



ILC Controls Telecon
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RDR Report Writing

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RDR Report Writing



- Control & Timing Systems chapter (15 pages)
- LLRF Chapter (5 pages)
- Controls & Timing section for each area system chapter (1 page each) ...?
 1. Electron Source (Brachmann)
 2. Positron Source (Sheppard)
 3. Damping Rings (Gao)
 4. RTML (Tenenbaum)
 5. Main Linacs (Adolphsen)
 6. Beam Delivery (Seryi)
- (Presumably) LLRF section for each area system chapter
- Updated BCD chapter
- Immediate deliverables (by end of August)
 - Chapter outlines + list of figures

- 11.1 Controls Standard Architecture
- 11.2 Timing System
- 11.3 Diagnostic Interlock Layer
- 11.4 Global Network
- 11.5 Machine Protection
- 11.6 Low level RF
- 11.7 Feedback
- 11.8 Integration with Instrumentation
- 11.9 Machine Detector Interface
- 11.10 Instrumentation – Beam position monitors
- 11.11 Instrumentation – Beam profile monitors (transverse)
- 11.12 Instrumentation – Longitudinal
- 11.13 Instrumentation – other (intensity, loss, ring)

■ **Control System Engineering**

- Management/Admin
- Integration and Testing
- Electronic Engineering
- Technical Support
- Control System Global Software (Applications, Framework, Infrastructure)
- Controls Computing (Sys Admin, Networks, Databases, Computer Security)
- Technical Systems Applications (fore each area)

■ **Global Control System Equipment**

- Computers
- Network Infrastructure
- Control Rooms

■ **RF Phase & Timing Distribution System**

- Central system
- <Each area>

- Protection Systems
 - MPS
 - Beam Containment System
 - Personnel Protection System
 - (Diagnostic Interlock Layer)
 - (Machine interlock distribution network)
- Front-end Control System Equipment
 - <Each area>
- Controls/LLRF Relay Rack Assembly & Test
- LLRF Engineering
- LLRF Equipment

■ Overview

- Introduction, philosophy, top-level requirements, etc
- Standards and Standardization, Quality Assurance
- High Availability (requirements, impact on architecture, etc)
- Requirements applied to the technical groups (eg DIL, standards, etc)

■ Control system

- Standard Architecture (software, framework, applications, etc)
- Computing (servers, networks, databases, archiving, data management, etc)
- Front-end electronics
- Diagnostic Interlock Layer

■ Timing and RF Phase Reference

- Timing and sequence generator
- RF phase reference generator
- Timing and RF phase reference distribution

■ **Protection Systems**

- Machine Protection System (MPS)
- Beam Containment System
- Personnel Protection System (PPS)

■ **Beam-based feedback**

- Pulse to pulse feedback infrastructure
- Intra-train feedback systems.

- **Rough 1st Draft** KEK MAC, Sept 20
 - Detailed outline of section, incl. topics to be covered in description, subsystems, design
 - List of any graphics requiring pubs help

- **Further drafts** October
 - Text submitted to editors, graphics developed

- **Complete Draft** Valencia, Nov 6
 - Text should have been passed by editors, nearly final graphics and tables

- **Also input to TDR R&D plans Chapter**

- Writing the RDR is an opportunity for us to consolidate our current thinking and to document it in one place.

- The RDR (and presumably the TDR) will be considered abbreviated snap-shots of the BCD, which will remain a dynamic document
 - At RDR release, we need to ensure the BCD and RDR are in sync.
 - The BCD does not have a page limit, so can go into more detail.

- Seek co-editors from each region to participate with final package integration, checking for consistency & completeness, edit, etc (in progress).
- Get input on the rough draft outline, finalize first draft outline by Aug 24.
- Identify authors / POCs for each section in the C&T chapter and for each AS, GS, and TS sub-section (by Aug 24).
- Section authors generate outline and preliminary lists of figures (by Aug 31).