TELERAD
Aeronautical and Maritime Radiocommunication Systems
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At the very foundation of the convergence between civil and military domains

Since its creation more than fifty years ago, TELERAD works for two different worlds, each having their particular constraints and expertise. For its development and to reinforce its positioning in the civil and military markets, TELERAD relies on its respective assets to offer critical systems at the cutting edge of technology and with very high levels of reliability. What better testbed than the sands of Mali, amphibious helicopter-carriers or in-flight tests with the Rafale? Or the criticality of air traffic control in the heart of Europe or over the whole North American continent?

This convergence has been underlined during the month of April by the visit of the Minister of the Armed Forces to TELERAD in the framework of the setting up of a French industrial subsidiary for the manufacture of acoustic buoys for anti-submarine warfare. A subsidiary into which TELERAD has brought its expertise coming from civilian applications in the area of performance optimization, industrialization, certification and the delivery of prototypes.

In the same vein, we are very pleased to welcome Janusz Janiszewski, chairman of the A6 Alliance, that represents the six largest Aerial Navigation Service Providers (ANSP) in Europe and whose role is essentially the deployment of the "Single European Sky", the airspace shared by both civilian and military aircraft.

Patrice Mariotte
CEO of TELERAD

Three questions for: Janusz Janiszewski

A6 Chair

a6 Alliance

Could you introduce us to A6 Alliance and its main missions?

The A6 Alliance consists of the largest air navigation services providers in Europe. We are responsible for the safe management of 80% of Europe's air traffic and ca. 70% of the investment in the future European Air Traffic Management (ATM) infrastructure comes from A6 Alliance members.

The group was established in June 2011 to coordinate the research and development and deployment of the providers within the Single European Sky ATM Research (SESAR) program.

The members of the A6 Alliance remain committed to working together to modernize Europe's airspace by developing and deploying the latest tools and technology that will support a digital Single European Sky and a sustainable future for our industry.

What is the role of A6 Alliance in the Single European Sky program?

A6 Alliance Members, like all the ANSPs, are playing the key role in the Single European Sky. We are committed to improving Europe's ATM system, managing demand for air traffic growth safely, efficiently and sustainably.

As mentioned above, A6 Alliance is mostly focused on the technological pillar of the Single European Sky. We work collaboratively to improve ATM performance by modernizing and harmonizing ATM systems through the definition, development, validation, and deployment of innovative technological and operational ATM solutions, and we take an active role in the future of the program.

The A6 Alliance believes that cooperation between all operational stakeholders (ANSPs, Airports, Airspace Users and the Network Manager) is the key to ensure the success of any initiative to improve the current ATM system. We have proposed the European Deployment & Infrastructure Management function as the "industry for industry" successor to the current SESAR Deployment Manager, responsible for the deployment phase. Such approach is built on the inclusive approach that has resulted in one of the strongest successes of the last six years of SESAR Deployment, and of incorporating the ambitions towards more integrated SES, with a renewed network-perspective and a link to ATM infrastructure.

What are the future technological deployments?

It is difficult to foresee how the global situation will evolve in the upcoming months, however, we should expect a steady recovery of traffic in the medium-term horizon. Therefore, despite the difficult times of pandemic, it is the right time to push for deployment of more innovative and digital solutions that could bring both more efficiency and help reduce the environmental footprint as well as increase resilience and scalability of the ATM system as a whole.

Once the pandemic is contained and traffic is reinvigorated, the need for a more resilient and scalable ATM system will be even more crucial. In this regard, scalability will provide the ATM system with the capacity to adapt quickly to traffic demand variations without generating negative consequences such as additional cost, delay or emissions.

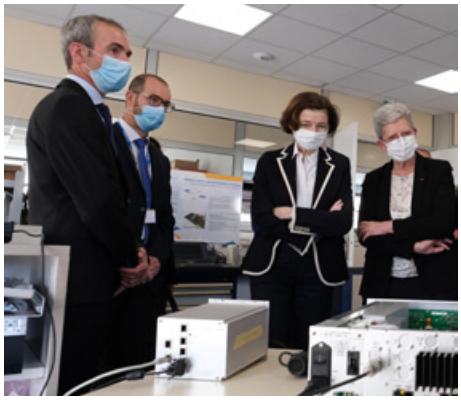
A large-scale digitalization across Europe seems to be a right response to the current and future challenges in ATM and should be a common thread in stakeholders' deployment endeavours. A6 Alliance is largely committed to support the digitalization of the European ATM system, having come up with an initiative to establish a "SES Digital Backbone" for a shared data exchange infrastructure, with the objective to underpin the Europe-wide systems and technology developments and move towards a Digital European Sky. Digital infrastructure will be key to enhancing capacity, increasing operational efficiency, reducing costs, delays, fragmentation and enabling integration of manned and unmanned air traffic.

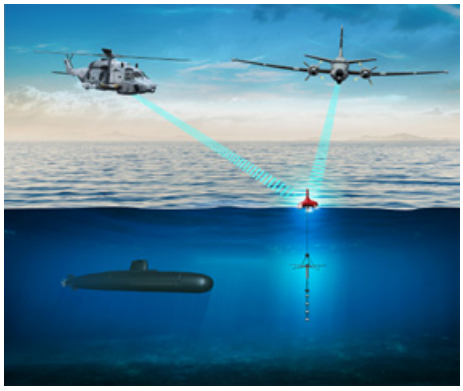
With products and systems in more than sixty countries, TELERAD is specialized in the study, the development and the manufacture of radio systems used for the control of aerial and maritime navigation. A unique company in this area, it is a key player in the French and European defense, industrial and technological base.

NEWS

The Minister of the Armed Forces at TELERAD

Florence Parly, the Minister of the Armed Forces, visited us at TELERAD last March 30th.
On this occasion, she was shown the new model of the "SonoFlash", high performance acoustic buoy.
With submarine operations intensifying, in particular with a menace aimed at telecommunications cables, anti-submarine warfare has become one of the principal challenges for navies worldwide.
SonoFlash is the French response to the establishment of an industrial subsidiary for the manufacture of active and passive acoustic buoys. SonoFlash is an acoustic buoy for mono-static and multi-static operations that can be taken aboard, deployed and operated by any type of aircraft (airplanes and helicopters) and ship (including those equipped with drones). TELERAD is a partner of THALES, the integrator in the SonoFlash project and provides its expertise in the area of performance optimization, industrialization, certification and the delivery of prototypes.





FOCUS

Flight tests center

A name to dream of. You have visions of breakneck tests pilots, incredible flying machines and danger at every step. The reality is quite different. Behind the name "Flight Tests Center" (FTC) lies a universe where entities with quite diverse missions obey all the safety rules to the utmost. Technical skills and resources employed for flight tests are often the quintessence of the aeronautical world. The proof is in the pudding: the large majority of French astronauts come from the tests pilot program.

There are several types of flight tests centers, some of which are Governmental while others are Industrial. Each have diverse missions but also things in common. The essential constant factor inherent in experimentation and testing: safety.

Government tests centers:

The French DGA (Directorate General of Armaments) has its own dedicated entity, based on the sites of Cazaux and Istres, DGA EV (Essais en vol - Flight Testing).

DGA EV is a key player in the framework of national and European, military and civilian aeronautical projects, including providing support for the export market. Its ability to adapt and innovate is a major asset for rapidly responding to the challenges of Defense and the major aeronautical programs of tomorrow.

Industrial tests centers:

Like the Government, the major aeronautical industrial companies have their own structures that allow them to do flight testing. For these players, the challenge of flight testing is to allow them to master the aircraft technology along with their on-board systems, with respect to market needs, customer satisfaction, operational objectives, costs and time-lines.

Thus, within Dassault Aviation, the Flight Tests Division and Tests Bases Division rely on the resources based in Mérignac and Istres. It is on these sites that fine-tuning flight testing is performed for products just leaving the production line up until customer assistance. These two flight centers are in charge of the overall testing, development and qualification/certification: of both civilian and military aircraft, of their on-board systems, and their support systems.

The Fokker 100, a new generation test bed aircraft (ABE-NG) of the DGA.

Moreover, what these centers have to offer, allows Dassault Aviation to promote their aircraft (Falcon, Rafale, nEUROn, etc.) and provides expertise for their users. They also provide training for pilots in the framework of certain markets.

Making Flight Tests Centers available is integrated into the commercial strategy of some export markets. Thus, the production of the Falcon 2000 and then the Rafale in India will be accepted by means of the local FTCs provided by Dassault Aviation.

Tests and radio:

The different flight tests, whether performed by the government or industry FTCs, all have a point in common: the necessity for exchanges between the ground and aircraft in flight. These exchanges are essentially of two types: radio links to do with the tests themselves (technical/operational) and radio links concerning air traffic control.

The first allow tests pilots to communicate with the ground operators of the FTC and stay strictly within the domain of the tests. They are often used in reserved (or so-called "segregated") air spaces. On the other hand, the second category allow the pilots to insert themselves into the general air traffic, in coordination with military or civilian air traffic control.

These needs for radiocommunications go hand in hand with flight safety but are also essential for performing the tests efficiently. Consequently, the radio means implemented in the FTCs are critical and therefore very highly secured. They rely not only on very reliable equipment but also on redundant architectures. This combination offers all the guarantees of continuity of the function whatever the circumstances.

TELERAD and FTCs:

To meet their high reliability requirements, all government and the greatest majority of industry FTCs, depending on their particular criteria, have chosen to converge towards identical equipment. TELERAD Series 9000-2G radio equipment has had proven success for its unanimously recognized reliability and performances. The great flexibility in use allows them to be perfectly adapted to the different tests center architectures. They can be used either in analog or in voice on IP, in VHF or UHF depending on the needs of each tests assignment.

At the request of certain customers, TELERAD has put in place complete "FTC systems": radio, technical racks, power, operating consoles, pylons and antennas. This turn-key solution has been chosen by Dassault Aviation for installation in its next Falcon/Rafale tests center on the site of the Nagpur plant (India).

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