

# **M&O Scrutiny Group Report to LHC Resources Review Board**

**10 November 2008**

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The University of Manchester

# Role of the M&O Scrutiny Group

- It will assist the RRB by analysing critically the collaborations' M&O reports and estimates, refine the Category A estimates in consultation with the collaborations and advise the RRB ...
- It will operate during the summer, with the aim of agreeing the estimates for Category A for the following year
- It will also make critical comment on the arrangements for Category B costs
  - since 2007, ATLAS Cat B M&O is subjected to a higher level of scrutiny

# Membership of the Scrutiny Group for 2008

Giovanni Batignani	(INFN Pisa)
Cristinel Diaconu	(Marseille)
George Ginter	(Rochester)
George Lafferty	(Manchester, Chair)
Joachim Mnich	(DESY)
Martyn Davenport	(CERN)
Jasper Kirkby	(CERN)
Sascha Schmeling	(CERN)
Emmanuel Tsesmelis	(CERN)

Scientific Secretary: Sascha Schmeling

# Activities of Scrutiny Group in 2008

- March
  - Informal discussions between chair, secretary and RCs
- May 5 - 6
  - Examined the budget reports for 2007
  - Identified the main issues for the 2009 budgets
  - First formal discussions with Resource Coordinators
  - Scrutiny organised by subgroups (including Service Contracts)
  - Meeting with CSO
- Between May and September
  - Meetings and discussions between subgroups and RCs and others to review and refine budget requests for 2009
- September 25
  - Discussion between chair, secretary and CSO
- September 29 - 30
  - Reports from experiment subgroups, plus Service Contracts
  - Final discussions with Resource Coordinators and others

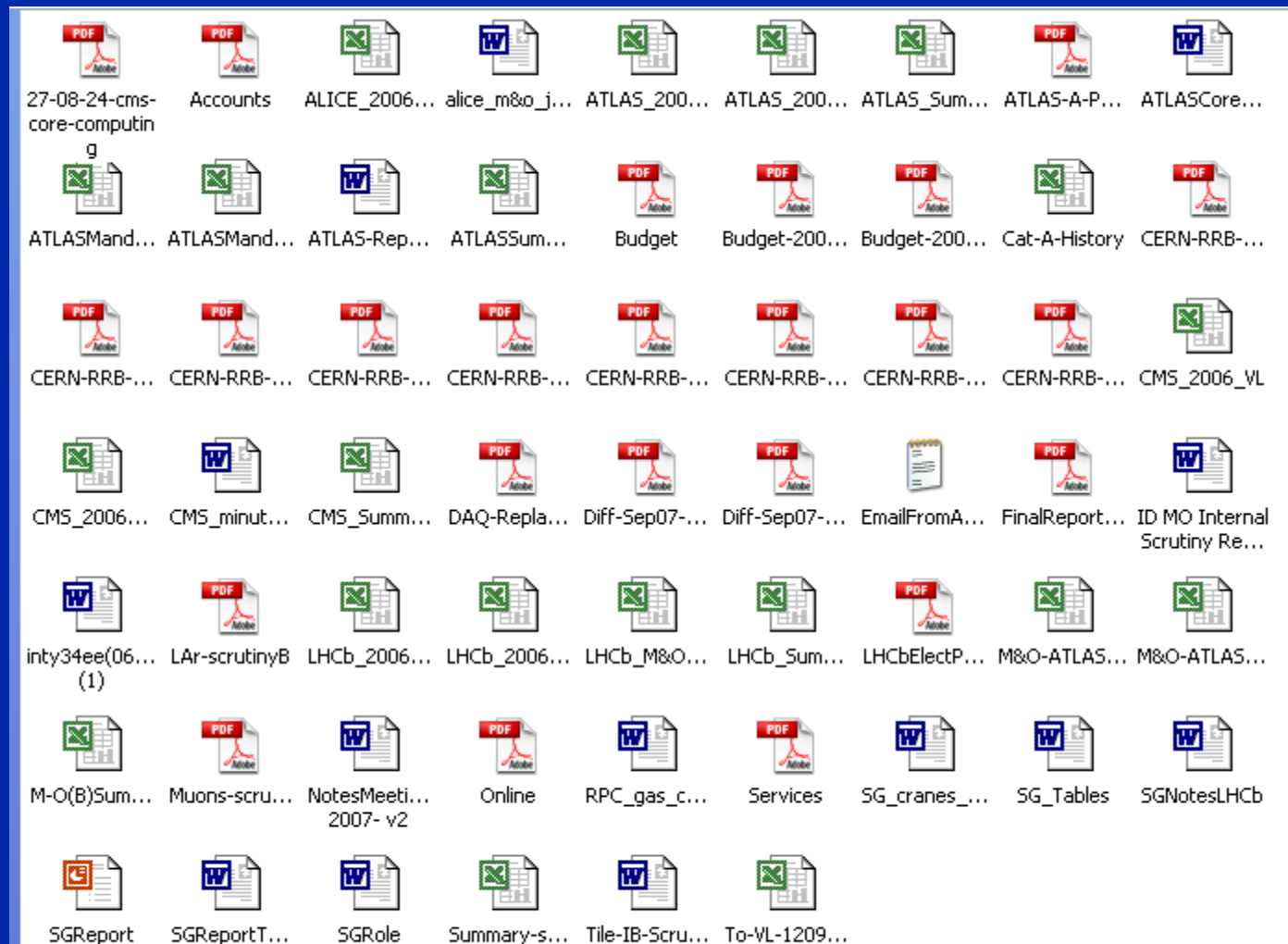
# ePaperwork in the Scrutiny Group

- The plethora of papers and tables was (and to some extent still is) a serious issue for the SG
- We needed a system for naming, categorising and cataloguing all submissions to the SG, that makes it easy for everyone to know what is what and where to find it
- For the 2008 scrutiny process we moved to [espace.cern.ch](http://espace.cern.ch) to classify and catalogue all documents
- Resource coordinators assisted by directly loading documents onto the web space
- This has been a limited success: more work is needed to harmonise naming conventions and properly catalogue all documents

# ePaperwork in the Scrutiny Group

Last year we had a growing problem with the plethora of documents ...

Snapshot of papers for the 2007 scrutiny, not including the many emails that also contained important information



# Scrutiny Group now using espace

M&O A requests for 2009 - Mozilla Firefox

File Edit View History Bookmarks Tools Help

https://espace.cern.ch/lhcrb-sg/2008/Lists/MO A requests for 2009/AllItems.aspx

Most Visited Getting Started Latest Headlines

CERN 2008

Home 2007 2008 Site Actions

Workspace for the LHC RRB Scrutiny Group > 2008 > M&O A requests for 2009

## M&O A requests for 2009

Requested M&O A budgets, to be discussed and refined by SG and RCs during 2008

New Actions Settings View: All Links

Type	Edit	URL	Notes
		ALICE M&O A request for 2009	
		CMS M&O A request for 2009	
		LHCb M&O A request for 2009	
		TOTEM M&O A request for 2009	
		ATLAS M&O A request for 2009	

Documents

- Experiments
- General
- Service Level Agreements
- Internal Scrutiny Documents

Lists

- Official Documents
- Scrutineers
- Scrutiny Calendar
- Scrutiny Issues
- Experiment Personnel
- ALICE Documents
- ATLAS Documents
- CMS Documents
- LHCb Documents
- TOTEM Documents
- M&O A requests for 2009
- M&O A out-turns for 2007
- "Vera" spreadsheets

Done espace.cern.ch

Start Exceed M&O A requests for... Microsoft PowerPoint -... Adobe Updater 09:13

# Example: ATLAS documents

The screenshot shows a Mozilla Firefox browser window with the title "ATLAS Documents - Mozilla Firefox". The address bar contains the URL <https://espace.cern.ch/lhcrb-sg/2008/Lists/ATLAS Documents/AllItems.aspx>. The page content is organized into several sections:

- General**
  - ATLAS system admin plans for TDAQ
  - ATLAS summary of documents and issues
  - ATLAS M&O A request for 2009
  - ATLAS M&O A out-turn for 2007
- Lists**
  - Summary "Vera" spreadsheet for ATLAS
  - ATLAS M&O B request for 2009
  - Summary of the ATLAS Scrutiny meeting 15 September 2008
  - Minutes of ATLAS Scrutiny meeting 4th June 2008
  - New Gas MoU
  - Comments on ATLAS Scrutiny by Markus Nordberg
  - M&O B Summary Table
  - LAr Status
  - Muons Status
  - ID Status
  - TileCal Status
  - Internal Scrutiny LAr
  - Internal Scrutiny Muons
  - Internal Scrutiny ID
  - Internal Scrutiny TileCal
  - Database Administration
- Discussions**
  - Network and System Administration
  - ATLAS Outreach Presentation
  - ATLAS Outreach Report
  - ATLAS SLA Summary
- Core computing**

The browser's status bar at the bottom shows "Done" and the URL "espace.cern.ch". The Windows taskbar at the very bottom includes the Start button, several application icons, and the system tray showing the time as 09:02.



# Cat A M&O spending overview for 2007

Experiment	Budgeted costs	Actual costs
ALICE	kCHF 4103	3665
ATLAS	11722	10522
CMS	9698	9548
LHCb	1478	1463

# Summary of Cat A M&O requests for 2009

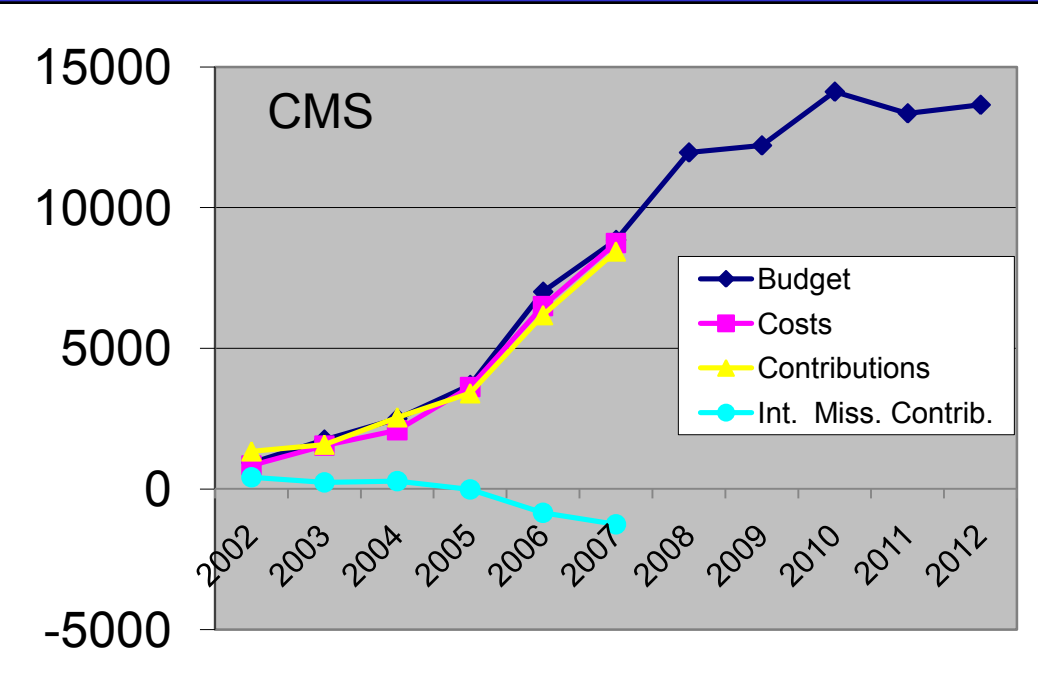
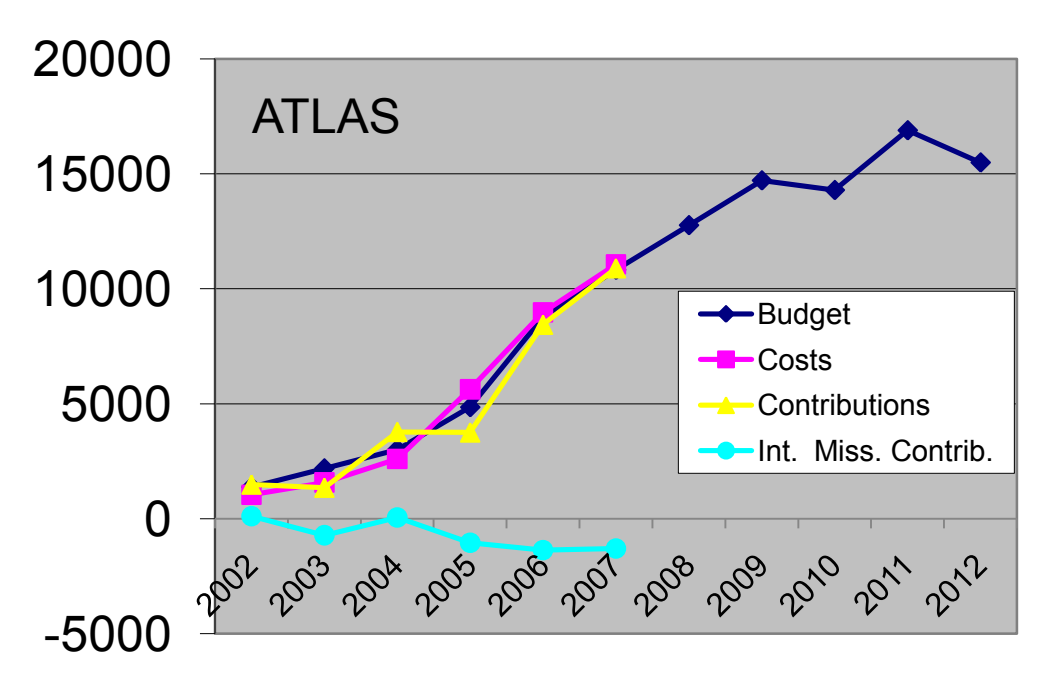
Experiment	Total (excl power)	Total (incl NMS share of power)
ALICE	kCHF 4687	5350
ATLAS	13610	14710
CMS	10408	12208
LHCb	2508	2592
TOTEM	449	

# Summary Tables for Cat A M&O

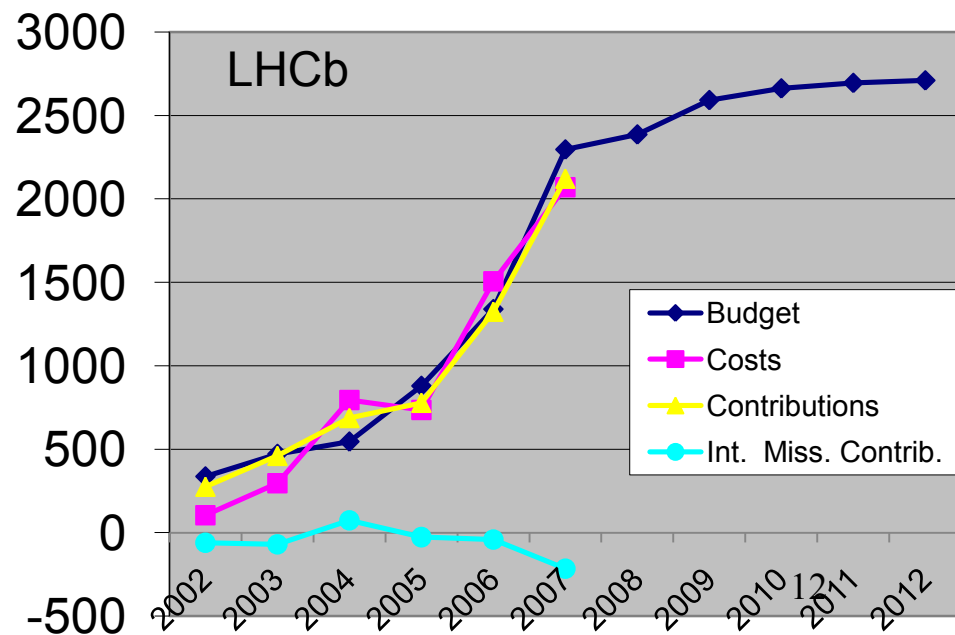
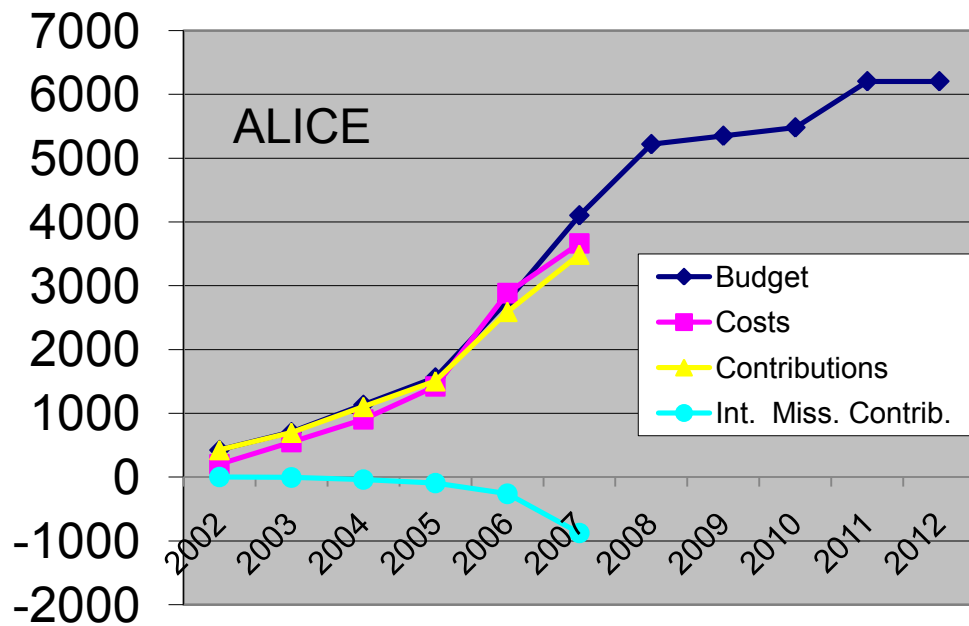
- “Vera” summary tables cover M&O Cat A from 2002 till 2012
- The tables keep track, since the inception of M&O A, of
  - budgeted and actual costs at level-one
  - balance at level-one
  - invoiced contributions
  - received contributions
  - balance of received contributions and actual costs
  - future budget projections
- The tables give a summary of the budgets, costs and funding of the M&O activities from the time the funding for these activities was established, and will continue to do so into the future
- But we need to work harder to keep these fully up to date and properly formatted ... they are already drifting ...

# Evolution of budgets, costs and received contributions

- Best estimates at present, but many uncertainties
- ATLAS costs expected to peak in 2011 (as already reported last year), a feature of the timing of online computer replacements
- CMS costs peak in 2010, also due to computer procurement



- ALICE budget rises in 2011/12 due to on-line computer replacements
- LHCb costs projected to rise slowly with inflation
- Missing contributions not a significant problem overall (and more money comes in after closing the tables)
- But all experiments' projections subject to revision once operations start in earnest, e.g.
  - Increasing costs of gas
  - Problems with detector cooling systems
  - Unexpected requests for payments
  - etc.



# TOTEM

- First M&O A budget request for TOTEM was made in late 2007, for 463 kCHF to cover CY2008
- Scrutinized after October 2007 RRB, and approved by email discussion among CSO and relevant funding agencies
- Income/spend during 2008 is in accord with expectations
- TOTEM now fully incorporated into the scrutiny process
- Request for 2009 is 449 kCHF, slightly below 2008 level

# Service Contracts

- Significant proportions of budgets pay for Service Contracts with CERN departments:
  - Beam pipes, vacuum systems, cryogenics, magnet controls, power converters, cooling and ventilation, power distribution, safety and access controls, surveying, gas distribution, heavy lifting, transport
- Expected to evolve during the exploitation phase
- Resource coordinators believe the Service Contracts generally offer good value for money
- Scrutiny Group expects to continue to monitor and scrutinise the service contracts to ensure that they remain efficient and good value

# ATLAS M&O Cat B

- Following discussion at April 2007 RRB, the ATLAS M&O B request is now scrutinised in more detail
- Request for 2009 is 6,976 kCHF, excluding in-kind contributions
- ATLAS has in place internal scrutiny for M&O B, whereby each subsystem's needs are reviewed by a small group, whose chair reports to the overall resource coordinator
- Written documents were provided to justify requests for all the subsystems
- Scrutiny Group had dedicated meeting with ATLAS that included discussions with resource co-ordinators for the all the subsystems

# Category C M&O

- Increasing concern among resource co-ordinators about requests to pay for what they see as Category C items
- Often they feel they have to pay from M&O A in order to secure vital services in a timely way
  - Provision of facilities for video-conferencing
  - IT support for database administration
  - Safety systems and radiation protection
  - Access doors
  - Cooling and ventilation installations
- The Scrutiny Group notes the concerns of the Resource Co-ordinators



# Membership of the Scrutiny Group for 2009

Giovanni Batignani	(INFN, Pisa)	
George Ginther	(Rochester)	
Cristinel Diaconu	(Marseille)	
pp George Lafferty	(Manchester)	<i>New UK delegate required</i>
pp Joachim Mnich	(DESY)	<i>New German delegate required</i>
Michal Turala	(Cracow)	
Gabriel Cosmo	(CERN)	
Martyn Davenport	(CERN)	
pp Jasper Kirkby	(CERN)	<i>New CERN delegate required</i>
Emmanuel Tsesmelis	(CERN)	
Scientific Secretary:	Sascha Schmeling (CERN)	

*New Chair for 2009 to be appointed*

# Summary and Conclusions

- The Scrutiny Group has carefully examined M&O Cat A requests for CY 2009 for ALICE, ATLAS, CMS, LHCb and TOTEM
- The SG has taken note of M&O B requirements where available, but has scrutinised the ATLAS figures in more detail
- The new web-based espace document repository has eased the process, but naming and cataloguing needs to be improved
- Thanks to all members of the SG for their hard work, and to the resource coordinators for their cooperation, depth of knowledge and patience, and for the quality of their written and verbal input to the scrutiny process
- The RRB-SG recommends approval by the RRB of the requested M&O budgets for CY 2009