Internship in Ground Segment System Engineering team

Internship title: Model-Driven Test Case Development

The reliable operation and reasonable evolution of a fleet of observation satellites is a continuous complex engineering challenge. In particular, the never-ending trade-off between stability and agility requires a sound selection of methodology and state-of-the-art engineering tooling.

In order to master the complexity, EUMETSAT has started and professionalized the usage of system models that are now available for utilization also in formal verification activities.

The intern will join the Satellite System Ground Segments (SGS) Division and support the Ground Segment System Engineering (GSSE) team.

SGS/GSSE is focusing on a structured approach of model-driven test case development at the moment and would benefit from a talented student interested in deep diving here.

The internship objective is the exploitation of system models for the design of test cases. There are three different aspects:

- Understanding EUMETSAT's system models and their potential to support and to guide test case design worthy for formal verification (e.g. with requirement references)
- Understanding the EUMETSAT usage of engineering tools (Enterprise Architect for system modelling, DOORS for requirement management, JIRA/X-RAY for test case design)
- Method Definition and Elaboration for the design of test cases ready to support verification using the system models

The all over work product of the internship is a description document that may serve as basis for further considerations.

Duties

As an intern you will:

- Work in a true space systems engineering department at the very top of engineering
- Gather insights behind the scenes of a world class satellite fleet operator and a truly international organisation.

LOCATION

Darmstadt, Germany

QUALIFICATIONS

The internships are open to bachelor and master students with mandatory internship requirements in relevant disciplines such as Systems Engineering, Controls Engineering, Space or Aerospace Engineering, Electrical Engineering, Computer Science, Astronomy, Physics.

LANGUAGES

The official languages of EUMETSAT are English and French. It is necessary to be able to work effectively in English.

DEADLINE

20 November 2023

methodology also under discussion in other domains;
- Directly contribute to ongoing SGS/GSSE activities through new insights and methodology proposals;
- Contribute to the Systems Engineering discipline as a whole, by bringing together MBSE (model-based systems engineering) with the need of formal IVV (integration,verification and validation);
- In addition, the intern will support relevant day-to-day activities within the team.

Skills and Experience

- Have the ability to work effectively in English;
- Be computer literate;
- Be intrinsically motivated and curious about the internship subject;
- Be able to work independently and collaboratively;
- Have the ability to take the initiative in researching ideas;
- Have the ability to collect, collate, conceptualize and present information clearly.

Additional specific requirements:

- Familiarity with Systems Engineering, IVV/testing, MBSE, System definition and design would be an advantage.
- First experience with respective engineering tools (DOORS, Enterprise Architect, JIRA/X-RAY) as well as with state-of-the-art collaboration frameworks (JIRA, Confluence) would be an advantage.
- Some knowledge of typical data formats (UML/XML) and shell scripting techniques (Python, Perl) would be an advantage.

Employment Conditions

Length of internship: **3 months**
Anticipated start date: **First quarter 2024**

The internship will require a non-disclosure agreement and potentially a basic background check for the intern, due to the sensitivity of the provided information.

No salary is paid to interns who are still in studies, however a daily allowance and contribution to travel / accommodation costs may be provided. The conditions will be established taking into

account the requirements and policy of the intern's educational institution.

Interns are responsible for providing their own health and accident insurance and for finding their own accommodation in Darmstadt.

EUMETSAT is committed to providing an equal opportunities work environment for men and women.
Please note that only nationals of EUMETSAT Member States may apply. The EUMETSAT Convention requires that Staff shall be recruited on the basis of their qualifications, account being taken of the international character of EUMETSAT.

About EUMETSAT

EUMETSAT is Europe's meteorological satellite agency. Its role is to establish and operate meteorological satellites to monitor the weather and climate from space - 24 hours a day, 365 days a year. This information is supplied to the National Meteorological Services of the organisation's Member States in Europe, as well as other users worldwide.

EUMETSAT also operates several Copernicus missions on behalf of the European Union and provide data services to the Copernicus marine and atmospheric services and their users.

As an intergovernmental European Organisation, EUMETSAT has 30 Member States (Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, The Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.)

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