

ACCELERATOR SCHEDULE MANAGEMENT AT CERN

B. Urbaniec, C. Roderick, CERN, Geneva, Switzerland

MOPHA149

Abstract

- Maximizing the efficiency of operating CERN's accelerator complex requires careful forward planning, and synchronized scheduling of cross-accelerator events. These schedules are of interest to many people helping them to plan and organize their work. Therefore, this data should be easily accessible, both interactively and programmatically. Development of the Accelerator Schedule Management (ASM) system started in 2017 to address such topics and enable definition, management and publication of schedule data in generic way.
- The ASM system currently includes three core modules in order to manage:
 - Yearly accelerator schedules for the CERN Injector complex and the LHC.
 - Submission and scheduling of Machine Development (MD) requests with supporting statistics.
 - Submission, approval, scheduling and follow-up of control system changes and their impact.



Conclusion

ASM brings added value to CERN when it comes to managing the schedules that directly or indirectly impact accelerator operation. With highly usable interfaces, ASM saves people time when it comes to preparing schedules and producing statistical summaries of how time is distributed between activities. The data driven configuration of ASM makes it relatively low cost to tailor and apply to new use cases. The programmatic access allows to leverage the schedule data in different applications and further facilitate the work of the corresponding CERN expects. The Controls Changes module belows streamline the evolution of

data in different applications and further facilitate the work of the corresponding CERN experts. The Controls Changes module helps streamline the evolution of the Control system in a coordinated manner. The Machine Development planning tool simplifies the task of collecting, sorting and allocating MD requests to MD slots and maximises the use of the precious beam time. Meanwhile, the use of open source software and a non-CERN-specific design mean that ASM could be ported to fulfil similar schedule management requirements in other institutes and domains.

