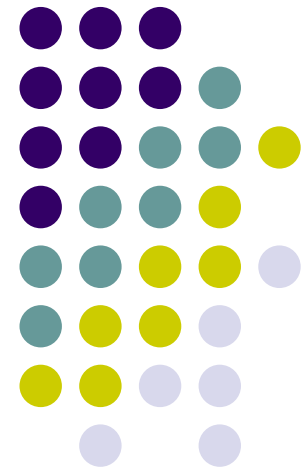


Controls for ATB equipment

R. Losito, AB/ATB/LPE
AB/CO Review, 22 Sep. 2005





Outline

- Foreword – Contact persons in ATB
- PLC systems in SPS and transfer lines (ex BT)
- LHC Collimation
- CTF3
- RILIS/ISOLDE
- Equipment from BDI
- General requirements
- Conclusions

Foreword

- ATB Equipment Controls group is only 4 months old:
- We have a limited knowledge of all the AB/CO meanders.....
- For this reason you may find my presentation incomplete. Further information may come later.



ME



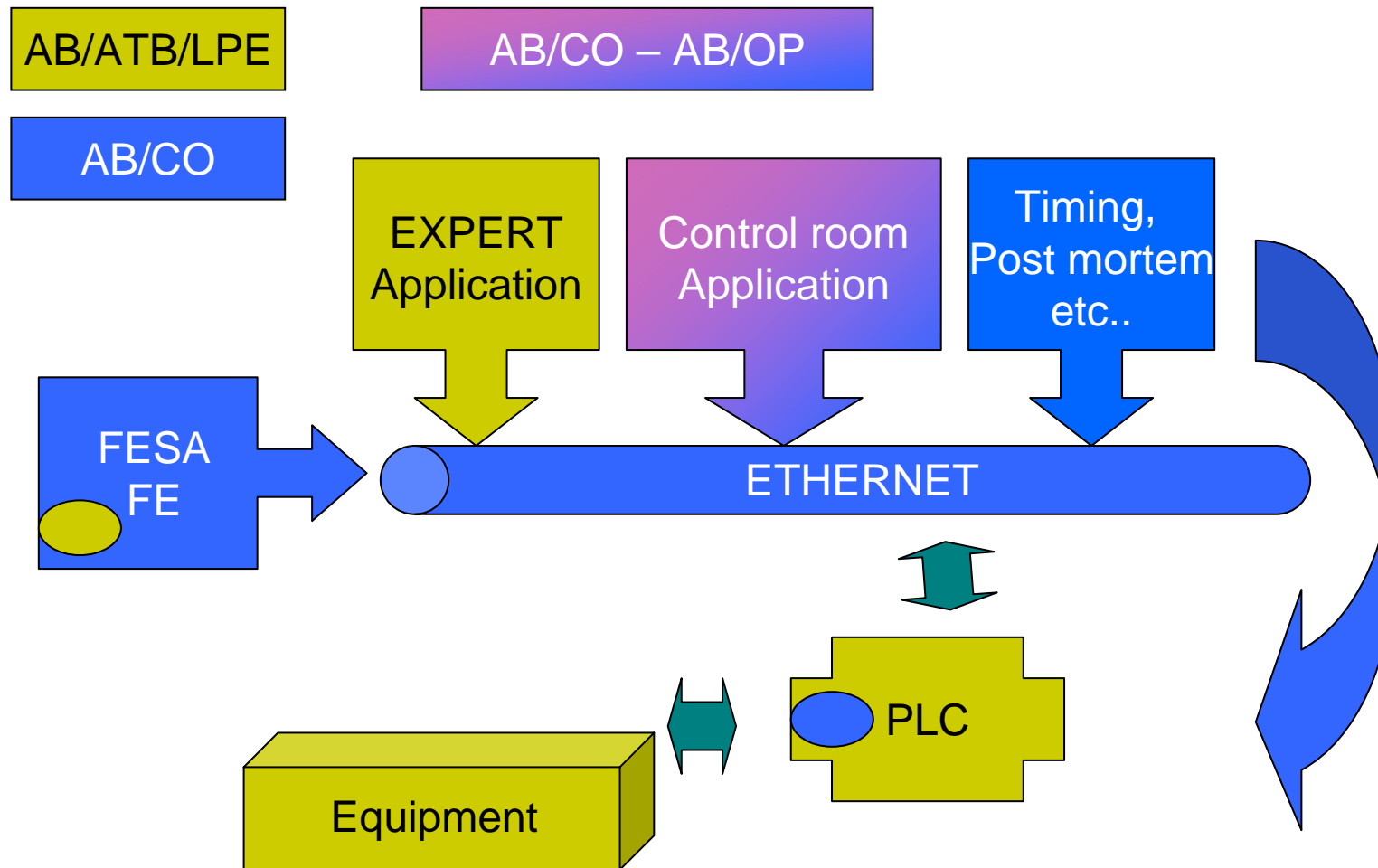
Alessandro
MASI

PLC Systems in SPS and Transfer lines (ex BT)



- We are in the process of transferring the responsibility of several equipments from BT to ATB
- They are all based on Siemens PLCs, but a consolidation is needed since they have not an Ethernet interface and use a PC passerelle.
- This upgrade will hopefully start in December and be finished before SPS startup.
- We wish to migrate all to FESA, with the following scheme:

PLC Systems in SPS and Transfer lines (ex BT)





LHC Collimation

- We assume that we will use PLCs for the low level controls.
- However, the performance specified is at the edge of what PLCs can do
- A prototype will be tested (hopefully) before Xmas.
- If unsuccessful, we will have to use a different hardware, **different from standard VME** (we have only available 400 mm deep racks).
- In this case some effort will be required from CO to provide the necessary drivers.

CTF3



- In the frame of CTF3 and CARE, a new photoinjector is under development.
- AB/CO will be called in 2006/2007 to integrate it in the CTF3 control system.
- There will be PLCs and (maybe) VME. Standard requirements are expected (FESA, timing, operation interfaces etc...)

RILIS/ISOLDE



- ISOLDE has already been presented by M. Lindroos. ATB is in charge also of RILIS (a laser facility), which will probably be upgraded in 2006/2007.
- As usual, we will need support for FESA, Timing, eventually operation interfaces...



Equipment from BDI

- A list of equipment to be transferred from BDI to ATB has been made available very recently.
- Not yet clear to me what has to be done and when. An overall analysis has to be carried on.
- The only thing I can do is subscribing all the requests from BDI, I suspect I will have the same needs.....



General requirements (1)

- We are in charge of equipment involved in personnel protection.
- Will INB accept that set and get actions on FESA are not protected?
- A protection of certain classes is in my opinion mandatory.



General requirements (2)

- We (ATB) will use FESA for all the new projects, and try to upgrade old systems to FESA whenever necessary/possible.
- We will need to develop in the next two years dozens of FESA classes (or instantiations)
- Automatic procedures to generate and synchronise classes in both low-level equipment and Front ends would save to us a lot of FTEs and a lot of mistakes!!!
- Please invest urgently some effort into that.

General requirements (3)



- For all the projects we will require timing, BIC, post-mortem, logging etc...
- We expect to have well identified contact persons (it is already the case in general...)

General requirements (4)



- We have received up to now all the support (help) we needed to start-up, and all the answers to our questions.
- Contact with CO people has been always very easy and fruitful
- Please, continue like that!!!



Conclusions

- ATB started recently to cope with control problems
- We are dealing now with PLCs and have chosen to integrate FESA from the beginning.
- Some automatic procedures are missing and create an overhead to low level controls
- We have (or will have) inherited old equipments everywhere in CERN machines, expect consolidations and upgrades with related requests of CO general “infrastructure”.
- LHC Collimation: the only potential problem. Maybe non standard hardware will have to be adopted.