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# LHCb Controls Project

Status and Progress

13 May 1998

P. Mato, CERN

# Progress

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## ◆ User Requirements

- Joint LHCb/ALICE URD for the DCS kernel
  - » Available as LHCb note 98-005
- No much progress on the LHCb specific
  - » Questionnaire sent. One reply received.
  - » Maybe is too early?

## ◆ Joint Control Project (JCOP)

- We are putting quite a lot of effort from LHCb (0.5 FTE)
- Participation in various sub-projects

# JCOP

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- ◆ Organization:
  - Started last December
  - Project leader: David Myers
  - Steering group (2 people each experiment + 2 people CO group)
  - Project team. Meetings every 1-2 weeks.
- ◆ Current work items
  - Technology survey, CAN bus, Architecture, Safety, ...
- ◆ Workshop (CERN, June 3-5)
  - Current practices, LHC sub-detector requirements

# JCOP: Architecture sub-project

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## ◆ Objective

- To design and architecture which implements the known requirements (scale, DAQ integration, etc.).

## ◆ Deliverable

- Architectural design document by summer.

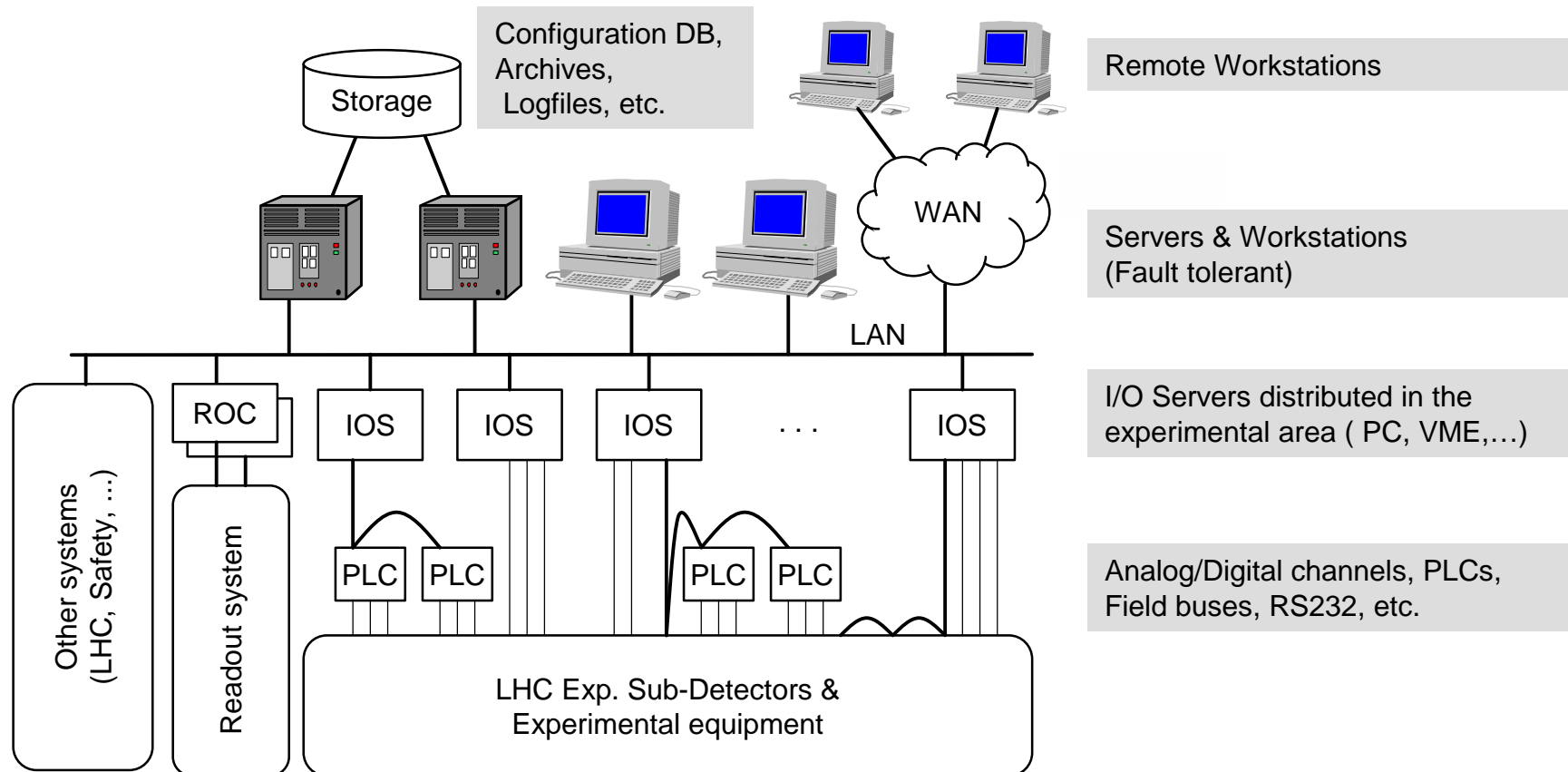
## ◆ Progress

- First ideas of an architecture exists. On the process of discussion specific points.

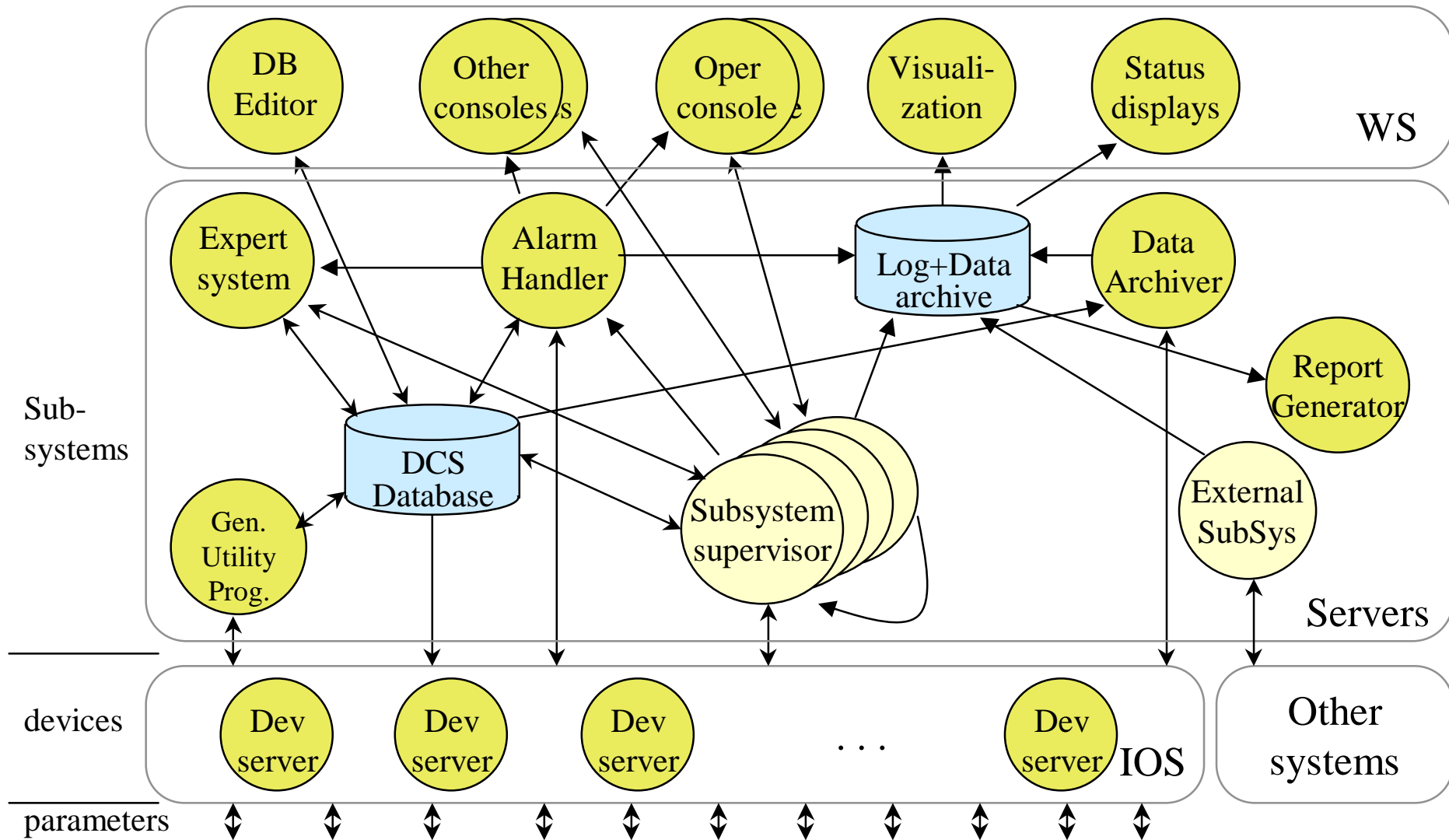
## ◆ People

- About 10-12 participants (Beat, Pere, Wolfgang from LHCb)

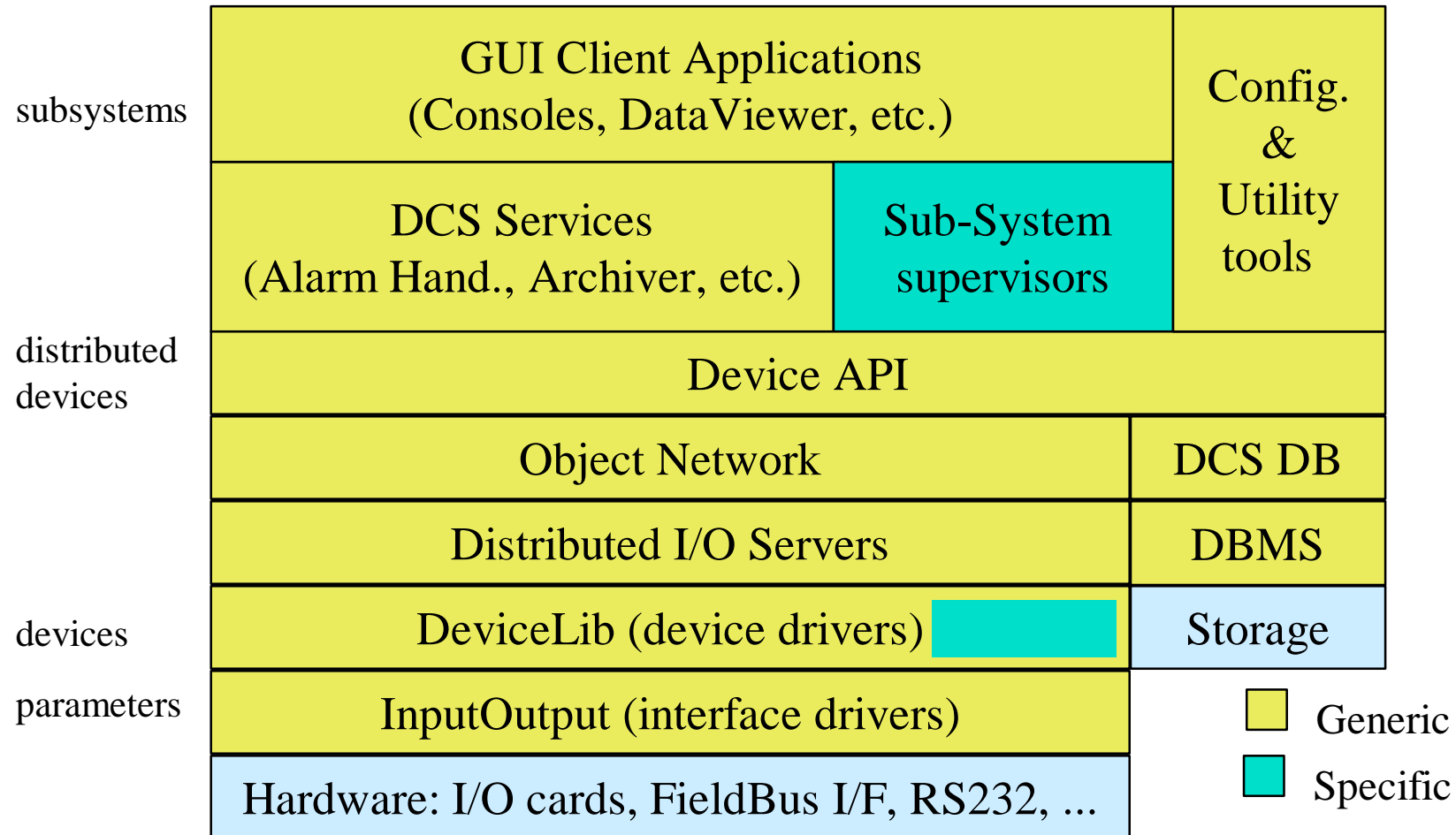
# JCOP: Architecture: Hardware



# JCOP: Architecture: Task



# JCOP: Architecture: Software



# JCOP: CAN bus sub-project

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## ◆ Objectives

- 3 parts: Hands on CAN bus, Local Monitor Box (ATLAS), Standalone small control system.

## ◆ Progress

- Two meetings.

## ◆ People

- Mainly ATLAS. (Andre from LHCb)



# JCOP: New sub-project proposals

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- ◆ A proposal from ALICE has been presented.
  - Not very attractive from the point of view of LHCb
- ◆ Planning to propose a new sub-project from LHCb.
  - Objectives:
    - » Evaluation of the Component Technology (DCOM) for controls. (Implementation of the architecture)
    - » Evaluation of OPC (OLE for Process Control) standard.
  - People:
    - » Some fraction of FTE from existing people plus Cooperant starting in September.

# JCOP: Workshop

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- ◆ CERN, June 4-6
- ◆ Program
  - Current Practice. Presentations from current and about to come on-line experiments.
  - LHC experiments requirements and technical sessions.
    - » LHCb has 45' + 15' to present our requirements
    - » Since we are not advanced on specific requirements we will use this time to convey generic requirements (scale, operation, integration...) ... lessons learned from Aleph+Delphi...
  - Selected discussion topics. Architectures, Integration DCS and Run Control, commercial vs. home-made, re-engineering, componentware ...

# JCOP: Workshop (2)

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- ◆ So far only 5 people from LHCb registered. We need to encourage our colleagues!
- ◆ We need to prepare the LHCb presentation for Day 2
- ◆ For more information:  
<http://itcowww.cern.ch/JCOPworkshop>

# Near future activities

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- ◆ Continuation with the participation of the JCOP sub-projects.
  - Architecture, CAN bus, Components, Safety.
- ◆ Get experience with new technologies: Field buses, PLC's, OPC, etc. Our role is to advice/recommend sub-detectors.
  - Use our DAQ/DCS bi-weekly meeting to present/discuss specific technologies.
- ◆ Collect specific requirements from sub-detectors.

# Planing

