The project

Through emerging technologies, it is possible to efficiently exceed everyday barbecue experiences. The IoT is changing the way we interact with our environment and sensing, re-dimensioning functionality. The objects can communicate with each other as well as with humans. The movement that is concerned with applying and investigating these technologies is called The Internet of Things.

What the Internet of Things (IoT) can do for the barbecue experience was an obvious direction to research. From the users’ point of view, it became clear that the challenges in the barbecue experience can be tackled with IoT features. While the user is busy cooking his meat on the grill, he wants control on the process. How can the IoT support the user, in order to control the meat in the barbecue? The project had two goals: the design of a user experience and the consideration of the communication of these temperatures since the object of technology is called The Internet of Things.

By integrating the opportunities from some of the iterations, Pitmaster was created. It is a barbecue support toolkit that consists of temperature sensors, sensor tongs, timers and a base station.

Pitmaster

The Pitmaster is a smart barbecue toolkit that can be used to enhance the functionality of any regular barbecue. Magnetic temperature sensors can be placed on the grill surface and in the lid. These will provide realtime temperature measurements. The base station takes care of the communication of these temperatures since it’s too hot inside the barbecue for some of the functionality of any regular barbecue. There are also sensor tongs that can be used when measuring and cooking. Magnetic temperature sensors can be placed on the grill surface and in the lid. These will provide realtime temperature measurements. The base station takes care of the communication of these temperatures since it’s too hot inside the barbecue for some of the base station.

The cooking progression can now rely on real time temperature measurements and will be shown on separate timers. Using the tongs, the user is free to do this whatever way he/she wants. By integrating the opportunities from some of the iterations, Pitmaster was created. It is a barbecue support toolkit that consists of temperature sensors, sensor tongs, timers and a base station.

Scenario

The usual scenario should be as follows:

1. Placing and measuring the food with the tongs.
2. Synchronizing the input with the right timer, vibration feedback confirms.
3. Determining the level of cooking (doneness/bite/color), this happens at first use or when adjustment is required.
4. Marking the spot on the timer, the user is free to do this whatever way he/she wants.
5. The timer will show the cooking progression.
6. When resting is required, turn the timer around, else the timer is reset by turning it back to its original position.
7. The resting timer shows the time that the meat needs to rest when it is done, the meat is at its best.

Structure

The visual shows an overview of the structure of the project. It is based on the iterative approach and related to the fields of Industrial Design and Information, Communication and Technology. The method that was used in this project is an iterative design process, described as Design-oriented. The strengths of this approach are the ability to evaluate new technologies and getting user input early. These results were either included in the final design or failed fast and failed cheap, resulting in many insights overall. Because of the intended use of relevant new technologies, the method seems to be really effective. The insights are important in order to design the intended interaction qualities.

Method

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