

EADS gets cracking on A330 air tankers
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Hawkesbury accounts for her first sea mine
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DCP DRAWS NEAR

It sounds great – the real problem is money

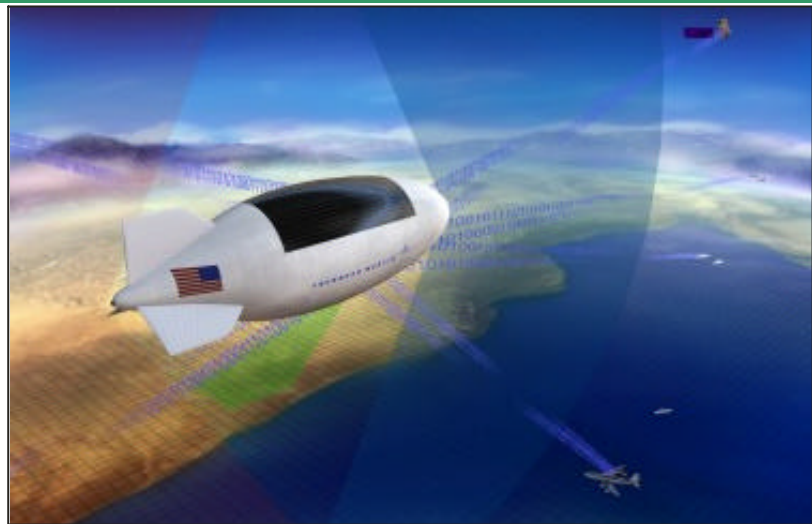
CANBERRA – With the Defence Capability Review heading for Cabinet decision, the defence debate focuses on the future ADF: a force that defends Australia and the immediate region, or the “expeditionary” force that can take part in US-led coalition operations across the whole of Asia.

Political speculation is that there is division between Prime Minister John Howard and his Defence Minister Senator Robert Hill (also the influential leader in the Senate), with Hill on the side of the big battalions.

Some of the contributions over the past week or so open up new options. Hugh White, at the Australian Strategic Policy Institute, in a piece in *The Australian Financial Review*, highlighted the need for more Federal Police – “soft force” rather than the deadly force the military is trained to apply. This is an extension of the argument for an Australian Coast Guard, as we are expensively misapplying “hard force” for what is basically a policing function.

The Australian Defence Association says the DCP is the wrong end of the problem. What is really needed is an honest strategic review, a new White Paper.

DCP, to Page 2



Lockheed Martin Air on image

An artist depicts Lockheed Martin’s concept for an unmanned US airship that will fly a surveillance mission last ing for months at 60,000 feet. Just the thing for Australia’s surveillance needs?

LM moves into airship business

AKRON – The Missile Defense Agency has awarded Lockheed Martin a \$40 million design and risk reduction contract for the advanced technology concept demonstration to deliver a high altitude airship (HAA) prototype in 2006.

The prototype airship will be about 500 feet long, 160 feet in diameter and have a volume of 5.2 million cubic feet, about 25 times larger than blimps.

Al Barber, VP at the Lockheed Martin Maritime Systems & Sensors (MS2) facilities in Akron says the airship will carry different payloads and provide multi-mission capabilities.

The Missile Defense Agency’s performance goals include sustained operations for one month

at 65,000 feet while providing 10 kilowatts of power to a two-tonne payload. The prototype will demonstrate station-keeping and autonomous flight control.

Work will be performed at Lockheed Martin’s facilities in Akron, the centre of US lighter-than-air development. Its existing airship factory, called the Airdock, is 1,175 feet long, 325 feet wide and 211 feet high.

The Lockheed Martin team includes LM business units in California, Colorado, Maryland and Virginia, and StratCom International LLC, Keedysville, MD.

While the main purpose is to develop a high-flying, so lar-

Airship, to Page 2

Airship, from P1

powered remote-controlled airship to monitor US borders and scan the horizon for missiles, it could also be used to monitor combat zones overseas.

The contract includes a \$50 million option to build one.

Last year, NORAD proposed stationing 10 ships to cover America's borders.

The Coast Guard and customs agents already use radar on low-altitude tethered balloons to

scan for drug smugglers. The Navy discontinued its blimp program in 1962.

Lockheed Martin Airdock, where the blimp is to be developed, was once the site of mass production of Navy surveillance airships during World War II.

DCP, from Page 1

Several of the options in the DCP have trickled out.

- The Army is to get new tanks – or more hopefully refurbished, older models rather than the complex US M1A/B Abrams, with thirsty gas-turbine engines and reported reliability problems in Iraq. More in the ADF's league are the refurbished German-made Leopard 2s, apparently surplus to *Wehrmacht* requirements and much cheaper to buy and run.

(Incidentally, we were sceptical about the value of tanks in the region until we read a chronicle of the deployment of armour in Vietnam. When the creaking and completely unsuitable Centurions were withdrawn prematurely, the Army took casualties that could have been avoided.)

- The F-111s are to stay as the main strike arm, which is common sense, despite the campaign waged against them.

- The Navy's air-defence ships may be postponed. If these have an Aegis-like, anti-missile capability they would play an essential role as part of the element in the

requirement to defend national assets such as the Northwest gas structures – valuable because of their presence on station.

- A bigger, better-equipped Army (aiming at deploying both a brigade and a battalion group with back-up forces to support and rotate them); new high-capability ships for the Navy; new aircraft for the RAAF (presumably the JSF will come down the line some day), including more Wedgetails and reconnaissance assets, such as Global Hawks. All these plus more should be in a realistic DCP.

But the limit won't be capability; it will be financial. Estimates suggest the Defence black hole is already about \$12 billion through this decade. But any government's survival instinct is to pour money down the vote-winning health and welfare sink, which already soaks up most of the funds and keeps demanding more.

Not that savings can't be made in Defence. In its latest issue, the ADA's *Defender* magazine makes this point in its comments on (yet another) shake-up in Defence procurement.

"More than one in five public servants in the now mainly of-

fice-bound department is a purported lieutenant colonel equivalent or higher. In Canberra alone there are about as many of these purported lieutenant colonel equivalents as there are commanders, lieutenant colonels and wing commanders in the entire ADF.

"The large and complex Department of Defence that has resulted has frustrated successive Ministers. It has also frustrated most members of the ADF tired of being regularly scapegoated for the resulting lack of accountability and ensuing bureaucratic failures.

"Even more insidiously, the correct relationship of the Government to its principal military advisers has been progressively smothered in self-serving and self-perpetuating bureaucratic processes....

"What is really required is a return to first principles concerning civil political control of the military and the correct delineation between military professional and departmental administrative tasks. Even the dichotomy should not be sacrosanct from review. After all, no other country has a Department of Defence structured like ours - and for a very good reason." – *John Stackhouse*

SpaceShip aims at centenary flight

NEW YORK – Burt Rutan's privately built, manned space ship is on track, possibly for an inaugural flight on December 17, the 100th anniversary of the birth of aviation, *Newsweek* reports.

The magazine reveals the first test of SpaceShipOne in the Mojave

Desert was not as smooth and uneventful as the *HeadsUp* report last week suggested.

After the drop from a mother plane at about 45,000 feet, it plummeted out of control, rolling over twice and falling 11,000 feet before test pilot Mike Melville could wrestle the unpowered aircraft out of its dive.

"You expect anomalies when testing out radical designs," Rutan

told *Newsweek*.

Rutan's SpaceComposites is aiming to win a US\$10 million purse, set aside for the first manned space ship.

The task is depart Earth, fly to more than 100,000ft, return and be ready for a second flight within a fortnight.

Rutan, of course, designed and built the *Voyager*, which Dick Rutan and Jeana Yeager flew non-stop, around the world.

SYDNEY – RAN pocket war ship HMAS Hawkesbury returned from a three-month tour on duty with Operation Helpem Fren in Solomon Islands – the first deployment for the new coastal mine hunters.

Hawkesbury provided security, logistic and general support to the participating police forces of the Regional Assistance Mission. The ship's main task was embarking police force officers to visit villages.

Although a mine hunter, Hawkesbury was flexible and capable in these duties. Her works resulted in the collection of 333 weapons and more than 1800 rounds of ammunition during the gun amnesty.

Hawkesbury was also involved in humanitarian aid support, maritime surveillance and boarding, maritime transport, search and res-

Hawkesbury home from Solomons



What a blast! The crater left when Hawkesbury's experts "neutralised" a mine (ADF image)

cues, medivacs, disposal of dangerous ordnance, beach landings, airfield surveys and other support tasks.

On one occasion in bad weather, Hawkesbury found and rescued six Solomon Island fishermen after their canoe had overturned, just after a dash to an

outlying island to transport a gravely ill baby and its mother to a hospital on the main island.

The mine clearance experts on board were also kept busy destroying 750 kilograms of ordnance as well as neutralising a World War II sea mine holding 300 kilograms of high explosives, making safe areas which had threatened the local fishing population for years.

Toothfish 'poacher' escorted to WA

PERTH – Caught allegedly poaching patagonian toothfish, the Uruguayan-flagged Viarsa 1 was brought into Fremantle with a Navy crew. She has arrived in the Western Australian port.

Commander Paul Bartlett said the Navy boarders stayed mainly within the fish-production area and slept on the conveyor belt "which was quite comfortable – at times".

Viarsa 1 was the quarry in a 21-day chase involving Australian, British and South African authorities. South African ships were able to halt her on the high seas, after Australian Customs maintained hot pursuit.

Customs officers finally boarded her in the South Atlantic and their vessel, *Southern Supporter*, spent the last month escorting the Viarsa to Fremantle.

Viarsa 1 has about 85 tonnes of patagonian toothfish on board, valued at more than \$1 million. The Federal Minister for Fisheries Ian MacDonald says the fish will be for-

feited to the Australian Government to be sold by tender.

It is alleged the crew was seen taking the catch from the Australian fishing zone near the Heard and McDonald islands.

The 40 crew, mainly Uruguayan, Chilean and Spanish nationals, will be questioned before any charges are laid.

"The proceeds from the fish sale will go to allay some of the enormous cost of this chase," MacDonald said. "It has been a very expensive exercise involving not only our own people but as well the South Africans and the United Kingdom fishery protection officers.

"We are particularly grateful to both South Africa and the UK.

Customs Minister Chris Ellison says protection of Australian waters has not been neglected during the chase and subsequent escort.

"We've had unarmoured and armed patrols, we anticipate continuing surveillance in the Southern Ocean, but we're not going to flag what sort

Parramatta IV joins the fleet

SYDNEY – The Royal Australian Navy's new est frigate HMAS *Parramatta* was commissioned into service at a traditional ceremony at Garden Island. HMAS *Parramatta* is the fifth of eight Anzac class frigates to be commissioned into the navy's fleet.

The captain, Commander Michael Noonan, says there is a century of his story associated with the ship.

"*Parramatta I* was literally the first ship of our navy," he said.

"Being here at most 100 years later, commissioning *Parramatta IV*, is very significant.

"This is the 90th anniversary of the first Australian Navy Fleet entry into Sydney Harbour."

of patrols we'll be engaging in," he said. "But our role in the Southern Ocean will continue."

WASHINGTON – Given Boeing's problems to get its B-767 tanker lease past congressional scrutiny, Europe's EADS is pushing ahead vigorously with its rival system based on the A330. It says it is investing more than \$80 million of company funding in developing technology and systems to position it as a strong competitor for the US Air Force's future aerial tanker modernisation requirements.

The commitment includes \$83 million for the design, manufacture and testing of an advanced centreline refuelling boom that incorporates fly-by-wire controls and a high-volume fuel transfer flow.

A prototype boom, to be mounted under the aft fuselage of an Airbus A330 tanker, is being developed by EADS Military Transport Division in Madrid and will be completed for ground-based evaluations on a test rig next year,

to be followed by flight testing.

Rafael Acedo, VPresident EADS Military transport aircraft division and Ralph Crosby, chairman of EADS North America, says Airbus is aggressively pursuing the Future Strategic Tanker Aircraft (FSTA) for the United Kingdom.

"In the US, we have made clear to Air Force authorities that we intend to compete aggressively for all future tanker buys – a commitment which has been acknowledged and supported by the Air Force," they said.

The A330 military tanker will be equipped with three refuelling points: the boom in stalled under the fuselage, and a pod located under each wing with probe-and-drogue systems that are unreeled in flight.

The boom will operate with

fly-by-wire controls and redundant power supply and actuation systems, ensuring precise, accurate positioning and fuel transfer, as well as a high degree of redundancy.

The boom is to be remotely controlled by an operator at a flight deck console that features a 3-dimensional viewing system. At most four tonnes of fuel will be transferred per minute via the boom.

Presenting the Airbus military commitment, Airbus North America said the German and Canadian air forces use A310s as transports, with four Luftwaffe and two RCAF A310s to be converted into tankers.

The Airbus Military Company is also developing its A400M multi-role airlifter.

Hawker buys Sydney Jet Charter

SYDNEY – Hawker Pacific has acquired one of Australia's leading aircraft management and charter operations, Sydney Jet Charter (formerly Combined Aviation Services).

Hawker Pacific CEO Alan Smith said the acquisition rounded out HP's service range in Sydney.

"The acquisition of Sydney Jet Charter [follows] our successful re-establishment of an FBO presence at Kingsford Smith," he said.

"It represents an excellent fit in

terms of Hawker Pacific's core business – aircraft sales and maintenance repair and overhaul – and we are confident that it will assist us in identifying market opportunities and driving growth.

"Charter operations represent an additional business development channel for us."

Smith said the combined Sydney Jet Charter and FBO operations would be run by GM of the FBO, Douglas Hendry, who is already overseeing the major refurbishment of the Mascot facility.

Hendry said the new combined Sydney operation would allow Hawker Pacific to offer its customers a comprehensive, integrated solution for business aviation.

"By combining two high quality businesses and drawing on Hawker Pacific's outstanding maintenance repair and overall capabilities we will ensure that existing customer relationships are not only maintained but improved," he said.

"This is an other step towards positioning Hawker Pacific as the centre for excellence for business aviation."

Hendry said the operation has 16 pilots and 10 aircraft from twin pistons to business jets.

It provides a 24/7 service for all business and corporate travel and medivac.

All Sydney Jet Charter staff will be retained including chief pilot, Wal Gascoigne.



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WASHINGTON – UQM Technologies, a developer of alternative energy systems, says it has successfully completed test and evaluations of a fleet of four XM1124 hybrid electric high mobility multi-purpose wheeled vehicles (HE HMMWV) produced by PEI Electronics, a wholly-owned subsidiary of Integrated Defense Technologies.

The tests were under subcontract to AM General Corporation, the prime contractor for the HMMWV, and the Program Manager for Light Tactical Vehicles at the Army's Tank Automotive and Armaments Command.

IDT-PEI built and supported the hybrid electric vehicles throughout the 14-month evaluation period at multiple sites, from Arizona to Alaska.

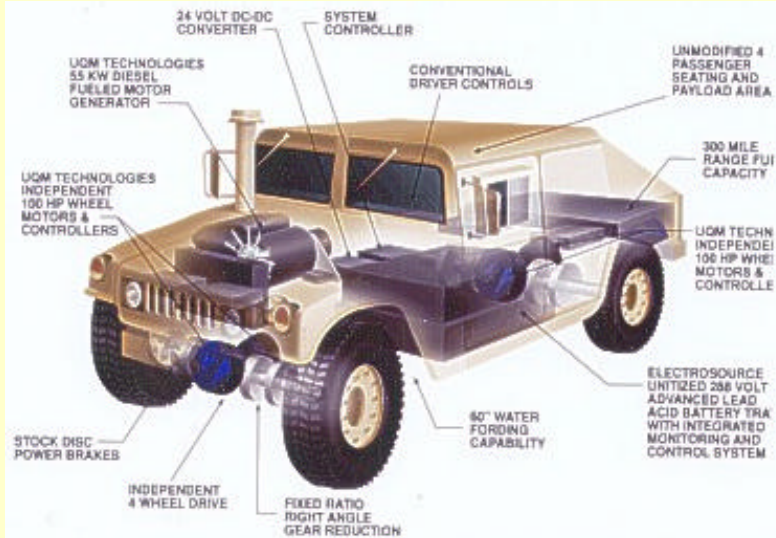
The testing represented the first controlled and autonomous field testing ever conducted by the Army on multiple hybrid electric vehicles without direct industry involvement.

The vehicles accumulated more than 6000 miles of road course testing and more than 600 hours of off-board power generation testing.

The company claims:

- Fuel efficiency performance improvements of greater than 30 per-

Hybrid Hummer passes tests



UQM's Hybrid Hummer with 100hp electric motors on each wheel (UQM image). To read the notes on the picture, scale this page up to 120-140 per cent.

cent over the conventional vehicle (48 per cent at GVW).

- Generation and exportation of 30kW of mobile electric power.
- C-130 aircraft compatibility with a standard Army shelter installed as a payload.

"The Army can leverage hybrid electric technology not only for advanced power trains and their fuel economy benefits, but also as mobile power and energy management

systems for current and next generation weapon and support system requirements," the companies say.

UQM Technologies is developing products for the alternative energy sector including power systems for electric, hybrid electric and fuel cell electric vehicles, 42-volt under-the-hood power accessories and other vehicle auxiliaries and distributed power generation applications.

US fighters stalk civil airliners

WASHINGTON – US fighter pilots practise shooting down airliners several times a week to steel themselves against a natural hesitation to kill civilians and are "well prepared to do this" if there is another September

11-style attack, said Air Force General Ralph Eberhart.

He is more worried that pilots may be "trigger hesitant" than "trigger happy" if given the order to shoot down a hijacked airliner.

"We have long discussions with people to see if they are mentally prepared to do this – pilots and (air defence) operators," Eberhart said.

"You know, you're up behind this airplane that has hundreds of innocent people – men, women, children, innocent – and now you've been told to shoot it down.

"We practise this several times a week – whether it's an airplane shooting down an airplane or air defence systems in the national capital shooting down an airplane."



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Air France to swallow KLM

AMSTERDAM – Air France, Europe's second-biggest airline, will take over the fourth-ranked and 85-year-old Dutch KLM in a €784 million all-stock deal that will create Europe's biggest airline company.

The air lines said the merger will cut costs and enhance revenues to help them battle over capacity and competition from no-frills carriers.

Alitalia may join later.

The merger will bring KLM into SkyTeam, the global airline alliance that includes Air France, Delta and Alitalia.

This is likely to lead to KLM's US partners, Northwest and Con-

tinental, joining at a later date, allowing SkyTeam to overtake the oneworld alliance led by BA and American Airlines and challenge the bigger Star Alliance grouping, led by Lufthansa and United.

Air France chairman Jean-Cyril Spinetta forecast €600 million in annual long-term merger benefits and said no layoffs were planned.

Some analysts say Air France's offer – a 40-percent premium over the market's closing price – was too rich. They say savings will be limited by plans to continue operating as separate branded entities.

Aviation industry mergers have proved elusive in the past, partly because of bilateral agreements between governments which dictate which air lines can fly where on international routes.

To prevent KLM from losing its landing rights, Dutch entities will hold a majority of voting rights for the next three years.

Air France-KLM will leapfrog British Airways to become Europe's largest airline in terms of traffic, and would be the world's number three carrier behind American Airlines and Delta.

Onya Murph! It's a winner

WASHINGTON – The inventor of Murphy's Law has won an IgNobel prize. An engineering prize from the science humour magazine

Annals of Improbable Research went to now-dead Air Force Captain Edward Murphy, Air Force doctor John Paul Stapp, and George Nichols, who in 1949 came up with Murphy's Law – "If any thing can go wrong, it will."

The chemistry prize went to

Yukio Hirose of Kanazawa University in Japan for his study of a bronze statue that fails to attract pigeons.

Australian physicists get an award for a project measuring the force needed to drag sheep across dry ground.

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**John Stackhouse, Killara
September 2003**

LANGKAWI—Malaysia's dash to increase defence spending and modernise its armed forces through equipment purchases drew many of the big arms suppliers to the bi-annual international air and naval show last week.

The long-awaited \$1 billion purchase of up to 18 F/A-18E/F Super Hornets from Boeing was not announced at the Langkawi International Maritime and Aeronautical (LIMA) show – and the feeling was that it won't happen until Prime Minister Mahathir Mohamad retires this month.

Mahathir is described as "still undecided", following the US-led invasion of Iraq, although he went ahead with a \$900 million purchase of 18 Russian Sukhoi Su-30MKs last month.

Defence Minister Najib Abdul Razak would say only "in good time" when asked about Boeing.

More than 600 companies from 25 countries, including Boeing, Lockheed-Martin, Thales and EADS exhibited the LIMA show.

Langkawi a feather for Mahathir

LIMA is a personal enthusiasm of the PM, who has a villa on the resort island where the event takes place.

Najib was prepared to sign 12 deals with several countries.

Malaysia in recent years has revived the re-armament stalled by the 1997-98 Asian financial crisis, allocating US\$2.8 billion or 10 per cent of its five-year development budget on defence.

Among major purchases so far are the Sukhois and three French submarines worth up to €1.04 billion.

Europeans eye Asia ship deals

LANGKAWI—A European shipbuilding consortium could be formed as early as 2005 to compete with US firms in naval markets, according to Alain Bovis, MD

of Armaris.

Armaris is the marketing arm of state-owned DCN International, the main naval contractor for France, and Thales SA, one of the world's largest defence electronics firms.

Formed last year to take over the commercial functions of its two shareholders, Armaris markets diesel submarines, frigates and the electronic combat systems.

Bovis predicted the fragmented European industry, with too many small players chasing too few customers, would lead to the creation of a maritime equivalent of the European Aeronautic Defence & Space Co NV.

Bovis identified DCN, Thales, Germany's HDW and Thyssen Krupp, Italy's Fincantieri and Alenia, and Spain's Izar as likely partners.

Europe's other big warship builders include Britain's BAE Systems Plc and VT Group Plc.

Bofors plans SEA base

KUALA LUMPUR – Bofors Defence plans to set up a regional manufacturing and distribution centre in Malaysia for its naval gun systems, Defence Minister Najib Razak said.

The former Swiss gun maker, now Swedish-owned, will set up the centre in Lumut, navy base in northern Perak.

Penang Ship Building Construction and Naval Dock yard will enter

into a joint venture agreement with Bofors to manufacture and distribute the guns, he said.

Retiring Prime Minister Mahathir Mohamad invited Swedish firms to use Malaysia as a springboard to market their products to South east Asia.

Russia to raise nuclear hulk

MOSCOW – Russia will raise the

wreck of the nuclear-powered submarine K-159 which sank last month in the Barents Sea, drowning nine. The navy chief Vladimir Kuroyedov said: "We will not leave a nuclear object lying on the sea bed, even though its condition does not pose any threat and our experts did not detect any radioactive pollution." Kuroyedov said as quoted by the Interfax news agency.

No details on the methods of the sub's retrieval and companies involved were set as yet, Kuroyedov added.



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NEW ORLEANS – The FAA is evaluating video cameras on commercial flights to monitor pilots and passengers and get an early warning of hijackings or other trouble.

Boeing demonstrated a satellite system in two test flights early this year, using a 737, with seven cameras, showing the cockpit and cabin.

Pilots oppose cameras in cockpits as an infringement of their authority. Passenger advocates want cameras to prevent terrorist acts.

The FAA's focus is purely on whether the technology would affect air safety.

One camera showed the pilots from behind, one was in first class and the others showed the rest of the passenger area. Ground moni-

US pilots oppose candid cameras

tors can choose a camera to view by touching a computer screen.

The city of Denver uses a similar video system to monitor part of its public transit system. For more than a decade, the FAA has considered various plans to put video cameras in aircraft. In 2000, the National Transportation Safety Board wanted flight deck cameras for crash investigators.

The proposal was dropped after stiff opposition from pilots, who were concerned that cameras could lead to a dilution of pilots' control over decisions made during flights. Pilots ground staff could misinterpret video images and give orders based on incomplete information.

SingAir gets cabin video

SINGAPORE – As a security precaution, all Singapore Airlines aircraft will have surveillance cameras just outside the cockpit from November to view the cabin.

Singapore Airlines and its Silk Air subsidiary have already installed bullet-proof reinforced cockpit doors and use sky marshals armed with stun guns.

Singapore stepped up security after the September 11 hijack attacks and tightened it again after last October's Bali bomb blasts.

Spain to design Fastship freighter

MADRID – Fastship, a US company developing a door-to-door, US to Europe maritime cargo transport project, has signed an agreement with Spain's IZAR yards for a feasibility study of the ships and their construction at a later stage.

Completion of the Darwin railway and the opportunity to speed freight from Asia to Australia makes the project of Australian interest.

Fastship will use high-speed ships between Philadelphia and Cherbourg, able to deliver cargo almost as fast as air transport at 50 percent of the cost.



The first phase is for an in-depth analysis of the project, putting IZAR in charge of the revision of the design in order to optimize the technology.

Once the feasibility of the concept has been verified, IZAR will be in charge of the construction of the ships. During the first phase IZAR will build three containerships, with the possibility of a fourth, with a length of 265 metres and a speed of

40 knots, driven by Rolls Royce gas turbines.

The schedule calls for a crossing from Philadelphia to Cherbourg in an average 92 hours.

Fastship partners include BP Marine, Cargolux, Cherbourg Port, CDC IXIS, CP Ships, Greenwich Terminals, International Development Projects, JPMorgan, Lockheed Martin Corporation, Rolls Royce, TTS Marine, as well as IZAR.



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