

Hi PETER,

THANKS FOR THE RAPID REPLY. HERE'S SOME RESPONSES FROM ANDY AND I. OUR STUFF IN CAPITALS...

One question,
clause 12(a) for rapid image acquisition I assume needs to be done 'on line' (i.e as part of any observing night). I had previously thought that the most efficient link for this optimization process would have been to physically plug in the fibers from the array controller (SDSU) into the NAOMI 'box' at some point and let NAOMI control the whole process. However, if it is a process that need to be done online, this is probably not feasible (unless we use an optical mux). What are your feelings or inclinations on this point ? Do you have a preferred method of controlling the camera ? The impact here is that if you 'attach' to the top level control structures you may well find a time penalty on frame rate that is unacceptable.

YES, IT DOES NEED TO BE DONE REGULARLY AND DURING THE NIGHT SO RECABLING IS UNATTRACTIVE. OUR PREFERENCE FOR CONTROL WOULD BE VIA THE MECHANISMS WHICH GUY IS DESIGNING (I'LL GET COPIES OF THE PAPERWORK TO GUY FOR HIS VIEWS - YOU'LL GATHER I FORWARDED THE FIRST ONES TO A NO DOUBT BEMUSED GUY RICKETT AT SWINDON). THIS PREFERENCE WOULD BE FOLLOWED BY EPICS/CA (AS THIS IS AN ELECTRA BUT NOT NAOMI REQUIREMENT AND COULD BE CARRIED OVER OR RE-WORKED). THEN ANYTHING... IF LATENCIES GOT UP TOWARDS A SECOND PER SUBFRAME IT WOULD BE WORTH THINKING ABOUT SOMETHING SPECIAL.

Another question ... (not to bad for Friday !) .. Concerning clause 15 (User Interface). Is the ING to supply these system status panels (served from the NAOMI control computer via a client on the Instrument Control Computer) or will these be available from the NAOMI monitoring computer sys as built by yourselves ?

THESE ARE PART OF THE JOINT DELIVERY FROM RGO/DURHAM.

And yet another Does clause 20(c) confine or bother you ?

GOOD QUESTION. AT THE MOMENT ELECTRA HAS (1) A SUN SPARC, (2) SOME C40s AND (3) AN SGI 3D-GRAPHIC WORKSTATION. FOR NAOMI WE HAVE RAISED THE IDEA OF AN EMBEDDED SPARC CARD ON THE C40 RACK AND WILL SHORTLY BE ASKING GUY AND, VIA HIM, YOURSELVES TO APPROVE THAT CHOICE. NOW THE SPARC, WHETHER CARD OR WORKSTATION, RUNS THE C40 DEVELOPMENT SYSTEM AND, OF COURSE, ITS OWN. SO THE DIFFICULTY IS THE 3D-WORKSTATION.

TO INSULATE US FROM THE HARDWARE WE'VE DONE ALL THE 3D STUFF WITH ISO OPEN/GL BUT WE COULDN'T GET A GOOD VALUE SUN OPEN/GL PLATFORM FOR DEVELOPMENT AT THE TIME SO WE WENT FOR THE SGI FOR ELECTRA (ROYAL SOCIETY FUNDED). THE IDEA WAS THAT WE'D ASK ING AT NAOMI PURCHASE -TIME IF THEY WANTED A GL SPARC (PERHAPS WITH LESS 3D SPEED/£) BUT COMPATIBLE WITH ING STANDARDS OR IF THEY WOULD PREFER SOMETHING ELSE - VERY POSSIBLY AN SGI. IF ING WENT FOR THE LATTER THEN 20(C) IS CLEARLY OUT THE WINDOW...

Jumping back to clause 12(b) Yes I can appreciate that NAOMI needs to know explicitly what the telescope is doing and also that NAOMI can determine the best action based on the circumstance. Do you envisage then a state flow diagram that would allow these and other (?) normal telescope operations to be interlocked via stepping through defined states of a predefined movement sequence set at the high end of the control system or defining specific commands to be sent to NAOMI before initiating the actual movement and awaiting a 'NAOMI SAFE' message

returned to begin moving ?

DEFINITELY ONE FOR GUY: AN EXTERNAL ING INTERLOCK MANAGER WILL PROVIDE LOCKING SERVICES WHICH CAN PREVENT COLLISIONS. NAOMI HAS A SEQUENCER PROCESS WHICH IS A SINGLE POINT OF CONTROL/STATUS FLOW WHICH CAN CONTROL AND SYNCHRONIZE ALL INTERNAL NAOMI ACTIONS. IT WILL HAVE INTERFACES TO THE WHT CIA (DESIGNED BY GUY) WHICH WILL ENABLE IT TO ALSO COMMUNICATE WITH THE INTERLOCK MANAGER AND TO ACHIEVE EXTERNAL SYNCHRONISATION. OTHER FUNCTIONS OF THE NAOMI-CIA INTERFACE SUPPORT THINGS LIKE THE SLOW (OFFLOAD) CONTROL LOOPS WHERE NAOMI GENERATES THE DEMAND PARAMETERS.

How's it going generally with you all there ... Good humor I hope !

PRETTY GOOD - ONLY TWO MORE PPARC REVIEWS PENDING NOW!