

## Broadening my Horizons

Weekly Report 10/23/17 to 10/29/17

This week, I managed to schedule another interview; this time with Mr. Oberle, the chief mechanical engineer at Raytheon in the DFW area. During the interview I learned about his role at the company, the multitude of products the company manufactured, and the general purpose and duties of Raytheon. Mr. Oberle also explained the design and development process of the boards while also explaining the various machines required to create and test these boards. The interview I had with Mr. Oberle provided helpful information about the wider scope of mechanical engineering while also expanding on the information I had gained in the weeks prior from research and my interview with Dr. Kovacevic. The interview was also beneficial for me as it gave me an opportunity to hear things from the perspective of someone working in the field rather than from someone who was a university professor. During the interview Mr. Oberle explained how his primary role at Raytheon was to oversee the manufacturing and design of analog printed circuit boards which were used in various weapon systems such as missiles. He also explained how his department utilized CNC (computer numerical controlled) milling machines in order to cut out and drill the paths from the copper sheet which the PCB (printed circuit boards) were created from. While this interview with Mr. Oberle was quite beneficial in learning how the design process required several different types of engineers such as systems engineers and electrical engineers, it was not as beneficial as I hoped it would be in learning more about rapid prototyping and CNC machines. Mr. Oberle had explained how he typically did not deal with the manufacturing side of Raytheon and as a result, he was not as knowledgeable as I had hoped him to be on this topic. In the coming weeks when ISM really starts to escalate with

the introduction of more assignments and with having to think about an original work idea, I will have to actively think about how I can use the information I have learned so far in my future work. I will also actively try to contact more professionals in order to further my research.