

Beam Commissioning Working Group

Minutes for 11 April 2019

Present: V. Kain, G. Rumolo, S. Albright, M. Alexander Fraser, H. Bartosik, C. Bracco
S. Cettour Cave, J. Coupard, H. Damerau, M. Delrieux, D. Gerard Cotte, G. P. di Giovanni,
B. Goddard, K. Hanke, A. Lasheen, B. Mikulec, J. Ridewood, C. Roderick, R. Scrivens,
B. Urbaniec C. Wetton

Meeting objectives

Presentation of EN-ACE planning tool as a possible option for scheduling the hardware commissioning period.

Approval of Minutes and Matters Arising - V. Kain

V. Kain requests approval of minutes, no comments.

D. Cotte says for the ION line ISTs they are still awaiting final confirmation for the schedule.

- There is 1 week scheduled to be lost from the LBE line run, which can be treated as extension of LINAC4 only run. B. Mikulec says if that week can be kept for beam it should be and asks about the two weeks at the end of the ISTs. D. Cotte says that before the PS ISTs it should be 4 days lost, and at the end it will be less than 2 weeks but the exact time needs to be confirmed. This will all come in an future AOB.
- During the LS2 committee meeting the ISTs were discussed. The ISTs will be collected by the commissioning coordinators together with a list of required services, but will not be discussed in the LIU-CCC. D. Cotte asks to what extent the test procedures need to be detailed. V. Kain says that we did not request procedures. It is however in the interest of the equipment groups to provide them. What is needed for the commissioning working groups is a list of all ISTs with duration, required services and risks associated for co-activity in the tunnel.

Introduction to the EN-ACE Planning Tool - J. Coupard

Presentation

- This presentation is supposed to show what tool EN-ACE use and what they do with it, rather than proposing this exact tool be used for commissioning.
- EN-ACE use the "Microsoft Project" tool, which is at least available until the end of LS2.
- The schedule is constructed from a set of master projects (one per machine), which contain sub-projects detailing each unit of work.
- For a given facility (or facilities) the group or groups of interest can be selected, and then the full demand across all facilities for those groups can be displayed directly and extracted if required.
- An important consideration for the commissioning period will be the split of expert time between commissioning and shutdown activities. With different tools this will potentially be difficult to manage, so the MS Project tool if used by everybody would be useful.

- Currently different tools are used (ASM, Checklists, JIRA, Excel, ...), something to combine this information and allow cross-checking of demands is needed.
- It may be possible to find a short term (LS2+recommissioning) solution, but should a more long term solution be identified?
- There will be a trial with the EN-ACE tool for the Linac4 beam tests this year, including extractin of check list information. There will be a possibility of feedback in the middle of May 2019 for OP to help them decide if this tool is suitable.

Discussion

- C. Roderick says the ASM tool was created with the intention of providing scheduling information for the operation of the accelerators, not to give a tool to construct a commissioning or shutdown planning. The API is then available for outside applications to interact with the schedule. The origin of using ASM for commissioning was added later and would require further development. J. Coupard says this has been a discussion with OP.
- C. Roderick says that in the context of looking for longer term solutions it would need to be decided if ASM would be wanted for scheduling. Currently it is not foreseen to provide a generic planning tool that could be used across CERN.
- V. Kain asks if the commissioing coordinators have an agreed list of requirements for the planning tool. J. Ridewood says they are all in agreement on what is required, but they are cautious about MS Project as it may not be available long term. J. Coupard says one option that might work would be not to use MS Project, but to make the data available in a format that can be imported into MS Project. J. Ridewood says there is a possibility of using JIRA, which makes the data available for import to MS Project.
- B. Mikulec says the integration with checklists need discussion. This is not currently possible in JIRA or MS Project. J. Coupard says that for the IT support in their group this is something that is planned for the Linac4 tests. A possible solution would be to use the scheduling tool to organise the timeline, and then to extract the dates to the checklist for day to day planning. J. Ridewood says the problem with that would be having two tools and ensuring data is reliably transferred between them.
- V. Kain says there are 3 different groups, with different requirements/areas of expertise: EN-ACE doing the HWC schedule, CO providing ASM and the operation scheduling tool, then ICS organsing checklists. H. Bartosik asks what the requirements are for the checklists and whether any more development is needed there. V. Kain says the check lists need a few upgrades which are in the pipeline. The main features are available, but the work needs to be done on the scheduling side and extracting the full list of 1000s of tests and using it elsewhere. H. Bartosik asks if the tool will be maintained, R. Steerenberg says this tool that has been confirmed for longer term support. J. Ridewood says there's a couple of smaller improvements that are fairly simple to implement that are intended, but no major changes are currently foreseen.
- V. Kain says that it is important to avoid entering the same information twice for efficiency and accuracy. The information should be shared with EN-ACE due to the possibility of conflicting demands. V. Kain asks C. Roderick and J. Coupard what functionality they would want to provide, and what sort of integration with ASM is desired. C. Roderick says there

have been some meetings on the subject, and distinction of short and long term requirements is required. Reinventing MS Project would not be suitable, and ASM was designed for containing and providing access to the accelerator schedule and MDs. Something is needed to enable the necessary functionality short term, without being too demanding in the long term.

- R. Steerenberg says the high priority item is tracking work where there is conflicting demands, which is not possible in ASM. The information should go from check lists to planning, then back to checklists after checking resources. During beam commissioning ASM is more suitable where there is less demand for specific individuals to do things. G. P. di Giovanni says that for PSB commissioning this may not be the case as it will require a lot of expert time for about 2 1/2 months. C. Roderick says one option would be to keep the scope of ASM as it currently is, but expose the data to MS Project as a half way solution.
- J. Coupard says it might be possible for EN-ACE to work with experts, who can give the data to EN-ACE and only give the minimum number of people direct access to MS Project, then publish the data elsewhere for everyone to be able to see it.
- V. Kain suggests that over the next weeks there should be some more discussions with the interested parties. Unfortunately a short term solution might be the focus now, and something different will be needed long term. R. Steerenberg agrees. The outcome of these discussions will be reported in one of the upcoming meetings.
- R. Scrivens says the tool could be used for EN-ACE and LEIR as well, and asks what the LHC do. R. Steerenberg says they have a specific machine check tool, but not a planning tool of this sort. B. Goddard says LHC should be included in the scheduling planning as there will be experts shared between LHC and injectors.

AOB

- V. Kain says that the integration for each machine will be discussed at a future meeting. This has been discussed previously, but due to things that have changed an update will be required.