

Highlights

In a combined online-offline system like ALICE O², the traditional DAQ and online system takes over much more complex tasks

The required flexibility calls for polymorphism

- Meta programming and static polymorphism allow for flexibility AND compile time optimization
- A novel type-safe interface between compile time and runtime domain is presented
- In the presented application, utilization of static polymorphism allows for performance increase by one order of magnitude
- Meta programming has a huge potential for online processing at large data rates

Take away message: Think about the way we are using polymorphism ...