

**INDO**  
**AEROSPACE**  
2016 EXPO & FORUM

featuring  
**INDO**  
**HELICOPTER**  
2016 EXPO & FORUM

**INDOMARINE**  
2016 EXPO & FORUM

## Antasena advances

The Indonesian government is set to give the green light to the development of the Tank Boat concept after the project was given the official name Antasena by vice president Jusuf Kalla and minister of defence Ryamizard Ryacudu on the first day of Indo Defence 2016.

Being developed by PT Pindad, PT Lundin and CMI Defence, the Tank Boat concept was first displayed in 2011, but has been developed over the past two years under a design feasibility study. This has confirmed the structural design and hydrodynamic characteristics of the novel 18m composite catamaran platform, and the integration of the 105mm main armament.

The design has now been frozen, and the full-scale Tank Boat model on display at Indo

Defence will in fact serve as the mould for the prototype. Final negotiations are under way to build the first of class, with current plans aiming at delivery by the end of 2017.

The Tank Boat concept has been conceived to provide planned 'swamp' battalions with an improved amphibious/riverine manoeuvre and fire support capability.

The main armament will be a CMI Defence remote-controlled turret armed with a stabilised 105mm gun able to fire various natures of fixed 105mm ammunition including high-explosive via a bustle-mounted automatic loader. The mock-up of the turret shown here is also fitted with a Bofors Lemur remote weapon station armed with a low recoil Orbital ATK 30mm cannon. 



The 54-passenger N245 is a new rugged design for the development of regional air services

page 2



Ground-breaking supply and integration of combat system completed for frigates

page 4



Connected radar weather information service is imminent for rotary world

page 8



Free download



IHS Jane's  
Show Dailies app



The first Yak-152 prototype undertaking its first flight at the Irkut Aviation Plant

## Diesel-powered trainer from Russia

Displayed on the United Aircraft Corporation Stand 207 in Hall A in model form is Russia's latest trainer, the Yak-152. Designed by the Yakovlev Design Bureau and built by the Irkut Corporation, the Yak-152 is a diesel-powered trainer that is being put into production for Russia's 'Ptichka VVS' requirement to equip the DOSAAF military-affiliated aero club organisation. It is also being offered for export, both on its own and with the Yak-130 advanced jet trainer and ground-based training systems as part of the 'UTK-Yak' training complex.

Having produced more than 22,000 radial-engined trainers for the Soviet Union and its allies, Yakovlev began development of the Yak-152 in the late 1990s to answer a Russian air force requirement, but it lost out to the Sukhoi Su-49 in 2001, which itself was cancelled. The Yak design was resurrected in conjunction with the Chinese Hongdu company as the CJ-7, which first flew in 2010 with an M-14X radial engine.

In 2014 it was reborn for the current requirement. Radically altering the traditional 'Yak trainer' look is the new powerplant, a 500hp RED A03 diesel V-12 engine developed in Germany by Raikhlin Aircraft Engine Developments and first tested in a modified Yak-52. Other notable features are the Zvezda SKS-94M2 emergency ejection system, a modern avionics system with multi-function displays, and a fully aerobatic capability of +9/-7g when flown by a single pilot, or +8/-6g with two people on board.

Russia has a requirement for at least 150 Yak-152s to replace the ageing radial-engined Yak-52. Yakovlev has built four prototypes, including aircraft assigned to static and fatigue tests. The first of the two flying prototypes made its first flight on 29 September this year, piloted by Yakovlev OKB pilot Vasily Sevastyanov. 

# Rugged design f

BY DAVID DONALD

PT Dirgantara Indonesia (Hall D, Stand 039) is showing a model of its latest regional airliner design. The N245 is a derivative of the CN235 utility transport that is being developed as a 54-seat passenger carrier. It is intended to fill the niche between the 19-seat N219, which was developed from the NC212 light transport, and larger airliners.

As with the N219, the N245's military transport roots provide it with the capability to operate from short, unpaved runways in rugged terrain. Its primary role would be to ferry passengers between outlying areas and regional



# Amphibious recovery



Japan's ShinMaywa Industries (Hall D, Stand 286) is promoting its US-2i four-engined amphibian as an ideal rescue and disaster relief platform for Indonesia.

The aircraft is the latest in a line of large flying-boats produced for Japan's Maritime Self Defence Force. The initial PS-1 was an anti-submarine version, while the US-1A was a search and rescue version with transport capability. It introduced fully amphibious capability, whereas the PS-1 was fitted only with beaching wheels. The current version, the US-2 (or US-2i for export), is a major update with Rolls-Royce AE2100J turboprops, a pressurised cabin and fly-by-wire flight controls. The JMSDF

currently operates five US-2s, with two more to be delivered to replace the last of the US-1As.

A unique feature of the US-2 is its boundary layer control (BLC) system. Mounted in the fuselage just aft of the wings is a Rolls-Royce CTS800 turbine that generates compressed air to feed the BLC system. The air is blown around the wing flaps and control surfaces to improve lift, in turn allowing the US-2 to land at speeds as low as 55kt, and to take off from 3m waves at 80kt. Take-off run from water at 43 tonnes is just 280m (918ft), while the US-2 can land in 330m (1,082ft).

The short landing and take-off run, and its sea-keeping characteristics, make the US-2 a

3

# or regional development



centres, from where they could join the main air transport network. Most of the sectors would be short, with the N245 optimised to undertake multiple flights before refuelling.

PTDI already has a production line for the CN235, and while much of the N245's structure remains similar, there are notable changes. The most visually obvious is the adoption of a T-tail, while the cabin would also lose the military aircraft's rear loading ramp.

The cabin is slightly longer, allowing more seats to be fitted. Power is provided by a pair of turboprops in the 2050kW (2,750shp) class. It has been reported that the Pratt & Whitney PW127 has been selected rather

than the General Electric CT7 of the CN235.

With a maximum take-off weight of 18,300kg (40,345 lb), the N245 offers a 5,500kg (12,125 lb) payload. It can take off from a 1,000m (3,280ft) strip and land in 720m (2,362ft). The pressurised cabin permits flight at up to 7,620m (25,000ft). With 54 passengers aboard it has a range of 600nm (1,111km).

The N245 is destined to compete in the same sector as the Bombardier Dash 8-Q300 and ATR 42, PTDI claiming a five per cent reduction in operating costs over the latter, while offering a wider cabin than either. Low cabin noise levels are a design target, and the aircraft is equipped with an advanced 'glass' cockpit. 

very useful aircraft in the rescue role. ShinMaywa has also devised a fire-fighting system, with a water scoop that can fill the 15-tonne tank in 20 seconds as the aircraft skims the surface. An alternative interior can accommodate 38 passenger seats with galley and toilet.

In March this year, Indonesia signalled its interest in acquiring the US-2i for rescue, fire-fighting and disaster-relief operations. This interest was revealed during a visit by President Joko Widodo to Tokyo, during which a memorandum of understanding was signed covering defence co-operation between Indonesia and Japan.

Discussions regarding any acquisition are being conducted at government level. Both countries share similar geographic challenges, being large archipelagic nations situated on the tectonically and volcanically active 'Ring of Fire'.

India also has a requirement for this class of aircraft and is interested in two batches of US-2is, each of six aircraft. The amphibians are required for service in the Andaman and Nicobar Islands, among other duties. An Indian defence ministry decision is expected later this year or early next.

In terms of large amphibians, only Russia and China offer alternatives. Russia's jet-propelled Beriev Be-200 has also been reported as a subject of interest for Indonesia. China's is the AVIC AG600, the first example of which was rolled out at its Zhuhai factory in June. 



## Rescue asset

Resplendent in eye-catching orange, Indonesia's air rescue organisation ('Basarnas' – Badan SAR Nasional) is showing its new Leonardo AW139 outside the Indo Defence show halls.

The aircraft was ordered in March 2015 and delivered by sea around the end of the year. It was reassembled by Indopelita Air Service and test-flown at the company's Pondok Cabe facility in February. Included in the contract is an initial support package, plus training for aircrew and technicians. The AW139 is equipped with rescue hoist, radar, FLIR Systems Star SAFIRE 380HDC electro-optic turret, SX-16 Nightsun searchlight and equipment such as air-droppable life rafts.

Leonardo signed an agreement with Indopelita at the 2014 Indo Defence show to establish local support and maintenance services for the Italian company's helicopters, and it will

support the Basarnas AW139. Leonardo has sold AW116, AW139 and GrandNew aircraft to Indonesian customers.

AW139s have proved popular in the public services sector, particularly for SAR duties. The helicopter offers a high cruise speed of 165kt for rapid-response transits, and a six-hour patrol endurance. Accessed by large sliding doors on either side, the cabin can be reconfigured for various duties, and can accommodate an electro-optical sensor operator station. It can also carry aeromedical equipment and four stretchers.

Basarnas would like to acquire 12 AW139s, to operate alongside 12 Airbus Helicopters AS 365N3+ Dauphins (also on display). The service currently has eight ageing NBo 1050Bs, and two AS 365N3+s that were assembled by PT Dirgantara Indonesia and delivered in 2014. 

# Multiple firsts for combat

BY RICHARD SCOTT

Thales Nederland (Hall A, Stand 020) has completed the ground-breaking supply and integration of a prepackaged mission system for *KRI Raden Eddy Martadinata*, the first of the Indonesian Navy's (TNI-AL's) new SIGMA 10514 Perusak Kawal Rudal (PKR) frigates.

Under contract to PKR prime contractor Damen Schelde Naval Shipbuilding (DSNS), the company is supplying and integrating the core mission systems for the two PKR frigates. This includes the latest iteration of its TACTICOS combat management system (CMS), the SMART-S Mk 2 medium-range radar, the STIR 1.2 EO Mk 2 radar/optronic fire control system, and a Link Y datalink terminal.

Other Thales companies have provided the Kingklip hull-mounted sonar, and the internal/external communications suite. Thales Nederland additionally took on responsibility for the integration of the navigation subsystem (including gyro, log, and DGPS).

The PKR programme has marked a number of firsts, including an innovative modular build/test/delivery scheme that saw most of the combat system installed, integrated and tested in a ship module built in the Netherlands prior to shipping to PT PAL in Surabaya.

"This was the first time we have undertaken a project with DSNS for a full modular build," explained Edie Heuvelink, Thales Nederland's PKR programme manager. "Ship module 5 [built by DSNS in Vlissingen] was the most interesting for us because it included the combat information centre [CIC] below decks and the SMART-S Mk 2 and STIR EO Mk 2 radars above decks.

"Our TACTICOS system was integrated in the CIC, the radars installed on board the mast structures, and we performed approximately 80 per cent of the integration in the Netherlands over a six-month period from the start of 2015. The whole module was then shipped to Indonesia for consolidation with the remaining ship modules at PT PAL.

"We did the remaining 20 per cent integration in Indonesia. This included all the



other equipment – such as the 76/62 Super Rapid gun and hull-mounted sonar – that was not fitted in module 5, various alignments and calibrations on the ship, followed by harbour and sea acceptance tests."

One noteworthy aspect was that module 5 was shipped essentially intact, with both the SMART-S Mk 2 and STIR 1.2 EO Mk 2 sensors fitted. "DSNS had originally intended that we would remove the two radars for the journey,

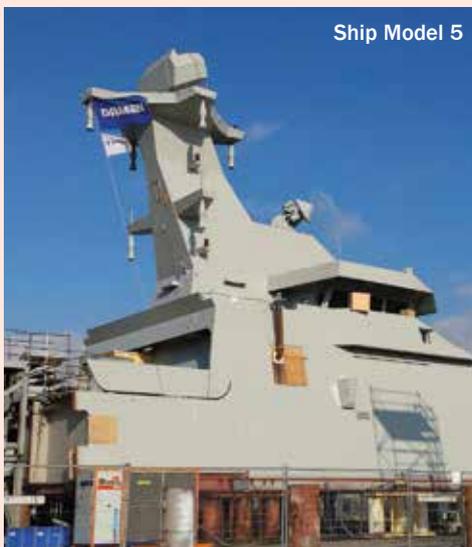
and then re-install in Surabaya," said Heuvelink. "But we discussed an alternative strategy under which the module would be hooked up to air conditioning, chilled water and power during the transport phase.

"This alternative strategy was agreed upon jointly. So the radars remained in operational condition on the module, albeit with environmental housings to protect the antennas."

Sea acceptance trials on the first PKR were successfully completed in September this year. These included a full range of combat system tests, and live gunnery firings.

Following crew training, *Raden Eddy Martadinata* will be handed over in January 2017. Its sister ship, the future *KRI Gusti Ngurah Rai*, was launched by PT PAL in late September and is scheduled for delivery in October next year.

The PKR contract marks another milestone in that it represents the first embodiment of the latest generation TACTICOS CMS. Known internally as 'Baseline 2', this revised and updated configuration introduces new MOC Mk 4 multifunction consoles (each PKR has 10 MOC Mk 4 stations), a revised operator-centric human machine interface based on individual worksets,



# system

and a collaboration wall featuring three large screen displays.

Another important aspect to PKR was the industrial cooperation forged with Indonesian company PT LEN, which includes significant transfer of technology. Hennie Everlo, Thales naval marketing and sales director in Indonesia, explained: "Next to the extensive technology transfer, we have subcontracted PT Len for three specific software modules in TACTICOS. That means the company is now developing its skills on the basis of our CMS technology."

He added: "We actually began our cooperation with PT Len back in 2011 without any specific programme, and began the transfer of technology programme in 2012.

We subsequently signed a memorandum of understanding with PT Len in 2014. The intent is for the two companies to work together as partners in the Indonesian market, and for PT Len to be able to build up its own skills."

Raden Eddy Martadinata is also the first ship to receive the latest production standard STIR 1.2 EO Mk 2 director. In its original production configuration, the STIR 1.2 EO Mk 2 was configured with distinctive box structures on either side of the tracking mount to accommodate solid-state transmitter assemblies associated with dual-band (I and K) monopole radars. However, the redesign accompanying the introduction of the new unified casting assembly has now allowed both transmitters and associated processing to be accommodated within the structure of the director, so enabling the two external equipment boxes to be engineered out.



## Protect and survive

China-based Beijing Winyarn High Performance Fiber Co Ltd (Hall D, Stand DP318), a global manufacturer and provider of Ultra High Molecular Weight Polyethylene (UHMWPE) fibre under the brand name TEXIMUS, has installed bullet-proof plate into the China Border Patrol Vessel Project. As well as providing the material solution, Winyarn also took responsibility for the project right through from material manufacture to final ship installation. The patrol vessel programme marked the first application of UHMWPE bullet-proof materials on board Chinese vessels.



# IHS Jane's Show Dailies App

AVAILABLE FOR iOS and ANDROID

### FEATURES:

- Event schedules
- Easy on-the-go access to IHS Jane's unique editorial event coverage
- Product launch notifications
- Once downloaded content is available off-line

Breaking news from the world's leading aerospace and defence events at your fingertips



**FREE DOWNLOAD**  
[www.ihs.com/showdailies](http://www.ihs.com/showdailies)



6

## Informasi keadaan cuaca udara

BY DAVID DONALD

Awal tahun depan Honeywell akan mengenalkan Connected Radar (Hall A, Stand 073), jasa informasi cuaca miliknya. Konsep yang diperkenalkan seperti pengumpulan data meteorologi dari radar cuaca setiap pesawat, beserta data dari sumber lainnya, yang digabungkan untuk memberikan informasi lewat aplikasi Honeywell's Weather Information Service.

Informasi keadaan cuaca ini sangatlah penting untuk kendaraan udara, terutama bagi para penerbangan dari sektor minyak dan gas, dimana pencakupan radar daratan tidak ada. Ini juga sangat menguntungkan para operator yang melakukan penerbangan di wilayah sulit dan terpencil dimana kemungkinan tidak adanya radar atau terhambat.

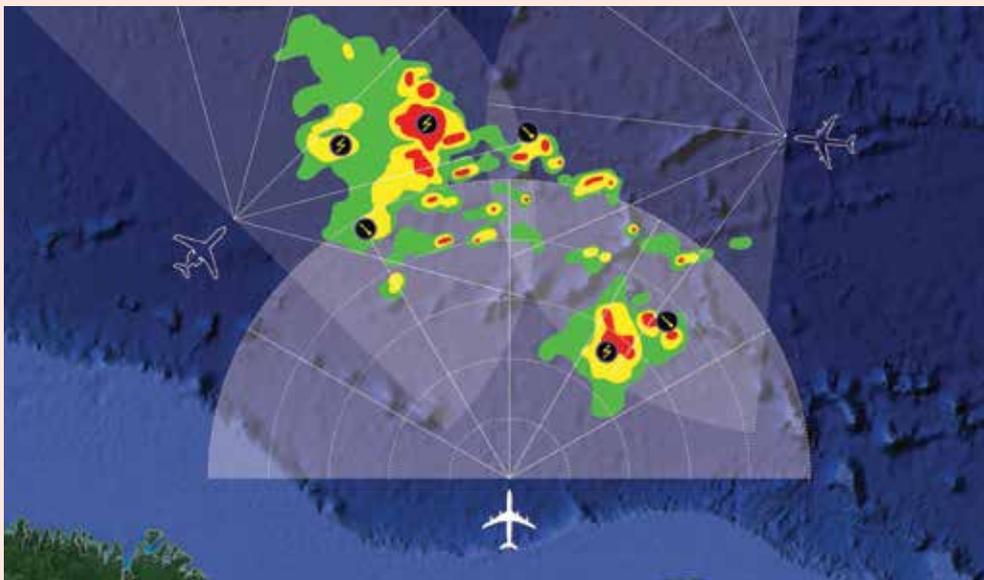
Connected Radar mengambil informasi dari para pesawat yang telah dipasangkan radar cuaca Honeywell IntVue RDR-4000 3D. Sensor ini memakai teknik *scan* dan getaran *volumetric* untuk memberikan/mendeteksi sinyal peringatan atas bahaya yang datang, seperti; halilintar, hujan es, pergolakan udara dan angin kencang. Radar ini dapat

melengkung lebih dari 160° di depan pesawat hingga jarak 320 mil bahari. Ketinggian yang dapat diliput mencapai 6,000 kaki (1,828.8 m) dari atas tanah.

Dengan adanya radar ini, informasi cuaca bisa didapatkan untuk penerbangan dengan ketinggian yang lebih rendah dari performa radar tersebut. Connected Radar mengijinkan

data disebar ke semua operator penerbangan, agar mereka memiliki informasi meteorologi lebih akurat untuk perencanaan misi-misi mereka. Selain meningkatkan sistem keamanan, juga dapat meminimalisir keterlambatan, menghemat waktu dan biaya karena operator dapat membuat perencanaan penerbangannya di rute yang aman dari cuaca buruk.

Data bisa diunduh dari aplikasi ke perangkat iOS/Windows tablet yang dipakai oleh awak pesawat, atau melalui desktop komputer di ruang operasional. Sistem ini memberikan sinyal peringatan bahaya sekaligus informasi ramalan cuaca.



## Pengamatan dengan biaya rendah

PT Indo Pacific Communication and Defence (IPCD) memamerkan pesawat ringan LH Aviation LH-10 Ellipse di pameran kali ini (Hall D, Stand 234). Pesawat yang dimiliki oleh perusahaan IPCD ini diperlihatkan untuk demo dan uji coba, dilengkapi dengan kubah pengintai *retractable* di ujungnya.

IPCD mempersembahkan Ellipse dengan versi *optional-pilot* untuk Angkatan Udara Indonesia (TNI-AU) di akhir tahun ini untuk dievaluasi, setelah sebelumnya sempat menyuplai sasaran untuk drone. Versi *optional-pilot* LHD ini dipamerkan oleh LH Aviation acara pertunjukkan udara Paris tahun lalu.

Didesain di Perancis, LH-10 merupakan pesawat ringan yang *compact* serta memberikan daya tahan 24 jam selama penerbangan tanpa awak. Mesin digerakkan oleh Rotax 912 yang hemat bahan bakar, tetapi ada juga alternatif lain yang membutuhkan bahan bakar lebih banyak. Kedua versi tanpa awak dan berpilot ini dapat dikonfigurasi untuk bermacam - macam misi; untuk pelatihan atau penyerangan kecil-kecilan. Ujung pesawat dapat diganti dengan alat sensor yang berbeda - beda dan pesawat ini juga

dapat membawa perlengkapan - perlengkapan persenjataan dibawah sayapnya untuk misi tertentu.



# Ragam senjata yang diciptakan pertama kali

BY RICHARD SCOTT

Thales Nederland (Hall A, Stand 020) telah menyelesaikan misi penyuplaian dan integrasi sistem untuk frigate SIGMA 10514 Perusak Kawal Rudal (PKR) terbaru Angkatan Laut (TNI-AL) Indonesia, KRI Raden Eddy Martadinata.

Dalam persetujuan kontrak dengan kontraktor utama PKR, Damen Schelde Naval Shipbuilding (DSNS), perusahaan ini menyuplai dan mengintegrasikan sistem misi utama untuk kedua frigate PKR. Semua merangkap TACTICOS combat management system (CMS) terbaru, radar *medium-range* SMART-Mk 2, sistem anti kebakaran *optronic* STIR 1.2 EO Mk 2 dan terminal *datalink* Link Y.

Perusahaan Thales lainnya telah memberikan sonar Kingklip *hull-mounted*, dan suite komunikasi internal/eksternal. Thales Nederland juga bertanggung jawab untuk mengintegrasikan subsistem navigasi (seperti *gyro*, pendataan, dan DGPS).

Program-program PKR telah memperoleh beberapa perangkat yang pertama kali diciptakan seperti, pembangunan ruang modul inovatif yang dapat memuat hampir seluruh sistem tempur yang sudah diintegrasikan, serta telah diuji coba sebelum dikirim ke PT PAL di Surabaya.

"Ini pertama kalinya kami melakukan proyek dengan DSNS untuk membangun ruang modul yang komplit," Edie Heuvelink, Thales Nederland PKR programme manager menjelaskan. "Modul kapal 5 (dibangun oleh DSNS di Vlissingen) sangat menarik karena merangkap combat information system (CIC) dibawah dek kapal, dan radar SMART-S Mk2 berserta STIR EO Mk 2 diatas dek.

"Sistem TACTICOS kami diintegrasikan dengan CIC, radar dipasang di struktur tiang kapal, dan kami juga melakukan integrasi kurang lebih 80 persen di Belanda selama kurun waktu enam bulan dari awal tahun 2015. Ruang modul keseluruhannya dikirim ke Indonesia untuk dikonsolidasi dengan sisa modul di PT PAL Surabaya.

"Kami menyelesaikan sisa 20 persennya di Indonesia, termasuk peralatan lainnya seperti;

Super Rapid Gun 76/62 dan *hull-mounted sonar* - tidak dipasangkan di modul 5, dijejer dan diuji di kapal tersebut, diikuti oleh uji coba di pelabuhan dan laut lepas."

Salah satu aspek yang patut diketahui adalah, modul 5 dikirim dalam keadaan kedua sistem sensor yang telah terpasang dan tersambungkan dengan SMART-S Mk2 dan STIR 1.2 EO Mk 2. "DSNS sebenarnya menginginkan kami melepas kedua radar



selama pengirimannya dan dipasang kembali di Surabaya," jelas Heuvelink. "Akan tetapi, kami akhirnya diskusi strategi alternatif dimana ruang modul dikaitkan ke pendingin ruangan, dan air dingin semasa pengiriman berlangsung."

"Rencana alternatif ini disetujui seluruh pihak berwenang. Jadi radar-radar tersebut tetap dapat beroperasi di ruang modulnya dengan antena yang terlindungi walaupun di kondisi yang banyak gangguan."

Uji coba lautan untuk PKR yang pertama telah berhasil diselesaikan pada bulan September tahun ini, termasuk uji coba rangkaian sistem tempur dan penembakan secara langsung.

Setelah penyelesaian pelatihan para awak

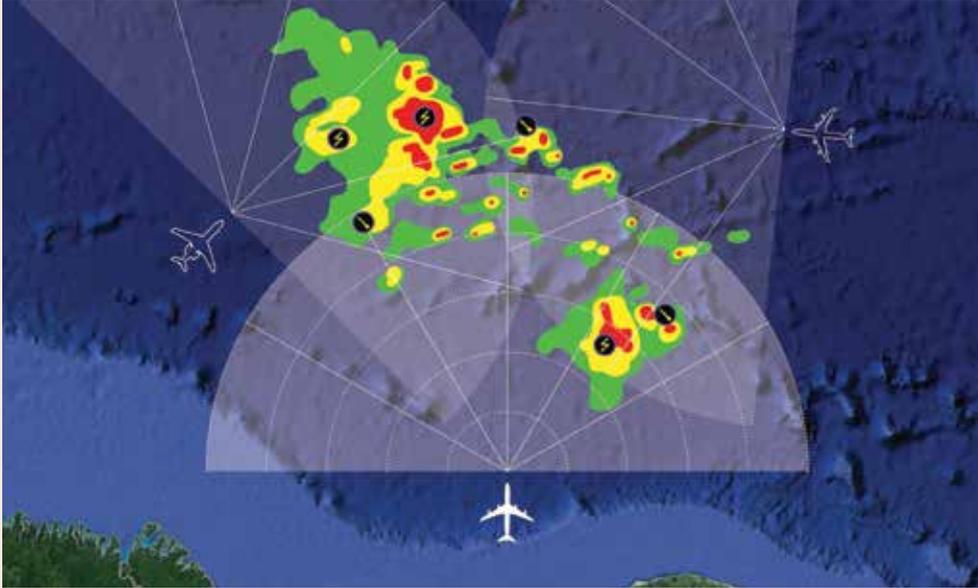
kapal Raden Eddy Martadinata akan diserahkan di bulan Januari 2017. Kapal pasangannya, KRI Gusti Ngurah Rai telah diluncurkan oleh PT PAL pada bulan September lalu dan dijadwalkan untuk pengiriman di bulan Oktober tahun depan.

Kontrak PKR merupakan perwujudan terobosan terbaru TACTICOS CMS, biasa diketahui sebagai 'Baseline 2', versi konfigurasi yang telah direvisi dan update mengenalkan MOC Mk 4 pengendali multifungsi (masing-masing PKR memiliki 10 MOC Mk 4 pos pemancar), sebuah mesin pengenalan wajah, dan kolaborasi tiga layar yang besar.

Salah satu aspek PKR penting lainnya adalah kerjasama bisnis dengan perusahaan Indonesia, PT LEN yang merangkap pentransferan teknologi penting. Henny Everlo, marketer dan direktur penjualan Thales di Indonesia menjelaskan, "Selain pentransferan teknologi yang ekstensif, kami juga mengontrak PT LEN untuk membuat software spesifik bagi TACTICOS. Ini artinya perusahaan sedang mengembangkan keahliannya atas dasar teknologi CMS kami."

Dia juga menambahkan, "Sebenarnya kami mulai bekerjasama dengan PT LEN sejak tahun 2011 tanpa membuat program yang spesifik dan memulai pentransferan teknologi di tahun 2012. Kami akhirnya menandatangani MoU dengan PT LEN di tahun 2014. Maksud kami adalah agar kedua perusahaan bekerjasama sebagai partner untuk pasar Indonesia dan agar PT LEN dapat mengembangkan keahliannya."

Raden Eddy Martadinata juga merupakan kapal pertama yang menerima produksi standar STIR 1.2 EO Mk terbaru. Di konfigurasi aslinya, STIR 1.2 EO Mk dikonfigurasi khusus dengan struktur kotak di setiap sisinya untuk mengakomodasi radar pemancar *solid-state dual-band* ( I dan K). Akan tetapi desain ulang dilakukan agar dapat memuat kedua pemancar yang dipasangkan di satu tempat agar keduanya dapat beroperasi dengan lebih maksimal.



# Crowd-sourcing weather info

BY DAVID DONALD

Early next year Honeywell expects to introduce its Connected Radar (Hall A, Stand 073) weather information service. The concept involves collecting meteorological information from the weather radars of individual aircraft, as well as

data from other sources, and aggregating it to provide a meteorological service via Honeywell's Weather Information Service app.

This 'crowd-sourcing' of weather information is of particular significance in the rotary-wing world, especially for operators in the offshore oil and gas sector, where ground radar coverage is

not available. It is also of benefit to operators flying in rugged and remote regions, where radar coverage is either not available or blocked by terrain.

Connected Radar draws information from airliners that are fitted with the Honeywell IntuVue RDR-4000 3D weather radar. This sensor uses volumetric 3D scanning and pulse compression techniques to provide a high level of detection/warning for hazards such as lightning, hail, turbulence and windshear. The radar scans over a 160° arc in front of the aircraft out to a range of 320 nautical miles. Altitude coverage is from ground level to 60,000ft.

Thanks to the radar's performance, information is generated about the weather at altitude levels way below those at which the primary airliner sources are flying. Connected Radar allows that data to be shared with operators flying way below, allowing them to plan and fly their missions with significantly greater meteorological awareness. This not only improves safety but also minimises delay and potentially saves time and money by allowing the plotting of more efficient routes around weather hazards.

Data can be downloaded via the app to iOS/Windows tablet devices being used by the flight crew as an electronic flight bag, and by desktop computers in operations offices involved in flight planning. The system provides hazard alerts, as well as current and forecast weather information.

# Low-cost surveillance

PT Indo Pacific Communication and Defence (IPCD) is displaying an LH Aviation LH-10 Ellipse light aircraft at the show (Hall D, Stand 234). The company owns this aircraft for demonstration and test purposes, and it is shown here in surveillance fit with a retractable sensor turret in the nose.

IPCD will deliver an optionally-piloted version of the Ellipse to the Indonesian air force by the end of the year for evaluation, having already supplied target drones to the service. The LHD optionally-piloted version was revealed by LH Aviation at the Paris air show last year.

Designed in France, the LH-10 is a compact composite light aircraft offering an endurance approaching 24 hours when flown unmanned. Power is provided by a low fuel-burn Rotax 912 engine, with a heavy fuel engine available as an alternative. Both manned and optionally-piloted versions can be configured for various missions, from training to light attack. The interchangeable nose can mount different sensors for ISR duties, and the aircraft can carry weapons under the wings for close air support missions.

