WE'VE RETURNED FROM AIRCRAFT INTERIORS EXPO (AIE)...

This year, the combined Telefonix and PDT teams experienced the show in Hamburg, Germany together, looking at trends that currently are or soon will be affecting the aerospace industry.

From connectivity to modularity, weight reduction and customization, options abound for airlines and aircraft manufacturers to leverage that increase passenger satisfaction and positively affect an airline's bottom line.

Join us now in seeing the show through our eyes.

telefonix®

pdt PRODUCT DEVELOPMENT TECHNOLOGIES

IS CONNECTIVITY KILLING IN-FLIGHT ENTERTAINMENT?

Absolutely not.

In fact, Reed Expositions, who organized the show, decided to increase the IFE zone by 8% this year.

In a world where families gather in a living room with mom playing Candy Crush on her smart phone, dad watching You Tube videos on a tablet, kids playing on iPods and Leapsters, all while streaming re-runs of Big Bang Theory through their Wii, we live in a world of more is better when it comes to connectivity.

Unlike video killing the radio star, connectivity in homes hasn't killed the television and it won't kill In-Flight Entertainment in aircraft.

What smart companies have to do, though, is figure out how to integrate and build upon their connected passengers' devices and deliver the value-added experiences passengers want (and will pay for).

86% of tablet owners watched TV while using their device and 88% of phone users did at least once during the month.

-'Double Vision – Global Trends in Tablet and Smartphone Use while Watching TV' (Nielsen)

53% of business and 38% of all travelers want to connect on board (per Gogo survey) even though only 41% of connections are paid for by the employer.

-Gogo, Ash elDifrawi, Chief Commercial Officer

Any airline that invests in connectivity is likely to experience significant competitive advantages.

-VentureBeat

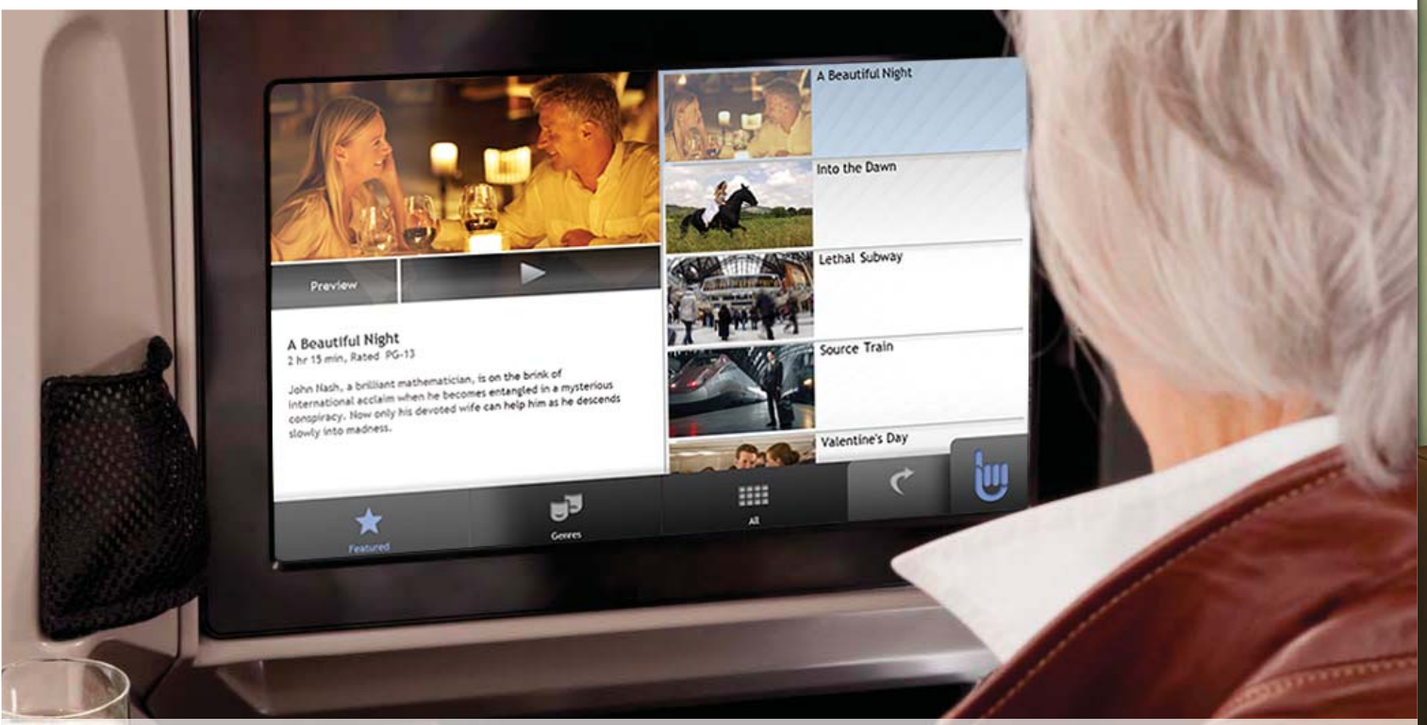
CONNECTIVITY AND IN-FLIGHT ENTERTAINMENT IS DELIVERING IMMERSIVE EXPERIENCES

Thales' Immersive Seat for Business Class Concept integrates NFC technology to pair with the user's personal electronic device. The passenger can control the system with eye movements, hand gestures or a track pad. The passenger's preferences in lighting, seat position and entertainment will be delivered automatically once the device pairs with the Seat.

Sogerma featured sleeper seats that integrate a smartphone and active electronic controls for movement of the seat. Breakaway cable connects for headsets were used to reduce traditional damage.

Allen Will, Telefonix's Business Development Director, tries out the Thales Immersive Seat

CONNECTIVITY AND IN-FLIGHT ENTERTAINMENT IS ENABLING MULTI-TASKING ABILITY



With Zodiac's RAVE™ IFE product, passengers can adjust lighting and seat position while their HD film is running and they look at a flight map.

Honeywell's Ovation™ Select "office in the sky" delivers surround sound audio and high definition video and enables users to use email, the internet, make calls and host video conferences while in the sky.

CONNECT!

Telefonix, Inc is proud to have been selected by Gogo, Inc. (Itasca, Illinois) to develop the ACPU-2 for Gogo's connectivity service. Gogo is the preeminent provider of airborne connectivity solutions enabling airline passengers to stay connected.

Pat Walsh, Sr. Vice President of Engineering at Gogo, states, "In our search for a company to develop and manufacture the ACPU-2, we focused on companies that not only offered a history of developing airborne certified hardware, but companies that could offer real design innovation and an eagerness to do whatever it takes to meet our mutual goals. We felt we got the best of both worlds with our selection of Telefonix."

Michael Kuehn, Telefonix, Inc. President underlines the faith that Gogo has placed in Telefonix to develop the ACPU-2 as a cornerstone of their ABS system offering. "Telefonix is extremely happy and proud to have been selected by Gogo for the ACPU-2 program. It underscores Gogo's confidence in our capabilities and our commitment to this important program and to meeting the expectations of Gogo's customers going forward." Currently, the ACPU-2 is in the final stages of its DO-160G qualification program, in preparation for early Q2 deliveries to Gogo. Michael Kuehn adds, "Our development team has worked jointly with Gogo's engineers and are on schedule to meet Gogo's development and installation schedule. We look forward to a very successful launch of the ACPU-2."

PROFILE OF TODAY'S CONNECTED PASSENGER

75% of passengers carry a smartphone.
-2013 SITA/Air Transport World Passenger IT Trends Survey

Some 90% of airline passengers would give up at least one other onboard convenience for one single in-flight amenity: Wi-Fi.
Fortune: September 6, 2013

For today's travellers, functionality such as flight status updates that take the stress out of their journey, are the highest priority for mobile services, says SITA.
-Airport World

Today's passengers want more control throughout their journey. They expect transformation in both the kinds of services airlines and airports offer, and the way they communicate with them.
-Airport World

Currently, between 25% and 33% use In-Flight WiFi strictly for professional purposes to remain productive. The rest use it mainly for personal reasons: sending and receiving email, interacting on social networks, or streaming movies and TV shows.
-Fortune: September 6, 2013

At 76%, the proportion of passengers carrying smartphones outstrips the global average of 40% in the general population.
-2013 SITA/Air Transport World Passenger IT Trends Survey

13% of Americans, 17% of Brits, and 22% of Singaporeans would give up their bathroom privileges for high-quality WiFi.
Fortune: September 6, 2013

For roughly 60% of passengers, having no connection is worse than having a seat that doesn't recline.
Fortune: September 6, 2013

"Information technology has already had a major influence on air travel, and with the number of global travellers expected to double by 2030, it will continue to lead the way for the industry.
-Nigel Pickford, director of market insight for SITA

IT'S TIME TO CHALLENGE PRE-CONCEIVED CONSTRAINTS

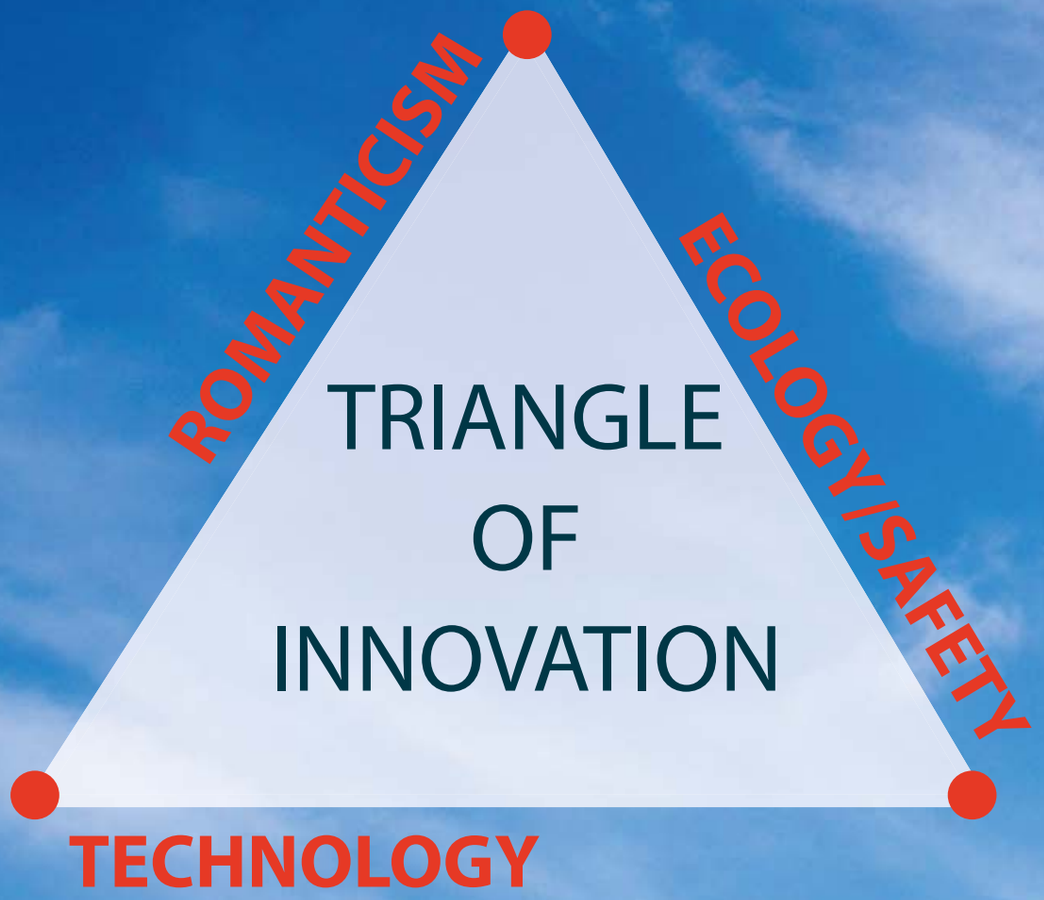
Rather than considering how to innovate based on what your direct aerospace competitors are doing, look at other industries for inspiration.

After attending the Passenger Experience Conference at AIE, we were inspired to think differently and agree the industry would benefit from doing the same.

While our industry will likely always be one that is price sensitive, if we can break away from traditional thinking that has confined differentiation to the standard 2 or 3 class cabin options, we will start to see all the options available if we utilize personalization, technology and thought innovation to drive real value for suppliers, airlines and the flying public.

LEVERAGE THE "FRACTAL" METHOD

Michael Robinson, who spent years as an auto designer, presented his "fractal" model for innovation. He encouraged product developers to address their offer across three key areas: romanticism, technology and ecology. By doing this, designers can think differently and see unique opportunities by creating emotion in design, rather than just creating objects.



Rather than just segmenting and delivering based on business versus economy class, why not consider offering a 'family class' for example, where ticket price builds in a snack and movies, making it easier for mom or dad by reducing what they need to bring on to keep kids happy during a flight.

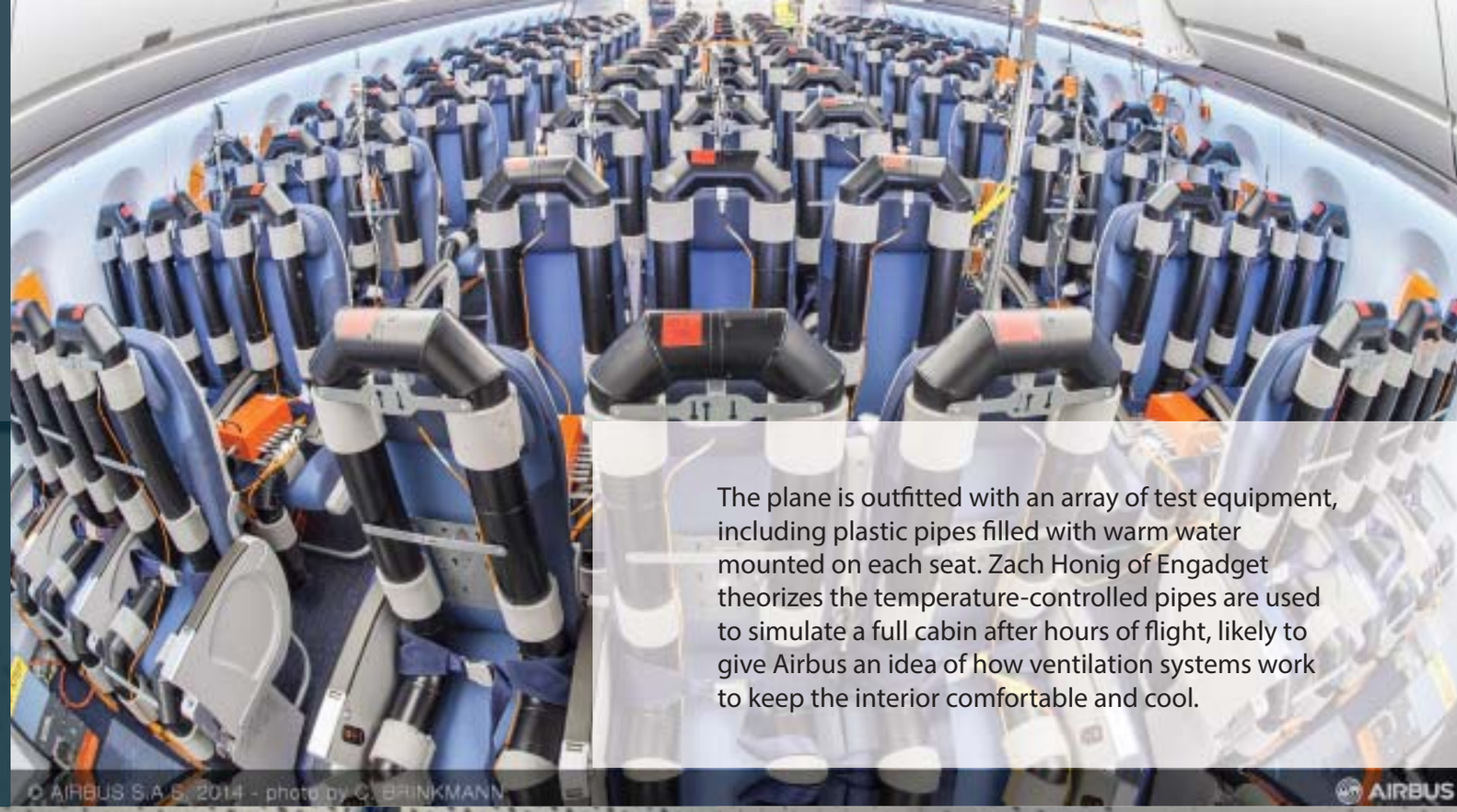
Or how about becoming the first allergen-free airlines as Swiss Airlines aims to be?

Maybe there can be a 'connectivity class' where Wifi is included in the ticket price?

NEXT GENERATION AIRBUS AIRCRAFT A350 AND A380

The Airbus A350 and A380 scale models gave attendees an up-close view of the aircraft, with lighting enabled and even the fan blades rotating.

With over 70% of the airframe made from advanced materials like composites, titanium and aluminum alloys, The A350 is shaping the efficiency of medium-to-long haul airline operations. The aircraft features an all-new Carbon Fibre Reinforced Plastic (CFRP) fuselage and brings together the very latest in advanced technologies, aerodynamics, and design.



The plane is outfitted with an array of test equipment, including plastic pipes filled with warm water mounted on each seat. Zach Honig of Engadget theorizes the temperature-controlled pipes are used to simulate a full cabin after hours of flight, likely to give Airbus an idea of how ventilation systems work to keep the interior comfortable and cool.

The A380 scale model

TRENDS TAKING OFF

Vision Systems displayed the “Energia” aircraft window. The Electronically Dimmable Window “harvests” solar energy on the ground or in flight and makes it possible to dim the window at the press of a button to regulate light, glare and heat within the aircraft.

ENERGY SAVINGS

DIEHL Aerospace featured their DACAPO Energy Automonous Cabin which is a self-sufficient cabin system that saves power and uses rechargeable and replaceable battery trolleys.

Recaro's slim, lightweight seat for short-haul flights, the SL3510

Composite materials to lighten weight of seat frames

WEIGHT REDUCTION

Lightweight medical stretchers used by the US Air Force for transporting patients

Dehumidifier for a 737 takes out the water buildup from condensation in the ceiling blankets, saving fuel by reducing the weight of the water getting absorbed into the blankets.

FlightWeight launched SmartCart, a lightweight cart equipped to monitor and manage access, location and internal temperature.

Weighing up to 5kg less than conventional carts, it also has a robust locking system, eliminating the need for awkward padlocks.

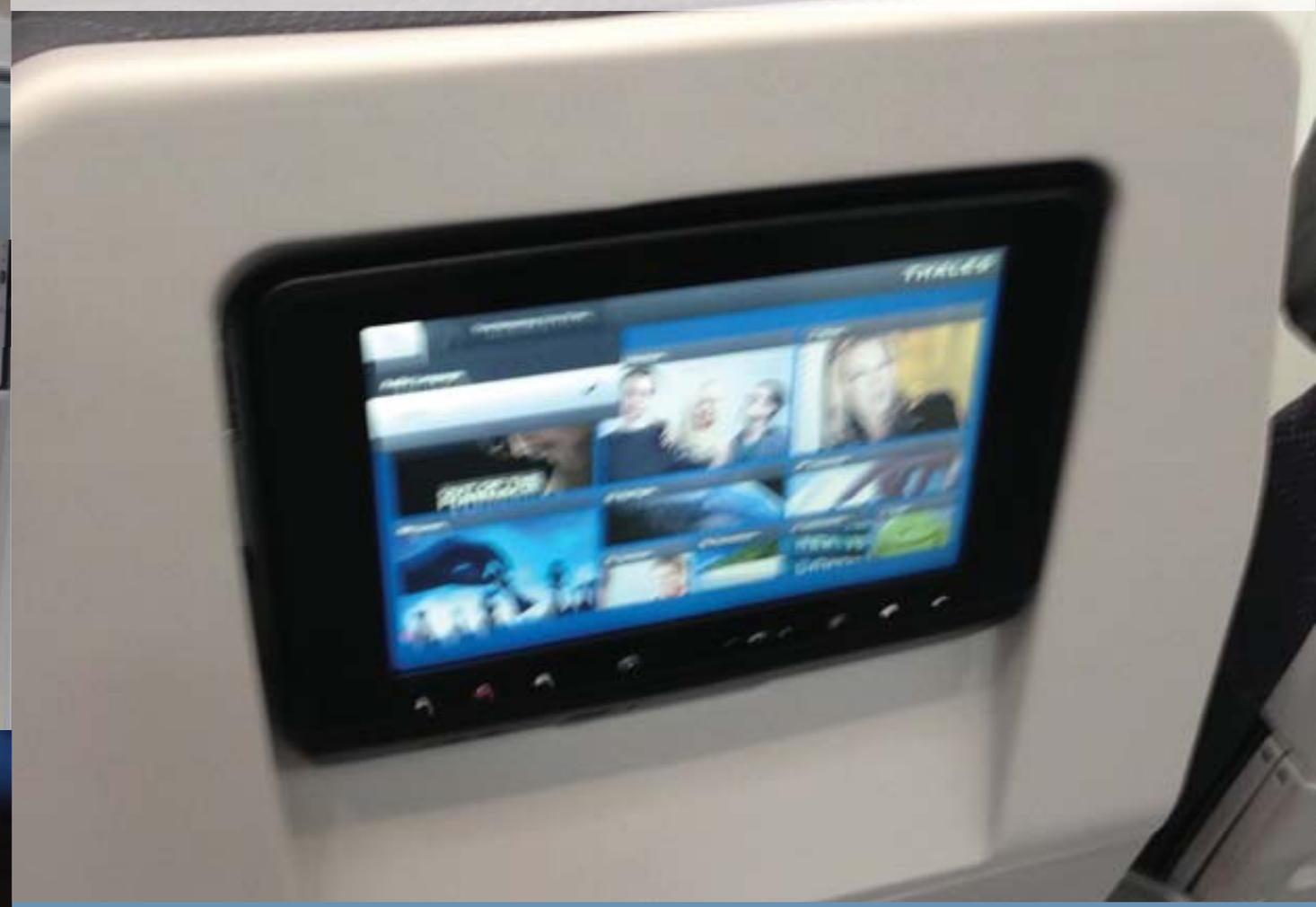
Modular concept – same electronics going into the back of narrow body seats could also be installed on an arm.

Modular galley equipment

Bucher Aerospace features a modular arm, increasing the ease of adapting to changing screen sizes and specs.

For the smaller IFE seat screens, it was all about modularity for replacing electronic interfaces to keep up with changing technologies.

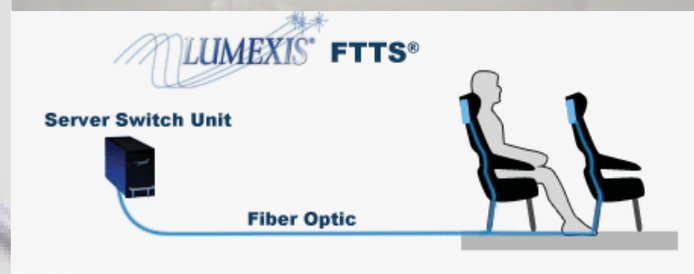
Thales – modular interfaces for upgradeability in their coach class seatback video screen.



MODULARITY

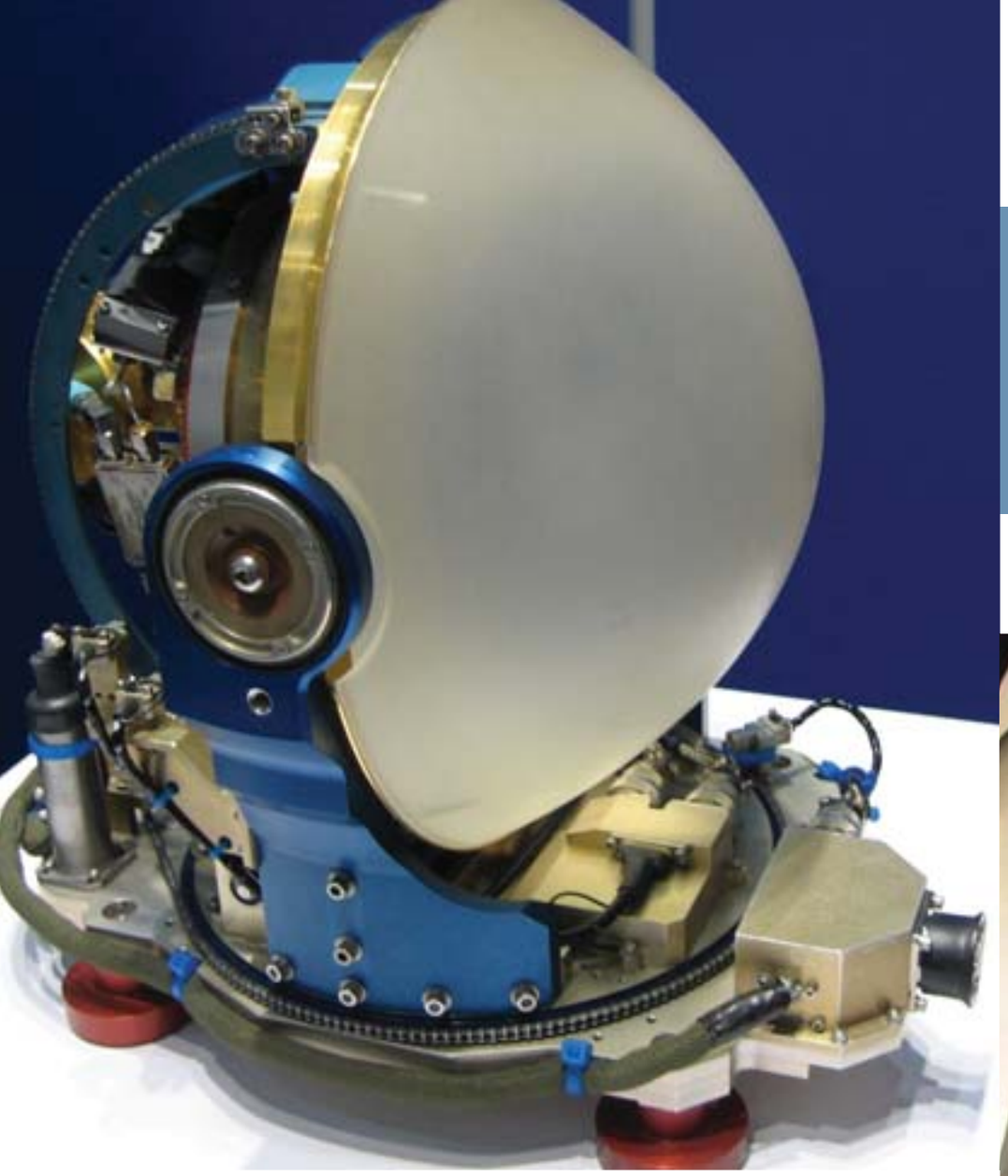
FIBER OPTICS

There is a greater use of fiber optics in cabins to reduce cable harness weight.

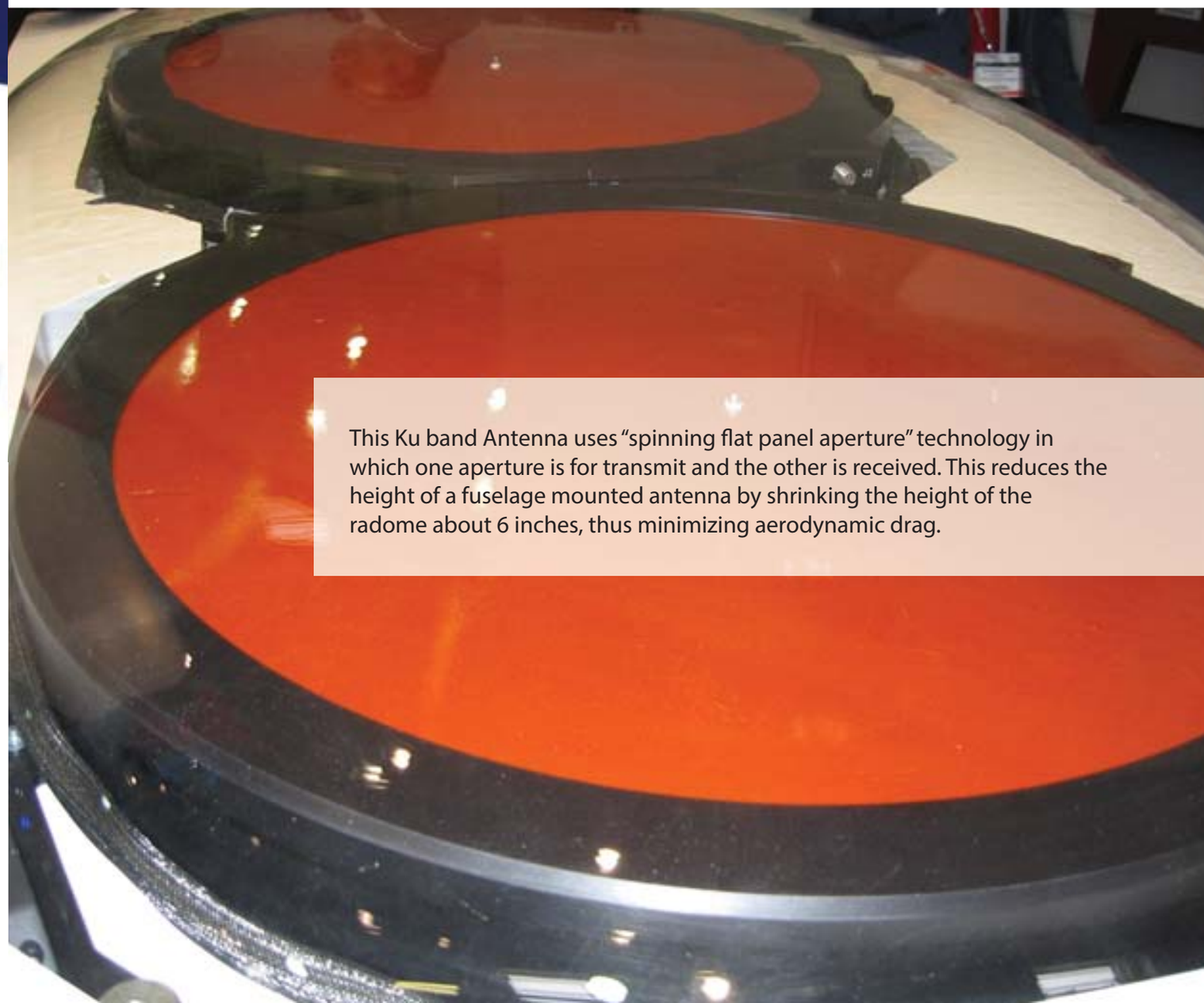


This display was a video monitor fed from a computer over fiber where the fiber is laced in the boxing glove and tied in knots to show the robust properties of the material technology.

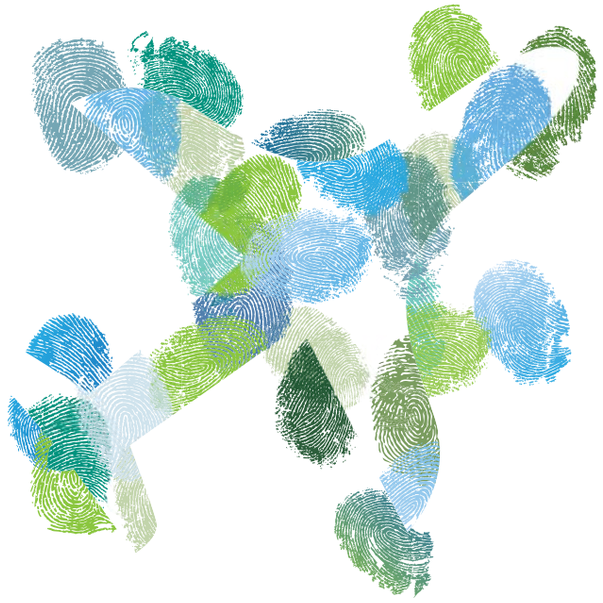
NEW ANTENNAE ON DISPLAY



This tail mount Ku satellite antenna is designed with a radome shroud that reduces drag and eliminates damage from bird strike (important since it's mounted in the upper tail section of the aircraft.)



This Ku band Antenna uses "spinning flat panel aperture" technology in which one aperture is for transmit and the other is received. This reduces the height of a fuselage mounted antenna by shrinking the height of the radome about 6 inches, thus minimizing aerodynamic drag.



Click to learn more about us and how we're creating solutions for aerospace.

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