CMS Goals in 2007

WLCG Collaboration Workshop

26. January, 2007

CERN

Matthias Kasemann CERN/DESY

CMS goals in 2007

- Demonstrate Physics Analysis performance using final software with high statistics.
  - Major MC production of up to 200M events starting in March
  - Analysis starts in June, finishes by September

- "Local Data taking": SubDetector – (HLT) Tape – T0 – T1
  - Readout tests should start as soon as possible (≥ March)

- Global Data Taking: P5 – HLT – TAPE - T0 - T1
  - At regular intervals, 3-4 days per months, starting May
  - Month of October: MTCC3

  Readout of (successively more) components, data will be processed and distributed to T1

- Commission the Computing infrastructure
- Demonstrate Computing and Analysis at ≥ 50% of 2008 numbers

Planning for 2007

- **Draft proposed major LHCC Computing milestones for 2007**

July 07: Pre-production Computing and Offline systems and physics procedures ready for data taking

– **Demonstrated by "ready for CSA07"**
  - Individual functionalities and performance ready for CSA07

Sep 07 HLT/Offline ready for pilot run

– **Demonstrated by Offline milestone**

Oct 07 Production Computing and Offline systems and physics procedures ready for pilot run

– **Demonstrated by the successful completion of CSA07**

CMS supports WLCG goals: Q1/2 2007 – Tier0 / Tier1s

- **Q1: Demonstrate Tier0-Tier1 data export at 65% of full nominal rates per site using experiment-driven transfers**
  - **Mixture of disk / tape endpoints as defined by experiment computing models, i.e. 40% tape for ATLAS**
  - **Period of at least one week; daily VO-averages may vary (~normal)**
- **Q1: Demonstrate Tier0-Tier1 data export at 50% of full nominal rates (as above) in conjunction with T1-T1 / T1-T2 transfers**
- **Q1: Demonstrate Tier0-Tier1 data export at 35% of full nominal rates (as above) in conjunction with T1-T1 / T1-T2 transfers *and* reprocessing / analysis stripping at Tier1s**
- **Q1: Provide SRM v2.2 endpoint(s) that implement(s) all methods defined in SRM v2.2 MoU, at least 75% methods pass tests**
- **Q1: Provide SRM v2.2 endpoint(s) that implement(s) all methods defined in SRM v2.2 MoU, at least 75% methods pass tests**
- **Q2: Repeat goals with SRMv2.2**

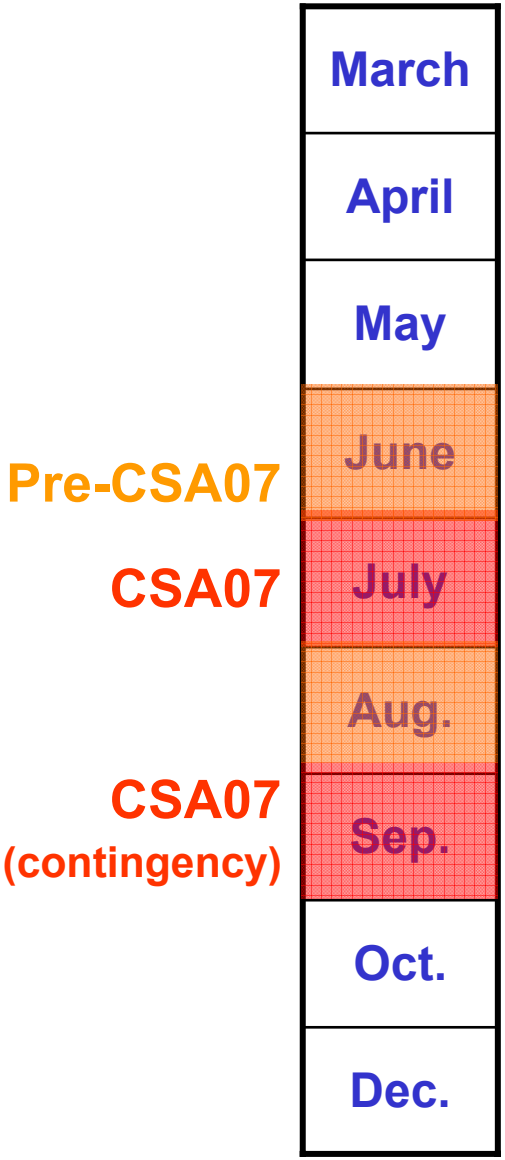
Software/Production Schedule 2007H1

Releases/Milestones	Production Activities
Mid Feb : Complete Physics Validation of CMSSW	
End Feb : 1_3_0: all components needed for HLT exercise; no changes in geometry; (Geant4 8.2 TBC)	1_3_x: Production for HLT exercise in March followed by analysis in April/May. 1_3_x: Production of Physics Samples (30M/mth) starts in April/May
End March : 1_4_0 : Changes to geometry allowed. new/improved local reconstruction algorithms Improved DQM and HLT SW. This release should resolve dependencies problems in a way that we can release Online releases without Geant4 components.	1_4_x: HLT test starts in April 1_4_x: Integration and Commissioning tests start end May 1_4_x: Production of SIMU can start end of April
Mid May : 1_5_0: new/improved global reconstruction algorithms and calibration alignment algorithms	1_5_x: Production of RECO and AOD can start mid June with analysis in July-September
End May: CPT 5.0.3 – Demonstrate performance of software	
June : Report HLT exercise to LHCC	1_5_x: New cycle of integration and commissioning tests August- November

Software/Production Schedule 2007H2

Releases/Milestones	Production Activities
End Jul : CPT 5 - Computing and Software Systems ready for CSA 07	
End July : 1_6_0 - new cycle with improvements/fixes This version will need also an Online Release	1_6_x: New cycle of integration and commissioning tests August-November
Mid Sept : 1_7_0 - new cycle with improvements/fixes	1_7_x: Pilot run
Mid Oct : CPT 6 - Comp & Offline operational (pilot run)	
Beg Nov : submit report to LHCC	

Production and Challenge activities



March:	1_3_x: Production for HLT exercise followed by…
Apr/May:	1_3_x: analysis of March-production
Apr/May:	1_3_x: Production of Physics Samples (30M/mth) starts
April	1_4_x: HLT test starts
endApril	1_4_x: Production of SIMU can start (30M/mth)
endMay:	1_4_x: Integration and Commissioning tests start
midJune	1_5_x: Production of RECO and AOD can start
Jul-Sep	1_5_x: analysis of Jun++ production
Aug-Nov	1_5_x: New cycle of integration and commissioning tests
Aug-Nov	1_6_x: New cycle of integration and commissioning tests
Oct-Dec	1_7_x: MTCC3 / Pilot run

Summary: Goals for 2007

- 2007 promises to be a very busy year for Computing and Offline
- Facilities will be ramping up resources to be ready for pilot run and the 2008 physics run
- Goals for 2007
  - Development of fully functional production tools and analysis software
  - Commissioning of infrastructure for physics analysis
  - Provide Computing and Analysis services to CMS for readout tests
  - Demonstrate Analysis and Software functionality and performance at ≥50% of 2008 level.

- Be ready for Pilot Run