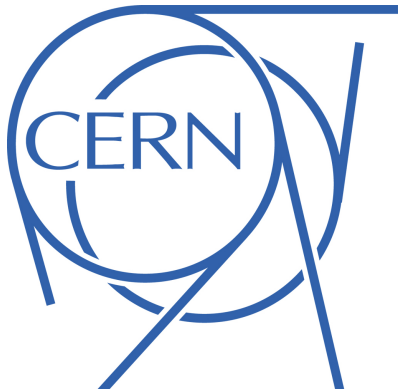
An introduction of the ALICE - FAIR prototype



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ALFA will be a new common framework to provide a layer of code, shared between the ALICE and FAIR projects

- Will rely on a data-flow based model (Message Queues)
- It will contain
  - Transport layer (based on: ZeroMQ, NanoMSG)
  - Configuration, building and testing tools (infrastructure)
  - Management and monitoring tools
- Provide unified access to configuration parameters and DBs
- It will include support for a heterogeneous and distributed computing system
- Incorporate common data processing components

By placing new features to the common code layer, it will be beneficial for both projects:

- ALICE will take advantage of the already existing FAIR infrastructure (i.e. the continuous read-out)
- FAIR will be able to be tested using real-life data and existing detectors

We have started developing a limited prototype of this concept

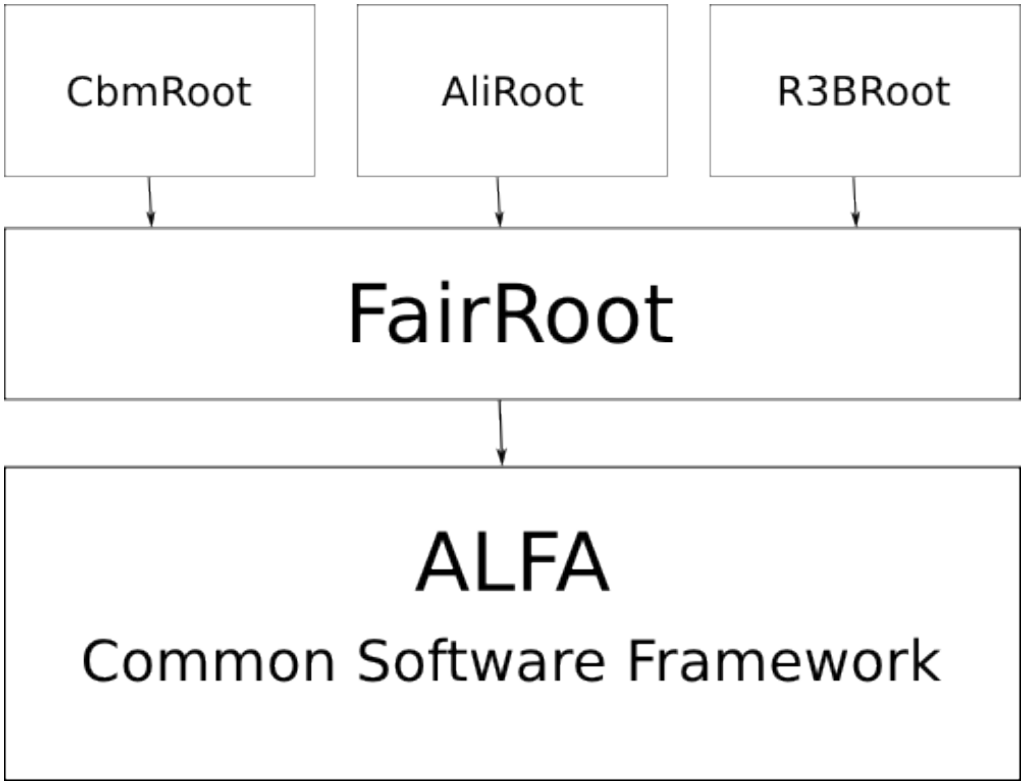
- A small developer team for now (Charis, Raffaele, Mohammad)
- The code can be tracked at: https://git.cern.ch/web/?p=o2proto1.git;a=summary

We have started developing a limited prototype of this concept

WHY?

- Will be used **solely** as a development tool for now
- Will be limited in scope.
- Will help us gain insight on both the FAIR and the ALICE code base at the same time
- It is a prototype: it will help us determine what works and what not

The architecture of ALFA:



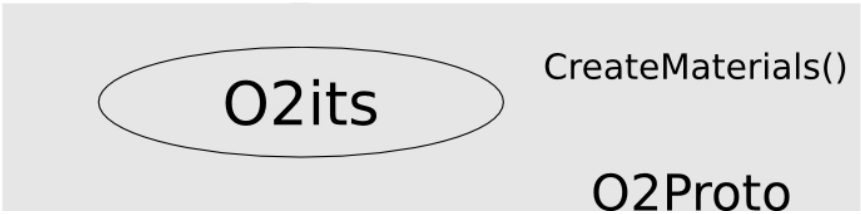
Our target:

- Import the existing geometry of the ITS and TPC detectors
- Port the stepping managers from ALICE
- Make a simple simulation of ALICE detectors

Our goals:

- Reuse as much of the underlying code as possible (i.e. the timeframe solution of FAIR, the geometry of ALICE detectors)
- Simulate the data flow of ALICE and import it to FAIR
- Experiment with different parameters (i.e. the size of the messages)

This is what the prototype looks at present:



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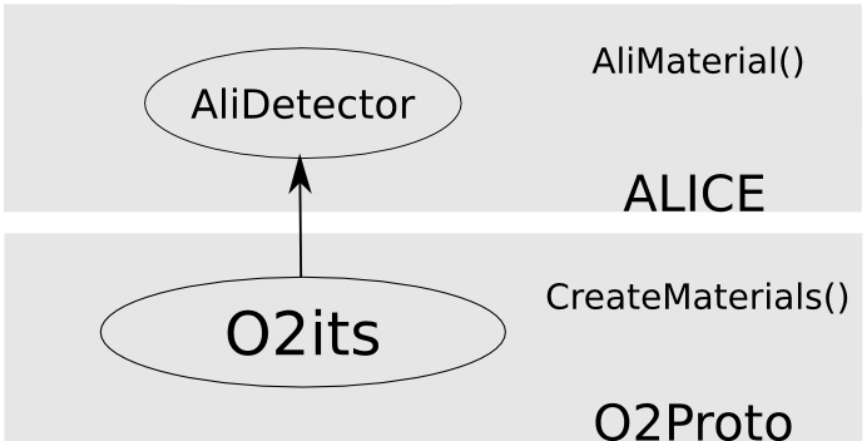

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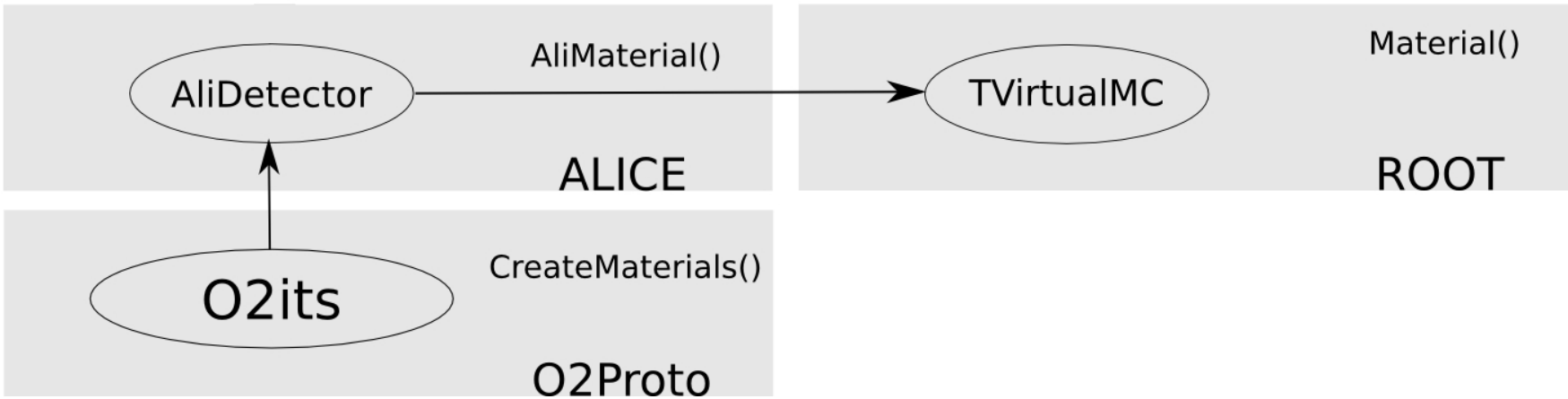
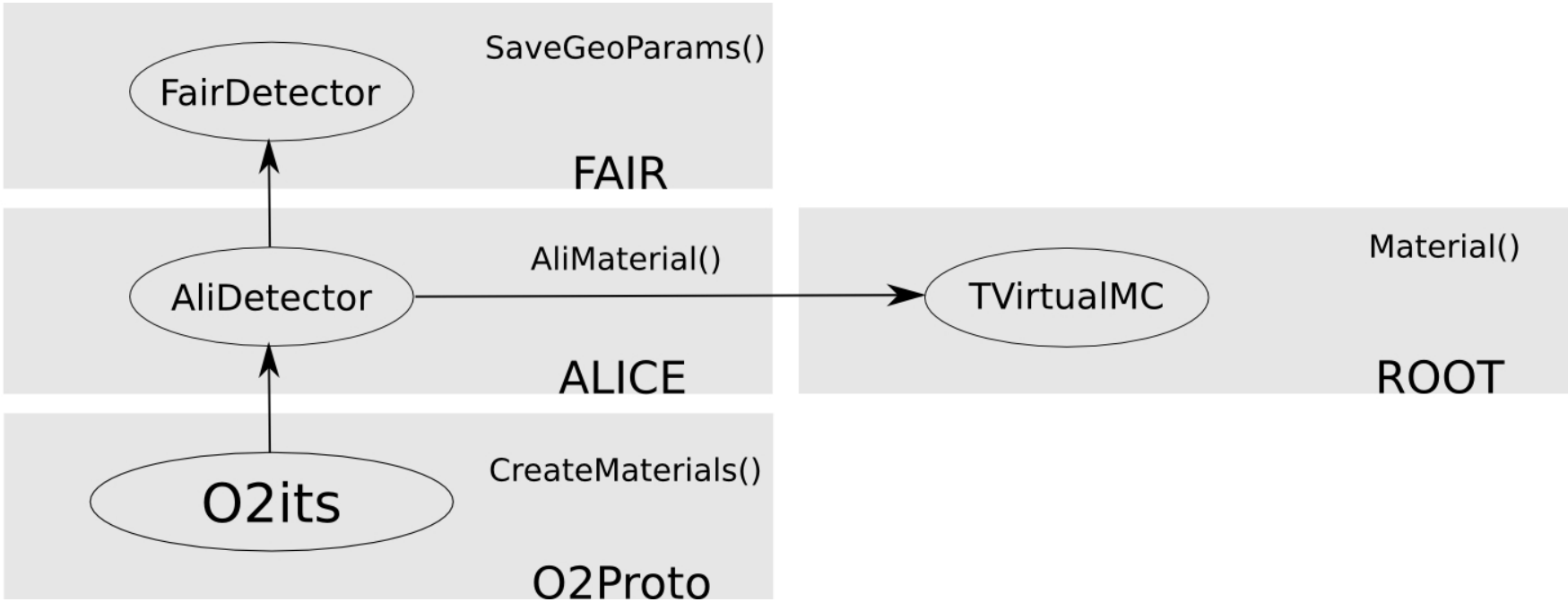
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