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# FLIGHT

## DAILY NEWS

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ISSUE 1

# THALES SETS SIGHTS ON THE SINGLE-AISLES

**T**hales (stand 6B20) has thrown down the gauntlet to competitors Panasonic and Rockwell Collins, announcing a version of its TopSeries inflight entertainment system aimed specifically at the single-aisle market.

"Up to now we've been highly competitive and have won a significant part of the market for full audio/video-on-demand throughout the aircraft," says Alan Pellegrini, general manager of Thales' Irvine, California-based inflight business. "But among airlines that want something more basic for single-aisle aircraft, Panasonic and Rockwell so far dominated. So we decided to scale our TopSeries family to fit this need, while also aiming not to create a me-too product."

The result is the newly announced TopSeries Digital Single-Aisle (D-SA), which is due to make its first appearance in September aboard the first of 42 new Airbus A320s belonging to Saudi Arabian Airlines.

### ON TRACK

"We're absolutely on track for first deliveries," says Pellegrini. "The customer will receive a system that steps up the single-aisle broadcast formula a notch by providing interactive and on-demand capabilities at the seat, while costing significantly less than the millions of dollars associated with AVOD."

Designed to supplant Thales' existing i-2000 broadcast system and to compete with Digital MPES from Panasonic (stand 6F25) and dPAVES from Rockwell Collins (stand 6B15), TopSeries D-SA is designed in basic form to provide broadcast overhead video and distributed audio while also being scaleable to full AVOD.

"It's particularly suitable for

airlines who want AVOD in their premium classes and overhead video in economy, explains Pellegrini. "But even in its most basic configuration it will have functional advantages compared with existing broadcast systems. For example, D-SA is inherently interactive, offering audio on demand at every seat – a hundred channels on demand compared with a typical 12 broadcast channels today."

D-SA combines existing TopSeries technology and hardware – digital video distribution, a Gigabit Ethernet network, servers and cabin management terminal – with a new passenger control unit



Thales TopSeries for single-aisle airliners.

called the ePCU. "This incorporates an MP3 player with its own Ethernet switch," explains Pellegrini. "It can gather content data direct from the head-end, avoiding the need for a seatbox."

Among standard applications will be connecting-gate information and moving-map, while

options will include seat-to-seat connectivity to support group entertainment such as trivia game competitions. USB power for passenger personal entertainment devices will be a hardware option.

"As well as offering weight and power consumption advantages, D-SA will support a huge choice of content," says Pellegrini.

"Its single 4MCU server has around a terabyte of capacity, enough for around four hundred movies. This level of capability has already attracted a lot of interest from the market, and right now we're bidding on a number of opportunities." ■

**Lighter than air?**  
Jon Zinopoulos finds the right balance for his replacement cylinders.



## Lighter options help Airlines breathe easier

Warrington, UK-based GCE Aviation (stand 5F35) is hoping to build on recent increased airline interest in retrofitting its lightweight portable oxygen cylinders across their fleets, offering weight and cost savings over existing steel cylinders.

BMI in February became the latest to sign up to retrofit GCE's Integra oxygen cylinders across its fleet. GCE estimates this will generate fleet weight savings of over 460 Kg (1,011 Lbs) for the UK carrier. SAS and South African Airways are also retrofitting the cylinders.

"At the end of last year no airline had retrofitted an oxygen cylinder," says GCE business manager aviation, Jon Zinopoulos, pointing to increased interest from airlines in looking at the retrofit option.

"They are half the weight of the steel ones," he says. "It is costing airlines money every day [to fly] and to maintain the cylinders." Alongside fuel savings, there is also interest in the associated reduction in carbon emissions. "In some ways airlines are more interested in the CO<sub>2</sub> rather than the fuel savings," says Zinopoulos.

AWARDS



Ladies and gentlemen, please take your seats! And the winners are... to be announced tomorrow morning.



# CRYSTAL CABIN FINALISTS GET SET FOR GLORY

For more news/show images see [flightglobal.com](http://flightglobal.com)

The finalists in the Hamburg-based Crystal Cabin Awards have just 24 hours to wait before learning their fate. The winners in the five different categories of the world's top competition for cabin innovators will be announced here tomorrow morning.

Recognising bright ideas and good products designed to enhance passenger comfort, improve safety, reduce environmental impact and bring the latest in communications and entertainment to the cabin, this year's awards are now within the reach of a shortlist of three finalists in each category. Several exhibitors – including Airbus, Lufthansa Technik, German seat-maker Recaro and Italian cabin equipment provider Iacobucci – are among them.

Vying for the laurels in the passenger comfort category are Recaro (stand 7G40) plus Aerar Seat Project and Lantal of Switzerland (stand 6G50).

Recaro is in the running thanks to the unique lightweight single-beam structure of its CL 3620 seat. Aerar Seat Project replaces the conventional cushion and dress cover with an open-knit mesh of elastic and non-elastic fibres to obtain a 75% weight saving.

The knit material improves comfort by adapting to variations in passenger size, shape, weight and posture. The aims of Lantal's Pneumatic Comfort System are similar – replacing conventional foams with air, it cuts weight and

cost and allows the passenger to adjust seat hardness.

Recaro is also up for an award in the industrial design/interior concept category, having submitted its SL 3510 seat. This is described as the only economy seat to weigh less than 10kg while also offering improved maintainability and comfort.

Airbus' Hamburg-based Customized Engineering Long Range division (stand 7D20) is shortlisted for its Video Control Insert (VCI), designed to minimise the impact of IFE installations on cabin layout. And US interior design specialist Teague is in contention with a complete redesign of Emirates' first-class cabin featuring high ceilings, sweeping arches and advanced LED lighting.

A greener, safer cabin is the objective of AeroCat of the Netherlands (stand 6A100), Germany's B&W Engineering (stand 6B50) and airframe giant Boeing. AeroCat claims to have developed the world's lightest catering trolley, throwing in RFID tracking and a recyclable all-polymer structure for good measure.

B&W Engineering's A-LogEqu is conceived as a maintenance-free and eco-friendly system of galley inserts in which hot and cold food can be stored for up to 20 hours without additional energy consumption. Boeing is

offering a recyclable carpet material produced without using harmful chemicals and delivered in the form of self-adhesive tiles.

B/E Aerospace (stand 5C55), Flasin Faser (Germany) and Iacobucci (stand 7G27) are contesting the materials and components category. Seating giant B/E Aerospace has come up with vacuum toilet assemblies, generators and waste tanks weighing 30% less than current equipment and eliminating the need for costly hardware removals.

**Natural fibres**

Hamburg-based Flasin Faser aims to replace existing glass-fibre composites with natural-fibre materials that are lighter, fully recyclable and with superior noise and heat insulation properties.

Iacobucci's H-Box is a dry-ice cooling drawer in which the refrigerant lasts longer and food is preserved more effectively. The

reduced dry-ice consumption also yields a cut of up to 50% in CO<sub>2</sub> emissions into the cabin and a corresponding improvement in passenger comfort.

Leading the entertainment and communication field are Colorado-based

Aircell with its Gogo passenger broadband Internet access service, Lufthansa Technik (stand 6D65) with its Niceview advanced moving-map, and Sicma Aero Seat of France (stand 7D40) with its new Seat Integrated Technology (SIT) IFE system. SIT shifts the system's processing power from a central server to a powerful in-seat unit with its own processor and storage.

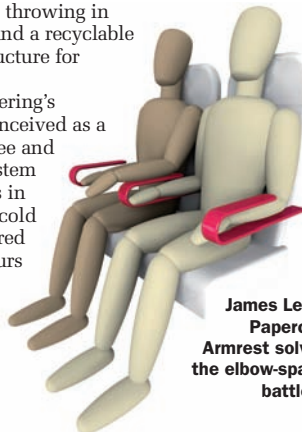
Increasing the available local processing power and eliminating the need for high-bandwidth connections to a central server is expected to enable new applications such as 3D games and animated and 3D graphical user interfaces.

A special award, recognising contributions outside the five main categories, is destined for one of three companies – Canadian airframer Bombardier, aerospace engineering provider CeBeNetwork of Hamburg (Hanse Pavilion) or Hong Kong-based James Lee.

Bombardier is the first corporate aviation manufacturer to offer a shower as an option for one of its types, in this case the Global range of top-end bizjets.

CeBeNetwork is focused on crew comfort, with a courier/crew rest module for use on the main deck area of freighter aircraft.

James Lee aims to eliminate the elbow-room struggles that are a feature of economy travel. The design company's Paperclip Armrest Concept is a double-level armrest that allows two adjacent arms to occupy the same vertical space without clashing. ■



James Lee's Paperclip Armrest solves the elbow-space battle...



# EADS Sogerma seat is with Oman for the long haul

The new Business Class seat developed for Oman Air to increase its roll out of long haul services is on display by its manufacturers EADS Sogerma (stand 6B80).

"The Class 180 was actually developed ten years ago with Cathay Pacific and is flying on Airbus A330, A340, A380 and

Boeing 747 & 777," says Marie-Pascale Jouaville, marketing and contracts manager. "It is a successful product with major airlines such as Gulf Air and Cathay Pacific.

"Oman Air decided to invest in the Class 180 too and the luxury seats were customised to the airline's colours with

trim and finish," says Jouaville.

The seat was manufactured in Rochefort, and will be installed on the Oman Air fleet of new Airbus A330-200/300 aircraft which are being delivered later this year.

Oman Air chief executive Peter Hill says: "We worked with EADS Sogerma and together surveyed the travel experiences of our customers, seeking their views and preferences on seating and cabin facilities. We believe that this business class seat perfectly exemplifies the combination of comfort, space, design and technology."

Oman Air have fitted 20 seats in its Business Class cabin which feature a four-abreast 1-2-1 layout.

The 17" monitors add to the luxury and spaciousness of the seat. "We believe we have raised the bar of many of our competitors' First Class offerings," says Hill



Sabine Chamla sees what's in store for Oman's new long haul passengers.

## Rockwell Collins dPAVES way for Air Arabia

Rockwell Collins (stand 6B15) has landed orders from three airlines for more than 60 examples of its dPAVES digital broadcast IFE system.

In the perfect riposte to rival Thales' unveiling of its new TopSeries Digital Single-Aisle system, the US avionics giant has named Air Arabia and Air Europa as new takers for dPAVES, while existing customer CanJet has ordered another two shipsets.

Sharjah-based low-fare operator Air Arabia wants dPAVES for a total of 49 Airbus A320s. At the core of the system to be installed in the aircraft is the 4MCU Broadcast Digital Server (BDS), offering 160Gb of content storage – enough for several entertainment play periods – and Airshow 3D moving-map.



The unspeakable words in design:

## Cost & Compliance

Let's face it: No one likes to talk about cost and compliance. But the fact is, they have a huge impact on what you can (or can't) do in aircraft interior design.

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## B/E seats for high energy use

Qatar Airways began flights between two of the world's energy capitals yesterday with passengers on the Doha-Houston flights experiencing the airline's newly launched Boeing 777 fully flat Business Class seat-cum-bed one of the latest designs on show at B/E Aerospace (stand 5C55).

Featuring a pitch of 78 inches, it is easily seen as among the biggest business seats in

the air today, offering passengers unprecedented levels of space and comfort. The seats are currently deployed across Qatar Airways' eight Boeing 777s.

B/E Aerospace is also exhibiting its complete line of lightweight products including High Density SFC Environments, New Premium Class seats, Galley Inserts and a new vacuum water waste system.

### SIMPLIFYING ARRANGEMENTS FOR HAMBURG 2010

Organisers of Aircraft Interiors Expo have simplified the on-site re-booking process for exhibitors meaning that they will not have to spend valuable time away from their stands.

The dates for the 2010 event have now been confirmed as the 18 to 20 May 2010 at the Hamburg Messe.

Exhibitors will be able to hold on to their current stand space until tomorrow at 4pm.

Exhibitors wishing to book a new stand position are able to do so from 8.30am Thursday.

Any stand enquiries should be directed to the Aircraft Interiors Expo Sales Booth located in Hall 6 on stand 6H40. Floor plans for other events in the Aircraft Interiors Expo portfolio at Hong Kong and California are also now open.

### AIRBUS DRIVES FOR EFFICIENCY IN THE CABIN

Recognising the tough economic climate for airlines, Airbus (stand 7D20) is highlighting the importance of achieving greater efficiency from current and future cabins. The manufacturer is backing up its claims with its displays here at the show – including examples of the A320, A350 and A380.

The A320 Family Enhanced Cabin offers a quieter cabin, designed with a more modern look and feel, including improved luggage stowage and is available as a weight-reducing retrofit. The A350 XWB focuses on a modular design which the manufacturer says enhances aircraft value and provides a full range of cabin designs.

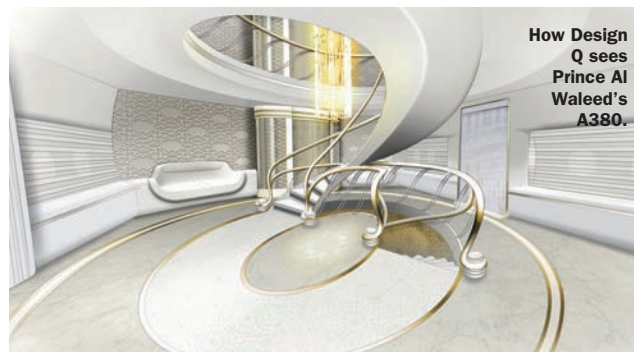
While for its 'superjumbo' it is highlighting the cabin experience. It says that the A380 is proving to be tremendously popular and attracting higher load factors and higher yields.

# Palace that is fit for a prince

Case4de (stand 7B54) and Design Q (stand 7A43) have teamed up to produce the interior for Prince Alwaleed bin Talal bin Abdulaziz Al-Saud's A380 'Flying Palace'.

Gary Doy, director at Design Q says the task is significant. "The A380 offers an incredible canvas on which to create an exceptional VVIP aircraft. At Design Q we believe it is our role to create designs that not only fulfil the customers' expectations but also raise the bar, truly taking their breath away. This aircraft is all about the ultimate luxury travel experience and exudes confidence and commitment on the part of the owner."

Noureddine Madoui, managing director North Africa & Middle East, Case4de, emphasises the complexity of such a completion. "There are many technical and certification challenges on this project however we are confident given the experience we have of this aircraft that the concept we have developed with Design Q is



How Design Q sees Prince Al Waleed's A380.

feasible from an engineering perspective and can be delivered to the highest of standards."

The Flying Palace will truly live up to its name. A grand entrance hall with a floating spiral staircase joining three floors in the front section of the aircraft leads to a large boardroom and private lounge. The boardroom can either be open to the main entrance hall creating the feeling of a vast room or closed for private meetings. The boardroom is crammed with "class-leading technology" allowing the owner access to multimedia feeds from around the world without leaving his seat at

the head of the table. Clever mood-lighting and display technology is used to immerse the guests in an array of ambient environments providing a unique "journey within a journey".

A separate entrance, fit for a king, has been devised in the forward area of the aircraft. A private lift allows the principal to enter the aircraft from the ground providing both a sense of occasion and an effortless travel experience. Once in the aircraft the lift is used to travel between floors forming part of the principals own private area and an entrance to the more public grand hall.

## Emergency power from STG and Fokker

STG Aerospace (stand 6A86) has teamed with Stork Fokker Services to develop its WEPPS (Wireless Emergency Power System) for operators of the Fokker 50, 70 and 100 turboprop regional airliners.

The system will allow Fokker operators to slash the running costs of their emergency lighting systems. WEPPS uses approved 'fit-for-life' non-rechargeable battery modules to replace conventional NiCad battery or charger packs. Costs are reduced because WEPPS eliminates the emergency lighting system's entire maintenance schedule. "There is now no need to maintain the batteries and

do regular battery health checks because the new battery's lifespan is theoretically longer than that of the aircraft," says STG's chief executive Peter Stokes.

"We share Fokker's vision of innovating to create safer aircraft and WEPPS is consistent with STG's mission to reduce the cost of operating aircraft. By developing a system suited to Fokker aircraft we are making the technology and the savings available to yet more customers."

Presently there are 85 operators with nearly 450 aircraft that will be able to benefit from the cost saving technology.

It will integrate with wireless



monitoring, real time minimum equipment lists diagnostics and solid state-operation for managing and powering emergency lighting systems.



For more news/show images see [flightglobal.com](http://flightglobal.com)



## Why Inseat can meet your kneads with the Relaxor massager

If you pass the stands of BE Aerospace, EADS Sogerma and Zodiac Sicma while at the show you can test out a Relaxor cabin seat massager by manufacturer Inseat Solutions.

"The massage system is input in the cabin seats of these manufacturers with the controls in the armrest or through the IFE system," says president and chief executive Judie

Rothenberger. "It offers the passenger lumbar support, 2 to 12 motors as well as having a heat and cooling system which draws heat and moisture away from the passenger's body which refreshes them – great for long-hall flights where you can get very dehydrated.

The Santa Fe Springs located company already have a host of commercial clients which

include Emirates, Qatar, Etihad, Qantas, Air India and Kingfisher, who have installed them in their premium sections, and have seen interest from the VIP market too.

"While we are not advertising them as a health benefit as yet, it is obvious that it will help circulation as well as relax the passenger," says Rothenberger.

## Superweight-saving seat Clark to the rescue

Acro (stand 5D23) is at Hamburg on an all-time low... but that is good news. The seat manufacturer is promoting its low-cost, low-weight seating solution Clark.

Clark has just entered service with launch customer Jet2.com on one of its Boeing 757 aircraft. The remainder of the fleet will be completed over the summer.

Chris Brady the seat manufacturer's commercial director says: "The seat is very lightweight and very robust. It uses a single spar and the seats are like 'bucket seats'. "Economy seats haven't changed much over the years, whereas business class has changed dramatically in just the last 15," he adds.

Brady explains that because the seat is more contoured to fit the human body it allows the seat to have a 2in scallop in the back to give extra legroom. At a pitch of 28in this can make a significant difference for taller passengers.

But it is the weight benefit that Brady thinks will appeal to

potential customers. It weighs just 31kg for a triple row. Another advantage is that the seat is made from just 60 parts resulting in easier and cheaper maintenance.

Brady says: "Jet2.com has been the perfect partner for us helping refine the seat into just what it needs to be - comfortable, stylish, but above all simple and easy to maintain. This is a fantastic platform to launch Clark to low cost carriers."

Jet2.com's chief executive Philip Meeson says: "The seats really do deliver extra legroom and comfort. In addition, they are tough and hard-wearing and will help keep our maintenance costs at rock bottom – an absolute must for us as a business."



Above: Take it as red: Clark the weight-saving economy seat.

### ZIM ZEROES IN ON ECONOMY COMFORT

Germany's ZIM Flugsitz (stand 7A8) is showing its ECO range – economy-class seats designed to keep both the airlines and their passengers happy by cutting weight and increasing living space. The long-haul model combines 9in recline, provision for IFE and an adjustable headrest with an extremely thin backrest designed to maximise legroom.



For more news/show images see [flightglobal.com](http://flightglobal.com)

## Schneider at the cutting edge

Germany's CH. Schneider (stand 6B90) is highlighting its laser cutting services for seat manufacturers. The company manufactures the seating shells for seat-makers. "Laser cutting means you can have lightweight designs" says managing director Christof Schneider.

Schneider is looking for expansion. He says that given the current economic climate "the only ones who can win in a crisis like the current one are those that invest against the cycle". He has his sights set on expansion into the USA and plans to set up a subsidiary in Seattle.

"We can benefit from the cluster of aerospace industry related business that have settled there," explains Schneider.



"It is only a matter of time before the economic motor in the USA starts revving up again. Then the structures will already be in place and the company can 'take-off'," he says.

**Christof Schneider looking for a global customer base.**


## Making good connections

IFPL designs and manufactures dataport and ethernet connectors





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CONNECTIONS FOR INFLIGHT ENTERTAINMENT SYSTEMS

## OI! ARINC PROMISES INTERNET ACCESS BY YEAR-END

IT and communications service provider ARINC (stand 6C10) says that the first application of its Oi onboard Internet software could be in service by the end of the year.

Oi is designed to exploit the 432kbit/sec-per-channel bandwidth of the SwiftBroadband satcoms service provided by London-based Inmarsat (stand 6C10) to deliver managed Internet and private network access, news services, email and instant messaging to passenger laptops and in-seat IFE screens.

According to Andy Hubbard, director of aviation solutions for ARINC in Europe, the Middle East and Africa, the first operational application of Oi could be in service aboard a business jet before the year is out. "We have already been approached by a number of corporate operators," he says.

He also anticipates significant progress with the airlines: "We have some very big airline programmes under way. The first implementation on an airliner is due in the fourth quarter of this year. The first line-fit on a new aircraft is set for November or December, and flight trials will begin in the first quarter of next year."

Oi centres on a Web portal hosted on the aircraft's cabin server and made accessible to in-seat screens and passenger laptops by both wired and wireless networks. A clear, user-friendly selection of screens allows the passenger to select among a range of offerings, including Internet and corporate network access, Webmail, instant messaging, live news and sport, podcasts and airline information. The service will be open to both Mac and PC laptops, and the user will not have to load any special software.

Based on a standard two-channel SwiftBroadband installation, that capacity is expected to be enough to mimic the ADSL connections used in many homes and offices.



# TriaGnoSys team to slash cost of onboard cellphone

Onboard mobile phone connectivity at a fraction of the cost of today's services is the promise of a new offering to be showcased here by TriaGnoSys Stand (stand 6C1).

The German air-to-ground communications software specialist has teamed with Israeli-headquartered telephony solutions provider EIM Telecom to bring into aircraft cabins the latter's Skuku technology, which allows IP-based communications devices to roam on to GSM cellular networks.

EIM Telecom is already marketing Skuku to users on the ground; TriaGnoSys is responsible for the software that adapts it for airborne use.

The partners are offering a small, inexpensive USB-based device that will allow mobile phone subscribers to carry out voice calls and text messaging via the aircraft's existing air-to-ground system, but without any

Plug in your mobile for a fraction of the cost with special USB dongle.



need for the airline to install the cellular picocell and other equipment currently used to support onboard cellphone. Passengers will also benefit, having access to their usual mobile numbers and address books and paying little more than national rates for calls rather than the international roaming tariffs currently imposed.

"Aircraft operators can exploit technology already on board to provide an additional passenger service," says TriaGnoSys managing director Axel Jahn. "All that's needed is a simple software upgrade on the aircraft's

existing cabin communications server. And the technology can easily be integrated into current IP-enabled inflight entertainment systems."

The Skuku device has a slot for the passenger's SIM card, removed from the phone for the duration of the flight. With the SIM in place, the device is designed to plug into the USB ports that

are now increasingly common in seatback IFE. Typically, the combination of Skuku device and seatback screen would allow the passenger to send and receive text messages, and to pay via his standard monthly mobile phone bill.

In airline service, says Jahn, the carriers could choose either to distribute the cheap USB devices free of charge, like IFE headsets, or collect a small fee for access to the service.

For more news/show images see [flightglobal.com](http://flightglobal.com)

## ASL is a star of the screen

Expo debutant Airline Services (ASL) of the UK (stand 6D15) is turning heads with two new products designed to deliver high-quality broadcast inflight entertainment.

Designed and developed by the Manchester-headquartered company's own engineers, the ASL 175 AeroScreen is a high-definition-ready 17.5in unit that can be mounted retractably above the aisle or on a bulkhead. Five examples are currently on trial in a Boeing 757 operated by British airline bmi.

ASL says the screen is the first in a range it is creating to meet market demand for lighter, brighter IFE displays. Also in development are a 10in luggage bin-mounted unit and a seatback version.

Also on show is the AeroStream digital audio and video delivery unit – a compact, multi-channel broadcast head-



Line up for Airline Service's high-def 17.5in retractable screens.

end intended to replace heavy, unreliable and outmoded tape systems. Due to reach the market in the fourth quarter of the year, it will come with Airline Services' StarStream moving-map application. StarStream innovations include a head-up display perspective simulating the forward view from the flight deck.

Originally focused on a variety

of airline engineering and support activities, ASL entered the IFE business in 2007.

"Our customers complained consistently about the poor reliability and image quality of existing IFE systems," says chief executive Bryan Bodek. "We decided there was an opportunity to develop new products exploiting the latest developments in consumer electronics."



# FLIGHTS OF FANCY

Mary Kirby takes a look at why designers are in demand as the Interiors industry meets in Hamburg.

Imagine you are seated in economy class on an ultra-long-haul flight. When you are free to roam, where do you go? Your options are limited. You can walk up and down the aisle or go to the lavatory. But if airlines offered the type of luxuries now seen in some premium cabins, such as a stocked bar, these passengers would “spend more on that flight, I’m sure”, says Ceri Rocca, one of the UK’s foremost designers for transport interiors.

As airlines struggle to fill seating capacity in today’s painfully difficult economic climate, novel cabin concepts that offer the allure of brand differentiation or the possibility of ancillary revenue generation – or both, as in the case of a cash bar in economy class – are sure to spark conversation here at the Aircraft Interiors Expo.

Designers able to show a more efficient use of materials and a better exploitation of cabin space may find themselves in hot demand at the event. “There has been talk about cash bars for economy. Whether that continues, with the economic climate, and whether airlines lay out more space for that sort of thing, is not clear,” says Rocca, who works in partnership with design consultancy Design Q.

“However, having said that, one of the things that airlines are struggling with is filling the capacity of their seats. So it could be worthwhile having an area like that. They wouldn’t be losing money because the seats aren’t selling. And they would have more of an edge to sell the other economy seats.”

People want to feel like human beings. “In economy, you sometimes feel you’re being treated like a steer,” suggests one frequent business traveller. Taking the “cattle-class” sensibility out of coach, Australian operator V Australia lays claim to the Pacific’s widest seats for economy travellers. A self-service kiosk keeps peckish passengers satiated.

The carrier’s premium economy offering goes a significant step further, however. Passengers can swing by the self-service bar for a drink or two on the house as soon as cruising altitude is reached.

V Australia is just one example of how out-of-the-box thinking is alive and well. “It may be too early to judge the impact of the latest economic problems. Airlines began feeling the pinch years ago and took steps to

survive. That resulted in a slowdown of cabin upgrades, and better planning of those major programmes. This slowdown will likely continue,” says Ford Chown, consultant and engineer for Linford Aerospace

“However, commercial aviation has progressed from an ‘adventure’ into a stable business, and the cabin environment is part of the marketing package for that business to compete in the industry,” he adds.

Carriers that regularly get it right are familiar names such as Airbus A380 launch customers Emirates and Singapore Airlines.

“The interior cabins make flying a beautiful experience. I think it encourages people to fly our airline. It may even encourage them to fly more often,” says Emirates vice-president for passenger communications Patrick Brannelly.

Other carriers are making their mark. “Travel agents say they are hearing roars of applause for the new seat in the international economy-class cabin of the A380 operated by Qantas, the third launch customer,” says author and consultant Jennifer Coutts Clay.

At the top of the seat there is a movable winged head- and neck-rest cushion; and when you recline your seat-back panel, the seat-base sitting area moves forward by a couple of inches. “This type of mechanism is frequently used for seats at theatres,



cinemas and sports stadiums because it provides an added amount of personal comfort without encroaching on the space of the people in the row behind you,” says Coutts Clay.

**James Park Associates' concept seating arrangement.**

#### FOOTREST NETS

The Qantas long-haul economy-class experience is further enhanced by the addition of footrest nets under the seats of the row in front of the passenger. “When stretching out, passengers can get their feet off the floor and supported in a comfortable flexible cradle. This ingenious innovation is much simpler to use than the traditional front- or rear-projecting foot bars – the nets stop passengers from sliding forward when they are sleeping. And it is virtually weightless,” says Coutts Clay.

Yet, as with long-term fleet replacement, it will be difficult for marginal airlines – those unable to control costs or generate profits – to raise the necessary funding to support expensive interior upgrade programmes, she says.

Design Q’s Rocca says most carriers are looking at weight reduction in

**...SIA generated a huge amount of publicity around its new first-class product, described as “your very own office, dining room and bedroom in the sky, in the privacy of your inner sanctum”...**

**JENNIFER COUTTS CLAY**

**FOCUS ON DESIGN**



economy. "That seems to be the main concern, not making it any more fabulous an experience for the customer. It's more about, 'how can we save ourselves a little bit of money with it'."

Therefore, less radical choices could attract the most cost-conscious among airlines. For example, the concept of "slim seats" is gaining in popularity. "We've been promoting this for a very long time," says designer James Park of James Park Associates (JPA). "We, too, are developing a very lightweight, economy-class seating solution, which does provide more space, less weight, fewer parts and a lower cost of ownership. It's logical, isn't it?"

However, he is encouraged that airframers are reportedly considering stacked sleeper seats for long-haul, economy-class travel. "I'd like to think that companies like Airbus and Boeing would examine something like that. We've applied our minds to this and produced concepts. It would be exciting if somebody did initiate production of something like that and I'm sure the problems could be solved. The real question is the level of commitment required to make a success of such an undertaking."

The most impressive innovations are at the front of the cabin. Lie-flat beds in first class have increasingly become the cost of doing business. "Whether that will change, if the economic situation gets worse, I don't know. However, increasingly that seems to be the standard for all flights from 8h upwards," says Park.

"We've reached a point where semi-lie flat seats are not acceptable, but semi-lie flat did allow the seats to be all forward facing. Airlines could provide a two-four-two layout and that would give a good passenger count. It's better than sitting upright all night, and perhaps could still be exploited if the sleeping platform could have a more sophisticated design."

The great buzz is about the new-style first-class suites that provide standards of luxury and privacy unparalleled in the history of aviation, says Coutts Clay, noting that SIA generated a huge amount of publicity around its



new first-class product, described as "your very own office, dining room and bedroom in the sky, in the privacy of your inner sanctum".

Two years ago, Swiss International Air Lines set about to develop a clean and simple first-class product that would have "more of an architectural" design and fall in line with the same design language of its brand. When Swiss begins operating its new Airbus A330-300s in April, first-class passengers will be able to invite a guest for dinner as each passenger has an ottoman and a large dining/working table offering enough space for two. Individually adjustable sidewalls for privacy can be closed while sleeping or working.

Lie-flat seats allow each Swiss first-class customer to choose the softness or firmness of the seat cushion and backrest. And each passenger can enjoy the latest in in-flight entertainment on 23in (58cm) screens.

"Our product drive is primarily intended to further strengthen our position as a top-quality airline. And the investments we have made in the past suggest that this is the best way to do so," says

**Top: Singapore Airlines' business class cabin.**

**Above: Swiss Airlines' first class cabin.**



For more news/  
show images see  
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Paul Estoppey, senior manager and head of cabin interior development and infotainment for Swiss.

What types of innovation can passengers expect in the future? "I think that in the context of the current economic climate there may be opportunities now to start looking at new ways to making air travel more economical, while at the same time maintaining very high levels of comfort," says Park.

"This is obviously a design challenge, but it is a challenge that JPA would welcome. We will be launching a product at Hamburg, the Cirrus seat, that helps achieve just that."

Chown predicts improvement in technology for passenger electronics using satellites (in-flight entertainment, connectivity, telephony); in air quality; in window shade capability, such as light diffusion plus blackout capability; and in fault identification systems for quick maintenance and better maintainability.

**'GREEN' EMPHASIS**

Coutts Clay also sees an emphasis on "green" aviation, including the use of water filters and sustainable products such as wool and other natural fibres; the use of lighter accessories such as oxygen containers, galley carts, crockery and cutlery; development of hi-tech waste-management programmes to handle in-flight products; smarter on-board baggage storage options; and new-style lighting techniques that can provide the impression of on-demand full-cabin interior decor changes at the flick of a switch.

Estoppey points out that consolidating one's position as a top-quality airline is a long-term undertaking, something Swiss considered when developing its new in-flight product. "We should also bear in mind that, while the economy is not strong, air transport remains a growth sector in the long term. So by making these investments now, we are equipping ourselves to take full advantage of the next economic upturn." ■

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## Airlines hand IMS a welcome boost

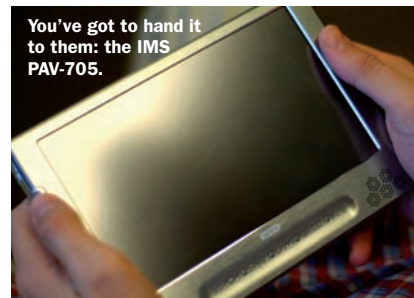
After a quiet few months for the handheld inflight entertainment sector, market leader The IMS Company (stand 6B19) is here in buoyant mood after announcing two new airline customers on the eve of the show.

California-based IMS is to supply its PAV-705 7in-touchscreen device to Kuwait Airways and West Africa's Gabon Airlines. The Middle Eastern operator plans to offer the IMS players in business and first-class cabins from the beginning of May. They will be available to passengers travelling in five Airbus A300s and four A340s and a pair of Boeing 777s on routes from Kuwait to Europe and the United States. Under a

three-year agreement IMS will provide several hundred players and accessories, ground support equipment and content management services.

The PAV-705's 160Gb storage capacity will be exploited to provide more than 280 hours of video, including 72 films, along with audio content, games, news and current affairs, comedies, documentaries and sports programmes.

Libreville-based international carrier Gabon Airlines will introduce PAV-705s in its Boeing 767s within the next three months. They will be offered in business and economy on routes to France, the Congo and South Africa. Content will comprise



seven feature-length films, eighteen and a half hours of other video programming, audio and games. IMS is also supplying ground infrastructure and content management services.

## TEN THOUSAND TAKE-OFFS FOR ONAIR

Inflight mobile phone provider OnAir (stand 6G30b) has recorded the 10,000th commercial flight of an airliner with its system aboard and functioning.

The milestone was achieved on a TAP Portugal Airbus A320 flight from Lisbon to Munich. The Portuguese carrier is trialling the OnAir service, which supports text messaging, email and voice calls via passenger's own mobile phones and other devices. Other current triallists are Ryanair, in 20 Boeing 737s, and bmi of the UK, in a single Airbus A319, while Middle Eastern carriers Royal Jordanian and

Wataniya Airways are offering the service on a full commercial basis on a total of three aircraft.

A number of other airlines – AirAsia, British Airways, TAM of Brazil and Oman Air – have said they will launch commercial services before the end of the year. OnAir says that as a result the 100,000-flight milestone is likely to be passed within the next nine months.

"The 10,000-flight tally shows how quickly our operations are expanding across a variety of markets," says OnAir chief executive Benoit Debains. "Feedback makes it clear that phone

use inside aircraft does not create any discomfort to passengers – we have not heard of a single complaint."

OnAir also announces that it has successfully tested the Inmarsat SwiftBroadband 432kbit/sec satellite service, which it uses for its air-to-ground link, with the telemedicine capabilities of UK company RDT. According to the two companies, SwiftBroadband offers enough bandwidth to support simultaneous real-time video, voice communications and vital-signs data relating to the diagnosis and management of serious medical conditions arising in-flight.



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## No compromise from BIC's ultra light weight carpets

Belgian carpet specialists Belgian International Carpets (BIC) (stand 6G75) has expanded its range of ultra light weight carpet in to a full collection of various designs and colours.

"The ultra light weight carpet is 1,050 grammes per square metre compared to 1,800 for standard carpet," says Philip Dermaut, managing director.

"Less materials also means a lower cost but without making any compromises on strength, durability or compliance with industry standards." BIC is aware of its tough competition and says it has stepped up its game and made the carpets look different to traditional ones.


"We have run methods of testing for burning behaviour, anti static, colour and surface appearance to determine changes in appearance of textile floor coverings.

"We found even alongside ultra light weight coverings, which are non-carpet, our carpets can deal with tough stains as well as absorb dirt and dust.

"We have worked hard in developing these new programmes and look to help airlines that care about fuel burning savings and also focus on cost efficiency. We are pleased to offer a varied selection as well," says Dermaut.



Aircraft alchemists: Chameleon creates the illusion of luxury from base materials!

 For more news/show images see [flightglobal.com](http://flightglobal.com)

# Chameleon's illusions have the magic touch

Chameleon Products (stand 5B20) can change the way your interior looks with its decorative film technology and save weight into the bargain.

The company uses a film transfer process that can make plastics look like other materials. It can, for example, make plastic look like marble, without the excessive weight penalty that real marble would give.

It is a water transfer process so parts can be complex in shape or pattern. Chameleon uses a water and ink based transfer printing system which is fully compliant with FAA and EASA smoke and toxicity requirements if the original part is already certificated.

The company says that by using its processes customers can achieve a step change in

their interior look, especially on surfaces that are touched by passengers or highly visible.

Managing director Trevor Whetter says there are two principle advantages to using the film technology. "It is 300% lighter than a wood veneer, and for recycling and refurbishment it's also great. We can apply the film, for example, to aircraft seat plastic. We can take a dull tattered bit of grey plastic and make it into something spectacular," he says.

Chameleon's product can be used on any furnishings in an aircraft and Whetter says that recently the company had a request for a

customer's aircraft to look like the interior of his Mercedes Maybach. Whetter jokes that "you can even make your briefcase look like your aircraft interior!"

But it isn't just the ability to transform dull colours into more than a thousand different things.

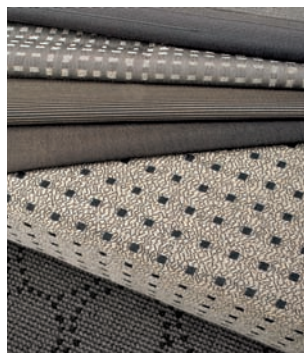
Whetter says the company is working on new technology to enable it to film 3D images.

"It's like being a magician, we change it into something else, he says. "Our motto is to change the way we see things."



Posh Loo-k: Chameleon has transformed this bog-standard WC into a marble throne!

## Tisca Tiara crowns display with exciting new products



Swiss company Tisca Tiara (stand 6G68) is showcasing its new generation seat cover, curtain fabrics and carpets here at Hamburg.

"The Collection 2009 will help airlines and the VIP and business jet market save money," says Matthias Tischhauser, division manager Mobility Textiles.

"These smart textiles will allow airlines and business jets to reduce operating costs by lowering fuel consumption, by reducing maintenance and cleaning costs, and by

minimising replacement and refurbishment costs.

"Furthermore, the new collection of seat cover fabrics, curtains and carpets are carefully harmonised designs and colours and, importantly, these textiles result in the most economical life-cycle costs thanks to their premium quality and longevity," says Tischhauser.

The company, which designs, develops and manufactures a range of premium fabrics and carpets for complete cabin interiors, is also

displaying its new ultra-light-weight carpet.

"The carpet is 25% weight-saving compared to standard aircraft carpets. Despite being much lighter, this carpet is extremely robust and achieves the best test results regarding durability, wear and tear.

Another innovation we have on display will be a non-woven carpet that is extremely low in weight and that offers new exciting possibilities to the business jet market," says Tischhauser.



# Kydex debuts Dreamliner seating sheet solution

A new thermoplastic sheet for aircraft interiors applications from Kydex is making its debut here at Hamburg from Kleerdex Company (stand 5F65).

"Kydex 6787 LT was developed in direct response to the commercial seating suppliers that have contracts for the Boeing 787 Dreamliner 'catalog seat' programme," says Ronn Cort, international business manager of Kydex thermoplastic sheets.

"There was a need to supply these companies with a

compliant material that could be produced in very small runs of customised colours. The 6787 was developed for these customers. It is a proprietary acrylic/PVC blend that can be thermoformed into complex shapes with very low tooling and fabrication costs.

"With a price and performance index similar to our popular Kydex 6565 material, this material is a step up in compliance without any significant costs increase compared to

our Kydex 6565 material."

The sheet meets with Boeing toxicity requirements for cabin interior components like seating, tray tables and literature pockets.

"We do not supply Boeing directly, so this product is engineered specifically for customers of ours like B/E Aerospace, Contour Premium Aircraft Seating, Sicma, Recaro, Weber and Geven."

The new Kydex 6787 adds to the line of Kydex thermoplastic sheets which are all suited to applications requiring such properties as fire retardance, chemical resistance, formability and high impact resistance.

They are available in a wide range of custom colours, textures and finishes. "We provide a fast set-up and turnaround with the ability to handle small runs, short lead times and custom orders cost-effectively," says Cort.

**Kydex's acrylic/PVC blend can be thermoformed into complex shapes with very low tooling and fabrication costs.**



## SCOTTISH LAUNCH IS A REAL BUTE

A new stretch fabric by Scottish wool design and manufacturer Bute (stand 5C20) is being introduced at the show.

"Galloway is a brand new stretch fabric which is a unique mix of wool and silk, with 15% stretch both ways," says Douglas Graham managing director. "This two-way stretch means that the fabric is suitable for modern furniture shapes and cabin interiors which is why we're here at Hamburg."

Galloway will come in a choice of 12 vibrant colours and six natural colours. The company is also showing samples of its Island Collection specifically designed for the aircraft interiors market.

# Sandvik showcases surface engineered strip materials

Sandvik Surface Technology (stand 5A10) is highlighting its new range of surface engineered stainless steel strip materials that it launched this month.

The company says that manufacturing processes have been developed to apply coatings with excellent adhesion and purity to stainless steel strips, enabling selected combinations of

substrates and surface layers to provide new, enhanced and often unique material properties.

The company has a high degree of manufacturing flexibility so surface engineered strips can be tailor made to customer specifications. Properties such as electrical conductivity, low resistivity, corrosion, surface function or decorative appearance can be met or enhanced.

The new line lets Sandvik produce complex coatings on any stainless steel strip with surface layers that can be any metallic element such as aluminium, nickel, copper or silver and mixtures of elements or binary compounds, such as aluminium or titanium oxides.

Coatings can be single or double-sided, with thicknesses ranging from tenths of nanome-

ters up to a few microns. All coatings have an extremely low content of impurities and foreign elements. Sandvik says that this is a key property for creating excellent electrical and contact properties.

Because of the excellent adhesion between substrate and surface layer, the new strip products are cold formable and bendable to tight radii.

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