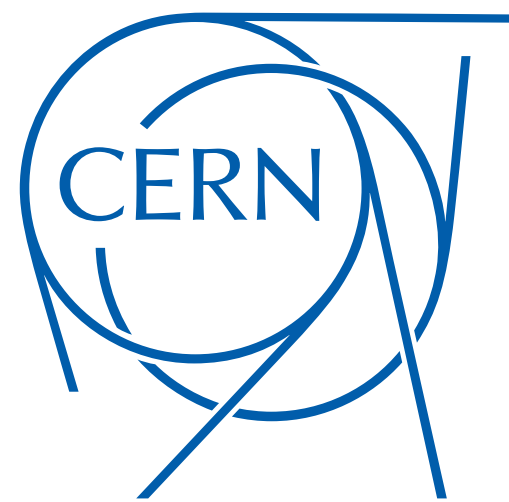


Report from the Scientific Computing Forum – SCF

Eckhard Elsen

Director Research and Computing




















Meetings so far

- 15.2.2017
- 12.5.2017
- 27.10.2017
- 23.2.2018
- 20.9.2018
- 15.2.2019
- 2.10.2019 – discussed today

Agenda of 7th Scientific Computing Forum

- Role of GPUs
 - Consensus on the introduction of co-processors, which provide much better performance/cost
 - ALICE O², CMS, LHCb online
- CERN School of Computing
- CERN Openlab
- CERN MAlt project

10:00	→ 10:10	Introduction and approval of the minutes Speaker: Eckhard Elsen (CERN)  2019-02-25-SFC6-...  Recording
10:10	→ 10:30	WLCG preparations for Run 3 and beyond (15'+5') Speaker: Ian Bird (CERN)  Recording  SCF-Outlook-02101...  SCF-Outlook-02101...
10:30	→ 10:55	GPUs in CMS: Status and plans (20'+5') Speaker: Danilo Piparo (CERN)  19-10-02_Scientific...  Leveraging Heterog...  Recording
10:55	→ 11:20	CERN School of Computing (20'+5') Speaker: Sebastian Lapienski (CERN)  2019.10 CERN Sch...  2019.10 CERN Sch...  Recording
11:20	→ 11:45	CERN Openlab (20'+5') Speaker: Alberto Di Meglio (CERN)  CERN_openlab - R...  CERN_openlab - R...  Recording
11:45	→ 12:05	CERN's MAlt project (15'+5') Speaker: Tim Smith (CERN)  MALT Presentation  Recording  SCF The MALT Proj...
12:05	→ 12:20	Round table discussion
12:20	→ 12:30	AoB and next meeting
12:30	→ 13:30	Sandwich Lunch

Heterogenous Software

- It has become evident that the computing challenges for HL-LHC can only be met by employing heterogenous platforms: GPU, FPGA, (possibly even neuromorphic or quantum computing in the future)
- Coding languages and paradigms have to change; C++ will not be able to satisfy the needs
- HEP Community is aware and reacting (Community White Paper (CWP), Journal of Computing and Software for Big Science, Comput Softw Big Sci (2019) 3, 7)
 - Describes the soft- and hardware developments required for the mid 20ies.
- Considerable savings can be obtained with software improvements on the system side