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Profile of Dawn Harms

Mary Frost

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Dawn Harms is Vice President of Marketing and Sales at Space Systems/Loral, a manufacturer of communications satellites headquartered in Palo Alto, California. She is responsible for new business development, sales and marketing for the company. Ms. Harms joined SS/L in 1990 as a subcontract engineering manager and later served as the director of Asia Pacific Business Development.

Prior to joining Space Systems/Loral, Ms. Harms was the product-line manager for commercial communications Traveling Wave Tubes (TWTs) at Teledyne MEC in Palo Alto, California. Before that she held a variety of other TWT design engineering and program management positions at Teledyne.

Ms. Harms earned a Bachelor of Science degree in Electrical Engineering from the University of Wisconsin and has completed numerous advanced engineering and management programs.

1) How did you get started in the satellite business?

My first job after graduation from college was as a design engineer of Traveling Wave Tubes (TWTs) at Teledyne MEC in Palo Alto, California. Although most new engineering graduates were favoring more high technology positions, there was something about the TWT and vacuum tube technology that fascinated me. When I learned that TWTs had attributes that make them particularly amenable to space applications, I knew I was headed in the right direction.

In 1990, I was recruited by Ford Aerospace (which later became Space Systems/Loral), a commercial satellite manufacturer in Silicon Valley, as their Traveling Wave Tube specialist for satellite payloads.

2) How have you been involved in changes brought about in or by this business (innovations, technologies, services)?

As an engineer at Space Systems/Loral (SS/L), I was the technical liaison between the systems engineers and hardware suppliers. I specified and oversaw the manufacture of radio frequency (RF) hardware used in satellite payloads. The emerging broadcast television market wanted lower cost access to transponders so we drove the TWT suppliers to continuously increase the output power and efficiency of their product. SS/L supported the development of direct radiating collectors for TWTs, which allow heat to be radiated directly into space rather than via the satellite's communications panels. This facilitated higher power

satellite platforms and improved the business models for direct-to-user applications such as DISH Network, DIRECTV and Sirius XM Radio.

Today, in my role in sales and marketing, I've been an advocate for technology developments that provide value to satellite operators and help make my customers more competitive in their markets.

3) What do you think was the greatest event/situation/opportunity you experienced?

Closing a two satellite deal on the Mekong River in the mid 1990's for a joint venture between some Thai entrepreneurs and the Lao People's Democratic Republic was a pretty special event, but this is just one of many. My career is chock-full of fantastic experiences and I am sure the best are yet to come.

4) What was the greatest obstacle?

Obstacle? What obstacle?

5) What do you see happening in the next five years in this industry?

On the technical side I see more power onboard satellites, perhaps upwards of 30 kilowatts in the next 5 years. Satellite operators and manufacturers will continue to push rocket manufacturers to launch larger and heavier payloads more cheaply - at least until the limits of physics have been reached.

On the business side I see consolidation within the mobile satellite service sector with more realizable business plans.

Finally, my crystal ball foretells of government-hosted payloads on commercial satellites as a baby step towards our government adopting commercial procurement practices to bring the sky-high price tags for current U.S. government systems back down to earth.

6) What advice do you have for women interested in entering the industry?

This is a great industry - one that nurtures life-long careers with enough breadth to allow you to evolve as your interests change.

Seek out mentors from within the industry. Become an expert in some aspect of the business. For those women who aspire to progress through the male-dominated aerospace hierarchy into executive management, articulate your goals to your management and ask for their support in attaining to your goals. Take every opportunity to build your skills. And network!