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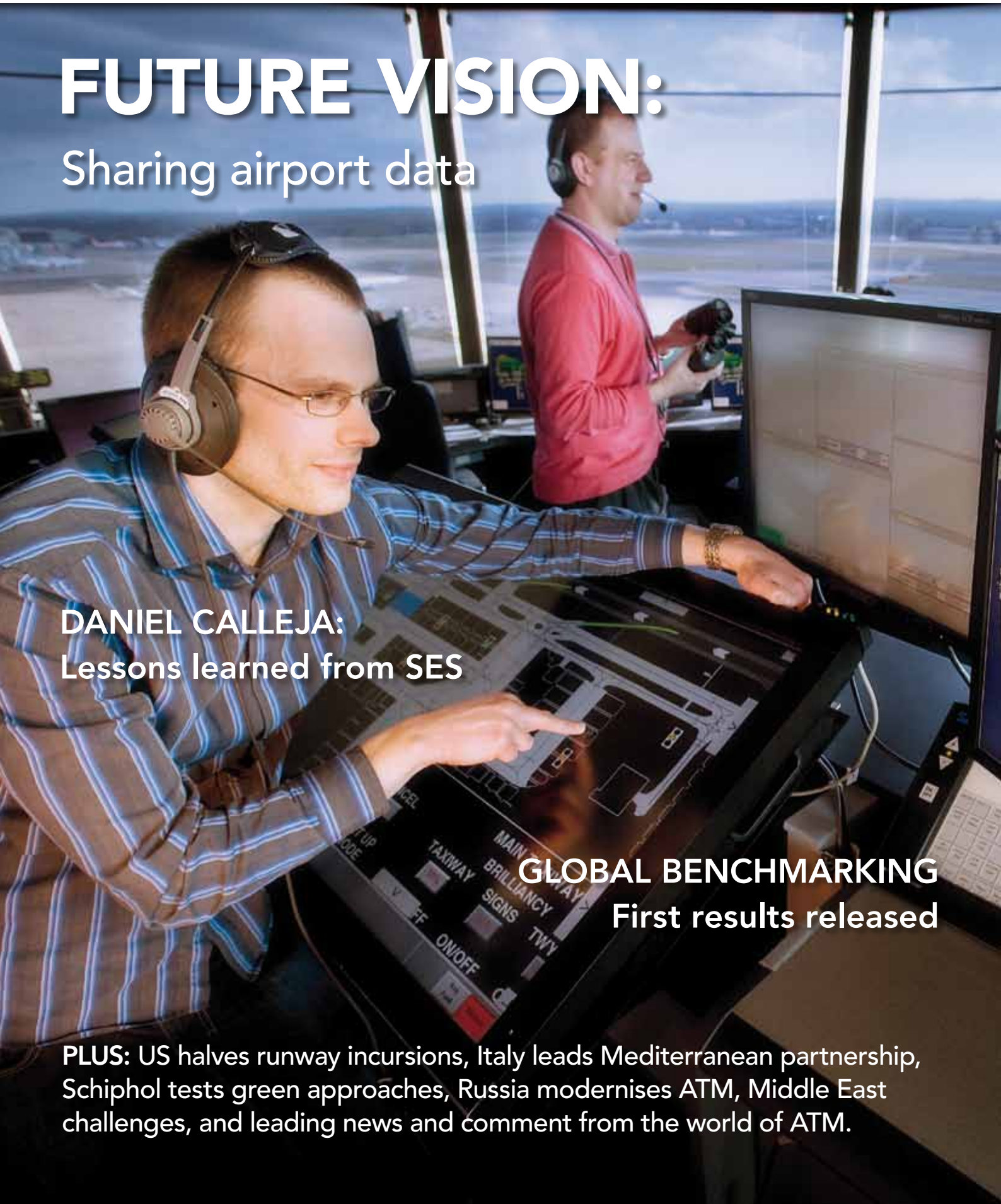


FUTURE VISION:
Sharing airport data

DANIEL CALLEJA:
Lessons learned from SES

GLOBAL BENCHMARKING
First results released

PLUS: US halves runway incursions, Italy leads Mediterranean partnership, Schiphol tests green approaches, Russia modernises ATM, Middle East challenges, and leading news and comment from the world of ATM.

Brazil – Intercontinental gateway

Regional modernisation is a priority for Brazil

The Brazilian air navigation service provider Departamento de Controle do Espaço Aéreo (DECEA) became a new full member of CANSO in September 2010. The organisation explains its unusual role as a provider of both military and civil air traffic services.

Air Traffic Controllers operate the Brasilia Area Control Centre (ACC-BS).

Brazil's vast airspace includes 8.5 million square kilometers of continental territory and 14.5 million square kilometers of Atlantic Ocean, making it one of the largest in the world. Extending from South America, Africa, Europe and the Middle East the region is an important intercontinental gateway.

DECEA is the operational arm of the Brazilian Airspace Control System (SISCEAB). It is responsible for planning, deployment, operations, and maintenance of the air traffic control system. It makes available services such as aeronautical information system (AIS), air traffic management, aeronautical telecommunication, aeronautical cartography, aeronautical meteorology, flight inspection and search and rescue. The organisation operates five area control centres; two of them located in Recife and the others in Brasilia, Curitiba, and Manaus.

DECEA employs more than 11,000 personnel who carry out operational and administrative duties for the five area control centres, 47 approach controls centres, and 59 air traffic control towers. The company maintains more than 900 Navaids, 90 aeronautical telecommunications stations plus other support divisions and subsidiary organisations throughout the country.

The Brazilian Department of Airspace Control has an unusual remit to provide air traffic control services for both civilian and military airspace users. The concept differs from many other countries because the department falls within the Ministry of Aeronautics. Military and civil air traffic control operations are provided the Air Force, resulting in significant economies in resources. As a result of being under the aeronautical command DECEA applies the same communications, navigation and surveillance means to provide air traffic control services and to guarantee the defence of Brazilian skies. DECEA complies with the rules set by the Brazilian Airspace Defense Command and meets its duties to ICAO to satisfy all the annexes referring to air traffic.

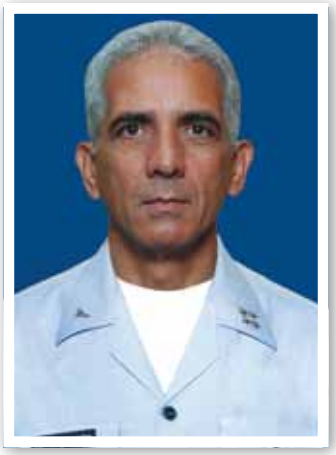
Future systems

DECEA is fully committed to the implementation of CNS/ATM systems. Brazil has adopted the CNS/ATM concepts of technology integration, large-scale satellite surveillance and digital communications. Like US NextGen and European SESAR modernisation programmes, Brazil supports the safe and efficient development of world air traffic services. DECEA published its ATM National Operational Concept in 2008, also called CONOPS, which is the reference and guideline for all that concerns CNS/ATM implementation in Brazil.

There are several initiatives that have already been achieved based on the identification of operational requirements, availability of appropriate technology and allocation of resources. Among these are:

- The accomplishment of the Automatic Dependent Surveillance by Contract (ADS-C) established at the Atlantic Area Control Center (ACC-AO) in Recife, incorporating safety and effectiveness to the transcontinental air traffic flow over the Atlantic Ocean
- Implementation of Performance Based Navigation (PBN) in some Brazilian terminal manoeouvring areas including Recife and Brasilia
- Implementation with the start of initial tests of the Ground Based Augmentation Systems (GBAS) at Rio de Janeiro International Airport.

DECEA is working with CANSO to introduce improvements to air traffic management across Latin America beyond. The organisations are working hard to transform air traffic management performance in the region.



Air Lieutenant Brigadier Ramon Borges Cardoso

Director General of Departamento de Controle do Espaço Aéreo (DECEA)

DECEA provides air navigation services for Brazilian airspace

DECEA is modernising its communications infrastructure. How is this improving ATC?

There are several initiatives underway to remodel and improve the country's aeronautical communication network. Among these, the adoption of Controller Pilot Data Link Communications (CPDLC) in the Atlântico Area Control Centre introduces digital technology and data commands for communications between pilots and control centres. CPDLC provides a substitute or complement to voice communications and brings safety and efficiency benefits to oceanic traffic flows, mainly in the EURO-SAM corridor.

Data communications will be extended to the whole country in the medium and long term. CPDLC will relieve saturated voice channels and reduce problems that arise from audio quality, linguistic barriers and sign propagation.

At the start of 2011 DECEA entered into a partnership with SITA to modernise the Brazilian aeronautical communication data network. The project includes upgrading the current DATACOM network with new VDL data link ground stations compliant with next generation ATN technology.

What other new technology is planned to enhance ATC services?

We can mention the implementation of the new air traffic control system Sagitario. Developed by a Brazilian company, the project is a replacement for the previous system also developed in Brazil, and will optimise air traffic services. The system supports the execution of the routine actions; helps to identify and avoid conflicts or risks situations; offers more flexible software configurations and decreases the air traffic controller workload. Sagitario is already in operation at the Curitiba Area Control Centre and in the medium term will be rolled out to the four other Brazilians area control centres.

In addition, the introduction of Automatic Dependent Surveillance by Contract (ADS-C) at the Atlântico Area Control Centre has made it possible to monitor all aircraft position reports – equipped with the necessary receiver – across the Atlantic Ocean. Tests with a similar tool more appropriate to continental areas, Automatic Dependent Surveillance Broadcast (ADS-B), are planned to take place at Bacia de Campos near Rio de Janeiro, where helicopters support the operation of oil rigs in the region.

Our planning is carried out in the context of international air traffic management, and in close association with our neighbours. We are in permanent contact with other South American countries, as well as air transport bodies and work groups including GREPECAS, SESAR Joint Undertaking and recently CANSO.

What new procedures are being introduced to meet airline demands to fly more efficient routes?

There are many. Activated in 2006, Air Navigation Management Centre (CGNA) is a central unit that monitors air traffic service provision 24 hours a day and responds to changes as they occur. These include adverse meteorological conditions, degradation of the airport infrastructure or similar events that require traffic flow to be restructured. The unit makes adjustments to ensure minimum disruption to day to day operations using the structure and human resources available. The unit includes permanent representatives of all the airlines, as well as the Brazilian National Agency of Civil Aviation (ANAC) and airport representatives who collaborate in the decision making.

Similarly, the implementation of the Performance Based Navigation (PBN) has brought results in terms of improved routes and reduced emissions. PBN redraws and optimises the structure of the navigation routes. It makes feasible the use of more routes in a smaller space, with reduced separations, or simultaneous approaches, to generate more capacity.

What are DECEA priorities going forward?

There are several actions under way. The first is in the domain of ATCO training, where DECEA aims to increase the number of controllers to match traffic growth of 10 per cent each year. Training is provided by simulators that allow the student to use the same systems and experience as the real operational system.

The restructuring of the routes network is of the utmost importance. This is being carried out together with other countries in South America. In addition, establishing PBN procedures in the main terminal areas (TMA) and on those routes characterised by dense traffic flow is a priority.