Settings management working group update

Past year results and plans for LS2

Following last workshop

A list of tasks had been established: to be implemented during the run, or planned for LS2.

Concern about manpower for the working group: shifts, workload for OP and LSA team, priority...

➢ Thanks to a good OP/CO collaboration : many tasks were done anyway

Optics

Jmad models created for PSB (injection, extraction, rings), LINAC4,ELENA, PS…

JMAD model management much improved (release mechanism simplified)

Optic uploader : GUI improved, adaptation for the new machines

Cycle and BP types

LSA new implementation

-> possible to clone types when cloning cycle

-> fetch optics defined in BP type first, then, if empty, from optic parameter

Cycle/BP type configuration in PS and PSB :

define new types with correct optic tables, re-assign cycles with the new types. Once done, the optic parameter can be eradicated.

High level parameters and knobs

PS tune parameters : PFW and low energy quads knobs

LSA new implementation : scalar KNOB

-> KNOB for PS injection bump

-> new configuration of PSB open bump with standard knobs

Configuration work

YASP for PSB extraction + PS first turn

Configuration of LINAC4 L4T devices and parameters

Improvement of RF hierarchy in SPS to ease generation

Generation of all SPS timings from cycle type definition

Investigation on full LSA solution for ISOLDE settings

Configuration of high levels parameters for PSB transfer line quadrupoles (generation from optics)

New LSA functionalities

Function List supported now by app suite

New graph concept to simplify multiple hierarchies

October settings management workshop

Get the full team together during 2 days

Main goal : defined a prioritized list of tasks to be achieved during LS2

Discuss issues and new requirements

A good part of the workshop was dedicated to:

Get common understanding of the issues

Start discussing possible solutions

Agree on new requirements

Prioritize the tasks

Cost/benefit evaluation : final priorities to be decided together with the management

full product backlog settings management backlog

Tools improvement

➔ new tool for LSA DB configuration

➔ High level parameters available in the working sets

➔ Trim history with more functionality

➔ New tools for consistency checks

➔ Change history for BP and Cycle types

Issues solving/ new requests

➔ PSB extraction line configuration

➔ Transactional drive to HW

➔ Multiple non-multiplexed contexts

➔ Non-PPM devices used as PPM

➔ Transfer lines with strippers

➔ New POPS control in PSB

➔ KSW parameters and makerules in PSB

Simplification

➜ Hierarchies and makerules review and simplification (including ADT and collimators in LHC)

➜ Creation of new knobs and high level parameters (including Q and Q' in PSB)

➜ Generate settings from optics in PS and PSB transfer lines

Standardisation

➔ Naming convention

➔ YASP

➔ complete JMAD models for all machines/ lines

➔ Isolde settings management with LSA instead of files

➔ Migrates some rules from cycle editor to LSA makerukes in

AD/ELENA

➔ Review of coast model in SPS

Conclusion

First estimation of the full backlog

➔ 5 men/year for software changes

➔ 2 men/year for discussions and configuration work

This has to be prioritized with other OP software tasks, as the manpower is limited.

OP organization for software development in LS2 and the collaboration with CO still need to be defined with the management