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Profile of Jane Petro

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Jane Petro
Kennedy Space Center Deputy Director

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

I got interested in space in general at a very young age. In 1962 the same year that NASA Kennedy Space Center was established, my family moved to Florida from Michigan because my dad began working for the space program, as part of the Chrysler Corporation. My dad made several trips down to the Center in 1960 and 1961 before we finally moved here permanently in 1962. While I do not remember many specifics, I do remember the excitement of my siblings and me watching the Mercury, Gemini, and Apollo rockets liftoff from the beach. I was too young to completely appreciate the complexity of these programs, but there was no doubt of its importance. I, along with the rest of the nation, were caught up in the sheer excitement and national pride brought forth by these efforts. In July of 1969, I stared at our 13 inch black and white TV, along with most of America, when Neil Armstrong first stepped onto the moon. And to realize my father was a part of that national program had a significant and profound impact on my life.

Professionally, I was in the U.S. Army flying helicopters for about five years, when I decided to go back to my engineering roots at the Kennedy Space Center. I was hired by McDonnell Douglas to perform payload/spacecraft processing for DOD programs in the late '80s. I started as a mechanical engineer and progressed through various engineering and management positions within this industry over the past 20+ years.

I continued throughout my career to maintain a very broad background, working both in large and small businesses, with multiple customers including the Dept of Defense - US Air Force, Navy, and Strategic Defense Command, in addition to NASA. I did not limit myself to specifically just satellites.

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

As the Deputy Director for the Kennedy Space Center (KSC), I have been heavily involved in the numerous changes affecting the human spaceflight industry as we transition from the current Space Shuttle Program into the Constellation Program era - the next generation of exploration vehicles to get us out of low Earth orbit. It was one of the things that most attracted me to the job - the challenge of transition. We are perhaps one of the most effected NASA centers in terms of the Shuttle retirement on our current workforce as well as the restructuring of our facilities and capabilities to meet the new program requirements. Constellation

has new and very different challenges in terms of ground processing, and the different types of both current and future projects - Ares 1X Test Program, Orion/Ares1 (International Space Station capability) and then the Altair/Ares 5 (Lunar capability). At KSC, we are undergoing a reorganization to be more in line with these future requirements.

For example, there exists a number of cross cutting technical capabilities in the form of flight hardware processing facilities, shops, labs, support facilities, and communications infrastructure that support individual programs, projects or entities across KSC. We chartered a Technical Capabilities Working Group to perform a detailed assessment of these technical capabilities and make recommendations on how to align KSC capabilities to best support our future mission and institutional requirements. The goal was to migrate toward a strategy of interdependence between programs and the KSC institution where duplication of functions are eliminated and the institution provides the core technical capabilities that the programs can rely upon and acquire on an as-needed basis.

Other changes you would see at KSC lately would include the changing landscape. This past year at KSC many of the designs for our ground support systems have come off the 'paper' and moved into the construction phase. Perhaps most visible is at Launch Complex 39B, where construction of the Lightning Protection System, over 600' tall is nearly complete. The Mobile Launcher is currently being constructed behind our Vehicle Assembly Building. The complete refurbishment of the Operations and Checkout (O&C) building was completed and dedicated this past January. This was a complete gutting of this high bay and refurbishment for the next program. We had partnered with the State of Florida and its many organizations who invested nearly \$35 Million into this refurbishment project. This facility is where the final assembly of the Orion Crew Vehicle will take place just like the Command and Service Modules for the Apollo program - and may create up to 400 new jobs at KSC which is a great thing for everyone.

We continue to partner with federal, state and local agencies so our employees have options during this transition. This includes Congress, the Florida Governor, our state legislators, State sponsored organizations to promote space in Florida - Space Florida, Brevard's Economic Development Commission, Brevard Workforce Development Board. These entities are active - and we share a great work relationship with them to promote our highly skilled workforce as a resource for future work.

Our top priority at the Center remains to safely fly the shuttle until its retirement and complete construction of the ISS. This is a challenge into and of itself, without all of the activities associated with our transition to the new Constellation Program.

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

In 1975, President Ford signed legislation that allowed women entry into the military academies. This happened to be during my sophomore year of high school. I'd like to say that I was particularly visionary -or mature beyond my years - but the reality is that I was as young and ignorant as most teenagers are when I applied for admission into West Point. In other words, I really didn't know what I was getting myself into. I had a few things that sort of pushed me into this direction - first I was somewhat of an athlete - I had been playing softball in competitive tournaments and leagues since I was a very young child; I had pretty good grades especially in the math and sciences which I attribute to my parents genes; I had 4 other brothers and sisters and we lived modestly so getting a 'free' college education looked pretty good to me. Lastly but maybe most important was I had the confidence in myself, set for me by my parents, that I could do this.

And so, women were first accepted as Cadets at West Point in 1976 and became part of the Class of 1980. They make up between 10 and 12 percent of freshmen and follow the same training as the men entering with only a few exceptions in the physical aptitude standards on the Army Physical Fitness Test and the Indoor Obstacle Course Test as well as not taking boxing. I applied to West Point and was accepted, and so at the ripe age of 17 began my leadership training at the finest institution in this country - the United States Military Academy at West Point. I was in the second class of women, the class of 1981, graduating in 1981 with 62 other women and a total of 917 classmates.

I think that the long term influence this education and training had on me at that point in my life was perhaps the greatest opportunity I have experienced. I had many, many other events and situations that certainly had a strong impact on me, but I think it started for me when I was allowed into West Point and all that experience provided me.

4) What was the greatest obstacle?

The greatest obstacle to me was in deciding what I wanted to work on. There were so many opportunities and challenges - I didn't feel any particular obstacle prevented me from doing something - I just wanted to experience it all. And that is really impossible.

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

I believe we in the space industry are at a crossroads. Within NASA, we are executing the established plan to retire the Space Shuttle and go back to the moon and beyond. We'd like to get back out of low Earth orbit and do the exploring that great nations do. Human spaceflight is a difficult, unforgiving business - but it is

also the most exciting thing we as a nation can contribute to the world and the next generation.

There is also much going on in the commercial sector - many, many organizations are coming into the space business, building new rockets and generating a lot of interest in space. There will be more and more cargo vehicles to carry payloads and spacecraft and planetary explorers to space, and so I think that will bring more competition to the industry - and maybe more efficiency. The commercial sector is trying hard to break into human spaceflight, but that takes a lot of upfront investment and testing if you want to do it right.

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

I would say that it takes a lot of hard work, so expect that. You'll always have critics, and you actually sort of want someone else to find your mistakes before you leave Earth. I'd also say to strive to always meet your commitments - in other words, do what you say you will do to build solid, trusting relationships. The community is not that big. And ask a lot of questions. It's the only way you learn and it keeps your mind sharp.