



EXTENSION OF COMFORT LIVING

INTERVIEW WITH ED HARRIS, JET AIRCRAFT INTERIOR TECHNICAL SERVICES, LLC

Text by Grisella Luivindy

Ed Harris' track record in the aviation industry is top tier. He has spent nearly five decades building up his reputation through manufacturing, management, technical integration, certification, interior design of corporate aircraft, and product design that complements an aircraft interior. Specializing in completion projects, Ed Harris is a completions consultant for Asian Sky Group and a founder and president of VIP aircraft interior completion specialist company - JET Aircraft. With a long portfolio in the field, JET Aircraft is inspiring futuristic change in the current aircraft interior industry landscape.

How was your experience in aviation industry?

I started in the design engineering department of Page Gulfstream in San Antonio, Texas in 1980. I went on to work at The Dee Howard Company as an Interiors Project Engineer for the Sultanate of Brunei's A310 until 1987. I worked for Pat Pyka Aircraft Interior Design Consultants for nine years as the Special Programs Manager for VVIP aircraft interiors, where my position was to develop VVIP interior products and the corresponding procedures and certification processes. I issued supplemental type certificates (STC) multiple interior products for Pat Pyka Design and was also issued a patent on a TV that folded out between windows on the Gulfstream GV. I stayed at Pat Pyka's until 1995, when I became the co-founder of a composite manufacturing company called Fiber Art until 1998. Over the years, I have represented or managed many unique programs. Over the last several years I have consulted on numerous interior completion projects with the Asian Sky Group.

When did you start JET Aircraft Interior and why?

It was in 1998 that I decided to start my own company to help deal with the on and off employment cycle of VIP aircraft interiors. JET Aircraft Interior Technical Services (JET) was founded to assist the operators of VIP aircraft in managing their interior completion projects using my core strengths and knowledge of the business. I recognized during the completion process that many small specialized manufacturers doing business with completion centers and OEM aircraft manufacturers in the VIP corporate aircraft completions industry did not have a voice to properly technically market and sell their specialized products. It was then that I formed the basic mission statement of JET "to support the manufacturing and management of VIP interior completions".



How has this segment of the market evolved throughout your career?

The key changes have been regulatory and constant developments in technology. I have been through several cycles, starting in the early 90s, when the aerospace industry had crashed. I would say the last three years have been the toughest. But from the crash of 2014, I can see the industry crawling back up evidently from the rising amount of requests for quotes on the manufacturing side.

The biggest change in the industry occurred from the year 1994 to 2000. The regulations for seating and interior compliance changed dramatically that it caught most completion centers flat footed. The industry has adapted over time. However, a little clause at the start of every regulation "or any other means deemed necessary by the regulator" makes it still tough to know what is in the mind of the regulatory authorities.

Regulatory and technology has changed the way we manufacture interiors today. We have better electronics for cabin management and entertainment, new finishing methods, and better flammability products for making interior components and furnishings.

What are the current trends you are seeing from clients?

Every customer wants their interior to have the same gadgets and technology that they have at their office or home. The emphasis is on the customer bringing his content with him to upload into an IFE system. So many folks own all types of gadgets and all these gadgets can interface through USB, HDMI, Wi-Fi and Bluetooth. More spacious rooms and cabins with home-furnished settings are also trending now. So, when you fly, it is an extension of how you live your life.

“When you fly, it is an extension of how you live your life.”

What are some of the difficulties you come across working in completions?

I have a few areas that make it difficult to manage a completion. The first is regulatory interpretation. This is a grey area that transcends the

world. Whatever regulatory agency you're dealing with, they often will hold back one card out of the written regulations which can really make for a bad poker hand when you're sitting at the table. Most regulatory authorities have the option of interpreting rules and regulations through the use of regional authority, advisory circulars, or white papers. It is, therefore, important that the certification department of the completion center has the regulatory agency sign off on the Project Specific Certification Plan (PSCP) for the aircraft very early on in the completion.

Another challenge is vendor selection. During one of my projects, the completion center had a vendor who controlled a major structural system of the interior that went bankrupt. I had to notify the completion center and the customers immediately that they were going to be 5 months late. We eventually recovered the certification and engineering effort.

Additionally, even though we have great CMS and IFE systems for the VIP aircraft, they still lag behind the available consumer electronics by two years. It takes a long time to certify something new on an aircraft.

It is important, as a completion manager, that I understand all the basics of design, engineering, manufacturing, certification, and sub contracts if I am going to mitigate challenges as a team member. The final outcome is delivering the aircraft on time and within budget, showing impeccable quality, and having the customer's voice be heard at the poker table. Because managing a completion is like playing poker, there is a challenge in determining who is bluffing and who or what is correct.

Is there a project you've worked on that stands out as being the most challenging or interesting?

In June 2017, I delivered a used airliner configured Boeing 777 to a US-based client and operations group. We had a great team of five bringing different skill sets to the table. It was the most challenging program to date. We had to ensure the program stayed on track, manage a maintenance budget over two years, track additional work requests, keep the schedule tight and quality tighter. When a program stretches

out, instead of getting into a hurry, the completion management team must pull back and ensure all quality squawks are worked off before final delivery. Otherwise, your client will be leaving with a Commitment Letter outside of normal warranty work in which they will need to schedule downtime for the aircraft in the future. Never a good thing for a client who needs their investment flying.

Can you tell us about a few of your ongoing projects?

I am looking for my next narrow body or widebody completions management project. To meet the next challenge, my company takes on manufacturing representative work. Presently, I am helping a small VVIP interior furnishing manufacturer in San Antonio, Texas with sales. It keeps me busy and engaged with my industry friends and associates. It also allows me to become involved with product manufacturing and certification which is the back bone of the completions industry. Most completions centers rely on hundreds of vendors and sub-contractors to make key products so they can integrate them into the interior.

Where do you see this market heading in the next few years?

I cannot speak for other areas in the world, but here in the US the personnel that work in the completions industry are becoming older. We need to train up the next upholstery, cabinetry, and technicians and convince them that the VVIP completions industry is a great career.

I see less wires in the future. With more and more electronics becoming smarter with wireless interfaces, this trend will make its way into the aircraft completions industry. LED lighting technology is changing and becoming less expensive in the consumer electronics world. All these technologies; OLED 5K monitors, Fiber Optic backbone CMS IFE Systems with WIFI interfaces, and personal electronic devices are all driving the industry.

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