# *PROJECT MANAGEMENT*

For the project an initial project proposal was outlined and a Gantt chart displaying deliverables and a timeframe was set out, which can be seen in Appendix X. It was quickly realised however, that the timescale outlined in the Gantt chart had been far too ambitious. There was an initial belief that it would be a fairly easy process to set up a working and accurate distance detection unit on stationary objects and that most of the time spent on the project would be looking to make a very accurate moving distance measurement. However, upon starting the project it became clear that this belief had been deeply fallacious and the multitude of problems that arose in trying to get an accurate distance reading even on stationary objects ended up taking up most of the project. This was not minded very much since the purpose of the project was to use this application of distance detection to study and explore the limits and obstacles when using ultrasound and certainly many challenges arising from ultrasound were discovered. Due to the length of time spent exploring and ultimately coming up with the solutions to these problems did impact the decision to not look at moving objects when performing the distance measurement as it was decided that it was better for the project to only look at distance measurement on stationary object well, with good analysis of the circuit and reasons for problems that arose properly explored rather than to rush the project and rush looking at moving objects. This was especially since, as described in the future developments section, the difficulties arising from being able to tell in testing whether distance measurements are correct when the object being measured is moving.

It was also felt that, although a Gantt chart was drawn up as per the project course requirements, due to the changing nature of the project and a lot of the project revolving around searching out reasons why the distance measurement was not accurate and seeking to find solutions, then the rigidity set down by relatively arbitrary deadlines decided upon at the start of the project and laid down in the Gantt chart was not useful or constructive for the project and indeed the Gantt chart was not really used when managing the project even though most of the deliverables set were achieved and only using transducer arrays and moving distances weren’t achieved and the reasons for this have already been explained.

Instead a Kanban board was used to keep track of the project progress as this was considered more flexible and more suited to the personal working style whilst still highlighting the major deadlines in the project such as the progress demonstration, and deadlines for poster submission etc. It should be clearly seen that this management style evidently worked as all deadlines were achieved on time or before. A screenshot of the Kanban board in progress during one week in the project timeline can be seen in Appendix X as evidence of its use. Another important factor in the good management of this project was the fact the progress and work on the project was constant throughout, with the project initially being worked on two days a week through the early stages and then daily as the deadline for the project became more imminent. Evidence can be seen of this in Appendix Y where the SAAS log of attendance in the lab has been screenshotted.

Contact with the supervisor was regular but not excessive, with emails being sent when problems occurred or when it was felt that a meeting should be held to discuss the progress of the project and the supervisor was always very helpful and prompt in their responses making for good communication with regards to the project. All this evidence shows good management of the project