A Focus on the Entry Level Engineer

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Abstract: The entry level engineer at the freshman student to the corporate entry level engineer have notional ideas on: what their education provides, their new employer expectations and career growth and sustainment. Based on my experience I will briefly cover these areas starting with some key points on education, employer expectations and career growth. I will break the college education into 3 sets of tools provided by the university to their graduates; 1) Common Core, 2) Major Support and 3) Major. I’ll walk through my experiences from being a sub-system engineer to becoming a Boeing Associate Technical Fellow (ATF) Project Engineer in military/limited commercial electronics hardware and software Research and Development (R&D), and provide a “Take Away” to think about as you move through your “Engineering Career”.

Biography: Steven Lien graduated from Lake Superior State University's engineering technology program in 1977. After graduation, he began a 33-year career that involved most aspects of technology associated with military hardware & software. Starting with McDonnell-Douglas's F-15 Electrical Group, where his focus was the power generation and distribution for the F-15 C/D/E. Lien became a technical representative for the F-15 program licensed production in Japan. Lien moved to the Tactical Electronic Warfare Systems group upon his return from Japan to complete his knowledge on the F-15 aircraft systems not releasable to Japan. In May 1987, he moved to McDonnell Douglas's advanced product research and development division (now Boeing Engineering & Operations Technology (EO&T)). Lien worked on researching and developing electronics hardware and software technology that would enhance future products designed for customers in all U.S. military services, along with diverse programs including missile defense, space, intelligence, homeland security, and commercial aircraft.

In 1997, Boeing acquired McDonnell-Douglas and Lien continued on with the company, as did his professional success. In 2001, Lien was elected to the “Boeing Technical Fellowship” as an Associate Technical Fellow (ATF). Only the top 5% of Boeing’s technical community are a part of this prestigious program. Additionally, Lien has two U.S. patents and has published three papers. In 2010, Lien retired from Boeing after 33 gainful years of dedicated work. In 2014, Lien accepted the position as the Southwest Missouri IEEE Section Chair to promote the mission of the IEEE organization in the Ozarks region and interests in Science, Technology, Engineering and Math (STEM) activities for all ages.