

Resource report

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GridPP financial summary

This section summarises the current financial situation in GridPP3.

There are three channels by which GridPP spends money: first, via the SLA at RAL; secondly, via grants to the Universities; and thirdly, direct expenditure from STFC. Table 1 below shows the financial situation at the end of January 2009 in terms of hardware, staff costs in each of the areas of the project and miscellaneous expenditure, which includes items such as travel. This table covers expenditure from FY08, which was the start of the GridPP3 project. Spend in bold has been finalised, while non-bold text is estimated expenditure.

	WG	FY08	FY09	FY10	TOTAL PLAN FY08 onwards
Tier-1 HW	A	£1,658,531	£1,843,237	£2,235,333	£5,737,101
Tier-2 HW	B	£2,186,000	£269,775	£1,744,725	£4,200,500
Tier-1 Staff	A	£993,757	£1,348,021	£1,439,983	£3,781,760
Tier-2 Staff	B	£926,630	£968,206	£1,002,239	£2,897,075
Support Staff	C	£678,610	£558,767	£471,163	£1,708,540
Operation etc	D	£726,778	£835,833	£1,048,140	£2,610,751
Management	E	£316,288	£337,809	£351,966	£1,006,063
Misc. staff	F	£46,176	£47,426	£84,998	£178,600
Grants staff		£1,988,146	£1,981,062	£2,174,179	£6,143,387
SLA staff		£1,700,092	£2,115,000	£2,224,310	£6,039,402
Misc. spend (travel etc.)	G	£179,227	£216,400	£258,270	£653,897
Total		£7,711,996	£6,425,474	£8,636,817	£22,774,287

Table 1: Current GridPP plan.

The overall project budget is shown in Table 2 below. The GridPP3 award (which covers GridPP2+ and GridPP3) was £24.661m plus a working allowance of £247k. GridPP2+ expenditure was £1,786,372, leaving funds for GridPP3 of £22,874,628. From the working allowance, £9k per year for each of FY09 and FY10 has been allocated as STFC's contribution to the EGI subscription, raising the GridPP3 funds available to £22,892,628.

Total Project Cost FY08 onwards	£22,774,287
GridPP 2+ and 3 Award	£24,661,000
Spend in GridPP 2+	£1,786,372
Allocated working allowance	£18,000
Total funds available for GridPP3	£22,892,628
Project Balance	£118,341
Remaining working allowance	£229,000

Table 2: GridPP project budget.

The main points are:

- a) Tier-1 hardware spend in FY09 was agreed at the time of the last OC to be £1,599k. Since then, a number of costs have migrated into, and out of, this financial year, the main points of which are:
 - Before the last OC, the Tier-1 allocation was £1,183k for FY09. It was subsequently agreed that the Tier-1 would aim to remain within this hardware budget. This was primarily possible because of savings on the purchase of tape server drives, of which £306k had been rolled over from FY08. The use of a new hybrid

T10KA+T10KB tape mix maximises bandwidth with fewer drives than the original 100% T10KB model, allowing us to benefit financially from this delay.

- In order to address the potential disk shortage arising from the acceptance-test failure of one half of the FY08 disk purchase, the FY09 purchase was increased. However, as the vendor has now managed to address the problem, GridPP will have approximately half a year's buffer in disk with respect to the pledge. This is of great benefit, allowing GridPP to ameliorate procurement failures or tide-over slight delays whilst still meeting our commitments to wLCG; to address peaks in resource-requests during the year; and to potentially improve performance by increasing cache-sizes etc. Given the relatively high risk of such disk procurement problems, the risk must now be proactively managed by maintaining this buffer.
- In December 2009, STFC requested that as much capital spend as possible at the Tier-1 be brought forward from FY10 to FY09. GridPP was able to move two items forward:
 - i. £352k for the second phase delivery of the FY09 disk procurement. This was originally planned for FY09, but moved to FY10 before the last OC, at the request of STFC, and is now moved back into FY09.
 - ii. The 2010 tape media purchase of £309k.

Overall this led to an additional £661k on the Tier-1 hardware budget for FY09, giving a total allocation of £1844k.

- b) Due to changes to the LHC schedule, there has been a re-profiling of the experiment requirements. New estimates have been received, which were used to recalculate GridPP's hardware pledge for FY10 and FY11. This has led to re-profiling of the Tier-1 hardware spend in FY09 and FY10. The current planning is also based on revised hardware estimates using information from the latest Tier-1 hardware procurement. There remains a risk that continuing global financial instabilities and large fluctuations in exchange rates could significantly affect our hardware costs.
- c) There is to be a change in the way networking costs are dealt with between the research councils and JISC, as a result of which it seems likely that the cost of the OPN from RAL to CERN will fall directly on GridPP from August 2010. Including the back-up link agreed at the last OC, the total cost of both links is estimated to be £110k per annum. The primary link is a new cost to the project, and this amount has been included in the FY10 Tier-1 hardware line.
- d) The second tranche of hardware allocations for Tier-2 sites is now underway. In December '09, GridPP's Collaboration Board agreed the amount that would be allocated to each site, calculated based on resources provided to the project in a previously defined period. Sites are currently in the process of completing Je-S applications for this second tranche of grants. More details about the amount for each site can be found in GridPP-PMB-144-Status.doc.
- e) Staffing levels at RAL continue to be nearly 100%. There remains one experiment support CMS post yet to be filled: this post is regarded as critical in interfacing between the experiment and the Tier-1. Originally allocated for 0.5FTE during the course of the project, this was been delayed due to recruitment restrictions at RAL. As a result, it is proposed to use the money to fund one full-time post for FY10. It is likely that this will result in redeployment of someone already in RAL PPD who is currently without funding in FY 10/11.
- f) Staff costs at RAL have been re-estimated for FY09 and FY10. Overall there has been a small increase in costs, with the FY09 estimate moving from £73.5k/FTE to £75.8k/FTE, a lift of around 3%. Initial estimates made many assumptions about positions and pay progression on the scales: now that staff are in post, a more accurate estimate is possible. SLA staff costs for FY10 have also been recalculated based on the new FY09 figures, increased for inflation and for a one-off uplift of 3.5% to cover increased employer contributions to superannuation. SLA staff costs for FY10 are now estimated at £80.3k/FTE.
- g) There are a number of posts currently funded by EGEE where the positions are envisaged to continue in GridPP4. However, the EGEE project will end in April 2010, so funding for these staff will also finish. We consider it essential to retain the expertise in some of these posts, which include four Deputy Tier-2 Co-ordinators supporting operations at the Tier-2s, and the Dissemination Officer who is 38% EGEE funded. As noted below, the Manchester Deputy

Co-ordinator will leave shortly, while Oxford's staff member was recruited later in the project so they have enough existing funding to carry their post through to the start of GridPP4. However, for the Deputy Co-ordinator positions at Imperial and Glasgow and for the Dissemination Officer at QMUL, we need to provide bridging funding from the GridPP3 budget for up to one year at a total cost of £174k: this has been included in the staff costs in Table 1. It does not require additional money for the project, and is largely decoupled from any decisions on the GridPP4 and EGI projects.

Staff effort

GridPP staffing continues at nearly its full complement, with all posts filled in the management, miscellaneous, support and Tier-1 lines. Four Tier-2 posts are temporarily unfilled, but these are for small fractions of an FTE, and the missing effort will be made up later when the post is filled. Only one post at RAL remains unfilled: the CMS experiment support post discussed in point e) above. There has been little staff turnover since the last OC, with two new staff starting at the Tier-1 in experiment support roles. The EGEE-funded NorthGrid Deputy Tier-2 Co-ordinator will leave in February, but this is shortly before EGEE ends in any case.

Table-3 shows the funded and unfunded effort delivered to GridPP3, both given as a % of the expected funded effort. Figures are given for FY09 and for the project as a whole, up to the end of Q309. It can be seen that, as recruitment is now essentially complete, 95% of the expected effort has been delivered to GridPP this financial year, with most of the shortfall arising from the enforced recruitment delay in experiment support posts at RAL. Overall effort delivered during the course of GridPP3 is now 129% of that funded by GridPP, with all work areas delivering at or above the funded effort. In particular, there remain large unfunded contributions in operations and Tier-2 support.

Work Area	FY09 GridPP funded effort (%)	FY09 Unfunded effort (%)	FY09 Total effort %	Total GridPP funded effort	Total unfunded effort	Total effort
Management	100	0	100	100	0	100
Miscellaneous	100	0	100	100	0	100
Operations and experiment support	81	84	165	80	69	149
Grid support	94	32	127	97	21	118
Tier-1	100	29	129	91	24	115
Tier-2	94	67	160	89	61	149
Total	95	46	141	91	39	129

Table 3: Cumulative effort delivered to GridPP3 from funded and unfunded sources.

Travel

Figure 1 shows the travel spend to January 2010, alongside spend in previous years. Although still lower than the spend two years ago, due to the reduced number of staff in GridPP3, travel spend in FY09 is higher than in FY08. This reflects completion of recruitment for GridPP3 posts and the switch-on of the LHC, which has resulted in greater emphasis on face-to-face meetings with more people involved in GDB and experiment-specific distributed computing meetings. Travel spend for FY09 is expected to be within our estimated budget. Note that there is a contribution from EGEE to these costs, which will not be realised until next financial year.

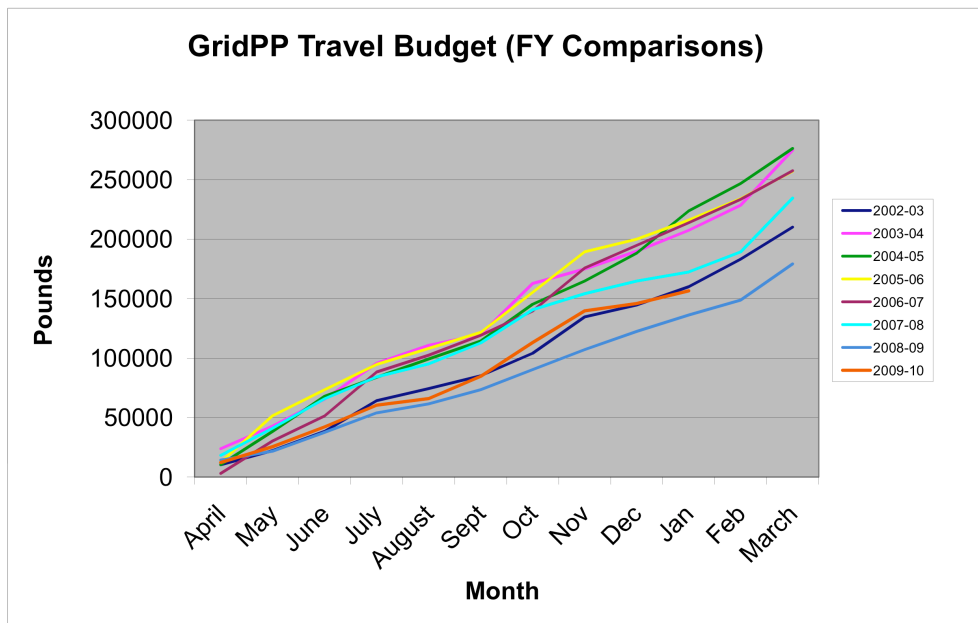


Figure 1: GridPP travel budget.

Summary

Changes to the LHC schedule have led to revised equipment figures from the experiments, resulting in a re-profiling of the Tier-1 hardware spend. In addition, at the request of STFC, £661k of Tier-1 hardware costs have been moved forward from FY10 to FY09. GridPP has also procured extra disk at the Tier-1, in order to address a shortfall from some disks failing to meet acceptance in the FY08 delivery. Beginning in August 2010, GridPP seems likely to have to pay directly for the OPN from RAL to CERN. It is proposed that GridPP provide bridging funding for 3 of the EGEE-funded staff whose contracts expire this April: no additional money is required for this.

GridPP3 staffing continues to be at nearly full complement, with only 0.5FTE of experiment support posts remaining to be filled at RAL, and in FY09, 95% of the planned funded effort has been reported. Effort funded from other sources has more than compensated for small shortfall, with 141% of the expected funded effort delivered in total over FY09.