

## Redesign of the User Interface of 20-sim

### Controllab Products Internship

Controllab Products B.V. is an engineering company with over 20 years of experience in the field of model based design. Controllab helps companies to use model based design to develop their machines and systems more quickly and with less errors. To support these activities, Controllab has developed own software called 20-sim. This software is sold to many customers worldwide.

20-sim is a modeling package for physical systems modeling with support for real-time simulation, C-code generation and 3D animation.

This amount of functionality in 20-sim also poses challenges. It is often not immediately clear to an end-user what 20-sim has to offer for them. Furthermore, a modern look and feel, combined with the state-of-the-art techniques on interface design, could even further improve the user experience.

### The assignment

During your assignment, you will be cooperating with experienced control engineers, software engineers, and modelers of physical systems to come up with a redesign of the user interface of our widely-used package 20-sim. You will find that the rules of physics come with interesting constraints and possibilities for the design of a new user interface, that will surely need an academic level of thinking and investigation.

This assignment covers the following topics and is a mix between research and development activities:

- Creating mock-ups for a new user-interface for 20-sim, and working out one design into a fully-featured prototype.
- Exchanging ideas and techniques on improving user interaction.
- Doing research into the best approach for interface design with respect to the modeling of physical systems.

### Competences

- You are currently doing a study at a University or Polytechnic University with a focus or interest in the design of user interfaces.
- You are a team player, that is not afraid to pitch new ideas.
- Basic knowledge of a programming language like C#, Python or C++ is strongly preferred.
- You have affinity with technology, you are interested in your field of research, and you are willing to learn new concepts.

### Your work situation

As a future software engineer you will be part of the software team. This team is responsible for the maintenance and improvement of our software products, like 20-sim.

### More information

If you are curious, ambitious, and you are up for a challenge, then please contact us to see if the assignment is still available, and to make an appointment. We frequently have more assignments available, in case this assignment is already given away. If you have any further questions, then please do not hesitate to contact us:

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