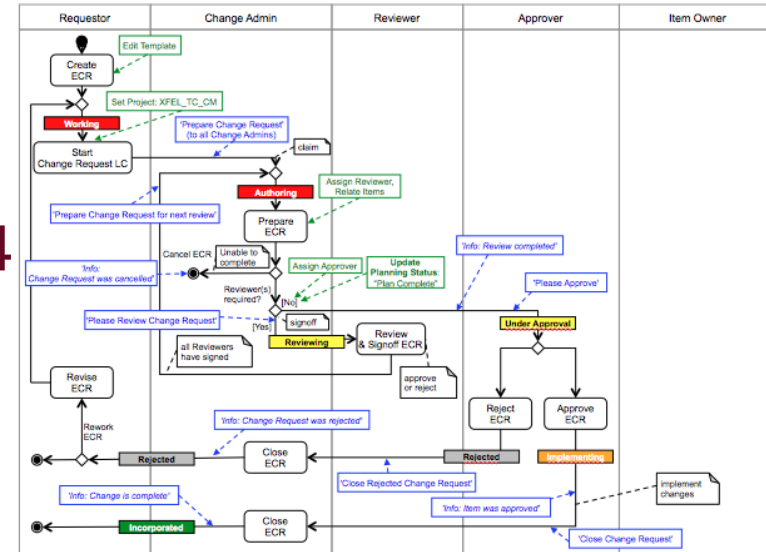


Change Management Implementation

Benno List, Nick Walker
DESY

4th AD&I Meeting, 26.9.2014



The Basic Path

Propose

1. Proposing a design change

- Change Request (CR)
- Change Request Creator (CRC)
- Written document
- Submitted to Change Management Board (CMB)

Review

2. Expert review

- Reviewed by CMB with additional experts as needed
- CMB defines the scope of the review
- Communication with all stakeholders
- Capture relevant documents

Decide

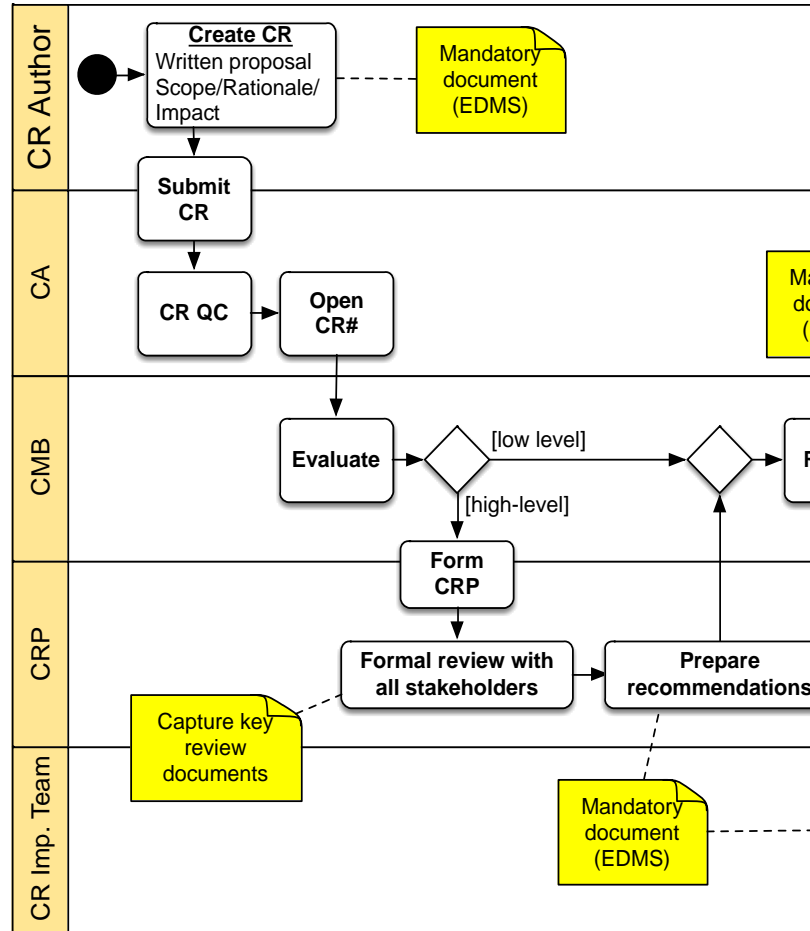
3. Decision

- Results with recommendation from (2) presented to ILC Director
- Written summary document
- ILC Director (in consultation with the CMB) makes final decision, or
- Decision is escalated to LCC directorate.

Implement

4. Updating TDD to reflect the change

- CMB identifies team (and team leader) to implement change.
- Generate scope of work
- Develop implementation plan
- Release of updated TDD



Change Management for the ILC

Release Version 1
23.01.2014

Prepared by: B. List, M. Harrison, N. Walker

Table of Contents

EDMS: D*1057375

Introduction 2

Why Change Management? 2

Proposed Change Management process for the LCC phase 3

Overview 3

1. Initiation: Change Request (CR) creation 4

2. Evaluation (expert review) 5

3. Decision 5

4. Implementation 6

Implementation details 7

Organisational aspects 7

Dealing with process documents – ILC-EDMS 7

Summary 9

Appendix I Overview of LCC Change Management Process, roles and responsibilities 10

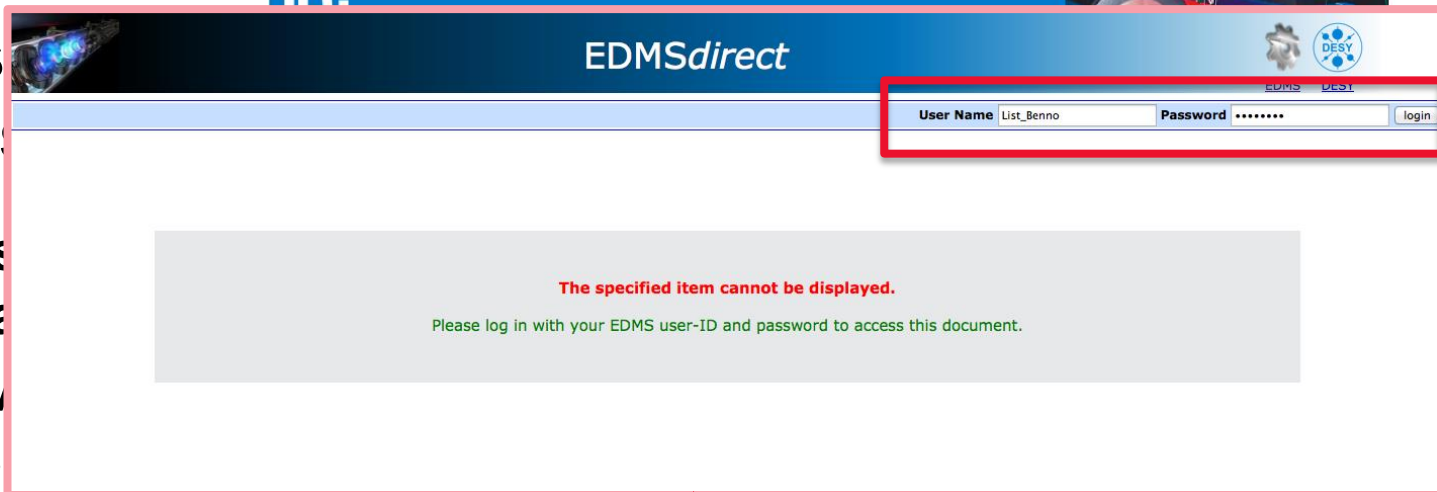
Addendum A Change Request Register status flags and their meaning 12

Introduction

The Technical Design Phase II of the GDE has produced an integrated, consistent and complete design of the ILC in its 500 GeV baseline configuration. This design is described in the Technical Design Report (TDR), which is a summary of the detailed body of specifications, calculations, drawings and CAD models that form the Technical Design Documentation (TDD) stored in ILC-EDMS. The level of maturity of the TDD varies considerably, ranging from very detailed and engineering-ready drawings for the cryomodule and its sub-assemblies, to relatively conceptual (non-engineering) design schematics, in particular for the accelerator layouts and associated CFS. Irrespective of the level of detail, it is inevitable that these design elements will evolve as R&D progresses and as we move towards a site-specific design. Furthermore, not only do we expect change in the existing parameters, specifications and drawings, but we also expect that the level of detail of those design elements which remain essentially unaltered to increase. Dealing with these changes in a consistent and efficient manner requires some form of Change Management, especially with a globally distributed design team.

Website ilc.de

- Lists in part
- Provides files to EDMS client
- Get your password (and account) from `ipp-support@desy.de`



Change Request documents in EDMS

The browsable tree below provides direct access to the change management related documents in EDMS.

>

Change Management (0 / 3)

>

Change Management Board (0 / 1)

>

Change Requests (0 / 2)

>

ILC-CR-0001: Insertion of a dogleg in the electron side

Insert a dogleg of ~400m long between the end of electron linac and the BDS. This should place the BDS on the extension of the electron linac line. 2014-09-23

D*1082395,A,1,1

D*1082395,A,1,1

>

ILC-CR-0002: Baseline optics to provide for a single L*

ILC-CR-0002: Baseline optics to provide for a single FFS L* (QD0 exit - IP distance) optics configuration 2014-09-23

D*1082495,A,1,1

D*1082495,A,1,1

Last update date: Fri Sep 26 10:06:34 CEST 2014

Search

<< >>

5

26.09.2014

B. List, Timing Constraints



Search [] Advanced Search... Home Exit DESY Benno List

Main Menu Classification Submit Bookmark History

Lists

- Work Lists
- My Lists
- My Teams

Create

- Part
- Documents
- MRO Items
- Others ...

Preferences

- My Preferences
- Change Password
- Change User Data

Logs

In Service

Help

- EDMS Help
- EDMS-FAQ
- EDMS-Info
- Downloads
- DESY Imprint
- Copyright 2012

ILC Document , D00000001083445,A,1,1 , Item Info : Summary

Summary Properties Related Items Files Next Steps Classification Reviewer/Approver All Versions Access

Related Items

Attaches

Export Table As CSV HTML XML

File Name

- CR1-Dogleg-2014-0925-Yokoya_atamp.pdf
- CR1-Dogleg-2014-0925-Yokoya.jpg
- CR1-Dogleg-2014-0925-Yokoya.pptx
- CR1-Dogleg-2014-0925-Yokoya.pdf

Relates To Documents : 1 object

Name

- ILC-CR-0001: Insertion of a dogleg in the electron side A.1.1

Is In Team Folder : 1 object

Name

- ILC-CR-0001 Add return dogleg to target by-pass...

Is Description for : 1 object

Name

- Change Request 1: Insert Dogleg A.1.1

Is In Team Folder : 1 object

Name

- ILC-CR-0001 Add return dogleg to target by-pass...

Purpose: for preliminary publication

More Properties ...

CR1: Insert Dogleg

K Yokoya
CMB mtg 2014.9.25

2014/9/25 CMB Yokoya

REGION

Adds an additional estimate 400 m of tunnel to the electron side of the machine. Adds an additional 400 m to the positron source and electron R.T.M.L. lattice. Displaces the existing BD 5 axis transverse by ~2m.

COST IMPACT: EST. 30 MILCU

Initial estimate by requestor based on cost of existing target bypass dogleg (beamline + tunnel).

Requested and prepared by: Keuru Yokoya (KEK)


Change Request Register (EDMS: D*1056505)

- Will be central point of information
- Lists also (possibly) upcoming CRs
- Will be updated after each CMB Meeting and when new CRs arrive

	A	B	C	D	E	F	G	H	I	J	K	L	M
	No.	Creation Date	Last Modified	Creator	Primary WG	Title	Description	State	Owner	Impact	Document	Next deadline	Remark
1				M. Harrison	ML	Adopt DKS as HLRF Scheme	The DKS (Distributed Klystron System) HLRF distribution scheme shall be the sole baseline design; KCS will not be pursued further.	In preparation	Change Requestor	Administrative			
2				N. Walker	RTML / ML	Move Bunch Compressor to Main Linac	The Bunch Compressor formally becomes a part of the Main Linac instead of the RTML.	In preparation	Change Requestor	Administrative			
3	ILC-CR-0002	02.09.14	09.09.14	G. White	BDS / MDI	Adopt equal L* for both detectors	Find solution for single L* value for BDS and both detectors.	CMB Review	Change Management Board	High	D*1082495	09.10.14	Next CMB meeting in Belgrade
4				K. Buesser	MDI / CFS	Adopt 18m shaft solution for detector hall	Consolidated solution for IR hall / layout which supports surface construction of the detectors.	In preparation	Change Requestor	High			
5				N. Walker	ADI	Update top-level parameters	Correct errors in reported luminosity for 500 GeV baseline and 1 TeV (b) parameters.	In preparation	Change Requestor	Administrative			Is this really a CR? Also questionable if this is really just administrative.
6	ILC-CR-0001	01.09.14	01.09.14	K. Yokoya	PS / BDS / RTML	Add return dogleg to target by-pass	Add additional lattice to bring BDS beamline on axis with main linac, to accommodate future >1 TeV beam energies.	CMB Review	Change Management Board	High	D*1082395	09.10.14	Next CMB meeting in Belgrade
7				H. Hayano	SRF	Adopt Saclay-like tuner as baseline	Adopt LCLS-2 tuner and associated helium tank and flange solution.	Under consideration		Low			
8				H. Hayano	SRF	Magnetic shield inside helium tank	Place magnetic shielding inside helium tank to simplify string / cryomodule assembly.	Under consideration		Low			
9				E. Paterson	PS	Add timing adjustment chicane system	Implement a timing adjustment chicane in the positron injection system to allow for fine path-length adjustment.	Under consideration		Medium			Part of global-timing task force review
10				N. Walker	BDS / MDI	Alternative FF scheme removing strong sextupoles from FD	Consider alternative FF schemes which would remove the strong sextupole magnets from the FD.	Under consideration		High			
11				B. Parker	BDS / MDI / CFS	Reduce IR crossing angle	Develop highly-compact SC FD to allow for smaller crossing angle.	Under consideration		High			
12													

CR Preparation

- Please download and fill out template (D*1082175) if you prepare a CR
- Complete and send to BL by email
- CRs can be submitted by:
 - TB members
 - WG coordinators
 - Phys&Det Representatives

 LINEAR COLLIDER COLLABORATION Designing the world's next great particle accelerator		
<small>for official use only</small>		
CHANGE REQUEST NO. ILC-CR-NNNN	EDMS No: D*0XXXXXX	Created: 27-08-2014
		Last modified: 27-08-2014
<p>[ADD BRIEF TITLE HERE]</p> <p>[Few sentences describing the main subject of the change request]</p> <p>RATIONALE</p> <p>[Outline briefly as possible the main reasons for requesting the change]</p> <p>SCOPE: [list of WGs or areas affected]</p> <p>[Brief description of the overall scope of the modifications being proposed, including possible impact on other areas]</p> <p>VALUE/SCHEDULE IMPACT</p> <p>[Brief explanation of the estimated value figure if available. Also if know, impact on construction schedule. Value should also include explicit labour if possible]</p>		
Requested and prepared by:	Your name	



- Agenda is open
- Participation limited to CMB members
- Minutes will be available
- CMB can review and decide on CRs
- CMB can also ask for more info or delegate to a Change Review Panel
- CMB members are TB members + CFS expert (Vic Kuchler) + 2 detector experts (J. List, T. Markiewicz) and Change Administrator (BL)

LINEAR COLLIDER COLLABORATION
Designing the world's next great particle accelerator

Change Management Board (CMB) Members

Date
EDMS ID

23.09.2014
000000001083165

Name	Affiliation	Email	Role
Mike Harrison	BNL	harrison@bnl.gov	LCC Assistant Director for ILC, CMB Chairman
Vic Kuchler	FNAL	kuchler@fnal.gov	CFS Coordinator
Benno List	DESY	benno.list@desy.de	Change Administrator
Jenny List	DESY	jenny.list@desy.de	Representative for Physics & Detectors
Tom Markiewicz	SLAC	twmark@slac.stanford.edu	Representative for Physics & Detectors
Olivier Napoly	CEA	olivier.napoly@cea.fr	ILC Technical Board member
Marc Ross	SLAC	mross@slac.stanford.edu	ILC Technical Board member
Nikolay Solyak	FNAL	solyak@fnal.gov	ILC Technical Board member
Nobuhiro Terunuma	KEK	nobuhiro.terunuma@kek.jp	ILC Technical Board member
Nicholas Walker	DESY	nicholas.walker@desy.de	ILC Technical Board member
Akira Yamamoto	KEK	akira.yamamoto@kek.jp	ILC Technical Board member
Yasuchika "Kink" Yamamoto	KEK	yasuchika.yamamoto@kek.jp	ILC Technical Board member

EDMS: D*1083165

<http://agenda.linearcollider.org/conferenceDisplay.py?confId=6513>

Summary

- **ILC Baseline Configuration is under Change Control**
- **CRs can be submitted by TB members and WG coord's**
- **CRs will be processed by Change Management Board**
- **Change Control Process is open, your input about current change requests is welcome and needed**
- **Keep yourself informed about CRs at <http://ilc.desy.de/cm>**



Additional Material

Roles and Responsibilities

Formal CM title	LCC implementation	Responsibilities
CR Author	Limited to ILCTB members, WG coordinators, other approved individuals (e.g. physics and detector reps.)	Preparation of clear and unambiguous Change Request document. Point of contact for questions arising during review process.
Change Administrator (CA)	B. List (DESY, ILC-EDMS)	Supports and facilitates all phases of a CR. Primary recipient of a newly created CR. Provide EDMS support for CR process. Maintains Change Request Register. Monitors progress during Implementation Phase. General documentation control. Reports to the CMB.
Configuration Management Board (CMB)	ILC Technical Board (ILCTB), P&D representatives (2), CFS representative (1), CA (1)	Primary management body for change management. The Chair provides final formal decision after consultation with the board. Convenes a Charge Review Panel (and a chair) when needed (at the boards discretion). Provides clearly document assessments and decisions on all CRs.
Change Review Panel (CRP)	Ad hoc review team, formed by CMB when needed. Specific to each CR identified as requiring higher-level review. Membership, chair and charge at the discretion of the CMB, but generally representative of stakeholders and domain experts.	Review in a timely fashion (defined by ILCTB) the change request, as specified in the charge provided by the CMB. Provide a written consensus report on its findings and recommendations, to be submitted to the CMB.
Change Request Implementation Team (CRIT)	Identified team (and team leader) who will implement the changes to the design documentation. ILC-EDMS support provided by the CA.	Prepare (with the help of the CA) a plan for implementing all necessary modifications to the technical design documentation, including milestones. Implement the plan.

CRR Status Flags

	Status	Meaning
Informal pre-CR	Under consideration	<u>Place-holder</u> / capture for upcoming ideas being discussed by ad hoc groups.
	In preparation	In transition to a formal CR (i.e. CR document being prepared for submission)
Formal CR	Submitted	CA has formally received mandatory CR document and assigned a number.
	CMB Review	Formally being discussed by CMB
	Deferred to Review Panel	CRP formed by CMB and charged to review CR.
	Accepted / Deferred	Accepted but implementation deferred until a more convenient time.
	Accepted / Implementing	Accepted and change is to be immediately implemented.
	Rejected	Assumed closed.
	Completed	If accepted, change has been fully implemented.