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| Wire scanner acquisition PDR-2 Charge Document |
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| Preliminary Design Review (PDR-2)  13 Dec 2016, Trieste, Sweden |
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| **Charge for the PDR** |
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**Purpose of the PDR**

The purpose of the preliminary design review is to verify that the requirements and interfaces are well understood and documented, and that the conceptual design is well matched to these boundary conditions. Also, the PDR covers planning, risks and safety issues. This PDR is a planned follow up of the previous main PDR, covering some particular topics.

Passing the PDR is a prerequisite for expending significant resources on detailed design.

**Scope of the PDR**

The following related topics have been covered on a previous review

* Specifications of the WS acquisition
* Conceptual drawings
* Interfaces, interfaces requirements in particular with ICS deliverables including the Machine Protection system
* Integrated system functionality description

This PDR will focus on:

* Acquisition system for scintillator channels
* Engineering screens

**PDR Committee**

The PDR committee consists of:

* Tom Shea, ESS BI (Chair)
* Daniel Piso, ICS
* Andreas Jansson, ESS BI
* Ryoichi Miyamoto, Beam Physics/Commissioning/Operation
* Inigo Alonso, ESS Linac Integration
* Lali Tchelidze, AD Safety
* Enric Bargallo, AD RAMI

**Presenters and Observers**

* Mario Ferrianis, Elettra
* Sandi Grulja, Elettra
* Stefano Cleva, Elettra
* Benjamin Cheymol, ESS BI
* Daniel Piso, ICS

**Committee Charge**

The supporting documentation will be provided to the committee about two weeks in advance, on the review Indico page, which also contains the agenda. Documents will include:

* Preliminary design report of the scintillator readout electronic
* Preliminary design report of the BI specific software
* Report from PDR-1

Presentations will also be available on Indico.

**Committee Charge**

The committee is asked to consider the following questions. Where appropriate, please organize the responses by component/system.

1. Is the scope of the system and each component well defined?
2. Is the conceptual design likely to fulfil all requirements and respect all interfaces, and is it mature enough to begin detailed design?
3. Is the interface with ICS well understood and functionality well covered? Is the control integration of the system properly addressed?
4. Is the planning appropriate and consistent with the overall ESS plans and milestones? Are the key interface milestones (e.g. with ICS~~)~~ properly identified
5. Is there an acquisition strategy for major procurements appropriate for this design stage, and is the lead time for procurements and contracts properly accounted for in the planning?
6. Is the verification strategy appropriate for this stage of the project?
7. Have potential safety hazards been properly identified and considered in the design choices? If required, is there a mitigation plan?
8. Have reliability aspects been considered in the design choices at a level appropriate for this stage of design?
9. Have the project risks and opportunities been properly identified and their impact considered in the conceptual design? If required, is there a mitigation plan?
10. Were any other issues identified during the review?

The results of the review should be summarized in a short report, outlining the answers to the above review questions and whether the review is considered passed, passed with action items, or failed. The report may also provide findings, comments, and recommended actions. Actions should be clearly categorized as one of the following:

* Must be addressed before PDR is considered closed
* Must be addressed prior to the CDR
* Must be addressed at some time during the project