

Astrium Services

ASTRIUM SERVICES, TRUSTED EDF PARTNER FOR THE PROVISION OF SATELLITE COMMUNICATION SOLUTIONS

For electricity generators and suppliers, the smooth running of operations on the generating sites, remote management of equipment and safety around sensitive sites, are all operational issues that require adapted communications means.

For this purpose, Astrium Services, a global provider of satellite communication services, and EDF, a major player in electricity generation and distribution, have been working together for several years to establish satellite communications which best meet operational requirements. This cooperation applies to a wide range of mobile and fixed services and is testimony to the extent of Astrium Services' expertise in relation to communication solutions.

COMMUNICATIONS FOR THE EMERGENCY SITUATIONS OF THE NUCLEAR RAPID ACTION FORCE (FARN)

Following the nuclear disaster of Fukushima which occurred in March 2011 in Japan, the Nuclear Safety Authority (ASN) has strengthened safety standards for enterprises in the nuclear energy sector. EDF has thus created a Nuclear Rapid Action Force responsible for emergency interventions on the power plants in the event of a major crisis.

Astrium Services also provides all of EDF's power plants with Iridium satellite phones and high-speed IP terminals, optimising basic connectivity using innovative value-added solutions.



TOGETHER WITH



The leading producer and supplier of electricity in France and in the world, *Électricité de France* (EDF) is specialised in the whole electricity generation and distribution process, from the design of power plants to distribution to private customers. Nuclear energy represents the main part of its business with more than 50 nuclear reactors operating in France.

By providing complete solutions combining integration, training, installation, monitoring and 24/7 support, Astrium Services allows EDF to stay connected in all circumstances, and ensures EDF's compliance with the nuclear safety standards.

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FROM REAL-TIME TRACKING ...

To meet the need for real-time tracking and management of the mobile resources on an intervention site, FARN uses the services of data transmission by Astrium Services' Iritrack satellite. Thus, in the event of a nuclear incident, this service, based on the Iridium network provides communications with the FARN's staff and technical resources totally independently from the other telecommunications networks.

... TO FIXED EMERGENCY SYSTEMS

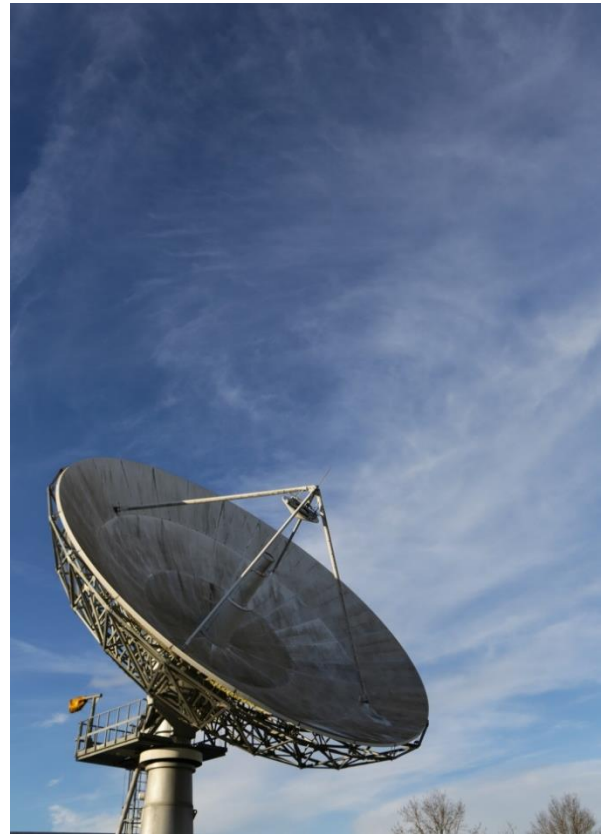
Following a framework agreement entered into in 2012, Astrium Services also provides an emergency VSAT communication service for the nuclear power plants ensuring communications in the event of an emergency. EDF thus benefits, for its nuclear reactors, from dedicated KU band satellite capacity for their voice and data communications, allowing continuity of operations even in the event of failure of the terrestrial network. The satellite connectivity provides communications between the FARN's teams, the power plant's teams and those of the operations' centre optimising the intervention conditions.

CONTINUOUS COMMUNICATION OF STAFF ON ASSIGNMENT

Astrium Services also provides all of EDF's power plants with satellite phones and high-speed IP terminals, optimising basic connectivity using innovative value-added solutions.



Astrium Services – Business Communications
 Email: enterprise.sales@astrium.eads.net
 Email: asbc.customercare@astrium.eads.net
www.astriumservices.com



REMOTE MANAGEMENT OF HYDRAULIC EQUIPMENT

The equipment required for the production of hydraulic energy, such as dams, sluice gates and pipes must be continuously monitored by EDF's technical teams.

By installing sensors connected to the Iridium satellite network, which feed back essential information about the equipment to EDF's technicians, Astrium Services allows them to monitor the safety indicators in real time, and thus schedule, if need be, the required maintenance operations.

In some regions which are difficult to access, EDF has also installed complete surveillance systems fitted with sensors and cameras, which require higher bandwidth. Astrium Services has therefore equipped some hydraulic dams with Ka stations, allowing EDF to rely on reliable data sets combined with images.