

**GridPP**  
UK Computing for Particle Physics

**GridPP Project Management Board**

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# Resource report

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## GridPP financial summary

Table-1 below shows the GridPP financial situation at the end of May 2010 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
<b>Tier-1 HW</b>	<b>A</b>	<b>£1,658,531</b>	<b>£1,938,833</b>	£1,199,000		£4,796,364
<b>Tier-2 HW</b>	<b>B</b>	<b>£2,186,000</b>	<b>£269,370</b>	£1,746,000		£4,201,370
<b>Tier-1 Staff</b>	<b>A</b>	<b>£993,757</b>	<b>£1,339,959</b>	£1,439,983		£3,773,698
<b>Tier-2 Staff</b>	<b>B</b>	<b>£926,630</b>	<b>£967,401</b>	£1,002,239		£2,896,270
<b>Support Staff</b>	<b>C</b>	<b>£678,610</b>	<b>£552,694</b>	£471,163		£1,702,467
<b>Operation etc</b>	<b>D</b>	<b>£726,778</b>	<b>£829,597</b>	£1,032,569		£2,588,943
<b>Management</b>	<b>E</b>	<b>£316,288</b>	<b>£336,318</b>	£351,966		£1,004,571
<b>Misc. staff</b>	<b>F</b>	<b>£46,176</b>	<b>£47,426</b>	£64,831		£158,433
<b>Grants Staff</b>		<b>£1,988,146</b>	<b>£1,981,062</b>	£2,138,442		£6,107,650
<b>SLA Staff</b>		<b>£1,700,092</b>	<b>£2,092,332</b>	£2,224,310		£6,016,734
<b>Misc. spend (travel etc.)</b>	<b>G</b>	<b>£179,227</b>	<b>£173,408</b>	£227,270		£579,905
<b>Total</b>		<b>£7,711,996</b>	<b>£6,455,005</b>	<b>£7,535,022</b>		<b>£21,702,023</b>

Table-1: Current GridPP plan.

The overall project budget is shown in Table-2 below. Originally allocated funds for GridPP3 were £22,874,628, plus a working allowance of £247,000. However, the original capital spend approved for the final year of GridPP3 is unlikely to be available in full from STFC. It has been agreed with STFC to work with a Tier-1 hardware total in FY10 that is reduced to £1.2m: point a) below discusses how this is to be achieved. This leads to a reduced total of £21,839,295 for the available GridPP funds in Table-2. From the working allowance, £9k per year for each of FY09 and FY10 has been allocated as STFC's contribution to the EGI subscription.

<b>Total Project Cost FY08 onwards</b>	<b>£21,702,023</b>
<b>Tier-1 Capital reduction FY10</b>	£1,035,333
<b>Total funds available for GridPP3</b>	<b>£21,839,295</b>
<b>Project Balance</b>	<b>£137,272</b>
<b>Allocated working allowance</b>	£18,000
<b>Remaining working allowance</b>	<b>£229,000</b>

Table-2: GridPP project budget.

Key points are:

- a) The main change in the plan since the last OC is a substantial reduction in the Tier-1 FY10 hardware line. This is for two main reasons:
  - STFC have requested that GridPP work within a significantly reduced Tier-1 capital spend for FY10. Rather than the £2.24m for Tier-1 hardware presented at the last OC, GridPP have agreed to work towards an

FY10 total (capital and resource) of £1.2m. We hope to achieve this economy partly through reduced hardware requirements and partly through the delay into GridPP4 of some capital spend on tape infrastructure that has been enabled by the new LHC planning. The resource portion of the Tier-1 spend for FY10 is currently budgeted within RAL-STFC at £100k. Classification between resource and capital varies and can be difficult to predict in advance. However, the FY09 spend at the Tier-1 identified as “resource” was £226k, so it is likely to be extremely difficult to complete the necessary purchases (OPN, LSF, ORACLE etc.) within this proposed budget. GridPP would like to understand whether it is only the Capital fraction of the spend that is restricted in FY10 and/or whether additional funds might be released. This is urgent as hardware procurement is underway.

- The LHC experiments prepared new resource projections for 2011 that were agreed by the Computing Resource Scrutiny Group and the Resource Review Board in April 2010. GridPP then requested projections to 2015 based on the new 2011 numbers; these were received by the end of April. Overall, there is a reduction in the required disk and CPU, but a significant increase in the requirement for custodial-storage.
- b) In December, STFC requested that as much capital spend as possible at the Tier-1 be brought forward from FY10 to FY09. In the event, we were able to move all the FY09 disk procurement forward, including £95k that, at the time of the last OC, we thought would be paid in FY10. Overall, this led to a provisional Tier-1 hardware spend in FY09 of £1,938,833.
- c) Grants for the second round of hardware allocations to the Tier-2 sites are now almost complete. All the grants for FY09 were issued before the end of the financial year, totalling £269,370.
- d) Final SLA staff costs at RAL for FY09 were very close to predicted levels, at 1% less than the budgeted figure.
- e) At the last OC, it was agreed to fund three EGEE bridging posts, in order to retain the expertise of staff who were funded or part-funded by EGEE. These posts have now been formally costed at a total amount to GridPP of £138k: this is 36k below the original estimate, in part due to exchange rate variations enabling EGEE funding to cover more person months than planned.
- f) Travel costs for FY09 were £173k, within the budget of £197k. These are discussed in more detail below.
- g) £32k was set-aside in the Misc. line to cover any costs associated with GridPP withdrawing funding for R-GMA software. R-GMA has been supported through a mix of EGEE and GridPP funding, but both of these ended at the start of FY10. It is now clear that a small amount of funding over the next 6 months, at the level of 0.25FTE, will be required to allow maintenance of R-GMA while sites transfer to new software. This is estimated at £10k.

## Staff effort

Staff effort is tracked through GridPP's quarterly reporting system. Since the last OC, there have been two quarterly reports, bringing the staff reporting up the end of FY09. At the start of April 2010, GridPP staffing was at its full complement in the management, miscellaneous, experiment and operations, Tier-1 and support lines. All posts at RAL were filled, including the extra CMS post agreed at the last OC, which has been recruited internally. However, more recently (possibly associated with the fact that GridPP3 now has less than one year to run) we have started to see some staff turnover:

- Durham's system administrator left at the end of May, but will return to train his replacement. Durham are currently recruiting and the site is being run by the ScotGrid team.
- One of the Imperial College system administrators went on leave of absence for a year from the end of April. However, IC had recently recruited another system administrator, so can maintain the required effort.
- One of the Manchester system administrators left at the end of May. This post was 50% GridPP funded.
- The ScotGrid Deputy Tier-2 co-ordinator left at the end of May. The post has been advertised, and closes this week.
- QMUL are recruiting for an extra system administrator.

We expect staff turnover to increase if the uncertainty over funding for GridPP4 grows; this is discussed further in the Status Report.

Table-3 shows the funded and unfunded effort delivered to GridPP3 in FY09, compared with the expected funded effort. 98% of the expected effort has been delivered to GridPP in FY09: most of the shortfall arose from the enforced recruitment delay in experiment support posts at RAL. Overall effort (funded and unfunded) delivered during FY09 is 143% of that funded by GridPP: in particular, there are large unfunded contributions in operations and Tier-2 support. Unfunded effort is from a range of sources, including EGEE, RAL and individual universities.

Work Area	FTE expected	FTE delivered (GridPP funded)	FTE delivered (unfunded)	Total effort (% of expected)
Management	3.5	3.5	0.0	100
Miscellaneous	1.1	1.1	0.0	100
Operations + experiment	6.5	5.6	5.5	171
Support	7.3	7.1	2.0	124
Tier-1	18.0	18.6	5.7	135
Tier-2	17.0	16.5	10.6	160
<b>Total</b>	<b>53.4</b>	<b>52.3</b>	<b>23.8</b>	<b>143</b>

Table-3: Effort delivered to GridPP3 from funded and unfunded sources in FY09.

## Travel

Figure-1 shows the travel spend to May 2010, alongside spend in previous years. Note that the spend in this graph is total GridPP spend – in the final accounting some of this is offset by a rebate from EGEE (£28k in FY09).

In GridPP3 spend is typically lower than in earlier phases of the project, due to a reduced number of project-funded staff. However, FY09 spend is higher than that in FY08 due to completion of recruitment and the start of LHC running. One specific issue has been the increased costs for the April 2010 EGEE User Forum in Sweden, resulting from the travel delays associated with the Icelandic volcano. Efforts are being made to recover some of these costs where possible from airlines and insurance. STFC moved to the Shared Services Centre at the end of May 2010 and there is likely to be some backlog of processed claims as a result.

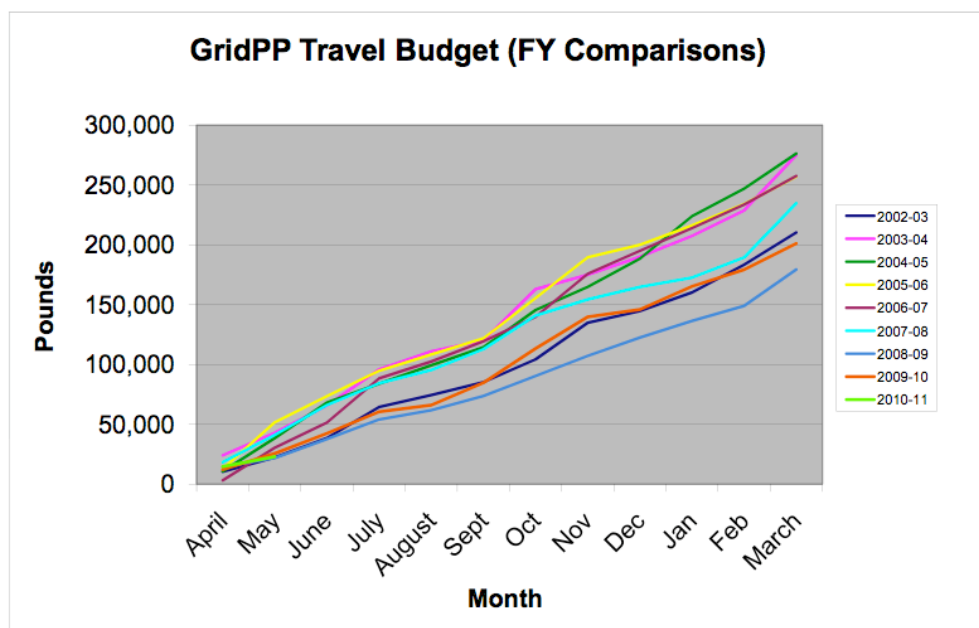


Figure 1: GridPP travel budget.

## Summary

The Tier-1 hardware spend for FY10 has been substantially reduced, in order to fall within a £1.2m budget set by STFC. We aim to achieve this through reduced hardware requirements, and by moving some spend on tape infrastructure into GridPP4. New resource projections from the experiments, agreed in April 2010, have been factored into these calculations. However, it will be difficult to make the required purchases within the proposed resource budget for Tier-1 hardware of £100k.

GridPP staffing is nearly at full complement, but we are beginning to see the effects of perceived uncertainty in GridPP's future funding, with increased staff turnover. In FY09, 98% of the funded effort expected by GridPP was delivered, with the shortfall mainly due to enforced delays on recruitment at RAL. A substantial amount of unfunded effort was again reported, taking GridPP's staffing in FY09 to 143% of the funded level.