

**Paul S. Weiss**

**Summer 2010 and 2011 Satellite Control Systems Intern (Flight Dynamics and Commanding) at Intelsat**

**Washington, D.C., USA**

I always wanted to work in the space industry; in 2010 I got that opportunity. After many applications, CVs, and phone calls, I was contacted by a company called Intelsat. I knew I applied to them, but I didn't know too much about them. I did some research and found out that Intelsat was formed in the 1960's by 11 different countries with the goal of making intercontinental communication easier by using satellites. After an interview with their senior software engineer, I was offered a position as the Satellite Control Systems Intern for Flight Dynamics and Commanding.

I didn't quite know what to expect when I approached the giant glass building on Connecticut Avenue. When I walked in I was greeted by some of the most amazing models, artifacts, gizmos, and gadgets from throughout the space age. During the building tour, a building of almost a million square feet, we went into the control center called ESOC (East coast Satellite Operations Center). The room looked exactly like the control centers I used to see in space films. Rows of consoles with computers, buttons, phones, headsets, and papers. That room was used for satellite launches and orbital events such as moving a satellite from LEO to GEO via a Hohmann Transfer.

Throughout my two summers at Intelsat I learned a lot about how satellites work. Even walking around the building, looking at transponders, satellite models and even actual satellites taught me so much about how satellites work. I would always ask employees questions about what they did and how they interacted with the satellites. In my department, SCS, there were two teams, Flight Dynamics and Commanding and Legacy Telemetry Systems. Basically Commanding and Telemetry. Since I was on the commanding team, I learned about how commands are sent to the satellite and how those commands differ from the information that the satellite is receiving and sending. I learned about orbital manoeuvres and how the flight team actually moves the satellite.

The space industry, specifically the satellite industry, is a very small and tight knit industry. I was very fortunate to have an opportunity to work in it and I cannot wait to graduate and get right back into the industry. This time maybe I will be building spaceships at Blue Origin, or inflatable space stations at Bigelow Aerospace, or back at Intelsat writing the programs that fly satellites.

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