

By Dr Carlo Kopp

MELBOURNE – Network Centric Warfare (NCW) has become the buzz word of choice in the Department of Defence and the Joint Strike Fighter (JSF) the shining star in the constellation of NCW capabilities. But in modern strike warfare, the F-111 is aerodynamically better suited to this environment than the hyped JSF.

NCW in strike warfare is in the words of US Air Force Chief of Staff General J.P. Jumper all about “compressing the kill chain” – reducing the time between target detection, identification and engagement with a lethal weapon. NCW is exemplified in the operational technique used over Afghanistan in 2001, Iraq in 2003 and the recent US Air Force/DARPA AMSTE trials.

Network: it's persistence, stupid

The “networking” element is to be provided by fast digital datalinks, which will provide connectivity between Intelligence Surveillance Reconnaissance (ISR) assets such as manned surveillance aircraft, UAVs and reconnaissance satellites and the strike aircraft prosecuting targets.

Future planning sees the new F/A-22A absorb the deep strike roles of the F-15E and F-117A, with the now actively promoted derivative FB-22A adding additional punch. The JSF absorbs the strike roles of the F-16C and A-10A. Both will carry an internal payload of eight GBU-39/B small diameter bombs, but the F/A-22A and JSF will occupy distinct niches in the USAF strike model.

The F/A-22A will kill heavily defended ground targets from higher altitudes, while the JSF will go “down and dirty” to hunt battlefield targets, like the F-16Cs and A-10As but using an extensive package of datalink radio and supporting software.

Public USAF comments on NCW frequently include the word “persistence”. The critical pre-condition for exploiting the speed of a digitised ISR and networking capability is having a strike asset orbiting near the target of interest to kill it as soon as the data hits its mission computer.

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Composites CRC gets new life

MELBOURNE – The new Cooperative Research Centre for Advanced Composite Structures, known as the Composites CRC, has been launched by the Minister for Science, Peter McGauran.

The new Centre is one of only six CRCs, and the only one in manufacturing, to be supported by the Commonwealth Government to continue into a third seven-year term.

The Composites CRC is incorporated with 11 members of which eight are core participants and three are supporting participants.

The activities of the Centre cover research, education, commercialisation and technology transfer in the areas of aerospace, maritime and general composite structures.

The major industry participant is Hawker de Havilland.

The Platforms Sciences Laboratory of the Defence Science and Technology Organisation is the major Government participant and this adds the vitally important role of im-

providing defence capability in the areas of air vehicles and maritime platforms.

Shock, horror! Sharks juiced

ADELAIDE – An anti-shark technology developed by a small Australian company has been approved for service by specialist military forces in the United States and Australia.

The privately-owned SeaChange Technology's electronic shark deterrents will be used to protect divers in

the Australian Army's special forces and in the US Pacific Fleet.

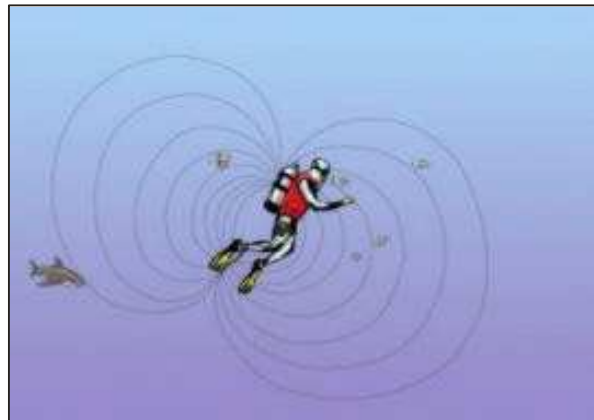
The Australian approval will also mean that SeaChange's technology will have au-

thority for use by all NATO forces.

“It would all mark a tremendous breakthrough for any company, but it's particularly exciting for a small, emerging company like SeaChange, considering our first commercial device only came onto the market 18 months ago,” SeaChange chairman Rod Hartley said.

SeaChange gained approval from Australia's special forces for a specialist military version of the Shark Shield after nine weeks of intensive trials under combat conditions on 20 prototypes.

An initial order has now been placed.



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Per sis tence is now driv ing US force struc ture plan ning as much as NCW is – the F-111-sized FB-22A “me dium bomber” and the en lar ged der i va tive X-45C UCAV are both a prod uct of or bit ing more bombs and fuel over tar get ar eas much lon ger.

While net work ing is vi tal to “kill chain com pres sion”, it is de mon stra bly less im por tant than per sis tence – the magic num ber now is that dig i tal tar get ing cuts the time to en gage rough ly by half, as sum ing the strike as set is or bit ing close by. With out a per sis tent strike as set in prox im ity, the NCW model lar gely col lapses.

Persis tence re mains a wholly

ab sent word in De fence pro nounce ments on NCW in Aus tra lia. Evi dently the De part ment be lieves that per sis tence is not im por tant – proven quite con vinc ingly by the eu pho ria over the small JSF and last No vem ber’s de ci sion to kill off the F-111 pre ma turely.

As the F-111 car ries about twice the in ter nal fuel of the JSF and twice the ex ter nal weapon pay load of the JSF, in the per sis tence game it kills the JSF ev ery time – phys ics are phys ics. The no tion that four to five A330 or KC-767 tankers will support more than eight to 12 JSFs in a per sis tent strike re gime qual i fies as a very poor joke.

Having the lat est NCW datalink

and soft ware tech nol ogy with out per sis tent strike as sets is akin to own ing a Ferrari pow ered by a two-stroke lawnmower en gine.

Readers might note that the cost of putt ing datalink trans ceiv ers and NCW data fu sion soft ware into the Block C-4 F-111 avi onic suite, based on the same VME com puter tech nol ogy used in the JSF, is a minis cule frac tion of the cost of buy ing the tank ers re quired to make up the dif fer ence be tween F-111 and JSF in ter nal fuel and bomb pay load capa bil ities; this aside from the cost of buy ing JSFs.

In the NCW game size does mat ter – kill ing off the per sis tent F-111 dem on strates that the De part ment of De fence have yet to grasp this basic real ity.

Politics deter chopper selection

WASHINGTON – The US Navy is de lay ing a \$1.6 bil lion award for the next presidential helicopter, to de fuse a sen si tive com pe ti tion.

Sikorsky Aircraft, a unit of United Tech nol o gies, has de scribed its of fer of the VH-92 “Superhawk” as an “all-American” solution, in con trast to a three-engine de sign of fered by Europe’s AgustaWestland and Lockheed Mar tin.

The Navy for mally launched the com pe ti tion for a new “Marine One” helicopter in December 2003 and planned to award an ini tial con tract in the next cou ple of months for de sign and pur chase of 23 to 25 he li cop ters.

Companies hope an order will lead to bil lions of dol lars of fol low-on or ders from the Coast Guard and other agen cies.

A contract award could now be put off un til De cem ber, which is af ter the Pres i den tial elec tion.

“It’s just too sen si tive,” said one source.

AgustaWestland, owned by Brit-

ain’s GKN and Finmeccanica of Italy, teamed with Lockheed and Textron’s Bell Helicopter and re named its chop per the US101 to play down its European origin as the EH101.

Good oil for new BAES boss

LONDON – Britain’s BAE Sys tems Plc named Dick Olver, dep uty chief ex e cutive at oil gi ant BP Plc, as its chair man, with effect from July 1.

Olver will take over from Sir Richard Evans, who is set to retire af ter more than 30 years at BAES and its pre de ces sor.

Olver will need to con cen trate on BAES rather than eyeing mergers. His un stated job will be to get BAES back to de liv er ing pro jects at contract cost and on time – and fence-mending with the UK MoD, which Evans con fronted.

Born in 1947, Olver joined BP in 1973. He is set to quit its board on July 1, BP said in a separate state ment.

Hornet burns at busy airport

MORRISVILLE – A Navy F-18 Hornet on a training mission caught fire on the runway of the Ra leigh-Durham air port dur ing take off, but the pilot ejected. The burning plane continued rolling before com ing to a stop less than 100m from a pas senger ter mi nal.

The pilot, Lieutenant Wesley Baumgartner, was taken to hos pi tal in good con dition.

Teresa Damiano, a spokes woman for the airport, said the plane had stopped to re fuel.

She said the pilot described his plane as swerving and bursting into flames as it headed to ward a take off runway.

The pi lot ejected be fore the plane left the ground – about 1,700 feet down the 7,500-foot run way.

One ter mi nal of the air port and a high way en trance nearby were closed fol low ing the fire, but re opened about two hours later.

The plane was as signed to VFA-15 – or the Valions – and was based at Oceana Na val Air Sta tion