Notes from Project Management Meeting, Durham 12/6/97

wht-naomi-89
Internal Document Number: AOW/MAN/AJL/16.2/06/97/Costs-9798 allocations meeting
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Present: ABG, RAH, AJL, RMM, JMDS, MW

1. Introduction

The following are brief notes. The goal of the meeting was to (a) confirm allocations for 1997/98 (b) identify areas where additional allocation / rephasing can bring the project forward (c) look at areas where further cost savings can be made if necessary.

AJL stressed how much project delay was driving up costs via overheads. Every effort must be made to keep on schedule.

(a) Profiles as presented in Excel sheet were acceptable.

(b) ROE might be able to bring work forward if extra electronics engineering effort is found.

(c) Ideas were roughly prioritised as follows, with approximate level of saving being given, if known. Scale: 1 = don't consider further at present to 5 = will implement pending final confirmation from Project Engineer.

Other decisions which were made during the discussion are given first.

1. Run two EPICS databases - cost slightly more up-front but could save later. Therefore RGO to develop own electronics rack
2. Put high priority on getting interface documents set up, so different WPs can proceed as independently as possible.
3. Choose two 4-port CCD controllers option rather than one 8-port. Reasons: no extra development work over other systems being delivered; assurance that timing between CCDs is issue already being handled; compatibility with other spares.
4. Don't adopt options which significantly restrict off-axis capability - we'd look too much like ELECTRA.
5. Use of same bay for RGO and ROE electronics rack mountings still preferred if possible). Need more information on total electronics requirements before finalising this decision.

2. Implementation of discussed items.

Items 1 - 5 above are to be implemented on the issue of version 16.2 of this document.

It should be assumed that items at level 5 in the list below will be implemented, pending final confirmation from the Project Engineer and a subsequent check with ING where there are any performance or reliability issues. formal confirmation of implementation will be given 'soon'

Items at level 4 require further discussion, which should be organised during the week of 16th June by those named. However, it should not be assumed that they will adopted until these discussions have taken place.

Items at level 3 and lower will not be adopted but for levels 2 and 3 they will be noted for reconsideration should further savings be required. Items at level 1 and 0 are unlikely to be reconsidered for cuts.

3. Items considered as cost saving measures

Don't cool chip. 2 - 4K	3.0K	- quantify first. (ABG is doing this)	5
Have only 1 filter wheel	3.8K	recoverable - space will be left for second wheel.	5
Slightly reduce time/T&S level of support for CRJ.	10K	Practical given CRJ's other commitments	5
Omit sidereal tracking option	~2K	Can be implemented later at no overall increased	5

implementation - expect small saving		cost	
Don't implement brakes option on carriages, use holding current	10K	ABG to discuss with AW, RAH and omit brakes brakes if both engineers are satisfied with holding current concept from stability and thermal viewpoints.	4+
Complete engineering (stand-alone) software only	Up to 100K	Discuss with Guy. Run integrated software as separate strand of project. (~ 0.5 dsy = £22K identified as sensible cut which would still give good functionality)	4
No encoders, use step counting	10K	Saving much less if facility still has to be designed in Also tied to power down option. Keep encoders on pick-off x-y at least. The '4' mark is for non-pick-off encoders being omitted. Do the 3 WFS elements need to occupy space that could be occupied by one of the other elements. i.e. can the pickoff run into the collimator? If so then care must be taken when powering up from an unknown state and moving to datums.	? 4
Take out on the fly change of waveforms	4.5K	note: requires reboot of CCD controller for each change	3

N.C.U. omitted/delayed	55K	RGO WFS cal unit placed at Nasmyth focus (optics may be slightly over f/11). Knock on effects are poor for operation. Know we'd have to make NCU eventually So eventually. that whole WFS cal unit does not have to be replaced/removed for each calibration it would probably be sensible for the final mirror of the cal unit to be a manual flip in mirror.	2
Don't implement second chip	24K	Requires 4-port controller then solve timing later. Hits badly on latency esp in 4cell mode	2
No WFS calibration source - do all with NCU	7.5K		2
Tip-tilt option in NCU - delay or cut?	?		2?
No ADC	9.2K	Lose funadamental high Strehl performance	1
WFS on-axis only - remove xy pick off	??	Lose too much sky cover and main gain over ELECTRA	0
Don't use EPICs	??		0
Don't even write s/w control for OMC	??		0
Dispense with DM height control	??	Too large an effect on alignment, observational off-axis performance.	0

Note added after meeting

The Durham grant has a figure of £100K for the new DM and its electronics. Over half this is the electronics. A potential saving of ~£35K might be found if the ELECTRA mirror drivers can be modified to cope with the higher capacitances of the Xinetics mirror actuators. This avenue should be pursued, following up on the indication from Xinetics that they might let us have an individual actuator for testing.

Some small saving might be made by omitting implementation of the sidereal tracking option, but an amount was not identified.

Total Savings Identified.

1. Savings likely to be adopted (marking 5 and 4+) £28.8K
2. Possible saving on continuous face-sheet DM electronics £35.0K
3. Delayed spend through phased software approach, ~0.5 d.s.y. £22.0K

4. Next level of saving priorities (to marking 3) £14.5K
5. Have engineering level software control + phase A study only £55.0K