

**Training title:** *Metadata extraction and cataloguing of videos*

**Field:** Operations and R&D

**Speciality:** Product software development, image processing and GUI

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### Subject

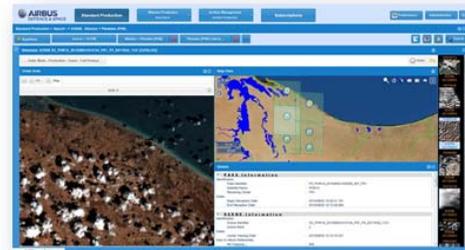
**Persistent observation** will be soon possible from space (in geostationary orbit) and stratosphere.

Such innovative platforms will provide videos covering very large field of view: each frame will contain from 100 to 1000 mega pixels.

The Image Chain department provides, for the operational ground segment, a Catalogue of satellites images. This product should be used in the future for the referencing of these videos.

The training period will consist in several tasks:

- Developing: video metadata extraction module,
- Image processing: reformatting videos to be readable in internet browser
- GUI: Search and visualise videos in the Image Chain Catalogue.



The subject will be more precisely detailed during the interview, depending on the different studies of the image department and on the aspirations of the candidate. Depending on the planning of the internship, the contents may be adapted to be as interesting as possible.

The trainee shall have both computer programming skills (JAVA EE, GWT, JavaScript, Servlet Java, XML, C/C++, and Python) and an image processing background. We use "agile" methodologies and work in a continuous integration and automated validation environment.

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### Company background

The Space System business line of Airbus Defence & Space is the European leader in the field of optical Earth Observation systems. The company, through its history, is a pioneer of space industry, responsible for the development of the first Earth Observation space systems in Europe, starting with the SPOT family. Since this time, the company has led the major European developments in the field, through programs such as METOP, ERS, ENVISAT, HELIOS, PLEIADES, SPOT6/7 or GAIA. This experience developed is now applied on export turn-key programs such as FORMOSAT, THEOS, ALSAT, CHILI or KazEOSat-1, involving up to sub metric resolution systems, or such as COMS, a geostationary meteorological satellite for Korea.

This evolution conveyed Airbus Defence & Space to develop a strong expertise in Image Quality, Image Processing and Image Simulation through a group of about 50 engineers in 2016, constituting the Image Chain department (TSOTU2). The Image team carries out activities in fundamental image domains such as image simulation, ground processing, image quality, in-orbit testing, embedded processing, vision-based navigation and dedicated R&D activities.

## TRAINING PERIOD 2017

### Metadata and image processing for space applications

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**Required knowledge**

- JAVA EE, GWT, JavaScript, Servlet Java, XML, C/C++, and Python,
- Generic knowledge in image processing,
- Windows & Linux OS.

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**Desired education**

- Engineering school or Master, with specialisation in signal and image processing, or applied mathematics.

Training period length: **5 to 9 months in 2017**  
**+ Possibility of a one year internship.**

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<b>Location</b>	Airbus Defence & Space – Space Systems 31 rue des cosmonautes 31402 <b>Toulouse</b> Cedex 4, <b>France</b>
<b>Unit</b>	TSOTU2 – Image Chain department
<b>Deadline</b>	16/12/2016
<b>Contact</b>	David Villa Pascual: <a href="mailto:David.VILLAPASCUAL@airbus.com">David.VILLAPASCUAL@airbus.com</a>

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