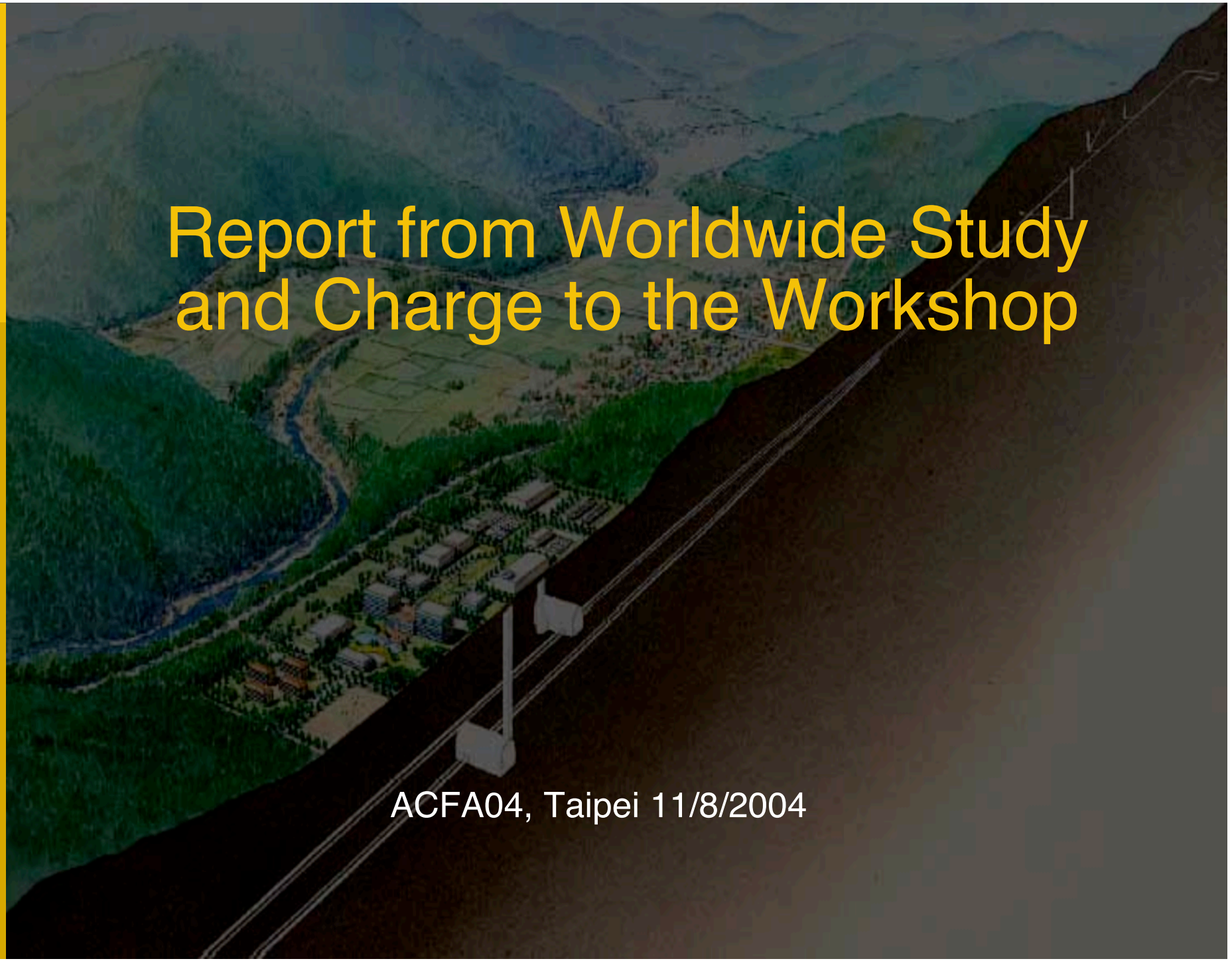


Report from Worldwide Study and Charge to the Workshop

ACFA04, Taipei 11/8/2004

ITRP
(International Technology Recommendation Panel)

As we will hear from Prof. Sugawara today ...

ITRP Members

Jean-Eudes Augustin (France)
Jonathan Bagger (USA)
Barry Barish (USA) - chair
Giorgio Belletini (ITALY)
Paul Grannis (USA)
Norbert Holtkamp (USA)
George Kalmus (UK)
Gyung-Su Lee (Korea)
Akira Masaike (Japan)
Katsunobu Oide (Japan)
Volker Soergel (Germany)
Hirotaka Sugawara (Japan)
David Plane - scientific secretary

- ITRP set out to

  Recommend LC technology - between TESLA (cold)

  and JLC/NLC (warm) to ILCSC

  (A technology choice, not a design choice)

- Deliberated

  Intensely from Jan to Aug 2004

- Recommended that

  LC be based on superconducting RF technology

- Endorsed by ILCSC (Aug 20, 2004)

Fully supported by the LC community

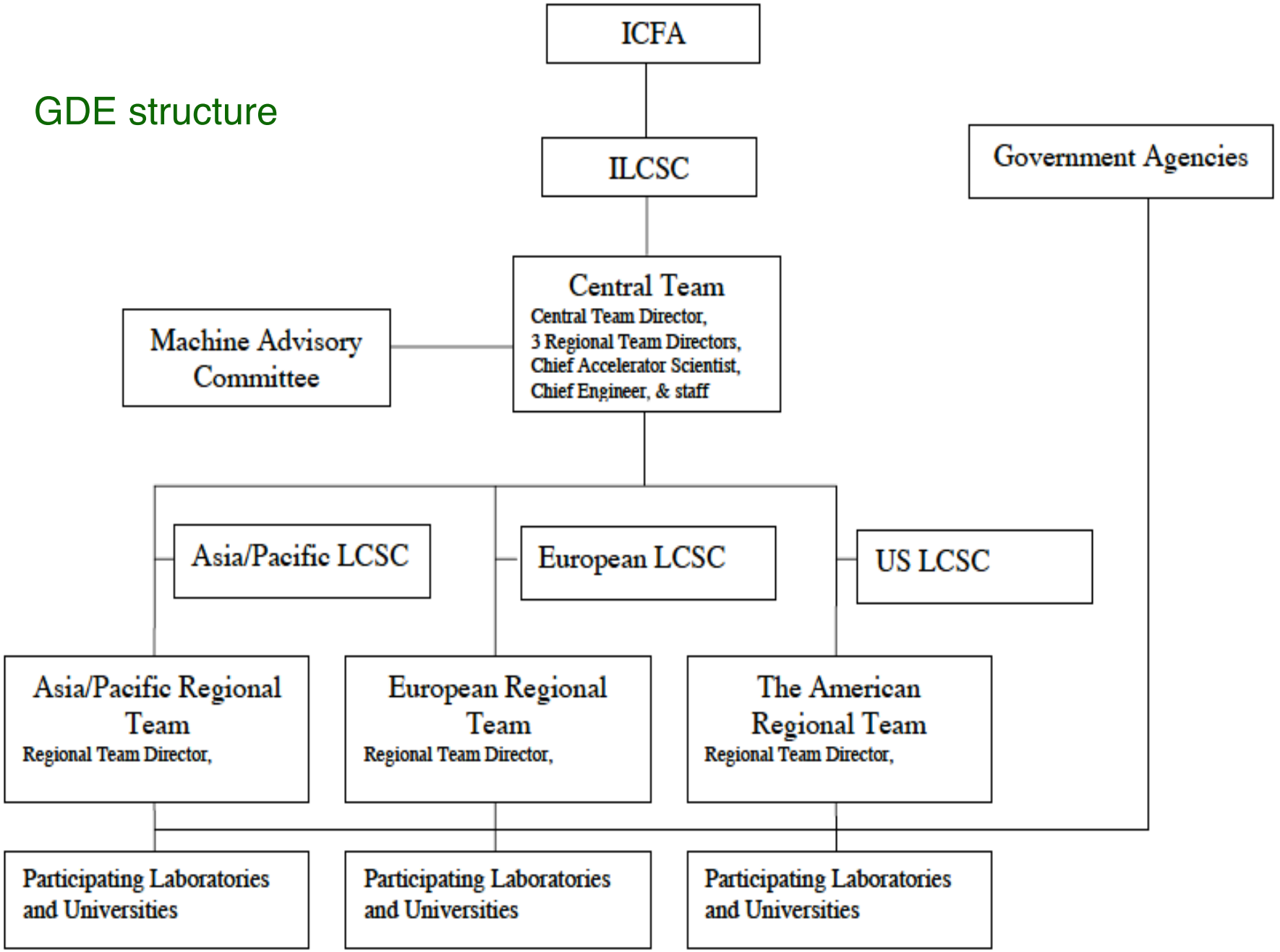
Things are starting to roll ...

- The name is decided to be ILC (International Linear Collider)
- GDE (Global Design Effort) - the first stage of GDI (Global Design Initiative) - is being formed

  → Talk today by Prof. Kurokawa
- First ILC workshop (Nov 13-15, KEK)

LC machine efforts are being re-organized around the cold technology

GDE structure



In Feb 2004, ILCSC&ICFA asked WWS to propose, in parallel with GDI, a mechanism which will:

1. Ensure that at least two different detector concepts are developed; by worldwide teams which will:
   - A) Prepare CDR(s) on concepts, by ~2006;
   - B) The cores of the collaborations should have formed when funding is in place and bids are called for
2. Encourage and coordinate inter-regional R&D on essential detector technologies, and give peer-reviewed recognition to nationally funded R&D programmes as part of the worldwide project.
3. Make sure that vital questions of machine-detector interface and beamline instrumentation are as fully supported as accelerator and detector R&D. This will involve close links with the GDI.

WWS OC Members

* co-chairs

- Additional members for LCWS program comm.

To Perform This Task -

Roles of WWS redefined

- Recognize and coordinate studies on whole detector concepts, and work toward interregional detector TDRs.
- Interface with GDI, especially on MDI issues.
- Keep a register of R&D relevant to LC experimental programs, identify those that are vital or missing, and ensure peer review of R&D proposals.
- Organize interregional meetings and workshops.
- Report to ILCSC and ICFA on the matters above.

Timeline proposed by WWS OC

(2004) ITRP tech. recommendation	Set up 3 panels (costing, detector R&D, and MDI)
(2005) Accelerator CDR	Single preliminary-costing paper for >1 whole detector concepts
(2007) Accelerator TDR	WWS receives CDR from each detector concept team
(2008) LC site selection	Collaborations form and submit LOIs for proposal to the global lab (or GDO?)
Site selection + 1yr	Global lab selects experiments.

- Timeline of experimental benchmarks are synchronized with that of GDI - it will be delayed if GDI is delayed.
- Costing document is a single document with a chapter on detector concepts with cost estimates and another on detector R&Ds.
- Individuals are encouraged to participate in multiple concept studies - up to CDRs.
- Cores of collaboration will form around CDRs.

Panels to be created by WWS

Costing panel : Request inputs from the teams studying each detector concept, ensure the same costing basis, and edit into a single document to be included with the accelerator CDR. Then the panel will stand down.

Detector R&D review panel : Maintain a register of relevant R&D, identify vital or missing activities, arrange for peer review of proposals, and endorse approved programs to funding agencies when requested. This panel will stand down when the detector proposals are finalized.

MDI panel : Liaise with GDI to coordinate MDI issues between accelerator and experimental teams, and ensure that essential MDI R&D is done. The panel will stand down when the global lab takes over its role.

More to be appointed as needed.

WWS OC meetings during this workshop

- Two early-morning meetings
- Main topics
  - Selection of the three panels
  - Finalize the document 'Proposal for the organization of the International Linear Collider experimental program'

    http://blueox.uoregon.edu/~lc/wwstudy/ORG_OF_GLOBAL_EXP_PROG.pdf

    Its points are as presented here, and key points approved by ILCSC at Beijing ICHEP 2004.
  - Plan for future workshops

Detector Concept Studies

Time to re-evaluate detector concepts based on :

- up-to-date detector R&D results
- refined physics benchmarks
- some design need to be re-thought for the cold machine (longer bunch train etc.)

Detector concept session during this workshop (this afternoon)

- Concept 1 : silicon-tracker-based (SiD)
- Concept 2 : 'medium' Tesla-based
- Concept 3 : 'large' GLC-based (GLD)

Concept Study Launch Meetings during this workshop

- SiD re-launch meeting

  Nov 9, 5:30 pm

- 'Large' (GLD) launch meeting

  Nov 10, 5:30 pm

- Large gaseous detector umbrella

  Nov 11, 11:15 am (lunch boxes provided)

Additional Issues

- Cases for LC
  - LHC and LC
  - Cosmology
- Outreach

Let's get to work!