

THE EVOLUTION OF THE DELPHI EXPERIMENT CONTROL SYSTEM, OR HOW TO SURVIVE 10 YEARS OF RUNNING

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The DELPHI experiment at the LEP collider started taking data in august 1989. The design of its control architecture had been done around 1986 and the first implementation of it was ready for the experiment commissioning. However the Control System has been evolving quite a lot since then, taking advantage of new communication and display technologies. Nevertheless, the design had enough flexibility that the changes to the actual control processes were minimal, keeping the modifications internal to the system. We shall show how the integrated and highly distributed framework which was used allowed to gradually implement the various control domains (slow-controls, data acquisition control...) by using higher levels of abstraction. The current system contains an integrated fully automatic running mode based on the very same concepts which were designed 13 years ago. It is however the result of a long process of maturation and gain of expertise on the behaviour of all domains in the online system.