Summary of offline software meeting

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Meeting on Jan 31

- Called by Weidong Li
- Participants
  - ✦IHEP: Weidong, Xiaomei, Jiaheng, Manqi, Chengdong, Liangliang, Linghui, Shengsen, Beijiang, Ziyan, Gang
  - ✦ Zhenyun You(SYSU)
  - ✦Xingtao Huang (SDU)
- Topic : CEPC new offline software, focusing on framework

Considerations on future offline software

- Mature and well maintained softwares:
  - GEANT4/V
  - ROOT

- Framework: Weidong and Jiaheng suggest to use our own framework as a start point, Jiaheng and xingtao are the main developers, light-weighted, more flexibility, quick response to new requirements, …

- Share some common parts with other projects, reuse some algorithms to reduce software complexity

- Starting points: simulation & event data model in new framework

More

- Chengdong: at TDR stage, Mokka can used for detector design/optimization, long term: ROOT based data format and xrootd protocol

- Manqi: at present most of the software tools mastered, some others need more experts；perspective plan needed

Manpower and funds

- Weidong：two students

- Linghui: a student

- Beijiang: interested in algorithm work

- Zhenyun: more student(s) continue to work on event display

- Other people need coordinating with EPD/BESIII admin.

- More dedicated funds needed for software

Suggestions and questions?

Thanks a lot !

Backup

- 参加人员：李刚，孙胜森，伍灵慧，邓子艳，邹佳恒，尤郑昀，黄性涛，阮曼奇，李卫东，张晓梅，付成栋，王亮亮，刘北江

- 李卫东：CDR完成后，软件方面工作需要进一步深入，先确定工作目标：创新，团队合作 …

- 曼奇：

  - 部分核心模块现阶段已经cover，但是有一些核心模块例如框架还没有人负责启动

  - 需要一些前瞻性计划

- 付成栋：模拟可以暂时使用ILC的框架，但是以后需要更完善的框架。数据格式需要统一成ROOT，更方便使用数据读写xrootd协议

- 黄性涛：自主开发，还是采用基于现有的Gaudi框架？和其它项目共享一些软件工具模块？

- 邹佳恒：自主开发的轻量级的软件框架，更灵活，对今后的特殊需求容易满足。

- 尤郑云：前瞻性，人力有限

- 刘北江：框架对Geant4, ROOT依赖性很强，未来原则上不会有太大的变化。

- 结论：

  - CEPC软件可以从现有高能所的软件框架开始起步，逐步完善。

  - 配合 R&D 的进度；鼓励良性竞争。

  - 工作可以从模拟开始，尝试框架的移植，考虑数据模型的设计。

  - 人力方面：李卫东有两个学生；伍灵慧有一个学生可以投入；北江会对CEPC软件算法感兴趣；尤郑云会继续投入学生承担事例显示。

  - 经费方面：缺，需要申请经费支持