## **Summary:**

Individuals all updated on progress and preparation ahead of meetings this morning and following weeks

## **Actionable Items:**

- Group meeting to ensure everyone is on the same page after the holidays ahead of the final stretch of the project
- Clarification questions have been listed by appropriate subsystem groups
- Subsystem documentation will be created and referenced to in the final design report
- Plan to prepare a draft of the post and discuss with Celine by week 9
- Plan to have recommendations for subsystems for next project group handover

## **Attendance:**

Gerard (G), Chris (C), Paul (P), Steve (S), Brian (B), Wenjie (W), Alex (A)

## Agenda:

| Item                    | Discussion                           | Actions + Responsibilities |
|-------------------------|--------------------------------------|----------------------------|
| Meeting Open            | 9:20am                               |                            |
| Tutor Update from Audit | G: Did pretty well for an            |                            |
|                         | Engineering group since software     |                            |
|                         | groups are doing better and          |                            |
|                         | postgrad software the best           |                            |
|                         | A: 70 something was the mark         |                            |
|                         | S: Shadows marked kinda well,        |                            |
|                         | Seeing outputs in the repository     |                            |
|                         | was hard. Just looking at things     |                            |
|                         | that are on the criteria. G + Celine |                            |
|                         | feedback more helpful since it's     |                            |
|                         | more project oriented.               |                            |
|                         | G: Lack of shadow feedback is not    |                            |
|                         | helpful                              |                            |
|                         | A: If we aren't getting actionable   |                            |
|                         | feedback then why aren't we          |                            |
|                         | getting a higher mark.               |                            |
|                         | G: discrepancy between marks in      |                            |
|                         | peer review they will get toned      |                            |
|                         | out. Shadows almost entirely got     |                            |
|                         | toned out because they were too      |                            |
|                         | far different. And hence removed.    |                            |
|                         | It's not a perfect system. One thing |                            |
|                         | that was consistent was low          |                            |
|                         | shadow feedback mark. No             |                            |
|                         | actionable feedback 1 and if it is 3 |                            |
|                         | S: No specific guidelines to         |                            |
|                         | feedback marks. No review of it,     |                            |
|                         | but people shouldn't be giving       |                            |
|                         | feedback on how they feel.           |                            |
|                         | G: of 250 people, 90 forgot.         |                            |
|                         | Information is spread out over 4     |                            |

|         | sites making it hard to find        |                            |
|---------|-------------------------------------|----------------------------|
|         | everything.                         |                            |
| WP      | G: The guideline is on one of the   |                            |
| ***     | websites.                           |                            |
|         | S: do we have to apply?             |                            |
|         | G: No but you need to do stuff to   |                            |
|         | apply. Base application on the      |                            |
|         | work around here and can't use      |                            |
|         | pre-existing work. Hope you will    |                            |
|         | be doing the job, or scholarship    |                            |
|         | and send them through to tutors to  |                            |
|         | make them valid. No tutorial next   |                            |
|         | week. Week before the audit, week   |                            |
|         | of and week after. You as a group   |                            |
|         | send an email with all the job      |                            |
|         | applications to Gerard next week.   |                            |
|         | I'm one of the main marking         |                            |
|         | groups, so it would be in your best |                            |
|         | interest.                           |                            |
| Poster  | G: Work on that due week 10. One    | Have a draft of the poster |
| TOSTCI  | more tutorial in wk 9 due 4 days    | in week 9                  |
|         | before. Have a draft of it and talk | III WEEK )                 |
|         | it over in the tutorial. Have a     |                            |
|         | poster double checking with         |                            |
|         | Celine.                             |                            |
|         | S: Do you have a template of the    |                            |
|         | poster?                             |                            |
|         | G: Marcus                           |                            |
| Project | S: Did you know there was a         |                            |
| Troject | standby heater                      |                            |
|         | G: Nope                             |                            |
|         | S: Starting up the laser from cold  |                            |
|         | takes 24 hours so it helps speed it |                            |
|         | up. Ideal temperature requirement   |                            |
|         | might result in ambient             |                            |
|         | temperature increasing than         |                            |
|         | wanted. Need to address at          |                            |
|         | meeting today.                      |                            |
|         | W: assume laser needs to operate    |                            |
|         | at a very specific temperature      |                            |
|         | S: 10-30-degree optimal             |                            |
|         | W: I think there is confusion       |                            |
|         | between cooling temperature, or     |                            |
|         | environmental temperature.          |                            |
|         | S: CAN bus expect to be an          |                            |
|         | ethernet cable. They expect that    |                            |
|         | ethernet? Want previously           |                            |
|         | discussed with them.                |                            |
|         | G: CAN over ethernet.               |                            |
|         | C. C. II ( O ( CI CHIOIIIC)         | L                          |

|              | S: Put it into a google doc.                  |  |
|--------------|---|--|
|              | Including responses to their                  |  |
|              | document comments.                            |  |
|              | W: Tell vendor cooling system is              |  |
|              | air to water. Closed system.                  |  |
| Presentation | G: There is a presentation                    |  |
|              | component with the meeting?                   |  |
|              | S: There is one after the vendor              |  |
|              | meeting to update everyone on                 |  |
|              | each subsystem and get everyone               |  |
|              | on the same page                              |  |
|              | G: WP due on the 27 <sup>th</sup> don't quote |  |
|              | me on that. Is everyone in the                |  |
|              | group on the same page.                       |  |
|              | A: Finish CAD model by next                   |  |
|              | week which is feasible. Mark                  |  |
|              | wanted FEA done, but it's hard to             |  |
|              | model   |  |
|              | G: Documentation of analysis                  |  |
|              | process to hand over.                         |  |
|              | A: Very preliminary analysis.                 |  |
|              | Model as actual square sections.              |  |
|              | Simplify using 1D frame network,              |  |
|              | and stiffness. To determine                   |  |
|              | whether it is appropriate. Where              |  |
|              | the next group would do it. Celine            |  |
|              | wanted to do concept designs for              |  |
|              | breadboards. Ask Celine.                      |  |
|              | G: Getting to the point when it will          |  |
|              | get to the handover phase and                 |  |
|              | what the project will look like at            |  |
|              | that stage. Mechanical seems well             |  |
|              | defined. Electrical, cooling,                 |  |
|              | environmental.                                |  |
|              | W: Written document and                       |  |
|              | specification, maintenance                    |  |
|              | manually. Two laser requirements.             |  |
|              | Combined with electrical.                     |  |
|              | C: Preliminary design document is             |  |
|              | started and the format and                    |  |
|              | template checked with EOS and                 |  |
|              | Celine. Setting up requirements               |  |
|              | and system architecture diagrams.             |  |
|              | G: That's good because Celine                 |  |
|              | said that you have a better idea of           |  |
|              | what to expect on the design report           |  |
|              | now   |  |
|              | S: Summary report with each work              |  |
|              | package. Summarise subsystem                  |  |
|              | areas and reference into the design           |  |
|              | areas and reference into the design           |  |

|                              |                                      | <u>,                                      </u> |
|------------------------------|--------------------------------------|--|
|                              | report. Make an overleaf document    |  |
|                              | and uploaded onto the site.          |  |
|                              | B: Similar to cable wrapping         |  |
|                              | document. Don't know the             |  |
|                              | position of the cabinet.             |  |
|                              | S: Got the cable routing document    |  |
|                              | in the presentation. EOS and ANU     |  |
|                              | electrical cabinet is supposed to go |  |
|                              | on the bottom floor and routed       |  |
|                              | from there. Vendors don't know       |  |
|                              | size of components and the           |  |
|                              | auxiliary cabinet may be split up    |  |
|                              | making it ideal. Addition of cables  |  |
|                              | will have to go through the cable    |  |
|                              | wrap.                                |  |
|                              | P: Plug stuff into the network       |  |
|                              | switch on the ground floor.          |  |
|                              | B: ANU laser should use ethernet     |  |
|                              | to make it all the same with the     |  |
|                              | cooler way it's controlled.          |  |
|                              | S: CAN and EOS confusion             |  |
|                              | G: Ask Mark today in the meeting     |  |
|                              | today.                               |  |
| Project subsystem discussion | W: Air is more a part of the         |  |
|                              | mechanical design.                   |  |
|                              | S: There is temperature needs that   |  |
|                              | might need the air to be cooled.     |  |
|                              | G: Vibration very open ended.        |  |
|                              | S: Possibility of a vibration        |  |
|                              | analysis on the EOS laser, if it's   |  |
|                              | changed and in the clean room        |  |
|                              | where things are going to be         |  |
|                              | operating. Look into that later      |  |
|                              | today.                               |  |
|                              | G: Is it going to be performed       |  |
|                              | when the telescope is moving.        |  |
|                              | Assume the telescope is moving       |  |
|                              | while the laser is operational,      |  |
|                              | unless Celine say's otherwise.       |  |
|                              | W: Cooling is the choice of cooler.  |  |
|                              | S: Clarification with the vendor     |  |
|                              | and need for it in the air control   |  |
|                              | system and a secondary cooler        |  |
|                              | necessary, with the wattage          |  |
|                              | known. There is still stuff to be    |  |
|                              | done linking with the electronics    |  |
|                              | component.                           |  |
|                              | G: Want to be aware that temp is     |  |
|                              | ok when they are all running.        |  |
| 1                            | ok when they are all rullilling.     |  |
|                              | W: Adjust the model.                 |  |

|                | S: 3kW heater would need 3 phase   |  |
|----------------|------------------------------------|--|
|                | power                              |  |
|                | W: assume it's 1 phase no matter   |  |
|                | what. We don't need 3500W.         |  |
| Group Cohesion | G: I have this idea that people    |  |
|                | don't know what they need to do.   |  |
|                | Does that usually happen in the    |  |
|                | weeks when you aren't here?        |  |
|                | S: Last few weeks have been a bit  |  |
|                | different cause not everyone is    |  |
|                | here.                              |  |
|                | C: Meeting after lunch and reflect |  |
|                | on everything and make sure        |  |
|                | everyone on the same page.         |  |
|                | G: Presentation split into work    |  |
|                | packages and individuals will      |  |
|                | present                            |  |
| Meeting Close  | 10:25am                            |  |