

---

# Collaborative Project Progress Tracking and Earned Value Management

---

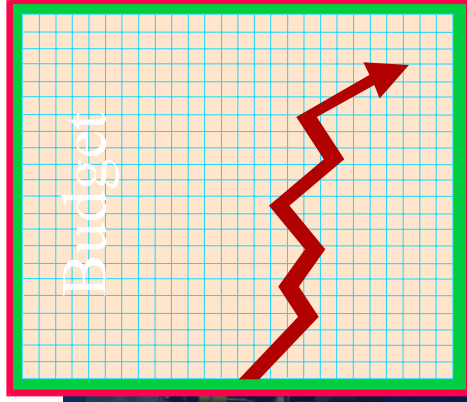
*Jurgen De Jonghe*

*IT-AIS*

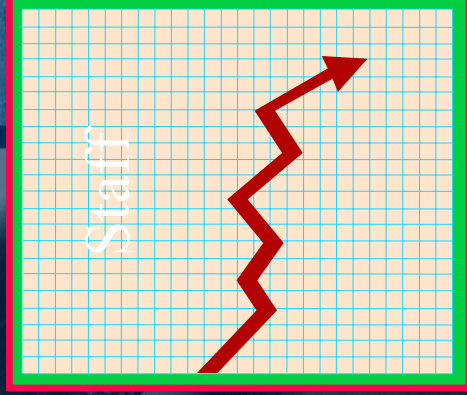
*[jurgen.de.jonghe@cern.ch](mailto:jurgen.de.jonghe@cern.ch)*

# Challenge facing CERN Today

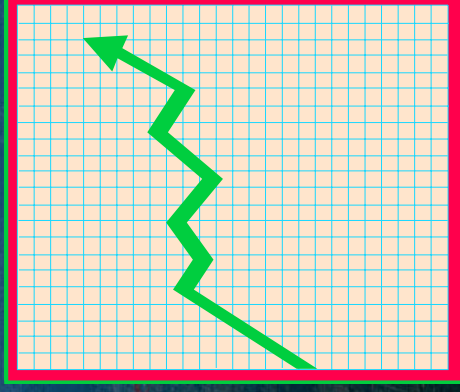
Building the world's largest scientific instrument...



With less budget..



fewer staff...

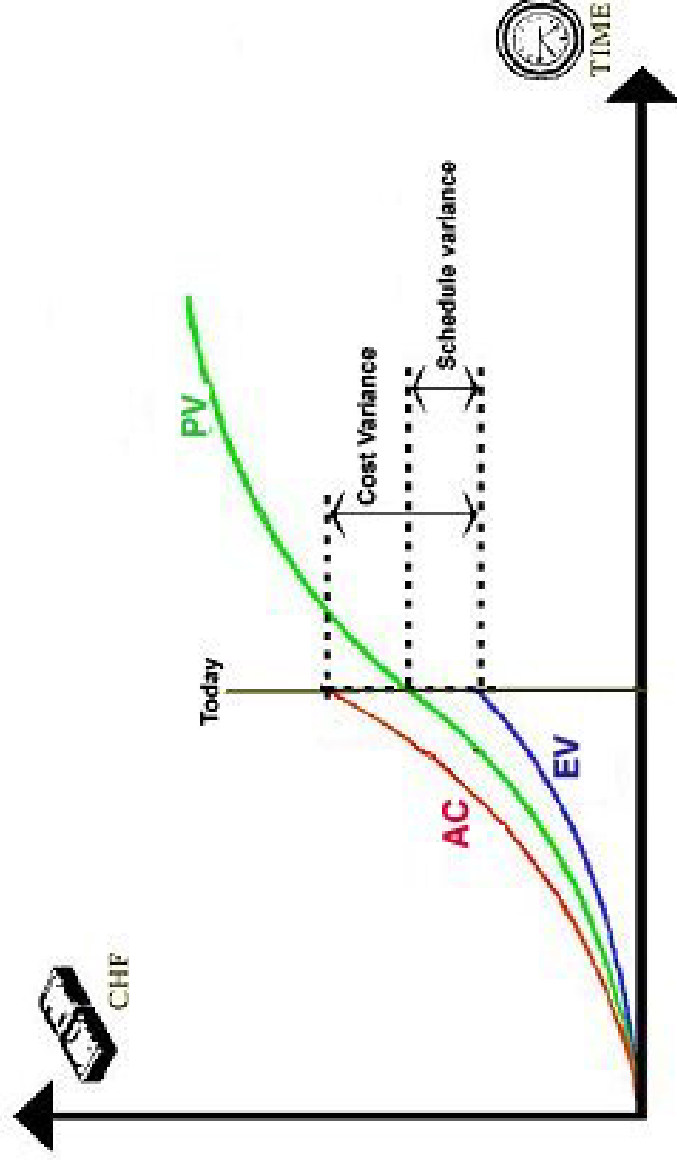


for more scientists...

- 2001 budget crisis for LHC.
  - Proposal to Directorate
- External Review Committee:
  - CERN to implement state of the art project management practices based on Earned Value Management.
  - For all “major” projects at CERN.

EVM developed by US DoD  
 (C/SCSC: cost/schedule control systems  
 criteria)

ANSI standard 748



Original planning (Planned Value)

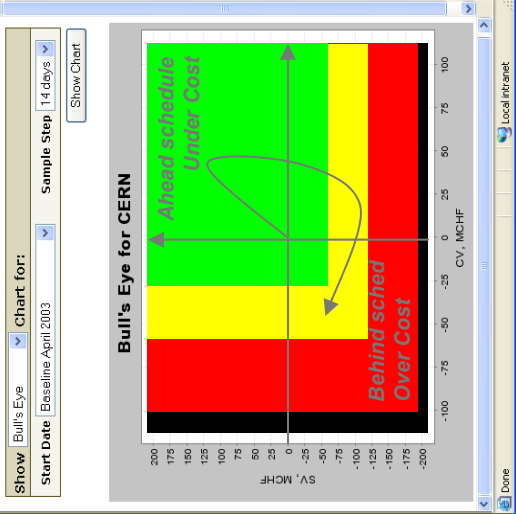
Real evolution of the costs (Actual Cost)

Costs budgeted for the work carried out (Earned Value)

- June 2002: early specification for EVM software
- July-August 2002: WBS definition + workunit outline
- September-December 2002: workunit refinement
- January-April 2003: “war room”, iron out misunderstandings
- Mid-April 2003: start of Progress Tracking
- June 2003: 1<sup>st</sup> report to Finance Committee
- September 2003: baseline, regular written report to Finance Committee

# Buy or Build

- Existing “Project Progress Tracking” application in place for ATLAS, available to CERN partners in 35 countries
- Integration with “best-of-breed” ERP since 80% of financial resources in major contracts
  - Accounting, Contract management, Logistics...
- Buy & Build



Microsoft Excel - report.spj.xls

File Edit View Insert Format Tools Data Window Help

Type a question for help

AT	AP	AS	EA	EF	EG	EH	EI	EJ	EN	EO	EP	OR
Business report (unit) and 30 MAR 2003 12:02:29												
F264: Supply Of The Dipole Inner Layer Sc Cable (1)												
Responsible: JAMES PURVIS (j.purvis@cern.ch)												

**EVM Notification**

James Purvis  
 To: James Purvis

You receive this message because you are the holder of the following active workunits:

- 07000: F264 Supply Batch #8
- 11471: F265 Supply Batch #6: Cable 02
- 11497: F265 Supply Batch #B02: Bus-bars

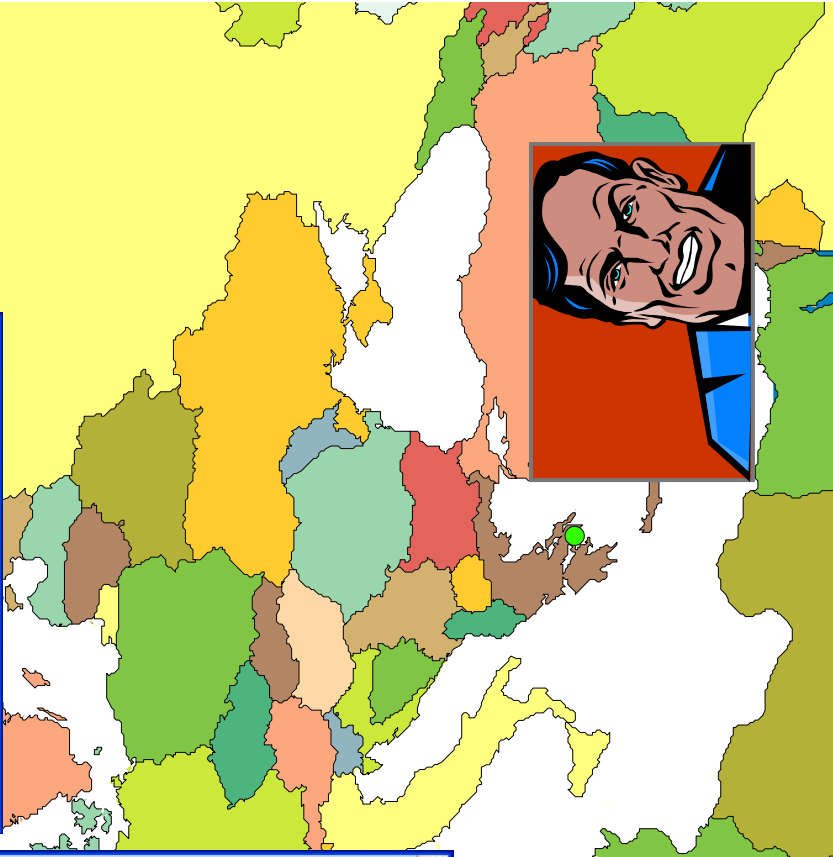
Please update the status of the deliverables for these workunits. You may obtain an Excel file for reporting at:

Thank you for your time!

All folders are up to date. Connected

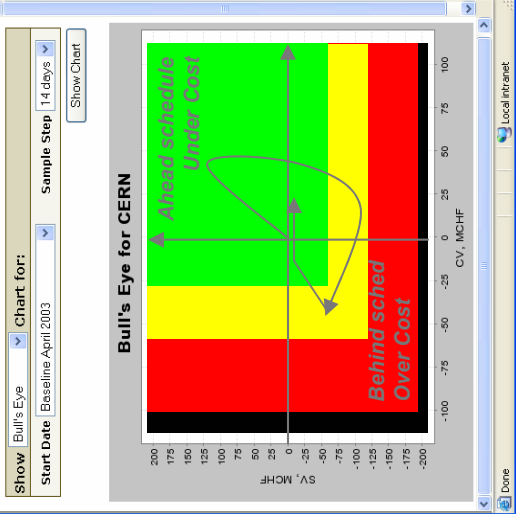
Level of Effort:	No			
Comments:				
<b>Deliverables</b>				
Description:	Actual/Total Quantity:	Planned Finish:	Actual Finish:	Comments:
Conceptual design approved	0 / 1 Unit	31-Aug-2000	31-Aug-2000	
Report on the TED thermo-mechanical behaviour	0 / 1 Unit	31-Jan-2001	31-Jan-2001	

Updates Cancel



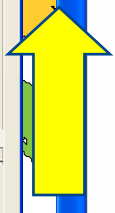
# EVM

Bull's Eye for Organization Unit CERN - Microsoft Internet Explorer



ID	Description	Est. Code	Total Quantity	Actual Quantity	Planned / Actual	Expected / Actual	Planned Value to Earn	Earned Value	Schedule Variance (\$)	Reference	Comments
7	6882 F264 Beam #0 Acceptance		20	20	14-Mar-03 / 14-Mar-03	14-Mar-03	385,882	385,882	0		
8	6893 F264 Beam #1 Acceptance		24	24	17-Mar-01 / 17-Mar-01	17-Mar-01	467,874	467,874	0		
9	6894 F264 Beam #2 Acceptance		104	104	14-Sep-01 / 14-Sep-01	14-Sep-01	2,027,440	2,027,440	0		
10	6895 F264 Beam #3 Acceptance		138	138	21-Sep-02 / 21-Sep-02	21-Sep-02	2,495,311	2,495,311	0		
11	6896 F264 Beam #4 Acceptance		138	138	14-Aug-02 / 14-Aug-02	14-Aug-02	2,651,268	2,651,268	0		
12	6897 F264 Beam #5 Acceptance		138	138	29-Jul-02 / 29-Jul-02	29-Jul-02	2,551,268	2,551,268	0		
13	6898 F264 Beam #6 Acceptance		200	200	28-Aug-03 / 28-Aug-03	28-Aug-03	2,699,268	2,699,268	0		
14	6899 F264 Beam #7 Acceptance		200	200	15-May-03 / 15-May-03	15-May-03	1,530,041	2,017,882	487,841		
15	7000 F264 Beam #8 Acceptance		208	208	14-Aug-03 / 14-Aug-03	14-Aug-03	0	0	0		
16	7001 F264 Beam #9 Acceptance		208	208	15-Dec-03 / 15-Dec-03	15-Dec-03	0	0	0		
17	7002 F264 Beam #10 Acceptance		220	220	15-Mar-04 / 15-Mar-04	15-Mar-04	0	0	0		
18	7003 F264 Beam #11 Acceptance		220	220	15-Jun-04 / 15-Jun-04	15-Jun-04	0	0	0		
19	7004 F264 Beam #12 Acceptance		220	220	15-Sep-04 / 15-Sep-04	15-Sep-04	0	0	0		
20	7005 F264 Beam #13 Acceptance		220	220	15-Dec-04 / 15-Dec-04	15-Dec-04	0	0	0		
21	7006 F264 Beam #14 Acceptance		220	220	29-Jan-05 / 29-Jan-05	29-Jan-05	0	0	0		
22	7007 F264 Beam #15 Acceptance		220	220	15-May-05 / 15-May-05	15-May-05	0	0	0		
23	7008 F264 Beam #16 Acceptance		220	220	14-Aug-05 / 14-Aug-05	14-Aug-05	0	0	0		
24	7009 F264 Beam #17 Acceptance		220	220	15-Dec-05 / 15-Dec-05	15-Dec-05	0	0	0		
25	7010 F264 Beam #18 Acceptance		148	148	29-Jan-06 / 29-Jan-06	29-Jan-06	0	0	0		
26							18,421,388	18,904,229	482,841		
27											
28											

**Impact?**  
 $\Delta$  Cost  
 $\Delta$  Schedule  
 $\Delta$  Scope



## Workunit

**Id: 19114**

**Description:** Propose conceptual design for External beam dumps (TED)

**Holder:** Serge Perata (AB-ATE)      **Part of Contract:** None

**Status:** Draft      **Type:** Engineering & Contr

**FBS:** None      **WBS:** LEC.4.4

**Planned Start:** 31-Aug-2000      **Planned End:** 31-Jan-2001

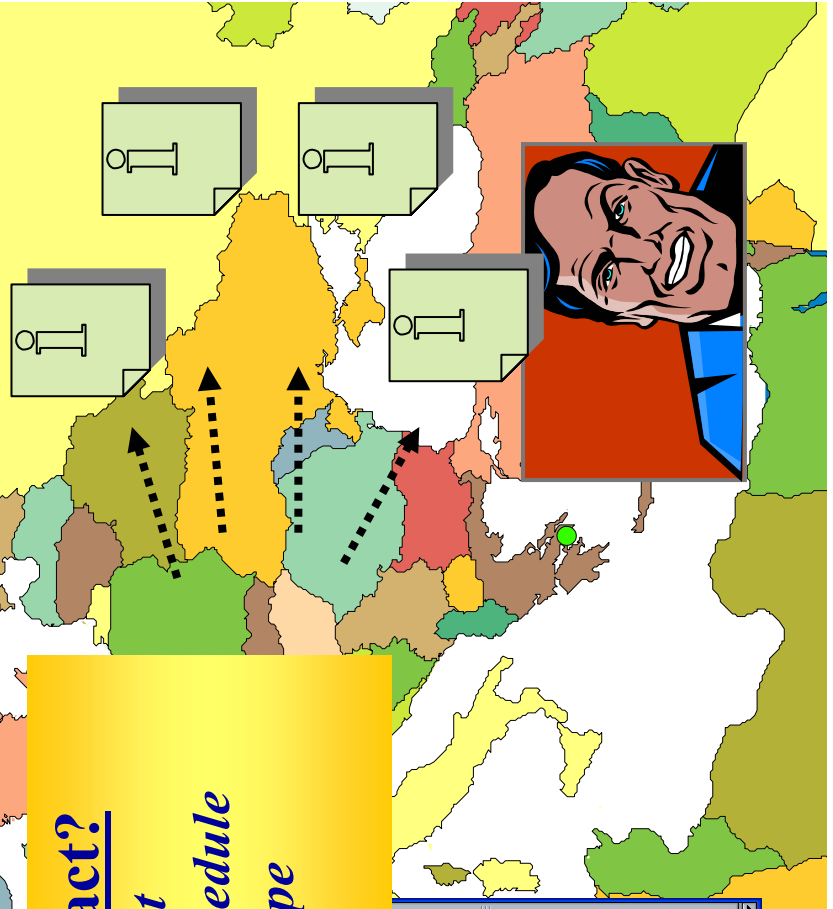
**Level of Effort:** No

**Comments:**

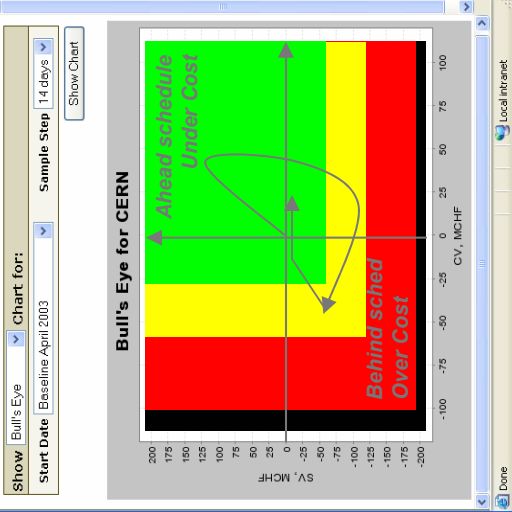
---

**Deliverables**

Description	Actual Total Quantity	Planned Finish	Actual Finish	Comments
Conceptual design approved	0 / 1 Unit	31-Aug-2000	31-Aug-2000	
Report on the TED thermo-mechanical behaviour	0 / 1 Unit	31-Jan-2001	31-Jan-2001	







**EVM Notification**

James Purvis  
 To: James Purvis

This mail is sent to make you aware of changes in workunits in the EVM application.

On 17-JUN-2004, 15:40 Michael ALLITT made the following changes:

Comments from Michael ALLITT :

Supplier able to deliver earlier than scheduled.

Cost Impact:

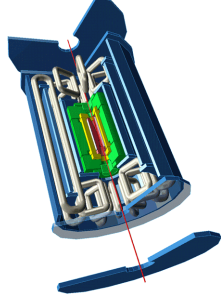
No impact

Schedule Impact:

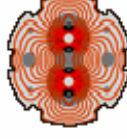
workunit 15237: brought forward 73 days

Full details of the change:

- ATLAS Detector (500 MCHF  
CORE Cost, 150 institutes  
in 35 countries)



- LHC (3 BCHF)



- CNGS (75 MCHF)



- EGEE (50 MCHF, 70 partners)



- Departments, Staff Planning