



Master Thesis Implementing a Raspberry Pi based Smart Prototype Controller

Cinemo, a young and relatively small but highly successful global company, located in the heart of Karlsruhe, is creating embedded multimedia software for the next generations of in-vehicle infotainment systems. Our customers are top brands automotive companies around the world.

As the company grows fast, we need support in different departments and are now on the lookout for a Master Thesis student who can work hand in hand with our prototyping team.

This could be your project

Implement a device to control and validate the startup behavior of our infotainment system prototypes which are shown to nearly all car OEMs worldwide.

Your opportunity, your tasks

- You evaluate the requirements and select the hardware
- You plan, design and implement the touch-controlled graphical application to manipulate and validate the prototype startup sequence
- You define test methods to ensure that the different prototypes with all their components and network connectivity can start, run and reboot reliably
- You evaluate a way how the Controller can be integrated in our infrastructure to pull updates easily
- You work very closely with our prototyping team to improve the existing prototypes for the automotive industry worldwide

What you should bring along

- Advanced studies in Informatics with a passion for small computers like the Raspberry Pi
- You know how the Linux command line works and how to set up and configure a Linux embedded system
- We don't need to explain to you how to connect hardware to the Raspberry Pi and that "the internet" is more than only OSI layer 5 to 7
- Technical challenges raise your attention to dig deeper
- You love to try different approaches for problems until you find the best solution
- Excellent analytical skills and care of the details
- Finally, you are able to write code which can paint a UI and talk to the network



Full story

Our in-vehicle infotainment system prototypes usually consist of several different embedded devices which are connected over the network and to the internet. These prototypes are portable and brought to customers where they are set up and presented during meetings and workshops. Setting up such a prototype involves some steps and manual testing that all components are working as expected, and this is where you – with the Smart Prototype Controller – join the game: Your job is to develop this device which is going to be the master controller and is in charge of the status of all components to control and validate their proper functionality.

If you are looking for an interesting and challenging position in a professional team for your Master Thesis, Cinemo is happy to offer you this opportunity and be part of the forefront of the technological development in the automotive industry.

Eager to join our team? Please send your job application to Annika Demendi (ademendi@cinemo.com).

We are looking forward!

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