

Thank you for your attention