Lyon le 19/12/2017

To Whom It May Concern,

I, the undersigned Arnaud BONNAFOUX, have conjointly overseen Marius PETER's internship at Cosmo Tech for a duration of 3 months between 09/20/2017-12/22/2017. The internship's goal was to study upstream interfacing possibilities between our Cosmo complex systems simulator and static modelling tools used in the context of an orbital launcher's pre-flight operational activities.

Firstly, Marius became familiar with our dynamic modelling solution. He learned the in-house notion of the "conceptual" model, which is a generic abstraction of the studied system, as well as the notions related to the conceptual model's instantiation to represent a particular implementation of the system under consideration.

Secondly, Marius studied the market of existing modelling solutions geared towards operational processes like Capella and Mega Hopex. These tools leverage systems engineering concepts such as breaking down the system structure into different abstraction layers: operational, functional, logical and physical. More specifically, Marius used Capella to model actors and operations involved in the pre-flight preparation phase for an orbital launcher.

Lastly, he used Cosmo's framework to create a "conceptual" model as well as an instantiation based on the Capella model. This demonstrated *a priori* that the Cosmo solution may indeed capture a static model's entities & behaviours, in an effort to instantiate and simulate it dynamically within a particular use case.

Marius thus demonstrated that he has mastered the concepts of systems engineering as well as concepts specific to Cosmo, and that he could apply these in a real-world situation. He has demonstrated his capacity for abstraction and ability to work autonomously. I also note that it was very pleasant to work with Marius, who is always enthusiastic and curious.

I remain available for further inquiries.

Best regards,

Arnaud Bonnaffoux
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