

The Review on the ILC accelerator related activities at KEK

Fumihiko Takasaki

Jan. 25 2006

This is the 3rd review on the activities of the ILC accelerator group in the past.

We appreciate the advice and suggestions in the last two reviews.

We hope that this review will be useful for the ILC group.

Purpose of this Review

To get another advice and suggestions to what the ILC team of KEK plans to do in the coming year.

Thank you for your help.

Global Design Effort

- B. Barish Dec. 9,05 -

- The Mission of the GDE
 - Produce a design for the ILC.
 - Coordinate worldwide prioritized proposal driven R&D efforts.

- By the BCD, we chose Baseline Parameters.
- The GDE is moving from the BCD into the RDR.
- By the RDR, we will have an ILC Design with costs so that we can show it to the funding Agencies.

The GDE Plan and Schedule

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2005 2006 2007 2008 2009 2010



→ **Baseline configuration**

→ **Reference Design**

→ **Technical Design**



Background Information on the GDE

For refreshing our memory

Function of the Central Team and the Regional teams

ILCSC - Daigu Sept 05 : B. Barish

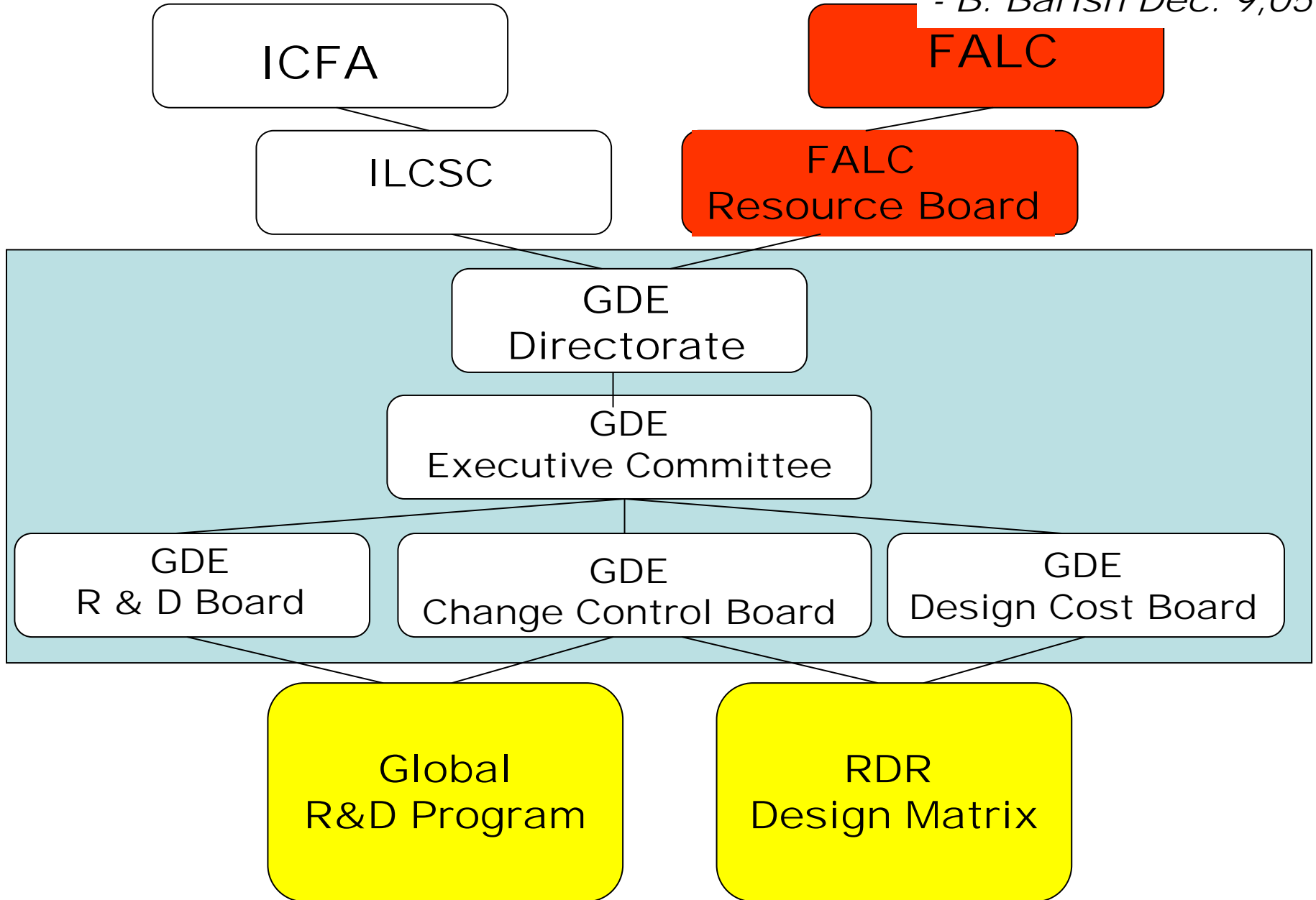
- The Central Team is the focal point for the **ILC design effort**, holding the schedule, major milestones, and parameter list, and providing intellectual leadership under ICFA guidance.
- **Regional Teams perform the R&D and design work of ILC systems in close coordination with the Central Team.**

Responsibilities of the Central Team

- Manage the execution of the ILC design and associated R&D;
- Establish technical and administrative controls to ensure that the agreed-upon work toward the RDR and TDR is executed within their approved cost, schedule and technical scope under the MOU; and
- Maintain and control the machine parameters database and configuration documents, and direct overall design effort.

GDE RDR / R&D Organization

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GDE Structure and Organization

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- **Executive Committee for Baseline Configuration**

- **GDE Director**
 - Barish
- **Regional Directors**
 - Dugan – Americas
 - Foster – Europe
 - Takasaki – Asia
- **Accelerator Leaders**
 - Yokoya - Asia
 - Raubenheimer - Americas
 - Walker - Europe



GDE
Executive
Committee

- **Responsible for decisions and documentation for the Baseline Configuration Document (BCD)**

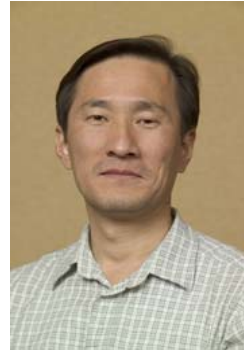
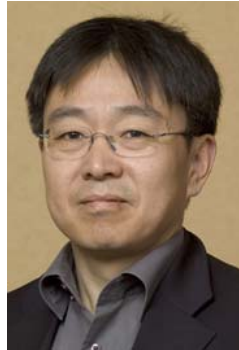
- Discuss issues by a Tele-conference once a week.

GDE Organization

GDE members : 49 → 60

- Americas 21
- Europe 23
- Asia 16

16 GDE members from Asia



Norihito
Ouchi



Nobuhito
Terunuma



GDE Organizational Evolution for RDR

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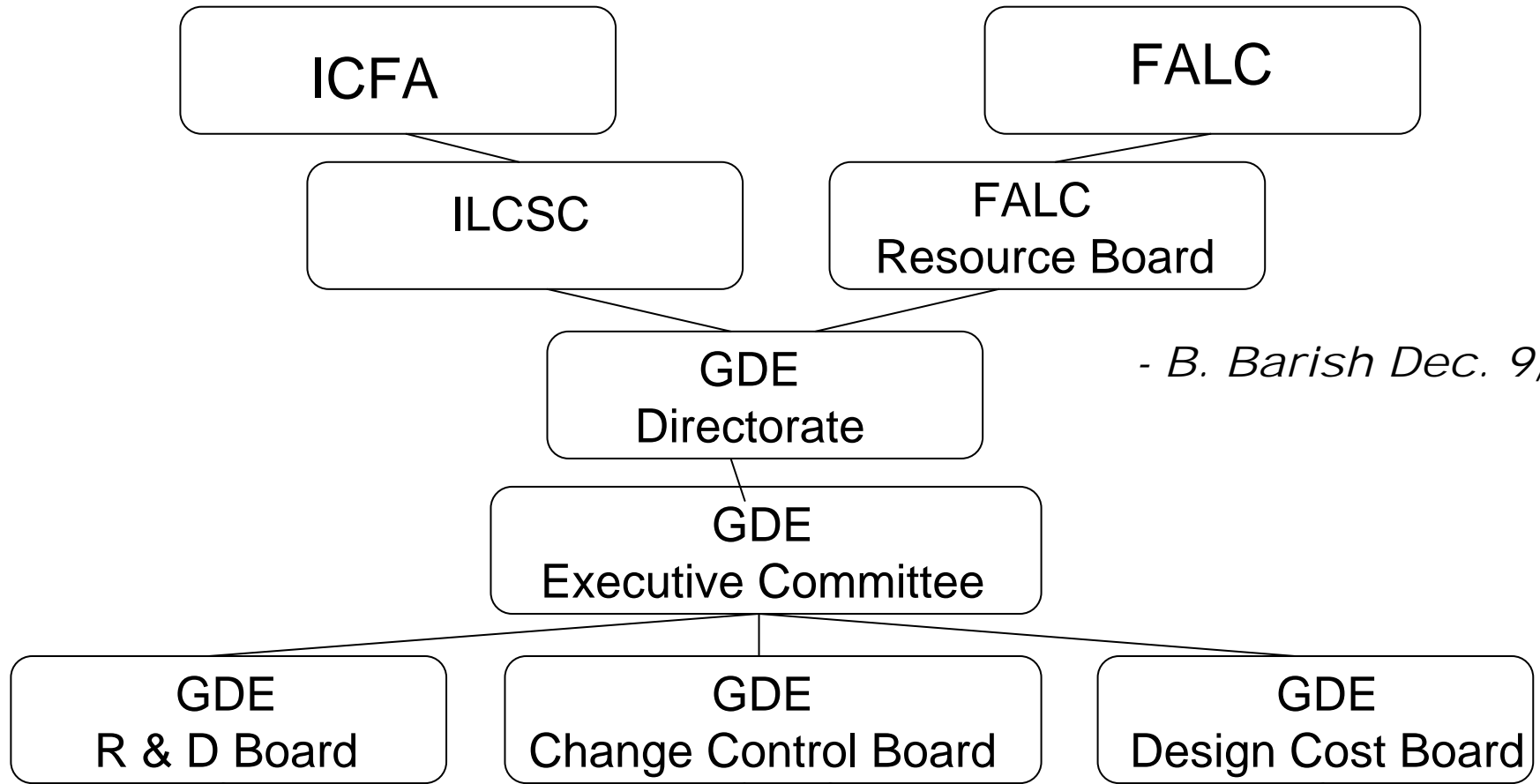
- Change Control Board (CCB)
 - The baseline design will be put under configuration control of the CCB.
- Design / Cost Board (DCB)
 - The DCB will coordinate the reference design effort, including costing, etc:
 - Check the consistency of the overall design.
- R&D Board (RDB)
 - The RDB will evaluate, prioritize and coordinate the R&D program with a single chair

Approach to ILC R&D Program

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- Proposal-driven R&D in support of the baseline design.
 - Technical developments, demonstration experiments, industrialization, etc.
- Proposal-driven R&D in support of alternatives to the baseline
 - Proposals for potential improvements to the baseline, resources required, time scale, etc.
- Develop a prioritized **DETECTOR** R&D program aimed at technical developments needed to reach **combined** design performance goals.

GDE RDR / R&D Organization



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**ILC
R&D
Program**

Global
R&D Program

RDR
Design Matrix

**ILC
Design
Effort**

	<u>Area Systems</u>					
<u>Technical Systems</u>	e- source	e+ source	Damping Rings	RTML	Main Linac	BDS
Vacuum systems Magnet systems Cryomodule Cavity Package RF Power Instrumentation Dumps and Collimators Accelerator Physics						
<u>Global Systems</u>						
Commissioning, Operations & Reliability Control System Cryogenics CF&S Installation						

Charges of Area System, Tech.
System and Global System and
Also Schedule toward RDR

- GDE-EC Jan 13, 2006 -

Described in a file,

[RDR_Charges_01-12-06.doc](#),

Sent recently to all GDE members

ILC International Linear Collider
Office of the Global Design Effort
PO Box 500
Batavia, IL 60510
USA
630-840-8907

November 18, 2005

Dr. Gerry Dugan
Regional Director for the Americas

Dr. Brian Foster
Regional Director for Europe

Dr. Fumihiko Takasaki
Regional Director for Asia

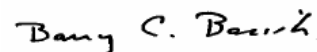
Dear Regional Directors of the GDE

As you are well aware, the detailed technical design and implementation of the ILC will be intimately connected to the features of the site where it will be located. For that reason, it will be important to have real site information during the technical design effort in a couple years. However, at the present time, our design effort is conceptual and we have much less need for specific site information. Therefore, it would be premature to solicit actual site proposals at his time.

More specifically, our needs during the reference design effort are to learn about the factors that are important in doing the siting and can help set site requirements. Secondly, it is important to develop an ILC reference design that is consistent with the features of real sites. For these reasons, I am requesting each regional director to produce information on one "sample" site in their region by this December 2005. Even though the final candidate sites are likely to be different sites, the information on these sample sites will help to insure that we produce a realistic reference design.

Let me assure you that the sample site information from the three regions will not be used to compare one site with another or to do any preliminary site selection, or in a way that will reveal those sites. Instead, we plan to study siting issues and to develop a reference design for a range of site conditions. We will not make public any detailed or individual site information and the chapter we produce on siting in the Reference Design Report will not discuss or compare individual sites.

Sincerely,



Barry C. Barish
Director, ILC Global Design Effort

Request for Sample Site Information

**To be used to
study siting issues,
in advance of a call
for "expressions of
interest" to host
the ILC**

- B. Barish Dec. 9, 05 -