RD's Report on Detector Activities

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June 04, 2008 @ Dubna

Progress since the last meeting

Plans in Warsaw

Next step

Decisions at the last ILCSC in February

- The purpose of the LOI:
  Submitted LOIs will be validated by IDAG to be implemented in the GDE's technical design.
- The due date of LOI: end March, 2009
- A new time line: to keep synchronized with that of GDE.

Phase I till 2010 ➔ an interim report (?)
Phase II till 2012 ➔ ILC proposal of GDE with detectors

- Call for EOI (Due date End of March 2008)

- Managing structure:
  RD + Regional contacts,
  LOI groups, Common task groups

Progress since the last ILCSC meeting

- Formation of IDAG

  Member List: next page

- Trial to meet during the Sendai ACFA workshop (March 2008) did not work due to the short preparation time. But those members who could come, got together. In particular the chair participated in the workshop allowing detailed discussions on how to proceed.

IDAG was formed

In total 16 members

10 Experimentalists
3 Accelerator physicists
3 Theorists

Most of the experimentalist are from out of ILC community.

All the accelerator members and theorists are ILC experts

- Prof. Michael Danilov (ITEP)
- Prof. Michel Davier (LAL) (Chair)
- Prof. Abdelhak Djouadi (Paris Sud)
- Dr. Eckhard Elsen (DESY)
- Prof. Paul Grannis (SUNY)
- Prof. Rohini Godbole (IIS)
- Dr. Dan Green (FNAL)
- Prof. JoAnne Hewett (SLAC)
- Prof. Thomas Himel (SLAC)
- Prof. Dean Karlen (Victoria)
- Prof. Sun-Kee Kim (Seoul)
- Prof. Tomio Kobayashi (Tokyo)
- Dr. Weiguo Li (IHEP)
- Prof. Richard Nickerson (Oxford)
- Dr. Sandro Palestini (CERN)
- Prof. Nobukazu Toge (KEK)

Call for Expression of Interest

Required were:

- Statement of group's willingness to submit an LOI with studies of the agreed benchmark reactions,
- 2 names of representatives and participating institutions.

- Despite the close due date, three concept groups expressed their interests.

  ILD, SiD, the 4th concept

Establishment of the formal channel to contact LOI groups

ILD group

- Representatives: Ties Behnke (DESY), Yasuhiro Sugimoto (KEK)
- Participating Institutions: 169 (28 counties)

SiD group

- Representatives: John Jaros (SLAC), Harry Weerts (ANL)
- Participating Institutions: 49 (8 counties)

The 4th concept group

- Representatives: John Hauptman (Iowa State), G.P. Yeh (FNAL)
- Participating Institutions: 17 (10 counties)

Unbalanced in size. The effect is seen in the speed of decision making so far.

Participation is geologically clustered with some smearing at present.

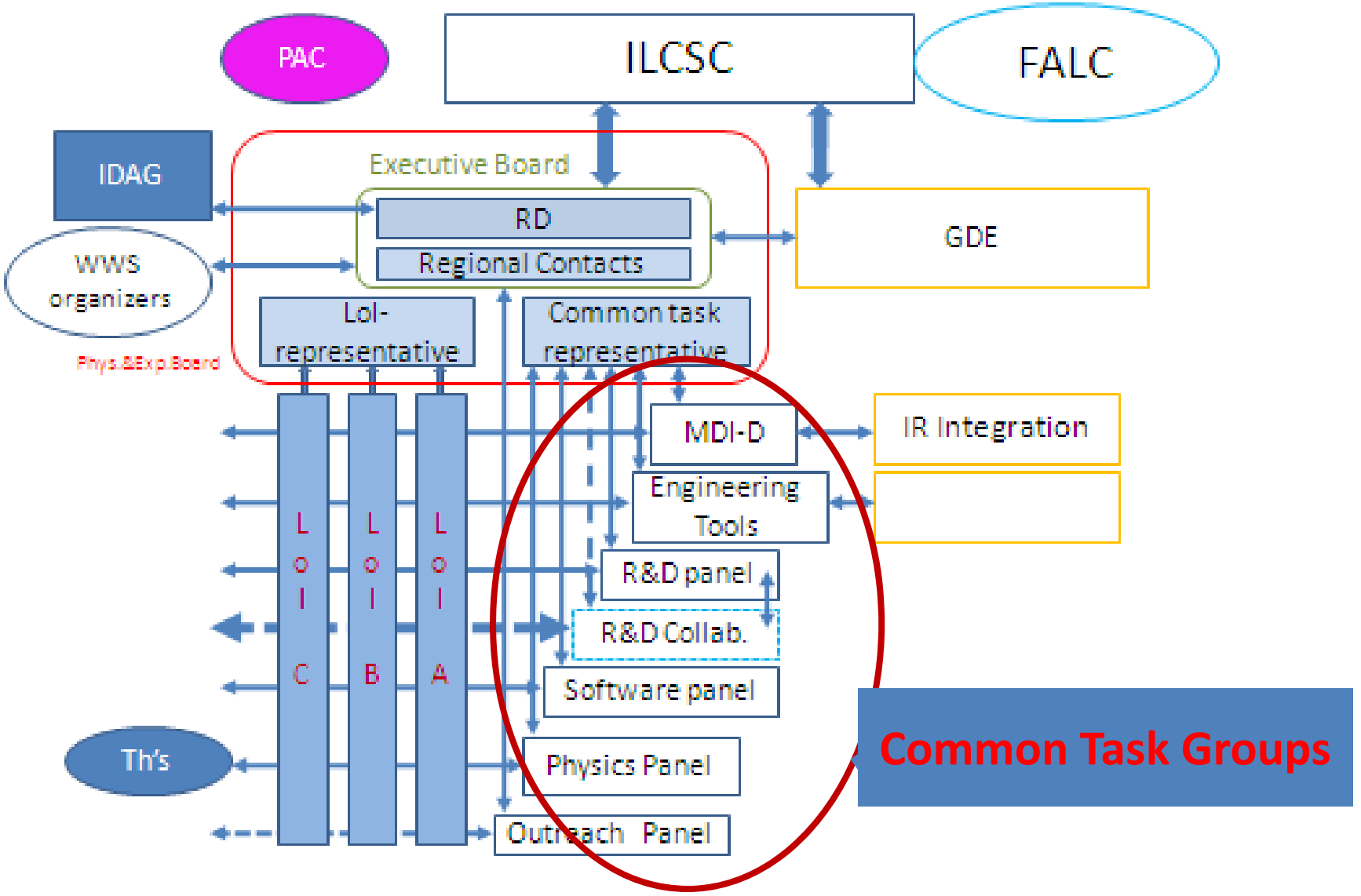
Common task groups

- The second step was to form the common task groups which will cooperate cutting across the LOI groups for the tasks of common interest.
- The numbers are participating members from each group.

1. **Machine Detector Interface (2)**
2. **Engineering Tools (1)**
3. **Detector R&D Panel (2-3)**
4. **Software Panel (1-2)**
5. **Physics Panel (2) + some theorists**

The Representative/convener of each common task group will participate the Physics and Experiment Board.

Jan.09,2008


PAC
ILCSC
FALC
IDAG
Executive Board
RD
Regional Contacts
GDE
WWS organizers
Phys.&Exp.Board
LoI-representative
Common task representative
MDI-D
IR Integration
Engineering Tools
R&D panel
R&D Collab.
Software panel
Physics Panel
Outreach Panel
LOI C
LOI B
LOI A
Th's
Common Task Groups

Current Status of the common task groups

- Nomination from each group was almost finished.
- Particularly for the MDI, we tried to hurry in order to meet the speed of GDE's beam delivery system activities.

  They work jointly since about a month.
- Detector R&D panel will survey status and priority of detector R&D .
- Physics panel

  Physics Panel will work to prepare for possible physics scenarios in view of the result of LHC . They may provide material for possible considerations for staging by GDE or by ILCSC's new parameter group.
- There was a meeting with the representatives of the LOI groups to exchange views about what to work on and how to organize.

Common task members at present

June 03.2008 (6:00GMT)

LOI group	ILD	SiD	the 4th
MDI	Karsten Buesser karsten.buesser@desy.de Toshiaki Tauchi toshiaki.tauchi@kek.jp	Phil Burrows p.burrows1@physics.ox.ac.uk Marco Oriunno oriunno@slac.stanford.edu	Bill Ashmanskas ashmanskas@fnal.gov Alexander Mikhailichenko mikhail@lns61.lns.cornell.edu
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Two thirds are from large HEP labs

A few more names expected.

Collaboration with CLIC for Detectors

- We participated in the CLIC-ILC meetings in February and May.
- Some practical actions were agreed

  taking the difference of the status of each detector communities into account.

1. ILC side will provide simulation tools
2. CLIC side will study the performance of different ILC concepts at higher energies.
3. There will be cooperation in other areas which will be discussed further.
4. CLIC members will participate in the coming ILC workshops.

Plans during the ECFA workshop

- The first IDAG meetings on June 9,10.
- Open presentations by the LOI groups on the first day.

  Each group will present its physics/detector idea, plan to prepare LOI and group structure.
- Meeting of IDAG and each LOI group on the second day.

  Questions from the both sides are expected.
- We meet with IDAG.

  Validation process, ***Plans to proceed b/a LOI.***
- The first meeting of all the common task members available is planned.

Next step

- For the management

1. With IDAG, make a detailed plan for validation so that LOI groups can reach desired detector designs
2. Keep good communications between LOI groups and IDAG
3. Keep close link between GDE and the detector Community
4. How to match the machine design with very different structures of the detector designs
5. Encourage LOI groups to cooperate through the common task groups first by identifying themes of common interest and then by working together.

This cooperation will be important for the future rearrangement/merger of the groups.

Next step (continued)

- For the LOI groups

1. Preparation of LOI,

   Design work for an optimized detector system

   Work on MDI-issues with GDE (e.g. push-pull)

   proceed with detector R&D

   simulation of performance

The LOI groups will be very busy.

- For the ILC detector community

1. Promote cooperation with CLIC detector activity

Issues of the next steps

- How to complete Detector R&D for each LOI group to reach an optimized design with confidence

  How to secure needed resources, question of priority
- How to reach complementary and contrasting detector plans at the end ?
- How to accommodate two detectors of possibly very different structure (MDI matter)
- Prepare possible options of scenario foreseeing coming outputs from LHC

We need to talk with GDE which also considers the same question from the viewpoint of cost and staging.

Further more, GDE and we need to contact ILCSC (parameter group) on this question.

Summary

- The working scheme is nearly completed.
- IDAG will begin its actions in Warsaw next week.
- There are many issues in front of us.
- We intend to solve these issues by working in the new scheme.