



Summary: Site Discussion

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Conventional Facilities Plan

- RDR based on “sample sites”
 - Accounts for about 1/3 of costs
 - Much specific information, but not cost minimized
- TD Phase proposed to produce “uniform” site study
 - Work together on siting to apply “value engineering” to minimize costs
 - Investigate shallow sites, single tunnel, etc.
 - Define uniform site
- Develop Siting strategy
 - Desired features, requirements, cost and other information for potential hosts
 - What is asked from hosts?



Special Session on Site-Related and Hosting Issues

Thursday June 5, 9-11 am



Agenda

- Overview of the Key Issues Jonathan Dorfan (10 mins)
 - ❖ Uniform Site Approach (60 mins)
 - Overview Mark Ross (20 mins)
 - Discussion All (40 mins)
 - ❖ Governance and Hosting (50 mins)
 - Discussion All



Summary Comments: Uniform Approach



- The word “Uniform” derives from the management approach going forward
 - Given the reduced manpower resources of the CFS team, the regional teams will pool their resources, forming a *uniform* team
 - However the concept extends beyond the management definition; the uniform team will focus its effort on site studies that are not constrained by the specific sites studied to date; in that sense uniform should be understood as “generic”



Summary Comments: Uniform Approach



- Studies unconstrained by specific sites
 - Permit a bias-free method for relative evaluation of different site configurations
 - Is not a prescription for cost minimalization, but rather a method for cost optimization
 - In no way narrows the process of site choice
 - Will provide invaluable guidance for optimization of the site-specific designs
 - Address the anticipated requirement by the collaborating governments that the proposed site has been cost-optimized
- Details of how the uniform approach will be implemented is still under active discussion, but GDE management feels sufficiently strong support for the concept that it has been adopted



Schematic Path to a “Uniform Design” Solution

Value Engineering and Technical Criteria Review



Alternate Configurations Identified



Alternatives Ranked by Parameters (Cost)



*Qualifications and/or Required Criteria
Adjustments for Optimum Alternatives Reviewed*



*Optimized non-Site Specific Alternatives
Combined into the “Uniform Design” Solution*



The Path Forward for CFS

- **Three Aspects Form the CFS Equation**
 - **Amount of Work to be Completed**
 - **Time Constraints and/or Guidance**
 - **Resources Available**
- **Evaluate the Current and Near-Term Resource Profile at FNAL, SLAC, KEK, CERN and JINR**
- **Develop a Prioritized Value Engineering Plan**
- **Develop Viable Alternate Design Configurations and Adjusted Technical Design Criteria for Review and Approval**
- **Take Full Advantage of the Opportunities Provided by the Collaboration with the CLIC Project and the Experience Gained in the Construction of the XFEL**
- **Agree on a Timeframe that Allows for the Completion of a Comprehensive Alternative Design Solution and an Effective ILC Siting Strategy**



Near-Term Specifics

- **Continue Value Engineering Effort Initiated in FY 08 as Resources Permit**
- **Initial Efforts will Focus on Highest Level CFS Cost Drivers**
 - **Tunnel Configuration**
 - **Single Tunnel (Deep and Near Surface)**
 - **Alternate Exiting Strategies**
 - **Analyze Information from Dubna Effort, CLIC/ILC Collaboration and XFEL**
 - **Uniform Surface Elevation Cut and Cover Accelerator Enclosure and Surface Gallery**
 - **Process Cooling Systems**
 - **Increased DT Process Water Systems**
 - **Alternative Heat to Air Cooling Systems**
 - **Alternative HVAC Systems**
- **Determine Specific Impacts on Technical System Criteria Generated by Alternative Design Solutions**
- **Together with Technical Groups and Project Managers, Review Impacts and Establish Preferred Optimized Alternatives**
- **Generate the “Uniform Design” Solution from Optimized Alternatives**



Summary of Key Issues for ILC



- ❖ Ultimately, there will be a global, high level process that decides on the governance, siting and the model for host versus non-host responsibilities
 - however, ignoring these issues now would be a mistake
 - on the 2012 timescale, we should provide guidance on these issues

Questions – these are not new questions, but we have made no progress in the past few years towards answering them

- 1) Do we remain committed to a truly *global* governance model?
If so, what are the key features of such a model?
What can we learn from the recent past (ITER, ALMA, SKA)?
- 2) In such a global model, what is the role of the “host” country?
- 3) What defines the construction responsibilities of the host country?
Does our knowledge of the RDR costs provide new guidance?

Slide from Dorfan on Tuesday



Summary Comments: Governance/Siting



- Wide-ranging discussion
 - Albrecht Wagner described the history of XFEL governance process
 - Provides a blueprint for the steps in the process
 - Required initiating event to bring governments together in a serious way
 - Took longer than hoped
 - Atsuto Suzuki emphasized the need for the physics community to develop now a plan for the process for site selection
 - The job should be done by ILCSC



Summary Comments: Governance/Siting



- ILCSC Chair, Enzo Iarrocchi, reminded us of the history of the governmental processes, including OECD Megascience study and the FALC process and their relationship to GDE
 - General feeling was that, while FALC is not appropriately constituted to generate a governance roadmap for ILC, we should continue to work actively with them
- **Result of the discussions:**
 - ILCSC subcommittee will evolve a model for site selection process
 - GDE subgroup will be formed to evolve governance models