# Benoit ANDRIEU

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# Summary

French engineer with 12 years of experience in the aerospace industry, with responsibilities ranging from team manager to AOCS engineer. Both driven and passionate, always striving to overcome new challenges.

When not performing in-orbit activities, busy developing new tools and assets associated with both space and ground segments. In the face of the continuously evolving aerospace field: proven time and again to be a consistent source of innovative.

# Skills

- Management (managed a team of 4 English-speaking employees)
- Project Management
- Languages: French (native), English (fluent)
- Attitude and Orbit Control System (AOCS)
- Satellite operations
- Space analysis tools: MATLAB and STK
- Radiofrequencies: link budget, analog/digital conversion, compression, coding, modulation and upconversion

# **Professional Career**

FROM 04/2022

# **Satellite Operations Manager**

# Exotrail, Toulouse (31), France

- Manage the Exotrail satellites operations.
- Creation of operating procedures.
- Development of satellite frame encoding software.
- Manage the deployment of the control center.
- Managing operational personnel.
- O Meet and select Ground Segment as a Service (GSaaS) players.

#### FROM 02/2021 TO 04/2022

## **Product Owner of spacetower™**

## Exotrail, Toulouse (31), France

- o Build the roadmap, specify products, in very close relationship with our product development team.
- Build and maintain the pre-sales tools for the sales team (documentation, standard proposal, product configurator).
- $\circ$   $\quad$  Watch and size the market and the competition.
- Establish the go-to-market, pricing and costing.
- Get customers and prospects feedback.

- Development and programing: C#, Python/Tk, Java, Perl/Tk, HTML, PHP, JavaScript, SQL
- Virtualization: VMware systems (ESX, vSphere, Horizon)
- Operating Systems: Linux, Windows, IOS Cisco, UNIX
- Version control software: Git, CVS, SVN
- Atlassian tools: JIRA, Confluence
- First-aid worker certification French "Sauveteur Secouriste du Travail" (SST)

# FROM 01/2016 TO 02/2021 Attitude and Orbit Control System (AOCS) Engineer

# **Globalstar Europe SAS, Issus (31), France**

- $\circ$  Daily responsibilities:
  - o Station keeping burns analysis and command sheet creation
  - o Collision avoidance maneuvers analysis and command sheet creation
  - Analysis of sun intrusion in sensors using MATLAB/STK
  - Magnetorquer and earth magnetic field co-linearity analysis using MATLAB/STK
  - o Solar eclipse events: FSS surveillance and Yaw Linear Correction management
  - o Creation and upgrade of the satellite operational procedures in a test bed environment
  - o Experimenting of new procedures and maneuvers using a satellite simulator
- Contingency duties:
  - Fault Detection, Isolation and Recovery (FDIR) and Fault History Buffer (FHB) analysis
  - Earth pointing attitude maneuver for satellite in barbecue (safe)
  - Payload reconfiguration if requested
- o Globalstar constellation system on-call engineer 12 weeks per year
- Support the Electric Power System (EPS) team: assessment the satellite state of charge and the on-charge cells voltage, realignment of solar panels, etc.
- o Aussaguel gateway (ground segment: 5 antennas plus IT/telecom devices) on-call 17 weeks per year

#### FROM 01/2015 TO 02/2021

# Satellite Control Center System Administrator

### **Globalstar Europe SAS, Issus (31), France**

- System administrator on-call 26 weeks per year
- Bi-weekly recycle the 4 control centers in the world
- Recurrent tasks: manage user privileges and passwords, deploy new software version, etc.
- o Migration from physical server to virtual machines
- Implements the approved changes (satellites database and limits, new elements created by the satellite engineer team)

#### FROM 01/2015 TO 01/2016

# Satellite Control Center Supervisor

## Globalstar Europe SAS, Issus (31), France

- o Managed 4 English-speaking satellite controllers
- o Low Earth Orbit (LEO) satellite constellation oversight
- o Aussaguel gateway (ground segment: 5 antennas plus IT/telecom devices) on-call 17 weeks per year

#### FROM 09/2012 TO 01/2015

## Satellite Controller

# Globalstar Europe SAS, Issus (31), France

- o Low Earth Orbit (LEO) satellite constellation oversight
- Perl tools developed to support satellite control center operations
- Developed a C# software to monitor and control all the Globalstar antennas in the world
- Developed a C# software to monitor the Effective Isotropic Radiated Power (EIRP) for all the Globalstar antennas in the world
- o Studied all the Globalstar satellite subsystems
- o Aussaguel gateway (ground segment: 5 antennas plus IT/telecom devices) on-call 17 weeks per year

#### FROM 09/2011 TO 09/2012

# A350 Fuselage Electrical System Installation Manager

#### **Airbus Operations SAS, Toulouse (31), France**

- $\circ$   $\;$  First hands-on experience in an international workspace
- o Ensured fuselage electrical deliverable harmonization in Saint-Nazaire (France) and Hamburg (Germany)
- $\circ$   $\;$  Followed development process to minimize installation issues

#### FROM 01/2010 TO 07/2011

# Harness Detailed Design and Performance Manager

#### **Airbus Defence and Space, Toulouse (31), France**

- Created detailed design, performance and manufacturing dossiers
- o Followed manufacturing subcontractors
- Developed harness performance calculation tool in C#

#### FROM 09/2008 TO 09/2009

# **Apprentice during education period**

### **FREESCALE** Semiconductor, Toulouse (31), France

- o Real time data centralization of production equipment, and real time error detection tool developed
- Created a web interface (JavaScript/AJAX on client, tcl on server) to monitor and control the real time error detection tool
- $\circ$   $\,$  Created a web interface providing live production Cisco router status

#### FROM 01/2008 TO 05/2008

# **Trainee during education period**

## FRENCH NAVY, Centre d'Instruction Naval de Saint Mandrier (83), France

- o Created a satellite transmission simulator on LabVIEW for military educational purposes
  - Theorical studied and implemented the following technologies:
    - Coding: Viterbi, Reed-Solomon
    - o Modulation: FSK, PSK, ASK, APSK

# Education

#### 09/2009

# Master 2 STRI (Telecommunication and Networking Engineering Degree)

**Paul Sabatier University, Toulouse, France** 

Telecommunication, networks and IT

# Activities

- o DIY
- o Automobile mechanic
- o Sports: paddle tennis, rugby (former university player), golf, skiing