

Master Thesis / Bachelor Thesis Proposal

Early validation of a digital feature development in induction cooktops. Application to the User Presence Detection.

Description

The development of new features in products to be launched on the market does not only consist of the development of the feature itself, but the project phases include from the conception of the technical solution to the final acceptance of the feature. Furthermore, depending on the complexity of the feature, the effort required in each of these phases may vary.

This work is framed in the development of a novel algorithm to determine when a user is in direct line of sight and close to the appliance. Due to the complexity of the algorithm and the novelty of the solution, an early validation of the solution is desirable for two reasons: To have an early feedback about the correctness of the parameterization and configuration used in the solution and on the other hand, to have an early feeling about the validity of the value provided to the final user.

The work consists of the validation of the early integration of this algorithm in the complete system (i.e. in the home appliance at household kitchen). It will be comprised of the following tasks:

- Design an overall validation strategy in the “algorithm design phase” for its correct integration
- Design a test plan on which the validation strategy will be based
- Design and run a set of experiments to validate the development
- Analyze data and extract conclusions based on it

The activity will be carried out within the development team, in close contact with the solution architect and the testing team.