

Next Step

A view seen from the RD

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Contents

- Time line of the LOI process
- Quick overview of the submitted DBD
- Post 2012 stage for physics/detector

The time line of the LOI process

- Oct. 2007: Call for LOIs was made by ILCSC
appointment of RD to conduct the process
 - Jan. 2008: Detector management was formed
 - Mar.2008: IDAG formed, 3 LOI groups known
 - Mar.2009: 3 LOIs submitted
 - Summer 09: IDAG recommendation for validation and ILCSC's approval
 - Oct 2009: Work plan of the validated groups
 - **End 2011: Interim Report**
 - **October 2012: DBD draft reviewed by IDAG**
 - **December 2012: PAC review**
 - **End 2012: Detailed Baseline Design Report**
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- 2007
RDR
2008
2009
2010
2011
2012

Overview of the DBD

- **DBD draft: Completed and submitted to PAC for review.**
- **The completed draft is a compilation of the all the achievements of the efforts of many colleagues during the LOI period.**
- **We have *almost* reached the expected goal of the LOI process.**

Remarks on the achievements

- **The LOI process provided a framework to coordinate the efforts of the community.**
- **The management did not provide any budget for R&D.**
The participating groups worked for their budget and there were difficult moments.
- **The report is a symbol of the strong desire and will of the community for ILC, which we relied upon and appreciate much.**

Milestones till draft completion

- **Format WG started December, last year.**
 - Arrangement with GDE for a common Format
- **Monitoring of the planned contents by IDAG**
 - During KILC12 in Daegu, Korea, Last April**
- **Review of the first draft by IDAG**
 - The entire draft was submitted end Sept.**
 - IDAG met during LCWS12, in Arlington, last October
 - Each author group was interviewed by IDAG**
- **Submission to PAC after polishing end November**
- **PAC review on Dec. 13/14 at KEK**

The review by IDAG

- IDAG validated the LOIs, and has watched all the activities through the entire process to give us advices. We owe much to IDAG for the accomplishment.
- IDAG is informed of every detail of the progress of the groups and the DBD contents.
- **Three members, including the chair, joined the PAC review.**
- **(IDAG was the ideal body to review the DBD with PAC.)**
- **We received several suggestions to consider for the final version in the PAC meeting.**

The messages in the DBD

- ✓ The case of ILC physics be presented.
- ✓ The feasibility of the detectors and software technologies be proven.
- ✓ The capability of the detectors to accomplish aimed physics be demonstrated.
- For the last point, the communication with the GDE teams was crucial.
e.g. IR design, Push-pull issues, SB2009, beam parameters/b.g.

DBD volumes

**There are 2 volumes of DBD.
These volumes will make a part of TDR**

Volume 1: Physics

Volume 2 (2 parts): Accelerator

Volume 3: Detector

(There may be an executive summary, which may then shift all the other volumes.)

Physics volume

- All the considerable physics topics are summarized in 220 pages. They include:
- *Precise measurements on the Higgs particle at different energies,*
- *Identification of the newly discovered 125GeV Higgs boson-like particle,*
- *Possible deviations from the SM Higgs case,*
- *And many others for the possible future directions.*

Physics and Detector, DBD, volume

- **Introduction chapter**

general matters like experimental conditions

- **Common chapter**

Common activities/matters to both ILD & SiD

(component R&D, MDI issues, beam

instrumentations, Eng. Tool, Simulation Tool)

Detector chapters, SiD and ILD

- These are the main part of the volume with ~190 pages each.

Concept, design, component R&D (feasibility), integration, software, performance (benchmark simulation), cost estimation

Summary and Future chapter

Summary:

Future:

- We are still in the R&D phase.

The R&D will continue for better performance or cost reduction.

Engineering studies need to be enhanced toward construction phase.

- **More over we wish the project advances toward realization with the completed TDR.**

Handover of the draft to ILCSC

- We announced the completion of the draft on Dec.15 and handed the draft to the ILCSC chair.

(Personal observation:

It was received well or positively by the ILC colleagues and the press.)

- **This was fine. Looking forward is also fine.**
- **However:**
The draft is incomplete and rough yet.

Remaining works

- There are much work left to fully complete DBD.
- *Simulations need to be finished.*
- *The results must be compared between ILD and SiD, and difference need to be understood.*
- *Cost estimation is not reached to the expected level of completeness.*
- *Editing and format arrangement, Figures, etc.*
- *Prepare for printing*

I do NOT feel like talking about the next step for the moment.

Call for signatory

- The draft will soon be made open to the community in the incomplete form.
- There will be a call for signatory:
Contributors,
Possible future participants,
Supporters of the ILC project

The signatory list will appear in all the volumes combined with the accelerator's contributors.

Post 2012 program

We have come to the goal of the LOI process.

It is strongly desired to define the next objectives of the activity *in concrete as soon as possible*.

We, the RD, will hand the completed report to ILCSC next February, finishing the final polishing, and complete the mandate except printing the report.

The concept groups wish to continue R&D and include engineering studies toward project realization. How to organize this and to secure resources for these works is a critical issue now.

The groups

- need to define how to polish the design and approach the construction phase,
- need to secure resources to continue the advanced R&D,
- need to think how to participate in the project realization.

The new scheme must be formed to help these.

Last remark

After all, I believe the enthusiasm of the community is the driving force for ILC.

Keep your strong wish and will.