

Time travel

By looking at its past, Boeing is developing the aircraft interiors of tomorrow

By Bret Jensen

“We’re analyzing our interiors, starting with the 707, and the design influences through time that shaped them, so we may better understand the future.”

– Rich Simms, Boeing senior industrial designer

PHOTO: GAIL HANUSA/BOEING



PHOTO: An original mock-up of the 707 cabin known as the Hatrack Interior. The hatrack can be seen at the top of the photo. BOEING ARCHIVES

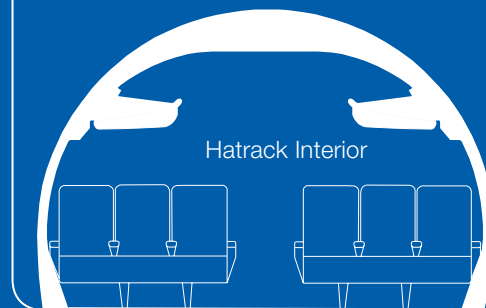
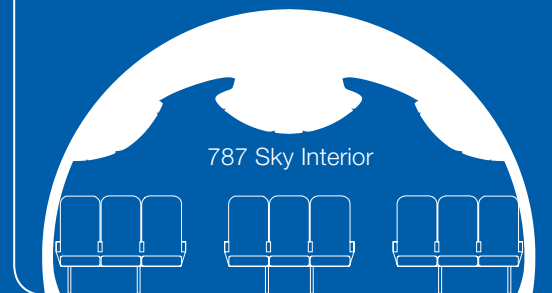


PHOTO: A look at the premium economy seating available on the 787 Dreamliner. BOEING



Hindsight may be 20/20. But members of the Commercial Airplanes Payloads Concept Center are hoping that looking back provides a clear path forward for Boeing passenger cabin interiors.

“We’re analyzing our interiors, starting with the 707, and the design influences through time that shaped them, so we may better understand the future,” said Rich Simms, senior industrial designer at the Payloads Concept Center. He noted that Boeing designers over the years have developed both revolutionary and evolutionary cabin interiors that have lasted for decades.

Simms’ team also includes principal industrial designer Charles Lau and research specialist Cerise Fraker, both representing design partner Teague.

The team has gathered historical data by accessing Boeing and Teague archives and interviewing retired and current employees involved in the interior design and payloads engineering process. The information has provided further insight into cabin interior evolution.

To visualize the past, Simms and his team have created large,

poster-sized timelines of Boeing products and interiors over the years. The photos of airplanes and cabins overlay major events in aviation and product design influences through the same period of time. The posters give a visual representation of 60 years of Boeing cabin interior development.

One example of the evolution of interiors design is the stowage bin because it represents a commodity that changed due to external influences. The stow bin’s evolution also significantly altered the appearance of Boeing interiors.

The first 707 interiors were very transit-inspired and simply had an open shelf on which passengers could set a coat and hat (referred to as the Hatrack Interior). In the 727, Boeing developed the New Interior Program, or the Super Jet interior, that introduced enclosed, overhead stow bins for the first time. They were integrated into an angular and sculpted overhead architecture. Passenger Service Units, containing reading lights, air vents and call buttons, were integrated beneath the bins for the first time.

By the time the 737 entered service in the late 1960s,

airplane passengers were carrying on more and larger luggage. This marked a turning point in bin design and Boeing began offering larger, shelf-type stow bins.

The 747 presented new challenges as the first large, twin-aisle airplane. Boeing designers wanted to create a human-scaled interior to offset the fact that the airplane was sized like an auditorium. They subdivided the length of the airplane into “passenger zones” to give it a better feel. Centerline stow bins were incorporated into the ceiling above the middle seats to increase stowage volume.

When the 757 and 767 airplanes were developed in the 1980s and ’90s, Boeing had to create two different interior schemes simultaneously. New safety and flammability standards added to the challenge.

With the 777, Boeing introduced the Signature Interior in 1995. The outboard bins in the Signature Interior were the largest pivot bins that Boeing had ever offered. This “signature look” was subsequently incorporated into the 767-400ER (Extended Range) and the 747-400ER NLI (or new look interior).

Boeing designers entered the 21st century looking to further revolutionize airplane interiors. Boeing was developing the Sonic Cruiser and designers began seeking passenger input, asking them what they would like to see in the Sonic Cruiser’s interior.

While the Sonic Cruiser program was abandoned in response to market demands, the results of the research became the genesis for the new Boeing Sky Interior, developed for the 787 but applied on the 747-8 Intercontinental and introduced on the 737. The Sky Interior features stow bins that pivot up and out of the way to give more room to passengers when standing in the aisles and the appearance of a more spacious passenger cabin.

“Boeing interiors have been a part of the long and successful history of our airplanes,” said Alan Anderson, Commercial Airplanes director of Payloads Systems Engineering and founder of the Payloads Concepts Center. “As we’ve developed new and industry-leading products, it’s important for us to remember all that has preceded us—because it can make us better.” ■

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