

A Mass Properties Engineer's Tale

Clint Stephenson, December 2023

Early in my professional career, I joined the American Space Shuttle Program as a Mass Properties Engineer (MPE). My technical manager was highly supportive of career development. My manager introduced me to the Society of Allied Weight Engineers (SAWE). Per ANSI/AIAA S-120A-2015(2019) you could say I was an E1 on the Mass Growth Allowance (MGA) table with significant engineering growth to be attained over the course of the years to come.

I became active in the SAWE at the local level. This provided me with an avenue to engage other local MPE professionals at a magnitude beyond what I would have if I had not made the decision to participate in the SAWE. Interactions with these MPEs had a mentoring effect. I was becoming more and more competent and confident in my technical abilities. I had advanced to an E1/E2 on the ANSI/AIAA MGA table.

Years into the future, I was approached about becoming a supporting chair of one of the SAWE International officers. I accepted. I became the individual membership chair for the SAWE Executive Vice President (EVP). I began interacting with senior SAWE leadership and individual members around our World on a regular basis. My goal was, and is, to soak up all the knowledge fellow MPEs choose to share. My work portfolio was becoming quite diverse as I began supporting the Chinook, Space Launch System, and even Gulf of Mexico Offshore projects. My expertise was being sought. This was the point in my career where I transitioned to a C3 on the ANSI/AIAA MGA table.

I became the SAWE EVP. I was engaging industry leaders who make up SAWE Corporate Partners and Company Members (CPCMs). These leaders support SAWE at a high level. The limited term EVP position set me up to become the SAWE Vice President of Vendor Relations (VPVR). I collaborate with CPCMs on a new level directly supporting them with our International Conferences. I am now a C3/C4 on the ANSI/AIAA MGA table.

These roles with the SAWE supported my maturity as an MPE. As a function of my collaboration with SAWE MPEs through the years, I was afforded my latest opportunity to use my growing duffel of analysis skills supporting mass properties analysis of the International Space Station (ISS). I began to work with ISS International Partners from countries around our World, similar to how I have been working with SAWE MPE and CPCM leaders from around our World. Sometimes you have Great days. Other days you do not. As interactions increase, more and more of the Great days will be had.

Take every opportunity that crosses your path to grow your skills. With the recent creation of the SAWE Mentoring program, it dawned on me this was another opportunity for personal growth. I signed up as a Mentee and was matched up with a Mentor who has the expertise I am seeking. The certainty of my path continues to converge as I aspire one day to become a S7 on the ANSI/AIAA MGA table. Thanks to the support of the SAWE, I am now able to be plugged into and play in any MPE situation.