SESAR JU programme prepares incentives for technology adoption

The Single European Sky ATM Research Programme Joint Undertaking (SESAR JU) is rapidly moving to recommend more solutions for deployment in 2013, according to the departing Executive Director Patrick Ky.

The European Commission (EC) has asked the SESAR JU to help define a legal framework that could incentivise deployment of these solutions. However, the schedule is very tight - this framework must be finalised by April 2013. "We are looking at a set of solutions which we think require action, and are conducting safety, benefits and cost assessments," Ky said. "If those assessments are positive, then we pass the results to the EC with a recommendation that it incentivises implementation."

Speaking to *IHS Jane's*, Ky gave examples of simple and complex solutions: "We tested at Southampton Airport [via NATS] a very simple input device that enabled ATC to send the most up to date flight status information. This is a very simple, tactile tool that only required controller to push a button to automatically send update information. It would be deployed purely at a local level."

More complicated is the implementation of the extended horizon arrival manager (AMAN), trialled for London Heathrow and Madrid Airport in 2012. Extended horizon AMAN streaming techniques will be tested across multiple airports and coupled with Point Merge procedures. This is intended to reduce controller workload through smoother arrival flows; create optimum two-dimensional routes in terminal airspace; and improve situational awareness by giving controllers new tools to monitor separation between aircraft.

Ky, who joins the European Aviation Safety Agency as director in September 2013, noted that extended horizon AMAN has been tested by the JU for Heathrow arrivals. The complex airspace restrictions around Heathrow make it the only airport in Europe with systematic airborne holding for inbound traffic. "What if, instead of having the aircraft stacked, we tried to slow the aircraft down further back in their journey?" Ky mused. "We could see from the work we've done with NATS that average holding time reduction using this technique was about 80%," he said. "The problem is that to do this, we would need to slow the aircraft down in French- or MUAC- [Maastricht Upper Area Control Centre-] controlled airspace. So there needs to be some reciprocity – European partners need to benefit as well. We are now looking to incentivise extended horizon AMAN: otherwise, if Maastricht does the preparatory work, what is their incentive?"

Any improvement delivered by this SESAR JU project for NATS would therefore have to be balanced by equivalent benefits for other ANSPs. Incentives could be economic – not a direct subsidy as such but perhaps a route charge bonus. One move suggested by Ky would introduce similar projects at Paris Charles de Gaulle or Amsterdam Schiphol. "It has to be a win/win game," he concluded. *BV*

APIS offers new radar capabilities

A consortium led by Indra Sistemas has completed development and demonstration of what it claims to be the world's first passive radar that makes use of Inverse Synthetic Aperture Radar (ISAR) technology.

Sponsored by the European Defence Agency (EDA) and the result of a 24-month development programme, the new Array Passive ISAR Adaptive Processing (APIS) radar is also "completely viable in a civil environment", according to a statement from Indra.

The system could "cover air traffic control requirements in areas with a low or zero coverage of conventional primary radars".

APIS is intended to further define and implement an adaptive Space Adaptive Processing – ISAR processing technique, a process that has seen the development of new ISAR algorithms designed to be applied to SAP filtered signals.

Indra further noted that the APIS architecture also makes use of non-deterministic digital beamforming techniques that are based on the Multiple Signal Classification algorithm. *MS, DI*

CS displays VoIP system solution

French manufacturer CS exhibited its full Internet Protocol (IP) voice communication system (VCS) at the CANSO World ATM Congress in Madrid.

Communication and Security over IP (CSoIP) complies with the new EUROCAE ED137 standard that supports ATC communication streams over IP technology.

It fits any control centre configuration as a main system or back-up and can be scaled to suit present and future needs. It features built-in gateway modules to bridge the gap between IP technology and legacy existing non-IP radio and telephone equipment.

The new VCS (N-VCS) solution selected by DSNA is based on the common specifications of the Functional Airspace Block - Europe Central.

Moreover, CS is supplying European NATO airbases as part of the ACCS-LOC1 programme, as well as the French Air Force, where its CSoIP product supports convergence between military and civil architecture. *JB*

ATRiCS launches tower simulator

ATRiCS has developed a low-cost tower simulator that draws on the company's experience in developing test and validation platforms.

The company supplied its tower trainer to Frankfurt Airport in the first half of 2012 to meet the airport's need for additional training capacity for ground controllers. Airport operator Fraport built a new 300 m² centre to house two separate three-dimensional tower simulators offering 270-degree and 180-degree out-of-the window views, adding a total of 10 controller working positions and 12 pseudo pilot working positions. The facility can simulate 120 movements per hour, or more in the future, based on a low-cost procurement strategy.

Fraport can configure its own software and hardware requirements. Ground controllers receive training on elements of the airport's increasingly complex airfield environment – these include electronic flight progress strips, A-CDM, A-SMGCS, and controller-pilot datalink communications (CPDLC). *JB*